

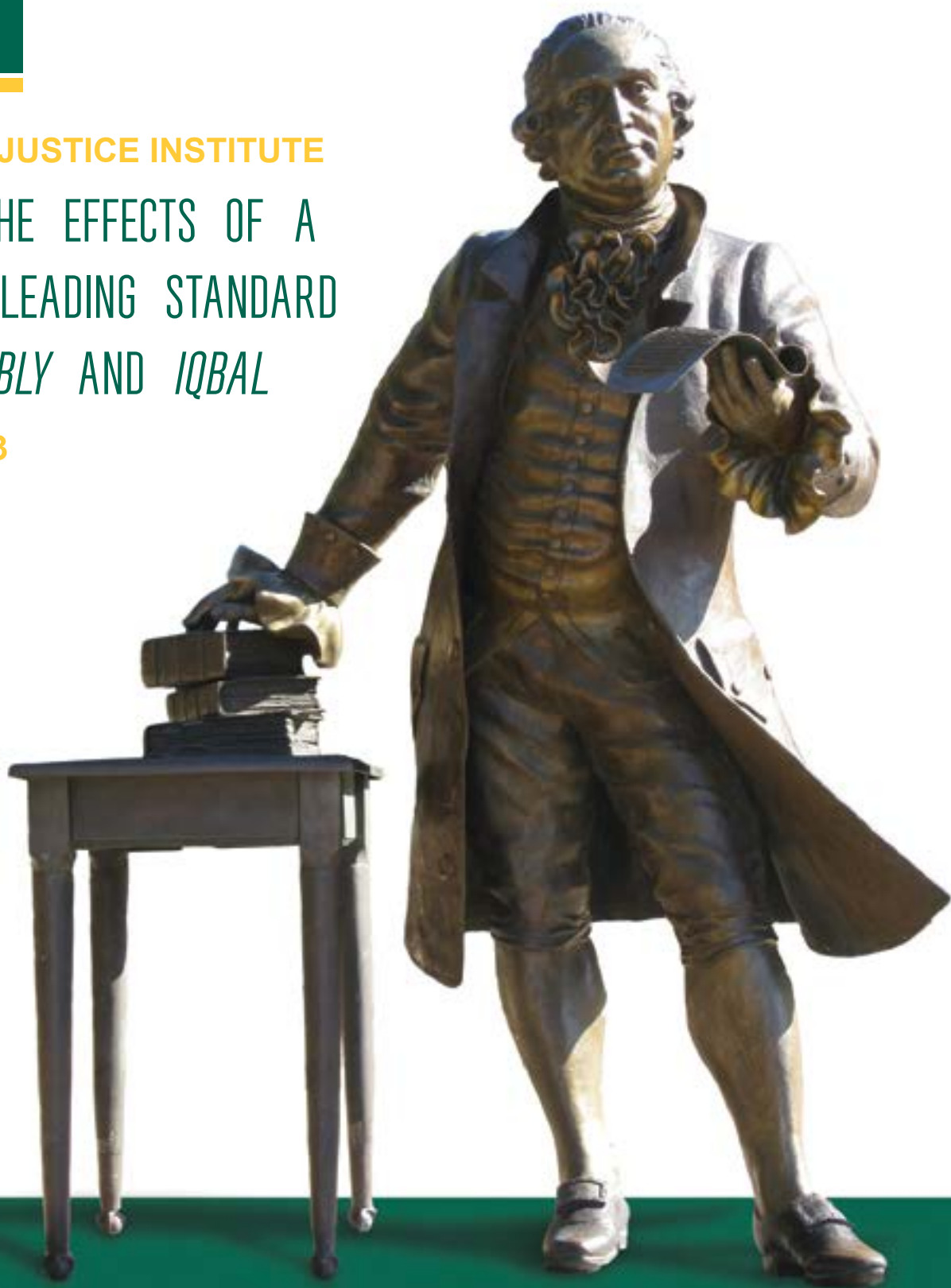
GEORGE MASON UNIVERSITY SCHOOL OF LAW

# LAW & ECONOMICS CENTER

SEARLE CIVIL JUSTICE INSTITUTE

MEASURING THE EFFECTS OF A  
HEIGHTENED PLEADING STANDARD  
UNDER *TWOMBLY* AND *IQBAL*

OCTOBER 2013



LEGAL & ECONOMIC ANALYSIS. PUBLIC POLICY IMPACT.

Searle Civil Justice Institute

Measuring the Effects of a Heightened Pleading Standard Under  
*Twombly* and *Iqbal*

October 2013

Law & Economics Center  
George Mason University School of Law

## SEARLE CIVIL JUSTICE INSTITUTE

Founded in early 2008, the Searle Civil Justice Institute (SCJI) is a nonpartisan public policy institute based at George Mason University's Law & Economics Center (LEC). The SCJI's core mission is to provide research regarding the impact of laws and regulations on economic growth that is analytically rigorous, balanced, accessible, and useful to policy makers. The SCJI works diligently to maximize the effectiveness of such research through large-scale public policy conferences, public policy reports, and an extensive communications strategy. In accordance with the SCJI Research Protocol, all research projects are subjected to independent peer review prior to widespread dissemination.

A Board of Overseers advises and reviews the activities of the SCJI. The Board is composed of a balanced group of leading legal, economic, business, and public policy experts. SCJI work products, however, do not necessarily reflect the opinions or policies of LEC donors or the SCJI Board of Overseers.

**Law & Economics Center**  
**George Mason University School of Law**  
3301 Fairfax Drive  
Arlington, VA 22201-4426  
703.993.8040  
[www.MasonLEC.org](http://www.MasonLEC.org)

## BOARD OF OVERSEERS

### **Fern P. O'Brian**

Chair, Searle Civil Justice Institute Board of Overseers & Partner, Thomson Hine LLP

### **Henry N. Butler**

George Mason Foundation Professor of Law & Executive Director, Law & Economics Center

### **Dan R. Brouillette**

Senior Vice President, Government & Industry Relations, USAA

### **P. Brent Brown**

Attorney, Brown & Jennings, PLC

### **David R. Donnersberger Jr., MD**

Clinical Assistant Professor of Medicine, University of Chicago Pritzker School of Medicine

### **Richard O. Faulk**

Partner, Gardere Wynne Sewell LLP & Senior Director, Law & Economics Center

### **Hon. Douglas H. Ginsburg**

Judge, US Court of Appeals for the District of Columbia Circuit & Professor of Law, George Mason University School of Law

### **Joseph Goldberg**

Partner, Freedman Boyd Hollander Goldberg Ives & Duncan PA

### **Markus Green**

Senior Corporate Counsel, Pfizer, Inc.

### **Hon. Harris L Hartz**

Judge, US Court of Appeals for the Tenth Circuit

### **Thomas H. Hill**

Associate General Counsel, Environmental Health & Safety, General Electric Co.

### **Jeffrey W. Jackson**

Senior Vice President & General Counsel, State Farm Mutual Automobile Insurance Company

### **Janet Langford Kelly**

Senior Vice President, General Counsel & Corporate Secretary, ConocoPhillips

### **Bruce H. Kobayashi**

Professor, George Mason University School of Law

### **Geoffrey J. Lysaught**

Group Vice President, Strategic Communications, The Heritage Foundation

### **William B. Lytton**

Executive Vice President & General Counsel, Tyco International, retired

### **Paul K. Mancini**

Senior Vice President & Associate General Counsel, AT&T, retired

### **Alan B. Morrison**

Lerner Family Associate Dean for Public Interest & Public Service Law, The George Washington University Law School

### **Judyth Pendell**

Owner, Pendell Consulting

### **Hon. William Ray Price**

Partner, Armstrong Teasdale

### **Marsha J. Rabiteau**

Executive Director, Legal Policy Strategies Group

### **Victor E. Schwartz**

Partner, Shook, Hardy & Bacon LLP

### **Joseph F. Speelman**

Partner, Blank Rome LLP

### **Walter L. Sutton**

Associate General Counsel, Wal-Mart Stores, Inc.

### **Hon. Gerald Bard Tjoflat**

Judge, US Court of Appeals for the Eleventh Circuit

### **Daniel E. Troy**

Senior Vice President & General Counsel, GlaxoSmithKline PLC

## PRINCIPAL INVESTIGATOR\*

**Jonah B. Gelbach, JD, PhD**  
University of Pennsylvania Law School

\* Rita Choi, former SCJI Research Coordinator, contributed substantially to data collection in this report.

# CONTENTS

EXECUTIVE SUMMARY .....	vi
ACKNOWLEDGEMENTS.....	ix
1. INTRODUCTION AND MOTIVATION .....	1
2. FEDERAL CIVIL PROCEDURE AND THE DEBATE OVER <i>TWOMBLY</i> AND <i>IQBAL</i> ..	4
2.1 OVERVIEW OF PLEADING, DISCOVERY, AND SUMMARY JUDGMENT IN THE FEDERAL COURTS.....	4
2.2 THE NO-SET-OF-FACTS STANDARD AND THE DEBATE INDUCED BY <i>TWOMBLY</i> AND <i>IQBAL</i> .....	6
2.3 EMPIRICAL EVIDENCE ON <i>TWOMBLY</i> AND <i>IQBAL</i> .....	11
3. CONCEPTUAL AND METHODOLOGICAL DISCUSSION .....	13
3.1 UNDERSTANDING THE SUMMARY JUDGMENT LINK WHEN ONLY JUDGES' BEHAVIOR CHANGES FOLLOWING <i>TWOMBLY</i> AND <i>IQBAL</i> .....	13
3.2 UNDERSTANDING THE SUMMARY JUDGMENT LINK WHEN JUDGES' BEHAVIOR AND PARTY BEHAVIOR CHANGE FOLLOWING <i>TWOMBLY</i> AND <i>IQBAL</i> .....	18
3.3 SUMMARIZING THE CONCEPTUAL RESULTS AND PREDICTIONS ABOUT THE EFFECTS OF <i>TWOMBLY</i> AND <i>IQBAL</i> .....	20
4. DATA .....	22
5. EMPLOYMENT DISCRIMINATION CASES .....	27
5.1 BASIC CHARACTERISTICS OF THE EMPLOYMENT DISCRIMINATION SAMPLE.....	27
5.2 SUMMARY JUDGMENT ADJUDICATION RESULTS FOR EMPLOYMENT DISCRIMINATION CASES.....	28
6. CONTRACT CASES .....	33
6.1 BASIC CHARACTERISTICS OF THE CONTRACTS SAMPLE .....	33
6.2 SUMMARY JUDGMENT ADJUDICATION RESULTS FOR CONTRACTS CASES.....	34
7. FURTHER DISCUSSION .....	39
7.1 WHY IT WOULD BE INAPPROPRIATE TO FOCUS ONLY ON CASES IN WHICH A RULE 12(B)(6) MOTION WAS FILED AND DENIED .....	39
7.2 STATISTICAL POWER .....	40
7.3 <i>SCOTT V. HARRIS</i> .....	40
8. SUMMARY .....	42
APPENDIX A: CONCERNING STATISTICAL POWER .....	A-1

# EXECUTIVE SUMMARY

## **Background**

This project uses summary judgment adjudication to measure the effects on case quality of two recent Supreme Court cases, *Bell Atlantic v. Twombly* and *Ashcroft v. Iqbal* decided two years later, which many believe together raised the pleading standard in federal civil litigation. The empirical results provide at most suggestive evidence that *Twombly* and *Iqbal* affected case quality among those cases that reach summary judgment.

The relationship between the pleading standard, the plaintiff win rate against defense summary judgment motions, and the change in the average merit of cases is theoretically ambiguous:

- If *Twombly* and *Iqbal* succeed at filtering out low-merit cases, as supporters believe, then the plaintiff win rate against defense summary judgment motions should rise.
- If *Twombly* and *Iqbal* instead filter out difficult-to-plead but high-merit cases, as critics believe, then the plaintiff win rate on defense summary judgment motions should fall.
- If *Twombly* and *Iqbal* filter out low- and high-merit cases roughly in proportion to their share in the pre-*Twombly* population of cases, then the plaintiff win rate against defense summary judgment motions should remain unchanged. Such a result might be viewed as providing evidence of effects predicted by both supporters and “aggressive critics”. Alternatively, as “moderate critics” might suggest, the same result would occur if *Twombly* and *Iqbal* operate in an essentially random way.
- Accordingly, the effect of *Twombly* and *Iqbal* on the quality of cases that get to summary judgment is an empirical question. In an attempt to shed some light on this important question, this Report offers empirical evidence gleaned from representative samples containing results of summary judgment adjudication involving over 1,800 employment discrimination and contracts cases filed before *Twombly* and after *Iqbal*.

## **Data**

The data comprise randomly sampled non-ADA employment discrimination cases and contract cases filed in the federal district courts, including only cases that had docket entries suggesting that a defendant filed a summary judgment motion in which no *pro se* plaintiff was involved. Cases included were filed between October 1, 2005, and June 30, 2006 (the pre-*Twombly* period), and between October 1, 2009, and June 30, 2010 (the post-*Iqbal* period). Coders working on the project team downloaded and read court documents related to all summary judgment motions they identified. These coders identified and recorded the adjudication of summary judgment motions as to each claim challenged in a defense summary judgment motion. Useable case data are available for 1,068 employment discrimination cases and 781 contracts cases.

This report uses two complementary measures of the plaintiff win rate against defense summary judgment motions:

1. The percentage of cases in which plaintiffs win against defense summary judgment motions on all challenged claims.
2. The percentage of cases in which plaintiffs win against defense summary judgment motions on at least one challenged claim.

### **Key Findings**

For employment discrimination cases:

- Across both the pre-*Twombly* and post-*Iqbal* periods taken together, plaintiffs win on all challenged claims in slightly fewer than one out of five employment discrimination cases that face a defense summary judgment motion.
- Across both the pre-*Twombly* and post-*Iqbal* periods taken together, plaintiffs win on at least one challenged claim in slightly fewer than two out of five employment discrimination cases that face a defense summary judgment motion.
- Without adjusting for changes in the geographical pattern of summary judgment motion filing, the share of employment discrimination cases in which plaintiffs win as to all challenged claims drops 0.2 percentage points after *Twombly* and *Iqbal*; with an adjustment for filing patterns, this share rises 0.4 points. The share of cases in which plaintiffs win as to at least one challenged claim increases by 1.5 percentage points without adjusting for changes in filing patterns, and by 1.0 percentage points with an adjustment.
- None of these changes is statistically significant.
- Even if statistical significance were ignored, the results would suggest very little change in the plaintiff win rate against defense summary judgment motions.
- On balance, then, the empirical evidence for employment discrimination cases suggests that after *Twombly* and *Iqbal*, there was no appreciable change in the average merit of employment discrimination cases that actually face defense summary judgment motions. In terms of predictions by supporters and critics of *Twombly* and *Iqbal*, a finding of no change in the plaintiff win rate against defense summary judgment motions in employment discrimination cases is consistent with either of two interpretations. First, both supporters' and aggressive critics' predictions might have been correct as to different sets of cases—some types of meritless cases might have been systematically filtered out even as an offsetting share of meritorious cases were as well. Second, moderate critics' predictions might be correct, with some cases being filtered out of litigation more or less without regard to quality.



For contracts cases:

- Across both the pre-*Twombly* and post-*Iqbal* periods taken together, plaintiffs win on defense summary judgment motions on all challenged claims in a bit fewer than two out of five cases (about twice the rate for employment discrimination cases).
- Across both the pre-*Twombly* and post-*Iqbal* periods taken together, plaintiffs win on at least one challenged claim somewhat more than half the time (by comparison to fewer than two out of five motions in employment discrimination cases).
- Without adjusting for changes in the geographical pattern of summary judgment motion filing, the share of contract cases in which plaintiffs win as to all challenged claims rises 1.0 percentage points after *Twombly* and *Iqbal*; with an adjustment for filing patterns, this share rises 3.0 points. The share of cases in which plaintiffs win as to at least one challenged claim increases by 4.4 percentage points without adjusting for changes in filing patterns, and by 6.4 percentage points with an adjustment.
- Taken at face value, these findings suggest an increase in quality, in line with the supporters' view of *Twombly* and *Iqbal*'s effects on the average merit of the contracts case mix. However, only the 6.4-point increase using the geographical adjustment is plausibly statistically significant at conventional significance levels.
- Thus, the evidence on contracts cases points tentatively in the direction of the supporters' view.

In sum:

- Ignoring statistical significance, the results are consistent with both (i) the supporters' view for contracts cases, and (ii) critics' view that the "Catch-22" problem will lead to filtering out of at least some meritorious cases in those areas where defendants are more likely to have private information, such as employment discrimination cases.
- However, it is important to recognize that most of the estimates are imprecise. Future work involving a larger sample of cases would provide more precision, and perhaps clearer conclusions.

## ACKNOWLEDGEMENTS

I would like to thank the Searle Civil Justice Institute for financial and other support for this project, as well as the many helpful comments from members of the SCJI Board of Overseers, participants in the SCJI research workshop at George Mason University School of Law, and two anonymous referees. I would also like to thank current and former GMU School of Law students Dale Baker, Josh Branson, Corey Carpenter, Wei Fan, Patrick Vincent, and Chris Woolley, and current and former University of Pennsylvania Law School students Meredith Gage, Gary Ho, James Klima, and Jonelle Saunders for all their hard work coding cases.

In addition, this project could not have been completed without the data provided by Thomson Reuters, nor the generous financial support in acquiring those data that was provided by the Oscar M. Ruebhausen Fund at the Yale Law School. I am also very grateful to Yale Law School Professor William N. Eskridge and Dean Robert C. Post for their enthusiastic support. I had many valuable conversations with legal scholars too numerous to name; at the risk of offending those left out, I offer special thanks to Steve Burbank, Henry Butler, Joe Cecil, David Engstrom, William Hubbard, Daniel Klerman, Bruce Kobayashi, and Joshua Wright. Finally, I thank Mark Weiss and Michael Wilt for their excellent editorial work in finalizing this Report and James Cooper for his management expertise and intellectual support.

