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The Drug Short: A New Mechanism for Creating Financial Incentives for the Discovery of Invalid Pharmaceutical Patents

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THE DRUG SHORT: A NEW MECHANISM FOR CREATING FINANCIAL INCENTIVES FOR THE DISCOVERY OF INVALID PHARMACEUTICAL PATENTS

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"I HOPE THE IRONY IS NOT LOST ON ANYONE THAT THE DRUG COMPANIES AND THEIR LAWYERS ARE ALLEGING THAT I HAVE A PROFIT MOTIVE."[1]

–Kyle Bass
Hedge Fund Manager
Hayman Capital

I. INTRODUCTION

An ironic state of affairs exists indeed when allegations and cries of "profit motive!" come from private, for-profit pharmaceutical manufacturers. But hedge fund manager Kyle Bass finds himself in such a state after his Coalition for Affordable Drugs (Coalition) began filing inter partes review (IPR) petitions, asking the Patent Trial and Appeal Board (PTAB) to invalidate drug patents held by several pharmaceutical companies.[2] An invalidation would seriously hurt a company whose profits depend on the patent-conferred ability to exclude competitors from manufacturing the same drugs. As such, the news of Bass's filings have spooked some investors, causing share prices to fall in some of the companies whose patents were challenged.[3] Therein lies Bass's profit motive: his hedge fund, Hayman Capital, is also selling short the stocks of the companies whose drug patents it has challenged.[4] By doing so, the fund stands to profit when the companies' share prices decline (unlike traditional, "long" investors, who stand to profit when a company's shares appreciate in value).[5]

The Pharmaceutical Research and Manufacturers of America (PhRMA), a trade association, has decried the practice and sought legislative reforms aimed at curtailing "hedge funds and other speculators from abusing IPRs in the

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[1] *CNBC Exclusive: CNBC Transcript: Hayman Capital Management Founder Kyle Bass Speaks with CNBC's David Faber on "Squawk on the Street" Today* (Sept. 15, 2015, 1:44 PM), http://www.cnbc.com/2015/09/15/cnbc-exclusive-cnbc-transcript-hayman-capital-management-founder-kyle-bass-speaks-with-cnbcs-david-faber-on-squawk-on-the-street-today.html.

[2] Brian Nolan & Michael Martinez, *New Enemy Challenging Biopharma Patents: Investment Firms*, 22 WESTLAW J. INTELL. PROP., no. 8, 2015, at 1, 2.

[3] *See id.* at 2 (noting that some, but not all, of the companies experienced a post-filing decline in share price).

[4] Joseph Walker & Rob Copeland, *New Hedge Fund Strategy: Dispute the Patent, Short the Stock*, WALL ST. J. (Apr. 7, 2015, 7:24 PM), http://www.wsj.com/articles/hedge-fund-manager-kyle-bass-challenges-jazz-pharmaceuticals-patent-1428417408.

[5] Joanna Lee, *Activist Short Sellers: Market Manipulators or Market Protectors?*, 32 REV. BANKING & FIN. L. 274, 274 (2013).

context of such biopharmaceutical patents."[6] Bass, in return, argues that his activities represent a proper challenge to pharmaceutical companies unjustly reaping the benefits of patents that should not have been granted in the first place.[7] Regardless of whether his specific challenges succeed, he has identified a potential solution to free-rider problems in the quest for ridding the system of patents that never should have been granted. If a pharmaceutical patent is invalidated, competitors are free to enter the market and begin manufacturing generics. Everyone but the holder of the invalid patent benefits: Competitors from the opening of new markets, and the general public from the lower drug prices associated with competition. Where, then, is the incentive to challenge a patent if all competitors will benefit from one competitor's successful challenge? Bass's strategy of simultaneously short selling the stock and challenging the patents creates a financial incentive to invest time and resources in discovering the information that certain patents may be invalid.

In order to lay the groundwork for the argument that Bass's strategy creates an appropriate mechanism for overcoming free-rider problems in patent validity challenges, Part II of this Note will first explore the relevant patent law. This includes the economic justification for patent protection, problems with patent validity and the free-rider problem inherent therein, as well as the new procedures for challenging patent validity created by the America Invents Act (AIA), which Bass employed. Part II then takes a detour through relevant areas of securities law to identify the boundaries of acceptable short-selling practices that patent challengers such as Bass must observe. Finally, Part II provides a brief overview of Bass's specific activities as of the writing of this Note, its reception with the PTAB thus far, and the pharmaceutical industry's response and calls for legislative change.

Part III of this Note argues that despite criticism from the pharmaceutical industry, the strategy employed by Bass and his fund represents a new mechanism for creating an acceptable financial incentive for the discovery of and challenge to potentially invalid patents. If one believes that a company is unfairly profiting from patents that are potentially invalid, that person should be able to simultaneously sell short that company's stock and file a petition to institute an inter partes review. If that challenger is right and the patent is invalidated, he is sure to profit on his short sale, thus allowing him to potentially recoup some of the resources he invested in seeking out the

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[6] *PhRMA Statement On Markup Of H.R. 9, The Innovation Act* (June 11, 2015), http://www.phrma.org/media-releases/phrma-statement-on-markup-of-hr-9-the-innovation-act#sthash.uK6xQ0dd.dpuf.

[7] Julia La Roche, *Kyle Bass eviscerates a drug company's criticism of him short selling their stock*, BUS. INSIDER (Aug. 13, 2015), http://www.businessinsider.com.au/kyle-bass-response-to-celgene-motion-2015-8.

potentially invalid patent. Creating financial incentives for the discovery of information that would otherwise be undersupplied is, after all, the very purpose of intellectual property protection.[8]

II. BACKGROUND

A. PATENT LAW

1. Economic Theory of Patent Law. Patent law in the United States has its roots in the Constitution itself. Article I explicitly grants Congress the power to "promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[9] The purpose of enumerating such a power to Congress is the economic notion that "encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in 'Science and useful Arts.' "[10] The federal government accomplishes this goal by granting to a patentee "the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States."[11] If Congress could not confer the monopoly rights inherent in a patent on the inventor, "even successfully made inventions would languish, since it would be unprofitable to spend the resources necessary to transform the invention into a saleable product."[12] This is because an invention, as a form of information, is a public good.[13] Thus, such information, including inventions, is both nonrivalrous, meaning "one person's use of it does not leave any less for another to use," and nonexcludable, meaning "it is difficult to restrict its use to those who have paid for access."[14] A free market tends to underproduce public goods, as the aforementioned characteristics impede the inventor's efforts to recoup the high fixed costs associated with research and development of the good.[15] The patent-conferred right on inventors to temporarily control the use

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[8] *See* R. CARL MOY, 1 MOY'S WALKER ON PATENTS § 1:39 (4th ed. 2016) (noting that "the favored explanation for the patent system in the United States . . . is that it creates an incentive for persons to engage in inventive activity").

[9] U.S. CONST. art. I, § 8, cl. 8.

[10] Mazer v. Stein, 347 U.S. 201, 219 (1954).

[11] 35 U.S.C. § 154(a)(1) (2015).

