

Deeper Perspective: How Issue-Level *ex Parte* Appeals Data Illuminates the Reversal Picture

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The United States Patent and Trademark Office (USPTO) Patent Trial and Appeal Board (PTAB) regularly reports statistics regarding the rates at which its administrative patent judges affirm, reverse, or affirm-in-part the rejections of examiners appealed to the Board. The PTAB's data reporting approach, however, confounds the issue-level contribution for all appeals that involve rejections citing multiple legal issues. Examining the *ex parte* appeal decisions at the issue-level provides a remarkable picture of how the rejections of the examiners are standing up at the Board and provide practitioners, patent holders, and inventors (and the examiners themselves) greater insight in what legal issues make sense to take to the Board.

INTRODUCTION

An *ex parte* appeal to the Board can be taken after a patent applicant has been twice rejected by the examiner, whether or not the rejection is made final². After filing a notice of appeal, the applicant submits an appeal brief, which must include all of the arguments the applicant can rely on in the appeal³. Following the receipt of the appeal brief, the examiner who wrote the rejection and two supervisory level examiners meet in an appeal conference to discuss the brief and decide whether to file an examiner's answer to the brief, reopen prosecution, or allow the case⁴. A decision to file an examiner's answer is effectively a decision to send the case to the Board for decision⁵. All three appeal conferees sign the examiner's answer⁶. The use of the appeal conference ensures that the decision to send any particular case to the Board always involves at least two additional senior examiners in addition to the examiner who wrote the rejection. Following receipt of the examiner's answer, the applicant is allowed (but not required) to file a reply brief and then pay the appeal forwarding fee, at which time the appeal will be docketed for decision by the Board⁷. A three judge panel of judges from the PTAB is then selected to review the case and issue their written opinion.

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² UNITED STATES PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 1204(II) (9th rev. 2017).

³ UNITED STATES PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 1205.02 (9th rev. 2017).

⁴ UNITED STATES PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 1207.04 (9th rev. 2013).

⁵ See UNITED STATES PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 2676 (9th rev. 2015) and § 1207.01 (9th rev. 2017) for appeal conference procedures including the inclusion of a quality assurance specialist in *ex parte* reexamination appeal conferences.

⁶ UNITED STATES PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 1207.01 (9th rev. 2017).

⁷ UNITED STATES PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 1208(I) (9th rev. 2013).

Some have expressed to the author some skepticism of the validity of using of *ex parte* appeals data to make decisions in patent prosecution because of a perception that *ex parte* appeals represent situations where the examiner's rejection is perceived by the appellant as "particularly bad," "suspect," or "worse" overall than the garden variety. Fortunately, the appeals process itself erases any possible appellant selection bias, as it is the three examiners in the appeal conference who make the final decision to send each appeal to the Board, not the appellant. The examiners in the conference always have the ability to reopen prosecution or allow a case after considering all of the arguments presented in the appeal brief⁸. The examining corps is in control of 1) how many appealed cases go to the Board and 2) which cases are sent. Thus any appellant "cherry picking" of cases to be decided by the Board is screened out by the examiners themselves. The result is that the outcome of any appeal decision reflects on the correctness of the decision made by the examiners in the appeal conference, not on the appellant's particular reasons for appealing. Accordingly, in this article, examination quality is regarded as the percentage of the time the PTAB judges agree that the examiner, in the appealed rejection, correctly found the facts and applied the law so that the panel could affirm the particular legal issue cited in the rejection.

When reporting aggregate decision statistics, the methodology the PTAB uses to count a decision's outcome confounds the issue-level contribution for all appeals that involve multiple legal issues. A few examples illustrate this effect⁹. If an appeal involves a novelty¹⁰ rejection and an obviousness¹¹ rejection of the same or different claims, the Board panel makes separate findings as to the correctness of each rejection made by the examiner in the decision¹². If the Board panel reverses the novelty rejection, but affirms the rejection of all claims on obviousness grounds, the case is counted by the PTAB as affirmed. If the Board reverses the novelty rejection, but affirms the rejection of all but one of the claims for obviousness, the case is counted by the PTAB as affirmed-in-part. Only if the Board reverses the rejection of all the claims for both novelty and obviousness will the case be counted by the PTAB as reversed. Note that in all examples, the novelty ground of rejection was reversed, but invisibly, as the PTAB counted only the overall outcome.

