

Acquisitions by Partially Privatized Firms: The Case of Deutsche Telekom and VoiceStream

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I. INTRODUCTION

A recent phenomenon in American competition policy is the acquisition of a private firm by an enterprise that is either wholly owned by government or in the midst of privatization. Such an acquisition poses the question of how public ownership may alter the incentives of a firm to engage in anticompetitive conduct. It also prompts one to examine the process by which such altered incentives revert, as the level of government ownership declines, to the same incentives that face purely private firms. The competitive significance of partial privatization is increasingly important as a matter of competition policy. The privatization, in Europe and elsewhere, of government owned providers of telecommunications, energy, transportation, and postal services is creating many new corporations. These corporations each have billions of dollars to pursue strategies of acquisition and entry into markets currently populated by private firms. This Article focuses on the telecommunications industry, and especially wireless telecommunications, because they are well down the road of privatization and foreign direct investment.

American consumers gain from foreign direct investment in the U.S.

telecommunications services market in at least three different ways. First, foreign investment can increase competition in the market and thus improve quality and decrease prices for American consumers.

Second, foreign direct investment increases the supply of capital in the United States. That influx decreases the cost of capital for U.S. telecommunications firms—particularly the riskier upstarts—and thus enables them to fund greater levels of expansion and service enhancements than would be possible in the presence of a higher cost of capital. A lower cost of capital eventually works its way into lower prices, which again benefits U.S. consumers.

Third, foreign direct investment may generate beneficial spillovers for U.S. telecommunications firms. These benefits consist of the transfer of new technology and management practices to U.S. firms and their workers. Americans may be accustomed to thinking that U.S. firms are consistently in the vanguard of new technologies, but in the case of wireless telecommunications services, however, several other nations are more advanced than the United States in terms of customer penetration and breadth of service offerings. These spillovers of technology and management expertise benefit U.S. consumers.

There is no reason to believe that any of these significant benefits to U.S. consumers from foreign investment would not accrue if the foreign firm making the investment were still undergoing the process of privatization. Each of these benefits is unrelated to the nature of the shareholders of the investing company. Nevertheless, to date, the debate over acquisitions by government owned enterprises has paid virtually no attention to the effect of such acquisitions on consumer welfare maximization. Although the welfare of consumers is universally understood to be relevant to enforcement of antitrust law, the typical industry-specific statute, the Telecommunications Act of 1996 (Communications Act),¹ delegates vast discretion to an independent agency authorized to advance the largely undefined “public interest.” In connection with its evaluation of an application to transfer a license (which is necessary to any acquisition), the Federal Communications Commission (“FCC”) has the authority to deny any license transfer that would contradict its understanding of the public interest. This standard is so elastic, at least in the minds of those currently empowered to make decisions or influence policy, that it encompasses an evaluation of the effects of the acquisition on the welfare of American firms, with or without a corresponding evaluation of the acquisition’s effect on American consumers. Thus, in a manner reminiscent of U.S.

1. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified at scattered sections of 47 U.S.C.).

antidumping law, the public interest analysis of acquisitions by firms that are partially or wholly owned by a foreign government has taken on a producer-welfare orientation.² That orientation is also evident in the legislative initiatives of the members of Congress most resistant to foreign direct investment in the U.S. telecommunications industry.

This Article takes as given the unfortunate starting point that consumer welfare is subordinated to producer welfare when evaluating the competitive consequences of telecommunications acquisitions by partially privatized firms. Given that unfortunate orientation, the challenge is to give economic content to that producer-protection orientation in the manner least deleterious to *aggregate* producer welfare in the United States. If we are stuck with a producer-welfare standard, we should at least ensure that no group of American producers is treated as more equal than another.

The 2000 acquisition of the American wireless telecommunications firm VoiceStream Wireless by Deutsche Telekom AG of Germany supplies the factual basis for developing this framework. The FCC approved the acquisition in April 2001 and, in the process, embraced the economic analysis that forms the basis for this Article.³ Despite its approval by the FCC, the acquisition was vigorously opposed by the ranking Democrat on the Senate Commerce Committee, Senator Ernest F. Hollings of South Carolina.⁴ In May 2001, the Deutsche Telekom-VoiceStream transaction also received U.S. government approval on national security grounds.⁵ This

2. See, e.g., Richard J. Pierce, *Antidumping Law as a Means of Facilitating Cartelization*, 67 ANTITRUST L.J. 725 (2000).

3. Applications of Voicestream Wireless Corp., Powertel, Inc., Transferors, and Deutsche Telekom AG, Transferee, for Consent to Transfer Control of Licenses and Authorizations Pursuant to § 214 and 310(d) of the Communications Act and Petition for Declaratory Ruling Pursuant to § 310 of the Communications Act and Powertel, Inc., Transferor, and Voicestream Wireless Corp., Transferee, for Consent to Transfer Control of Licenses and Authorizations Pursuant to § 214 and 310(d) of the Communications Act, *Memorandum Opinion and Order*, 16 F.C.C.R. 9779, 23 Comm. Reg. (P & F) 1089 (2001) [hereinafter *Deutsche Telekom Order*].

4. See, e.g., Yochi J. Dreazen, *Deutsche Telekom Deal Wins FCC Votes*, WALL ST. J., Apr. 26, 2001, at B7 (discussing opposition of Senator Hollings on grounds that “the combined company’s backing by the German government would give it an unfair advantage over American competitors such as AT&T Wireless Group . . .”) When control of the Senate shifted from the Republicans to the Democrats in May 2001, Senator Hollings became chairman of the Senate Commerce Committee. See Stephen Labaton, *Senate Switch Alters Outlook for Businesses*, N.Y. TIMES, May 25, 2001, at C1.

5. Press Release, Deutsche Telekom AG, *Deutsche Telekom Notes Completion of CFIUS Review of Mergers* (May 1, 2000), available at <http://www.telekom.de/dtag/presse/artikel/0,1018,x1201,00.html>. Acquisitions by foreign firms (whether or not in the process of privatization) may raise national security considerations. See J. GREGORY SIDAK, FOREIGN INVESTMENT IN AMERICAN TELECOMMUNICATIONS 109-10 (Univ. of Chicago Press 1997). There is no basis to suppose that, in the discharge of its duties under the Exon-Florio Amendment, the Committee on Foreign Investment in the United States (“CFIUS”) will fail

Article will not address that topic.

Part II of this Article summarizes the legal analysis conducted by the FCC in approving the license transfer application associated with Deutsche Telekom's acquisition of VoiceStream. After reviewing legislative history, statutory language, and its own precedent, the FCC determined that section 310(a) of the Communications Act⁶ does not apply to indirect ownership of a U.S. wireless communications licensee by a foreign government. Under its analysis of section 310(b)(4),⁷ the FCC found no basis to overcome the statute's rebuttable presumption that the proposed license transfer from VoiceStream to Deutsche Telekom would serve the public interest. The FCC explained that partial government ownership conferred no unique advantages to Deutsche Telekom, found that the corporation lacked both

to identify true threats to American security that would arise from acquisitions by foreign entities. See Exon-Florio Amendment to the Omnibus Trade and Competitiveness Act of 1988, Pub. L. No. 100-418, § 5021, 102 Stat. 1107, 1425 (codified at 50 U.S.C. app. § 2170 (1994)); 31 C.F.R. pt. 800 (CFIUS regulations to implement Exon-Florio Amendment). Under the Exon-Florio Amendment, the federal government may block any proposed investment that appears to threaten national security. CFIUS makes that determination upon request by a potential investor or a CFIUS agency. 50 U.S.C. § 2170(a) (1994).

Since the late 1990s, the Federal Bureau of Investigation (FBI) has played an aggressive role in that national security process in acquisitions that have concerned the telecommunications and information technology sectors. See Neil King, Jr. & David S. Cloud, *Global Phone Deals Face Scrutiny From New Source: the FBI*, WALL ST. J., Aug. 24, 2000, at A1. This national security review of foreign investment appears to be exhaustive. For instance, in connection with transactions such as British Telecommunications' proposed acquisition of MCI in 1997, and Vodafone's acquisition of AirTouch in 2000, the FBI required the parties to agree to a variety of conditions and restrictions designed to ensure that foreign ownership of U.S. facilities would not impede U.S. law enforcement or otherwise harm national security. The FBI continued its vigilance in negotiations in connection with the acquisition of Verio, an Internet service provider, by NTT Communications, a unit of Nippon Telegraph and Telephone, in which the Japanese government owned a majority interest. *Id.* The NTT-Verio acquisition passed a thorough investigation by the CFIUS agencies, which resulted in a committee recommendation to the President that the transaction should be permitted to proceed. The President was satisfied that any national security issues that may have been presented by the acquisition had been resolved through these existing processes. Statement by the Press Secretary on Verio Acquisition, Office of the Press Secretary, The White House (Aug. 23, 2000) available at <http://clinton6.nara.gov/2000/08/2000-08-23-statement-by-the-press-secretary-on-verio-acquisition.html>.