Jonah B. Gelbach  
Principal Investigator

# Measuring the Effects of a Heightened Pleading Standard Under *Twombly* and *Iqbal*

## 1. INTRODUCTION AND MOTIVATION

Much controversy has surrounded the Supreme Court's opinions in *Bell Atlantic v. Twombly*<sup>1</sup> and *Ashcroft v. Iqbal*.<sup>2</sup> In *Twombly*, the Court declared the "retirement" of the previous standard for the sufficiency of a civil plaintiff's federal complaint.<sup>3</sup> Under that standard, first set forth in *Conley v. Gibson*,<sup>4</sup> "a complaint should not be dismissed for failure to state a claim unless it appears beyond doubt that the plaintiff can prove no set of facts in support of his claim which would entitle him to relief."<sup>5</sup>

Ruling in the substantive context of a complaint that alleged an agreement violating Section 1 of the Sherman Act<sup>6</sup> while providing no direct factual allegations indicating the presence of any agreement,<sup>7</sup> Justice Souter's *Twombly* opinion stated: "we hold that stating such a claim requires a complaint with enough factual matter (taken as true) to suggest that an agreement was made."<sup>8</sup> He emphasized "[t]he need at the pleading stage for allegations plausibly suggesting (not merely consistent with)" entitlement to relief.<sup>9</sup> Two years later, amid discussion over whether *Twombly* applied outside the antitrust context, the Supreme Court held in *Iqbal* that *Twombly*'s plausibility standard applied to "all civil actions".<sup>10</sup>

These seemingly dry cases, concerning what it takes adequately to plead a claim for relief in the federal courts, have touched off a heated debate. Critics of the plausibility standard argue that it will reduce access to the federal courts in meritorious suits.<sup>11</sup> In some disputes, the critics argue, the defendant controls the information that would be necessary to plead in sufficient factual detail to meet the plausibility standard.

---

<sup>1</sup> Bell Atl. Corp. v. Twombly, 550 U.S. 544 (2007).

<sup>2</sup> Ashcroft v. Iqbal, 556 U.S. 662 (2009).

<sup>3</sup> *Twombly*, 550 U.S. at 563.

<sup>4</sup> Conley v. Gibson, 355 U.S. 41 (1957).

<sup>5</sup> *Id.* at 45-46.

<sup>6</sup> Sherman Act, 15 U.S.C. § 1 (2012).

<sup>7</sup> *Twombly*, 550 U.S. at 564.

<sup>8</sup> *Id.* at 556.

<sup>9</sup> *Id.* at 545.

<sup>10</sup> *Iqbal*, 556 U.S. 662, 684 (2009) ("Our decision in *Twombly* expounded the pleading standard for all civil actions[, including ] antitrust and discrimination suits alike.") (quotation marks removed).

<sup>11</sup> For purposes of this Report, a case has merit if, following discovery, there would be sufficient facts that either (i) are in dispute or (ii) point in the plaintiff's favor if not in dispute, such that the defendant would not be entitled to judgment as a matter of law. That is, a case has merit if, following discovery, its factual posture would either present an issue of triable fact or entitle the plaintiff to judgment as a matter of law. A final way to say it is that a case has merit if, following discovery, the plaintiff could demonstrate that she would be able to meet her burden of production at trial. Given this definition of merit, it is possible for even meritorious suits to fail the plausibility pleading standard. Judges deciding Rule 12(b)(6) motions might believe that the complaint's allegations are implausible, so that they grant the motions, even though it happens to be true that discovery, were it to occur, would turn up evidence sufficient to meet the plaintiff's burden of production.

Under the lower *Conley* standard, plaintiffs could allege wrongdoing generally and then count on discovery to unearth the facts necessary to establish the elements of such causes of action. By requiring plaintiffs to allege such facts *before* Rule 12(b)(6) adjudication, critics argue, *Twombly's* plausibility standard sets up a Catch-22: pleading sufficiently to reach discovery requires access to information that is available only through discovery.

On the other side of the *Twombly/Iqbal* debate, supporters of the plausibility standard argue that too many plaintiffs intentionally bring low-merit lawsuits for settlement value only. Defendants must agree to pay off plaintiffs in such cases, according to this view, because the burden of discovery is greater for defendants than plaintiffs. Plaintiffs in such suits have little disincentive to proceed through discovery, leaving defendants to choose between either settling before discovery or bearing the high discovery costs that will enable them to get to summary judgment, where they will very likely win. Supporters of the switch to *Twombly's* plausibility standard believe it will help eliminate low-merit cases, whose plaintiffs they believe will be unable to plead with sufficient factual detail. Thus, defendants will be able to vanquish such cases at the Rule 12(b)(6) stage, before discovery costs mount. In this manner, the plausibility standard will reduce discovery costs for cases that are filed and additionally deter plaintiffs from bringing low-merit suits in the first place.

Both the critics and the supporters hold theoretically coherent views. That is, logically both views could be correct. Further, there is no *a priori* reason not to believe there are sizable numbers of both meritorious cases likely to face a Catch-22 problem under the plausibility standard, and strike suits likely to be filtered out by the plausibility standard. Therefore, which effect predominates ultimately is an empirical question—one this Report attempts to answer (at least partially) using newly collected data on defense summary judgment motion adjudications. Section 3 of the Report explains the conceptual basis for this approach.

The empirical work in this Report is based on a sample of cases in which defendants filed Rule 56 summary judgment motions. To construct the sample, it was first determined which cases had at least one motion for summary judgment filed among all civil cases filed in the federal district courts in the periods of October 1, 2005-June 30, 2006 (the pre-*Twombly* period) and October 1, 2009-June 30, 2010 (the post-*Iqbal* period). Restricting attention to cases with a PACER code indicating the nature of the suit was employment discrimination or contracts, cases were randomly sampled from these two periods.

For each sampled case, a coder<sup>12</sup> attempted to locate case documents related to defendants' summary judgment motions. When they could locate an order,<sup>13</sup> the coders read the order to determine how it resolved the corresponding motion for summary

---

<sup>12</sup> Coders were current or recently graduated JD students from the George Mason University School of Law and the University of Pennsylvania Law School.

<sup>13</sup> For some cases with filed motions for summary judgment, the motion had not been adjudicated by the time the observation window closed. See Section 4 for more detail on this issue.

judgment as to each claim attacked by the motion and entered the key information into a web-based coding application. The coder then saved the coded information in a back-end data base, which was the source of all data used for statistical and compilation purposes.

This Report uses two related measures to investigate the change in plaintiffs' win rates against defendants' summary judgment motions. The results indicate that there may have been little substantive change in the plaintiff win rate among employment discrimination cases (Section 5), though the estimates are imprecise. Estimates for contracts cases (Section 6), also are imprecise, though the estimated changes in the plaintiff win rate for these cases are larger in magnitude. Taken together, this evidence is consistent with both (i) the supporters' view for contracts cases, and (ii) the critics' view that the "Catch-22" problem will lead to essentially random filtering of cases in those areas where defendants likely have private information, like employment discrimination cases. Again, though, it is important to recognize that most of the estimates are imprecise.

The rest of this Report proceeds as follows. Section 1 provides some background on how federal civil procedure generally, and *Twombly* and *Iqbal* in particular. Section 3 describes the project's conceptual motivation. Section 4 discusses the data. Sections 5 and 6 present the main results for employment discrimination and contracts cases, respectively. Section 7 discusses several potential caveats to the Report's approach. Section 8 discusses some policy implications of the results and concludes.

## 2. FEDERAL CIVIL PROCEDURE AND THE DEBATE OVER *TWOMBLY* AND *IQBAL*

This Section begins with a brief overview of pleading, discovery, and summary judgment in the federal courts. It next discusses the *Twombly* and *Iqbal* cases briefly, and the extant quantitative empirical literature on *Twombly* and *Iqbal*'s effects.

### 2.1 Overview of Pleading, Discovery, and Summary Judgment in the Federal Courts

Pleading refers to the process by which plaintiffs initially present their case to the court.<sup>14</sup> A plaintiff initiates a federal lawsuit by filing a formal *complaint*, which is one type of document known as a *pleading*.<sup>15</sup> The *pleading standard* is formally given in Rule 8(a) of the Federal Rules of Civil Procedure, which states in pertinent part that “[a] pleading that states a claim for relief must contain . . . a short and plain statement of the claim showing that the pleader is entitled to relief.”<sup>16</sup> The controversy over *Twombly* and *Iqbal* ultimately involves the interpretation of this language.

After the plaintiff<sup>17</sup> files her complaint, the defendant can file either an answer, denying or admitting the plaintiff's various allegations, or a motion to dismiss.<sup>18</sup> There are many bases for attacking a complaint with a motion to dismiss (e.g., lack of personal or subject matter jurisdiction; improper venue; failure to join a necessary party),<sup>19</sup> but because *Twombly* and *Iqbal* concerned Rule 12(b)(6) motions for failure to state a claim, this ground for dismissal is the focal point of the Report. If a court denies the motion to dismiss, then the plaintiff is entitled to discovery. If the court grants the motion, it might do so with or without leave for the plaintiff to amend the complaint,<sup>20</sup> which would provide the plaintiff an opportunity to cure the complaint's defects and re-file. Generally speaking, a grant without leave to amend has the same effect as a defendant's win at trial.<sup>21</sup> If the defendant either does not file or does not finally prevail on a motion to dismiss, then the case will proceed to *discovery*.<sup>22</sup> The discovery

---

<sup>14</sup> The discussion in this Section simplifies a large number of procedural details and should not be considered a substitute for a detailed knowledge of federal civil procedure.

<sup>15</sup> The noun “pleadings” refers jointly to a plaintiff's *complaint* and a defendant's *answer*, which defendants file to present their formal admissions and/or denials, when they choose or are required to do so; the pleadings can also refer to a reply to an answer, if the court orders such a reply. FED. R. CIV. P. 7.

<sup>16</sup> FED. R. CIV. P. 8.

<sup>17</sup> Throughout the discussion, the Report assumes for expositional simplicity that the case involves only a single plaintiff and a single defendant. In reality, cases might have multiple parties on each side, as well as intervenors who are neither plaintiffs nor defendants; also, defendants might counter-claim, in which case all or some parties will have roles on more than one side of the case.

<sup>18</sup> A complaint might assert multiple claims for relief, and a motion to dismiss might attack only a subset of these claims. For simplicity, the discussion in this part incorporates the assumption that the plaintiff raises only one complaint, or alternatively that any defendant's motion to dismiss challenges all claims and wins or loses on all at once. Nothing critical hinges on this assumption.

<sup>19</sup> See, e.g., FED. R. CIV. P. 12(b)(1)-(7).

<sup>20</sup> FED. R. CIV. P. 15(a) governs the conditions under which a pleading may be amended.

<sup>21</sup> See FED. R. CIV. P. 41(b) (stating that, unless the court's order states otherwise, certain dismissals, including those under Rule 12(b)(6), “operate[] as an adjudication on the merits”).

<sup>22</sup> Generally speaking, a defendant's Rule 12(b)(6) motion to dismiss need not, as a logical matter, stay discovery. However, many discussions—including the Supreme Court opinions in *Twombly* and *Iqbal*—

process involves the parties' exchange of information that is germane to the issues in the case.<sup>23</sup>

A party may move for *summary judgment* "at any time until 30 days after the close of all discovery,"<sup>24</sup> though many discussions often assume that any summary judgment motions would be filed only after the close of discovery.<sup>25</sup> A summary judgment motion asks the trial court to enter judgment for the moving party on one or more claims.<sup>26</sup> If the court grants summary judgment as to a claim, then the moving party wins the case as to that claim. Courts can also grant summary judgment as to only one or more issues that do not themselves fully compose a claim.<sup>27</sup> To win summary judgment, the moving party must show two things: (1) "that there is no genuine dispute as to any material fact," so that no trial is necessary for a jury (or a judge ruling in a bench trial) to find facts; and (2) the moving party is "entitled to judgment as a matter of law."<sup>28</sup> Thus, the movant will be entitled to judgment as a matter of law when, given the undisputed material facts, the law supports the moving party's position as to the issue, rather than either supporting the opposing party's position or leaving an issue of credibility for a jury to resolve.

Figure 1 provides a simple flowchart of the stylized pre-trial litigation procedure just discussed.

---

implicitly assume that a Rule 12(b)(6) motion does stay discovery. Where relevant, this Report follows that assumption.

<sup>23</sup> This process is governed by Rules 26-37 of the Federal Rules of Civil Procedure, as well as aspects of other rules (e.g., Rule 16, which governs scheduling and case management). See FED. R. CIV. P. 16, 26-37.

<sup>24</sup> FED. R. CIV. P. 56(b).

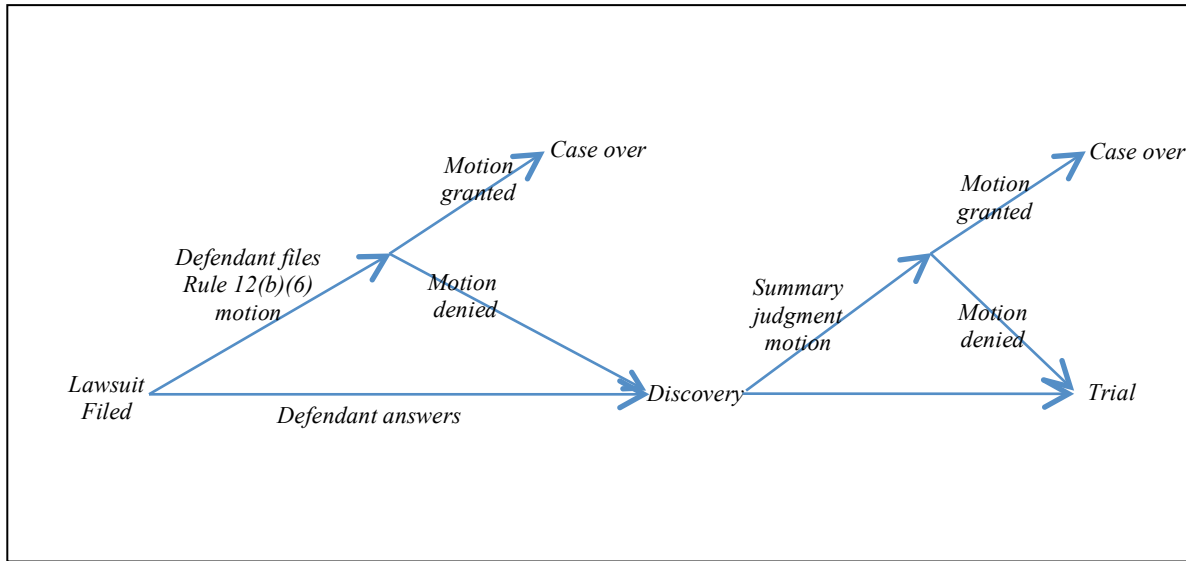
<sup>25</sup> In the event of an early summary judgment motion, or for other cause, the court has discretion to delay resolution of a summary judgment motion. Fed. R. Civ. P. 56(d).

<sup>26</sup> Parties also may move for, and the court has power to grant, summary judgment as to defenses under Rule 56(a), though the Report will focus on summary judgment motions filed as to the original plaintiff's claims. FED. R. CIV. P. 56(a).

<sup>27</sup> For example, a court could grant summary judgment as to liability but not damages, or *vice versa*.

<sup>28</sup> FED. R. CIV. P. 56(a).

FIGURE 1  
SIMPLIFIED DIAGRAM OF PRE-TRIAL LITIGATION PROCEDURE



It is important to realize that when the moving party loses a motion for summary judgment, its opponent does not necessarily win *its* case. Rather, denial of a party's motion for summary judgment means only that the opponent is entitled to argue its case at trial.<sup>29</sup> It is also important to recognize that a party could survive an opponent's motion for summary judgment even with a factually weak case, provided that there is at least a sufficiently minimal chance that the responding party could win at trial.<sup>30</sup> Finally, it is important to keep in mind that a party can win partial summary judgment. For example, it is possible that a judge will grant summary judgment as to only some of the elements necessary to prove a claim, as to only liability or only damages; indeed, Rule 56(g) allows summary judgment as to any issue, "treating the fact as established in the case."<sup>31</sup>

## 2.2 The No-Set-of-Facts Standard and the Debate Induced by *Twombly* and *Iqbal*

Before *Twombly*, *Conley v. Gibson* set the standard for federal courts adjudicating Rule 12(b)(6) motions to dismiss: "a complaint should not be dismissed for

<sup>29</sup> Parties opposing a summary judgment motion do sometimes file *cross motions for summary judgment*. It is of course possible that a judge will deny one party's motion and grant its opponent's cross motion, in which case the opponent wins the case as to the relevant claims. But a judge might also deny *both* motions for summary judgment, following which the case would get to trial unless the parties settle.

<sup>30</sup> It is not sufficient for this minimal chance to simply be greater than zero, because courts impose a *burden of production* on parties. This burden requires some minimal level of evidence, i.e., more than simply a shred. This burden of production is, however, still less than the *burden of persuasion* that a party faces in front of a post-summary judgment fact finder. For more on these technical issues, see, e.g., LINDA J. SILBERMAN, ALLAN R. STEIN, & TOBIAS BARRINGTON WOLFF, CIVIL PROCEDURE: THEORY AND PRACTICE 596 (4th ed. 2013).

<sup>31</sup> FED. R. CIV. P. 56(g).



failure to state a claim unless it appears beyond doubt that the plaintiff can prove no set of facts in support of his claim which would entitle him to relief.”<sup>32</sup> This standard is objective, because it implies that the complaint sufficiently states a claim as long as it would be logically possible for facts to exist that are both consistent with the plaintiff’s complaint and sufficient to establish a valid claim to relief. The standard is also low: it says nothing about the probability that a plaintiff will prevail; it says only that *if* the allegations are true, the plaintiff will be entitled to relief.

