Excess Medicaid Payments and the Stock Prices of Drug Companies

The study by Bian et al. ("Long-Term Medicaid Excess Payments from Alleged Price Manipulation of Generic Lorazepam") published in the September 2012 issue of JMCP is important to our understanding of anticompetitive pricing for generic drugs.¹ The large sums lost by payers and the public, estimated at approximately \$625-\$657 million in the case studied by the authors, partly become gains for other parties and partly vanish due to wasteful deadweight loss. Stock price returns help to shed light on these economic issues surrounding the excess Medicaid payments analyzed by Bian et al. By examining the generic lorazepam manufacturer's stock price return resulting from the price hike, I find evidence that complements the authors' conclusions. The "abnormal return" for Mylan Pharmaceuticals was estimated for the standard market model² using publicly available stock price data.³ The appropriate *t*-test² reveals that the lorazepam price hike caused a significant abnormal return, equal to Mylan's actual return minus the return that would be expected had the drug price hike not taken place. In the short run time period surrounding the drug price hike, Mylan's shareholders enjoyed a gain, 4.74% cumulatively above normal over a 15-day event window, significant at P=0.051. Stock market participants were anticipating enhanced profits for Mylan consistent with the evidence of excess Medicaid payments that Bian et al. have since uncovered.

It is also interesting to consider the authors' findings regarding branded lorazepam in light of stock performance for the branded manufacturer. The Medicaid results show "small impacts on the utilization of branded lorazepam," consisting of a branded lorazepam price "unaffected by events in the generic lorazepam market," combined with "a steep percentage rise in the utilization of branded lorazepam."¹ In hindsight, this looks like a modestly improved outlook for the shareholders of American Home Products, the concurrent claimant on profits in the branded lorazepam market, who enjoyed a positive and significant "abnormal return" (cumulatively 3.39% above normal, P=0.016) during the generic price hike event window. Stock market participants clearly and correctly perceived that a less competitive generic market is positive news for branded profit potential.

The findings of Bian et al., the \$147 million settlement with the Federal Trade Commission (FTC), and the behavior of stock prices may indicate that Mylan's actions were anticompetitive. The significant short-term increases in stock prices may show that higher profit from greater market power was expected to exceed the loss from potential antitrust challenges. When antitrust action did materialize, stock prices moved in the opposite direction. Both generic and branded manufacturer stock prices exhibited significant negative "abnormal returns" upon the FTC suit announcement (P < 0.001 for both generic and branded returns). For stock market performance, the ups and downs resulting from profit-seeking bets are financially efficient. But for drug product markets and for society as a whole, inadequate competition leads to deadweight loss. Part of the excess payments are lost at Medicaid's expense but not transferred to anyone's net benefit. Anticompetitive conduct and quantification of its effects are indeed very worthy of our attention.

William C. Grant, PhD

Department of Economics, James Madison University grantwc@jmu.edu

DISCLOSURES

The author reports no financial or other conflicts of interest related to the subject of this letter.

REFERENCES

1. Bian B, Gorevski E, Kelton CM, Guo JJ, Boone JE. Long-term Medicaid excess payments from alleged price manipulation of generic lorazepam. *J Manag Care Pharm.* 2012;18(7):506-15. Available at: http://www.amcp.org/JMCP/2012/September/15589/1033.html.

2. Campbell J, Lo A, MacKinlay AC. *The Econometrics of Financial Markets*. Princeton, NJ: Princeton University Press; 1997.

3. Datastream International. Thomson Reuters. 2012. Available at: http://online.thomsonreuters.com/datastream/. Accessed October 20, 2012.

Editors' note to online readers: All *JMCP* articles contain hyperlinks to the source documents for free-access references. These hyperlinks are embedded in the reference numbers cited in the text as well as in the list of references at the end of each article.