⁸ UNITED STATES PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 1207.04 (9th rev. 2013).

⁹ This way of counting the outcome of each case is reflected in the stated disposition in each *ex parte* appeal decision.

¹⁰ The conditions for novelty are set forth in 35 U.S.C. § 102 (2019) but Board decisions involve cases for both pre- and post-American Invents Act (AIA) decisions. Novelty decisions reported in this paper include all possible statutory grounds for rejection under 35 U.S.C. § 102 both pre- and post-AIA. There are some cases where multiple statutory grounds for rejection under 35 U.S.C. § 102 are decided in the same appeal by the Board, but these are uncommon.

¹¹ The conditions for non-obvious subject matter are set forth in 35 U.S.C. § 103 (2019) but Board decisions involve cases for pre- and post-AIA decisions. Obviousness decisions reported in this paper include all possible statutory grounds for rejection under 35 U.S.C. § 103 both pre- and post-AIA.

¹² There are some infrequent exceptions observed by the author to this general rule where the Board panel occasionally declines to rule on each rejection if they determine one legal issue disposes of all of the claims in the application. Other situations where rulings on less than all issues in an appeal is when the issue involves indefiniteness where the panel cannot determine the meaning of a claim term and, as a result, either non-substantively affirms or reverses the remaining novelty or obviousness rejections because of an inability to apply the art to the indefinite claims (these types of issue-level outcomes are reflected as "non-substantive" outcomes in the Anticipat.com database).

This “lump sum” reporting methodology obscures what is going on at the legal issue level of the case, and invites a closer look at the data—an issue-level look at what is happening for each legal issue in each decision. Additional Pareto charting of the legal reasoning used by the Board to affirm, affirm-in-part, or reverse each legal issue on appeal also deepens the ability to know why the Board is reversing the examining corps¹³. In this paper, such issue-level data has been taken from the commercial database available at Anticipat.com. In the database, the outcome for each legal issue in each Board decision along with a list of the legal reasoning discussed as the basis of the Board’s decision is recorded for each decision¹⁴. So, at the issue-level, for a case involving a novelty issue reversed by the Board and an obviousness issue affirmed by the Board, the novelty issue would be recorded in the database as reversed while the obviousness issue would be separately recorded as affirmed. If the legal reasoning discussed by the panel for reversal for 102 was the failure of the cited reference to disclose each and every element of the claim as arranged in the claim, the novelty issue would include a tag “All Elements Rule¹⁵” in the database.

DATA

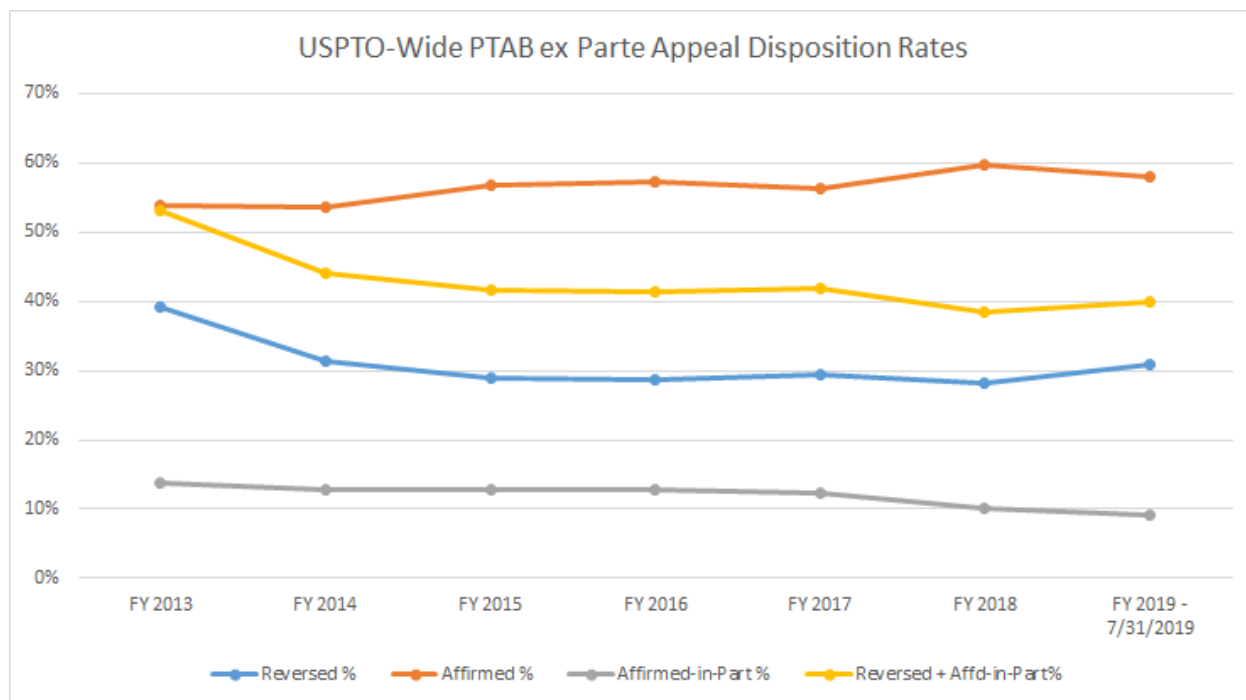
The PTAB reports its *ex parte* data summary each fiscal year, but provides it in the form of separate pie charts. As an aid to summarizing the data and observing time trends, the author constructed the chart below using the PTAB’s own reported USPTO-wide outcome data with the percentages of total decisions that the PTAB identified as being affirmed, affirmed-in-part, or reversed¹⁶:

