

# Internet Appendix for “Creditor Rights and Innovation: Evidence from Patent Collateral”

William Mann

May 26, 2018

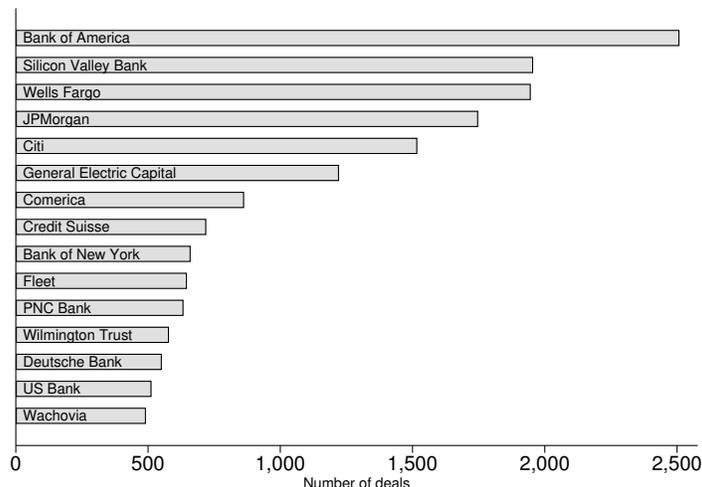
## A Data

I downloaded the most recently updated versions of the Patent Assignment and Patent Grant datasets from the Google Patents website (<https://www.google.com/googlebooks/uspto-patents.html>) on March 27, 2014. As of 2015, the underlying files have been migrated to the USPTO’s Bulk Data Products website, and the Google website is no longer being maintained.

### A.1 Patent collateral data

The Assignment Dataset provides a patent number and contract execution date for each pledge of patents as collateral that is recorded with the Patent Office. Although this recordation is not mandatory, lenders have a strong incentive to file these documents to maintain a clear chain of title, so any missing contracts are likely to be simply those for which lenders attach little value to the patent collateral. Thanks to the execution date, I can observe the exact timing of the loans, even in cases where there is a delay between the signing of a contract and its recordation with the Patent Office. The dataset also includes the names of the secured party and the pledging firm. I match the latter to NBER firm identifiers, then use the NBER linking file to match these identifiers to Compustat, carrying forward the most recent set of matches to years since 2006.

Assigning the pledging companies to NBER identifiers is a complex task, as the name of the pledging company may be different from that of the original patenting company due to M&A activity, name changes, holding patents in subsidiaries or holding companies, or sales or other transfers of the patents. My approach is as follows: The Assignment Dataset includes the entire chain of title to each patent, from its initial grant to the inventor, then its assignment to the patenting company, and subsequently through any future assignments and collateral pledges. At each point in this chain, I attempt to match the name of the current or new owner with a name listed in the NBER data. My name matching algorithm is described in A.2 below. Having performed this matching, for any pledge events that could not be matched manually, I refer to the most recent assignment or grant in that patent’s



**Fig. A.1.** Top fifteen lenders against patent collateral, by number of deals in the sample (not restricted to Compustat-matched borrowers). Previous versions of the paper reported this as Figure 3.

chain and fill in the acquiring company from that event, if it was matched. If the previous assignment was not matched, I leave the identifier missing.

Even with this approach, problems can arise when a small company includes in its collateral portfolio limited rights to a patent that it is merely licensing from a larger corporation. For example, in August 2002, Matrics Inc pledged nine patents that it owned to Comerica Bank, but also included patent number 6198937, owned by Motorola. To avoid coding Motorola as a patent pledger in this case, I require a firm to pledge at least 2% of its existing patent stock in order to record a pledge event (patents are usually pledged in bundles, and most often as entire portfolios). This procedure leaves me with 2,208 firm-events of Compustat firms pledging patents as collateral since 1990. This approach yields a high degree of accuracy, as verified by extensive hand-checking, but at the cost of screening out over half of firm-months that appear to pledge patents, resulting in conservative estimates of the prevalence of pledging activity.

Figure A.1 reports a histogram of the most common lenders in the patent collateral data. (This figure was reported as Figure 3 in previous versions of the paper.)

