
Pay-For-Delay & Stock Prices: Smoking Gun Or Damp Squib?

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Law360, New York (August 24, 2016, 10:46 AM ET)



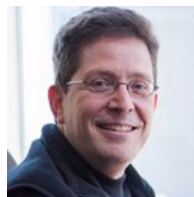
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In a July 19 Law360 article, we took issue with a recent publication that characterized stock price increases as dispositive evidence in establishing whether a particular reverse-payment settlement is anti-competitive¹. The authors of that approach responded with a vigorous objection to our critique². Here, we address the issues raised in that objection and provide additional context to support our unwavering position.

By way of background, advocates of the “stock-price approach” to assessing reverse-payment settlements made three key claims in their prior published work:

(1) “[a]n increase in the patent holder stock value upon announcement of a reverse-payment settlement constitutes a statistical test of the hypothesis that the agreement was anticompetitive³.”

(2) “Absent a defendant’s showing of some unexpected procompetitive efficiency for which the settlement was reasonably necessary, the statements that ‘the settlement increases expected patent holder profits’ and ‘the agreement delays entry beyond the date expected with litigation’ are economically equivalent. An event study showing an increase in future expected profits thus shows that the agreement is anticompetitive⁴.”

(3) “[t]he predictions of the ‘anticompetitive hypothesis’ are sharp and testable with publicly available data, meriting, we think, calling event studies the ‘smoking gun’ of reverse-payment settlements⁵.”

These claims reflect an extraordinarily aggressive interpretation of both the theoretical and the empirical literature. Our view is that while stock price evidence may at times be useful in analyzing the effects of reverse-payment settlements, it cannot serve as a shortcut to the rule of reason analysis articulated by the U.S. Supreme Court in its 2013 decision in *FTC v. Actavis*. An increase in the patent holder's stock price is insufficient to establish that a settlement of patent litigation is anti-competitive because the resolution of uncertainty that follows from a settlement can cause a change in the stock price even if the settlement outcome is perfectly consistent with a "competitive" outcome. Therefore, rather than simply observing a stock price increase and claiming that it means that a settlement was anti-competitive, analysis of the stock price effects of reverse-payment settlements requires extensive empirical evaluation of the many factors that affect stock prices, including the resolution of uncertainty. The complexity of such an exercise leads us to conclude that, in fact, event studies are not the "smoking gun" of reverse-payment settlements⁶. In their July 29 response to our Law360 article, advocates of the "smoking gun" viewpoint described our position as "incorrect in theory, empirically and legally⁷." We disagree with each of the three pieces of this sweeping assertion.

In Theory: Not a Smoking Gun

The "smoking gun" view of event studies is premised on the belief that patent litigation uncertainty is a risk that does not matter to investors⁸. Whether this assumption is accurate is fundamentally an empirical question, yet the "smoking gun" authors attempt to defend it with an appeal to theory. They cite to the Capital Asset Pricing Model ("CAPM"), a theory in financial economics that assumes investors are fully diversified and thus only "systematic" (i.e., not firm-specific) risk matters. While the CAPM clearly represents an important contribution to financial economic theory, it has been subject to considerable scrutiny since its development in the 1960s⁹. Since then, a large literature has emerged that confirms that it is not reasonable to simply assume that firm-specific risk does not matter¹⁰. Advocates of the "smoking gun" view claim that these other theories and empirical results are irrelevant because it would be "simple and obvious" for investors to diversify away patent litigation risk by holding specific amounts of brand manufacturer and generic manufacturer shares. But, of course, such a claim assumes that investors can foresee with certainty the impact of the litigation on the brand and generic manufacturers' share prices. That may be possible for some fortunate investor, but asserting that it explains a broader pattern in the market is fallacy. The difficulty in performing this calculation is one reason why the uncertainty of patent litigation — as well as resolution of that uncertainty — may well be factored into brand manufacturer stock prices in the first place.