¹³ See ANTICIPAT.COM, <https://www.anticipat.com/analytics>.

¹⁴ A combination of computerized analysis of each decision along with human review are involved in generating the issue-level data for each decision.

¹⁵ The author has observed in personal research using the Analytics tool at Anticipat.com that the All Elements Rule is the leading reason for reversal for novelty given by Board and happens 3 times more often than any other legal ground used for novelty.

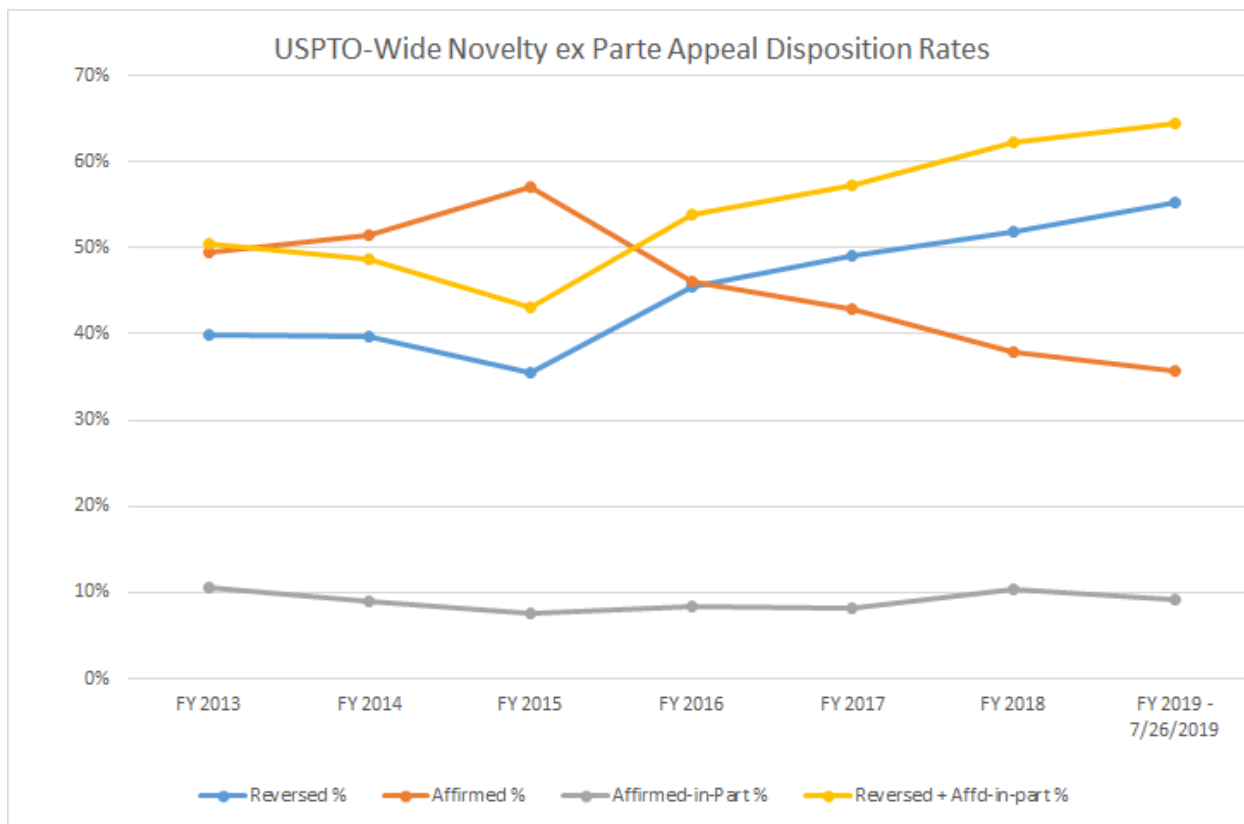
¹⁶ Data for fiscal years 2013-2016 data is taken from UNITED STATES PATENT AND TRADEMARK OFFICE, APPEAL AND INTERFERENCE STATISTICS: PATENT TRIAL AND APPEAL BOARD, p. 9 (September 30, 2016), <https://www.uspto.gov/sites/default/files/documents/Appeal%20and%20Interference%20Statistics%20September%202016.pdf>. Data for fiscal year 2017 data is taken from UNITED STATES PATENT AND TRADEMARK OFFICE, APPEAL AND INTERFERENCE STATISTICS: PATENT TRIAL AND APPEAL BOARD, p. 6 (September 2017), https://www.uspto.gov/sites/default/files/documents/appeals_interferences_statistics_sept17.pdf. Data for fiscal year 2018 is taken from UNITED STATES PATENT AND TRADEMARK OFFICE, APPEAL AND INTERFERENCE STATISTICS: PATENT TRIAL AND APPEAL BOARD, p. 6 (September 2018), <https://www.uspto.gov/sites/default/files/documents/Appeal%20and%20Interference%20Statistics%20-%20September%202018.pdf>. Data for fiscal year 2019 is taken from UNITED STATES PATENT AND TRADEMARK OFFICE, APPEAL AND INTERFERENCE STATISTICS: PATENT TRIAL AND APPEAL BOARD, p. 6 (July 31, 2019), <https://www.uspto.gov/sites/default/files/documents/Appeal%20and%20Interference%20Statistics%20-%20July.pdf>.



