Did Going Public Impair Moody's Credit Ratings?

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Abstract

We investigate a prominent allegation in Congressional hearings that Moody's loosened its standards for assigning credit ratings after it went public in the year 2000 in an attempt to chase market share. We exploit a difference-in-difference design by benchmarking Moody's ratings for a common set of corporate bonds with the ratings assigned by its rival S&P before and after 2000. Consistent with Congressional allegations, we find that Moody's credit ratings for new and existing corporate bonds are significantly more favorable to issuers relative to S&P's, after Moody's initial public offering (IPO) in 2000. Moreover, such relative loosening of credit standards at Moody's after its IPO is more pronounced for clients where Moody's is likely to face larger conflicts of interest: (i) large issuers; and (ii) firms that are more likely to benefit from better ratings, on the margin. Our findings have implications for incentives created by a public offering for capital market gatekeepers and professional firms.

We acknowledge financial assistance from our respective schools. All errors are ours alone.

Did Going Public Impair Moody's Credit Ratings?

"Many former employees said that after the public listing, Moody's culture changed, it went "from [a culture] resembling a university academic department to one which values revenues at all costs," according to Eric Kolchinsky, a former managing director of Moody's" (The Financial Crisis Inquiry Commission, 2011, 207)

1.0. Introduction

Moody's was founded in 1900 to produce manuals of performance statistics related to stocks and bonds. The business was acquired by Dun & Bradstreet in 1962 and spun off as a separate company, organized as Moody's Corporation, on October 4, 2000. Currently, Moody's trades on the NYSE and is part of the S&P 500. In Congressional hearings investigating the culpability of the major credit rating agencies in the financial crisis of 2007, Moody's employees testified that the culture at Moody's changed after it went public. They alleged that after its IPO, Moody's encouraged an environment where employees were asked to focus on revenues and market share such "that they looked the other way, trading the firm's reputation for short term profits" (The Financial Crisis Inquiry Commission, 2011, 207).[1]

The recent financial crisis has spurred an active debate into why the major credit rating agencies failed to downgrade the ratings of structured mortgage products in a timely manner. However, much of the academic debate has focused on the conflicts of interest inherent in the "issuer-pays" business model followed by credit rating agencies (e.g., Jiang, Stanford and Xie 2012; Xia 2010, Bonsall 2012). Relatively little attention has been devoted to the perverse incentives created by the public ownership structure of the rating agencies, especially, to the potential pressure imposed by the stock market on managers of a publicly traded credit rating firm. In this paper, we investigate whether the quality of credit ratings assigned by Moody's systematically declined after it went public in 2000.

[1] Similar concerns were raised when Goldman Sachs went public. For instance, one partner was worried that "the public company could never replicate the close-knit culture of a partnership, where financial rewards are measured in lifetimes instead of months." (Kahn 1998).

To study the impact of Moody's IPO on its credit ratings, we compare the difference in its ratings of corporate bonds before and after it went public in 2000. The period prior to going public ("pre-public period") spans 1995 to 1999. The period after going public ("post-public period") extends from 2001 to 2005. Merely comparing rating changes between the pre- and post-public periods is subject to two obvious criticisms: (i) ratings' standards for the industry might have changed over time for reasons unrelated to Moody's publicly listed status; (ii) corporate bonds with different cash flow and risk characteristics might have been issued in the pre- relative to the post-public period. To control for such time trends and self-selection in the nature of corporate bonds issued in the two periods, we employ a difference-in-difference methodology. In particular, we benchmark Moody's ratings for a common set of corporate bonds to those assigned by its closest rival, Standards & Poor (S&P), and then evaluate whether the changes in Moody's ratings relative to S&P's ratings, on average across all corporate bonds, were laxer after Moody's IPO relative to before.

S&P serves as an ideal benchmark for Moody's. Although S&P is Moody's closest competitor with an almost equal market share, it is not publicly traded. S&P was formed in 1941 from the merger of H.W. Poor Co. and the Standard Statistics Bureau. In 1966, it was acquired by The McGraw-Hill Companies and has been a fully owned division of McGraw Hill ever since. Any change in the ratings of S&P, after Moody's IPO, ought to reflect the impact of overall market conditions and any potential decline in rating standards for the entire industry. As S&P ownership status did not change over this period, any change in S&P ratings does not reflect market pressures potentially faced by Moody's after it went public.