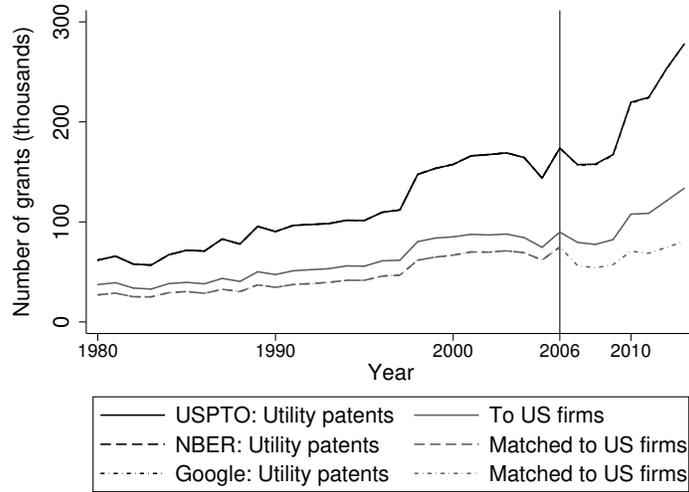
## A.2 Patenting by firms since 2006

The Google Patents data contain both granted patents and pending applications, but the company producing the patent cannot be observed until the patent is granted, at which point the inventor transfers it to the corporation. Thus, I restrict to patents that have actually been granted by the Patent Office, and I manually match the company name to a list of all NBER firm identifiers for US-headquartered companies that have been assigned at least five patents as of year-end 2006 (this restriction is necessary to keep the processing time manageable).

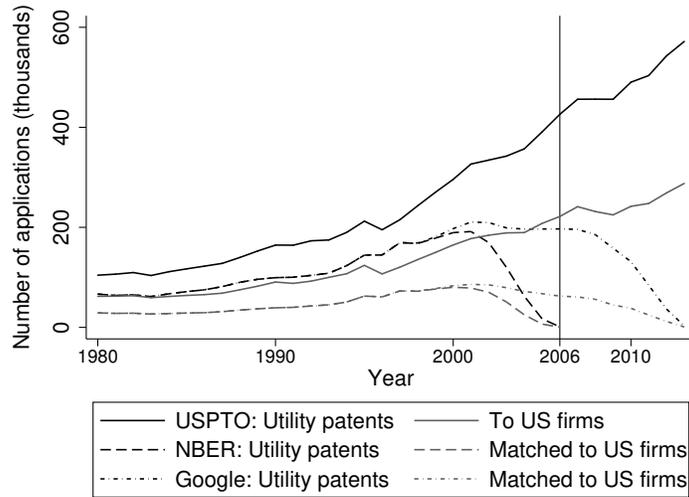
To match the company names, I take the first 30 characters of each name, eliminate

some of the most common corporate words, and then calculate a “distance” between pairs of names, matching any pairs with a sufficiently low distance. My algorithm to calculate this distance is as follows: First, I sequentially calculate the commonly-used Levenshtein distance between each pair of words in the two names (that is, between the first two words, the second two words, and so on). Next, I divide each word-pair distance by the length of the longer of the two words, so that the penalty is per fraction, not number, of mismatched letters. Finally, I divide again by the square of the word’s position in the company name, so that the algorithm overweights the first few words of a company’s name. I add up the resulting value from each word pair to get the overall distance between the two names.

Using this algorithm, I am able to match 59% of domestic corporate patents granted since 2007 with firm identifiers (for comparison, 76% of domestic corporate patents granted prior to 2007 are assigned firm identifiers in the NBER data). Extensive hand checking has turned up no mistaken matches. Figure A.2 displays the fraction of patents reported by the USPTO that are accounted for in the NBER and in my data, dated by grant year in Panel (a) and by application year in Panel (b). Citation pairs are also available for all granted patents through the present, allowing me to construct the citation counts received by a patent within any horizon of its grant date. Throughout the paper, I set this horizon to five years in an attempt to mitigate right-truncation problems.



A. Timed by grant year.



B. Timed by application year.

**Fig. A.2.** Summary of aggregate and firm-matched patenting data. Solid black lines are the total utility patent grants (Panel (a)) or applications (Panel (b)) reported by the USPTO. Lighter solid lines are the number from US companies only. Dashed lines are the aggregate figures from NBER data, which end in 2006, and dotted lines are the figures from the combined NBER and Google Patents data.

### A.3 Trademarks data

Table 10 in section 5.2 of the paper presents a placebo analysis of the natural experiment using USPTO data on trademarks granted to US firms. This dataset is described in a working paper published by the USPTO (Graham et al., 2013), but to my knowledge it has not been used in previous empirical finance research. Therefore, this subsection provides some details about the dataset that are relevant to this study. All information is taken from Graham et al. (2013).

Trademarks are uniquely identified by a serial number, which is assigned by the USPTO when the trademark application is received. The final step in the process of approving the application is *registration*, and the trademark is effective beginning on the registration date. Figure 7 in Graham et al. (2013) suggests that approximately two-thirds of trademark applications in a given vintage are ultimately registered. The entire application and approval process is detailed on the USPTO website, at <https://www.uspto.gov/trademarks-getting-started/trademark-basics/trademarks-what-happens-next>.

In some ways, a trademark registration is not exactly equivalent to a patent grant. Trademarks may have certain rights under common law even if they are not registered, while the extra rights conferred by registration lapse if the trademark is not in continual use, in contrast to a patent which expires on a preset date. However, these facts are not important for the placebo analysis in my paper.

