

U.S. PATENT PRACTICE
PROFESSIONAL
LIABILITY &
PERFORMANCE RISKS

INSIGHTS AND OPPORTUNITIES

FIRST EDITION:
JULY 2017

 VISIBILITY



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"Data sets that are proxies for the behavior of the insured are the best predictors of risk,"

*Sarah Street, XL Catlin, a P&C insurance company, CB Insights
Innovation Summit, January 12, 2017*

OVERVIEW

Mistakes, such as missed deadlines, can have very serious and expensive repercussions in the patent profession - for the patent practitioner, for the insurance companies that insure them, and for patent clients. Lack of insight into the practice of patent law, such as how things can go wrong, together with a lack of tools to mine and analyze such data, make it difficult for insurance companies to properly assess professional liability risk. Furthermore, this lack of insight also makes it difficult for those looking to purchase patent services to assess which patent practices are the most reliable, and for patent practitioners to develop their own systems to prevent and catch mistakes before they become costly.

For the first time, Big Data provides the opportunity to quantify these aspects, and allows these metrics to be accessed and analyzed. In this study, our findings examine how Big Data and analytical insights allow insurers, reinsurers and other patent law service users to better address efficiency, performance, profitability and risk issues in the patent practice market with a user-data driven perspective.

The Patent Practice Benchmark 20 (PPB20™) identifies the top 20 patent practices nationwide, based on the accuracy, completeness, and timeliness of their actions before the United States Patent and Trademark Office (USPTO).



BEHAVIORAL DATA, RISK & PERFORMANCE RANKINGS

MISPRICING RISK: UNDERWRITING WITHOUT BEHAVIORAL DATA

Malpractice suits against patent practitioners and firms have the potential to be extremely costly. Lawyers Professional Liability (LPL) insurers and reinsurers for patent practices face a problem - they have little objective data upon which to base their risk assessment of the practice.¹

In fact, traditionally, in addition to standard actuarial models, patent LPL insurers and reinsurers have based their underwriting of professional liability coverage policies on:

- size of the practice;
- size of the firm²;
- number of lawyers;
- the number of years a lawyer has practiced;
- existence of internal control systems/processes;
- geographical location; and
- claims history.³

However, the above factors provide an incomplete risk profile of a patent practitioner or patent practice. This prevents effective risk pricing and the creation of customized products.

When comparing the factors that revolve around patent LPL underwriting with other property and casualty areas, one of the most significant differences is the lack of insight into a policyholder's behavior. This is unlike many other insurance areas. For instance, the auto insurance industry has access to data regarding a host of known risk factors, such as real time data on clients' driving behaviors, which provide underwriters the proper insight to assess the risk their clients run before an accident occurs. In contrast, patent LPL insurers underwrite policies with little, if any, statistical insight into a patent practitioner's actual practice case history. Though patent LPL insurers and brokers have access to past claims data as a basis to assess and predict risk, these tools have limited reliability, due to the paucity of such claims.

Underwriting based on incomplete data results in poor risk identification, differentiation, and inefficient pricing and lower profitability.⁴ Due to the potential for very high rewards in a malpractice suit, and limited number of claims, it is crucial to have accurate data upon which to identify risk, and upon which to base pricing and underwriting.

LAW FIRM RANKINGS: WHY BEHAVIORAL DATA IS KEY TO PERFORMANCE RANKING

The purpose of law firm, patent practice, and practitioner rankings and ratings is to provide clients with a benchmark on which to rely and to facilitate the decision to retain a law firm, lawyer, or a patent practice.

Law firms and patent practices prominently cite rankings on their websites, while business development professionals actively use rankings to promote a firm's practice.⁵ The presence of a patent practitioner or law firm on a ranking directory is meant to validate an individual, practice, or firm as a key player and promotes them as highly competent. However, the law firm and practice ranking business lacks objectivity and reliability when it comes to assessing competence.⁶

Ranking directories identify, rate, rank, and recommend firms, practices, and practitioners. Researchers are hired by the ranking directories to interview, research, and gauge the market perception of a law firm or practitioner. Practitioners and firms alike dedicate significant resources to making submissions to the ranking directories, including highlighting why a specific practitioner is qualified to be ranked and in which area.⁷ Typically, the ranking of patent practitioners is based on either financial metrics, subjective factors, or a combination of both. These include annual revenues,

survey of peers, word of mouth, and size of the firm.