In the half-century between *Conley* and *Twombly*, a number of lower courts imposed effective pleading standards more demanding than *Conley*’s no-set-of-facts standard.<sup>33</sup> In response, the Supreme Court more than once reversed Courts of Appeals, affirming the *Conley* standard in no uncertain terms. One such reversal occurred in 1993, in a constitutional civil rights case,<sup>34</sup> while another occurred as recently as 2002, in a Title VII employment discrimination case.<sup>35</sup>

In 2007’s now-famous *Twombly* case, which was a putative class action involving allegations of conspiracy founded only on allegations of parallel conduct, the Court switched directions. As discussed above, the Court held that “stating such a claim requires a complaint with enough factual matter (taken as true) to suggest that an agreement was made.”<sup>36</sup> Although some of the argument in *Twombly* could be read as applying specifically to antitrust’s substantive prohibition on drawing inferences of conspiracy from evidence indicating only the presence of parallel conduct, the Court was categorical in rejecting *Conley*’s no-set-of-facts standard, holding that it had “earned its retirement.”<sup>37</sup> Two years later the *Iqbal* Court eliminated any residual doubt concerning the reach of *Twombly*’s new standard, straightforwardly holding that *Twombly*’s plausibility standard governed pleading in “all civil actions.”<sup>38</sup>

*Twombly* and *Iqbal* have come up in an enormous number of cases. As of October 4, 2013, Westlaw reported that *Twombly* had been cited in over 85,000 cases. As of the same date, *Iqbal* had been cited in over 60,000.

---

<sup>32</sup> *Conley v. Gibson*, 355 U.S. 41, 45-46 (1957).

<sup>33</sup> For discussions of such cases, see Richard L. Marcus, *The Revival of Fact Pleading Under the Federal Rules of Civil Procedure*, 86 COLUM. L. REV. 433 (1986); Richard L. Marcus, *The Puzzling Persistence of Pleading Practice*, 76 TEX. L. REV. 1749 (1998); and Christopher M. Fairman, *The Myth of Notice Pleading*, 45 ARIZ. L. REV. 987 (2003).

<sup>34</sup> *Leatherman v. Tarrant Cnty. Narcotics Intelligence & Coordination Unit*, 507 U.S. 163, 168 (1993) (“it is impossible to square the ‘heightened pleading standard’ applied by the Fifth Circuit in this case with the liberal system of ‘notice pleading’ set up by the Federal Rules” and elaborated by the Court in *Conley v. Gibson*).

<sup>35</sup> *Swierkiewicz v. Sorema N.A.*, 534 U.S. 506, 512 (2002) (“Imposing the Second Circuit’s heightened standard conflicts with Rule 8(a)’s express language,” citing *Conley v. Gibson*, and stating that “[a] court may dismiss a complaint only if it is clear that no relief could be granted under any set of facts that could be proved consistent with the allegations.”).

<sup>36</sup> *Twombly*, 550 U.S. 544, 556 (2007).

<sup>37</sup> *Id.* at 563.

<sup>38</sup> *Ashcroft v. Iqbal*, 556 U.S. 662, 684 (2009).

*Twombly* and *Iqbal* have also touched off a firestorm of debate among judges, practitioners, and academics.<sup>39</sup> Critics believe that these cases have destabilized the pleading system, and thus federal litigation generally.<sup>40</sup> Especially relevant to this Report, critics have argued that the plausibility pleading standard will reduce access to plaintiffs with meritorious claims, especially in disputes whose alleged wrong-doers control access to the information necessary to meet the heightened pleading standard.<sup>41</sup>

Supporters of *Twombly* and *Iqbal* point to their hoped-for role in reducing the burdens presented by meritless lawsuits.<sup>42</sup> The Court's opinions in the two cases

---

<sup>39</sup> See, e.g., Colleen McMahon, *The Law of Unintended Consequences: Shockwaves in the Lower Courts After Bell Atlantic Corp. v. Twombly*, 41 SUFFOLK U. L. REV. 851, 852-53 (2008) ("no one quite understands what the case holds. ... We district court judges suddenly and unexpectedly find ourselves puzzled over something we thought we knew how to do with our eyes closed: dispose of a motion to dismiss a case for failure to state a claim."); *Barriers to Justice and Accountability: How the Supreme Court's Recent Rulings Will Affect Corporate Behavior: Hearing Before the S. Comm. on the Judiciary*, 112th Cong. 2 (2011) (statement of Andrew Pincus, Partner, Mayer Brown LLP), available at <http://judiciary.senate.gov/pdf/11-6-29%20Pincus%20Testimony.pdf> ("Two years ago, many asserted that the Court's ruling in *Ashcroft v. Iqbal* . . . would dramatically restrict plaintiffs' access to court and that Congressional action was needed to overturn that decision. That speculation has been proven wrong . . . ." (citing JOE S. CECIL ET AL., FED. JUDICIAL CTR., MOTIONS TO DISMISS FOR FAILURE TO STATE A CLAIM AFTER *IQBAL*: REPORT TO THE JUDICIAL CONFERENCE ADVISORY COMM. ON CIVIL RULES (2011), available at [http://www.fjc.gov/public/pdf.nsf/lookup/motioniqbal.pdf/\\$file/motioniqbal.pdf](http://www.fjc.gov/public/pdf.nsf/lookup/motioniqbal.pdf/$file/motioniqbal.pdf)); Arthur R. Miller, *From Conley to Twombly to Iqbal: A Double Play on the Federal Rules of Civil Procedure*, 60 DUKE L.J.1, 10 (2010).

<sup>40</sup> See, e.g., Robert G. Bone, *Plausibility Pleading Revisited and Revised: A Comment on Ashcroft v. Iqbal*, 85 NOTRE DAME L. REV. 849, 852 (2010) ("*Iqbal* applies a thick screening model that aims to screen weak as well as meritless suits, whereas *Twombly* applies a thin screening model that aims to screen only truly meritless suits. The thick screening model is highly problematic on policy grounds . . . ."); , Kevin M. Clermont & Stephen C. Yeazell, *Inventing Tests, Destabilizing Systems*, 95 IOWA L. REV. 821, 840 n.70 (2010) (writing that a defense attorney "commits legal malpractice if he or she fails to move to dismiss with liberal citations to *Twombly* and *Iqbal*" and quoting "experienced litigator" Tom Goldstein as "predict[ing] that *Iqbal* will be 'the basis for an attempt to dismiss more than 50 percent of all the complaints filed in federal court'" (citation omitted)); Michael C. Dorf, *Iqbal and Bad Apples*, 14 LEWIS & CLARK L. REV. 217, 218 (2010) ("[u]nless overturned by Congress or the Rules Advisory Committee process, the *Twombly/Iqbal* pleading rule will play a potentially decisive role in every federal civil case."); Mark Herrmann, James M. Beck & Stephen B. Burbank, Debate, *Plausible Denial: Should Congress Overrule Twombly and Iqbal?*, 158 U. PA. L. REV. PENUMBRA 141, 145 (2009), available at <http://www.pennlawreview.com/online/158-U-Pa-L-Rev-PENumbra-141.pdf>.

<sup>41</sup> See, e.g., Joshua Civin & Debo P. Adegbile, *Restoring Access to Justice: The Impact of Iqbal and Twombly on Federal Civil Rights Litigation*, AM. CONST. SOC'Y FOR L. & POL'Y 2 (2010), available at [http://www.acslaw.org/sites/default/files/Civin\\_Adegbile\\_Iqbal\\_Twombly.pdf](http://www.acslaw.org/sites/default/files/Civin_Adegbile_Iqbal_Twombly.pdf) (expressing fear that *Twombly* and *Iqbal* might "create an undesirable safe harbor that effectively places some defendants beyond the reach of civil rights laws"); Alexander A. Reinert, *The Costs of Heightened Pleading*, 86 IND. L.J. 119, 159 (2011) ("[C]ases in which state of mind plays a large role or in which there are large information asymmetries, such as civil rights, constitutional, and employment discrimination cases, are most likely to be vulnerable to accusations of thin pleading."); Arthur R. Miller, *Are the Federal Courthouse Doors Closing? What's Happened to the Federal Rules of Civil Procedure?*, 43 TEX. TECH L. REV. 587, 596 (2011) ("In many modern litigation contexts the critical information is in the possession of the defendant and unavailable to the plaintiff. . . . Discovery was designed to let each side have access to that type of information so that the litigation playing field would be level to promote more informed settlements and trials.")

<sup>42</sup> See, e.g., Mark Herrmann, James M. Beck & Stephen B. Burbank, *supra* note 40, at 145 (opening statement of Herrmann and Beck); Richard A. Epstein, *Of Pleading and Discovery: Reflections on*

themselves raise policy concerns related to the discovery burdens that defendants face. In *Twombly*, Justice Souter suggested that caution related to pre-discovery dismissal must be counterbalanced against the expense of discovery in antitrust cases. He cited a law review student note that focuses on the special discovery burdens antitrust defendants face,<sup>43</sup> the Manual for Complex Litigation;<sup>44</sup> and a Judicial Conference Committee document emphasizing discovery's high share of litigation costs in cases when it is used.<sup>45</sup> Moreover, Justice Souter declared defeat in the use of case management, to which Justice Stevens pointed in his *Twombly* dissent, "given the common lament that the success of judicial supervision in checking discovery abuse has been on the modest side."<sup>46</sup>

Justice Souter's concern regarding the role of discovery expense is well summarized by the following passage:

the threat of discovery expense will push cost-conscious defendants to settle even anemic cases before reaching those proceedings. Probably, then, it is only by taking care to require allegations that reach the level *suggesting* conspiracy that we can hope to avoid the potentially enormous expense of discovery in cases with no reasonably founded hope that the

---

*Twombly and Iqbal with Special Reference to Antitrust*, 2011 U. ILL. L. REV. 187, 196 ("[A] bad set of legal rules also leads to bad settlements. As a general matter, these settlements reflect the probable outcomes of cases that go to final judgment. Any errors in the overall procedural rules, therefore, are likely to be embedded in the settlements.").

<sup>43</sup> William H. Wagener, *Modeling the Effect of One-Way Fee Shifting on Discovery Abuse in Private Antitrust Litigation*, 78 N.Y.U. L. REV. 1887, 1898-1899 (2003).

<sup>44</sup> Manual for Complex Litigation (Fourth) § 30 (2004) ("Antitrust litigation can, however, involve voluminous documentary and testimonial evidence, extensive discovery," and other related features).

<sup>45</sup> This document is cited in *Twombly* as "Memorandum from Paul V. Niemeyer, Chair, Advisory Committee on Civil Rules, to Hon. Anthony J. Scirica, Chair, Committee on Rules of Practice and Procedure (May 11, 1999), 192 F.R.D. 354, 357 (2000) (reporting that discovery accounts for as much as 90 percent of litigation costs when discovery is actively employed)." *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 559 (2007).

<sup>46</sup> *Twombly*, 550 U.S. at 559. For this proposition, Justice Souter cites a law review article by Judge Frank Easterbrook, whose argument may be worth quoting at length:

The timing is all wrong. The plaintiff files a sketchy complaint (the Rules of Civil Procedure discourage fulsome documents), and discovery is launched. A judicial officer does not know the details of the case the parties will present and in theory *cannot* know the details. Discovery is used to find the details. The judicial officer always knows less than the parties, and the parties themselves may not know very well where they are going or what they expect to find. A magistrate supervising discovery does not—cannot—know the expected productivity of a given request, because the nature of the requester's claim and the contents of the files (or head) of the adverse party are unknown. Judicial officers cannot measure the costs and benefits to the requester and so cannot isolate impositional requests. Requesters have no reason to disclose their own estimates because they gain from imposing costs on rivals (and may lose from an improvement in accuracy). The portions of the Rules of Civil Procedure calling on judges to trim back excessive demands, therefore, have been, and are doomed to be, hollow.

Frank H. Easterbrook, *Discovery As Abuse*, 69 B.U. L. REV. 635, 638 (1989).

discovery process will reveal relevant evidence to support [an antitrust claim under Section 1 of the Sherman Act].<sup>47</sup>

*Iqbal* involved a defendant facing a different kind of discovery burden. The plaintiff alleged that after the attacks of September 11, 2001, he was arrested and held in administrative detention, where he had suffered “brutal mistreatment and discrimination,”<sup>48</sup> including having been “deliberately and cruelly subjected to numerous instances of excessive force and verbal abuse, unlawful strip and body cavity-searches, the denial of medical treatment, the denial of adequate nutrition, extended detention in solitary confinement, the denial of adequate exercise, and deliberate interference with ... rights to counsel and to exercise of ... sincere religious beliefs.”<sup>49</sup> He sued a variety of low-ranking defendants, including correctional officers and the detention facility’s wardens.<sup>50</sup> The complaint also named then-Attorney General John Ashcroft and FBI Director Robert Mueller, alleging that *Iqbal* was treated unlawfully “as a matter of policy, solely on account of [his] religion, race, and/or national origin and for no legitimate penological interest.”<sup>51</sup>

Echoing Justice Souter’s skepticism of managerial judging as a solution to discovery costs, Justice Kennedy wrote that the “rejection of the careful-case-management approach is especially important in suits where Government-official defendants are entitled to ... [be free of] the concerns of litigation, including avoidance of disruptive discovery.”<sup>52</sup> He also linked the Court’s earlier holding in *Twombly* explicitly to discovery, writing that although the Federal Rules of Civil Procedure’s pleading standard in Rule 8 “marks a notable and generous departure from the hyper-technical ... regime of a prior era, ... it does not unlock the doors of discovery for a plaintiff armed with nothing more than conclusions,” rather than hard factual information provided in the lawsuit’s complaint.<sup>53</sup>

In sum, the majority opinions in both *Twombly* and *Iqbal* focus on the discovery burdens defendants can be expected to face in a system that allows merits determination only after discovery. Each opinion suggests a belief that district courts will be able to usefully forecast, on the basis of the plaintiffs’ complaints, the set of cases in which discovery will yield evidence of liability. As Section 3 will discuss, these points signal the useful link between summary judgment results and the case-quality views held by supporters and opponents of *Twombly* and *Iqbal*.

---

<sup>47</sup> *Twombly*, 550 U.S. at 559 (emphasis added) (quotation and punctuation marks omitted).

<sup>48</sup> Second Amended Complaint at 1, *Elmaghraby v. Ashcroft*, No. 1:2004cv01809 (E.D.N.Y. May 03, 2004), ECF No. 273.

<sup>49</sup> *Id.* at 2.

<sup>50</sup> *Ashcroft v. Iqbal*, 556 U.S. 662, 668 (2009).

<sup>51</sup> *Id.* at 669.

<sup>52</sup> *Id.* at 685 (quotation marks omitted).

<sup>53</sup> *Id.* at 678-679.

## 2.3 Empirical Evidence on *Twombly* and *Iqbal*

The foregoing discussion shows the central role that concerns over case merit and access to discovery play in *Twombly* and *Iqbal*. The enormous amount of debate by scholars, practitioners, and even lawmakers<sup>54</sup> suggests the importance of trying to quantify the actual effects that *Twombly* and *Iqbal* have had.

Many reports and papers have now been written with the aim of sorting out whether judges have indeed applied a higher standard when adjudicating Rule 12(b)(6) motions.<sup>55</sup> The general finding in this literature has been that, overall, the Rule 12(b)(6) grant rate did not change much following *Twombly* and/or *Iqbal*,<sup>56</sup> though some authors have found at least some evidence of larger increases in cases involving employment discrimination and/or constitutional civil rights.<sup>57</sup> This literature has had its share of disagreement and debate over the details of data collection and empirical interpretation.<sup>58</sup>

One recent paper criticizes much of this literature on the more fundamental conceptual ground that perceived changes in the pleading standard can be expected to change litigants' behavior.<sup>59</sup> Such behavioral changes constitute a type of selection, which might reasonably be expected to change the composition of cases that face Rule

---

<sup>54</sup> See Notice Pleading Restoration Act of 2009, S. 1504, 111th Cong. (2009); Open Access to Courts Act of 2009, H.R. 4115, 111th Cong. (2009).

<sup>55</sup> See, e.g., Cecil Et Al., Motions To Dismiss, *supra* note 39; Joe S. Cecil Et Al., Fed. Judicial Ctr., Update on Resolution of Rule 12(b)(6) Motions Granted with Leave to Amend: Report to the Judicial Conference Advisory Comm. on Civil Rules (2011), available at [http://www.fjc.gov/public/pdf.nsf/lookup/motioniqbal2.pdf/\\$file/motioniqbal2.pdf](http://www.fjc.gov/public/pdf.nsf/lookup/motioniqbal2.pdf/$file/motioniqbal2.pdf); Kendall W. Hannon, Note, *Much Ado About Twombly? A Study on the Impact of Bell Atlantic Corp. v. Twombly on 12(b)(6) Motions*, 83 Notre Dame L. Rev. 1811 (2008); Joseph A. Seiner, *The Trouble with Twombly: A Proposed Pleading Standard for Employment Discrimination Cases*, 2009 U. Ill. L. Rev. 1011 (2009); Joseph A. Seiner, *Pleading Disability*, 51 B.C. L. Rev. 95 (2010); William H.J. Hubbard, *Testing for Change in Procedural Standards, with Application to Bell Atlantic v. Twombly*, 42 J. LEGAL STUD. 35 (2013); Patricia W. Hatamyar, *The Tao of Pleading: Do Twombly and Iqbal Matter Empirically?*, 59 Am. U. L. Rev. 553 (2010); Patricia Hatamyar Moore, *An Updated Quantitative Study of Iqbal's Impact on 12(b)(6) Motions*, 45 U. Rich. L. Rev. (2012); Raymond H. Brescia, *The Iqbal Effect: The Impact of New Pleading Standards in Employment and Housing Discrimination Litigation*, 100 Ky. L.J. 235 (2012); Victor D. Quintanilla, *Beyond Common Sense: A Social Psychological Study of Iqbal's Effect on Claims of Race Discrimination*, 17 Mich. J. Of Race & L. 1 (2011); Scott Dodson, *A New Look: Dismissal Rates of Federal Civil Claims*, 96 Judicature 127 (2012).

<sup>56</sup> See, e.g., Cecil Et Al., Motions To Dismiss, *supra* note 39; Cecil Et Al., Rule 12(b)(6) Motions, *supra* note 55.

<sup>57</sup> See, e.g., Moore, *supra* note 55; Brescia, *supra* note 55; Quintanilla, *supra* note 55.