The graph above indicates the total affirmed percentage ranged between 53.8% in fiscal year 2013 to 58% through July 31, 2019. If the total percentage of cases identified as the examining corps' "loss rate" at the Board includes affirmed-in-part decisions, the "loss rate" for at least one appealed claim was between 53.1% in fiscal year 2013 to 40% through July 31, 2019. Over time, the PTAB's reported data indicates the examining corps' loss percentage has generally decreased—leading to the impression that examination quality is improving.

Until about July of this year, the author was unaware of any issue-level *ex parte* appeals data available back as far as fiscal year 2013 (October 1, 2012). At that time the database at Anticipat.com was updated to include additional historical *ex parte* appeals decisions. With this information, the author performed an issue-level analysis for all *ex parte* appeals decisions for the period of fiscal year 2013 to July 26, 2019 that included at least one novelty issue¹⁷. A chart showing the issue-level novelty outcomes for this time period is below. The total number of decisions over this period represented in the chart is 13,065.

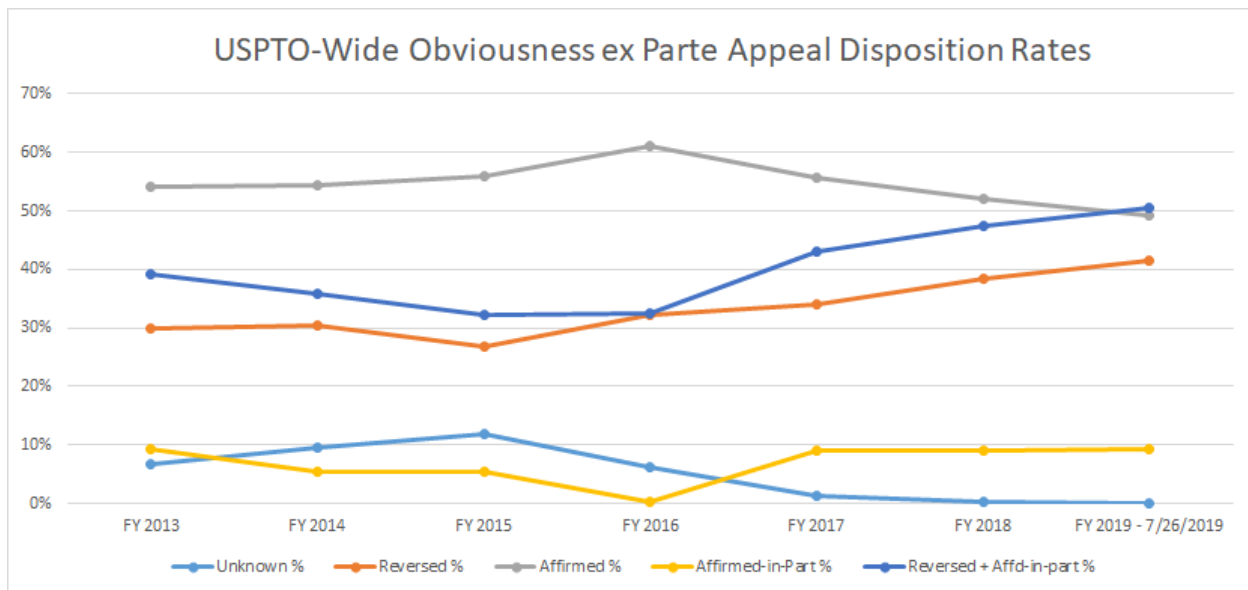
¹⁷ ANTICIPAT.COM, <https://www.anticipat.com/research>.



By inspection, the total reversal rate for novelty varied from 39.92% in fiscal year 2013 to 55.16% as of July 26, 2019. During this same period, the total affirmed-in-part rate remained basically flat at around 10%. Combining the reversed and affirmed-in-part rates indicates that, as the Board is deciding cases today, the Applicant will prevail for at least one claim rejected on novelty grounds 64.41% of the time. What is also notable about the data is that since fiscal year 2015, the USPTO-wide issue-level reversal rate for novelty has steadily climbed with the total reversal rate being the driving factor.

To further investigate the dissonance between the trend observed on the PTAB's reported outcomes and that observed at the issue-level for novelty, the author performed a similar analysis for all *ex parte* appeals decisions over the same time period that included at least one obviousness issue¹⁸. As indicated on the graph, the database at Anticipat.com contains a certain percentage of decisions for obviousness that, unlike for novelty, require additional (mainly human) review and so have an unknown outcome assigned. As the author participated in the approximately 1100 or so human reviews for novelty cases to eliminate those with unknown outcomes, the author's experience indicates that these unknown decisions are a mix of affirmed, reversed, and affirmed-in-part outcomes favoring affirmed-in-part because such decisions are harder for the database's computerized review to disambiguate. However, since fiscal year 2017, the percentage of unknown outcome cases in the data set has been negligible and does not affect data interpretation. The total number of decisions reflected in the chart is 49,602.

¹⁸ ANTICIPAT.COM, <https://www.anticipat.com/research>.