The above factors have limited scope and reliability. In the patent law firm and practice ranking business, there is no objective standard like the S&P 500® or NASDAQ-100®, against which to assess and measure the performance of patent practices. The challenge for ranking directories is that they do not speak to the quality of the work or performance of patent practitioners or law firms, nor do they give any reliable guidance as to what firms one should use in the future.⁸ According to a law firm consultant, the legal industry "absolutely" needs new ways to measure law firm quality. In his view, "League tables and ranking systems are entirely reactive and backwards-looking: they tell you what people thought or what decisions they made in the past, but they don't give you any reliable guidance on what firms they should use in future".⁹



USING BIG DATA INSIGHTS

USING BIG DATA ANALYTICS TO DETERMINE PATENT PRACTICE RISK & PERFORMANCE

Previously, patent LPL insurers and reinsurers were unable to leverage Big Data analytics to assess patent practices because the data was limited, fragmented and not easily accessible. Cases of professional negligence, errors and omissions, or missed deadlines have been difficult to track due to the limited access to a patent practitioner's casefile history before the USPTO and access to docketing systems for verification. Furthermore, there was no statistical data for cases of incomplete applications or documents not adhering to the USPTO requirements. By the same token, clients of patent law firms and practitioners have been unable to measure patent practice quality based on casefile histories.

Applying the right analytics to the USPTO's publicly available patent casefile histories results in game changing insights. The combination revolutionizes the way and what type of patent LPL coverage can be calculated, covered, structured and delivered. This promises full customization of patent LPL insurance products. It allows the collection and comparison of a patent practice's behavior irrespective of its size. It also changes how purchasers of patent law services assess the performance of, and compare, patent practices.



QUOTIA™'S PROPRIETARY RISK & PERFORMANCE ANALYTICS

Quotia™ is an analytics platform that mines and analyzes intellectual property (IP) transactions of every patent firm or practitioner before the USPTO and assigns a score. Quotia predicts and forecasts a patent practice's risk and performance potential. It gives insight into the daily behavior and performance of a patent practice.

To objectively and accurately assess a U.S. IP law firm's patent practice, Quotia isolates patent practices from other practices in the firm, and also from other IP practice areas, such as trademarks and copyrights. Each practice area carries a different set of risks and potential liability, with patent mistakes typically having the most serious and costly repercussions.

The Quotia analytics platform examines a patent practice's published applications and

issued patents that have a recorded transaction in a given calendar year ("Active Casefiles"). The transactions are based on three major categories:

- non-compliance with USPTO requirements;
- payments history; and
- potential subject matter conflicts.

The above factors are further divided into numerous sub-categories. Quotia assigns a numerical value to the results of each category and sub-category as well as a relative weight. While each incident of procedural non-compliance may not in itself be a reportable incident, or evidence of risk, the Quotia Score suggests a correlation between the level of repetition, the severity of increased risk, and the likelihood of reoccurrence.

Each patent practice in the U.S. is assigned a Quotia Score:

The total of the values results in a final score assigned to each patent practice across the U.S. The scores range between 150 and 900. As a score decreases, so does the patent practice's performance. Conversely, a patent practice's risk increases as its score decreases.

With patent practice risk allocation based on the Quotia Score, insurers and reinsurers can determine patent practice behavior using a suite of variables that may lead to potential claims. Also, clients can objectively assess the performance of how a patent practice has performed and is likely to perform in the near future.

Inside the Data:

For a greater appreciation of the types of data that are used, four (4) sub-categories of non-compliance and payments history are explained in greater detail in Appendix A. The sub-categories discussed relate to:

- a) Incomplete Information Disclosure Statements (IDS);*
- b) Defective Notices of Appeal;*
- c) Corrections to Inventorship; and*
- d) Payments practice.*

PATENT PRACTICE ASSESSMENT & THE PATENT PRACTICE BENCHMARK 20: PPB20™

Using Quotia analytics, we have divided every patent practice in the U.S. into 1 of 3 tiers based their Quotia Score: Tier 1 (score of 900-751), Tier 2 (score of 750-551), and Tier 3 (score of 550-150).