6. 47 U.S.C. § 310(a) (1994).

7. *Id.* § 310(b)(4) (Supp. V 1999). The statute states:

No broadcast or common carrier or aeronautical en route or aeronautical fixed radio station license shall be granted to or held by any corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country, if the Commission finds that the public interest will be served by the refusal or revocation of such license.

Id.

the incentive and the ability to act anticompetitively in U.S. communications markets and concluded that American consumers would likely benefit from increased competition if the FCC approved the license transfer.

Part III explains how economics can be used to predict, among various constituents of U.S. producers, the likely winners and losers created by Deutsche Telekom's investment in the U.S. telecommunications sector.

Part IV completes the analysis by examining an anticompetitive hypothesis that could explain the predicted decline in the market value of U.S. incumbent wireless carriers. That hypothesis, however, must be rejected (and subsequently was rejected by the FCC) because Deutsche Telekom cannot engage in predatory pricing and cross-subsidization in the U.S. wireless telecommunications market. Deutsche Telekom does not benefit from subsidized capital because of its partial government ownership. Its bond ratings and weighted average cost of capital are inconsistent with the credit-subsidization hypothesis. Moreover, Deutsche Telekom does not have the *opportunity* to engage in predatory behavior because: (1) Deutsche Telekom must pursue profit maximization, (2) its fiduciary duties reinforce profit maximization, and (3) in Germany, it faces competitive telecommunications markets as well as effective and transparent regulation. Finally, Deutsche Telekom does not have the *incentive* to engage in predatory behavior in the U.S. wireless telecommunications market largely due to certain production characteristics of the wireless telecommunications industry. In particular, the low variable costs of wireless communications and the durability of spectrum ensure that no predatory policy would pay off in the long term.

II. THE FCC'S INTERPRETATION OF THE STATUTORY FRAMEWORK

In reviewing the license transfer application associated with Deutsche Telekom's acquisition of VoiceStream and Powertel, the FCC decided several issues of first impression relating to a foreign acquirer that is in the midst of privatization. The FCC considered, among other things, the consumer benefits of upgrading and expanding existing networks, the lack of unique advantages conferred by partial government ownership, and the acquirer's lack of the ability and the incentive to conduct anticompetitive price predation in U.S. markets. Furthermore, the FCC affirmed that, under its 1997 *Foreign Participation Order*, acquirers from member countries of the World Trade Organization ("WTO") would receive preferential treatment under a new "open entry" standard, such that they would receive a rebuttable presumption of compliance with the foreign ownership

restrictions in section 310(b)(4) of the Communications Act, unless the FCC could show a “very high risk to competition” in a U.S. market.⁸ Under the FCC’s practice, the granting of a license or the approval of a license transfer will generally be permitted, and the U.S. Trade Representative will be trusted to ensure that market access for U.S. firms is possible in the home market of the foreign investor.⁹

A. *Statutory Interpretation of Sections 310(a) and (b)*

Before applying the framework of the *Foreign Participation Order* to Deutsche Telekom’s acquisition of VoiceStream, the FCC evaluated the transaction under section 310(d) of the Communications Act, as the agency would any other transfer of a communications license.¹⁰ Section 310(d) directs the FCC to analyze, under section 308, the applicants’ qualifications, requiring, among other things, the disclosure to the FCC of certain financial and technical facts about the proposed licensee.¹¹ Because of its plans for network expansion, Deutsche Telekom also had to gain FCC certification under section 214(a) because “the present or future public convenience and necessity require or will require the construction” of particular facilities.¹²

After finding that Deutsche Telekom met basic qualification standards to be the transferee of a license, the FCC conducted a detailed analysis of sections 310(a) and (b).¹³ Specifically, the FCC had to decide whether section 310(a) prohibits indirect ownership of a communications licensee by a foreign government. If so, then the FCC would be precluded from conducting a public interest analysis under section 310(b)(4).¹⁴ Senator Hollings urged that section 310(a), rather than section 310(b)(4), should be interpreted to apply to Deutsche Telekom and to prevent the license transfer from VoiceStream to Deutsche Telekom.¹⁵

To weigh these arguments, the FCC examined the legislative history

8. *Deutsche Telekom Order*, *supra* note 3, paras. 51, 53 (citing Rules and Policies on Foreign Participation in the U.S. Telecommunications Market, Market Entry and Regulation of Foreign Affiliated Entities, *Report and Order and Order on Reconsideration*, 12 F.C.C.R. 23,891, paras. 61-62, 113, 10 Comm. Reg. (P & F) 750 (1997) (specifying procedure for section 310(b)(4) filings)) [hereinafter *Foreign Participation Order*].

9. *Id.* para. 70.

10. 47 U.S.C. § 310(d) (1994).

11. *Id.* § 308 (Supp. V 1999).

12. *Id.* § 214(a) (1994).

13. *Deutsche Telekom Order*, *supra* note 3, paras. 33-50.

14. 47 U.S.C. § 310(b)(4) (1994).

15. *Deutsche Telekom Order*, *supra* note 3, para. 38. Senator Hollings also argued that Deutsche Telekom’s acquisition should be denied under section 310(a) because, he alleged, the corporation is a de facto representative of the German government. *Id.* para. 47 n.143.

of section 310.¹⁶ Although it noted the possibility for ambiguity,¹⁷ the FCC found that the statutory language strongly disfavored the interpretation that indirect foreign ownership should be governed by both sections 310(a) and 310(b).¹⁸ The FCC said:

An interpretation of the statute that section 310(a) absolutely prohibits indirect control of a licensee corporation under the structure described in section 310(b)(4) therefore requires both reading section 310(a) to cover a situation (indirect control) it does not expressly address, and reading section 310(b)(4) not to cover a situation (ownership of a holding company that also constitutes indirect control of the licensee) that is within its express terms.¹⁹

Previously, the FCC had rejected such an interpretation in dicta in several cases.²⁰ The Commission conceded that one decision, *Telekom Finland*, supported Senator Hollings's interpretation of section 310(a), but the agency ruled that such an interpretation would be inconsistent with the majority of decisions.²¹ In short, relying on the plain language of section 310 as well as its own regulatory history, the FCC held that section 310(b) applies exclusively to indirect foreign government investment in U.S. telecommunications and that section 310(a) is inapplicable to such investment.²²

16. *Id.* paras. 35-37, 46. The FCC considered the evolution of the Radio Acts of 1912 and 1927, the Communications Act of 1934, and its 1974 amendments that formed the basis of the subsectional split of sections 310(a) and 310(b), and decided that Congress intended the subsectional division to lessen the burden on potential foreign investors. *Id.* para. 37 n.126 (citing S. REP. NO. 93-795, at 1 (1974)). The FCC concluded: "The legislative history reflects that this structural change was designed to lessen the burden on private radio licensees and permit entities other than foreign governments and their representatives to hold private radio licenses directly." *Deutsche Telekom Order, supra* note 3, para. 37.

17. *Id.* paras. 38, 45.

18. *Id.* paras. 39-40. The FCC also rejected the argument that Deutsche Telekom was a de facto representative of the German government. *Id.* para. 47.

19. *Id.* para. 40.

20. *Id.* paras. 41-44; *id.* para. 40 n.131 (citing Pet. of Cable & Wireless, Inc., *Declaratory Ruling and Memorandum Opinion, Order, Authorization and Certificate*, 10 F.C.C.R. 13,177, paras. 11-23, 1 Comm. Reg. (P & F) 1007 (1995); App'n of GRC Cablevision, Inc., *Memorandum Opinion and Order*, 47 F.C.C.2d 467, paras. 1-6, Rad. Reg.2d (P & F) 827 (1974); App'n of Intelsat LLC, *Memorandum, Opinion, Order and Authorization*, 15 F.C.C.R. 15,460, para. 48, 21 Comm. Reg. (P & F) 1077 (2000)).

21. *Deutsche Telekom Order, supra* note 3, para. 44 (overruling any conflicting interpretation of *Telecom Finland, Ltd.*, Pet. for Determination of the Public Interest Under 47 U.S.C. § 310(b)(4) to Permit LMDS and PCS Licensing, *Order*, 12 F.C.C.R. 17,648, para. 7 (1997)).