<sup>58</sup> See, e.g., Joe S. Cecil, *Of Waves and Water: A Response to Comments on the FJC Study Motions to Dismiss for Failure to State a Claim after Iqbal* (2012) available at <http://ssrn.com/abstract=2026103>; Lonny Hoffman, *Twombly And Iqbal's Measure: An Assessment of the Federal Judicial Center's Study of Motions to Dismiss*, 6 FED. COURTS L. REV. 1 (2011); Lonny Hoffman, *Rulemaking in the Age of Twombly and Iqbal*, U.C. DAVIS L. REV. (forthcoming 2013), available at <http://ssrn.com/abstract=2123325>; Moore, *supra* note 55; Brescia, *supra* note 55.

<sup>59</sup> Jonah B. Gelbach, Note, *Locking the Doors to Discovery? Assessing the Effects of Twombly and Iqbal on Access to Discovery*, 121 YALE L.J. 2270 (2012). See also William H.J. Hubbard, *Testing for Change in Procedural Standards, with Application to Bell Atlantic v. Twombly*, 42 J. LEGAL STUD. 35 (2013).

12(b)(6) motions following *Twombly* and *Iqbal*.<sup>60</sup> Accordingly, the fact that the existing empirical literature ignores these selection effects means that many of the conclusions in this literature are fundamentally flawed.<sup>61</sup> The author of this paper provides his own empirical calculations using data from the two Cecil reports cited in *supra* note 55, on both the adjudication of Rule 12(b)(6) motions and changes in the number of these motions that are filed.<sup>62</sup> Taking into account effects related to both changes in judicial and party behavior, he calculates that *Twombly* and *Iqbal* caused at least one in six plaintiffs to be negatively affected—that is, caused not to reach discovery, or to lose out on a settlement—among those plaintiffs who actually faced a Rule 12(b)(6) motion in those cases represented by the Federal Judicial Center’s (FJC’s) post-*Iqbal* data.

Interpretive critiques aside, this literature also concerns only one aspect of the debate over *Twombly* and *Iqbal*: the share of cases affected by the change in the pleading standard. What this literature does not do—indeed, what no previous work has even tried to do—is to measure the extent to which *Twombly* and *Iqbal* have affected any measure of the level of merit among cases that get past the Rule 12(b)(6) stage.<sup>63</sup> This Report attempts to take up that task.<sup>64</sup>

---

<sup>60</sup> For discussions of changes in party behavior induced by changing pleading standards under the Private Securities Litigation Reform Act, see Stephen J. Choi, *Do the Merits Matter Less After the Private Securities Litigation Reform Act?* 23 J. L. Econ. & Organization 598 (2007); Stephen J. Choi, Karen K. Nelson, and A. C. Pritchard, *The Screening Effect of the Private Securities Litigation Reform Act*, 6 J. Empirical Legal Stud. 35 (2009).

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*; see Cecil Et Al., *Motions To Dismiss*, *supra* note 39; Cecil Et Al., *Rule 12(b)(6) Motions*, *supra* note 55.

<sup>63</sup> Reinert, *supra* note 41, does attempt to measure the effects that a heightened pleading standard would have had on the ultimate dispensation of certain pre-*Twombly* cases (those that had Rule 12(b)(6) motions granted and then reversed on appeal). This is one approach to measuring case quality, though by design Reinert uses only pre-*Twombly* cases. Thus his paper cannot provide information about cases that are actually litigated after *Twombly*, nor, therefore, after *Iqbal*. Moreover, by coding cases that settle as meritorious, Reinert begs the very question raised by supporters of the plausibility pleading standard: whether settlements occur because of the threat of costly discovery rather than the presence of a genuine basis for suit.

<sup>64</sup> The Report will not discuss the voluminous literature on summary judgment practice, because its objective is to evaluate the effects of changes in the pleading standard, rather than to provide information about general trends in summary judgment motion activity or outcomes. For contributions concerning summary judgment practice, see, e.g., Memorandum from Joe Cecil and George Cort to Hon. Michael Baylson, (April 12, 2007) (Revised June 15, 2007) (<https://bulk.resource.org/courts.gov/fjc/sujufy06.pdf>); Joe S. Cecil, Rebecca N. Eyre, Dean Miletich, and David Rindskopf, *A Quarter-Century of Summary Judgment Practice in Six Federal District Courts*, 4 J. Empirical Legal Stud. 861 (2007); Stephen B. Burbank, *Vanishing Trials and Summary Judgment in Federal Civil Cases: Drifting Toward Bethlehem or Gomorrah?* 1 J. Empirical Legal Stud. 591 (2004); Theodore Eisenberg and Charlotte Lanvers, *Summary Judgment Rates Over Time, Across Case Categories, and Across Districts: An Empirical Study of Three Large Federal Districts* (May 28, 2008), Cornell Law School Research Paper No. 08-022 (<http://ssrn.com/abstract=1138373>).

### 3. CONCEPTUAL AND METHODOLOGICAL DISCUSSION

This Report's objective is to help answer this empirical question: What has been the net impact of *Twombly*/*Iqbal* on the quality of cases that make it to summary judgment? To explain the conceptual approach, it will help to use a series of examples, each illustrated using a figure. The discussion begins in section 3.1 by using the simplifying assumption that only judicial behavior is affected by *Twombly* and *Iqbal*. Then, in section 3.2, the implications of changes in parties' behavior are considered.

#### 3.1 Understanding the Summary Judgment Link When Only Judges' Behavior Changes Following *Twombly* and *Iqbal*

As discussed above, Rule 56(a) provides two conditions for granting a movant's motion for summary judgment. First, the movant must "show[] that there is no genuine dispute as to any material fact," and second, the movant must show that she "is entitled to judgment as a matter of law."<sup>65</sup> By construction, the defendant will be entitled to judgment as a matter of law in a meritless suit. Also by construction, evidence of liability sufficient that a reasonable fact finder could find for the plaintiff will not have appeared by the end of discovery in a meritless suit (if it did, the suit would not be meritless; see note 11, *supra*, on this point). Thus, in a meritless suit, there will be no genuine dispute, following discovery, concerning any material fact, and the defendant will be entitled to judgment as a matter of law. Therefore, defendants should always win their summary judgment motions in meritless suits.

In his opinion for the *Twombly* Court, Justice Souter wrote that the plausibility standard "calls for enough fact to raise a reasonable expectation that discovery will reveal evidence of [entitlement to relief]."<sup>66</sup> Thus, one useful way to understand the plausibility standard is that it (a) asks trial judges to forecast what will result from discovery, and (b) expects them to be able to forecast that result with some level of success. This reading allows us usefully to connect the plausibility pleading standard to summary judgment adjudication. In light of Rule 56, Justice Souter's characterization of the plausibility standard can reasonably be re-stated as "call[ing] for enough fact to raise a reasonable expectation that the defendant will not win a summary judgment motion should the defendant file one."

Accordingly, the Report will use the term "supporters' view" to refer to a situation in which judges are good at forming expectations concerning the fruits of discovery. If the supporters' view is right, then other things equal, the cases judges will dismiss at the Rule 12(b)(6) stage under the plausibility pleading standard will have lower merit than cases they dismiss at the Rule 12(b)(6) stage under the notice pleading standard. To

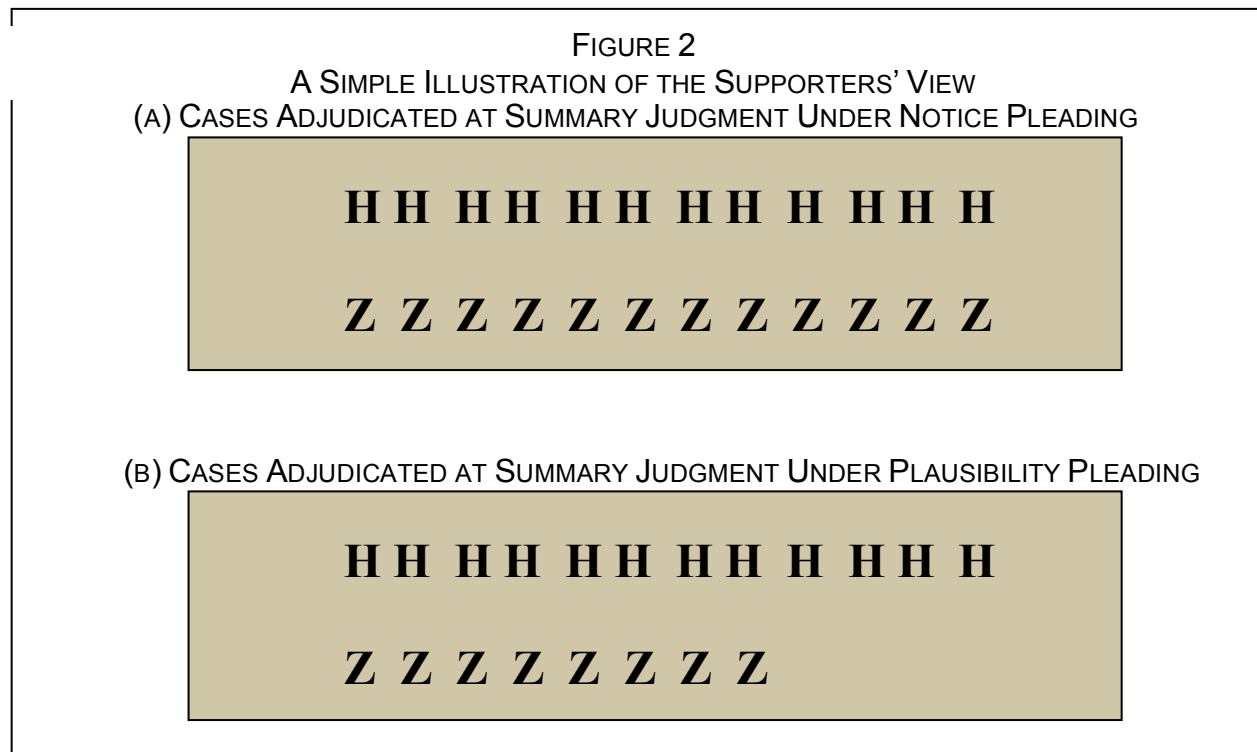
---

<sup>65</sup> FED. R. CIV. P. 56.

<sup>66</sup> *Bell Atl. Corp. v. Twombly*, 550 U.S. 544,545 (2007) (the actual quotation being "calls for enough fact to raise a reasonable expectation that discovery will reveal evidence of illegal agreement," in reference to *Twombly*'s § 1 antitrust context).

illustrate this fact, suppose that cases can be characterized as having either high merit or zero merit, so that in a high-merit case, the plaintiff would defeat a defendant's motion for summary judgment under Rule 56, whereas the plaintiff would lose a defense summary judgment motion in a zero-merit case.

Figure 2 illustrates the implications of the supporters' view in. In box (a) of this figure, it is assumed that under the notice pleading standard, 24 cases make it to summary judgment. Each instance of the letter "H" or the letter "Z" represents a separate case. There are 24 cases over all, of which 12 are high-merit ("H" cases) and 12 are zero-merit ("Z" cases). Since plaintiffs will win defense summary judgment motions in high-merit cases and lose them in zero-merit cases, the rate at which plaintiffs win against defense summary judgment motions in cases represented in box (a) will be 50 percent.<sup>67</sup>



<sup>67</sup> There is nothing special about 50 percent here—examples can be constructed using other figures, too. This point is worth noting in light of the misplaced emphasis by some observers—see, e.g., Cecil, *Of Waves and Water*, *supra* note 58, at 38 (citing Steven Shavell, *Any Frequency of Plaintiff Victory at Trial is Possible*, 25 J. LEGAL STUD. 493, 445 (1996))—of the famous paper by George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984). Priest & Klein show generally that the set of cases that are actually litigated generally will be unrepresentative of all cases. Consequently, the plaintiff win rate in actually litigated cases might not be a useful measure of case quality. Priest & Klein do show that, in certain limiting situations, the plaintiff win rate will be 50 percent. But nothing about their general analysis implies such a win rate, so empirical evidence that the win rate diverges from 50 percent does not reject the existence of party selection effects.



Box (b) of Figure 2 contains the cases that would make it to summary judgment if they were litigated under the plausibility standard. This box contains the same 12 high-merit cases that box (a) did. However, box (b) contains only 8 zero-merit cases, reflecting Justice Souter’s assumption that, using the plaintiff’s complaint, district court judges will be able to cull at least some zero-merit cases in response to motions brought under Rule 12(b)(6). Box (b) indicates that 20 cases would face defense summary judgment motions under the plausibility pleading standard. Since plaintiffs would win these motions in the 12 high-merit cases, but not in any of the 8 zero-merit cases, the plaintiff win rate in box (b) would be 60 percent (12 out of 20)—greater than the percentage under the notice pleading standard.

The example in Figure 2 thus illustrates why one should expect the plaintiff win rate against defense summary judgment motions to rise if district courts are successful at identifying zero-merit cases from the complaint and dismissing them at the Rule 12(b)(6) stage, all else being equal.

But the supporters’ view is not the only possible one. As discussed above, critics of *Twombly* and *Iqbal* worry that judges erroneously will dismiss some high-merit cases under the plausibility pleading standard because these plaintiffs will be unable to turn up sufficient information at the pleading stage. That is, these critics fear that some cases that are actually high-merit cases will be dismissed because judges wrongly forecast them as zero-merit cases at the Rule 12(b)(6) stage.

Figure 3 illustrates this “aggressive critics’ view.” Box (a) shows the same 24 cases reaching summary judgment under the notice pleading standard. Since these cases again are split evenly between high and zero merit, the plaintiff win rate under the notice pleading standard is again 50 percent. But per the critics’ view, the scenario depicted in Box (b) assumes that four high-merit cases are dismissed at the Rule 12(b)(6) stage under the plausibility pleading standard, and that district court judges are *not* able to identify zero-merit cases from the plaintiffs’ complaints. Consequently, the same 12 zero-merit cases make it past the Rule 12(b)(6) stage and get to summary judgment. Box (b) shows that under the plausibility pleading standard, 8 high-merit cases and 12 zero-merit cases make it to summary judgment. Therefore, the plaintiff win rate falls, to 40 percent, in this critics’ view scenario.

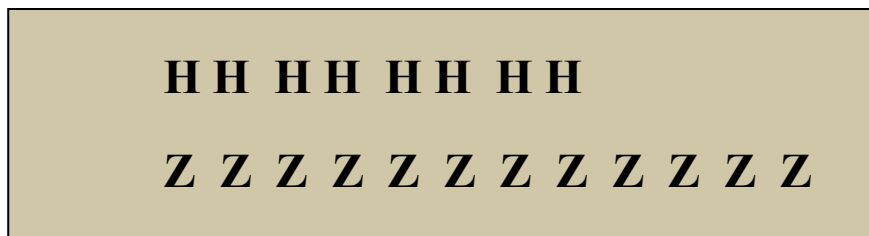
FIGURE 3

A SIMPLE ILLUSTRATION OF THE AGGRESSIVE CRITICS' VIEW

(A) CASES ADJUDICATED AT SUMMARY JUDGMENT UNDER NOTICE PLEADING



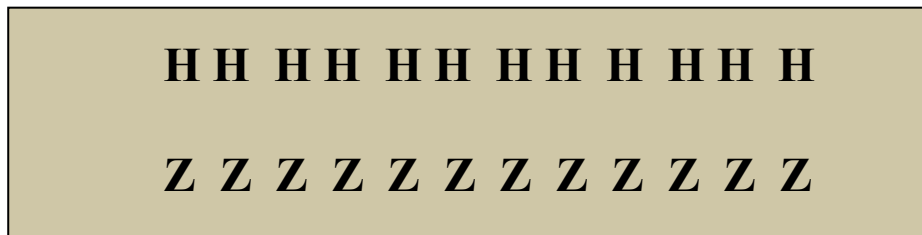
(B) CASES ADJUDICATED AT SUMMARY JUDGMENT UNDER PLAUSIBILITY PLEADING



The examples in Figure 2 and Figure 3 show that “pure” versions of the supporters’ view and the critics’ view point to exactly opposite effects on the plaintiff win rate against defense summary judgment motions. But there might be some truth to *both* views. Figure 4 illustrates such a possibility. Box (a) contains the same 24 cases, split evenly among high- and zero-merit cases that would make it to summary judgment under the notice pleading standard. Box (b) shows that under the plausibility pleading standard, there are fewer high-merit cases *and* fewer zero-merit cases, reflecting the possibility that predictions of both the supporters and the critics have merit.

FIGURE 4  
AN EXAMPLE IN WHICH THE SUPPORTERS AND THE CRITICS ARE BOTH RIGHT

(A) CASES ADJUDICATED AT SUMMARY JUDGMENT UNDER NOTICE PLEADING



(B) CASES ADJUDICATED AT SUMMARY JUDGMENT UNDER PLAUSIBILITY PLEADING



As constructed, the example in Figure 4 shows that there are four fewer high-merit cases and four fewer zero-merit cases. Since eight high-merit cases and eight zero-merit cases make it to summary judgment under the plausibility pleading standard, the plaintiff win rate is now 50 percent under that standard. In this example, the plaintiff win rate against defense summary judgment motions would not change following *Twombly* and *Iqbal*, even though the change in the pleading standard does affect eight cases. This example suggests that the lack of change in the plaintiff win rate may indicate that any reduction of zero-merit cases has been offset by a proportionately equal reduction in high-merit cases.

In fact, the picture illustrated in Figure 4 could also arise if neither the supporters nor the critics described above are right. That is, there is a third possibility, which this Report will call the “moderate critics’ view”. According to this view, district court judges will not be able to predict which cases are meritorious at the Rule 12(b)(6) stage. But unlike the more aggressive critics’ view discussed above, the moderate critics’ view holds that judges will not systematically dismiss meritorious suits following *Twombly* and *Iqbal*. Rather, the view holds, judges can be expected to dismiss suits in an essentially random pattern, with no correlation between dismissal and merit. This pattern would yield exactly the result depicted in Figure 4—a post-*Twombly* and *Iqbal* situation in which judges have dismissed the same fraction of high- and zero-merit cases among those that would have made it to discovery pre-*Twombly*. Thus, if the moderate critics’ view is right, there will be no change in the plaintiff win rate following *Twombly* and *Iqbal*. In sum, the moderate critics’ view is indistinguishable from an offsetting combination of the aggressive critics’ view and the supporters’ view.