The patent practices in Tier 1 pose the least overall risk and are statistically the top performers when measured by accuracy, completeness, and timeliness of work.

PPB20: *The PPB20 is the only benchmark which relies on a user-data risk allocation approach. This consists of the top 20 U.S. patent practices in Tier 1 based on a Quotia Score. The benchmark is set out in Appendix B. This benchmark provides a more objective and reliable standard for assessing patent practices both in terms of risk and performance.*

PPB20 Constituents for 2016: *The constituent patent practices of the PPB20 are listed in Appendix C.*



BIG DATA & PATENT PRACTICE CASE STUDIES

We conducted two surveys: one, on the overall patent practice market to ascertain whether the data bears out a correlation between size, performance and risk, the other, a granular look at two nationwide patent practices of similar active casefiles portfolio size, practitioners, and awards/rankings.

CASE STUDY #1: DOES SIZE DICTATE RISK OR PERFORMANCE IN PATENT PROSECUTION?

The U.S. patent law firm market is traditionally viewed in terms of the size of the firm to assess risk: small, mid-size and large. Practice size, by extension, is used as a proxy to measure competence. The traditional methods of calculation are heavily based on size, number of patent practitioners, reputation, and years in practice.

In our analysis, we examine another set of criteria: user-data driven risk allocation based a Quotia Score.

To carry out the study, all U.S. patent practices were characterized as small, medium, or large. This is based on the portfolio size, determined by the number of Active Casefiles.

The size categories are as follows:

- **Small Patent Practices**
*Manage up to 6,000 Active Casefiles
(an average of 6 registered patent practitioners)*
- **Mid-size Patent Practices**
*Manage between 6,001 to 15,000 Active Casefiles
(an average of 54 registered patent practitioners)*
- **Large Patent Practices**
*Manage more than 15,000 Active Casefiles
(an average number of 112 registered patent practitioners).*

Note that small patent practices are not necessarily small law firms. A number of mid- and large law firms have small patent practices.

49%
Small Patent Practices

22%
Mid-Size Patent Practices

29%
Large Patent Practices



US PATENT PRACTICE BREAKDOWN

Small patent practices make up the majority of the U.S. patent law practice market, based on Active Casefiles. In total, these small patent practices are responsible for the largest number of Activefiles portfolio and have the most transactions before the USPTO.



PATENT PRACTICE
— BENCHMARK —

65%
of PPB20 are Small Patent Practices

30%
of PPB20 are Mid-Size Patent Practices

5%
of PPB20 are Large Patent Practices

PPB20 BENCHMARK BREAKDOWN

Despite handling 29% of the USPTO Active Casefiles, large patent practices only represent 5% of the PPB20 patent practices, while small and mid-size practices, respectively, represent 65% and 30%

Standard benchmark ratings tend to favor large firms as a whole and discount smaller patent practices. The data clearly indicates that basing risk and performance on practice size alone would mean that 65% of the PPB20 patent practices would be eliminated due to their size. Yet, based on Quotia analytics and the resulting scores, these patent practices are rated as top performers. Based on objective data, the accuracy, timeliness, and completeness in their work, demonstrates that these patent practices outperform the majority of the market.

The absence of large patent practices as a significant component of the PPB20 and the domination by small and mid-size patent practices, suggests there is a significant misidentification of risk, pricing and opportunities based on practice size alone. The findings show that risk is independent of size and very much behavior dependent, when it comes to patent prosecution.

CASE STUDY #2: DOES RANKING DICTATE RISK OR PERFORMANCE IN PATENT PROSECUTION?

A comparison of two patent practice's Active Casefiles illustrates how the Quotia Score's reliance on behavioral data provides insight into previously unknown behavior and allows for better risk identification, quantification, and competence assessment.

To illustrate the type of insight and the nature of the relative risk and performance of patent practices, we compared a limited selection of data for two patent practices. Both patent practices have similar numbers of Active Casefiles, meaning they have similar portfolio sizes and they have similar numbers of practitioners. Both patent practices have similar numbers of awards and rankings based on traditional methods. Both are nationwide practices.