22. *Id.*

B. The Effects of the Foreign Participation Order on Section 310(b)(4)

The *Foreign Participation Order*, issued in 1997, changed how the FCC decides cases concerning indirect license control by foreign entities, including foreign companies in the midst of privatization. The order expresses a liberalized policy toward allowing foreign ownership of U.S. wireless licensees.

1. Displacing the ECO Test

Before its *Foreign Participation Order*, the FCC engaged in complex market analyses to determine whether the home country of a foreign investor allowed American investors reciprocal opportunities for investment and market entry. That approach evolved into the Effective Competitive Opportunities (“ECO”) test.²³ The high costs to both private parties and the FCC of conducting that test surely deterred some measure of foreign investment into U.S. communications markets. That cost led the FCC to replace the ECO test with the *Foreign Participation Order*.²⁴

The order created a rebuttable presumption for WTO member nations, predicated on the notion that foreign investment into U.S. communications markets should be encouraged whenever possible for its competitive benefits.²⁵ In discussing the applicability of the *Foreign Participation Order* to the Deutsche Telekom-VoiceStream license transfer, the FCC ruled: “In adopting this presumption as a factor in its public interest analysis [under section 310(b)(4)], the Commission made no distinction between government and private foreign ownership.”²⁶

2. Restoring the Burden of Proof

The FCC long regarded its discretion under section 310(b)(4) to be so broad as to authorize the agency to reverse the burden of proof that Congress specified. The FCC presumed foreign investment in an American holding company exceeding 25% was unlawful, such that the applicant was

23. *See id.* para. 51 n.153 (“The ECO test required, as a condition of foreign carrier entry into the U.S. market, that there be no legal or practical restrictions on U.S. carriers’ entry into the foreign carrier’s market.”). *See also* Market Entry and Reg. of Foreign-Affiliated Entities, *Report and Order*, 11 F.C.C.R. 3873, para. 6, 1 Comm. Reg. (P & F) 459 (1995) [hereinafter *Foreign Carrier Entry Order*]; SIDAK, *supra* note 5, at 264-74.

24. *Foreign Participation Order*, *supra* note 8.

25. *Deutsche Telekom Order*, *supra* note 3, para. 50. German competitors accused Deutsche Telekom of anticompetitive conduct in the German market, but the FCC rejected these complaints on the ground that it must defer to the USTR’s conclusions to the contrary. *Id.* paras. 67-70.

26. *Id.* para. 51.

required to prove to the FCC's satisfaction that the agency's grant of a *waiver* of that putative ceiling on foreign ownership would affirmatively serve the public interest in the applicant's particular facts and circumstances. In *PrimeMedia Broadcasting, Inc.*, for example, the FCC succinctly and erroneously stated in 1988 that "alien equity interests in a parent corporation . . . may only amount to 25%, *unless* the Commission finds that the public interest would be served."²⁷

The *Deutsche Telekom Order* ended the FCC's longstanding misreading of the plain language of this key subsection of the foreign ownership restrictions in the Communications Act.²⁸ By its plain language, section 310(b)(4) allows foreign ownership of the holding company of a communications licensee to exceed 25% but gives the FCC the discretion to deny or withdraw the license "if the Commission finds that the public interest will be served by the refusal or revocation of such license."²⁹ A treatise on international telecommunications regulation compiled by the Federal Communications Bar Association in 1993 correctly stated that "the onus is on the Commission to prove that the relaxed public interest standard mandates a refusal of the license request."³⁰ In 1995, the House Commerce Committee agreed and chastised the FCC for its enduring misinterpretation of section 310(b)(4). In its report accompanying H.R. 1555, the Communications Act of 1995, the Committee noted that "the Commission has consistently misinterpreted section 310(b)(4) by creating a presumption that foreign investment is not in the public interest if it exceeds 25 percent of the equity of an American radio licensee."³¹ The Committee further stated that pending proposed "amendments to section 310(b) . . . do not constitute congressional acquiescence to the Commission's past misinterpretation of section 310(b)(4)."³²

In its order approving VoiceStream's transfer of licenses to Deutsche Telekom, the FCC corrected its misinterpretation of section 310(b)(4) and stated that Congress "barred the entities described in sections 310(a), (b)(1) and (b)(2) from owning more than 25 percent of . . . a holding company *only if* the FCC found such restrictions to be in the public interest in the

27. App'n of PrimeMedia Brdcast., Inc., for Construction Permits for New FM Facilities, *Memorandum Opinion and Order*, 3 F.C.C.R. 4293, para. 12, 65 Rad. Reg.2d (P & F) 27 (1988) (emphasis added).

28. SIDAK, *supra* note 5, at 98-100.

29. 47 U.S.C. § 310(b)(4) (emphasis added).

30. Tara Kalagher Giunta, *Foreign Participation in Telecommunications Projects*, in 43 FED. COMMUN. BAR ASS'N INT'L PRACTICE COMM., INTERNATIONAL COMMUNICATIONS PRACTICE HANDBOOK § 1(b), para. 3 (Paul J. Berman & Ellen K. Snyder eds., 1993).

31. H.R. REP. NO. 104-204, at 120-21 (1995).

32. *Id.* at 121.

particular case.”³³ With the circumlocution that only a regulatory agency can supply, the FCC also said that “the language in section 310(b)(4) permits the Commission, without implied limitation, to find that the public interest would not be served by denying indirect foreign government ownership that amounts to control of a licensee.”³⁴ In plain English, Commissioner Harold Furchtgott-Roth confirmed that “today’s decision properly places the burden on the Commission, not the applicants, to show that the ‘public interest will be served by the refusal or revocation of such license’ transfer under section 310(b)(4).”³⁵

3. Unique Risks of Government Ownership

Before examining specific markets, the FCC first asked whether, as a general proposition, VoiceStream’s proposed license transfer would give Deutsche Telekom an anticompetitive advantage owing to its partial government ownership. The FCC’s analysis had two principal parts: one concerning the consumer benefits expected to flow from the acquisition, and the other concerning the greater likelihood of anticompetitive activity, presumably in the form of price predation that the acquisition might engender.

The FCC concluded that consumers would benefit from both Deutsche Telekom’s extension of VoiceStream’s existing telecommunications network and from increased competition.³⁶ The FCC also found it highly unlikely that the proposed license transfer would result in anticompetitive actions by Deutsche Telekom, notwithstanding that various opponents of the acquisitions claimed that the transfer would give VoiceStream a “virtually unlimited supply of capital” due to favorable interest rate terms reflecting Deutsche Telekom’s lower risk of default, or through loan guarantees or special subsidies.³⁷ As Part IV explains, and the FCC agrees, however, an analysis of Deutsche Telekom’s weighted average cost of capital (“WACC”) and bond ratings refutes this hypothesis.³⁸ The FCC determined that “the German government’s ownership of [Deutsche Telekom] does not confer unique financial advantages or otherwise create a high risk to competition or consumers in the United States that warrants special conditions.”³⁹

33. *Deutsche Telekom Order*, *supra* note 3, para. 36 (emphasis added).

34. *Id.* para. 48.

35. *Id.* (statement of Commissioner Harold Furchtgott-Roth, concurring in part, dissenting in part, para. 1 (citing SIDAK, *supra* note 5)).

36. *Id.* paras. 116-24.

37. *Id.* para. 60 (quoting comments from several *ex parte* letters).

38. *Id.* paras. 63-64.

39. *Deutsche Telekom Order*, *supra* note 3, para. 59.