[12] MOY, *supra* note 8, § 1:41.

[13] Joseph Scott Miller, *Building a Better Bounty: Litigation-Stage Rewards for Defeating Patents*, 19 BERKELEY TECH. L.J. 667, 681–82 (2004).

[14] *Id.* at 682.

[15] Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 994–96 (1997).

and distribution of their information creates an incentive to "invest efficiently in the production of new ideas."[16] Accordingly, patent law represents an attempt to overcome a free-rider problem that would otherwise inhibit the market from producing the socially optimal amount of useful inventions.

Despite their obvious benefits, patent-conferred temporary monopoly rights do not come without costs in a free-market economy like America. The societal costs imposed by America's patent regime result primarily from "the distorting effect that patent rights have on competition and the optimal allocation of resources that such competition supposedly creates."[17] In recognition of such costs, Congress refuses to grant indefinite exclusionary rights to inventors, but instead limits the grant of patent rights to a fixed term of twenty years.[18]

2. Patent Validity Problems. The delicate balance between the potential benefits (spurring innovation) and potential costs (distorting free markets) inherent in granting patent rights demonstrates the need for a finely tuned system that freely grants patent protection for deserving inventions, but avoids granting patent protection where none is appropriate.[19] Such a system, unfortunately, does not reflect our own. For example, an empirical study conducted by Professors John Allison and Mark Lemley on the validity of litigated patents conducted in 1998 found that federal courts held a mere 54% of challenged patents valid, which is "little better than a coin toss."[20] That study evaluated all written, final validity decisions by either district courts or the Federal Circuit during a seven-year period from 1989 to 1996.[21] In 2014, the same authors updated and expanded the 1998 study with a new data set.[22] The updated study included eleven "substantive decisions rendered by any court in every patent case filed in 2008 and 2009 — decisions made between 2009 and 2013."[23] The updated study found that while the nature of validity challenges has evolved (including, among other aspects, a heavier reliance on the doctrines of patentable subject matter and indefiniteness as opposed to obviousness and prior art), patent holders still struggle in validity litigation.[24] The updated study found that patentees won only 26% of definitive merits rulings on validity

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[16] *Id.* at 996.

[17] MOY, *supra* note 8, § 1:31.

[18] 35 U.S.C. § 154(a)(2) (2015).

[19] Inventions that are neither novel nor useful cannot receive patent protection. 35 U.S.C. § 101 (2015).

[20] John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 251 (1998).

[21] *Id.* at 194.

[22] John R. Allison, Mark A. Lemley & David L. Schwartz, *Understanding the Realities of Modern Patent Litigation*, 92 TEX. L. REV. 1769, 1769 (2014).

[23] *Id.* at 1770.

[24] *Id.* at 1782.

during the test period.[25] The two Allison and Lemley empirical studies, viewed together, suggest that problems with patent validity have only increased over time.

While relatively few patents are actually challenged through litigation, these statistics are still striking in their suggestion that the U.S. Patent and Trademark Office may be "failing to do a serious job of examining patents, thus allowing bad patents to slip through the system."[26] The existence of these "bad patents" in turn imposes several costs on society. One such cost, among several others, is "supra-competitive pricing, in the absence of non-infringing product substitutes."[27] In the context of the pharmaceutical industry, this means that manufacturers holding bad patents can keep prices unnecessarily high by excluding competitors who would otherwise be free to produce generic drugs and create downward pressure on prices in that market.

Given these costs, the invalidation of a patent that never should have been granted is objectively good for the market. It follows, then, that the identification of a potentially invalid patent is a valuable piece of information. But information, remember, is a public good. Just like information about useful inventions will be undersupplied in a free market absent the incentives provided by patent law, so too will information about the identification and discovery of potentially invalid patents be undersupplied absent any form of incentive. In 1971, the Supreme Court inadvertently amplified this problem when it recognized the doctrine of nonmutual defensive issue preclusion.[28] In the context of patent litigation, this doctrine implies that an alleged infringer may raise a plea of estoppel when the patent in question has already been declared invalid.[29] The Court reasoned that a patentee "who has had one fair and full opportunity to prove a claim and has failed in that effort, should not be permitted to go to trial on the merits of that claim a second time."[30] While this rule certainly helps to further policy aims such as consistency and judicial efficiency, it eliminates the incentive to invest time and resources in the discovery and weeding out of dubious patents. This is because a party who successfully obtains a judgment invalidating a patent "earns a benefit not only for itself but for everyone, including those of this winner's competitors who

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[25] *Id.* at 1787 (finding that patentees won only 164 of 636 definitive merits rulings during the test period).

[26] Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1495 n.1 (2001) (compiling instances of such complaints being levied against the Patent and Trademark Office in both academic sources and popular media).

[27] Jay P. Kesan, *Carrots and Sticks to Create a Better Patent System*, 17 BERKELEY TECH. L.J. 763, 767–68 (2002).

[28] Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found., 402 U.S. 313 (1971).

[29] *Id.* at 350.

[30] *Id.* at 324.

were either practicing the patented technology already or might wish to adopt it in the future."[31] Scholars have since proposed solutions designed to address this free-rider problem now inherent in patent validity litigation, primarily by designing various mechanisms for compensating people for investing in keeping bad patents out of the system.[32]

3. The America Invents Act. A patent regime that seeks to mitigate the societal costs imposed by granting "bad patents" must provide mechanisms for challenging questionable patents. Litigation is an obvious choice, but patent litigation is very costly.[33] Accordingly, Congress has created a number of extrajudicial proceedings for challenging patent validity. The most recent legislation creating administrative, post-grant patent challenge proceedings is the Leahy-Smith America Invents Act.[34] Through the AIA, Congress sought "to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs."[35] To accomplish this goal, the AIA created two new administrative challenge proceedings: the post-grant review[36] and the inter partes review.[37] The AIA also created a special body within the Patent and Trademark Office, the Patent Trial and Appeal Board (PTAB) to hear post-grant review and inter partes review proceedings.[38]

A post-grant review allows a third party to file a petition to the PTAB seeking to cancel one or more claims of a patent on any ground that could be raised under 35 U.S.C. §§ 282(b)(2) or (3), relating to the invalidity of the patent as a whole or any individual claim.[39] Any third party may file a post-grant review petition any time after nine months has passed since the granting of the

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[31] Miller, *supra* note 13, at 673.

[32] *See* Kesan, *supra* note 27, at 787 (proposing a fee-shifting program whereby the patentee would be forced to pay all or a part of a successful challenger's fees when the patent is invalidated based on prior art that should have been reasonably discoverable to a diligent patentee); Miller, *supra* note 13, at 677, 704 (proposing a litigation-stage cash bounty paid directly to a successful patent challenger that need not be shared with others); John R. Thomas, *Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. ILL. L. REV. 305, 342 (proposing an examination-stage cash bounty paid to third parties who provide the Patent and Trademark Office with information that contributes to the rejection of a patent application).

[33] AM. INTELLECTUAL PROP. LAW ASSOC., REPORT OF THE ECONOMIC SURVEY 2015, at 37 (2015) (calculating that median all-inclusive litigation costs for all varieties of patent litigation suits range from $600,000 to $5 million, depending on the amount of money at risk in the suit).