We begin by comparing credit ratings on new corporate bonds issued in the pre-public period and the post-public period that were rated by both Moody's and S&P. It is worth noting that although the Financial Crisis Inquiry Commission (FCIC) was concerned with Moody's push for market share of structured debt products such as mortgage backed securities (MBS) and collateralized debt obligations (CDOs), we study the impact of Moody's IPO on its ratings for

corporate bonds. This is because most corporate bonds (99%) are rated by both Moody's and S&P creating a sample of comparable securities with little selection bias. In contrast, all structured financial products do not have ratings from both Moody's and S&P. Further, corporate bonds are an established product with a long time series of data that whereas there is little issuance of MBS and CDOs in the pre-public period, which covers the years 1995 to 1999, making a difference in difference test difficult to implement. Moreover, finding bias in ratings of corporate bonds, given that is an older and a more mature market relative to MBS and CDOs, is harder and hence our tests are more stringent.

We obtain data on new corporate bond issues and the initial ratings for these issues by Moody's and S&P from the Mergent's Fixed Income Securities Database (FISD). For each new issue, we create a variable "Rating_Diff" which is the S&P's numerical rating minus the Moody's numerical rating for the bond issue. As more favorable ratings have smaller numerical values, a positive value of Rating_Diff implies that Moody's assigned a more favorable rating than S&P for the new issue. The average value of Rating_Diff for the 5,722 new bond issues in the pre public period is -0.302. This implies that prior to going public, Moody's, on average, assigned tougher ratings than S&P. The mean value of Rating_Diff for the 2,783 new bond issues in the post public period is 0.286, suggesting that in the period after going public, Moody's, on average, reversed its conservative policy and awarded more favorable ratings than S&P. The change in these differenced ratings, of more than half a notch (0.302+0.286), before and after Moody's IPO is statistically significant at less than the 1% level. The relative loosening of Moody's ratings is also observed for (i) median values of Rating_Diff; (ii) both investment grade and high yield bonds; and (iii) after controlling for issuer firm characteristics and bond characteristics. In addition to looking at Moody's rating relative to S&P's, we also examine each rating agency by itself. We find no evidence of any change in the ratings assigned by S&P in the period 2001 to 2005. This result suggests that the relative decline of Moody's ratings is mostly due to Moody's becoming laxer and not attributable to a significant change in S&P's ratings.

The pressure on the rating agencies to compromise the quality of ratings is likely higher for issuing firms that account for a larger share of the credit rating agencies' revenues. Therefore, we investigate whether large issuers of corporate bonds are likely to experience a greater loosening of credit ratings by Moody's, relative to S&P. Consistent with this conjecture, we find that though the large issuers got a relatively tougher rating from Moody's in the pre-public period, they received a relatively more favorable rating from Moody's in its post-public period.

We go on and identify bonds whose credit ratings are on the margin and can hence benefit from a better rating from Moody's. Bongaerts, Cremers and Goetzmann (2012) document that firms with lower ratings often shop for better ratings from other agencies to serve as a tiebreaker. Among all the bonds in any rating class of S&P, the bonds with the highest operating profits are those that are at the top of the rating class and could potentially take advantage of a higher credit rating from Moody's. We find that though prior to going public, Moody's was relatively tougher on these bond issuers; it tends to go easy on such issuers after its IPO.

Next, we examine outstanding bonds, as opposed to new issues, and investigate the magnitude and the timeliness of rating changes by both rating agencies. Unlike new issues, comparing credit rating changes on outstanding bonds is more challenging. Consider the case when S&P downgrades a bond by one notch and a week later Moody's downgrades the same bond but by two notches. The former downgrade was more timely but the latter action was tougher. To account for these disparate magnitudes and timings of ratings changes, we compute a new measure that captures, on a daily basis, whether Moody's had a laxer rating than S&P. The resultant daily indicator variable is aggregated over the year to capture the fraction of days for which Moody's had a laxer rating. Our measure "Lead_Time_Diff" is the difference in the fraction of days on which Moody's rating is laxer minus the fraction of days on which S&P's rating is laxer, for an outstanding bond. A positive value of Lead_Time_Diff implies that, on average, Moody's has a higher fraction of days with a laxer rating on outstanding bonds than S&P.

We find that Lead_Time_Diff is significantly higher in the post-public period. Furthermore, we show that Moody's relative ratings in the post-public period are significantly higher for (i) bonds issued by large issuers; and (ii) bonds that are on the margin, as described earlier, and would hence gain significantly more from a better rating. In summary, Moody's is likely to have a higher fraction of days with better ratings relative to S&P in the period after it went public.