4. Examining Specific U.S. Markets for a “Very High” Risk

The FCC also examined specific U.S. markets to determine whether Deutsche Telekom’s acquisition of VoiceStream would create a “very high” risk of anticompetitive behavior. As Commissioner Furchtgott-Roth observed, however, the FCC did “not engage in market analysis for market analysis sake.”⁴⁰ Rather, the analysis focused on specific complaints brought before the FCC by competitors and others. Specifically, the FCC sought, but did not find, evidence of very high risks in the U.S. mobile telephony market and the U.S. international services market. The agency also examined domestic issues regarding the global wireless market.⁴¹

With respect to the U.S. mobile telephony and international services markets, the FCC determined that there was not a very high risk of anticompetitive behavior because, after the proposed license transfer, Deutsche Telekom still would lack both the ability and the incentive to engage in predatory behavior directed at U.S. competitors. In finding that Deutsche Telekom lacked the ability to engage in anticompetitive behavior, the FCC reiterated the lack of any unique advantage conferred by Deutsche Telekom’s partial government ownership, as well as Deutsche Telekom’s legal duties as a public corporation to German regulatory agencies and shareholders.⁴² The FCC also noted the impossibility of Deutsche Telekom’s price predation against American wireless carriers, given VoiceStream’s small market share relative to competitors that have vast capital resources.⁴³ In finding that Deutsche Telekom lacked the incentive to act anticompetitively, the FCC reasoned that it would be irrational for Deutsche Telekom to incur predatory losses to gain temporary control over wireless communications only to have the FCC reallocate the spectrum of bankrupt rivals a short time thereafter.⁴⁴

Finally, the FCC determined that there is not a very high risk of anticompetitive problems with respect to certain domestic issues regarding Deutsche Telekom’s move to gain more control over the global wireless market—that is, to gain a bigger global “footprint.”⁴⁵ The FCC reasoned that the advantages of scale inherent in such activity should be encouraged

40. *Id.* para. 3 (statement of Commissioner Furchtgott-Roth, concurring in part, dissenting in part).

41. *Id.* paras. 45-64.

42. *Id.* paras. 78-99. The FCC also noted the role of dominant carrier safeguards in Germany, which require strict accounting standards for Deutsche Telekom’s long-distance service. *Id.* paras. 100-02.

43. *Id.* paras. 89, 98-99.

44. *Id.* para. 90.

45. *Id.* para. 113.

as a normal competitive development within a high-technology industry.⁴⁶

III. PREDICTED PRODUCER HARM FROM FOREIGN GOVERNMENT INVESTMENT

When Deutsche Telekom's acquisition of VoiceStream was announced, one might have predicted that an invigorated VoiceStream, with access to Deutsche Telekom's technology, expertise, and resources, would increase competition in the provision of wireless services in the United States. Consumers benefit from increased competition in the form of improved services, lower prices, or both. In addition, one might have predicted that the U.S. Treasury would benefit from VoiceStream's ability to compete more effectively in future spectrum auctions as the company sought to complete the footprint necessary to offer truly national service.

Some might argue that the benefits to U.S. consumer welfare from investment by companies with foreign government partial ownership come at the expense of U.S. companies. Put in economic terms, do the gains in consumer welfare come at the expense of producer welfare? To begin to answer that question, one must immediately ask two more. First, which constituencies of American producers benefit or suffer from the foreign investment in question? Second, if a particular constituency of American producers suffers as a result of the foreign investment, is that harm something from which those producers have a legal right to be protected?

With respect to the acquisition of VoiceStream by Deutsche Telekom, one could predict that four identifiable constituencies of producers would be affected by the transaction. Three clearly would benefit. The fourth would not, but for reasons that should not raise policy concerns.

First, VoiceStream and its shareholders obviously would be expected to benefit from Deutsche Telekom's acquisition the same is true of Powertel and other wireless carriers that use the GSM standard. VoiceStream would be a more effective competitor, and the increased value of the company is reflected in the premium that Deutsche Telekom offered to pay over VoiceStream's previous market price.

Second, American companies that are major users of wireless telecommunications services would be expected to benefit from the acquisition of VoiceStream by Deutsche Telekom because, as explained above, the transaction would intensify competition over price, quality, and service innovations. For these firms, the cost of an important input would fall and the quality of service would rise.

Third, U.S. manufacturers of telecommunications equipment would

46. *Id.* paras. 113-14.

benefit from Deutsche Telekom's acquisition of VoiceStream. An acquisition that leads to lower prices and raises output of wireless services in turn increases the demand for complementary equipment, including handsets, base stations, switches, and the like. Incidentally, the expanded demand for telecommunications equipment is a good proxy for consumer-welfare effects in the telecommunications services market.

Fourth, one would predict that incumbent wireless carriers in the United States would suffer from Deutsche Telekom's acquisition of VoiceStream. The predicted competitive effects on incumbent wireless carriers come from two distinct sources. The incumbents would face more competition for customers and thus face downward pressure on prices. In addition, in future spectrum auctions, the incumbents would confront a more robust bidder and thus face upward pressure on the amounts that they must pay the U.S. Treasury for spectrum. Neither of those results, however, is one that the incumbent U.S. wireless companies have standing to complain about. Both effects flow from more vigorous competition.

IV. COULD THE NEGATIVE EFFECT ON INCUMBENT WIRELESS CARRIERS RESULT FROM ANTICOMPETITIVE BEHAVIOR?

Consider the main question that Deutsche Telekom's acquisition of VoiceStream presented: Could losses to U.S. incumbent wireless carriers result not from greater competition, but from anticompetitive behavior that is unique to an entrant with partial government ownership? It is a subtle economic question whether a firm having a government owner has different incentives from those of a wholly private firm. The scholarly literature in economics and law contains virtually no published analysis of this question. Along with Professor David Sappington, this Author has analyzed the competitive incentives of government enterprises. The analysis assumed, however, that the public enterprise was 100% owned and controlled by a government entity.

Regulators and antitrust authorities in the United States might have the following competitive concerns about a firm *wholly* owned by a foreign government entity. First, the bonds of the firm might be backed, explicitly or implicitly, by the full faith and credit of the foreign government, thus allowing the firm to borrow more than a similar company facing the prospect of failure. Consequently, the firm might enjoy an artificially low cost of capital relative to totally private firms. Second, the government owned firm might cause the regulator in the firm's home market to be lenient toward the firm. As a consequence, the foreign market may not be open to competition, such that the government owned firm might be able to cross-subsidize its entry into the U.S. market with supracompetitive pricing

at home.

As this analysis has emphasized, the absence of profit maximization is the critical factor for a public enterprise in terms of its predatory incentives. Conversely, profit maximization becomes the requisite objective of a firm as soon as it is *at least partly* privatized and listed on a stock exchange. This caveat is directly relevant to Deutsche Telekom. Moreover for other reasons, the concerns about predation do not fit the facts of Deutsche Telekom's acquisition of VoiceStream. Consider first the argument about government subsidization of capital.

A. *Does the Foreign Acquirer Benefit from Subsidized Capital?*

Deutsche Telekom's debt is not backed, explicitly or implicitly, by the full faith and credit of the German government. Deutsche Telekom does not benefit from any preferential conditions regarding access to capital, such as government guarantees. After January 2, 1995, the date of Deutsche Telekom's registration in Germany's Commercial Register, liabilities incurred were no longer guaranteed by the Federal Republic of Germany.⁴⁷ Further evidence that Deutsche Telekom does not have a subsidized cost of capital is found in Deutsche Telekom's credit rating.

1. Bond Ratings

Deutsche Telekom's bond ratings refute the hypothesis that the company has subsidized capital. As Table 1 indicates, in January 2001 (during the pendency of VoiceStream's license transfer application), the German government was rated at the highest possible Standard & Poor's rating of AAA. At the same time, Deutsche Telekom had a significantly lower Standard & Poor's rating of A-. As of August 2000, Deutsche Telekom's credit ratings had been higher, at AA2 (Moody's) and AA- (Standard & Poor's). At the conclusion of the 3G spectrum auction in Germany in August 2000, Deutsche Telekom's credit rating was downgraded.⁴⁸

47. Deutsche Telekom AG, PROSPECTUS FOR 200 MILLION ORDINARY SHARES IN THE FORM OF SHARES OR AMERICAN DEPOSITARY SHARES, June 17, 2000, at 23, available at http://www.telekom.de/english/company/inv_rel/gesch_zahlen/geschaeft/download/prospectus00.pdf [hereinafter DEUTSCHE TELEKOM PROSPECTUS].

48. *German '3G' Winners Take Hit from Credit Rating Agency S&P, German 3G Spectrum Auction Tops U.K. Bidding Total by \$10 Billion*, TELECOMM. REP. DAILY, Aug. 21, 2000, available at <http://www.tr.com/online/trd/2000/td081700/Td081700-01.htm> (discussing how S&P analysts planned to downgrade the credit ratings of Dutch carrier KPN NV, British Telecommunications PLC, and Deutsche Telekom AG within two weeks of the auction's close); see also Edmund L. Andrews, *\$50 Billion for German Wireless Licenses*, N.Y. TIMES, Aug. 18, 2000, at C4.