[34] Pub. L. No. 112-29, 125 Stat. 284 (2011).

[35] H.R. REP. NO. 112-98(I), at 69 (2011).

[36] 35 U.S.C. §§ 321–329.

[37] *Id.* §§ 311–319.

[38] *Id.* § 6(b)(4).

[39] *Id.* § 321(b).

patent.[40] The Director will grant the review if the information in the petition suggests that it is more likely than not that at least one of the challenged claims is in fact unpatentable.[41] The PTAB will then issue a final decision within one year after the review is granted.[42] A party dissatisfied with the PTAB's final decision on a post-grant review may appeal the decision to the United States Court of Appeals for the Federal Circuit.[43]

An inter partes review allows a third party to file a petition to the PTAB seeking to cancel one or more claims of a patent on any ground that could be raised under 35 U.S.C. §§ 102 or 103, relating to the novelty or non-obviousness requirements, and only on the basis of prior art consisting of patents or printed publications.[44] Any third party can file such a petition after the latter of either nine months after the granting of the patent or the termination of a post-grant review. The statute defines a third party as any person who is not the owner of the patent, regardless of whether or not that person would have had standing to file suit in the federal courts.[45] The Director will grant the inter partes review if he determines that there is a reasonable likelihood that the petitioner would succeed with regard to at least one challenged claim.[46] The PTAB will then issue a final decision on the petition within one year from the institution of the review.[47] Any party dissatisfied with the PTAB's final decision may likewise appeal to the United States Circuit Court of Appeals for the Federal Circuit.[48] Finally, the Director has discretion to prescribe sanctions for the abuse of process.[49]

Bass has employed this inter partes review procedure to challenge patents held by pharmaceutical companies whose stock he has also sold short. Specifically, the lack of any standing requirement for filing an inter partes review is what allows Bass, as neither a patent holder nor an alleged infringer, to avail himself of this new proceeding.

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[40] *Id.* §§ 321(a), 321(c).
[41] *Id.* § 324(a).
[42] *Id.* § 326(a)(11).
[43] *Id.* § 329.
[44] *Id.* § 311(b).
[45] *Id.* §§ 311(a), 311(c).
[46] *Id.* § 314(a).
[47] *Id.* § 316(a)(11).
[48] *Id.* § 319(a).
[49] *Id.* § 316(a)(6).

B. SECURITIES LAW

A brief review of some applicable securities law is necessary to an analysis of Bass's activity, to ensure that his tactics fall squarely within the boundaries prescribed by any relevant regulations.

1. Short Selling. Short selling is a type of securities trading which allows a trader to profit if the price of a security falls.[50] The trader does this by first borrowing the security from someone else, usually a broker, and selling the borrowed security in a market transaction.[51] The trader completes the transaction by later purchasing an equivalent security on the market, and returning it to the lender.[52] Put differently, if Bass believes a company's stock price is likely to fall (because, say, he believes that their business model relies on patents that will eventually be declared invalid), he can borrow some shares of that company's stock from a broker. He will then sell that stock (which he has borrowed, but not bought) in the open stock market. Later, once the price has in fact fallen, Bass will return to the stock market to buy shares of that company, which he will then return to the broker from whom he borrowed the initial stock.

If the price of the security did, as a trader predicted, fall in between the time he initially sold the borrowed security and the time he subsequently bought an equivalent security, he has effectively sold high and bought low, and managed to turn a profit trading in a security whose price has fallen.[53] However, if the price of the security rises, contrary to the trader's prediction, he will lose money on the short sale.[54]

The majority of straightforward short sales are legal.[55] The practice can serve many productive functions in the market. A trader may short sell a stock because he believes it to be overvalued, and anticipates a decline in its price.[56] Other investors use short sales as a means of hedging the risk created by long positions in their portfolio.[57] Finally, short sellers in the market for a given security can provide liquidity in response to unanticipated demand. Despite these benefits provided by short selling, the practice begins to draw scrutiny and cross the boundary of legality when traders engage in abusive short sale

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[50] Abel Ramirez Jr., *Are Short Sellers Really the Enemy of Efficient Securities Markets? A Discussion of Misconceptions After the Financial Crisis*, 42 SEC. REG. L.J. 31 (2014).

[51] *Id.*

[52] *Id.*

[53] *See* Levitin v. PaineWebber, Inc., 159 F.3d 698, 700 (2d Cir. 1998); Ramirez, *supra* note 50.

[54] *Levitin*, 159 F.3d at 700.

[55] U.S. SECURITIES AND EXCHANGE COMMISSION, KEY POINTS ABOUT REGULATION SHO (Apr. 8, 2015), http://www.sec.gov/investor/pubs/regsho.htm.

[56] Ramirez, *supra* note 50.

[57] *Id.*

practices.[58] Short selling can be abusive, and thus illegal, when it amounts to "market manipulation," or when it is employed in conjunction with insider trading.[59]

2. Market Manipulation. In response to the manipulative and abusive practices brought to light in the Great Depression, Congress prohibited the use or employment of "any manipulative or deceptive device or contrivance in contravention of such rules and regulations as the Commission may prescribe as necessary or appropriate in the public interest or for the protection of investors."[60] In turn, the Securities and Exchange Commission (S.E.C.) promulgated its Rule 10b-5, which states:

It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality of interstate commerce, or of the mails or of any facility of any national securities exchange,

> (a) To employ any device, scheme, or artifice to defraud,
> (b) To make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading, or
> (c) To engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person, in connection with the purchase or sale of any security.[61]

The Supreme Court subsequently interpreted the statute and the regulation in conjunction, finding that use of the word "manipulative," in the context of regulation of the securities markets, connotes "intentional or willful conduct designed to deceive or defraud investors by controlling or artificially affecting the price of securities."[62] Proof of such manipulation exists "if the manipulator caused either actual or apparent activity or caused a [change] in the market price."[63] In determining whether a trader has manipulated the market for a security in violation of Rule 10b-5, courts have considered a variety of factors, including "(1) price leadership by the manipulator; (2) the exercise of 'dominion

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[58] *See generally "Short Sales" and Applicable Regulations*, TREATISE ON THE LAW OF SECURITIES REGULATION, 5 LAW SEC. REG. § 14.22 (2015).

[59] *See generally* Ramirez, *supra* note 50 (distinguishing legitimate short selling from illegal market manipulation and insider trading).

[60] 15 U.S.C. § 78j(b).

[61] 17 C.F.R. § 240.10b-5.

[62] Ernst & Ernst v. Hochfelder, 425 U.S. 185, 199 (1976).

