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MARKET REACTIONS TO INTELLECTUAL PROPERTY INFRINGEMENT LITIGATIONS IN THE INFORMATION TECHNOLOGY INDUSTRY

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The information technology industry is characterized by constant innovation and substantial expenditures on research and development. Firms attempt to protect their investment in research and development and retain a competitive edge in the industry by obtaining patents and copyrights. These intellectual properties are important intangible assets that are evaluated by the financial markets and can be observed in the market price at which the common stock is traded. If a firm announces a lawsuit claiming that its intellectual property has been violated, the markets have to form an opinion about several matters, viz. the merit of the lawsuit, the probability of a verdict favoring either party, the damages which will be awarded, if any, and managerial time and effort expended in the process. We are unable to observe these inputs, but can measure the impact of these factors on the stock price.

We use the well established event-study methodology (Dodd and Warner 1983) to estimate the abnormal return on the stocks of both the plaintiff and defendant firms consequent to announcement of the lawsuit. Event-time portfolios of defendant and plaintiff firms allow us to overcome the problem of measurement errors and also draw conclusions about the statistical significance of these abnormal returns. We formulate a series of hypotheses regarding the economic impact of such lawsuits on individual firms and classes of firms in the IT industry. Is there a systematic bias in favor of either the plaintiff or defendant firms? In the absence of legal costs, will a lawsuit constitute a zero-sum game between the two parties? Does the size of the firm influence the abnormal returns incurred by the shareholders at the announcement of a lawsuit? Are there systematic differences in the abnormal returns in litigation involving hardware as opposed to software disputes? We also examine the abnormal returns to these stocks in the twenty days prior to announcement of the lawsuit to study if there was any anticipation by the markets of the forthcoming announcement and in the twenty days subsequent to announcement to see if there is any lag in market response.

The announcement of a settlement or judgment in the lawsuit could lead to further abnormal returns, especially if the outcome is different from what was expected by the financial markets. We study these abnormal returns for evidence supporting the same hypotheses mentioned earlier in the context of announcement date abnormal returns.

Preliminary results based on data collected using Lexis and CRSP databases on about forty firms indicate that defendant firms indeed suffer significantly negative abnormal returns when the lawsuits are announced. Plaintiff firms, on the other hand, benefit from significantly positive abnormal returns when lawsuits are announced. Neither class of firms exhibit significant abnormal returns in the periods leading to or subsequent to announcement. Regarding the judgment/settlement date abnormal returns, defendant firms exhibit abnormal returns both on the announcement date and in the twenty day period prior to that date. The markets seem to at least partially anticipate an unfavorable outcome for the defendant, and on average this is confirmed by the judgment or settlement. Plaintiff firms, on the other hand, enjoy positive abnormal returns on the judgment/settlement date, indicating that on average the outcome was in their favor.

Further testing should provide evidence supporting or not supporting the various hypotheses mentioned above. We may find that large software firms are able to use intellectual property rights to subdue smaller competitors and thereby quell competition, while this may not be the case with large hardware firms. As a policy issue, are different levels of patent protection required for hardware as opposed to software innovations? These are questions that take on more significance with the rapid growth of the IT industry and electronic commerce.

REFERENCE

Dodd, P., and Warner, J. B. "On Corporate Governance: A Study of Proxy Contests." *Journal of Financial Economics*, April 1983, pp. 401-438.