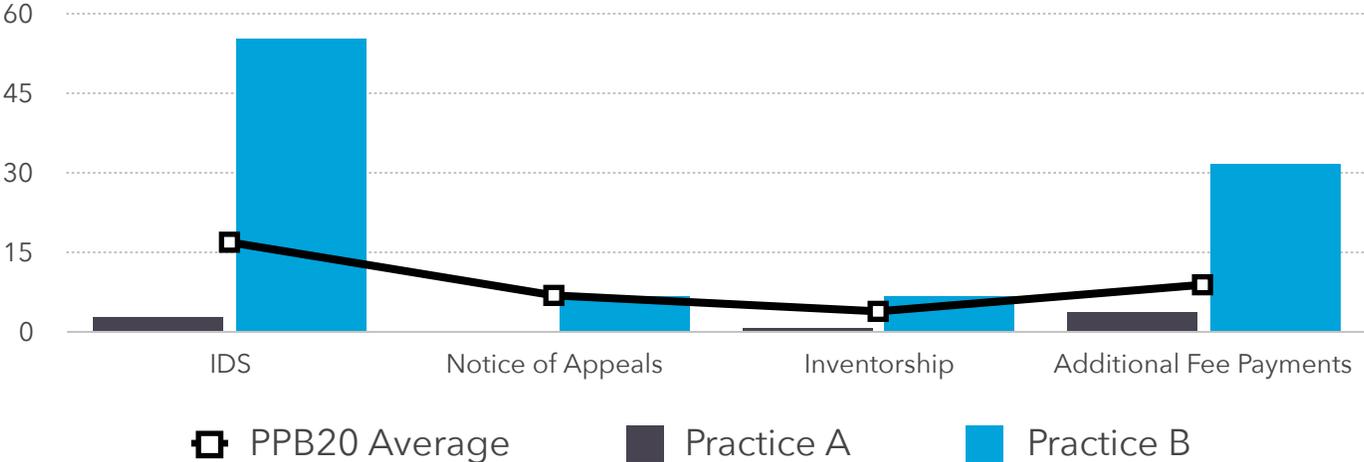
Using the data currently available to both users of patent services and insurance companies, the patent practices would appear to have similar levels of competency and malpractice suit risks. However, their competency and risk factor profiles are vastly different:

- Practice A is an IP boutique and had a Quotia Score of 820 in 2016, making it a PPB20 patent practice.
- Practice B is a general practice AM Law 100 firm with a large patent practice. The AM Law 100 is a group of the largest law firms ranked by revenue in the U.S. However, Practice B had a Quotia Score of just 434 in 2016, putting its risk and performance profile in Tier 3.

Both patent practices have been top ranked in LMG Life Sciences, U.S. News - Best Lawyers® "Best Law Firms", IAM Patent 1000 - The World's Leading Patent Practitioners, and Chambers Global rankings. The two practices were compared with respect to the subcategories outlined in Appendix A. The number of times (number of incidents) that each practice failed to meet USPTO requirements in the respective categories in a calendar year (in this case 2016) was noted. The results of the comparison are shown on the next page.



INCIDENT COUNT



PRACTICE B vs. PPB20 AVERAGE

17x
Worse than
PPB20 Average
INCOMPLETE
DISCLOSURE
STATEMENTS
(IDS)

7x
Worse than
PPB20 Average
NOTICE OF
APPEALS

4x
Worse than
PPB20 Average
INVENTORSHIP

9x
Worse than
PPB20 Average
ADDITIONAL
FEE PAYMENTS

Despite what would be similarly ranked patent practices under traditional methods, Practice B was shown in our study to have had a significantly greater number of incidents in failing to follow procedural requirements that affect a patent holder's substantive rights compared with Practice A

Of particular interest is the fee payment and IDS profiles for Practice B. Both stand out as being significantly worse than the PPB20 average. These sub-categories appear to be important predictors of the patent practice's risk and performance profile.

Based on the present case studies, we note that in the overall patent practice market, there is a disconnect between awards/rankings perception and the data when it comes to competence and performance. That is, there is a disconnect between perceived competence and measured performance of a patent practice.

While not shown here, the data indicates that Practice B's Timely Payments practice was almost 4% below that of Practice A's 99.2% rate. While Practice A paid fees late 0.8% of the time, Practice B paid fees late almost 6 times more frequently than Practice A.