### 3.2 Understanding the Summary Judgment Link When Judges' Behavior and Party Behavior Change Following *Twombly* and *Iqbal*

One feature of the three examples considered above is that the total number of cases that face defense summary judgment motions falls after a switch from the notice pleading standard to the plausibility pleading standard. This feature need not characterize reality, however, because a change in the pleading standard also can be expected to change the set of cases that settle before the Rule 12(b)(6) stage.<sup>68</sup>

Consider a dispute in which Smith believes that Jones, Inc. has discriminated against her. Assume that under the notice pleading standard, Smith and Jones would settle the dispute before Smith files suit, in part because Jones would not expect to be able to win a pre-discovery dismissal of a lawsuit, should Smith file suit. If the same dispute occurred when the plausibility pleading standard applied, though, Jones might believe it could win a Rule 12(b)(6) motion, making the company unwilling to settle for an amount Smith would accept. Now suppose that Jones, having been overly optimistic, were to lose its post-*Iqbal* Rule 12(b)(6) motion. If the parties did not then settle, *Smith v. Jones, Inc.* would get to discovery, and possibly also to summary judgment.<sup>69</sup>

The hypothetical case of *Smith v. Jones, Inc.* thus shows that changes in the pleading standard can eliminate settlements, leading to an increase in the number of cases that face defense summary judgment motions. In addition to such “settlement selection”,<sup>70</sup> there might also be reductions in the number of lawsuits plaintiffs file<sup>71</sup> and increases in the number of Rule 12(b)(6) motions that defendants file.<sup>72</sup> Whether the total number of cases that actually face defense summary judgment motions rises or falls following a change in the pleading standard will depend in complicated ways on the relative magnitudes of changes in party behavior and changes in the adjudication of Rule 12(b)(6) motions.

Changes in party behavior are potentially complicated enough that as an empirical matter, they generally cannot be separately quantified.<sup>73</sup> Therefore, it is

---

<sup>68</sup> For a detailed discussion on this point, and on other changes in party behavior, see Part III of Gelbach, *Locking the Doors to Discovery?*, *supra* note 59.

<sup>69</sup> It is possible that the parties would settle following the denial of Jones's Rule 12(b)(6) motion; after all, under the notice pleading standard, they would settle before Smith even filed suit. But it is also possible that the parties would not settle. One inducement to settle before either party files suit is that it allows the parties to avoid all costs not yet sunk into the filing and defending of the suit. Once the plaintiff files suit, she has sunk some costs, reducing the scope for a settlement to leave both parties better off. Similarly, by litigating its Rule 12(b)(6) motion, Jones might have made some investigations that also reduce its cost of post-Rule 12(b)(6) litigation; sinking such costs further reduces the scope for mutually beneficial settlement. Thus, some cases that would (i) settle without the filing of a complaint under the notice pleading standard but (ii) face a Rule 12(b)(6) motion under the plausibility pleading standard might not settle following denial of a Rule 12(b)(6) motion.

<sup>70</sup> Gelbach, *Locking the Doors to Discovery?*, *supra* note 59.

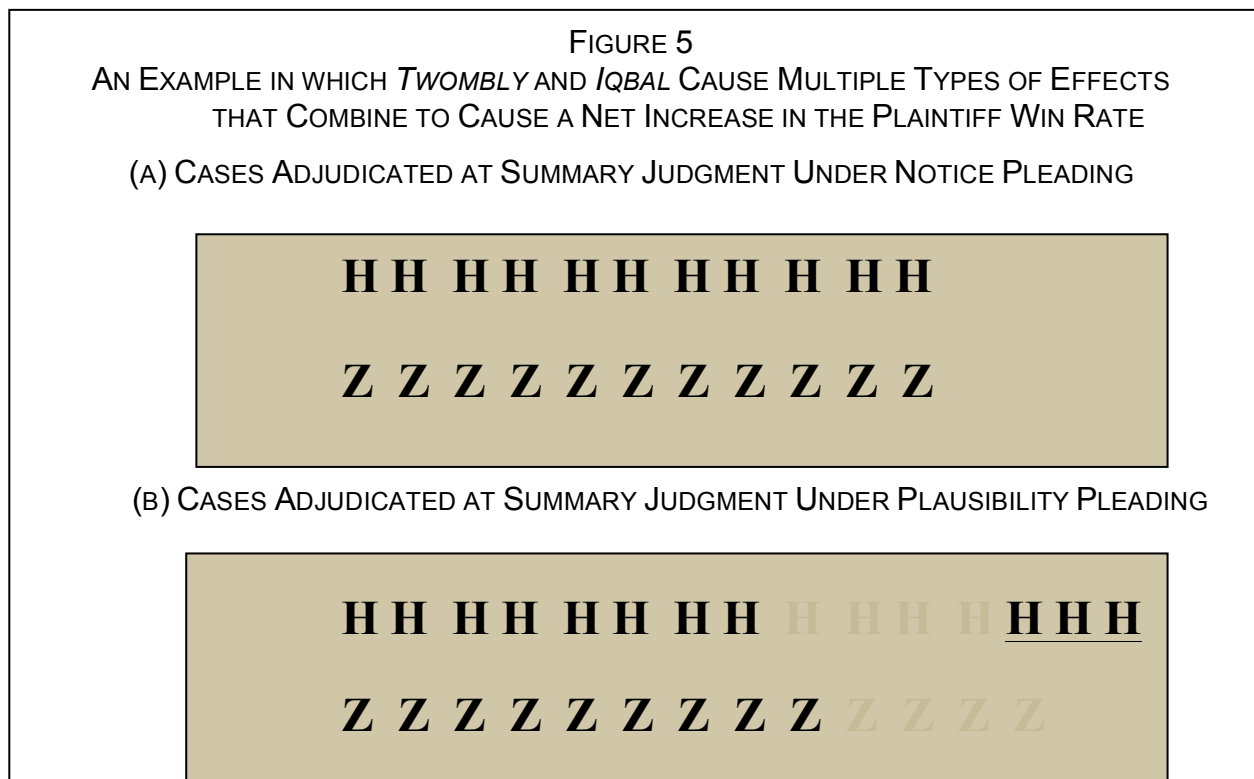
<sup>71</sup> Gelbach, *id.*, calls this type of effect “plaintiff selection.”

<sup>72</sup> Gelbach, *id.*, calls this type of effect “defendant selection.”

<sup>73</sup> *Id.* See also Jonah B. Gelbach, Selection in Motion: A Formal Model of Rule 12(b)(6) and the Twombly-Iqbal Shift in Pleading Policy (2012), available at <http://ssrn.com/abstract=2138428>.

important to recognize that the results presented below represent the *net* impact of multiple types of gross effects. Thus, any observed change in the plaintiff win rate against defense summary judgment motions must be interpreted as providing us information only about the *net* impact of *Twombly* and *Iqbal* on the average quality of cases that get to summary judgment.

To illustrate how all these effects work together, consider one further example, in which the change in the pleading standard affects not only judges' behavior but also party behavior. Figure 5, box (a) shows the now-familiar pattern of 12 cases each in the high-merit and zero-merit case categories, which yields the familiar plaintiff win rate of 50 percent (12 out of 24). In box (b), four of the high-merit cases have been eliminated at the Rule 12(b)(6) stage, as have three of the zero-merit cases. Some of these cases might have been eliminated due to the changes in judicial behavior posited by the critics and supporters of *Twombly* and *Iqbal*, even as others might have been eliminated due to the changes in litigants' pre-Rule 12(b)(6) choices discussed above. If switching to the plausibility pleading standard changed nothing else, then, the plaintiff win rate would fall, indicating a drop in the average quality of cases at summary judgment.



However, box (b) also contains three *new* high-merit cases, as indicated by the three underlined “H” cases at the right end of the box’s top line. These new cases get to summary judgment under the plausibility pleading standard due to the presence of

the settlement selection effect discussed above.<sup>74</sup> Given the presence of these new cases, there are 11 high-merit cases and 9 zero-merit cases facing defense summary judgment motions under the plausibility pleading standard. The actual plaintiff win rate when this standard applies would thus be 55 percent (11 out of 20).

The example in Figure 5 illustrates how the presence of settlement selection can be sufficient to cause the plaintiff win rate to rise following a change in the pleading standard, when this rate would have fallen instead in the absence of settlement selection. It is straightforward to construct examples in which the opposite happens. It is also possible to construct examples in which settlement selection reinforces the other gross effects on the plaintiff win rate against defense summary judgment motions.

This example neatly illustrates the claim from above: Changes in party behavior are sufficiently complex that it will not be possible to sort out the relative sizes of case-quality effects related to changes in judicial behavior and in party behavior. But even so, it is still possible to learn whether *Twombly* and *Iqbal* have led to a net increase in case quality among cases that make it to summary judgment. This issue is significant, because it is a primary point on which the supporters and critics of the plausibility pleading standard disagree.

### **3.3 Summarizing the Conceptual Results and Predictions about the Effects of *Twombly* and *Iqbal***

Table 1 summarizes the various conceptual ideas discussed above. The first row of the table illustrates the *Twombly/Iqbal* supporters' view—that low-merit cases<sup>75</sup> will be eliminated by switching to the plausibility pleading standard, leading to an increase in the quality of cases that actually face defense summary judgment motions. The second row indicates the aggressive critics' view that *high*-merit cases will be eliminated by switching to the plausibility pleading standard, leading to a *reduction* in the quality of cases that actually face defense summary judgment motions. The third row indicates the moderate critics' view that cases will be randomly filtered out as a result of *Twombly* and *Iqbal*, leading to no change in the quality of cases that actually face defense summary judgment motions.

Table 2 relates various observable changes in the plaintiff win rate to their corresponding implications concerning *Twombly* and *Iqbal's* effects on the quality of cases that get to summary judgment. A finding that the plaintiff win rate rises constitutes evidence of an increase in the average quality of cases that get to summary judgment, in line with the supporters' view. If the plaintiff win rate instead *falls*, then that is evidence of a *drop* in the quality of cases that get to summary judgment, which would support the aggressive critics' view. Finally, a finding that the plaintiff win rate is unchanged is evidence of no net change in the average quality of cases that make it to

---

<sup>74</sup> That is, these disputes would not make it to summary judgment if they arose under the notice pleading standard, since the parties would have settled these cases under that standard.

<sup>75</sup> The Report used the term “zero-merit” above, but the basic analysis is easy to extend to the more general case of allowing multiple merit levels.

summary judgment; this result would support either the moderate critics' view or a mix of the supporters' and critics' views.

TABLE 1  
SIMPLE PREDICTIONS FLOWING FROM SUPPORTERS' AND CRITICS' VIEWS

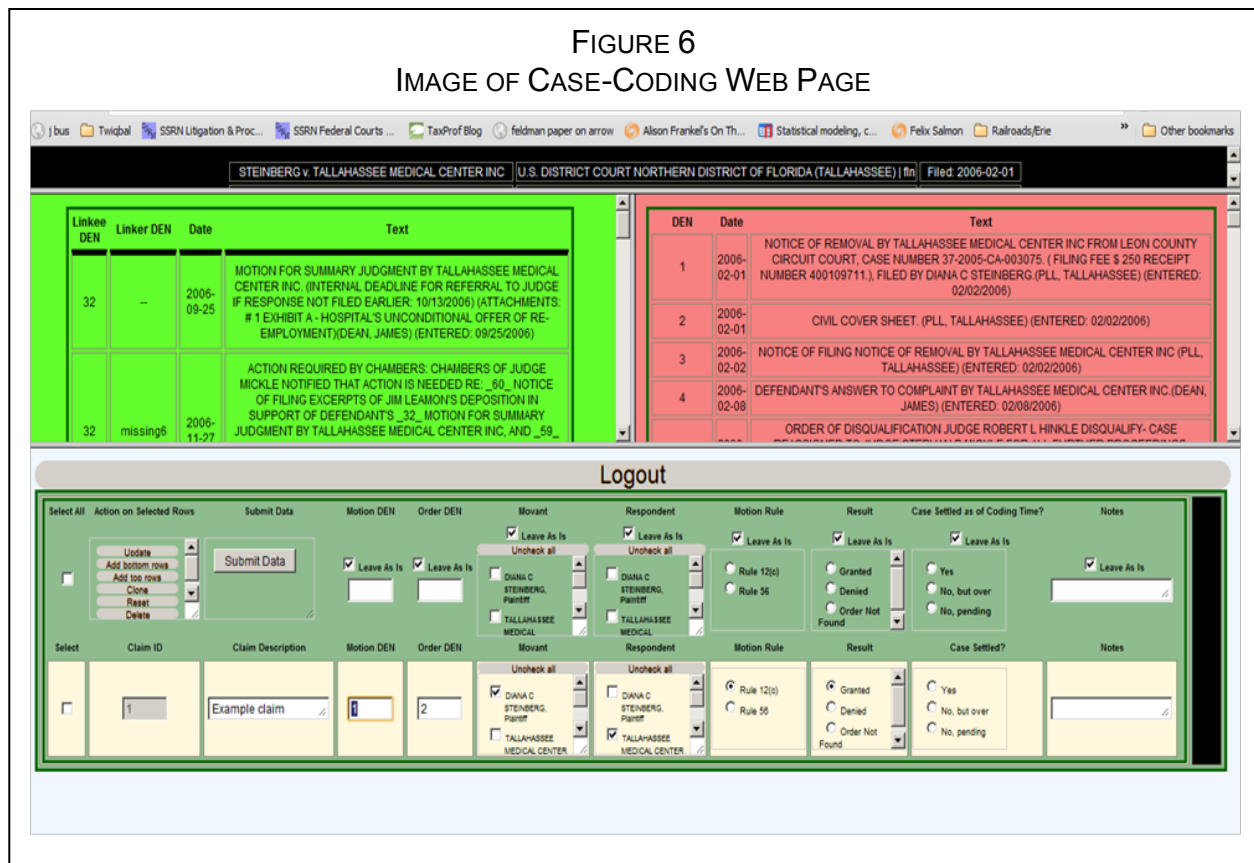
<i>View</i>	<i>Impact on Composition of Cases Facing Summary judgment Motions</i>
Supporters	Quality increases
Aggressive Critics	Quality drops
Moderate Critics	Quality stays unchanged

TABLE 2  
INFERENCES ABOUT SUPPORTERS' AND CRITICS' VIEWS FLOWING FROM  
OBSERVED CHANGES IN DENIAL RATE OF DEFENSE SUMMARY JUDGMENT MOTIONS

<i>Change in Plaintiff Win Rate Against Defense Summary Judgment Motions</i>	<i>Inference Concerning Twombly and Iqbal's Net Effects on Quality of Cases Getting to Summary Judgment</i>	<i>Finding Constitutes Evidence in Favor of:</i>
Rise	Increase in average quality	Supporters
Fall	Drop in average quality	Aggressive Critics
No Change	No change in average quality	Moderate Critics, or Mix of Supporters & Critics

## 4. DATA

The data used in this report originally became available as a result of a grant funded by the Oscar M. Ruebhausen Fund at the Yale Law School.<sup>76</sup> That grant funded a contract between Yale and Thomson Reuters, owner of Westlaw, to provide direct access to the universe of federal district court docket reports for civil cases filed beginning on January 1, 2005. These are the docket sheet data one can search on Westlaw via its “DCT” database. Pursuant to the contract, Thomson Reuters delivered docket report data in raw form. Various data base and scripting tools were used to select cases with at least one docket entry whose text indicates that the docketed event is a motion for summary judgment under Rule 56. These cases were uploaded into a database connected to a web-based coding tool. A number of current JD students and recent graduate students working with the project then read and coded judicial opinions and orders related to cases’ Rule 56 motions (as well as, where needed, the underlying motions or other case documents). Figure 6 shows an example of the web-based coding application used in the project.



<sup>76</sup> This grant was submitted jointly by Yale Professor William N. Eskridge and Report team leader Jonah B. Gelbach.



The data used for this project include cases involving employment discrimination (PACER nature-of-suit code=442) and contracts (PACER nature-of-suit code between 110-190) cases. Employment discrimination cases were chosen both because there are a large number of them and because many critics of *Twombly* and *Iqbal* have focused on employment discrimination suits as among those most prone to the information asymmetry that might create a need-discovery-to-get-to-discovery Catch-22.<sup>77</sup> Contracts cases, on the other hand, were chosen because plaintiffs in these cases are less likely to require information that can only be acquired in discovery to satisfy *Twombly* and *Iqbal*'s plausibility standard.

This study includes cases that were initially filed in either of two time periods: (i) October 1, 2005 – June 30, 2006 (the “Pre-*Twombly* observation period”), and (ii) October 1, 2009 – June 30, 2010 (the “Post-*Iqbal* observation period”). These time periods were chosen because they are the ones used by the FJC to evaluate changes in Rule 12(b)(6) filing rates in its initial study of the effects of *Twombly* and *Iqbal* on Rule 12(b)(6) practice.<sup>78</sup> These time periods are appropriate, since the Pre-*Iqbal* observation period ends well in advance of *Twombly* (the Supreme Court released its opinion on May 21, 2007), and since the Post-*Iqbal* observation period begins several months after *Iqbal* (the Supreme Court released its opinion on May 18, 2009).<sup>79</sup> The FJC characterizes the Pre-*Twombly* observation period as one “of stable motion practice,”

---

<sup>77</sup> All cases were dropped for which coding indicated the presence of any claims, among those challenged by a defense summary judgment motion, that were potentially related to the Americans with Disability Act (ADA). The reason this exclusion of cases is warranted is that the ADA Amendments Act of 2008 expanded the set of people protected by the ADA. See, e.g., Seiner, *Pleading Disability*, *supra* note 55, at 108 (quoting the ADA Amendments Act of 2008, Pub. L. No. 110-325, § 2(b)(1), 122 Stat. 3553, 3554 (2008)). This change could be expected to induce more ADA-related cases and claims all else equal, so that defense summary judgment adjudication might differ across pre-*Twombly* and post-*Iqbal* cases involving the ADA for reasons unrelated to the conceptual issues discussed in Section 3. There are reserved PACER codes for ADA cases (code 445 is for ADA-employment claims, and 446 is for other ADA claims). However, some cases with ADA claims are coded under PACER's nature-of-suit code 442, the omnibus employment discrimination code. These cases can be identified using the brief textual description of challenged claims that coders were asked to create. Claims were coded as ADA-related when this description contained any of the following strings: “isabil”, “isable”, or “ADA”. It is possible that not all ADA-related cases were flagged this way by coders, but as many have been excluded as could have been.