[63] S.E.C. v. Martino, 255 F. Supp. 2d 268, 286 (S.D.N.Y. 2003) (quoting S.E.C. v. Resch-Cassin & Co., 362 F. Supp. 976 (S.D.N.Y. 1973)).

and control of the market for the security'; (3) the manipulator's attempt to reduce the 'floating supply of the security'; and (4) collapse of the market for the security after the manipulator's activities cease."[64] The central tenant of all these examples of market manipulation is the Rule 10b-5 requirement of an intent to deceive or artificially affect securities prices. Absent such intent, short selling remains a legitimate practice well within the bounds of securities law.[65]

One specific type of manipulation deserves particular recognition here: a practice known as scalping. Scalping can be generally described as "the practice of recommending the purchase of a security to a group of investors while one is selling, or intending to sell, that security at the same time."[66] The typical scalping case involves investment advisers or broker-dealers imposing this sort of manipulation on their clients. The Supreme Court has held that scalping in this context does constitute "a fraud or deceit upon any client or prospective client."[67]

Courts have subsequently fit the practice of scalping within the realm of Rule 10b-5. A district court has found a "fraudulent scheme" in violation of Rule 10b-5 where defendants obtained significant blocks of a security, then "artificially inflated the stock price by engaging in a fraudulent promotional campaign in which they failed to disclose their intent to sell their holdings" in that security, and then "dumped the stock on the unsuspecting public for substantial profits."[68]

The Ninth Circuit Court of Appeals has also applied the scalping doctrine to the context of a newspaper columnist who "failed to reveal to investor-readers that he expected to gain personally if they followed his advice."[69] What the defendant columnist failed to reveal was "that he had purchased the stock at a bargain price knowing that he would write his column and then sell on the rise, as he had done with other stocks before"—information that was "necessary to avoid misleading [the defendant columnist]'s audience on the reliance they could place on the column."[70] The court's reasoning suggests that scalping

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[64] *Id.* at 287.

[65] *Ernst & Ernst*, 425 U.S. at 193 (holding that no private cause of action under § 10(b) and Rule 10b-5 could like in the absence of scienter intent to deceive, manipulate, or defraud).

[66] DONNA M. NAGY, RICHARD W. PAINTER & MARGARET V. SACHS, SECURITIES LITIGATION AND ENFORCEMENT: CASES AND MATERIALS 642 (West ed., 3d ed. 2012).

[67] Sec. & Exch. Comm'n v. Capital Gains Research Bureau, Inc., 375 U.S. 180, 181 (1963) (interpreting the Investment Advisers Act of 1940, 15 U.S.C. § 80b-6).

[68] S.E.C. v. Abellan, 674 F. Supp. 2d 1213, 1219 (W.D. Wash. 2009).

[69] Zweig v. Hearst Corp., 594 F.2d 1261, 1266 (9th Cir. 1979).

[70] *Id.* at 1266–67.

might not exist solely in the realm of market manipulation, but may also bear some similarities to insider trading.[71]

Regulating market manipulation is justified on the notion that "those who artificially and fraudulently manipulate the price of securities should not have an advantage over those from whom they buy, or to whom they sell, securities."[72] Legitimate short-sellers do not artificially and fraudulently manipulate prices, but rather, help efficient markets reach appropriate prices by providing information to the market that the short-seller has a "suspicion that there is something afoot that has resulted in [the] overvaluation of the company."[73] The "something afoot" identified by the short seller could come in the form of weakening business prospects, corporate fraud, or, in Bass's case, a reliance on potentially bad patents.

3. Insider Trading. Short selling can also be illegal when used in conjunction with insider trading. Illegal insider trading refers to "trading by *anyone* (inside *or outside* of the issuer) on any type of material nonpublic information about the issuer or about the market for the security."[74] Like market manipulation, insider trading also draws its regulatory origin from Rule 10b-5.[75] Two primary theories exist for imposing liability for insider trading under Rule 10b-5: the classical theory and the misappropriation theory.[76]

Under the classical theory of insider trading, liability attaches when a "corporate insider trades in the securities of his corporation on the basis of material, nonpublic information."[77] Such trading constitutes a "deceptive device" in the context of § 10(b) because such an insider who has obtained confidential information about the corporation by reason of his position in the corporation has a relationship of trust and confidence with the corporation's shareholders, and trading on such information for his own benefit would amount to taking unfair advantage of uninformed shareholders.[78] The classical

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[71] *Id.* at 1267 (holding that the defendant columnist violated Section 10(b) and Rule 10b-5 just as corporate insiders do when they withhold material facts about a corporation's prospects while trading its stock). This reasoning invokes the "special relationship" element of classical insider trading, which is discussed at greater length below.

[72] Ramirez, *supra* note 50.

[73] Lee, *supra* note 5, at 278. *See* Christopher A. Stanley, *The Panic Effect: Possible Unintended Consequences of the Temporary Bans on Short Selling Enacted During the 2008 Financial Crisis*, 4 ENTREPRENEURIAL BUS. L.J. 267, 270 (2009) (noting that short selling improves market efficiency by providing information about the perceived value of securities).

[74] WILLIAM K.S. WANG & MARC I. STEINBERG, INSIDER TRADING § 1.1 (3d ed. 2010). By contrast, a corporate director or officer buying or selling shares in her own company could represent legal insider trading.

[75] 17 C.F.R. § 240.10b-5.

[76] WANG & STEINBERG, *supra* note 74, § 5.1.

[77] United States v. O'Hagan, 521 U.S. 642, 651–52 (1997).

[78] *Id.* at 652.

theory of insider trading is not limited to corporate officers and directors, however.[79] When certain outsiders, such as lawyers, accountants, underwriters, or consultants working for the corporation, come into the legitimate possession of corporate information, they can become temporary insiders, also subject to the same fiduciary duty.[80] Thus, the crux of liability in the classical theory of insider trading is the existence of a "special relationship" between the trader and the shareholders of the corporation in whose stock he trades.[81]

Under the misappropriation theory of insider trading, "a person commits fraud in connection with a securities transaction . . . when he misappropriates confidential information for securities trading purposes, in breach of a duty owed to the source of the information."[82] In *O'Hagan*, for example, the Supreme Court applied the misappropriation theory to uphold the insider trading conviction of a lawyer who traded in options contracts on a company which was involved in a potential transaction with another company that the defendant's law firm represented.[83] The Supreme Court distinguishes the misappropriation theory from the classical theory by noting that instead of "a fiduciary relationship between company insider and purchaser or seller of the company's stock" forming the basis for liability, "the misappropriation theory premises liability on a fiduciary-turned trader's deception of those who entrusted him with access to confidential information."[84]

Critical to establishing liability for insider trading is a determination that the information motivating the trade was "material" and "nonpublic."[85] Courts have espoused varying standards for what must occur for information to become public. By one formulation, in order for information to become public, "it must be disseminated in a manner calculated to reach the securities market place in general through recognized channels of distribution, and public investors must be afforded a reasonable waiting period to react to the information."[86] Another formulation works on the premise that "once the information is fully impounded in price, such information can no longer be misused by trading because no further profit can be made."[87] This theory,

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[79] *See* WANG & STEINBERG, *supra* note 74, § 5.2.3 (outlining various relationships which place or might place a defendant in the classical special relationship triangle).

[80] Dirks v. S.E.C., 463 U.S. 646, 655 n.14 (1983).

[81] *Id.* at 657–58 (holding that the "duty to disclose information or refrain from trading on that information is extraordinary, it only arises from the relationship between parties and not merely from one's ability to acquire information because of his position in the market").