To implement my analysis, I first download the *owner* dataset from the USPTO website.<sup>1</sup> This dataset contains a unique row for each trademark-owner combination. I select from this dataset all rows with owners that match the names of Compustat firms in my sample. (About 1.5% of trademarks in my sample are jointly owned by more than one sample firm. I retain all these matches, so one trademark can count towards the portfolio of more than one firm.)

Next, I match this dataset by serial number to the *case\_file* dataset, which contains one row for each trademark application, along with other information including registration dates. I retain only trademarks that have been registered, and use the registration date to determine the size of each sample firm's trademark portfolio as of each court decision date.

---

<sup>1</sup> The trademarks data download website is <https://www.uspto.gov/learning-and-resources/electronic-data-products/trademark-case-files-dataset-0>

## B Additional results from the natural experiment

### Placebo results for capital expenditures

	(1)	(2)	(3)	(4)	(5)
	Capex/Assets	Capex/Assets	Capex/Assets	Capex/Assets	Capex/Assets
Treated	0.00231** (0.000892)	0.00202*** (0.000267)	-0.000424 (0.000293)	-0.000235 (0.000317)	
After	-0.00124*** (0.000145)	-0.00118*** (0.000182)	-0.00207*** (0.000326)	-0.00204*** (0.000393)	-0.00211*** (0.000367)
Treated, after	-0.000488*** (0.000145)	-0.000599** (0.000290)	0.000162 (0.000326)	0.000135 (0.000398)	0.000203 (0.000586)
Fixed Effect	None	HQ	None	HQ	HQ x Inc.
Sample	All	All	High-tech	High-tech	High-tech
Obs.	412246	412246	124136	124136	124136
$R^2$	0.00229	0.00179	0.00208	0.00204	0.00209

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

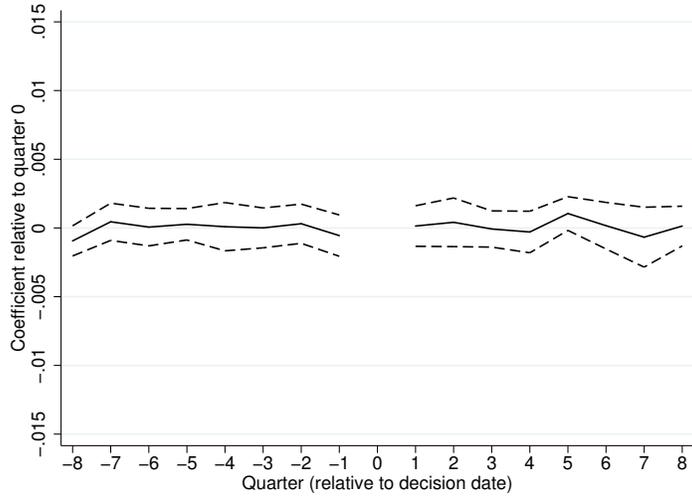
**Table B.1.** Placebo analysis of the effect of the natural experiment on capital expenditures.

	(1)	(2)	(3)	(4)	(5)
	Capex+R&D	Capex+R&D	Capex+R&D	Capex+R&D	Capex+R&D
Treated	0.0118*** (0.00278)	0.0106*** (0.00113)	0.0136*** (0.00399)	0.0105*** (0.00253)	
After	-0.00239*** (0.000450)	-0.00210*** (0.000435)	-0.00379*** (0.000996)	-0.00356*** (0.00121)	-0.00273** (0.00122)
Treated, after	0.00121** (0.000450)	0.000968* (0.000561)	0.00410*** (0.000996)	0.00385*** (0.00131)	0.00306* (0.00157)
Fixed Effect	None	HQ	None	HQ	HQ x Inc.
Sample	All	All	High-tech	High-tech	High-tech
Obs.	412246	412246	124136	124136	124136
$R^2$	0.00725	0.00525	0.00523	0.00293	0.0000578

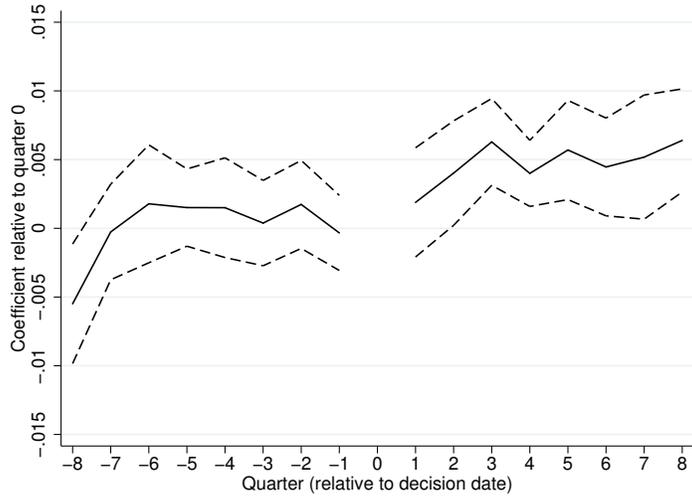
Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table B.2.** Effect of the natural experiment on combined R&D and capital expenditures. The outcome variable in each column is capital expenditures plus R&D expense, divided by total assets.