<sup>78</sup> See Cecil Et Al., *Motions To Dismiss*, *supra* note 39.

<sup>79</sup> It is possible that with many delays or repeated pleading amendments, a case in the Report's pre-*Twombly* sample could have been at risk of facing a Rule 12(b)(6) motion *after Twombly* was decided. To assess this possibility, the earliest date on which each case had a *summary judgment* motion filed was coded. Among employment discrimination and contracts cases used in the final analysis pre-*Twombly* sample, 87% and 84%, respectively, had a summary judgment motion filed before *Twombly*, so none of these cases could have faced a Rule 12(b)(6) motion after *Twombly* (since Rule 12(b)(6) motions must be filed earlier than summary judgment motions); note also that any Rule 12(b)(6) motion converted to a summary judgment motion must be decided under Rule 56. Results calculated without the remaining 13% and 16% of cases were very similar to those reported below. Finally, since discovery takes time, it is perhaps reasonable to assume that a case would not face a summary judgment motion fewer than 90 days following the filing of a Rule 12(b)(6) motion. Among cases in the final analysis pre-*Twombly* sample, 96% of employment discrimination and 94% of contracts cases had their first summary judgment motion filed within 90 days following May 21, 2007. Thus there seems little basis for concern about whether the cases in the Report's pre-*Twombly* sample were actually affected by *Twombly*.

and its report suggests that the Post-*Iqbal* observation period is appropriate because it occurs after “each of the circuits had had a chance to publish at least one appellate court opinion interpreting *Ashcroft v. Iqbal* and offering guidance to the district courts.”<sup>80</sup> Like the Cecil reports, this Report uses only cases in which plaintiffs were counseled.<sup>81</sup>

There is one case-coverage difference between the Cecil reports and this study. The Cecil reports contain data from only 23 district courts, which, according to the FJC, accounts for roughly half the cases filed in the U.S. district courts in 2009.<sup>82</sup> By comparison, the sample used in this Report is drawn from cases in 75 of the 78 districts that had adopted the electronic case filing (“ECF”) system before October 1, 2005.<sup>83,84</sup>


The sample was constructed by first searching the docket reports in all employment discrimination or contracts cases for text suggesting that a docket entry involved the filing of a motion for summary judgment.<sup>85</sup> Next, docket-sheet entries were collected from each selected case, and the cases were sorted on a number generated using a computerized pseudo-random number generator. Cases were then served in this random order to coders who logged on to a secure web-based coding site. The coder assigned each case read through its docket sheet, looking for entries that appear

---

<sup>80</sup> See Cecil Et Al., Motions To Dismiss, *supra* note 39.

<sup>81</sup> Shortly after handing down *Twombly*, the Supreme Court in *Erickson v. Pardus*, 551 U.S. 89, 94 (2007) (*per curiam*) (citing *Estelle v. Gamble*, 429 U.S. 97, 106 (1976), which itself cites directly to *Conley*’s no-set-of-facts language), reaffirmed that in “a pro se complaint, however inartfully pleaded, must be held to less stringent standards than formal pleadings drafted by lawyers.” As such, some empirical studies concerning *Twombly* and *Iqbal* exclude *pro se* cases, see, e.g., CECIL ET AL., MOTIONS TO DISMISS, *supra* note 39, at 6 n.10, though the Cecil et al approach has been somewhat controversial; see Moore, *supra* note 55. There were many fewer *pro se* than counseled cases in the Report’s sample, and excluding them does not have important effects on its results.

<sup>82</sup> *Id.* at 5.

<sup>83</sup> The date on which a district court adopted ECF was determined by visiting the “INDIVIDUAL COURT SITES” webpage at the PACER website (<http://www.pacer.gov/psco/cgi-bin/links.pl>) and clicking on the information icon (which looks like this: ) next to each district court’s name. The resulting webpage lists the date on which the court began using the ECF system in the field “ECF Go Live Date.” The courts that had not yet gone live as of October 1, 2005, were the District of Nevada, District of Montana, District of North Dakota, District of Hawaii, District of Alaska, Eastern District of Oklahoma, Western District of Texas, Southern District of California, District of Vermont, Southern District of Florida, District of New Mexico, District of Virgin Islands, Central District of California, Western District of Wisconsin, District of Northern Mariana Islands, and Western District of Tennessee. The Report uses only the 78 districts that had fully implemented the CM/ECF system in order to avoid any problems that might arise if the ECF system were adopted between the Report’s pre-*Twombly* and post-*Iqbal* periods; such problems could occur to the extent that coders are able to obtain case documents more for cases filed after adoption than before, in late-adopting districts. For a study of summary judgment activity in fiscal year 2006 by Federal Judicial Center researchers that uses the same universe of courts, see Memorandum from Joe Cecil and George Cort to Hon. Michael Baylson, (April 12, 2007) (Revised June 15, 2007) (<https://bulk.resource.org/courts.gov/fjc/sujufy06.pdf>).

<sup>84</sup> The Report’s sample contains no cases from the District Courts for the Northern District of Illinois, the Northern Mariana Islands, or Southern District of West Virginia. It became evident after coding had been completed that docket entries involving summary judgment motions follow a different textual structure in these districts from the structure typically used elsewhere. Consequently, the text search used to find summary judgment motion entries did not detect cases in these districts.

<sup>85</sup> Roughly speaking, docket entries were searched to determine whether they begin with the phrase “MOTION FOR SUMMARY JUDGMENT” or certain variations thereon.

to be motions for summary judgment and orders resolving them. Finally, the coders downloaded the relevant documents—motions and resolving orders—from a legal research site, read the documents, and entered details concerning the motions and their resolutions.

The latest date on which a case could have been filed and included in this Report's analysis was June 30, 2010. At the time the coders began work, the data base had up-to-date information on cases through June 30, 2012. Therefore, docket-report information was available for up to 731 days (2012 having been a leap year). For cases filed on dates earlier than June 30, 2010, there were more days of information, but such information was disregarded in order to allow the same period of observation for all cases considered. Consequently, the sample includes only cases with summary judgment motions adjudicated within 731 days of case filing.<sup>86</sup>

One further issue to discuss involves the number of claims challenged in a motion. Plaintiffs can state multiple claims in a lawsuit, and defendants can challenge either none, all, or some subset of claims in both Rule 12(b)(6) motions to dismiss and Rule 56 motions for summary judgment. Further, parties can move for,<sup>87</sup> or be granted,<sup>88</sup> summary judgment as to only certain aspects of a claim. This discussion raises the question of how to measure the plaintiff win rate in defense summary judgment motions. Should it be the fraction of cases in which the plaintiff defeats a defense summary judgment motion on all challenged claims? Or should it be the fraction of cases in which the plaintiff defeats a defense summary judgment motion on at least one challenged claim?<sup>89</sup> Since defendants choose for themselves which claims

---

<sup>86</sup> Without the 731-day limit, non-comparability problems could occur. To illustrate, consider two cases—one filed on June 30, 2006, and one filed on June 30, 2010. The docket reports text is up to date through June 30, 2012, for both cases. Therefore, there are 2,192 days of docket information for the earlier case (four years having 365 days, plus two leap years having 366 days), by comparison to the 731 days of docket information for the later-filed case. Suppose that in general there are two types of cases, simple and complex, and suppose that simple cases always have motions for summary judgment filed and adjudicated within 731 days of case filing, while complex cases have these motions filed and adjudicated between 731 and 2,192 days of case filing. Then an unrestricted search of earlier cases' docket reports would yield a data set that included both simple and complex cases, whereas such a search of later cases' docket reports would yield a data set including only simple cases. If claims challenged by defense summary judgment motions have different average merit levels in simple and complex cases, then ignoring the different lengths of data availability would bias the results. To avoid this potential problem and maintain comparability of the pre-*Twombly* and post-*Iqbal* data sets, only cases whose summary judgment motions are adjudicated within 731 days of case filing are considered.

<sup>87</sup> FED. R. CIV. P. 56(a) ("A party may move for summary judgment, identifying each claim or defense — or *the part of each claim or defense* — on which summary judgment is sought") (emphasis added).

<sup>88</sup> FED. R. CIV. P. 56(g) ("If the court does not grant all the relief requested by the motion, it may enter an order stating *any material fact* — including an item of damages or other relief — that is not genuinely in dispute and treating the fact as established in the case") (emphasis added).

<sup>89</sup> A third alternative would be to use the fraction of all challenged claims in which the plaintiff defeats a defense summary judgment motion. Experience showed that it can sometimes be difficult to determine exactly how many claims are challenged via a defense summary judgment motion. An important reason for this difficulty is that defense summary judgment motions sometimes state that they challenge "all claims" the plaintiff has brought, or some other phrasing with similar meaning, and some claims have been withdrawn by the plaintiff by the time the case reaches summary judgment adjudication. To determine exactly how many claims are challenged for each case thus could require reading multiple

to attack via Rule 56 summary judgment motions, there is no convincing reason to prefer either measure to the other. As such, the empirical work below reports the change in the plaintiff win rate for each of them.

---

case documents (e.g., complaints). There was not enough time to ask coders to engage in such extraordinarily detailed work. Also, the judicial orders or opinions resolving motions for summary judgment could not always be retrieved, but the disposition of the summary judgment motion in question could sometimes still be coded because it was docketed. In sum, a percentage-of-all-claims-challenged measure might well be beset by unavoidable measurement error. Moreover, sometimes particular issues, rather than claims as such, are challenged, and it is not always clear how to map general fact issues into claims. For these reasons, the Report confines attention to the two measures discussed in the text—whether the plaintiff prevails at summary judgment as to either all claims or at least one claim that the defendant challenges.

## 5. EMPLOYMENT DISCRIMINATION CASES

### 5.1 Basic Characteristics of the Employment Discrimination Sample

Coders processed a total of 2,511 employment discrimination cases. Of these, 185 were dropped because they were from a district that had not adopted the ECF system as of October 1, 2005. An additional 335 were dropped because at least one *pro se* plaintiff was involved in at least one motion for summary judgment. A further 138 were dropped because they appeared to involve ADA-related claims.<sup>90</sup> That leaves 1,853 employment discrimination cases with summary judgment motions in which all plaintiffs were counseled and no claims appeared to be ADA-related. In 32 of these, there was no defendant's summary judgment motion filed,<sup>91</sup> so that there are 1,821 non-ADA employment discrimination cases in which there were no *pro se* plaintiffs and at least one defense summary judgment motion was filed.<sup>92</sup>

The first column of Table 3 reports the number of such cases by year (Panel A) and by pre-*Twombly*/post-*Iqbal* period (Panel B). All told, there were 1,189 employment discrimination cases coded in the pre-*Twombly* period that had defense summary judgment motions and no *pro se* plaintiffs; there were 632 such cases in the post-*Iqbal* period.<sup>93</sup>

---

<sup>90</sup> As discussed, *supra* note 76, the ADA Amendments Act of 2008 expanded the set of people covered by the ADA. Dropping ADA-related cases avoids the risk of misattributing effects of this change in ADA law to changes in pleading standards. See *supra* note 77 for a discussion of the method for identifying cases with ADA-related claims.

<sup>91</sup> Summary judgment motions filed by defendants in their capacity as crossclaimants or counterclaimants were not treated as defense summary judgment motions.

<sup>92</sup> Only 74 of these 1,821 cases also had a plaintiff's summary judgment motion filed.

<sup>93</sup> The reason there are a disproportionate number of cases included in the 2005 filing period is because the JD student coders were ready to work before all years of data were loaded into the data base. Rather than have the coders sit idle, they were served cases filed in 2005 while data base code necessary to load the other years' cases was completed.

TABLE 3  
NUMBER OF EMPLOYMENT DISCRIMINATION CASES WITH SUMMARY JUDGMENT MOTIONS  
OBSERVED FILED, AND WITH ADJUDICATIONS WITHIN 731 DAYS

Year Filed	Defense Summary Judgment Motion	
	Filed in Observed Period	Adjudicated Within 731 Days
<i>A. By year case filed</i>		
2005 (Oct 1— Dec 31)	769	457
2006 (Jan 1 — Jun 30)	420	243
2009 (Oct 1— Dec 31)	206	119
2010 (Jan 1 — Jun 30)	426	249
<i>B. By pre-Twombly/post-Iqbal</i>		
Total, pre- <i>Twombly</i>	1,189	700
Total, post- <i>Iqbal</i>	632	368

The second column of Table 3 reports the number of these cases that had at least one summary judgment motion adjudicated within 731 days of case filing. As with the total number of coded cases, and for the same reasons,<sup>94</sup> a disproportionate number of these cases were filed in 2005. Within each year category, just below 60 percent of cases with motions filed had them adjudicated before the 731-day cutoff. All told, the pre-*Twombly* period has 700 employment discrimination cases with no *pro se* plaintiff and an adjudicated defense summary judgment motion, while the post-*Iqbal* period has 368 such cases. These are the cases whose outcomes the Report analyzes below.

## 5.2 Summary Judgment Adjudication Results for Employment Discrimination Cases

This section reports the core results for employment discrimination cases. In each of section 5.2.1 and 5.2.2, *infra*, the Report presents both an unadjusted and an adjusted estimate of the change in the plaintiff win rate following *Twombly* and *Iqbal*. The unadjusted estimates are based on the simple plaintiff win rate among observations in the Report’s analysis sample, with win rates measured in each of the two ways discussed above.

The adjusted estimates are based on binary logit models.<sup>95</sup> In these models, the outcome variable is a dummy variable equal to one for a case whose plaintiff wins on a defense summary judgment motion (however a win is measured), and equal to zero otherwise. The variable of primary interest is a dummy variable indicating whether the case was filed in the Report’s post-*Iqbal* period. The other predictor variables—whose inclusion in the model is the source of the adjustment—are a set of dummy variables

<sup>94</sup> See *supra* note 93.

<sup>95</sup> A binary logit model is a commonly used model for measuring the relationship between a binary outcome variable of interest—such as whether a motion was denied or not—and a set of predictor variables, such as the post-*Iqbal* dummy and the district court dummies.

indicating the federal district court in which the case originated. The adjusted estimate of the change in plaintiff win rate following *Twombly* and *Iqbal* equals the average value, over all cases in the analysis sample, of the estimated marginal effect of switching a case from the pre-*Twombly* to the post-*Iqbal* sample.<sup>96</sup>

The Report includes these adjusted estimates in part because of the evidence that “there is great variation in [Rule 12(b)(6)] motion activity across federal district courts.”<sup>97</sup> To the extent that this variation interacts with changes in judicial or party behavior following *Twombly* and *Iqbal*, it could be important to account for it.<sup>98</sup> It is an open question, though, whether the adjusted or unadjusted approach to estimating the change in the plaintiff win rate is the better one.

The key question is *why* the geographical pattern of filing behavior changed. Adjusted estimates are the better measure if this pattern changed for reasons unrelated to changes in the pleading standard—that is, if the changes in the geographical filing pattern would have happened even in the absence of *Twombly* and *Iqbal*. But that is a big “if,” because lawyers, parties, and judges in different districts might have had different reactions to pleading standard changes. Accordingly, changes in the pleading standard could have *caused* changes in the geographical pattern of motion activity (whether concerning Rule 12(b)(6) motions or Rule 56 motions). Including covariates for district of origin in multivariate models then would wrongly characterize changes in geographic filing practice as an exogenous factor when such changes really are an *effect* of *Twombly* and *Iqbal*.<sup>99</sup> Because there is no way to resolve this question *a priori*, the Report presents results calculated using each approach. This allows readers with different opinions about the source of changes in the geographical pattern of motion filing to draw the conclusions most appropriate to their views.

### 5.2.1 *The percentage of cases in which plaintiffs win as to all challenged claims or issues*

The first column of Table 4 reports percentages of employment discrimination cases, among those with motions adjudicated within 731 days of case filing, in which

---

<sup>96</sup> Estimating a logit model yields estimated coefficients relating to each of the included predictor variables (the post-*Iqbal* dummy variable, plus the district court dummies). These coefficient estimates can then be used to estimate the probability that the plaintiff in each case would win against a defense summary judgment motion in each of the pre-*Twombly* and post-*Iqbal* periods. The difference in these estimated probabilities for a given case is the estimated value of the marginal effect of switching pleading standards. The average marginal effect is then the average of this estimate over all cases included in the analysis. That average value is what appears in the tables below.

<sup>97</sup> See CECIL, MOTIONS TO DISMISS, *supra* note 55, at 25. The models estimated in the Report are very similar, in their use of district court dummies, to the two Cecil studies, with the obvious difference that the outcome variables are different.

<sup>98</sup> In addition, there is evidence that summary judgment motion practice also varies across districts; see, e.g., Memorandum from Joe Cecil and George Cort to Hon. Michael Baylson, (April 12, 2007) (Revised June 15, 2007) (<https://bulk.resource.org/courts.gov/fjc/sujufy06.pdf>).

<sup>99</sup> For more on this type of problem, see Ian Ayres, *Three Tests for Measuring Unjustified Disparate Impacts in Organ Transplantation: The Problem of "Included Variable" Bias*, 48 PERSPECTIVES IN BIOLOGY AND MEDICINE S68 (2005).

the plaintiff won on all challenged claims. For the pre-*Twombly* sample, 17.6 percent of motions were denied as to all claims raised in the motions. For the post-*Iqbal* period, this figure was slightly lower, at 17.0 percent. The table's second column reports estimated standard errors for these percentages, which are 1.5 and 2.0 percentage points, respectively.