We perform several robustness tests. One potential question relates to the impact of the financial crisis of 2007 given that our reported tests only cover the post-public period of 2001 to 2005. To shed light on this issue, we include the years of the financial crisis and extend the post-public period from 2001 to 2009. For symmetry the pre-public period is also extended to cover the years 1991 to 1999. Using these extended time windows, we continue to find that Moody's ratings, on both new issues, as well as outstanding bonds, are more favorable than S&P's after it went public. We also investigate whether our results hold for a shorter time period around the decision to go public. The stock market induced pressure from going public and the consequent change in culture potentially takes time to leave its footprint on ratings. Although we expect the effect of going public on ratings to be stronger over a longer time period, we study the one year before (1999) and after (2001) going public to examine sensitivity of our results. Interestingly, we continue to find a significant easing in Moody ratings, relative to S&P, in the year after it went public, pointing to a potentially causal link between the Moody's IPO and it impact on ratings.

Another potential concern is that the results are driven by our choice of S&P as the benchmark. Hence, we also estimate our results using Fitch's ratings as a benchmark. Unlike S&P, Fitch is not an ideal benchmark because (i) it is much smaller than Moody's; and (ii) Fitch, itself, experienced significant ownership changes in 2000 when it acquired Duff and Phelps, a public listed smaller rating agency. Despite such contamination, we find significant evidence that even relative to Fitch, Moody's assigned more favorable ratings on new issues as well as outstanding issues in the period after it went public.

Our paper contributes to the extant literature by documenting the potential impact of stock market pressures on the declining quality of credit ratings at Moody's subsequent to its IPO. The extant literature has instead concentrated on the conflicts induced by the "issuer-pays" model on the quality of ratings. Our findings also have implications for the impact of ownership structures on the independence of gatekeepers to financial markets such as auditors, lawyers and underwriters. Traditionally, these gatekeepers have been organized as privately-held companies or partnerships (e.g., the Big Four audit firms) to avoid potential conflicts between clients and public shareholders. Our results suggest that such conflicts are real and can potentially impact the independence of gatekeepers in evaluating their clients' prospects.

The remainder of the paper is organized as follows. Section 2 discusses the background and the hypothesis. Section 3 reports the data and empirical analyses. Section 4 offers concluding remarks.

2.0. Background and Congressional Allegations

2.1 Other gatekeepers are privately held

Gatekeepers such as lawyers, accountants and finance professionals, who assist the company in raising public funds, are crucial to the smooth operation of capital markets. An interesting question to consider is why several gatekeepers, such as auditors and lawyers, are organized as privately owned enterprises? An obvious answer lies in the potential conflict of interest between the gatekeeper's clients and its shareholders. For instance, the prospectus of the first publicly traded law firm in the world, Slater and Gordon, listed on the Australian Stock Exchange in March 2007 includes the following caveat:[2]

[2] Publicly owned law firms are legally prohibited in the United States.

"Lawyers have a primary duty to the courts and a secondary duty to their clients. These duties are paramount given the nature of the company's business as an incorporated legal practice. There could be circumstances in which the lawyers of Slater & Gordon are required to act in accordance with these duties and contrary to other corporate responsibilities and against the interests of shareholders or the short-term profitability of the company.[3]*"*

Slater and Gordon went public, as per their prospectus, so that the firm could (i) allow key shareholders to liquidate part of their holdings; and (ii) raise capital to finance acquisitions, investments in information technology and lateral recruitment. However, partners in the firm were restricted from selling more than 20% of their ownership within the first two years of public ownership. After five years, the partners were free to sell off their entire interest in the firm.

Debuse (2006) argues that outside, especially public, ownership of a law firm creates conflicts between clients and shareholders. In particular, it is hard to reconcile the key features of a "profession" such as autonomy, the ability to self-regulate through peer review and ethical codes of conduct with the pressures imposed by public ownership on the maximization of profits. Going public would jeopardize the "partnership" ethos of a firm which refers to "collaborative efforts in which goals are shared and at least some measure of mutual participation is the expectation" (Hillman 2005). Further, the American Bar Association's House of Delegates objected to public ownership in the early 1980s because they were concerned that non-lawyers will interfere with lawyers' exercise of professional judgment (Debuse 2006).