CASE STUDY CONCLUSIONS

In the patent practice industry, the general rule of thumb is that a patent practice's reliability can be ascertained based on size, reputation, and industry rankings. Large patent practices are considered stable and reliable.¹⁰

The data suggests that when looking at top performers, competence and performance is not dictated by size and ranking. But rather, the top performers are spread out between patent practices of different sizes, and between general practice and specialist IP boutique law firms.



FINDINGS & IMPLICATIONS

One law firm practice and risk management consultant posed the question as follows:

Are there elements of a law firm's [or patent] practice management environment, which, evaluated in a different manner and statistically weighted by an established algorithm, may act to increase the potential for accuracy in the forecast or prediction of potential claims.¹¹

Our study suggests that based on empirical and behavioral data, a patent practice's inability to score well in the different practice categories covered in the Quotia analysis, would generally be predictive of a higher potential for professional liability claims and lower performance. As the study demonstrates, the lack of insight and objectivity clouds perception and leads to incorrect assumptions and results in inefficient pricing.

Using Big Data to identify and quantify patent practice user behaviors helps determine trends and provides objectivity. The data allows one to uncover underinsured or unsuspected risks, define risk triggers, and allows for an objective assessment of the patent practice's performance. Using Quotia analytics, one can now readily identify top patent practices nationwide, based on the accuracy, completeness, and timeliness of their actions before the USPTO.

APPENDICIES & ENDNOTES

APPENDIX A: EXAMPLES OF SUB-CATEGORIES IN QUOTIA

For a greater appreciation of the types of data that are used, four (4) sub-categories of non-compliance and payments history are explained in greater detail below. The sub-categories discussed relate to:

- a) Incomplete Information Disclosure Statements (IDS);
- b) Defective Notices of Appeal;
- c) Corrections to Inventorship; and
- d) Payments practice.

(a) *Incomplete IDS*: Quotia notes each time a patent practice received a notice of non-compliance from the USPTO, with respect to IDS requirements. A notice of non-compliance is received for various reasons including: failure to submit a statement under 37 CFR 1.97 (e), failure to pay a fee and failure to provide listed references.

(b) *Appeals before the USPTO Patent Appeal Board - Defective Appeals*: Before the Patent Appeal Board, submission of defective or incomplete appeal briefs poses risks. Quotia examines the number of appeals launched

by a patent practice on behalf of a client in which the steps taken were considered by the USPTO to be procedurally non-compliant. The steps range from submission of insufficient fees, unacceptable Notices of Appeal, as well as defective Appeal Briefs. All of these incidents have adverse consequences on a client's rights.

(c) *Inventorship Errors*: A patent is invalid unless it lists the first and true inventor or inventors of the invention. These incidents relate to the number of unsuccessful attempts to correct errors in the name(s) of the inventors by a patent practice in a calendar year. If the inventorship is incorrect, the validity of the patent is jeopardized.

(d) *Payment History*: The ability of a patent practice to make timely and correct payments is critical to the value of a patent. It is also a factor that closely determines a patent practice's overall performance. In this area, there are three main categories of payments:

- Timely Payments;
- Remediable Late Payments -Late payments that are remediable by making additional payments; and
- Non-Remediable Late Payments - Payments where additional payments are rejected.

APPENDIX B: PPB20 METHODOLOGY

To be eligible for consideration in the PPB20, a patent practice must meet the following criteria in a calendar year:

- be based in the United States;
- have a minimum of 13 Patent Agents/Attorneys registered and authorized to practice before the USPTO;
- have a minimum of 3,100 published patent applications and patents in the Active Casefile histories;
- have a minimum of 600 maintenance fee payments; and
- have a minimum Quotia score of 800.

To ensure that the PPB20 as a benchmark relies on statistically significant data, the PPB20 requires a minimum number of patent agents/attorneys, active portfolio size and payments activity.

APPENDIX C: PPB20 CONSTITUENT PATENT PRACTICES

Carlson Gaskey & Olds P.C.

Katten Muchin Rosenman LLP

Allen Dyer Doppelt Milbrath & Gilchrist

Alleman Hall McCoy Russell & Tuttle LLP

Miles & Stockbridge P.C.

Rankin Hill & Clark LLP

TraskBritt P.C.