The first column of the table's final row reports information for the difference in the all-claims-denied percentage. This difference is -0.2 percentage points, nominally suggesting that quality fell. While this finding would tend to support the aggressive critics' view, the second column shows that the difference in win rates has an estimated standard error of 2.4 percentage points—great enough so that the difference is far from being statistically significantly different from zero.<sup>100</sup>

TABLE 4  
PERCENTAGE OF CASES IN WHICH PLAINTIFFS WON ON ALL CHALLENGED CLAIMS  
IN EMPLOYMENT DISCRIMINATION CASES  
(AMONG THOSE WITH MOTIONS RESOLVED IN 731 OR FEWER DAYS)

	Unadjusted		Adjusted <sup>a</sup>	
	Percentage	Estimated Standard Error	Percentage	Estimated Standard Error
Pre- <i>Twombly</i>	17.3	1.4		
Post- <i>Iqbal</i>	17.1	2.0		
Difference	-0.2	2.4	0.4	2.7
p-value	0.946		0.892	

<sup>a</sup> Eighty-eight cases in 19 district courts were dropped by the logit estimate's statistical routine because these district courts have no variation in the plaintiff win rate, preventing the inclusion of these observations in logit estimation. The adjusted estimates in this table are thus based on 980 observations, by comparison to 1,068 observations in the unadjusted estimation. Unadjusted estimates calculated using only the 980 observations included in the logit estimation yielded a difference in the plaintiff win rate of -0.1 percentage points, with an estimated standard error of 2.6.

The third and fourth columns show that adjusting for changes in the geographical pattern of summary judgment motion filing switches the sign of the change in the plaintiff win rate. However, the adjusted difference is both small in magnitude—0.4

<sup>100</sup> The *p-value* reported below the estimated difference, which is based on a standard *t*-test, is 0.946, whereas conventional levels of significance in the social sciences would require a value less than 0.05 or perhaps 0.10. Note that the reported *p-value* is for a test of the null hypothesis of zero difference in the plaintiff win rate, against the two-sided alternative of a change not equal to zero. The two-sided alternative is appropriate for assessing the predictions of *Twombly/Iqbal* supporters and aggressive critics in employment discrimination cases, since the supporters' view predicts a positive difference, while the aggressive critics' view predicts a negative difference.



percentage points—and, like the unadjusted difference, far from being statistically significant.<sup>101</sup>

### 5.2.2 The percentage of cases in which plaintiffs win on at least one challenged claim

The first column of Table 5 reports the percentages of claims on which plaintiffs won on at least one challenged claim in employment discrimination cases. For the pre-*Twombly* sample, plaintiffs won on at least one claim in 36.6 percent of cases. For the post-*Iqbal* period, this percentage was slightly greater, at 38.0 percent. The table’s second column reports estimated standard errors for these percentages, which are 1.8 and 2.5 percentage points, respectively. The unadjusted difference of 1.5 percentage points<sup>102</sup> has an estimated standard error of 3.1 percentage points and is thus far from statistically significant. The table’s final row reports information for the adjusted difference in the denial percentage. The difference of 1.0 percentage points is likewise statistically insignificant, given its estimated standard error of 3.1 percentage points.

TABLE 5  
PERCENTAGE OF CASES IN WHICH PLAINTIFFS WON ON AT LEAST ONE CHALLENGED CLAIM  
IN EMPLOYMENT DISCRIMINATION CASES  
(AMONG THOSE WITH MOTIONS RESOLVED IN 731 OR FEWER DAYS)

	Unadjusted		Adjusted <sup>a</sup>	
	Percentage	Estimated Standard Error	Percentage	Estimated Standard Error
Pre- <i>Twombly</i>	36.6	1.8		
Post- <i>Iqbal</i>	38.0	2.5		
Difference	1.5	3.1	1.0	3.1
p-value	0.637		0.746	

<sup>a</sup> Fourteen cases in 8 district courts were dropped by the logit estimate’s statistical routine because these district courts have no variation in the plaintiff win rate, preventing the inclusion of these observations in logit estimation. The adjusted estimates in this table are thus based on 1,054 observations, by comparison to 1,068 observations in the unadjusted estimation. Unadjusted estimates calculated using only the 1,054 observations included in the logit estimation yielded a difference in the plaintiff win rate of 1.8 percentage points, with an estimated standard error of 3.1.

<sup>101</sup> As a note to the table indicates, when district court dummies are included in logit estimation, it is necessary for estimation purposes to drop all observations from those district courts in which there is no variation in the plaintiff win rate, *i.e.*, those districts in which plaintiffs either win in all cases or no cases. This is a well-known feature of the logit model (as well as other similar models). Only districts with relatively small numbers of observations are affected by this issue, since large districts will naturally have at least some variation in the plaintiff win rate. As the note to the table indicates, the unadjusted difference in the estimated plaintiff win rate is not sensitive to dropping the observations in question.

<sup>102</sup> Due to rounding, this reported difference does not exactly equal the difference of reported plaintiff win rates in the table.

### 5.2.3 Summary of employment discrimination results

The results for employment discrimination cases in Sections 5.2.1 and 5.2.2 can be summarized with the following observations.

1. Pooling results over the pre-*Twombly* and post-*Iqbal* data samples, plaintiffs win on all aspects of a defense summary judgment motion in a bit less than one out of five employment discrimination cases that face a defense summary judgment motion.
2. Pooling results over the pre-*Twombly* and post-*Iqbal* data samples, plaintiffs win on at least one issue raised in a defense summary judgment motion in roughly two out of five cases.
3. Point estimates for one of the measures indicates a small reduction in quality based on the unadjusted estimates, and an increase based on the adjusted estimates. Point estimates for the other measure suggest a small quality increase based on both the adjusted and unadjusted estimates.
4. But all of these point estimates of the change in the plaintiff win rate are close to zero, and each estimate has a sizable estimated standard error. Thus, none of the point estimates is either substantively or statistically significantly different from zero. That is, the Report cannot reject the hypothesis that *Twombly* and *Iqbal* have had no impact on the quality composition of cases that make it past the Rule 12(b)(6) stage.
5. On balance, then, the empirical evidence for employment discrimination cases suggests that following *Twombly* and *Iqbal*, there was no appreciable change in the average merit of employment discrimination cases that actually face defense summary judgment motions. In light of the conceptual discussion in section 3, then, this finding is consistent with each of two hypotheses: (a) that *Twombly* and *Iqbal* cause random filtering of cases, as moderate critics would predict, and (b) that *Twombly* and *Iqbal* have induced offsetting effects of the types that both supporters and aggressive critics expected. In either case, the results suggest that overall, *Twombly* and *Iqbal* have not had sizable effects on the average quality of those cases that get past the Rule 12(b)(6) stage of civil litigation.

## 6. CONTRACTS CASES

### 6.1 Basic Characteristics of the Contracts Sample

Coders processed a total of 2,478 contracts cases. Of these, 236 were dropped because they originated in districts that had not adopted the ECF system before October 1, 2005.<sup>103</sup> An additional 53 were dropped because at least one *pro se* plaintiff was involved in at least one motion for summary judgment,<sup>104</sup> and 8 more were dropped because coders indicated that at least one claim involved the ADA.<sup>105</sup> That leaves 2,181 contracts cases with summary judgment motions in which all plaintiffs were counseled. In 750 of these, there was no defendant's summary judgment motion filed,<sup>106</sup> so that there are 1,431 contracts cases in which there were no *pro se* plaintiffs involved in any motion for summary judgment and at least one defense summary judgment motion was filed.<sup>107</sup> Table 6 reports the breakdown of these 1,431 cases across sub-types of contract suits; 48.2 percent (689) involved insurance, 7.1 percent (103 cases) involved other enumerated types of cases, and the remaining 44.7 percent (639 cases) involved the "Other Contract" PACER category.

TABLE 6  
SERVED CONTRACTS CASES, BY INDIVIDUAL NATURE OF SUIT CODE

PACER Code	Nature of Suit	Number of Cases Served
110	Insurance	689
120	Marine	27
130	Miller Act	4
140	Negotiable Instrument	12
150	Recovery of Overpayment & Enforcement of Judgment	10
151	Medicare Act	15
152	Recovery of Defaulted Student Loans (Excl. Veterans)	1
160	Stockholders' Suits	5
190	Other Contract	639
195	Contract Product Liability	22
196	Franchise	7
All Contracts cases		1,431

<sup>103</sup> See *supra* note 82.

<sup>104</sup> See *supra* note 80 concerning the rationale for excluding cases with *pro se* plaintiffs.

<sup>105</sup> See *supra* notes 77 and 90.

<sup>106</sup> As above, summary judgment motions filed by defendants in their capacity as either crossclaimants or counterclaimants were not treated as defense summary judgment motions.

<sup>107</sup> Of the 2,181 contracts cases with summary judgment motions in which all plaintiffs were counseled, 85 had summary judgment motions filed only by a party classified as neither a plaintiff nor a defendant, and another 665 had summary judgment motions filed by plaintiffs but not defendants. Together, these two sets of cases make up the 750 contracts cases with summary judgment motions in which all plaintiffs were counseled, but in which no defense summary judgment motion was filed. The share of all contracts cases with summary judgment motions in which all plaintiffs were counseled and in which a plaintiff filed a summary judgment motion thus was 36 percent ( $100\% \times 750 \div (2,181 - 85)$ ), which is much greater than the rate for filing by plaintiffs in employment discrimination cases; see *supra* note 78.

The first column of Table 7 reports the distribution of contracts cases with a defense summary judgment motion and no *pro se* plaintiff by year (Panel A) and by pre-*Twombly*/post-*Iqbal* period (Panel B).<sup>108</sup> There are somewhat more coded cases in the pre-*Twombly* period (758 cases) than in the post-*Iqbal* period (673 cases). This discrepancy arose because the coders worked on one year of cases at a time, and all coders had to stop working before they managed to code as many 2010 cases as 2006 cases.<sup>109</sup>

TABLE 7  
NUMBER OF CONTRACTS CASES WITH SUMMARY JUDGMENT MOTIONS OBSERVED FILED, AND WITH ADJUDICATIONS WITHIN 731 DAYS

Year Filed	Defense Summary Judgment Motion	
	Filed in Observed Period	Adjudicated Within 731 Days
<i>A. By year case filed</i>		
2005 (Oct 1— Dec 31)	238	124
2006 (Jan 1 — Jun 30)	520	276
2009 (Oct 1— Dec 31)	254	144
2010 (Jan 1 — Jun 30)	419	237
<i>B. By pre-Twombly/post-Iqbal</i>		
Total, pre- <i>Twombly</i>	758	400
Total, post- <i>Iqbal</i>	673	381

The second column of Table 7 reports the number of the contracts cases with any defense summary judgment motion filed that had at least one such motion adjudicated within 731 days of case filing. The discrepancy in the number of cases across the pre-*Twombly*/post-*Iqbal* periods is largely eliminated because the share of cases that were adjudicated within 731 days is greater in the post-*Iqbal* period (57 percent) than in the pre-*Twombly* period (53 percent). Overall, the pre-*Twombly* period has 400 contracts cases with an adjudicated defense summary judgment motion, while the post-*Iqbal* period has 381 cases.

## 6.2 Summary Judgment Adjudication Results for Contracts Cases

This section discusses the main results for contracts cases. As with the employment discrimination cases, results are reported first for the percentage of cases in which plaintiffs win on all claims challenged via a defense summary judgment motion. Then results are reported for the percentage of cases in which the plaintiff wins on at

<sup>108</sup> Unlike the employment discrimination sample, the contracts sample does not have a disproportionate number of cases included in the 2005 filing period, because all relevant years of contracts cases had been loaded into the data base when the coders began coding these cases.

<sup>109</sup> There were no qualitative changes in the results when the samples were weighted so that the 2005 and 2009, and 2006 and 2010, samples had the same effective number of cases.

least one claim challenged via a defense summary judgment motion. The results are then summarized.

6.2.1 *The percentage of cases in which plaintiffs win as to all aspects raised by defense summary judgment motions*

The first column of Table 8 reports the percentages of contracts cases in which plaintiffs won on all claims challenged via a defense summary judgment motion. For the pre-*Twombly* sample, plaintiffs won on all challenged claims in 36.3 percent of cases. For the post-*Iqbal* period, this figure was slightly greater, at 37.3 percent. The table's second column reports estimated standard errors for these percentages, which are 2.4 percentage points for the pre-*Twombly* period and 2.5 percentage points for the post-*Iqbal* period.

TABLE 8  
PERCENTAGE OF CASES IN WHICH PLAINTIFFS WIN ON ALL CHALLENGED CLAIMS  
IN CONTRACTS CASES (AMONG THOSE WITH MOTIONS RESOLVED IN 731 OR FEWER DAYS)

	Unadjusted		Adjusted <sup>a</sup>	
	Percentage	Estimated Standard Error	Percentage	Estimated Standard Error
Pre- <i>Twombly</i>	36.3	2.4		
Post- <i>Iqbal</i>	37.3	2.5		
Difference	1.0	3.5	2.9	3.7
p-value (two-sided)	0.768		0.437	
p-value (one-sided)	0.384		0.219	

<sup>a</sup> Thirty-five cases in 12 district courts were dropped by the logit estimate's statistical routine because these district courts have no variation in the plaintiff win rate, preventing the inclusion of these observations in logit estimation. The adjusted estimates in this table are thus based on 746 observations, by comparison to 781 observations in the unadjusted estimation. Unadjusted estimates calculated using only the 746 observations included in the logit estimation yielded a difference in the plaintiff win rate of 1.0 percentage points, with an estimated standard error of 3.6.

The table's next row reports information for the difference in the percentage of cases in which plaintiffs won on all challenged claims. The unadjusted increase of 1.0 percentage points is in line with the supporters' view of *Twombly* and *Iqbal*, but this increase is very small. Moreover, its estimated standard error, 3.5 percentage points, is large enough that this difference is not statistically different from zero using either a two-

sided or one-sided test of significance.<sup>110</sup> The adjusted difference, which is based on a logit model that includes district court dummies, is equal to 2.9 percentage points. While this estimate is greater than the unadjusted difference, it, too, is statistically insignificant, given its estimated standard error of 3.7.<sup>111</sup>

### 6.2.2 *The percentage of cases in which plaintiffs win on at least one claim challenged via defense summary judgment motion*

The first column of Table 9 reports the percentages of contracts cases in which the plaintiff won at summary judgment on at least one claim challenged by a defense summary judgment motion. For the pre-*Twombly* sample, the plaintiff won on at least one challenged claim in 52.3 percent of cases. For the post-*Iqbal* period, this percentage was 56.3 percent. The table's second column reports estimated standard errors for these percentages, which are 2.5 in both periods. The table's final row reports information for the difference in the denial percentage.

The difference of 4.4 percentage points indicates some support for the supporters' view of *Twombly* and *Iqbal*, since it suggests that average merit increased. However, the difference has an estimated standard error of 3.6 percentage points, indicating that this difference, like those above, is not statistically significantly different from zero: even its one-sided *p*-value exceeds 0.10.

Finally, though, consider the third and fourth columns of Table 9. The adjusted difference, in the third column, indicates that when geographic patterns are held constant, *Twombly* and *Iqbal* are associated with a 6.4 percentage-point increase in the plaintiff win rate. This estimated difference in the plaintiff win rate is statistically significantly different from zero using a one-sided alternative hypothesis, having a *p*-value of 0.042;<sup>112</sup> many social scientists would consider the estimate significant even based on the two-sided *p*-value of 0.083. Moreover, the point estimate is substantively sizable: 6.4 percentage points amounts to a 12 percent increase over the pre-*Twombly* plaintiff win rate of 52.0 percent (see the first row of the first column in the table). Thus, the results for contracts cases do provide some evidence that case quality increased following *Twombly* and *Iqbal*.

---

<sup>110</sup> A one-sided alternative hypothesis is arguably appropriate for contracts case, since the aggressive critics' concern that only defendants will have the information necessary to plead seems considerably less likely to hold in contract actions.

<sup>111</sup> This conclusion holds regardless of whether one uses a two- or one-sided alternative hypothesis.

<sup>112</sup> See *supra* note 110 for an explanation of why a one-sided test is arguably appropriate for contract cases.

TABLE 9  
 PERCENTAGE OF CASES IN WHICH PLAINTIFF WON ON AT LEAST ONE CLAIM  
 IN CONTRACTS CASES (AMONG THOSE WITH MOTIONS RESOLVED IN 731 OR FEWER DAYS)

	Unadjusted		Adjusted <sup>a</sup>	
	Percentage	Estimated Standard Error	Percentage	Estimated Standard Error
Pre- <i>Twombly</i>	52.0	2.5		
Post- <i>Iqbal</i>	56.4	2.5		
Difference	4.4	3.6	6.4	3.7
p-value (two-sided)	0.215		0.083	
p-value (one-sided)	0.108		0.042	

<sup>a</sup> Twelve cases in eight district courts were dropped by the logit estimate's statistical routine because these district courts have no variation in the plaintiff win rate, preventing the inclusion of these observations in logit estimation. The adjusted estimates in this table are thus based on 769 observations, by comparison to 781 observations in the unadjusted estimation. Unadjusted estimates calculated using only the 769 observations included in the logit estimation yielded a difference in the plaintiff win rate of 4.5 percentage points, with an estimated standard error of 3.6.

### 6.2.3 Summary of contracts results

The results for contracts cases in sections 6.2.1 and 6.2.2 can be summarized with the following observations.

1. Pooling cases across the pre-*Twombly* and post-*Iqbal* samples, plaintiffs win on all aspects of defense summary judgment motions in a bit fewer than two out of five cases (about twice the rate for employment discrimination cases).
2. Pooling cases across the pre-*Twombly* and post-*Iqbal* samples, plaintiffs win on at least one aspect of defense summary judgment motions a bit more than half of the time (by comparison to only about two out of five motions in employment discrimination cases).
3. There was essentially no change in the plaintiff win rate following *Twombly* and *Iqbal* when a plaintiff win is defined as denial of all claims or issues challenged by the motion. When a win is defined to be denial of at least one claim or issue, the point estimate indicates that the plaintiff win rate increased 4.4 percentage points using the unadjusted difference in win rates, and 6.4 percentage points using the adjusted difference. The former estimate is statistically insignificant, but the latter is plausibly significant. Further, an increase in the win rate of 6.4 percentage

points amounts to roughly a twelve percent increase in the win rate by comparison to the pre-*Twombly* plaintiff win rate.

