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# The Effects of *Alice* on Covered Business Method (CBM) Reviews

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## ABSTRACT

*The frequency of § 101 challenges in Covered Business Method (CBM) filings has undoubtedly increased after the Supreme Court's ruling in Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 134 S.Ct. 2347 (2014). It is uncertain, however, whether this shift in petitioners' preferences will lead to more favorable outcomes from the Patent Trial and Appeal Board (PTAB) post-Alice. This study analyzes CBM outcomes at both the institution and final decision stages by ground to provide an empirical perspective on Alice's impact that can benefit practitioners, policymakers, patentees, and petitioners alike.*

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## I. SUMMARY

¶1 Many studies have tracked aspects of Patent Trial and Appeal Board (PTAB) outcomes, but none have specifically analyzed Covered Business Method (CBM) outcomes at both the institution and final decision stages by ground.<sup>1</sup> Practitioners, policymakers, patentees, and petitioners can benefit from an empirical analysis of outcomes. Our study analyzes CBM outcomes according to the basis for the challenge and examines the impact of the Supreme Court’s ruling in *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S.Ct. 2347 (2014) (*Alice*) on different grounds for CBM petitions. We also investigate the effect of *Alice* on CBM petition filing and success. We determined that there were more § 101 challenges in CBM filings post-*Alice*.

## II. BACKGROUND

### A. Objective: First Review of CBM Outcomes

¶2 Rather than a claim-level analysis, the study focused on whether—for each filing—a petition, institution decision, or final written decision discussed or ruled on at least a single claim involving one of the particular grounds for unpatentability. We believe this patent-by-patent approach provides a better representation of CBM outcomes because the correlation between claims and challenges may skew claim-based results. For example, it is common for a particular ground for challenge to be applied against all or nearly all of a patent’s claims. Using a claim-level analysis would give greater weight to patents with a greater number of claims. A patent-by-patent analysis avoids this skew, though it loses some fidelity as to success of CBM within an individual patent.

### B. Differences between CBM and IPR Proceedings

¶3 CBMs and *Inter Partes* Reviews (IPRs) have several differences. CBMs can be based on §§ 101, 102, 103, 112 and statutory double patenting, while IPRs are limited to only §§ 102 and 103 challenges (evidence in CBMs is not limited to patents and printed publications, as with IPRs). IPRs can be used to challenge any patent, while CBMs can

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<sup>1</sup> See, e.g., [Fitzpatrick, Cella, Harper & Scinto, “2016 Analysis On PTAB Contested Proceedings” PostGrantHQ.com, available at: [http://www.postgranthq.com/wp-content/uploads/2014/10/PostgranthQ\\_Reporter.pdf](http://www.postgranthq.com/wp-content/uploads/2014/10/PostgranthQ_Reporter.pdf)].

be used to challenge only the subset of patents deemed “covered business methods.” The statistical comparison of IPRs and CBMs provided in Table 1 highlights several additional differences between the proceedings. First, the number of filed CBMs is substantially less than the number of filed IPRs. Second, the final outcomes show that 87.0% of IPRs final written decisions (FWDs) included at least one cancelled claim versus 96.1% for CBM FWDs.

*C. Table 1: IPR vs. CBM Petitions (before October 1, 2015)<sup>2</sup>*

	Settled	FWD (at least 1 claim cancelled)	Denied Institution (instituted including joinder)	Adverse Judgment or Other Termination	Pending Pre-/Post-Institution	Total
IPR	712	575 (499)	645 (1666)	421	1225	3578
CBM	76	77 (74)	76 (207)	49	104	382
Total	788	652 (573)	721 (1873)	470	1329	3960

*D. Study Parameters: CBMs Reviewed and Key Cutoff Dates*

1. CBMs Reviewed

¶4 We reviewed 382 CBMs for our study. We divided the grounds for petition between abstract idea (a subset of § 101), prior art (§§ 102/103), and written description (§ 112) challenges. Originally, the abstract ideas category included all judicially recognized exceptions under § 101—i.e. laws of nature, physical phenomena, and abstract ideas. After analysis, we discovered that petitioners almost always invoked judicially recognized exceptions based on abstract ideas, and rarely on laws of nature or physical phenomena. Therefore, we refer to § 101 grounds as abstract idea challenges.