TABLE 1: Credit Ratings for Selected Global Telecommunications Companies, January 2001

Carrier or Government	Standard & Poor's Rating	Moody's Rating
German Government	AAA	Aaa
SBC Communications	AA-	Aa3
Verizon Communications	A+	A1
British Telecom*	A	A2
AT&T Corp. **/***	A	A2
Deutsche Telekom*	A-	A2
WorldCom Inc. *	A-	A3

Sources: Standard & Poor's ratings obtained from Standard & Poor's New York Ratings Desk on Jan. 2, 2001. Moody's ratings obtained from Moody's New York Rating Desk on Jan. 2, 2001.

Notes: *Standard & Poor's: Negative outlook. **Standard & Poor's: Negative credit watch. ***Moody's: On watch for possible downgrade.

Deutsche Telekom's credit rating in January 2001 not only was significantly lower than the German government's credit rating, but also was below or comparable with the credit ratings of private telecommunications firms in the United States and Europe. Deutsche Telekom's bond rating was below that of SBC, Verizon, British Telecom, and AT&T, and comparable with the bond rating of WorldCom. Deutsche Telekom's credit rating is therefore inconsistent with the hypothesis that it receives a credit subsidy from the German government. The FCC expressly relied on this credit rating evidence in its April 2001 order approving Deutsche Telekom's acquisition of VoiceStream.⁴⁹

2. Weighted Average Cost of Capital

One can also use a weighted average cost of capital analysis to evaluate the hypothesis that Deutsche Telekom has preferential access to capital by virtue of its partial ownership by the government. The results of this analysis also refute the credit subsidization hypothesis.

A firm's WACC is the expected return on a portfolio of all the firm's securities.⁵⁰ The formula for WACC is simply a weighted average of the return on equity and the return on debt: $WACC = (D/V)r_D(1-t) + (E/V)r_E$,

49. See *Deutsche Telekom Order*, *supra* note 3, para. 64.

50. See, e.g., RICHARD A. BREALEY & STEWART C. MYERS, *PRINCIPLES OF CORPORATE FINANCE* 457 (5th ed. 1996).

where D is the firm's outstanding debt, E is the market capitalization of the firm's equity, V is the sum of the firm's outstanding debt (D) and the market capitalization of the firm's equity (E), r_D is the firm's average borrowing rate, r_E is the firm's return on equity, and t is the corporate income tax rate.⁵¹ To estimate the firm's return on equity, the Author uses the capital asset pricing model.⁵²

To determine whether Deutsche Telekom has preferential access to capital, the Author computes the weighted average cost of capital for Deutsche Telekom and other telecommunications operators. If Deutsche Telekom's WACC is not significantly less than the WACC of its global competitors, then one must reject the hypothesis that Deutsche Telekom has the opportunity to engage in predatory tactics in the United States by virtue of its (supposedly) preferential access to capital due to its partial government ownership. In actuality, Deutsche Telekom's cost of capital is, as Table 2 shows, *higher* than that of SBC, Sprint, AT&T, Verizon, and BellSouth and is roughly equal to British Telecom's cost of capital.⁵³ The FCC embraced this WACC analysis in its order approving Deutsche Telekom's acquisition of VoiceStream.⁵⁴

51. *Id.* at 458. The Author uses the tax rate of the country that hosts the parent company. For Deutsche Telekom, the Author used the corporate tax rate of Germany, which is 31.65%. See DEUTSCHE TELEKOM AG, 1999 ANNUAL REPORT at 72 (2000), available at <http://www.telekom.de/english/company/invrel/geschzahlen/geschaeft/99/download/20f.pdf> [hereinafter DEUTSCHE TELEKOM ANNUAL REPORT] According to Deutsche Telekom:

German corporations are subject to corporate income tax at a rate of 40 percent on non-distributed profits and of 30 percent on distributed profits. The corporate income tax liability is subject to a 5.5 percent solidarity surcharge (*Solidarit tszuschlag*). This results in an effective aggregate charge of 31.65 percent on distributed profits.

Id. When calculating the WACC for foreign companies, it is important for consistency to use betas and risk premiums based on the same markets. In Deutsche Telekom's case, one could use either a beta based on a U.S. market index with the U.S. market risk premium, or a beta based on a German market index with the German market risk premium. Using the beta from one market and the risk premium from another will bias the WACC calculation upwards or downwards. The Author uses betas based on the S&P 500 (taken from NASDAQ's web site, available at <http://www.nasdaq.com>) in conjunction with the U.S. risk premium when calculating WACCs for all the firms, foreign and domestic, in the sample.

52. See, e.g., BREALEY & MYERS, *supra* note 50, at 180.

53. See *Deutsche Telekom Order*, *supra* note 3, para. 63.

54. See *id.*

TABLE 2: *Weighted Average Cost of Capital (WACC) for Major Telecommunications Companies*

Rank	Company	Weighted Average Cost of Capital	Government Ownership
1	Telmex	15.7	0.0%
2	Qwest	15.7	0.0%
3	Worldcom	13.5	0.0%
4	Vodafone	13.3	0.0%
5	France Télécom	13.0	63.6%
6	Telecom Italia	11.9	3.46%
7	British Telecom	11.9	0.2%
8	Deutsche Telekom	11.7	58.2%
9	Bell Canada	11.7	0.0%
10	SBC	10.8	0.0%
11	Sprint	10.1	0.0%
12	Telefónica	9.9	0.0%
13	AT&T	9.8	0.0%
14	Verizon	8.7	0.0%
15	BellSouth	8.6	0.0%
16	Telstra	8.2	50.1%
17	NTT	7.9	53.2%
18	KPN	7.5	43.0%
19	Eircom	7.4	1.1%
20	Telecom New Zealand	7.2	0.0%
	Average	10.7	

Sources: Market risk premium from BREALEY & MYERS, *supra* note 50, at 146. Risk-free rate is the 10-Year Treasury Constant Maturity Rate on December 15, 2000, downloaded from the Federal Reserve Bank of Chicago's Web site at <http://research.frbchi.org>. Betas downloaded from <http://www.nasdaq.com>. Debt borrowing rates, value of debt (which includes current maturities), corporate income tax rates, and shares outstanding taken from, or calculated on the basis of, data from companies' annual reports and publicly available SEC documents. Market prices per share downloaded on January 2, 2001 from various stock exchanges' Web sites and <http://finance.yahoo.com/?u>.

Note: Classes of non-traded common stock are not included in the market value of current outstanding equity.

In short, the theoretical argument that a firm with partial government ownership might have access to subsidized capital does not accurately describe Deutsche Telekom. At the time of its acquisition of VoiceStream, Deutsche Telekom's cost of capital was virtually the same as that of France Télécom, a company with a greater level of government ownership, and that of British Telecom, a company with no appreciable government

ownership. Clearly, partial government ownership does not determine the cost of capital for global telecommunications carriers.

3. Statutory Privileges or Immunities

In addition to the fact that it does not have preferential access to capital, Deutsche Telekom is a private law stock corporation subject to applicable German federal law, such as the German Stock Corporation Act and German tax laws.⁵⁵ Thus, Deutsche Telekom has the same responsibilities (for example, with regard to taxation) as any other private enterprise in Germany and does not enjoy tax benefits or any kind of preferential tax treatment.⁵⁶ Equally, Deutsche Telekom does not receive state aid, as European Union legislation prohibits state aid that would distort competition.⁵⁷

B. Can the Foreign Acquirer Engage in Predatory Pricing and Cross-Subsidization in the U.S. Wireless Telecommunications Market?

A fundamental difference exists between a company with *domestic* government ownership and a company with *foreign* government ownership. Plainly, the former is a greater threat to competition than is the latter. For example, predation and cross-subsidization by the U.S. Postal Service in the American overnight mail or parcel delivery market is plausible given that the Postal Service is 100% government owned with no realistic prospect of privatization in the near future, that it enjoys a statutory monopoly over both the delivery of letters and access to the customer's letter box, and that it is subject to relatively light-handed regulation by the Postal Rate Commission.⁵⁸ The same is true of Deutsche Post and the German parcel delivery market, as the European Commission ruled in March 2001, when it found Deutsche Post to have engaged in predatory pricing in violation of Article 82 of the EC Treaty.⁵⁹ If particular members of Congress seek to prevent possible competitive abuses by government-owned enterprises, there is much that can be done first by scrutinizing the

55. See DEUTSCHE TELEKOM ANNUAL REPORT, *supra* note 51, at 72-74.

56. See *id.*

57. Treaty of Amsterdam Amending the Treaty on European Union, the Treaties Establishing the European Communities, and Certain Related Acts, Oct. 2, 1997, O.J. (C 340) 211 (1997).