4. In sum, using one definition of plaintiff wins, the win rate essentially changes relatively little, and to a statistically insignificant degree. Using the other definition, the win rate rises noticeably, as the supporters' view predicts. The unadjusted estimate of the change in the plaintiff win rate using this definition is not statistically significant, while the adjusted estimate is plausibly significant. It is possible that additional data would yield sufficient additional precision in estimation to come to a more definitive conclusion.



## 7. FURTHER DISCUSSION

This Part of the Report discusses three further issues. The first concerns why it would be inappropriate to examine the plaintiff win rate for only those cases that faced and survived Rule 12(b)(6) motions. The second concerns statistical power and the sample sizes available for study in this Report. The third concerns *Scott v. Harris*, a Supreme Court decision partly involving summary judgment, which was handed down in the period between when the pre-*Twombly* and post-*Iqbal* sample cases were filed.

### 7.1 Why it Would Be Inappropriate to Focus Only on Cases in Which a Rule 12(b)(6) Motion was Filed and Denied

The only disputes affected by *Twombly* and *Iqbal* will be those in which either (i) Rule 12(b)(6) motions would come out differently pre-*Twombly* and post-*Iqbal*, or (ii) parties behave differently following a perceived change in the pleading standard. Thus, case-quality filtering related to a change in the pleading standard will not occur in all cases. Even so, including all these cases is the right thing to do empirically.

To see why, suppose the Report instead analyzed only those cases in which a Rule 12(b)(6) motion was filed and denied. Consider, for example, a defendant selection case—one that the defendant would answer under *Conley* but challenge with a Rule 12(b)(6) motion post-*Twombly/Iqbal*. If the Report considered only cases with a Rule 12(b)(6) motion filed and denied, then the post-*Twombly/Iqbal* sample would include those cases in which the defendant loses the Rule 12(b)(6) motion and then files for summary judgment. But this sample-definition rule would also lead the Report to exclude such cases from the pre-*Twombly* sample (since, by hypothesis, the defendant's choice to file the Rule 12(b)(6) motion is caused by the change in pleading standards). Such cases thus would be represented in the post-*Iqbal* sample, but not the pre-*Twombly* sample. If case quality is correlated in important ways with changes in parties' litigation choices, as it might be, then this sample-definition rule would induce non-comparability across the two periods. There are other selection-related types of cases that could be problematic as well.

It is useful to observe that the overall effect measured by the Report can be shown to equal a weighted average of (i) zero and (ii) the average effect among those cases that are affected. Since a weighted average of two numbers must always lie between them, and since one of the two numbers in the average in question is zero, the weighted average and the average effect among the affected will always have the same sign. Thus, to learn whether case quality has increased or decreased, it is sufficient to study a set of cases that includes all affected cases, even if it includes non-affected cases as well.

One concern that this point raises is the possibility that the Report's estimates are statistically insignificant, they are so simply because the number of coded cases is small. The next section of the Report considers this issue.

## 7.2 Statistical Power

For all but one of the estimates in Sections 5 and 6, there was no statistically significant change in the plaintiff win rate against defense summary judgment motions between the pre-*Twombly* and post-*Iqbal* periods. Of course, one reason why statistical tests can fail to find no statistically significant change in an outcome is that there really was no change in the outcome. But a second reason is that the statistical tests used might have low power.

Statistical power is defined as the probability that a test will yield statistically significant evidence of a change when there really was one. The greater are (i) the sample sizes used and (ii) the true change in the outcome of interest, the greater will be a test's power. The Appendix Concerning Statistical Power that follows the Report's main text calculates the approximate power of the Report's unadjusted tests based on sample sizes equal to those the Report uses.<sup>113</sup> While the Report used data from more than 1,800 cases to measure changes in the win rate, it is still clear that, taken individually, the tests used herein have relatively low power unless the true impact of *Twombly* and *Iqbal* on the mix of case quality was several percentage points—perhaps 4 or more. Thus, one possible view of the Report's findings is that most of them are statistically insignificant because the sample sizes are not great enough to detect nonzero but relatively small effects.

But this argument has relatively little bite for employment discrimination cases. For all four of the estimated differences in the pre-*Twombly*/post-*Iqbal* plaintiff win rate for employment discrimination cases are relatively near zero in magnitude. For employment discrimination cases, then, the Report's failure to reject the null hypothesis of zero effect seems to be at least as much due to a lack of substantial differences in the plaintiff win rate as the result of imprecision. By contrast, the estimated effects for contract cases are great enough in magnitude that a bigger sample size perhaps would yield clearer evidence of an increase in the plaintiff win rate. Thus, future work involving larger samples of cases than were feasible for this report might shed more light.

## 7.3 Scott v. Harris

A final issue involves the evolution of Supreme Court doctrine concerning summary judgment. In *Scott v. Harris*,<sup>114</sup> the Supreme Court reversed the lower courts' denial of summary judgment for a police officer who had rammed his car into the subject of a high-speed car chase. In holding that the officer's use of force was reasonable, the Court relied on a videotape of the car chase. The Court held that the videotape so thoroughly discredited the plaintiff's account of events that only an unreasonable jury would find for him. Even though courts handling a summary judgment motion usually

---

<sup>113</sup> The Report does not calculate the power of the adjusted tests, which would require not only simulating the behavior of logit estimates under alternative hypotheses concerning the magnitude of the coefficient on the post-*Iqbal* dummy, but also specific assumptions about the coefficients on the district court dummies.

<sup>114</sup> *Scott v. Harris*, 550 U.S. 372 (2007).

construe all facts in the light most favorable to the nonmovant, the Supreme Court held that in the particular facts of *Scott v. Harris*, “a court should not adopt [the discredited] version of the facts for purposes of ruling on a motion for summary judgment.”<sup>115</sup>

*Scott v. Harris* was handed down three weeks before *Twombly*, so most of the summary judgment motions considered in this Report’s pre-*Twombly* period were filed before *Scott*. While pending motions could have been affected by *Scott*, it is clear that more cases in the post-*Iqbal* period would be affected. Thus, if *Scott* created substantial change in district courts’ summary judgment practice, it would also render the Report’s two periods non-comparable for purposes of summary judgment adjudication.

But this seems unlikely, because the facts in *Scott* are unusual. Few cases can be expected to involve a documentary record that directly and, according to the Supreme Court, inarguably controverts testimonial evidence that would be the only evidence a nonmovant could provide. Justice Scalia’s opinion for the Court’s 8-1 majority says as much, characterizing the videotape’s role in *Scott* as “an added wrinkle.”<sup>116</sup> Concurring, Justice Breyer refers to the Court’s determination concerning the underlying Fourth Amendment issue at stake in the case as “highly fact-dependent.”<sup>117</sup> While it is possible that *Scott* might signal the Supreme Court’s approval of lower courts’ use of added discretion at summary judgment, it seems at least as likely that the case’s impact on the great mass of summary judgment motions is quite limited.

---

<sup>115</sup> *Id.* at 380.

<sup>116</sup> *Id.* at 378.

<sup>117</sup> *Id.* at 387. It is worth noting that Justice Stevens issued a spirited dissent; see *id.* at 389.

## 8. SUMMARY

This Report investigates the effects of *Bell Atlantic v. Twombly* and *Ashcroft v. Iqbal* on average case merit, as measured by adjudication of defense summary judgment motions. *Twombly* and *Iqbal* re-interpreted the pleading standard in federal civil litigation, requiring that entitlement to relief under a plaintiff's allegations be not only logically possible, but also plausible. Supporters have argued that this increase in the pleading standard was necessary to filter out low-merit cases that may have settlement value but otherwise would have little chance of a favorable disposition for the plaintiff. Critics, on the other hand, have emphasized concerns that even if a stricter pleading standard does eliminate low-merit cases, it will also filter out high-merit cases whose factual details are difficult to plead without access to discovery. Thus, what the Report terms "aggressive critics" would predict that *Twombly* and *Iqbal* set up a plaintiff's Catch-22 for some types of cases, while "moderate critics" would predict that *Twombly* and *Iqbal* are likely to induce essentially random filtering of cases.

If *Twombly* and *Iqbal* succeed at systematically filtering out low-merit cases, as supporters believe, then the plaintiff win rate against defense summary judgment motions should rise. On the other hand, if *Twombly* and *Iqbal* instead filter out some difficult-to-plead but high-merit cases, as both types of critics contend, then the plaintiff win rate on defense summary judgment motions should fall. Finally, if *Twombly* and *Iqbal* filter out low- and high-merit cases roughly in proportion to their share in the pre-*Twombly* population of cases, then the plaintiff win rate against defense summary judgment motions should remain unchanged. This last result would be consistent with either of two explanations. First, *Twombly* and *Iqbal* might have caused offsetting effects in the directions predicted by both supporters and critics. Second, *Twombly* and *Iqbal* might have caused random filtering—knocking out cases regardless of merit. Accordingly, a finding of no systematic change in the plaintiff win rate against defense summary judgment motions could be consistent with moderate critics' predictions alone or with the joint occurrence of both supporters' and more aggressive critics' predictions.

Even ignoring statistical significance, the results for employment discrimination cases that reach defense summary judgment motions do not point to a clear direction in which quality changed. The most plausible conclusion may be that the plaintiff win rate has simply not changed for these cases. For contract cases that reach summary judgment, point estimates do indicate an increase in average quality, though the estimates are imprecise and three of the four are statistically insignificant by any conventional standard. Leaving aside statistical significance, the overall pattern of results is consistent with both the supporters' view and the critics' view, under the reasonable assumption that employment discrimination cases are more likely than contracts cases to involve the "Catch-22" problem that results when defendants have private information.<sup>118</sup> Again, though, it must be emphasized both that the changes in

---

<sup>118</sup> This conclusion—which, again, requires ignoring the lack of statistical significance—suggests the possibility that whether *Twombly* and *Iqbal* have reduced or increased the average merit of cases reaching discovery depends on the prevalence of private information in federal civil cases. To be more concrete, it is worth noting that in the 12-month period ending on September 30, 2010, non-ADA

plaintiff win rates for contract cases generally are statistically insignificant, and that the relatively small estimated changes for employment discrimination cases are imprecisely estimated. If this Report's findings must be summarized in one statement, then, it would be this: To the extent that summary judgment adjudication is a reasonable proxy for case quality, the results presented in this report provide some support that *Twombly* and *Iqbal* have operated in ways reflecting both (i) the supporters' view, for contract cases, and (ii) the critics' Catch 22 concerns.

An additional important point is that the results presented in this report do not—because they cannot—address the social costs implicated in both the supporters' and critics' accounts of *Twombly* and *Iqbal*. For example, if heightened pleading standards are effective at screening out low-merit cases, then *Twombly* and *Iqbal* would lead society to benefit from a reduction in the resources spent on unnecessary litigation. Society likely would also benefit from a reduction in defensive behavior by potential defendants—that is, costly “over-deterrence” that diverts resources from productive use to avoiding suit. On the other hand, to the extent that heightened pleading standards erroneously screen out legitimate cases,<sup>119</sup> *Twombly* and *Iqbal* would reduce deterrence of unlawful behavior, leading to a countervailing socially detrimental increase in potentially harmful behavior.<sup>120</sup> Measuring these costs and benefits is beyond the scope of this Report, but doing so would help in assessing the welfare effects of *Twombly* and *Iqbal*.

---

employment discrimination cases composed 5.1 percent of federal civil cases filed in the district courts (14,543 out of a total of 282,895), while contract cases composed 11 percent (31,109 out of 282,895). See JUDICIAL BUSINESS OF THE UNITED STATES COURTS 2010, ANNUAL REPORT OF THE DIRECTOR, Table C-2, at 144-145. Further, the full set of antitrust cases—not merely those involving conspiracies, like the one alleged in *Twombly*—compose less than one-fourth of one percent of federal civil cases filed in district court (544 out of 282,895).

<sup>119</sup> For related analysis in the context of the Private Securities Litigation Reform Act, See Stephen J. Choi, *Do the Merits Matter Less After the Private Securities Litigation Reform Act?* 23 J.L. Econ. & Organization 598 (2007); Stephen J. Choi, Karen K. Nelson, and A. C. Pritchard, *The Screening Effect of the Private Securities Litigation Reform Act*, 6 J. Empirical Legal Stud. 35 (2009).

<sup>120</sup> In addition, both a reduction in access to justice for meritorious suits and a reduction in exposure of innocent defendants to meritless suits are aspects of the civil litigation system's performance in producing just, speedy, and inexpensive outcomes for individual litigants. See FED. R. CIV. P. 1.

## Appendix A: Concerning Statistical Power

Statistical power is the probability that a study using samples of the sizes used in this Report would find a statistically significant difference between the pre-*Twombly* and post-*Iqbal* plaintiff win rate (however this rate is measured).

The tables below report the approximate power<sup>121</sup> of tests using two-sided Type I error rates<sup>122</sup> 0.05 and 0.10, with *Twombly* and *Iqbal*'s true effect on the plaintiff win rate ranging from an increase of 1 percentage point to an increase of 6 percentage points.

- In Table A1, it is assumed that the pre-*Twombly* plaintiff win rate is 0.173 and the sample sizes are 700 in the pre-*Twombly* sample and 368 in the post-*Iqbal* sample; these figures correspond to the actually observed ones for employment discrimination cases using the share of cases in which plaintiffs win on all challenged issues.
- In Table A2, it is assumed that the pre-*Twombly* plaintiff win rate is 0.366 and the sample sizes are the same as in Table A1; these figures correspond to the actually observed ones for employment discrimination cases using the share of cases in which plaintiffs win on any issue challenged in a defense summary judgment motion.
- In Table A3, the pre-*Twombly* plaintiff win rate is assumed to be 0.363, corresponding to the observed rate for contract cases using the plaintiff wins on all challenged claims measure; the assumed sample sizes are 400 in the pre-*Twombly* sample and 381 in the post-*Iqbal* sample, again corresponding to the actual figures.
- In Table A4, the pre-*Twombly* plaintiff win rates are assumed to be 0.520, corresponding to the observed rates for contract cases using the plaintiff wins on any challenged claims measure; the assumed sample sizes in these tables are 400 in the pre-*Twombly* sample and 381 in the post-*Iqbal* sample, again corresponding to the actual figures.

In general, the greater the true hypothesized effect of *Twombly* and *Iqbal* on the plaintiff win rate, the greater will be the power of the tests used in this Report. In addition, power will be greater the greater is the allowable Type I error. The figures in Tables A1-A4 show, as one would expect, that power is very low for the smaller effect

---

<sup>121</sup> The approximation is based on the normal approximation to the binomial distribution, which is appropriate here since the outcomes of interest are proportions based on samples with several hundred observations.

<sup>122</sup> Type I error is the probability that a statistical test will erroneously reject a null hypothesis. In this Report, the null hypothesis is that there is no difference between the pre-*Twombly* and post-*Iqbal* plaintiff win rates. A Type I error thus would happen if the Report found statistical evidence sufficient to reject the hypothesis of no difference in the plaintiff win rate when, in fact, there really was no difference. Common choices of the Type I error rate in statistical studies in the social sciences are 5% and 10% (equivalently expressed as 0.05 and 0.10).

sizes, regardless of the selected Type I error rate. Using a Type I error rate of 0.10, power is roughly 0.4 for the employment discrimination cases when the true effect is 4 percentage points or greater, and roughly 0.3 for the contract cases. When the true effect size is 6 percentage points, power exceeds one-half for all tests but the contracts sample with a 0.05 Type I error rate.

TABLE A1  
 APPROXIMATE POWER WHEN PRE-*TWOMBLY* PLAINTIFF WIN RATE IS 0.173 AND SAMPLE SIZES  
 ARE 700 (PRE-*TWOMBLY*) AND 368 (POST-*IQBAL*)

True pre- <i>Twombly</i> /post- <i>Iqbal</i> plaintiff win rate difference (in percentage points)	Type I Error Rate	
	0.05	0.10
1	0.069	0.128
2	0.126	0.206
3	0.219	0.324
4	0.344	0.466
5	0.486	0.610
6	0.627	0.739

TABLE A2  
 APPROXIMATE POWER WHEN PRE-*TWOMBLY* PLAINTIFF WIN RATE IS 0.366 AND SAMPLE SIZES  
 ARE 700 (PRE-*TWOMBLY*) AND 368 (POST-*IQBAL*)

True pre- <i>Twombly</i> /post- <i>Iqbal</i> plaintiff win rate difference (in percentage points)	Type I Error Rate	
	0.05	0.10
1	0.064	0.120
2	0.106	0.179
3	0.177	0.272
4	0.276	0.391
5	0.398	0.523
6	0.530	0.652



TABLE A3  
 APPROXIMATE POWER WHEN PRE-*TWOMBLY* PLAINTIFF WIN RATE IS 0.363 AND SAMPLE SIZES  
 ARE 400 (PRE-*TWOMBLY*) AND 381 (POST-*IQBAL*)

True pre- <i>Twombly</i> /post- <i>Iqbal</i> plaintiff win rate difference (in percentage points)	Type I Error Rate	
	0.05	0.10
1	0.060	0.114
2	0.089	0.156
3	0.139	0.224
4	0.210	0.313
5	0.300	0.418
6	0.405	0.530

TABLE A4  
 APPROXIMATE POWER WHEN PRE-*TWOMBLY* PLAINTIFF WIN RATE IS 0.520 AND SAMPLE SIZES  
 ARE 400 (PRE-*TWOMBLY*) AND 381 (POST-*IQBAL*)

True pre- <i>Twombly</i> /post- <i>Iqbal</i> plaintiff win rate difference (in percentage points)	Type I Error Rate	
	0.05	0.10
1	0.059	0.114
2	0.088	0.155
3	0.137	0.221
4	0.208	0.311
5	0.299	0.416
6	0.405	0.530

GEORGE MASON UNIVERSITY SCHOOL OF LAW