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<sup>2</sup> USPTO, *Patent Trial and Appeal Board Statistics* (Sept. 30, 2015), <http://www.uspto.gov/sites/default/files/documents/2015-09-30%20PTAB.pdf> [https://perma.cc/6G3X-6BTG].

¶5 This result is likely because business method patents tend to be abstract as opposed to—for example—hardware patents, which operate in the physical or natural world and are therefore more likely to claim an unpatentable law of nature or physical phenomena. It is possible for a business method to claim a law of nature or physical phenomena. For example, a scientist may observe, quantify, and patent a natural event which is applicable to business, and therefore lay claim to a law of nature. But our study has yet to see one challenged in a CBM.

## 2. Cutoff Date

¶6 October 1, 2015, is the cutoff date for all data, including not only when petitions were filed, but also when institution and final decisions issued.

### III. SUMMARY OF RESULTS

*E. Table 2: Institution Success Based on Challenge Ground*

	Total Unique Challenges by Ground	Unique Institutions by Ground	“Denied” Ruling on Institution	Settled Before Institution	Terminated Before Institution - Other	Pending Institution
101	276	139	30	25	26	56
102/103	272	121	72	28	27	24
112	106	27	47	14	6	12

¶7 *Table 2* gives an idea of how successful institution may be for a particular ground. A lack of institution does not mean a CBM was unsuccessful. A CBM may be pending institution or may have been settled prior to institution. The percentages for “Unique Institutions by Ground” and ““Denied’ ruling on Institution” provide a baseline for assessing the success of a particular ground.

B. *Table 3: Post-Institution Success Based on Reason for Termination*

	Unique Institutions by Ground	Invalidation in Final Written Decision (FWD)	"Denied" Ruling in FWD	Settled After Institution	Terminated After Institution - Other	Pending FWD
101	139	44	0	29	5	61
102/103	121	49	1	14	6	51
112	27	10	2	7	1	7

¶8 *Table 3* shows how instituted grounds may affect the reason for termination. The chart gives the latest status of each unique institution, where a status may be pending or “terminal.” Terminal status includes settled cases, grounds which were invalidated in a FWD, or cases that terminated for other reasons. Each number in the “Unique Institutions by Ground” column is the sum of all other columns in that row.

#### IV. GETTING TO REVIEW

##### A. *Relative Popularity of Grounds for Challenge: § 101 the Most Popular*

¶9 Section 101 challenges are now the most popular CBM ground for challenge with a total of 276 challenges. Section 102/103 challenges followed closely behind with 272 challenges. There were far fewer § 112 challenges—less than half of § 102/103 and § 101 challenges each—at only 106 challenges.

##### B. *Institution: § 101 Rates Highest, § 112 Still Not So Common*

¶10 The rate of institution was highest for challenges based on § 101 with 81.7% of petitions containing at least one § 101 challenge being instituted. (See *Table 5* below). Prior art institutions were next with a 62.7% institution success rate. Written description challenges under § 112 were the least successful and obtained institution only 36.0% of the time. One possible explanation is that CBM petitioners perceive that § 112 grounds are generally less successful, and thus assert these challenges relatively sparingly.



## V. PRE-/POST-ALICE: A DIFFERENT PERSPECTIVE

¶11 The *Alice* decision issued on June 19, 2014.<sup>3</sup> There were no filings that fell on the date of the *Alice* decision, so we grouped petitions into pre- and post-*Alice* filings, institution decisions, and final decisions. For example, a petition submitted pre-*Alice*, but with an institution decision coming out post-*Alice* would have petition and institution filings categorized into the two different time periods. An overview of the numbers show pre-*Alice* and post-*Alice*: 185 and 197 petitions filed, 68 and 138 petitions instituted, and 11 and 69 final decisions issued, respectively. It currently takes an average of 16 months for a petition to reach a FWD, so the large difference pre- and post-*Alice* appears to be due to procedural reasons.