**A.** Placebo analysis of capital expenditures: The dependent variable is quarterly capital expenditures as a fraction of total assets.



**B.** Total investment: The dependent variable is quarterly combined R&D and capital expenditures as a fraction of firm total assets.

**Fig. B.3.** Regression coefficients, in event time, for the effect of the natural experiment on capital expenditures (Panel (a)), and on combined R&D and capital expenditures (Panel (b)). Except for the outcome variables, the figures are constructed as in Figures 6A and 6B.

## Robustness of core results to control variables

	(1)	(2)	(3)	(4)
	Debt/Assets	Debt/Assets	R&D/Assets	R&D/Assets
Treated, after	0.0119*** (0.00198)	0.0118*** (0.00274)	0.00151*** (0.000482)	0.00150** (0.000587)
Treated	0.0349*** (0.00760)	0.0349*** (0.00491)	0.00368*** (0.00132)	0.00374*** (0.000714)
After	-0.0112*** (0.00195)	-0.0112*** (0.00230)	-0.000817 (0.000489)	-0.000773 (0.000491)
Ln(assets)	-0.0157*** (0.00211)	-0.0155*** (0.00139)	-0.00456*** (0.000334)	-0.00470*** (0.000313)
Tangibility	0.193*** (0.00787)	0.191*** (0.00803)	-0.00180* (0.00102)	0.000774 (0.00133)
Market/book	0.00000695** (0.00000307)	0.00000572 (0.00000933)	-0.00000467*** (0.00000149)	-0.00000476*** (0.00000182)
Profitability	-0.000362*** (0.0000960)	-0.000350** (0.000146)	0.0000146 (0.0000104)	0.00000946 (0.0000340)
Cash/Assets	-0.245*** (0.00637)	-0.240*** (0.00700)	0.0627*** (0.00568)	0.0581*** (0.00343)
Fixed effect	None	HQ	None	HQ
Obs.	340153	340153	340153	340153
$R^2$	0.108	0.0957	0.122	0.104

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table B.3.** Debt financing and investment regressions with firm-level controls. The specification in Column 1 is the same as Column 1 of Table 6, except for the additional controls starting in the fourth row. Similarly, Column 2 of this table corresponds to Column 2 of Table 6; Column 3 of this table with Column 1 of Table 7; and Column 4 of this table with Column 2 of Table 7. The controls are fixed at the beginning of each event window. Missing values of the control variables are responsible for the decrease in observation counts relative to Tables 6 and 7.

## Robustness across geographic regions

	(1)	(2)	(3)	(4)
	Debt/Assets	Debt/Assets	Debt/Assets	Debt/Assets
Constant	0.225*** (0.00869)	0.220*** (0.0437)	0.306*** (0.0185)	0.231*** (0.00958)
Treated	0.0276*** (0.00869)	-0.0350 (0.0437)	-0.0307 (0.0185)	0.0738*** (0.00958)
After	-0.0155*** (0.00213)	-0.0198*** (0.00493)	-0.0259*** (0.00725)	-0.00249 (0.00624)
Treated, after	0.0135*** (0.00213)	0.0195*** (0.00493)	0.0249*** (0.00725)	0.0206*** (0.00624)
Sample	Northeast	CA	TX/CO	FL/GA
Obs.	113618	71520	43326	34447
$R^2$	0.00390	0.00191	0.00112	0.0213

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table B.4.** Effects of the court decision on total debt, in the full sample and across regions. *Northeast* states are NY, MA, CT, RI, NJ, and PA. Standard errors in all columns are clustered by state of incorporation.

	(1)	(2)	(3)	(4)
	R&D/Assets	R&D/Assets	R&D/Assets	R&D/Assets
Constant	0.0105*** (0.00316)	0.0234*** (0.00362)	0.0153*** (0.00393)	0.0121*** (0.00210)
Treated	0.0146*** (0.00316)	0.0136*** (0.00362)	-0.00422 (0.00393)	0.00236 (0.00210)
After	-0.00105 (0.000624)	0.000279 (0.000872)	-0.00744** (0.00268)	0.000629 (0.000778)
Treated, after	0.00110* (0.000624)	0.00194** (0.000872)	0.00786*** (0.00268)	0.00202** (0.000778)
Sample	Northeast	CA	TX/CO	FL/GA
Obs.	113618	71520	43326	34447
$R^2$	0.0116	0.00614	0.000913	0.000827

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table B.5.** Effects of the court decision on R&D spending, in the full sample and across regions. *Northeast* states are NY, MA, CT, RI, NJ, and PA. Standard errors in all columns are clustered by state of incorporation.