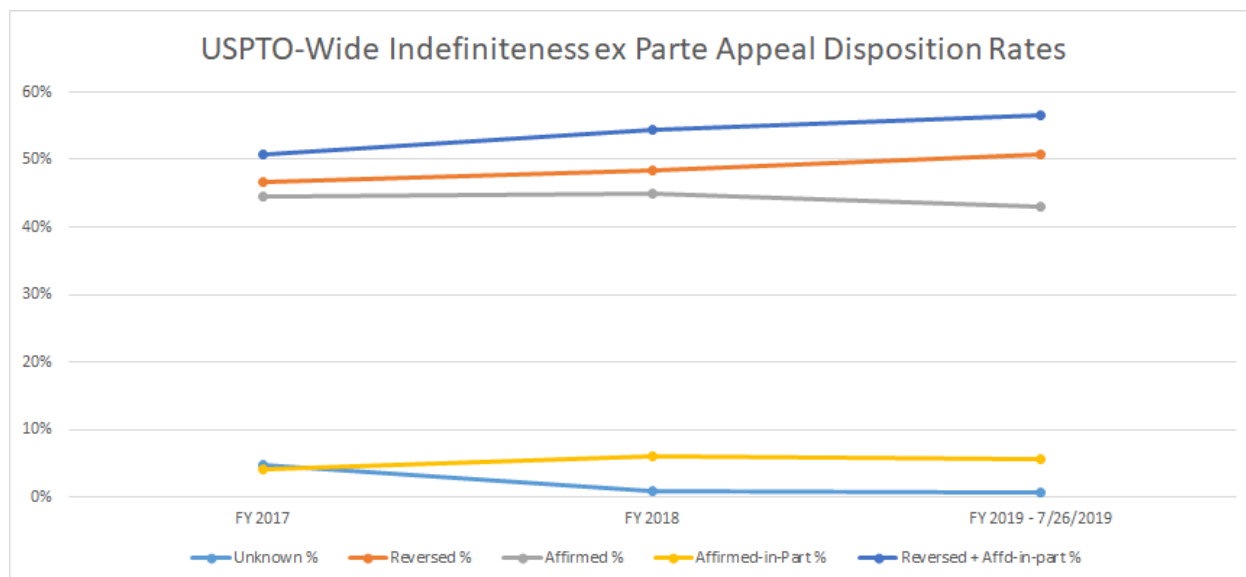


Over the 3 most recent fiscal years, the observed trend upward in the issue-level reversal rate for obviousness is evident. As with novelty, the affirmed-in-part rate for obviousness is flat. Combining the reversal and affirmed-in-part rates shows the Applicant will prevail for at least one claim rejected on obviousness grounds 50.58% in fiscal year 2019. The upward trend in pure reversal rates is driven by the reversal rate for all claims rejected as obviousness.

As an additional investigation, the author performed a similar analysis for all *ex parte* appeals decisions over the same time period that included at least one indefiniteness issue¹⁹. Due to the smaller number of cases that involve indefiniteness (lowest was 344 cases in fiscal year 2015 and highest was 1,025 cases in fiscal year 2017), data is shown for fiscal year 2017 to 7/26/2019 where the effect of unknown outcome cases is minimized²⁰. The total number of decisions reflected in the chart is 2,575.

¹⁹ The conditions for indefiniteness are set forth in 35 U.S.C. § 112(b) (2019) (AIA) but Board decisions involve cases for pre- AIA including 35 U.S.C. § 112 second paragraph rejections.

²⁰ ANTICIPAT.COM, <https://www.anticipat.com/research>.