[82] *O'Hagan*, 521 U.S. at 652.

[83] *Id.* at 647–48.

[84] *Id.* at 652.

[85] WANG & STEINBERG, *supra* note 74, §§ 4.2–.3.

[86] *In re* Faberge, Inc., 45 SEC 249, 255 (1973).

[87] United States v. Libera, 989 F.2d 596, 601 (2d Cir. 1993).

known as the efficient markets hypothesis, allows information to be "considered public for Section 10(b) purposes even though there has been no public announcement and only a small number of people know of it."[88]

Under either theory of insider trading, an outsider (in that he has neither a special relationship nor has he misappropriated information) is free to trade on any legitimate information asymmetry that works to his advantage. However, permitting outsiders to trade using material, nonpublic information may raise similar concerns present in the manipulative practice of scalping: that the outsider "controls—indeed creates—the very information that, when released, is bound to affect the security's market price."[89] However, outsider trading is distinct from the market manipulation or scalping context, in that it can promote socially productive ends from the trader-created-information feature. That information may be costly or difficult to obtain, but allowing the finder to trade on it—and therefore profit from it—incentivizes its discovery, and creates a net social benefit as well.[90]

C. THE KYLE BASS PROCEEDINGS

1. IPR Petitions. Bass claims to have formed the idea for the investment strategy at issue here after he learned of certain intellectual property practices in which the pharmaceutical industry engaged.[91] He claims that his strategy does not attack the entire pharmaceutical industry, but rather targets the "less than 1%" of pharmaceutical patents which he considers to represent particularly egregious examples of "evergreening."[92] Evergreening is the practice of "filing and refiling 'improvement' patents for the same basic drug product," with the goal of extending patent protection past the limited time period of the original patent.[93] Bass mentioned a change in dosage or in a micro tablet delivery system to be two such improvements that should not "be backed by the U.S. Patent Office to enable [the pharmaceutical companies engaged in such practices] to have market-based monopolies with the government's backing."[94]

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[88] *Id.*

[89] NAGY, PAINTER & SACHS, *supra* note 66, at 642.

[90] Bruce H. Kobayashi & Larry H. Ribstein, *Outsider Trading as an Incentive Device*, 40 U.C. DAVIS L. REV. 21, 23 (2006).

[91] *CNBC Exclusive: CNBC Transcript*, *supra* note 1.

[92] *Id.*

[93] Terry G. Mahn, *Patenting Drug Products: Anticipating Hatch-Waxman Issues During the Claims Drafting Process*, 54 FOOD & DRUG L.J. 245, 250 (1999).

[94] *CNBC Exclusive: CNBC Transcript*, *supra* note 1.

As of March 2016, the Coalition associated with Bass's hedge fund had filed thirty-three IPR petitions.[95] At that time, four had been denied and eighteen had been instituted—a success rate of 20%.[96] When the PTAB denied those three petitions, it did so on the contents of the petitions rather than the appropriateness of Bass's strategy. Specifically, in two petitions against patents held by Acorda Therapeutics, the Coalition alleged that posters presented at industry conferences prior to the filing qualified as printed publications and thus served to invalidate the granting of each patent.[97] The PTAB ruled in each case, however, that the Coalition had not made the "threshold showing that the posters were sufficiently publicly accessible to qualify as a 'printed publication' under § 102."[98] In another decision not to institute a petition, the PTAB rejected the Coalition's argument that the contents of a Phase II clinical trial operated as prior art to render as obvious the claims of the patent at issue.[99] By contrast, in the one case to date in which the PTAB did institute IPR proceedings, the PTAB held that the Coalition did demonstrate a reasonable likelihood of success in proving obviousness from prior European and domestic patent filings.[100]

Bass's success in the markets has been just as mixed as his success at the PTAB. While some stocks had fallen, the Coalition's IPR filings cannot bear all the responsibility for share price fluctuation in target companies during this (relatively short) time period. Poor earnings results affected some companies individually, and U.S. presidential candidate Hillary Clinton's proposal to drive down drug costs, negatively impacted the pharmaceutical industry as a whole.[101] Patent law firm Envision IP compiled data on share prices of companies whose patents Bass challenged, including Biogen, Jazz Pharmaceuticals, Shire, Celgene,

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[95] Michelle Carniaux, *PTAB Crashers: A Look at How They Are Doing in the PTAB*, IPR BLOG (Oct. 19, 2015), http://interpartesreviewblog.com/ptab-crashers-a-look-at-how-they-are-doing-in-the-ptab/.

[96] Dani Kass, PTAB Approves Kyle Bass's 2nd Bid to Review MS Drug Patent, Law360 (Mar. 23, 2016, 7:37 PM), http://www.law360.com/articles/775361/.

[97] Decision at 2, Coalition for Affordable Drugs (Adroca) LLC v. Acorda Therapeutics, Inc., Case IPR2015-00720 (P.T.A.B. 2015); Decision at 2, Coalition for Affordable Drugs (Adroca) LLC v. Acorda Therapeutics, Inc., Case IPR2015-00817 (P.T.A.B. 2015).

[98] Case IPR2015-00720 at 5, Case IPR2015-00817, at 5–6.

[99] Decision at 11, 14-16, Coalition for Affordable Drugs V LLC v. Biogen MA Inc., Case IPR2015-01136 (P.T.A.B. 2015).

[100] Decision at 3, 20, Coalition for Affordable Drugs II LLC v. Cosmo Technologies Ltd., Case IPR2015-00988 (P.T.A.B. 2015).

[101] Daniel Fisher, *Are Short-Sellers Really Making Money Off New Patent-Review Law? Not Yet*, FORBES (Oct. 24, 2015), http://www.forbes.com/sites/danielfisher/2015/10/24/are-short-sellers-really-making-money-off-new-patent-review-law-not-yet/.

and Accorda before and after IPR filings.[102] At the time of their analysis, Biogen's share price was down about 36%, but this may be largely attributable to a disappointing second quarter earnings miss and reduced outlook during the same period.[103] Shares in Jazz Pharmaceuticals fell in price approximately 26% between the first IPR petition filed on its patents and the date of the Envision study, but here, again, analysts suggest competing theories for the decline, including general unrest in the healthcare industry.[104] Shares in Shire fell approximately 12% between the first IPR petition filed on its patents and the date of the Envision study, but the decline here might also be attributed to corporate merger and acquisition activity.[105] Shares in Celgene actually rose by approximately 1% during the same period.[106] Acorda may actually represent a successful challenge and short for Bass and Hayman Capital. The company's share price fell 29% on news of the filing, and dropped further after its CEO appeared on CNBC to address the IPR filings.[107]

2. Denial of the Motion for Sanctions for Abuse of Process. As Bass began filing his IPR petitions, he made no attempt to hide or downplay his hedge fund's concurrent short-selling investment strategy or the fact that this created an inherent profit motive in his petition filings.[108] This placed the PTAB in the new and unexplored position of determining whether Bass had inappropriately exploited the IPR procedure. On Sept. 1, 2015, the PTAB issued an order in one of Bass's ongoing IPR proceedings requesting further briefing from the parties on the matter.[109] Specifically, the PTAB sought further briefing on the "extent, if any, the business objective or intent of the Petitioner should be considered in reaching a determination of abuse of process," and "the resulting social costs/benefits associated with a decision to address the merits of the Petitions versus a decision to dismiss the Petitions for abuse of process without reaching the merits of the Petitions."[110] In another proceeding, Bass argued against profit motive as an abuse of process, observing that "at the heart of

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[102] Maulin Shah, *Challenge the Patent and Short the Stock – Does it Really Work?*, PATENTVUE (Oct. 20, 2015), http://patentvue.com/2015/10/20/challenge-the-patent-and-short-the-stock-does-it-really-work/.

