After privatizing British Telecom (BT) in 1984, the British government privatized all other major utility industries in succession—gas in 1986, water in 1989, and electricity in 1990. Debates soon emerged about whether the benefits from privatization in these industries have been equitably distributed between shareholders and consumers. This Note discusses the post-privatization performance of BT, the longest-standing privatized utility in the United Kingdom, to shed light on some of the problems of regulating privatized utilities. A recent event study of BT suggests that regulation has checked monopoly power and that the impact of the regulator’s decisions has been heterogeneous—with some decisions favoring consumers, some favoring BT, and some favoring BT’s competitors. This event analysis could usefully be extended to the other utilities, which were privatized on different terms and are subject to different regulatory packages.

The problem of utility privatization

Nationalized utilities invariably operate with little or no competition, as many are natural monopolies or perhaps natural oligopolies. Competition, where it is possible, cannot emerge until a private market has been created. A privatizing government therefore is immediately subject to the criticism that it is creating private monopolies—especially when newly privatized utilities have to rebalance their charges—raising some and lowering others—to remove the inherited cross-subsidies that are a major financial liability.

With these hurdles in mind, the U.K. government decided early in the privatization process to subject newly privatized utilities to a regulatory regime with two main elements. The regime was designed to substitute for competition by encouraging the regulated firm to operate efficiently, and to promote competition whenever possible. The regulatory agencies adopted price capping (rather than rate-of-return regulation) to limit the exercise of monopoly power and simultaneously sought to stimulate entry. This regime was based in part on the U.K. government’s view by the 1980s that technical advances (fiber optics, for example) had weakened traditional arguments for limiting entry in industries once thought to be natural monopolies. Even in utility industries still thought to be natural monopolies (for example, gas distribution) because of the cost advantages of having just one firm operate, the government came to believe that the cost control discipline exerted by competition would produce net benefits. Therefore, a key feature of post-privatization regulation has been the regulatory agencies’ assumption of antitrust responsibilities. The Office of Telecommunications Regulation (Oftel), the Office of Electricity Regulation (Offer), the Office of Gas Regulation (Ofgas), and the Office of Water Regulation (Ofwat) all have responsibility for encouraging competition in their industry.

There is at least some evidence that post-privatization regulation has checked monopoly power. A series of decisions to open utility markets to competition gave the regulatory bodies a distinctly pro-competitive look. A notable early example of this pro-competitive stance was the October 1985 decision to grant BT’s only serious competitor, Mercury Communica-
tions (a wholly owned subsidiary of Cable and Wireless), the right to interconnect with BT’s local networks at advantageous access prices. Comparable rulings from Ofgas have allowed entrants to compete in the supply of domestic and industrial gas. The impact of post-privatization regulation has not been uniform, however. For example, BT benefited from the duopoly policy that limited its potential competitors to Mercury until 1990. And OfTEL’s plans to open the U.K. telecoms market (in practice, to U.S. cable operators) were not as tough as BT had feared.

A recent detailed study of the post-privatization period assessed the overall effect of regulatory events in U.K. telecoms. This study is outlined below.

### Regulatory capture and the public interest

Theories of regulation may be broken down into public interest and private interest approaches. There is also a mixed view, which argues that regulation should be seen in public finance terms as benefiting some groups at the expense of others. Among the private interest approaches is the capture hypothesis, associated with the work of the late George Stigler. This hypothesis is now generally understood as arguing that it is in the private interest of a vote-maximizing government to allow regulatory programs to reflect the interests of powerful electoral groups. A particular concern is that firms in a regulated industry will influence the regulatory environment in their favor—or capture the regulatory process. This capture may occur in the legislature (top-level capture), as policy is formulated and legislation passed, or in the regulatory agency and the ministerial decisionmaking (lower-level capture), as regulatory decisions are made after the regulation is in place.

The private interest view is often contrasted with the public interest approach that emerges from traditional welfare economics. The public interest view sees government as an impartial referee working to maximize the value of total output. This view tends to be regarded as naive by economists working on regulatory topics, who often expect to find evidence of capture or of regulation working as a tax and subsidy arrangement.

### Testing for capture

One way to test whether a regulatory package has been captured is to compare the stock market returns for a regulated company or group of companies over a long period with the returns for a comparable sample of firms not affected by the regulation. Abnormally high returns could indicate capture by the regulated industry if they can be associated statistically with changes in the regulatory environment (regulatory events). Lower-level capture would be reflected in an association between returns and individual regulatory events. A cumulative effect from all the regulatory events is consistent with top-level capture (bear in mind that some events will have a positive effect, and some negative). Standard statistical techniques exist for testing for association between regulatory events and abnormal returns while controlling for the effect of other possible influences.

### Data

Event data for BT are available from the archives of the Financial Times or Wall Street Journal for the period 1984–94. A basic event diary includes both regulatory and non-regulatory events. An important nonregulatory event that affected all quoted companies was the perturbation in stock markets in October 1987. Data on the daily share prices for a company are most conveniently drawn from a commercial service such as Datastream. An event study also needs an index of normal market returns for comparison, which in the United Kingdom is usually based on a market index such as the Financial Times Stock Exchange Index of 100 leading firms (FTSE-100). The technique, which may involve measuring thousands of changes in share prices for each company, has heavy data requirements.
The use of a market index based on the FTSE-100 (but excluding utility companies) implies that BT is in a risk class similar to that of blue-chip companies. That is in fact a reasonable assumption if utilities’ lower risk is linked to their monopoly status and, ultimately, to regulatory tolerance of their situation. In explaining utilities’ low risk, their monopoly status should be emphasized rather than the fact that they supply necessities: after all, food retailers also supply necessities, but their returns in the United Kingdom have been anything but stable since they entered into a competitive price war a few years ago. The use of the FTSE-100 allows isolation of abnormally high returns (or, indeed, any reduction in the variance of returns) for utilities attributable to their monopoly status.