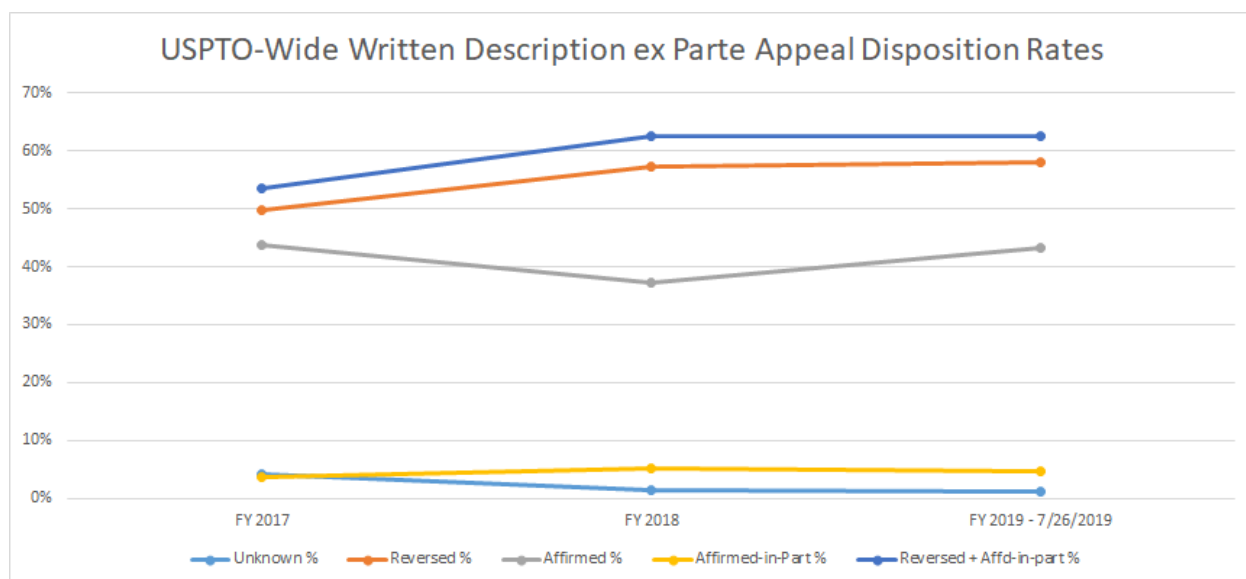


As with novelty and obviousness, the reversal rate for indefiniteness cases showed a steady rise from 50.83% to 56.52% for at least one claim. Again, the rise in the rate was driven by pure reversals as affirmances-in-part remained basically flat over this period.

To examine whether a similar effect could be observed for written description, the author performed an analysis for all *ex parte* appeals decisions over the same time period²¹. As with indefiniteness, the smaller number of cases that involve written description (lowest was 271 cases in fiscal year 2015 and highest was 879 cases in fiscal year 2017), meant that data is shown for fiscal year 2017 to 7/26/2019 where the effect of unknown outcome cases is minimized²². The total number of decisions reflected in the chart is 2,183.