58. See generally J. GREGORY SIDAK & DANIEL F. SPULBER, PROTECTING COMPETITION FROM THE POSTAL MONOPOLY (1996).

59. Case COMP/35.141, Deutsche Post AG, 2001O.J. (L 125) 27 (holding Deutsche Post liable for predatory pricing of parcel delivery services in Germany and ordering structural separation).

businesses that the U.S. government itself wholly owns and operates behind the protection of statutory monopolies and other privileges and immunities.

In contrast to the plausible anticompetitive behavior in domestic markets by public enterprises such as the U.S. Postal Service or Deutsche Post (before its initial public offering), predation and cross-subsidization by Deutsche Telekom in the American market for wireless telecommunications services is highly *implausible*. A critical assumption of the cross-subsidy argument is that Deutsche Telekom would use cross-subsidies to obtain a temporary competitive advantage over its rivals in the U.S. wireless market, with the objective of eliminating competitors. That view implies that Deutsche Telekom would engage in behavior resembling predatory pricing, which is said to occur when a firm incurs a loss with the intention of eliminating rivals and later raising prices to supracompetitive levels to recoup earnings after the rivals have exited the market.⁶⁰ That argument has been widely discredited. The published economics literature and the Supreme Court generally agree that predatory pricing is unlikely to succeed because: (1) there is little guarantee of successful recoupment; (2) rivals can also incur losses in anticipation of future profits; and (3) new entrants will appear if prices are raised after the existing competitors have exited the industry.⁶¹ Moreover it is difficult in practice to distinguish low competitive prices from predatory prices and to distinguish low earnings from predatory losses.⁶²

In the following sections, I apply the traditional theory on predatory behavior to demonstrate that Deutsche Telekom does not have either the opportunity or the incentive to engage in predatory behavior in the U.S. wireless telecommunications market. The German government's partial ownership of Deutsche Telekom during the remaining period of the company's privatization does not create any special concern in this regard.

1. Ability to Engage in Predatory Behavior

Deutsche Telekom does not have the ability to engage in predatory

60. See, e.g., WILLIAM J. BAUMOL & J. GREGORY SIDAK, TOWARD COMPETITION IN LOCAL TELEPHONY 63 (1994); DANIEL F. SPULBER, REGULATION AND MARKETS 475-76 (1989); see generally JOHN R. LOTT JR., ARE PREDATORY COMMITMENTS CREDIBLE?: WHO SHOULD THE COURTS BELIEVE? (1999).

61. See *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 224-26 (1993); *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 589 (1986); ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 144-59 (Free Press 1993) (1978); RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 184-96 (1976).

62. BORK, *supra* note 61, at 144-55.

behavior in the U.S. wireless telecommunications market for at least three basic reasons. First, Deutsche Telekom is compelled to pursue long-run profit maximization, which is inconsistent with predatory pricing. Second, fiduciary duties reinforce Deutsche Telekom's dedication to profit-maximizing behavior. Third, the German telecommunications market is sufficiently competitive to deny Deutsche Telekom any reservoir of supracompetitive profits from which it might pay for a strategy of predation in the U.S. wireless telecommunications market.

a. The Obligation to Pursue Profit Maximization and the Reinforcing Effect of Fiduciary Duties

The absence of long-run profit maximization is the critical factor behind the theory that a public enterprise will have a heightened incentive for predatory conduct.⁶³ But profit maximization necessarily becomes the objective of a firm as soon as it is *at least partly* privatized and listed on a stock exchange. (The same is not true of the U.S. Postal Service, for example, which is wholly owned by the U.S. government and thus has no shares publicly traded on a stock exchange).⁶⁴

This insight has critical implications for the competitive analysis of the partial government ownership of Deutsche Telekom; that partial government ownership does not relieve Deutsche Telekom from the objective of profit maximization. Because Deutsche Telekom must compete with other firms for capital, Deutsche Telekom is not free to choose predatory prices (or any other prices) that do not maximize long-run profits, and hence returns to investors. In short, because Deutsche Telekom is a publicly traded company, it must seek to maximize profit.

It is, of course, a fundamental principle of corporate law that the majority shareholder of a corporation owes a fiduciary duty of loyalty to minority shareholders.⁶⁵ Even though Deutsche Telekom is a German corporation, its securities trade on not only the Frankfurt and London exchanges, but also on the New York Stock Exchange. As of January 2001,

63. See LOTT, *supra* note 60; David E.M. Sappington & J. Gregory Sidak, *Are Public Enterprises the Only Credible Predators?*, 67 U. CHI. L. REV. 271 (2000); DAVID E.M. SAPPINGTON & J. GREGORY SIDAK, INCENTIVES FOR ANTICOMPETITIVE BEHAVIOR BY PUBLIC ENTERPRISES (AEI-Brookings Joint Center for Regulatory Studies, Working Paper No. 99-11, 1999).

64. See SIDAK & SPULBER, *supra* note 58.

65. See, e.g., Jones v. H. F. Ahmanson & Co., 460 P.2d 464, 471 (Cal. 1969). For an insightful analysis of the applicability of fiduciary duties to public enterprises, see Michael J. Whincop, *Another Side of Accountability: The Fiduciary Concept and Rent-seeking in Government Corporations*, Social Science Research Network, at http://papers.ssrn.com/paper.taf?abstract_id=258668 (Nov. 2000).

nearly 20% of Deutsche Telekom's stock was held by U.S. individual and institutional investors.⁶⁶ If, as majority shareholders of Deutsche Telekom, the German government and the Kreditanstalt für Wiederaufbau (the German reconstruction bank, founded pursuant to the Marshall Plan) attempted to influence the management of Deutsche Telekom to deviate from profit-maximizing behavior, and if Deutsche Telekom acquiesced to that attempt, Deutsche Telekom would expose itself, under American corporate law, to liability to the company's minority shareholders. Similar risks of liability could arise for Deutsche Telekom under the laws of other nations with respect to the rights of Deutsche Telekom shareholders in those nations.

Given the highly developed market for shareholder litigation in the United States, these various fiduciary duties are powerful incentives to keep the current majority shareholders of Deutsche Telekom inclined toward profit maximization. That legal duty accords with good business sense. Deutsche Telekom is in the midst of privatization. Plainly, to ensure successful share offerings in the future, the Kreditanstalt für Wiederaufbau and the German finance ministry have a powerful incentive to see that Deutsche Telekom delivers maximum value to its current shareholders, which is an objective that cannot be reconciled with a strategy of incurring predatory losses in new markets.

b. Competition and Regulation in the Acquirer's Home Market

The ability to engage in predatory behavior in the United States also depends on whether, in its home market, the foreign acquirer faces competitive telecommunications markets and effective, transparent regulation. In Deutsche Telekom's case, the regulatory and competitive conditions of the German wireless and traditional landline telecommunications markets do not provide Deutsche Telekom supracompetitive returns with which to subsidize predatory behavior in the U.S. mobile telephony market.

The German telecommunications market was fully liberalized on January 1, 1998. Because there are no foreign ownership restrictions in Germany, many foreign-owned companies have entered the market. The German Regulatory Authority reported that "[b]y the end of 1999, 252

66. The factual discussion over the following pages draws from my September 2000 congressional testimony and the sources cited therein. See *Foreign Government Ownership of American Telecomm. Companies: Hearings Before the Subcomm. on Telecomm., Trade, and Consumer Prot. of the House Comm. on Commerce*, 106th Cong. 101 *et seq.* (2000) [hereinafter *Testimony of J. Gregory Sidak*].

companies had been granted a network or a voice telephony licence.”⁶⁷ As of March 2000, over 100 companies offered voice telephony, including more than forty resellers.⁶⁸ Foreign companies, half of which are from North America, held majority stakes in 20% of these licensees.⁶⁹ In satellite communications, over 30% of the licenses (nineteen of fifty-nine) had been awarded to foreign companies.⁷⁰

The pace of telecommunications deregulation in Germany since its landmark legislation in 1996 compares favorably with that in the United States. Although interconnection disputes arise in Germany and produce court cases, the same is true in the United States where the Supreme Court has twice heard cases concerning the unbundling and interconnections rules applicable to incumbent local exchange carriers under the Telecommunications Act of 1996.⁷¹ In the German long-distance market, as Figure 1 shows, the decline in Deutsche Telekom’s market share following privatization has occurred much more rapidly than the decline that occurred in AT&T’s market share following its divestiture. AT&T’s share of operating revenues fell from 91% to 45% during the thirteen-year period from 1984 to 1997, whereas Deutsche Telekom’s market share fell from 100% to approximately 60% in only a two-year period from year-end 1997 to year-end 1999.