[103] *Id.*

[104] *Id.*

[105] *Id.*

[106] *Id.*

[107] *Id.*

[108] *See generally CNBC Exclusive: CNBC Transcript*, *supra* note 1.

[109] Order at 2, Coalition for Affordable Drugs II, LLC v. NPS Pharmaceuticals, Inc., Cases IPR2015-00990, IPR2015-01093 (P.T.A.B. 2015).

[110] *Id.*

nearly *every* patent and nearly *every* IPR, the motivation is profit."[111] Bass explains that the patent holder "files for and acquires patents to profit from the higher drug prices that patents enable," and generic pharmaceutical manufacturers "challenge patents to profit from generic sales."[112] He then labeled the patent holder's criticism of Bass's motive as non-altruistic a "truthful irrelevancy," because the "U.S. economy is based largely on the notion that individual self-interest, properly directed, benefits society writ large."[113] In such an economy, "people do not undertake socially valuable activity for free—not [patent holders], not generics, not shareholders, and not investment funds."[114] Rather, such socially valuable activity, such as lowering drug prices, "must be brought about by agents who will invest significant capital and do the hard work of identifying and challenging weak patents."[115]

The PTAB was convinced by Bass's arguments in support of his profit motive, and, on Sept. 1, 2015, declined to grant sanctions for an abuse of process.[116] The PTAB acknowledged Bass's point about the profit motive inherent in nearly every patent and every petition for inter partes review, then concluded that "economic motive for challenging a patent claim does not itself raise abuse of process issues."[117] The PTAB further stated that it takes "no position on the merits of short selling as an investment strategy other than it is legal, and regulated."[118]

3. Industry Backlash. The pharmaceutical industry has not taken kindly to Bass's IPR campaign. Beyond the failed request for abuse of process sanctions, the industry has also taken its fight to the legislature. The Pharmaceutical Research and Manufacturers of America (PhRMA) and Biotechnology Industry Organization (BIO), two trade groups representing the pharmaceutical industry, co-authored a letter to members of the House Judiciary Committee in July 2015, expressing support for legislation that would "exempt certain biopharmaceutical patents on approved medicines from the inter partes review

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[111] Opp'n to Patent Owner's Mot. for Sanctions Pursuant to 35 U.S.C. § 316(a)(6), 37 C.F.R. § 42.12 at 1, Coalition for Affordable Drugs VI, LLC v. Celgene Corp., Case IPR2015-01092 (P.T.A.B. 2015).

[112] *Id.*

[113] *Id.* at 2.

[114] *Id.*

[115] *Id.*

[116] Decision at 5, Coalition for Affordable Drugs VI, LLC v. Celgene Corp., Cases IPR2015-01092, IPR2015-01096, IPR2015-01102, IPR2015-01103, IPR2015-01169 (P.T.A.B. 2015) (the P.T.A.B. granted one decision that would apply to each of these five cases, since the parties were the same and the issue applied to each case identically).

[117] *Id.* at 3.

[118] *Id.*

process at the Patent and Trademark Office."[119] The trade groups argue that intellectual property rights in the field of biopharmaceuticals are already effectively regulated by the Drug Price Competition and Patent Term Restoration Act (Hatch-Waxman).[120] Hatch-Waxman, they argue, struck a delicate balance between two key objectives: increasing "the ability of generic and biosimilar manufacturers to offer consumers lower cost versions of off-patent medicines," and preserving "incentives for the discovery and development of new, innovative medicines."[121] The new IPR proceedings create a level of uncertainty for pharmaceutical researchers and manufacturers that the trade groups claim could upend the balance that the Hatch-Waxman regime struck.[122] Accordingly, the trade groups seek a legislative exemption from the IPR process for certain patents on FDA-approved medicines—"those covering the product, its use or manufacture, and only after the date of FDA approval"—but not, by contrast, all other pharmaceutical patents, including those same patents prior to FDA approval.[123]

In considering this request, members of Congress asked the Congressional Budget Office (CBO) to estimate how much a pharmaceutical exemption to IPR proceedings would cost.[124] The CBO found that if the exemption were to be enacted, "federal spending would increase by $1.3 billion over ten years because the exemption would delay the launch of certain generic products."[125] Pharmaceutical consumers, whether they be individual patients, private health insurers, or the federal government (by way of Medicare), would suffer from a law which delayed generics from entering the market, since generics can cost up to 90% less than their name-brand equivalents.[126] The trade groups counter such claims by alleging that "there is no evidence that IPRs will allow generic and biosimilar companies to bring products to market more quickly."[127]

The prospect of raising drug prices, and subsequently federal health care spending, is unlikely to gain much traction with members of Congress subject

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[119] Letter from James C. Greenwood, President and CEO of BIO & John J. Castellani, President and CEO of PhRMA, to Rep. Chuck Grassley, Rep. Patrick Leahy, Rep. Robert Goodlatte & Rep. John Conyers (July 15, 2015), *available at* http://www.phrma.org/sites/default/files/pdf/joint-phrma-bio-letter-on-ipr-071515.pdf [hereinafter BIO & PhRMA Letter].

[120] *Id.*

[121] *Id.*

[122] *Id.*

[123] *Id.*

[124] Joseph Walker, *Drug-Industry Rule Would Raise Medicare Costs: Congressional Budget Office estimates $1.3 billion increase in federal health-care costs over a decade*, WALL ST. J. (Aug. 31, 2015), http://www.wsj.com/articles/drug-industry-bill-would-raise-medicare-costs-1441063248 (reporting on CBO results presented orally to the Senate).

[125] *Id.*

[126] *Id.*

[127] BIO & PhRMA Letter, *supra* note 119.

to popular political pressure. Groups including "AARP, an advocacy group for retirees, insurers represented by the Blue Cross and Blue Shield Association, and the Pharmaceutical Care Management Association, an industry group for pharmacy-benefit managers" have already publicly opposed the exemption.[128] Such pressure has already impacted the legislative proceedings surrounding the changes proposed by the trade groups. Rep. Mimi Walters withdrew her proposal to include a pharmaceutical IPR exemption in a U.S. House of Representatives patent bill after the same exemption was opposed by Rep. Bob Goodlatte, the bill's lead sponsor and chairman of the House Judiciary Committee.[129] Rep. Goodlatte reportedly stated in committee that his constituents "frequently express concern about the high cost of prescription drugs."[130] He added, "I certainly would have to answer to my constituents as to why I allowed a provision into a bill that makes their medicine more expensive."[131] In light of such political pressure, the pharmaceutical trade groups face a steep uphill battle in seeking a legislative exemption for FDA-approved drugs from the IPR process. Thus Bass, and more importantly, any others who wish to follow in his footsteps and challenge pharmaceutical patents in an attempt to lower drug prices for all, are not likely to face a statutory bar. Patent law aims to strike a balance between encouraging innovation and the societal costs imposed by creating new property rights. Under a regime that tends to over-grant patent protection yet provides no incentives to potential challenges to patent validity, that balance starts to tip in the direction of increased costs to society. Bass's activities, the simultaneous short sale and IPR challenge, create the very incentive necessary to challenge bad patents and ensure the continuing balance of all interests in the U.S. patent regime.