**Results**

In the event study of BT’s post-privatization performance, the company’s average daily returns turned out not to be significantly higher than the market index, ruling out top-level capture. The results do not, of course, rule out the possibility that BT had attempted such capture, wasting resources in the process.

Regulation may go through a life cycle, however, and can become lower-level captured “in action” over time. Individual events or groups of events may favor industry interests, creating short-term abnormal returns, even if abnormal returns do not show up for the full period under examination. The event study for BT therefore also examined the effects of particular regulatory events by isolating the impact of ministerial and Oftel decisions during 1984–94. The event study showed few statistically significant regulatory events affecting BT over the post-privatization period: of seventy-five identifiable regulatory events, only twelve were significant. Furthermore, within this group of significant regulatory events, some were more robustly significant than others (as measured by standard statistical tests).

Reassuringly, Oftel’s interconnection ruling in October 1985, which set low interconnection charges for Mercury, showed up as a robust negative effect on BT’s returns. Another significant result that accords with expectations relates to the ending of the duopoly policy in 1990. Although it was always known that this policy would end, press reports that its end was imminent in the period just before publication by the U.K. government of a consultative paper, “Competition and Choice,” produced a significant negative effect. The publication of the paper in 1990 produced a robustly significant positive effect on BT’s returns that can be interpreted as reflecting the removal of uncertainty. Similar relief among investors may explain the robust positive effects on BT’s returns stemming from Oftel’s decision at the end of 1988 to resolve a lingering dispute over the nonprice terms for interconnecting Mercury. Investors also appear to have been reassured by the outcome of the August 1992 negotiations between BT and Oftel, which led to a decision not to refer BT to the Monopolies and Mergers Commission (MMC), the entity responsible for applying many aspects of U.K. antitrust law—even though the decision was also associated with proposals to tighten the price cap.

The decisions to liberalize private networks and to license new mobile services (including Mercury) in mid-1989 and the publication of another consultative document taking a tough line on price controls in 1992 all appear to have had a negative impact on BT’s returns. These events can all be reasonably regarded as regulatory moves that oppose BT’s commercial interests. Another event that could be added to this list is the February 1988 decision to relax the rules on entry into satellite services, which favored competition from U.S. sources and had a negative effect. But it occurred too close to an event that followed to allow reliable inferences to be drawn.

At least two pro-competitive decisions appear to have had a significant positive effect on BT’s returns. These are the decisions to suspend the monopoly on installation approval (January 1987) and to open the market to more competition (October 1993). Another potentially posi-
tive event is the 1988 decision to open competition in specific services, although this event also is too close to another to allow reliable inferences to be drawn. At first sight, these positive effects are counterintuitive. But investors may believe that creating a generally competitive environment forces BT to become cost-efficient and ultimately improves its profitability.

The event study of BT also revealed some “dogs that failed to bark.”11 Threats by Oftel to examine BT’s prices or to refer BT to the MMC over pricing issues appear to have had no impact on BT’s returns. These threats usually resulted in negotiated settlements, which sometimes had significant positive effects on BT’s returns. This outcome is consistent with the view that BT has earned normal market returns and with financial market expectations that BT will face such scrutiny. Announced revisions of the price cap had no significant impact on BT’s returns, probably because financial markets fully anticipate changes that hold BT to a normal market return. Although not strictly regulatory events, the commencement of share trading following the BT1, BT2, and BT3 share offers between 1984 and 1993 had no significant impact on returns.

Conclusions

BT seems to have earned normal market returns for the most part and thus does not appear to have captured the regulatory process. There were no individual events suggesting the early capitalization into share prices of anticipated future abnormal returns. And a detailed review of regulatory events revealed no clear pattern favoring or opposing BT’s commercial interests. Moreover, since BT has not been pushed below a normal market return, there is no evidence of capture by consumer interests. Instead, the regulatory pattern of events is heterogeneous, with some events favoring BT, some favoring its competitor, Mercury, and some favoring consumers.

The event study of British Telecom therefore suggests that Oftel has carried out its regulatory function effectively and avoided capture. Although precise statistical tests need to be carried out for gas, water, and electricity,12 press reports suggest that a heterogeneous pattern of regulatory effects also characterizes these utility industries. Thus, the post-privatization performance of utilities in the United Kingdom shows how decentralized regulation, based on price capping and promotion of competition, can prevent privatized utilities from becoming private monopolies.

Illustration by Ruth Sofair Keter.

1 Cross-subsidy cannot be justified by social-welfare economic analysis either. See D. Swann, The Retreat of the State (Harvester Wheatshead, 1989).
8 See Dnes and Seaton, “The Regulation of British Telecom.”
9 The analyst must exclude the companies in the event sample from the market index.
10 Significance refers to statistical significance (that is, the association could not have been generated by chance). Similarly, robustly significant means that the significance is maintained throughout different formulations of the economic model used in the event study.
11 “Is there any other point to which you would wish to draw my attention?”
   “To the curious incident of the dog in the night-time.”
   “The dog did nothing in the night-time.”
   “That was the curious incident,” remarked Sherlock Holmes. (Silver Blaze, from the Memoirs of Sherlock Holmes, by Sir Arthur Conan Doyle, 1892)
12 Work is being carried out by economists at the University of Oxford on a recent tightening of the electricity price cap. And economists, including the author, based at the Nottingham Trent University and Loughborough University of Technology are carrying out studies of the post-privatization performance of all the privatized utilities.

Antony W. Dnes, Professor of Economics, The Nottingham Trent University, Nottingham, England (email: EPA3Dnesaw@ntu.ac.uk)