Adams and Matheson (2008) suggest that these arguments have no merit in that a publicly owned law firm would succeed only by providing sound legal judgment to its consumers. Because the firm's stock price would incorporate the public law firm's reputation, lawyers would have no incentive to allow profit considerations to interfere with their professional independence and judgment, especially when these lawyers are compensated via stock or stock options. They go on

[3] We could not find a similar caveat in Moody's prospectus or its 10-K right after it went public.

to point out that the pressure to maximize profits is already intense at even privately held law firms.[4]

Although rating credit quality is not considered a profession, as per the classic definition of the term, many of the concerns listed in the context of a publicly owned law firm potentially apply to Moody's as well. More important, there is virtually no empirical evidence on the impact, positive or negative, of the act of going public and the consequent stock market induced pressure on a gatekeeper's decisions. We address that important gap in the literature.

2.2 Literature on the negative impact of going public

The literature suggests two reasons why going public might create incentives for the public firm to deviate from the "first best" level of outcomes. First, going public necessarily splits ownership from management (Berle and Means 1932, Jensen and Meckling 1976), which, in turn, can create agency problems when the interests of the manager diverge from those of the owners. One version of this agency problem is highlighted in the models of "managerial myopia" such as those advocated by Stein (1989). He suggests that the public-firm's manager will take decisions that deviate from "first best" decisions if he has utility for the firm's short-run stock price. Graham, Harvey and Rajgopal (1995) find survey evidence that a majority of Chief Financial Officers (CFOs) would not be averse to giving up positive net present value projects to meet analyst-consensus estimates of quarterly earnings. Bhojraj et al. (2009) show that firms that barely beat analysts' earnings forecasts cut discretionary R&D and advertising spending to avoid the short-run stock price decline stemming from missing earnings forecasts (Skinner and Sloan 2002) although such cuts lead to underperformance over longer horizons. Asker, Farre-Mensa and Ljungqvist (2012) find that publicly listed firms invest less and are less responsive to changes in investment opportunities compared to similar, matched private firms, especially in industries in which stock prices are particularly sensitive to current earnings. Several other papers document

[4] The trend of audit firms being organized as limited liability partnerships (LLPs) is related but not directly on point here. LLPs limit the liability of any one partner but continue to suffer from the same limits on raising capital as a traditional partnership.

that managers with agency-related incentives cut R&D or marketing expenditure (e.g., Baber et al. 1991, Dechow and Sloan 1991, Bushee 1998, Roychowdhury 2006, Mizik and Jacobsen 2007, Cohen, Mashruwala and Zach 2009, and Chapman and Steenburgh 2011).

Second, the liquidity associated with the stock's listing on public exchanges also makes it easier for concentrated shareholders to sell rather than hold the stock, monitor the firm and force value-increasing changes on management (Bhide 1993). In contrast, most privately held firms are usually owned by holders with concentrated holdings, which are inherently illiquid. These characteristics, on the margin, create incentives for owners in private firms to exercise better governance of the manager's actions.

In the context of our paper, it is worth noting that, S&P was a 100% owned subsidiary of McGraw Hill. The 2001 proxy statement filed by Moody's right after it went public, lists two concentrated owners who hold at least 5% of its shares: (i) Harris Associates LP at 5.28% and (ii) Berkshire Hathaway at 14.98%. That is, post spin off, Moody's ownership was diffuse. In particular, Berkshire is known for a hands-off approach in managing its investees (Bowen et al. 2012). Indeed, Warren Buffett (2010) testified to the FCIC that he had no knowledge of how Moody's assigns ratings. Moreover, one of the objectives of the 2000 spin-off was to award senior Moody's executives with stock and stock options, which, as discussed next, gave them a new appreciation for generating revenues and profits (McLean and Nocera 2010, 115).

2.3 Impact of going public on Moody's: employee testimonials

Before going public, Moody's had branded itself with notions of integrity, commitment, and expertise.[5] One of the analysts, during hearings conducted by the FCIC described the corporate culture at Moody's before going public as follows: "Moody's analysts were proud to work for what they believed was by far the best of the rating agencies. They viewed Moody's competitors as a very distant second in quality and ratings integrity" (Froeba 2010). Until that

[5] Charlie Munger, complimented the Moody's brand at the 2000 Berkshire Hathaway annual meeting: "Moody's is like Harvard, a self-fulfilling prophecy."

time, Moody's had an extremely conservative analytical culture (Permanent Sub Committee on Investigations 2011, 273). A 1994 article in Treasury and Risk Management magazine entitled "Why Everyone Hates Moody's" concluded that "ingrained in Moody's corporate culture is a conviction that too close a relationship with issuers is damaging to the integrity of the ratings process" (McLean and Nocera 2010, 114).