A. Table 4: Petitions Challenging Under § 101 More Common Post-*Alice*; Petitions Challenging Under §§ 102, 103, and 112 Less Common.

	Total Petitions	§ 101 in Petition	§ 102/103 in Petition	§ 112 in Petition	Total Petitions by Challenge (§§ 101 + 102/103 + 112)
Filed pre- <i>Alice</i>	185	113 (61.1%)	141 (76.2%)	64 (34.6%)	318
Filed post- <i>Alice</i>	197	163 (82.7%)	131 (66.5%)	42 (21.3%)	336
Total	382	276	272	106	654

## 1. Petitions applying § 101

¶12 Section 101 challenges have grown more common post-*Alice*. This could be due to a number of factors, such as the perceived success petitioners expect from using § 101 post-*Alice*. Pre-*Alice*, 61.1% of petitions contained § 101 challenges (113 out of 185 petitions). Post-*Alice*, 82.7% of petitions contained § 101 challenges (163 out of 197 petitions), a 21.6% increase.

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<sup>3</sup> *Alice*, 134 S. Ct. 2347.

## 2. Petitions applying §§ 102, 103, and 112

¶13 Section 101 challenges have *increased* post-*Alice* while challenges under §§ 102/103 and 112 have become less common. The *Alice* decision focused on § 101 and abstract ideas, not §§ 102/103 or 112. After *Alice*, §§ 102/103 challenges in CBM reviews dropped from 76.2% to 66.5%; a 9.7% decrease. Section 112 challenges also decreased from 34.6% of petitions pre-*Alice* to 21.3%; a 13.3% decrease.

¶14 There could be a number of reasons for this drop independent of § 101 success in *Alice*. First, *Alice* could have caused petitioners to focus on § 101 challenges and focus less time developing §§ 102/103 and 112 arguments. Second, petitioners might have separately recognized the poor institution rates for § 112 and avoided submitting those arguments. Third, the recent unanimous Supreme Court *Nautilus* decision may also have impacted the use of § 112 arguments.<sup>4</sup> Given the small numbers involved, our study did not take *Nautilus* into account and leaves it for future papers to investigate this and other independent reasons further.

B. Table 5: PTAB Institution Decisions Did Not Appear to Change Dramatically Post-*Alice*.<sup>5</sup>

	Number of § 101 Institutions / Number of Institution Decisions (% success)	Number of §§ 102/103 Institutions / Number of Institution Decisions (% success)	Number of § 112 Institutions / Number of Institution Decisions (% success)	Cumulative Institution Success Rate By Ground (§§ 101, 102/103, & 112)	IPR §§ 102/103 Institution Success Rate (*compare to CBM institution rates for §§ 102/103)
Instituted pre- <i>Alice</i>	46/54 (85.2%)	35/43 (81.4%)	12/31 (38.7%)	93/128 (72.7%)	566/656 (86.3%)
Instituted post- <i>Alice</i>	93/116 (80.2%)	86/150 (57.3%)	15/44 (34.1%)	194/310 (62.6%)	1103/1467 (75.2%)
Total	139/170 (81.7%)	121/193 (62.7%)	27/75 (36.0%)	287/438 (65.5%)	1669/2123 (78.6%)

<sup>4</sup> See *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014).

<sup>5</sup> Source?

¶15 *Alice* was a significant decision that we thought might affect decisions regarding institution. *Table 5* compares the number of successful institutions for a particular ground (§§ 101, 102/103, or 112) with the total number of institution decisions on that ground in order to determine the institution success rate before and after *Alice*. Interestingly, the institution success rates for each ground decreased after *Alice*. This decrease is likely due—at least in part—to the limited number of petitions with which to evaluate CBM institution success rates pre-*Alice*. Another explanation for the decrease might be opportunistic filings made shortly after CBMs became available. In sum, it is not clear that PTAB institution decisions were significantly affected post-*Alice*.