²¹ The conditions for written description are set forth in 35 U.S.C. § 112(a) (2019) (AIA) but Board decisions involve cases for pre- AIA including 35 U.S.C. § 112 first paragraph rejections. The cases from the database for written description included all of those that involve best mode, lack of enablement, new matter, and written description.

²² ANTICIPAT.COM, <https://www.anticipat.com/research>.



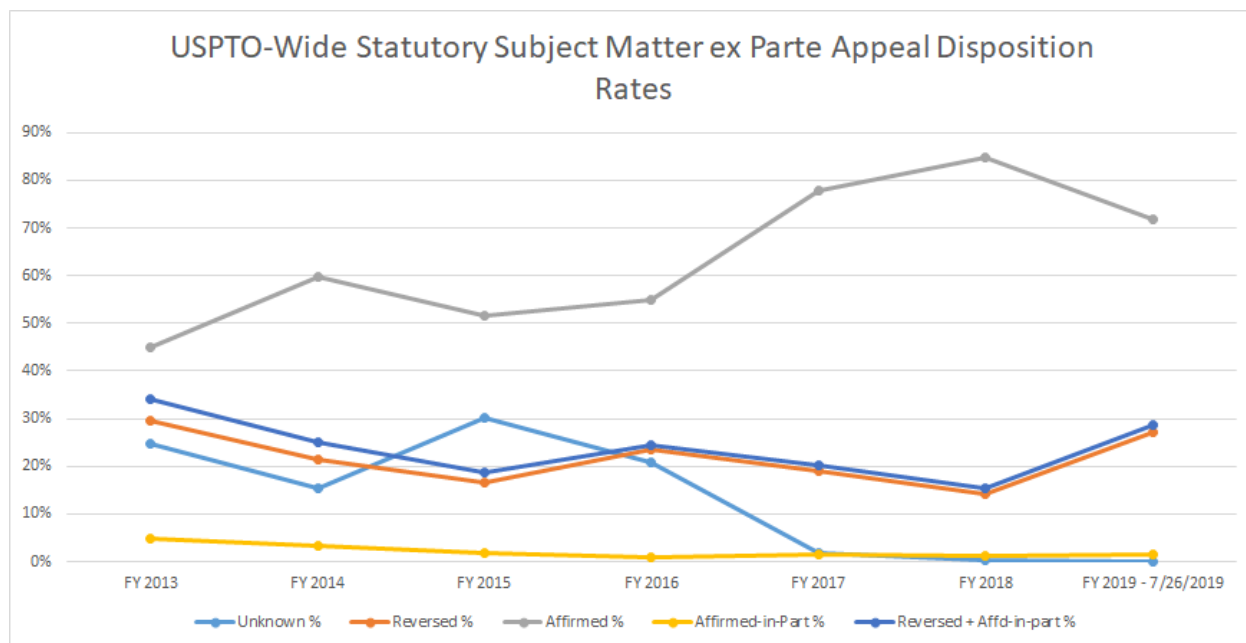
Similar to indefiniteness, written description reversal rates for at least one claim rose from 53.58% to 62.54%. Again, the pure reversal rate drove the change as the affirmed-in-part rate remained basically flat.