## Testing for heterogeneous effects of the decisions

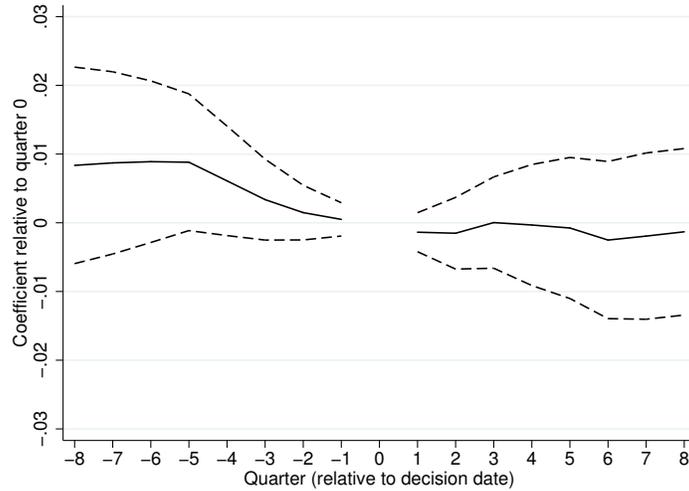
	(1) Debt/Assets	(2) R&D/Assets
ABSF $\times$ after	0.0136** (0.00514)	0.00138** (0.000666)
ABSF $\times$ after $\times$ Decision 1	-0.00700 (0.00459)	0.000535 (0.000797)
ABSF $\times$ after $\times$ Decision 3	-0.00868 (0.00674)	0.000938 (0.00117)
ABSF $\times$ after $\times$ Decision 4	0.00189 (0.00555)	-0.000508 (0.00105)
F-test p-value	0.0798	0.6905
Obs.	412246	412246
$R^2$	0.00409	0.00629

Standard errors in parentheses

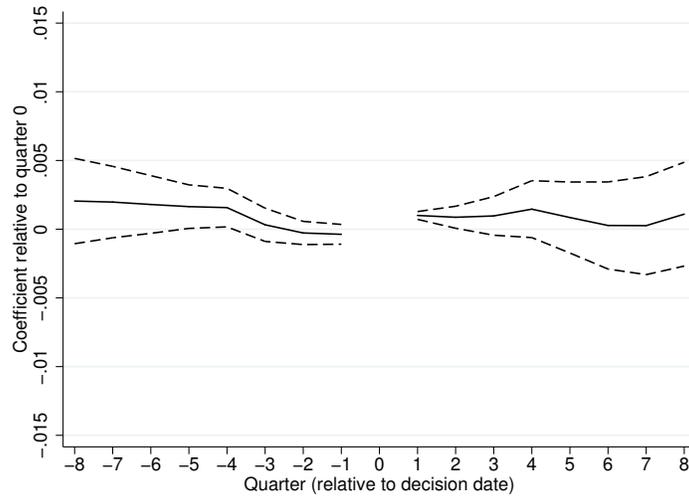
\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table B.6.** This table repeats the specification of Column 1 of Tables 4 and 5, but with additional interaction terms that separate the treatment effect for court decisions 1, 3, and 4 from the effect of decision 2, which is left as the baseline. The reported test statistic is from an F-test of the joint hypothesis that the coefficients in the second, third, and fourth rows are all equal to zero.

## Placebo results on non-event dates



A. The dependent variable is total debt (short-term plus long-term) as a fraction of total assets.



B. The dependent variable is quarterly R&D as a fraction of firm total assets.

**Fig. B.4.** Placebo analysis. The figures repeat the analysis of Figure 6, but using different event timing: Instead of being centered around the true court decision dates, the windows sampled from Compustat are centered on all quarters from 2000-2011 that are *not* within one year of a true decision date. This yields a total of 16 placebo “events.”

## C Delaware Asset-Backed Securities Facilitation Act

*Downloaded from [the State of Delaware official website](#).*

### § 2701A Title.

This chapter may be referred to as the “Asset-Backed Securities Facilitation Act.”

### § 2702A Intent.

It is intended by the General Assembly that the term “securitization transaction” shall be construed broadly.