¶16 Institution success rates for §§ 101 and 112 experienced only a marginal decrease of 5.0% and 4.6% while institution rates for §§ 102/103 demonstrated a dramatic decrease of 24.1%. *Alice* primarily addressed § 101 and abstract ideas challenges. Therefore, it is not clear why institution rates for prior art challenges have decreased since *Alice*. An explanation for this change may be worth exploring in future research.

## VI. FINAL WRITTEN DECISIONS

### A. Overall

¶17 PTAB has issued 77 CBM FWDs. Of these 77 FWDs, 44 invalidated at least one claim based on § 101; 49 invalidated at least one claim based on §§ 102/103; and 10 invalidated at least one claim based on § 112. None of the § 101 challenges were denied, and there have been only 3 denials overall.

B. *Table 6: Pre-/Post-Alice Shows Anticipated Change and Surprising Drop in §§ 102/103 (Prior Art) Invalidation.*

	Total FWD by Petition	§ 101 in FWD	§§ 102/103 in FWD	§§ 112 in FWD	Total FWD by Challenge (§§ 101 + 102/103 + 112)
FWD Pre- <i>Alice</i>	11	3 (27.3%)	9 (81.8%)	1 (9.1%)	13
FWD Post- <i>Alice</i>	66	41 (62.1%)	40 (60.6%)	9 (13.6%)	90
Totals	77	44	49	10	103

¶18 Post-*Alice* we expected to see § 101 success increase, but were surprised by the magnitude. The rates at which FWDs were based on § 101 pre- and post-*Alice* were 27.3% and 62.1% respectively. Comparable rates were 81.8% and 60.6% for §§ 102/103, and 9.1% and 13.6% for § 112. Unfortunately, the small number of FWDs decreases the value of some of our conclusions. Regardless, we believe the increased frequency of successful § 101 arguments is likely the result of *Alice*.

## VII. CONCLUSION AND FINAL REMARKS

¶19 Post-*Alice*, prior art challenges remain common despite additional availability of grounds for challenge in CBMs. Challenges based on § 112 declined post-*Alice* and are infrequent enough to suggest petitioners do not see much value in such challenges.

¶20 Independent of the increased frequency of petitions based on § 101 post-*Alice*, there has only been one final CBM decision in which all claims survived. Thus, although petitioners are increasingly challenging patents based on § 101, CBMs appear to be effective on § 101 and prior art grounds. Despite this finding, the frequency of invalidation ground has shifted post-*Alice* to slightly favor use of § 101 over prior art. Perhaps petitioners have an easier or cheaper time finding § 101 arguments.

¶21 Finally, we reviewed the original USPTO patent classes for all petitioned patents. We found that only 51.0% of the petitioned patents were in original class 705. That figure seemed low considering that class 705 is the home for U.S. business method patents and only business method patents are eligible for CBM. Hypothesizing that the PTAB is simply not instituting CBM proceedings for the non-business method petitioned patents, we also reviewed the original USPTO patent classes for patents for which CBM proceedings were instituted. We then found that 56.8% of the patents for which CBM proceedings were instituted were in original class 705. Therefore, the PTAB does appear to be screening out some of the non-business method patents during consideration of the petition, but 56.8% is still rather low and suggests that the PTAB may be “over-inclusive” in admitting patents. Further investigation may be warranted.

## FURTHER READING

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3. Stroud et al., *Unraveling the USPTO's Tangled Web: An Empirical Analysis of the Complex World of Post-Issuance Patent Proceedings*, 20 J. INTELL. PROP. L. (Georgia) (2014).
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6. PTAB statistics on the PTAB web site maintained by the USPTO, <http://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/statistics>.
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