III. ANALYSIS

This part begins with a positive analysis of how Bass's strategy of filing IPR petitions on a company's pharmaceutical patents while simultaneously shorting that company's stock falls within the appropriate legal boundaries of the relevant patent law (namely, the AIA requirements for IPR proceedings) and the relevant securities law (namely statutes and regulations prohibiting insider trading and market manipulation). Part III then moves to a normative analysis of how Bass's strategy creates a desirable mechanism for overcoming the free-

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128 Walker, *supra* note 124.

129 *Id.*

130 Allison Gilchrist, *Patent Law Change Could Increase Health Costs by $1.3 Billion Over 10 Years*, PHARMACY TIMES (Oct. 16, 2015), http://www.pharmacytimes.com/publications/issue/2015/october2015/patent-law-change-could-increase-health-costs-by-13-billion-over-10-years.

131 *Id.*

rider problem that would otherwise cause the market to undersupply patent validity challenges.

A. BASS'S STRATEGY COMPORTS WITH RELEVANT PATENT LAW

Bass and his associated entities have thus far carried out the IPR component of their strategy in a manner that comports with both the letter of the AIA, with regard to filing and procedural requirements, and the spirit of the AIA, in availing themselves of the new, more efficient patent challenge procedures.

The AIA explicitly allows for any person who is not the owner of the patent to file a petition to initiate IPR proceedings.[132] The statute contains no further standing requirements applicable to Bass. Thus, the fact that Bass is a disinterested third party (and not an alleged infringer of the patent in question) does absolutely nothing to run afoul of the filing requirements set forth in the AIA. The decision to lower the barriers to initiating patent challenges in an administrative setting, as opposed to the more costly and more time-consuming litigation setting, was no accident. Congress's stated intention in creating the IPR procedure was to establish "a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs."[133] Bass is hardly exploiting some esoteric loophole in the IPR framework; rather, he is utilizing the procedures for the very reason Congress intended.

This is not to say that any third party, Bass included, could never make use of the IPR procedure in an improper or abusive manner. However, the AIA grants the PTAB the authority to impose sanctions on a party for abusing the IPR process.[134] In fact, corporations against which Bass has petitioned to institute IPR proceedings have moved for the PTAB to grant such sanctions against Bass and his related entities, and the PTAB has thus far refrained from imposing any sanctions on Bass for abuse of process.[135] Society should continue to trust the PTAB with the job of identifying abusive IPR practices and imposing sanctions when appropriate, rather than categorically prohibiting third parties like Bass from filing IPR petitions.

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[132] 35 U.S.C. § 311.

[133] H.R. REP. NO. 112-98(I), at 40 (2011).

[134] 35 U.S.C. § 316(a)(6).

[135] *See* Order, *supra* note 109.

B. BASS'S STRATEGY COMPORTS WITH RELEVANT SECURITIES LAW

Likewise, Bass and his associated entities have thus far carried out the short-selling component of their strategy in a manner that steers clear of conduct that could be considered market manipulation or insider trading.

Bass's trading does not meet the requirements for a finding of market manipulation. In order to be liable for a violation of Rule 10b-5, Bass would need to demonstrate "intentional or willful conduct designed to deceive or defraud investors by controlling or artificially affecting the price of securities."[136] Bass's activities—short selling the stock of companies whose patents he has challenged simultaneously—do not suggest that he created "either actual or apparent activity or caused a [change] in the market price," examples of the proof requisite for a finding of market manipulation.[137]

Opponents of his strategy may argue that he is attempting to cause a change in the market price with the filing of his IPR petitions, but the news of the filings has had a negligible, if any, effect on the stock prices of the companies in question.[138] That Bass has continued full steam with his strategy in light of this suggests that his short sales are predicated on his belief that the companies are overvalued for their reliance on bad patents, not a belief that the news of his IPR filings will itself tank the share price. If this is the case, Bass's activities should not be considered manipulative because "[t]rading based on a genuine belief that prices will ultimately move in the direction of the trades is the essence of nonmanipulative trading."[139] Until any evidence suggests otherwise, Bass seems to rely on perfectly acceptable reasoning for his short sales, and not on an attempt to deceive or defraud investors by gaining a profit which "comes solely from the trader's ability to move prices and not from his possession of valuable information."[140]

Bass's trading also does not meet the requirements for insider trading under either theory. The classical theory premises insider trading liability on a special relationship between the trader, the issuing corporation, and the other shareholders of that corporation.[141] Bass has no such relationship with the corporations whose patents he challenges or their shareholders. He is not a director or officer of any of these companies, nor is he a lawyer, accountant, or

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[136] *Ernst & Ernst*, 425 U.S. at 199.

[137] *Martino*, 255 F. Supp. 2d at 286.

[138] *See supra* notes 102–07 and accompanying text.

[139] Daniel R. Fischel & David J. Ross, *Should the Law Prohibit "Manipulation" in Financial Markets?*, 105 HARV. L. REV. 509 (1991) (discussing various definitions of "market manipulation," including conduct that forces a security's price to an artificial level).

[140] *Id.* at 510.

[141] *Dirks*, 463 U.S. at 657–58.

consultant to any of the companies—the "temporary insiders" that are also capable of having such a special relationship with the issuing corporations.[142] Far from an insider, Bass's connection to these companies extends no further than his role as an adverse party in the IPR proceedings in question here. In fact, the activities Bass has undertaken, when viewed altogether, place him in the category of outsiders engaged in socially beneficial activity deserving of protection from insider trading liability.[143] The misappropriation theory of insider trading, by contrast, premises liability for insider trading on the misappropriation of confidential information.[144] One could debate as to what level of generality the information that Bass is trading on actually comprises—the information that the corporation in question relies on potentially invalid patents, or the information that the corporation in question may potentially soon be subject to IPR proceedings against a patent in its portfolio—but in neither case do Bass's activities amount to misappropriation. Unlike the defendant in *O'Hagan* who committed insider trading when, "in breach of a duty of trust and confidence he owed to his law firm . . . and to its client," he "secretly [converted] the principal's information for personal gain,"[145] Bass effectively created the very information that he later used in trading.