### § 2703A Securitization transaction.

- (a) Notwithstanding any other provision of law, including, but not limited to, §9-506 of this title, “Debtor’s right to redeem collateral,” as said section existed prior to July 1, 2001, and §9-623 of the title, “Right to redeem collateral,” which became effective July 1, 2001, to the extent set forth in the transaction documents relating to a securitization transaction:
- (1) Any property, assets or rights purported to be transferred, in whole or in part, in the securitization transaction shall be deemed to be no longer be the property, assets or rights of the transferor;
  - (2) A transferor in the securitization transaction, its creditors or, in any insolvency proceeding with respect to the transferor or the transferor’s property, a bankruptcy trustee, receiver, debtor, debtor in possession or similar person, to the extent the issue is governed by Delaware law, shall have no rights, legal or equitable, whatsoever to reacquire, reclaim, recover, repudiate, disaffirm, redeem or recharacterize as property of the transferor any property, assets or rights purported to be transferred, in whole or in part, by the transferor; and
  - (3) In the event of a bankruptcy, receivership or other insolvency proceeding with respect to the transferor or the transferor’s property, to the extent the issue is governed by Delaware law, such property, assets and rights shall not be deemed to be part of the transferor’s property, assets, rights or estate.
- (b) Nothing contained in this chapter shall be deemed to require any securitization transaction to be treated as a sale for federal or state tax purposes or to preclude the treatment of any securitization transaction as debt for federal or state tax purposes or to change any applicable laws relating to the perfection and priority of security or ownership interests of persons other than the transferor, hypothetical lien creditor or, in the event of a bankruptcy, receivership or other insolvency proceeding with respect to the transferor or its property, a bankruptcy trustee, receiver, debtor, debtor in possession or similar person.

It is not the purpose of this chapter to change the tax treatment of securitizations that take place pursuant to this chapter.

## D Court decisions

### D.1 *Rhone-Poulenc Agro v DeKalb Genetics Corp.*

The first decision (“Rhone Poulenc II”) was a reversal of two previous decisions (“Heidelberg Harris” and “Rhone Poulenc I”). The specific issue in all three was the bona fide purchaser defense, which for most assets is codified by state law (the Uniform Commercial Code, or UCC). An example of the bona fide purchaser defense is the following: Suppose party A owns a car, promises it to B, but then sells it to C, who is unaware of that promise. B cannot reclaim the car from C, because C is a “bona fide purchaser,” unaware of any wrongdoing by A at the time of purchase.

In Heidelberg Harris, the defendant claimed that as a *licensee*, it was protected from a claim of patent infringement by the bona fide purchaser defense (arguing that it had “purchased” the right to use the patent, unaware that the licensor was acting fraudulently). The plaintiff never disputed that a licensee could make this argument, so the court allowed it. However, the argument was inconsistent with the approach of the UCC, which requires transfer of title for the bona fide purchaser defense to apply.

Rhone Poulenc I revisited this issue: The defendant here made the same argument and cited Heidelberg Harris. This time, the plaintiff challenged the idea that a mere licensee could claim the bona fide purchaser defense, but the court found itself bound by the Heidelberg Harris precedent, and thus forced to rule against the plaintiff. This court also articulated more clearly the implication of that precedent: the creation of a distinct, federal bona fide purchaser defense for patents, with an approach very different from that of the UCC. The decision quickly attracted commentary as an example of a growing trend towards federal law preempting state law (see Ziff (2002), especially footnote 28). However, the plaintiff filed an en banc appeal, allowing the court to set aside the precedent and reconsider the issue.

The appeals decision (the event that I employ) was delivered in Rhone Poulenc II. This time, the court rejected the argument that a patent licensee can claim the bona fide purchaser defense. It reasoned from the approach of the UCC, which traditionally requires a transfer of title for this defense to apply, and emphasized repeatedly that North Carolina law makes this requirement explicit. (In contrast, the 2001 decision stated that “it was irrelevant if [North Carolina law] did not recognize such a defense.”) The previous outcome was reversed and the plaintiff was able to sue for infringement.

In the bigger picture, the court signaled that patents should, as much as possible, be subject to the same property and contract law as other asset classes. The decision is often cited for the phrase “the interpretation of contracts for rights under patents is generally governed by state law” (see, for example, Gibbons (2004), Rosenstock (2005), and Young (2008)).

Citation: *Rhone-Poulenc Agro v Dekalb Genetics*, United States Court of Appeals for the Federal Circuit, March 26, 2002 (en banc rehearing of Rhone-Poulenc I). Available online at <http://caselaw.findlaw.com/us-federal-circuit/1440442.html>

## D.2 *Pasteurized Eggs Corporation v Bon Dente Joint Venture*

This decision was made on May 30, 2003 by the Bankruptcy Court for the District of New Hampshire. It first held that patent law does not recharacterize limited or conditional transfers of patents as licenses instead of sales. It then held that state filing procedures are sufficient to perfect a security interest in a patent, and that the Patent Act was not intended to supersede these procedures.

The first of the two holdings arose because of a patent sale in which the seller retained the right to infringe prosecutors and file followup applications. After the buyer filed for bankruptcy, the seller argued that this transaction should be characterized as a patent license, not a sale, and therefore that the seller should be able to reclaim the patent from the bankruptcy estate. The closest available precedent was a case involving standing to sue for patent infringement. Building on that case, the court held that patent law did not relabel this transaction as a sale.