More generally, the strategy that the "smoking gun" authors describe, in which an investor purchases a specific amount of generic and brand shares to offset exposure to the patent litigation, is not diversification; it is hedging. The fact that a risk can be hedged does not mean that risk is irrelevant to investors, nor does it provide a basis to claim that

risk is irrelevant in theory. Moreover, it could be in direct conflict with the very same theory that is the basis for the authors' conclusions. A fundamental assumption of CAPM is that investors are broadly diversified. But, in a situation where brand manufacturer losses were expected to be significantly larger than generic gains, the "simple and obvious portfolio move" would involve buying a large volume of shares in the generic firm, thereby reducing diversification and increasing exposure to firm-specific risk.

Accordingly, we stand firm in our view that if financial market evidence is to be used in reverse-payment cases, all of the possible determinants of stock price changes upon the announcement of patent litigation settlements should be rigorously evaluated. This includes changes in firm-specific as well as market risk.

Empirically: Not a Smoking Gun

Advocates of the "smoking gun" interpretation of event studies refer to empirical support for their position that risk is irrelevant. They point to results showing that, on average, brand manufacturers' share prices tend to increase more following settlements with an "indication" of a reverse payment compared to settlements without, after controlling for market movements¹¹. They assert that risk effects should be similar across the two groups¹². However, they do not evaluate whether risk effects are similar across the two groups, instead relying on their appeal to the theory¹³. As we discussed above, the theory does not obviate the need to evaluate such a strong assumption. Further, the fact that substantially the same set of authors made a similar assumption in a different article does not constitute "empirical" support that the assumption is accurate.

Moreover, for the "smoking gun" test to be a "smoking gun," it should be applicable to each and every case in which the stock price rises following an announced settlement. However, the article on which the "smoking gun" claim is based looks at an average effect across settlements: "[t]he analysis presented in the current article makes no claim about the economic effect or legality of any individual ¶ IV settlement, but rather evaluates average effects of settlements with and without indications of reverse payments¹⁴." It is particularly heroic for advocates to now claim that the average effect found in this article produces a result that can be unequivocally applied as a litmus test to any specific settlement. In fact, the underlying data used in the article show that, while the majority of settlements with "indicia" of reverse payments were associated with stock price increases, the majority of settlements without reverse payments were also associated with stock price increases, including several of considerable magnitude. How can the claimed telltale sign of anti-competitive conduct be present when no anti-competitive conduct occurred?

In any event, the fact that there are likely to be false positives cripples the "smoking gun" interpretation of event studies in this context. The D.C. Circuit's *In Re: Rail Freight Fuel Surcharge Antitrust Litigation* decision commented on the issue of false positives, explaining that a method that produces demonstrably false estimates for some entities calls into question its estimates for other entities¹⁵. Empirically, the false positives

demonstrate that brand manufacturer stock prices may rise following settlement for reasons other than anti-competitive splitting of monopoly profits, making the stock price test more of a damp squib than a “smoking gun.”

Legally: Not a Smoking Gun

In a further attempt to bolster their narrative, the authors of the stock price approach appeal to a passage from the Actavis decision, but this too is misguided. Specifically, they highlight that Actavis makes clear that “risk avoidance” is not appropriate to “explain a settlement,” but this is beside the point. The reduction in risk we consider is not to “explain a settlement,” but rather, to explain the change in the market price of a financial asset — the purported “smoking gun” evidence. This is an important distinction. For the authors to suggest that key explanatory factors such as changes in risk should be overlooked in favor of a single factor of interest (i.e., potential wrongdoing) is essentially akin to assuming the conclusion. Accordingly, their argument must be disregarded.

Conclusion

To be clear, we are not claiming that stock market evidence can never be useful in the rule of reason evaluation described in the Supreme Court’s ruling in Actavis. As we said in our previous Law360 article, “analysis of stock price movements in response to settlement announcements may be informative in certain situations.” However, observing a price increase after a settlement is an inappropriate proxy for anti-competitive concern. In other words, the proposed stock market event study approach is no shortcut and cannot replace the rule of reason analysis envisioned in Actavis.