67. REGULATORY AUTHORITY FOR TELECOMMUNICATIONS AND POSTS, ANNUAL REPORT 1999, at 13 (2000), available at http://www.regtp.de/en/market/start/fs_15.html.

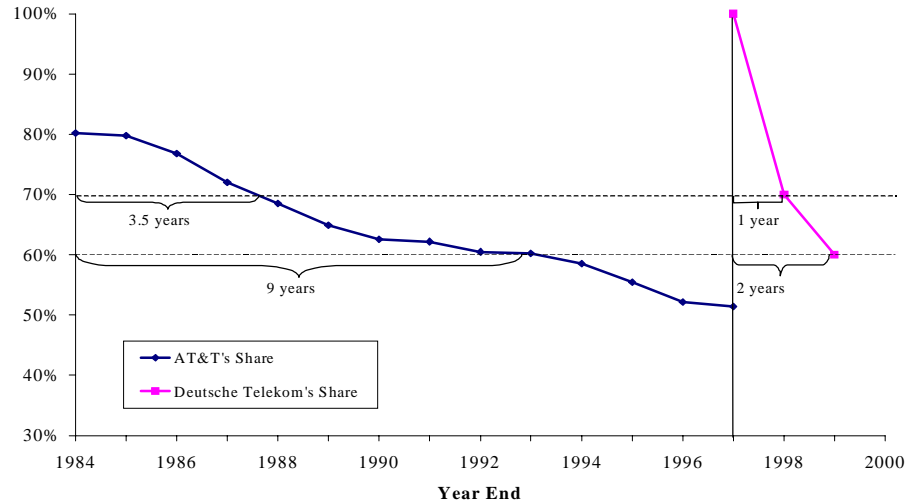
68. *Id.* at 14.

69. *Id.* at 13.

70. *Id.*

71. See *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366 (1999); *Iowa Utils. Bd. v. FCC*, 219 F.3d 744 (8th Cir. 2000), cert. granted sub nom. *Verizon Communications, Inc. v. FCC*, 121 S. Ct. 877 (2001).

FIGURE 1: *Decline in Long-Distance Market Share for AT&T and Deutsche Telekom*



Notes: AT&T's share of total access minutes, which includes international minutes, for all U.S. long-distance carriers. Deutsche Telekom's share of domestic long-distance, international, and fixed-to-mobile minutes.

Sources: FEDERAL COMMUNICATIONS COMMISSION, COMMON CARRIER BUREAU, INDUSTRY ANALYSIS DIVISION, TRENDS IN TELEPHONE SERVICE, Table 10.1, July 1998, at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/trend298.pdf; REGULATORY AUTHORITY FOR TELECOMMUNICATIONS AND POSTS, ANNUAL REPORT 1999, at 14 (2000), at http://www.regtp.de/en/market/start/fs_15.html; *Telekom Announces Aggressive Price Policy*, FRANKFURTER ALLGEMEINE ZEITUNG, Nov. 19, 1998, at 21.

Indeed, most market segments of the German telecommunications market are already subject to vigorous price competition, which eliminates any chance of excessive pricing from which to earn monopoly rents. With respect to the local market, Deutsche Telekom is required to provide competitors with unbundled access to its subscriber access lines, and the Regulatory Authority has set a monthly tariff for this unbundled access that is substantially lower than that sought by Deutsche Telekom in its tariff application.

With respect to unbundled network access, the U.S. incumbent local exchange carriers are obliged to provide unbundled access to the local loop. The access price is set by state regulators, and it varies by state. Using a three-state average of states with similar population density to Germany—New York, Delaware, and Massachusetts—the monthly local loop rate is

\$14.96, or DM 29.92.⁷² The tariff for a digitally capable loop, however, can be almost twice as expensive as the tariff for an analog loop. By comparison, Deutsche Telekom is obliged to provide unbundled access to the local loop at DM 25.40 per month, or 15.1% less than the U.S. rate. Moreover, in Germany, *all* loops are digitally capable. Thus, while the price of an analog loop in Germany is similar to an analog loop in the United States, the price of a digital loop in Germany is roughly *half* the price of one in the United States.

In the national market, the terms on which Deutsche Telekom provides services to competitors are essentially determined by the Regulatory Authority. The interconnection rates charged by Deutsche Telekom during 1999 were set by the Ministry for Posts and Telecommunications, the predecessor to the Regulatory Authority, in September 1997. In December 1999, the Regulatory Authority approved new interconnection rates that, applied through January 31, 2001, were on average approximately 24% lower than the previously applicable interconnection rates. The terms for interconnection of Deutsche Telekom's telephone network with networks of other national providers are contained in bilateral contracts. At the end of 1999, Deutsche Telekom had signed ninety-five such agreements. An additional fifty companies had submitted requests for negotiations at that date. The total number of leased lines provided to carriers at year's end (that is, transmission paths that had been made available to competitors in the fixed-line network) rose by 43% in 1999 in comparison with the previous year.⁷³

In the German wireless market, Deutsche Telekom ranks second behind the market leader, Vodafone. The wireless market opened to competition earlier than the wireline market. Four mobile network operators served Germany as of early 2001. The two largest, T-Mobil (T-D1/T-C-Tel) and Mannesmann Mobilfunk (D2), have battled for market leadership since 1990, with D2 currently having a modest edge. Between them, they serve approximately 79.9% of the digital mobile telecommunications market in Germany, based on management estimates, with T-Mobil having an estimated share of 39% of this market as of December 31, 1999. E-Plus, the third mobile network operator, entered the market using the GSM 1800 standard in 1994, two years after T-D1 and D2 commenced operations, and held an estimated 16.3% of the market at year-end 1999. E2, the fourth network operator, commenced operations in late 1998 also using the GSM 1800 standard and in 2000 had an estimated market share of 3.9%. Licenses for UMTS—or third-generation mobile

72. *Testimony of J. Gregory Sidak, supra* note 66.

73. DEUTSCHE TELEKOM ANNUAL REPORT, *supra* note 51, at 49.

telecommunications—were auctioned in Germany during the summer of 2000. The auction generated six distinct licensees—the four incumbent wireless carriers plus two entrant carriers backed by France Télécom and by Spain's Telefónica and Finland's Sonera. Now Deutsche Telekom must compete for wireless customers against VIAG Interkom (backed by British Telecom), MobilCom Multimedia (backed by France Télécom), Mannesmann MobilFunk (Vodafone), Group 3G (a joint venture between Telefónica and Sonera), and KPN's E-Plus Hutchison.⁷⁴ Some analysts expect that the six distinct licensees will produce “fierce competition” in the German wireless market, making “it more difficult for 3G operators to recoup their license costs.”⁷⁵

The large number of experienced companies that have entered, and continue to enter, all segments of the German telecommunication market ensures that prices in Germany are driven close to competitive levels. That outcome in turn ensures that Deutsche Telekom cannot earn supracompetitive returns with which to fund a predatory strategy in another country. The competitive entry witnessed in the German telecommunication market also indicates that entrants there do not fear cross-subsidization by Deutsche Telekom. Otherwise, for example, firms other than Deutsche Telekom would not have spent \$38.5 billion (\$46.2 billion total, less \$7.7 billion paid by Deutsche Telekom) in August 2000 to acquire licenses for 3G spectrum.⁷⁶ For these reasons, it is also highly improbable that, *outside* Deutsche Telekom's home market, Deutsche Telekom would pose any actual risk of cross-subsidization or be believed by competitors in those other countries to pose any such risk. No evidence exists that Deutsche Telekom has engaged in predatory behavior in other countries where it has acquired a wireless carrier. For example, since Deutsche Telekom acquired One2One in the United Kingdom in August 1999,⁷⁷ no complaints have been filed.

In addition, the German Telecommunications Act contains other safeguards explicitly intended to prevent cross-subsidization between

74. REGULATORY AUTHORITY FOR TELECOMMUNICATIONS AND POSTS, ANNUAL REPORT 2000, at 26, available at http://umts.regtp.de/en/market/start/fs_15.html.

75. *German 3G Winners Take Hit From Credit Rating Agency S&P*, TELECOMM. REPS. DAILY, Aug. 21, 2000, available at <http://www.tr.com/tronline/trd/2000/td082100/td082100-02.htm> (quoting analysts from Standard & Poor's).

76. *German '3G' Spectrum Auction Tops U.K. Bidding Total by \$10 Billion*, TELECOMM. REPS. DAILY, Aug. 21, 2000, available at <http://www.tr.com/online/trd/2000/td081700/Td081700-01.htm>.