This issue is particularly relevant for patent-backed lending, because transfers of collateral to an SPV also involve the retention of such patent rights, so that the original owner of the patents can continue to manage them. The retention of these rights increases the probability that the transfer of the collateral is not ultimately respected as a sale. The pro-creditor laws in certain states provide blanket protection against this outcome, and they are more likely to be effective for patents in light of this decision that patent law does not overrule them.<sup>2</sup>

The second ruling, concerning perfection of security interests in patents, adopted the position of the Ninth Circuit Court in a 1999 case. The two cases are generally cited alongside each other (see, for example, Menell, 2007 and Baker et al., 2013). Both cases contrast their conclusion with copyrights, for which the Copyright Act explicitly overrides state filing systems for perfection of security interests, and mention similar issues concerning railroads and airplanes.

Citation: *In re Pasteurized Eggs Corporation*, United States Bankruptcy Court for the District of New Hampshire, May 30, 2003. Available online at <http://www.nhb.uscourts.gov/Opinions/1999/present/2003BNH013-PasteurizedEggs.pdf>

---

<sup>2</sup>Kieff and Paredes (2004): “The more control the originator exerts over the IP SPE [...] the greater is the risk that a bankruptcy court will determine that the IP SPE is not bankruptcy remote and that the transferred IP assets are in fact part of the debtor’s bankruptcy estate.” And later: “Notably, Delaware has attempted to mitigate the legal risk surrounding securitizations by adopting the ‘Asset-Backed Securities Facilitation Act,’ which, by characterizing what constitutes a true sale under Delaware law, attempts to shore up an SPE’s standing as a bankruptcy-remote entity.”

### D.3 *Joseph Braunstein v Gateway Management Services (In Re: Coldwave Systems, LLC)*

This decision was made on May 15, 2007 by the Bankruptcy Court for the District of Massachusetts. It first disallowed an attempt to foreclose on patent collateral via the Patent Office registry due to noncompliance with California UCC. It next held that a state filing is necessary for perfection of a security interest, even if the Patent Office is notified of that interest. It finally held that a security interest cannot be perfected simply by possession of Patent Office transfer statements, which would preclude the need for filing the interest at all.

The chain of events began when the borrower pledged its patents as collateral, then defaulted on its loan payments. The lender notified the borrower and the USPTO that it was confiscating the patents, and believed thereafter that the patents were its property. The borrower never responded, and subsequently it filed for bankruptcy. The court ruled that the lender did not legally own the patents, because the borrower had never explicitly agreed to settle the debt by relinquishing them, as is required under California UCC.

Next, the lender claimed that it had, at least, a perfected security interest in the patents, which should allow it to reclaim them even after the bankruptcy filing. As evidence, the lender showed that it had notified the Patent Office of its security interest at the time of the loan (but it did not file with the state). The court recognized that this case was a novel situation, the reverse of existing precedents in which the lenders had filed with the state but not with the USPTO. It followed the same logic to conclude that the Patent Office filing was ineffective for perfection: Patent law was not intended to replace state law with respect to commercial lending.

Finally, the lender argued that filing was unnecessary, because it had perfected its security interest by taking possession of the patents, as evidenced by the transfer statement it had filed with the Patent Office. The judge disallowed this too, reasoning that actual possession is impossible for an intangible asset, leaving state filing as the only method of perfection, and further elevating the perceived importance of state law for transactions involving patents.

McJohn (2010):

Patent law is federal law. Commercial law is generally state law, governed by various states adoption of the Uniform Commercial Code. Where the two bodies of law overlap, there can be uncertainty as to which governs [...] The creditor [in this case] creatively, if vainly, argued that it need not file, because it had possession of the patent certificate, just as a pawnshop perfects by possession of the jewelry in its safe. *Coldwave* reflects a great uncertainty in the intersection between commercial law and intellectual property.

Citation: *In re Coldwave Systems LLC*, United States Bankruptcy Court for the District of Massachusetts, May 15, 2007. Available online at <http://chapter11cases.com/2012/07/01/in-re-coldwave-systems-llc-368-br-91-bankr-court-d-massachusetts-2007/>

#### D.4 *Sky Technologies, LLC, v SAP AG and SAP America*

This decision was announced on August 20, 2009 by the Court of Appeals for the Third Circuit. The issue was whether a foreclosure on patents following UCC procedures was sufficient to transfer ownership, even though the transfer was not filed with the USPTO. A district court had assumed that this was the case, but acknowledged that there was room for disagreement on the issue, and certified an appeal, resulting in this decision.

The patents were originally granted to TradeAccess, a Massachusetts company which later changed its name to Ozro. Ozro pledged them to Silicon Valley Bank and to a venture fund. Ozro subsequently defaulted and the lenders foreclosed on the patents, following the procedures outlined by the Massachusetts Uniform Commercial Code (staging and bidding at a public auction), but they did not file transfer documents with the USPTO. Subsequently, the founder of TradeAccess started a new company, Sky Technologies, which acquired the patents from the lenders once more.