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Endnotes

- 1 Pierre Y. Cremieux, Ted Davis, Mark J. Lewis and Paul E. Greenberg, “Stock Prices Aren’t Enough for ‘Rule of Reason’ Analysis,” Law360, July 19, 2016.
- 2 Thomas McGuire, Keith Drake, Einer Elhauge, Raymond Hartman, and Martha Starr, “A ‘Smoking Gun’ In Reverse-Payment Settlements,” Law360, July 29, 2016 (“McGuire et al. Law360”).
- 3 Thomas McGuire, Keith Drake, Einer Elhauge, Raymond Hartman, and Martha Starr, “Resolving Reverse-Payment Settlements with the Smoking Gun of Stock Price Movements,” Iowa Law Review, 101(1581), pp. 1581-1599 (“McGuire et al. Iowa Law Review”), p. 1594.
- 4 McGuire et al. Iowa Law Review, p. 1594.
- 5 McGuire et al. Iowa Law Review, p. 1599.

- 6 Pierre Y. Cremieux, Ted Davis, Mark J. Lewis and Paul E. Greenberg, "Stock Prices Aren't Enough for 'Rule of Reason' Analysis," *Law360*, July 19, 2016.
- 7 McGuire et al. *Law360*.
- 8 McGuire et al. *Law360*: "Because no-payment settlements reduce risk just as much as reverse-payment settlements, this indicates that the stock market gain for the latter must be coming from the entry delay rather than from the risk reduction."
- 9 See, e.g., Eugene F. Fama and Kenneth R. French, "The Capital Asset Pricing Model: Theory and Evidence," *Journal of Economic Perspectives*, Vol. 18 No. 3, Summer 2004, pp. 25–46.
- 10 See, e.g., Robert Merton, "A simple model of capital market equilibrium with incomplete information," *The Journal of Finance*, Vol. 42 No. 3, pp. 483-510, (July 1987); Amit Goyal and Pedro Santa-Clara, "Idiosyncratic Risk Matters!," *The Journal of Finance*, Vol. 58, No.3 (June 2003), pp. 975-1007; Yexiao Xu and Burton G. Malkiel, "Investigating the Behavior of Idiosyncratic Volatility," *The Journal of Business*, Vol. 76, No. 4 (October 2003), pp. 613-645; Fangjian Fu, "Idiosyncratic risk and the cross-section of expected stock returns," *Journal of Financial Economics*, Vol. 91 (2009), pp. 24-37; Stefan Süß, "The pricing of idiosyncratic risk: evidence from the implied volatility distribution," *Financial Markets and Portfolio Management*, Vol. 26, No. 2 (June 2012), pp. 247-267; Chichernea et al., "Idiosyncratic Risk, Investor Base, and Returns," *Financial Management*, Summer 2015, pp. 267-293). Other work is inconsistent with the pricing of firm-specific risk (see, e.g., Ang et al., "The Cross-Section of Volatility and Expected Returns," *The Journal of Finance*, Vol. 61 No. 1, pp. 259-299 (Feb. 2006), but, in any event, the literature is so rich and varied that close examination of the issue in the context of event studies in reverse payment cases is warranted.
- 11 Keith M. Drake, Martha A. Starr & Thomas G. McGuire (2015) "Do 'Reverse Payment' Settlements Constitute an Anticompetitive Pay-for-Delay?" *International Journal of the Economics of Business*, Vol. 22 No. 2, pp. 173-200.
- 12 McGuire et al. *Law360*: "Because no-payment settlements reduce risk just as much as reverse-payment settlements, this indicates that the stock market gain for the latter must be coming from the entry delay rather than from the risk reduction."
- 13 McGuire et al. *Law360*: "'Reductions in the discount rate' due to uncertainty reduction are not to be expected based on theory, as we discuss above. And, any such reductions in any case should apply to all settlements, so cannot explain the different pattern found for settlement with and without an indication of a reverse payment."
- 14 Keith M. Drake, Martha A. Starr & Thomas G. McGuire (2015) "Do 'Reverse Payment' Settlements Constitute an Anticompetitive Pay-for-Delay?" *International Journal of the Economics of Business*, 22:2, 173-200, p. 195.
- 15 725 F.3d 244 (D.C. Cir. 2013).

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