The practice of scalping does bear some similarity to Bass's trading activity in that "the scalper controls—indeed creates—the very information that, when released, is bound to affect the security's market price."[146] Given the limited context of the courts' decisions on scalping—investment advisers[147] and financial journalists[148]—it remains to be determined whether or not Bass's activities, absent the trusting relationship of an investment adviser and his clients or a financial journalist and his readers, would qualify as prohibited scalping or not. Given the ambiguity of the relevant securities laws, courts should defer to the PTAB and its governing statutes to determine the propriety of Bass's activities.

C. BASS'S STRATEGY PROVIDES A MECHANISM FOR OVERCOMING THE FREE-RIDER PROBLEM IN PATENT VALIDITY CHALLENGES

Bass's strategy likely comports with the IPR procedural requirements established by the AIA, and does not fall outside the boundaries of legal trading

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142 *Id.* at 655 n.14.
143 Kobayashi & Ribstein, *supra* note 90, at 23.
144 *O'Hagan*, 521 U.S. at 652.
145 *Id.* at 503.
146 NAGY, PAINTER & SACHS, *supra* note 66, at 642.
147 *Id.* at 181–82.
148 *Zweig*, 594 F.2d at 1266.

activities established by U.S. securities law. A normative analysis of the desirability of the strategy that Bass identified as a means to overcome the free-rider problem in patent validity challenges reveals that he has identified a viable strategy incentivize attacks on bad patents.

The free-rider problem in patent validity challenges is based on the idea that once a patent is invalidated, many people benefit other than the challenger. This means that if a generic pharmaceutical manufacturer were to file an IPR petition, and the PTAB were to initiate IPR proceedings and ultimately invalidate the patent, the generic manufacturer would have succeeded and could then enter the market for that drug to compete with the previous patent holder. But so could every other competitor. Herein lies the paradox underpinning this free-rider problem: by the very nature of the generic manufacturer's success, the drug is no longer patent-protected, so any and every manufacturer is free to enter the market for that drug. Only the challenger, however, has invested the time and resources into initiating the challenge. Who would want to make such an investment knowing that the spoils would not be his alone, but would be enjoyed by all his competitors as well? Just like free-rider problems can stifle the discovery of new technologies and useful arts, so too can they stifle the discovery and invalidation of bad patents.

Several previous proposed solutions to this free-rider problem are based on the premise of providing extra compensation to one who invests the time and resources into initiating a challenge on a potentially bad patent.[149] This approach seeks to overcome the barrier to innovation erected by the fact that, as a public good, an invalidated patent confers a benefit onto everyone. However, while it is true that many people benefit, only one entity loses—the patent holder. The patent holder's loss of the right to exploit the patent-conferred is likely to negatively impact its business model, and put a dent in its revenue. The loss to revenue is likely to manifest in a falling share price, and U.S. securities law already provides one with a legal way to profit from a falling share price: short selling.

Traders engaged in legitimate short selling are lauded for their role in providing relevant information to the market.[150] Securities markets "depend on new information to cause price changes," so in order to best promote market efficiency, measures which "cause the information to lose its value and thus eliminate the incentive to acquire the information in the first place" should be avoided.[151] Often, the information in question concerns a problem with a given

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[149] *See* Kesan, *supra* note 27; Miller, *supra* note 32; Thomas, *supra* note 32 (summarizing various proposals for creating incentives for patent challengers).

[150] Lee, *supra* note 5, at 278.

[151] Fischel & Ross, *supra* note 139, at 509.

company.[152] Just like the ability to short-sell stock provided traders with the incentive to invest the time and resources into benefitting the public by ferreting out instances of corporate fraud at companies like Enron, Lehman Brothers, and MBIA, Inc.,[153] so too can the ability to short-sell the stock of the corporations in question provide an incentive to invest the time and resources into benefitting the public by ferreting out potentially invalid patents.

Bass has exhibited every intention of carrying on with his strategy. Yet Bass is neither a patent prosecutor with the PTO nor a law professor devoted to the study of patent validity problems. He is a hedge fund manager. In the end, his IPR petitions ultimately exist because of his and his fund's investors' profit motive. And in the end, there isn't a thing wrong with that.

Ironically, his critics overlook the fact that profit motive goes to the heart of intellectual property protection. Bass would probably not have filed a single IPR petition if he did not believe he could subsequently make money for himself and for his investors by short selling the stock of the companies whose drug patents he was challenging. But would those drug companies have filed a single patent application if they did not believe they could subsequently make money for themselves and for their investors by using the patent-conferred monopoly to exclude competitors from forcing prices lower? In this way, the U.S. government consciously chooses to temporarily insulate the market for a given product from the forces of supply and demand as an incentive for inventors to benefit society by investing effort and resources into discovering new and useful information.

Pharmaceuticals that meet the novelty and utility requirements are certainly examples of information that benefit society. Unfortunately, under the current U.S. patent regime, some pharmaceuticals that fail to meet the novelty requirement are granted patent protection. This harms, rather than benefits, society because improperly granted patents distort free market forces for no good reason; society has granted the temporary right of exclusion to the patent holder, yet received nothing in return. Accordingly, information leading to the invalidation of an improperly granted patent is also socially beneficial. Whether knowingly or unwittingly, Bass has identified a mechanism to create incentives for investing effort and resources into discovering bad patents.

IV. CONCLUSION

In the free market, the potential to earn a profit encourages individuals and firms to take risks and invest time and money into their ventures. This

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[152] *See* Lee, *supra* note 5, at 287; Stanley, *supra* note 73, at 270.

[153] Lee, *supra* note 5, at 279.

generally leads to an efficient allocation of resources, and efficient levels of production and consumption. Sometimes, however, market inefficiencies, such as free-rider problems, lead to suboptimal levels of production. In those instances, the government may step in to create a profit motive where one would otherwise be lacking. Historically, the patent law regime conferred temporary monopolies in order to overcome a free-rider problem and encourage inventions. Now, procedures created by the AIA in conjunction with relevant provisions of U.S. securities law create a mechanism to overcome a different but related free-rider problem, and encourage challenges to potentially bad patents.

Eventually changing market conditions, pressure from investors to adopt some new investment strategy, or a number of other factors may cause Bass to discontinue his short-and-challenge strategy. A profit motive, after all, does not necessarily mean a profit guarantee. Importantly, though, even after he stops, his strategy lives on. In order to best preserve the integrity of the U.S. patent regime, some future third party, whether the world's most benevolent public interest crusader or a billionaire hedge fund manager, must be given the incentive to discover and challenge patents that should never have been granted in the first place. The existence of such patents only serves to keep drug prices artificially high, as demonstrated by a CBO estimate of the cost of exempting pharmaceuticals from IPR challenges altogether.[154] However, given that the discovery of and challenge to bad patents are public goods (much like the inventions underlying the patents themselves), such discoveries and challenges are likely to be undersupplied by the market absent a profit motive. Previous solutions create a bounty to compensate a successful challenger. Bass has identified a new mechanism whereby a successful challenger is able to compensate himself through short selling the stock of companies whose patents he challenges. This strategy can serve as a valuable new tool for overcoming the free-rider problem inherent in patent validity challenges, and help to protect both the strength of the U.S. patent regime and the efficient allocation of resources in the market for pharmaceuticals.

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[154] Walker, *supra* note 124.