When Sky sued SAP for patent infringement, SAP alleged that the lenders had never truly acquired the patents in foreclosure because they had not notified the Patent Office. The Patent Act requires a filing with the Patent Office for any assignment of a patent. However, the court distinguished the “assignments” of the Patent Act from foreclosure in bankruptcy, holding that both were valid means of transferring title. Thus, patent law should imply no exceptions to the typical legal regime for secured lending.

This is perhaps the most direct of the four cases in articulating a state-law regime for secured lending involving patents. The court specifically mentioned the policy implications:

First, if foreclosure on security interests secured by patent collateral could not transfer ownership to the secured creditor, a large number of patent titles presently subject to security interests may be invalidated. Any secured creditor who maintained an interest in patent collateral would be in danger of losing its rights in such collateral. Second, by restricting transfer of patent ownership only to assignments, the value of patents could significantly diminish because patent owners would be limited in their ability to use patents as collateral or pledged security.

See also McJohn (2010):

Intellectual property is the subject of many finance transactions, from loans to joint ventures to securitization and beyond. The simple and clear approach taken by Sky Technologies (treating intellectual property like any collateral) will facilitate those transactions.

Citation: *Sky Technologies, LLC v SAP AG and SAP America*, United States Court of Appeals for the Federal Circuit (on appeal from the United States District Court for the Eastern District of Texas), August 20, 2009. Available online at <http://caselaw.findlaw.com/us-federal-circuit/1385430.html>

## D.5 Other notes about the court decisions.

All four decisions were from federal courts, not state courts (two by bankruptcy courts and two by the Federal Circuit court of appeals).

Such decisions are often the result of appeals, and are themselves appealed. I focus on the date of the final decision in the case, consistent with the dates used when these decisions are cited. That is, I ignore appeals that were not heard by a higher court.

The delays between the triggering events and the ultimate decision ranged from three to five years, making it unlikely that the timing of the court decisions correlates with time-varying conditions affecting treated firms differently from untreated firms.

The state of incorporation, not the state of headquarters, determines treatment status:

- Under Revised Article 9 of the Uniform Commercial Code (effective as of July 2001), the state law defining ownership of collateral in bankruptcy is the state in which the debtor is located, and the location of a corporate debtor is defined as its state of corporation.
- Under old Article 9, the relevant state was the state in which the collateral was located. Even then, courts typically located of intangible assets with the debtor's location, so the two regimes generally should have had the same effect for patent collateral.

Loan parties can choose the state law governing some aspects of their contracts, but cannot choose the state law that governs ownership of collateral in bankruptcy. This was established in 1998 in *In re Eagle Enterprises* by the United States Bankruptcy Court for the Eastern District of Pennsylvania, and upheld on appeal by the district court the next year. The loan parties in this case had agreed to use German law to govern a loan secured by trucks located in Pennsylvania. (Germany has no automatic stay protection in bankruptcy, among other creditor-friendly provisions.) The court had no problem with the international aspect of the contract, but held that the ability to select governing laws could not extend to issues of ownership in bankruptcy. It reasoned that the bankruptcy estate, a separate entity from the loan parties themselves, would have been adversely affected by such an ability (which was of course the point), and it had not had the opportunity to object when the contract was signed (as it did not yet exist). Thus, loan parties are not allowed to contract around the provisions of their states' laws for the division of assets in bankruptcy. (I thank Steven Weise of Proskauer Rose LLP for referring me to this decision.)

# References for the Internet Appendix

## References

- Baker, C. A., Newman, R. M., Rutherford, D. M., 2013. Uniform commercial code. In: Kravitt, J. H. P. (ed.), *Securitization of Financial Assets*, Wolters Kluwer, New York.
- Gibbons, L. J., 2004. Stop mucking up copyright law: A proposal for a federal common law of contract. *Rutgers Law Journal* 35, 959–1033.
- Graham, S. J., Hancock, G., Marco, A. C., Myers, A. F., 2013. The USPTO trademark case files dataset: descriptions, lessons, and insights. *Journal of Economics & Management Strategy* 22, 669–705.
- Kieff, S., Paredes, T., 2004. An approach to intellectual property, bankruptcy, and corporate control. *Washington University Law Review* 82, 1313–1339.
- McJohn, S., 2010. Top tens in 2010: patent and trademark cases. *Northwestern Journal of Technology and Intellectual Property* 9, 313–324.
- Menell, P., 2007. Bankruptcy treatment of intellectual property assets: an economic analysis. *Berkeley Technology Law Journal* 22, 733–823.
- Rosenstock, J., 2005. *Transferring Invention Rights: Effective and Enforceable Contracts*. Aspen Publishers, New York.
- Young, E., 2008. Preemption and federal common law. *Notre Dame Law Review* 83, 1639–1680.
- Ziff, E., 2002. The effect of corporate acquisitions on the target company’s license rights. *The Business Lawyer* 57, 767–792.