77. Press Release, Deutsche Telekom AG, Deutsche Telekom Acquires One2One—Position in Great Britain Significantly Strengthened—Major Step on One [of] the Most Important Telecommunications Markets (Aug. 6, 1999), available at <http://www.dtag.de/dtag/presse/artikel/0,1018,x298,00.html>.

competitive and less competitive market segments. In particular, because Deutsche Telekom is not subject to rate of return regulation, it cannot cross-subsidize one division by misallocating its costs to another. The inability to shift costs from one division to another severely undermines Deutsche Telekom's opportunity to engage in predatory behavior.

2. Incentive to Engage in Predatory Behavior

The preceding analysis shows that Deutsche Telekom lacks the opportunity to engage in predatory behavior in the U.S. wireless telecommunications market. Deutsche Telekom also lacks the *incentive* to engage in such conduct because, for at least four reasons, Deutsche Telekom could never recoup predatory losses.

First, the likelihood of cross-subsidization and predatory pricing grows increasingly implausible when one considers that the U.S. wireless market that Deutsche Telekom enters through its acquisition of VoiceStream has multiple incumbent suppliers with substantial capacity and enormous financial resources. For example, as of August 28, 2001, the combined market capitalization of AT&T Wireless (\$39.7 billion), BellSouth (\$71 billion), Nextel (\$9.5 billion), SBC Communications (\$139.1 billion), Sprint PCS (\$23.6 billion), and Verizon (\$137 billion) was \$419.9 billion.⁷⁸

Second, the acquisition of VoiceStream gives Deutsche Telekom only about 3% of the wireless telecommunications customers in the United States. Starting with such a low market share makes it all the more implausible that Deutsche Telekom could capture a commanding market share quickly enough to make a campaign of predatory losses remunerative. Stated differently, Deutsche Telekom would need to capture a significant share of the U.S. wireless market to make the eventual price increase on "captured" customers profitable.

Third, the low average variable costs in the delivery of wireless services further diminishes the prospect that predation would be attempted by Deutsche Telekom or any other firm. Economic rationality will prevent a firm from persistently pricing below average variable cost.⁷⁹ When prices do not allow for a competitive level of profit—that is, when total revenues are less than total costs—a firm must confront the prospect of shutting down operations. In particular, the firm should continue to operate in the short run if and only if the loss incurred when the firm stays in business

78. Information obtained from Yahoo's web site <http://biz.yahoo.com/> at close of trading, Sept. 5, 2000.

79. See, e.g., WILLIAM J. BAUMOL & ALAN S. BLINDER, MICROECONOMICS: PRINCIPLES AND POLICY 216-17 (7th ed. 1997).

(that is, total costs less total revenues) is less than the loss incurred when the firm shuts down (that is, total costs less total variable costs). Hence, the economic decision to remain in operation can be boiled down to the following simple rule: Remain in operation so long as total variable cost is less than total revenue. Because total cost and total revenue are divisible by quantity produced (assuming a uniform price), the rule can be simplified further: A firm would remain in operation so long as average variable cost were less than price. If that condition were not met, the firm would rationally choose to shut down operations. Stated differently, no rational firm would choose to price below average variable cost if its sole objective were maximizing its own profit. Because the majority of the costs in developing a wireless network are fixed, the average variable costs for U.S. wireless carriers are very low, relative to their respective prices. Hence, a necessary (but not sufficient) condition for a successful predatory strategy would be that Deutsche Telekom would force prices for wireless telecommunications services to fall significantly.

The fourth reason that recoupment is impossible and predation therefore implausible is the durability of spectrum. Spectrum does not wear out and cannot be destroyed. It would therefore be impossible for Deutsche Telekom to restrict industry output of wireless telecommunications services and raise prices above incremental costs during the recoupment phase of the predation scenario. Even in the unlikely event that Deutsche Telekom could drive one of the large U.S. wireless incumbents into bankruptcy, the bandwidth capacity of that carrier would remain intact, ready for another firm to use (after a liquidation sale or FCC reassignment of licenses) and immediately undercut Deutsche Telekom's noncompetitive prices.⁸⁰ It is not plausible that Deutsche Telekom could hoard the spectrum of competitors that it had driven from the market because the FCC (if not also the federal antitrust authorities) would first have to approve a transfer of the relevant licenses from the failed competitors to Deutsche Telekom. In short, if Deutsche Telekom were to attempt predatory pricing in the U.S. wireless market, it could not expect to recoup its investment in sales made below

80. The FCC has recognized an analogous argument concerning the durability of fiber-optic transmission capacity. See Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Comm. Act of 1934, as amended; and Reg. Treatment of LEC Provision of Interexchange Servs. Originating in the LEC's Local Exchange Area, *Notice of Proposed Rulemaking*, 11 F.C.C.R. 18,877, para. 137, 5 Comm. Reg.2d (P & F) 2113, para. 137 (1996) (citing Daniel F. Spulber, *Deregulating Telecommunications*, 12 YALE J. ON REG. 25, 60 (1995); other citations omitted). See also J. GREGORY SIDAK & DANIEL F. SPULBER, DEREGULATORY TAKINGS AND THE REGULATORY CONTRACT: THE COMPETITIVE TRANSFORMATION OF NETWORK INDUSTRIES IN THE UNITED STATES 93-94 (1997) (making same argument).

incremental cost.⁸¹ The FCC expressly embraced this economic reasoning in its order approving Deutsche Telekom's acquisition of VoiceStream.⁸²

V. CONCLUSION

Deutsche Telekom's acquisition of VoiceStream was the first major occasion for the FCC to consider the significance of partial foreign government ownership for its public interest analysis of a proposed transfer of license. Bond ratings and weighted average costs of capital reveal the implausibility of the hypothesis that Deutsche Telekom has the *ability*, by virtue of its partial government ownership, to subsidize predatory pricing in the U.S. wireless market. These data are consistent with the qualitative insight that Deutsche Telekom must pursue profit maximization because at least some of its shares are privately held and publicly traded.

Furthermore, Deutsche Telekom lacks the *incentive* to engage in predatory conduct in the U.S. wireless market. Because of the inherent durability of spectrum, Deutsche Telekom could never recoup predatory losses incurred in the U.S. mobile telephony market—there would always be competitors in the market. Moreover, the low average variable costs in the delivery of wireless services make it all the more implausible that U.S. carriers would exit the wireless telecommunications market in the face of attempted predation by Deutsche Telekom. Because its expected losses from engaging in predation would outweigh any expected gains, Deutsche Telekom would not have an incentive to engage in predatory behavior.

As evidenced by the FCC's acceptance of it, the economic framework presented in this Article fits neatly within procedures that exist to scrutinize U.S. acquisitions by a company partially owned by a foreign government. If legitimate concerns exist about the economic incentives of such an acquiring firm, those concerns militate in favor of a thoughtful examination of the issue in the public interest proceeding at the relevant regulatory agency, such as the FCC, or in the merger review proceeding at the Department of Justice ("DOJ") or the Federal Trade Commission ("FTC").

81. For similar skepticism of the plausibility of predatory pricing in the U.S. telecommunications market, see PAUL W. MACAVOY, *THE FAILURE OF ANTITRUST AND REGULATION TO ESTABLISH COMPETITION IN LONG-DISTANCE TELEPHONE SERVICES* 186-90 (1996); Kenneth J. Arrow et al., *The Competitive Effects of Line-of-Business Restrictions in Telecommunications*, 16 *MANAGERIAL & DECISION ECON.* 301 (1995); Paul S. Brandon & Richard L. Schmalensee, *The Benefits of Releasing the Bell Companies from the Interexchange Restrictions*, 16 *MANAGERIAL & DECISION ECON.* 349 (1995); Susan Gates et al., *Deterring Predation in Telecommunications: Are Line-of-Business Restraints Needed?*, 16 *MANAGERIAL & DECISION ECON.* 427 (1995); Jerry A. Hausman, *Competition in Long-Distance and Telecommunications Markets: Effects of the MFJ*, 16 *MANAGERIAL & DECISION ECON.* 365 (1995).

82. See *Deutsche Telekom Order*, *supra* note 3, para. 90.

In addition, there remains a powerful incentive for private companies to use the antitrust law and the Telecommunications Act to challenge mergers, for both noble reasons and selfish ones. New legislation to regulate foreign government investment in American telecommunications is therefore unnecessary to protect the interests of either U.S. consumers or U.S. producers. The existing review processes at the FCC and the DOJ (or FTC) already have at their disposal, and use, sophisticated economic analysis to evaluate the public interest implications of acquisitions by partially privatized firms.