To examine whether any effect from any observed rise of statutory subject matter in the dataset could be helping the USPTO affirmance rate stay elevated in the presence of the rising reversal rates for all other grounds of rejection, the author performed an analysis for all *ex parte* appeals decisions over the same time period that included at least one statutory subject matter issue²³. Between fiscal years 2013 to 2015 the number of decisions ranged from 209 to 288, but the number of decisions doubled in fiscal year 2016 and grew nearly fivefold by fiscal year 2017 to 1,095, doubling again in fiscal year 2018 to 2,137 and including 1,852 decisions through 7/26/2019²⁴. The rise in fiscal years 2017-2019 likely reflects the timing of *Alice*²⁵ and related decisions as examiners implemented them in rejections. The total number of decisions represented in the chart is 6,231.

²³ The conditions for statutory subject matter are set forth in 35 U.S.C. § 101 (2019) (AIA). The cases included in statutory subject matter in this paper were all those involving judicially recognized exceptions (patent ineligible subject matter), lack of utility, and statutory double patenting rejections.

²⁴ ANTICIPAT.COM, <https://www.anticipat.com/research>.

²⁵ *Alice Corp. v. CLS Bank Intl.*, 573 U.S. 208 (2014).



There have been 5,084 statutory subject matter decisions during fiscal years 2017 to 7/26/2019. Affirmance rates rose from 55.05% to 84.84% from fiscal year 2016 to fiscal year 2018, falling to 71.98% by 7/26/2019²⁶.

The final major ground of rejected handled by the Board is obviousness type double patenting. From fiscal year 2013 to 7/26/2019, 2,212 decisions involved this issue, but the unknown decision percentages observed made interpreting and charting the results not effective²⁷. For the periods where the unknown percentage was 6% or less (fiscal year 2017 through 7/26/2019), for affirmed decisions, the percentage of those decisions where the Board non-substantively affirmed was 38.04%, 59.73%, and 73.23% for each year. For these same periods the sum of the reversed cases plus the affirmed-in-part cases was 18.23%, 23.21%, and 16.45%, respectively. The author's experience in reviewing Board decisions is that decisions marked as non-substantive for obviousness type double patenting occur when the appellant either does not present any arguments in opposition or when the arguments are so conclusory they are not regarded by the Board panel as responsive to the rejection. In either situation, the Board summarily affirms the Examiner's rejection without relying on any particular legal reasoning.

ANALYSIS

What is clear from the issue-level data is that the PTAB's reporting method provides relatively little helpful information to the practitioner or USPTO staff about how the Board will decide any particular issue today or in the past. Over the past 3 fiscal years, the loss rate for the examiners has been rising for all grounds of rejection except for statutory subject matter and obviousness type double patenting rejections—indicating examination quality for these issues

²⁶ This observed fall in affirmance rates is, in the author's opinion and experience with the Board, reflective of the impact of the USPTO's new binding guidance as to how statutory subject matter analyses are conducted. The guidance binds the Board and went into effect in January 2019.

²⁷ ANTICIPAT.COM, <https://www.anticipat.com/research>.

has been declining. It appears that there may be sufficient numbers of statutory subject matter cases affirmed during fiscal years 2017-2019 that compensated for at least some of the increase in reversed cases for novelty and obviousness. This conclusion is supported by the observed drop in the affirmance rate for statutory subject matter decisions from fiscal year 2018 to 7/26/2019 correlating with the slight drop in the PTAB's reported affirmance rate during this same period. It appears that statutory subject matter has some effect in countering the overall rise in pure reversal rates for all the other issues except obviousness type double patenting. This issue-level effect, however, cannot be deduced from the PTAB's own reported data so the rising examination quality issues for the other issues are effectively invisible.

The *ex parte* appeal issue-level data presented in time trend form here demonstrates how issue-level data gives greater insight into how the Board will decide a case than the PTAB's reported statistics. This issue-level data also provides quantitative answers to the question of which issues are better to appeal to the Board. The greater level of granularity of issue-level data can be combined with further drilling down by technology center, art unit, and examiner. When this information is considered in combination with the legal reasoning actually relied on by the Board, practitioners now, through use of issue-level *ex parte* appeal data, can have greater confidence in their patent prosecution decisions.