Park Vaughan Fleming & Dowler LLP

Fay Sharpe LLP

Dority & Manning P.A.

Fitzpatrick, Cella, Harper & Scinto

Wood, Herron & Evans LLP

Global IP Counselors LLP

Pearne & Gordon LLP

Volpe & Koenig P.C.

Workman Nydegger

RatnerPrestia P.C.

King & Spalding LLP

Armstrong Teasdale LLP

Fenwick & West LLP

ENDNOTES

1. Thomas Berman, Risk forecast: Predict your firm's professional liability claims potential, online: (2013) Solicitors Journal <<https://www.solicitorsjournal.com/feature/finance/risk-forecast-predict-your-firm%E2%80%99s-professional-liability-claims-potential.>>
"To date, the prediction or forecasting of claims has been the focus of the efforts of the underwriting community... prognostication is largely (but not exclusively) based upon the record of professional liability insurance claims and the firm's associated need for the utilisation of its insurance coverage.
2. William Freivogel, Avoiding Liability in Large U.S. Law Firms, online: Canadian Bar Association, <http://www.cba.org/cba/cle/pdf/MP_Freivogel_paper.pdf>
"Large law firms rarely make the kinds of mistakes that small firms and sole practitioners do, such as missing dates or getting the law wrong... While mistakes occur in large firms... One area that large law firms need to watch is patent prosecution. We are seeing firms miss filing dates. This does not happen often, but when it does, the matter can be a substantial one."
3. Tom Baker & Rick Swedloff, Liability Insurer Data as Window on Lawyers' Professional Liability, online: 5 U.C. Irvine L. Rev. 1273 (2015); (2015), Faculty Scholarship Paper 1545, <http://scholarship.law.upenn.edu/faculty_scholarship/1545>
"LPL insurers primarily segment the law firm market according to size and geography...selling to a firm with fewer than thirty-five lawyers insurers sell LPL policies without significant, if any, individuation between insureds beyond the insureds' areas of practice. As one Executive told us, below thirty-five lawyers "you have to underwrite by class in practice areas. There can't really be any insight into an individual firm. You just don't have the time and you can't afford it." As a result, providing LPL insurance to firms that are larger than thirty-five lawyers is a significantly different business than providing LPL insurance to smaller firms.
4. Raj Bhat, Underwriting and Risk Management, (2009) ISO Review, Summer 2009 edition, <<http://www.verisk.com/underwriting-v/resources/2009.09.04.underwriting.and.risk.management.pdf>>
5. Dominic Carman, Why Chambers and the Legal 500 matter, online: September 20, 2015, LinkedIn, <<https://www.linkedin.com/pulse/why-chambers-legal-500-still-matter-dominic-carman>>
6. Mark Anderson, Professional Rankings by Legal Publications: How Much Value Do They Have?, online: September 18, 2011, IP Draughts, <<https://ipdraughts.wordpress.com/2011/09/18/professional-rankings-by-legal-publications-how-much-value-do-they-have/>>
7. Why Chambers and the Legal 500 matter, supra at 6.
8. Felicity Nelson, Law Firm Metrics, not much use to clients, online: January 28, 2016, Lawyers Weekly, <<https://www.lawyersweekly.com.au/news/17872-law-firm-metrics-not-much-use-to-clients.>>
"Mr Furlong said other comparative metrics were also of little use to clients because they "tend to be either very narrowly applicable or highly subjective". For instance, M&A league tables are a "useful secondary measure" of which firms handle the best deals but it only applies to the "tiniest fraction" of firms...So to the extent there are any metrics to compare law firm performance, they are of interest and utility almost entirely to law firms themselves. Rankings systems such as Chambers "and many, many other less reputable versions that purport to rank law firms according to reputation and other criteria according to both peers and clients" are equally limited, he continued.
9. Law Firm Metrics, not much use to clients, supra at 8.
10. Liability Insurer Data as a Window on Lawyers' Professional Liability, supra at 3.
11. Risk forecast: Predict your firm's professional liability claims potential, supra at 1.

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ABOUT IPVISIBILITY

We provide risk insights and assurance tools for decision makers. This ranges from behavioral data, risk and competence benchmarks, risk insights to risk scores for financial institutions, professional liability insurers and intellectual property practitioners.

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