However, the culture at Moody's allegedly changed after it went public with the focus shifting to improving revenues and market share. Froeba (2010) testified "as long as market share and revenue were at issue, Moody's best answer could never be much better than its competitors' worst answers." The Wall Street Journal (April 11, 2008) discusses an anecdote where Brain Clarkson, a managing director, quadrupled Moody's market share in the residential mortgage backed securities group by simply firing (or transferring) nearly all the analysts in the group and replacing them with analysts willing to apply a new, potentially laxer, rating methodology. Gary Witt (FCIC 2011, 207), a former team managing director covering U.S. derivatives, described the cultural transformation under Clarkson: "My kind of working hypothesis was that [former chairman and CEO] John Rutherford was thinking, 'I want to remake the culture of this company to increase profitability dramatically [after Moody's became an independent corporation],' and that he made personnel decisions to make that happen, and he was successful in that regard. And that was why Brian Clarkson's rise was so meteoric: he was the enforcer who could change the culture to have more focus on market share."

Employees have asserted that the increase in market share, especially for structured products, was achieved in two ways: (i) via fears of reprisal; and (ii) by encouraging investment banker clients. According to employee testimonials, the reprisals consisted of a pattern of rewarding compliant analysts with promotions, bonuses and stock options and intimidating analysts that were not complaint with the threat of dismissal. In particular, performance appraisals of analysts valued market coverage, revenue, market outreach, ratings quality, and development of analytical tools. However, evaluating employees on the quality of ratings is difficult in real time as

the predictive ability of a poor quality rating can take years to validate. Hence, greater emphasis was placed on revenue and market share. Richard Michalek (2010), a former Moody's vice president and senior credit officer, testified to the FCIC, "the threat of losing business to a competitor, even if not realized, absolutely tilted the balance away from an independent arbiter of risk towards a captive facilitator of risk transfer."

At the same time, Moody's tried to reach out to their investment banker clients. Froeba (2010) testified that "investment banks had learned that Moody's would allow them to ask that all of the bank's deals be assigned to the same particularly "flexible" analyst or team of analysts." They had also learned that they could go over the heads of analysts (even of rating committees despite Moody's policies to the contrary) if they should ever really need to do so by appealing directly to Moody's managers and senior managers."

Other employees have alleged that Moody's under-invested in compliance related activities after the spin-off. Scott McCleskey (FCIC 2011, 208), a former chief compliance officer testified: "so Brian Clarkson comes up to me, in front of everybody at the table, including board members, and says literally, 'How much revenue did Compliance bring in this quarter? Nothing. Nothing.' For him, it was all about revenue."

Top officers at Moody's have denied the significant influence of the public spin off. They have argued (i) that market share was always a focus, before and after going public; and (ii) Moody's failure to spot deficiencies in the structured mortgage products reflected an industry-wide failure to identify such problems. In particular, Moody's Corporation Chairman and CEO Raymond McDaniel (FCIC 2011, 207) testified that he didn't see "any particular difference in culture" after the spin-off. Brian Clarkson explained that Moody's cares about business but the quality of ratings matters even more: "I think that Moody's has always been focused on business… but ratings quality, getting the ratings to the best possible predictive content, predictive status, is paramount." He blamed unforeseen conditions in the housing market when he testified to the FCIC, "we believed that our ratings were our best opinion at the time that we assigned them. As

we obtained new information and were able to update our judgments based on the new information and the trends we were seeing in the housing market, we made what I think are appropriate changes to our ratings" (FCIC 2011, 208).[6]

2.3 S&P equally at fault

S&P was founded in 1941 from the merger of Poor and Standard Statistics and acquired by McGraw Hill in 1966. S&P is Moody's direct and most significant competitor. The drive for market share was similarly emphasized at S&P (Permanent Subcommittee on Investigations 2011). One former S&P Managing Director testified: "by 2004 the structured finance department at S&P was a major source of revenue and profit for the parent company, McGraw-Hill. Focus was directed at collecting market share and revenue data on a monthly basis from the various structured finance rating groups and forwarded to the finance staff at S&P" (Permanent Subcommittee on Investigations 2011, 276). The hearings produced several emails where S&P's management discusses the possibility of easing rating criteria to gain market share. One example of such emails reads: "we are meeting with your group this week to discuss adjusting criteria for rating CDOs of real estate assets this week because of the ongoing threat of losing deals" (Permanent Subcommittee on Investigations 2011, 276). Several emails suggesting pressure from investment bankers to dilute ratings also surfaced in the hearings.[7] He, Qian and Strahan (2012) examine a hand collected sample of mortgage backed securities issued between 2000 and 2006 and find that both Moody's and S&P issue more favorable ratings to large issuers, who likely generate more business and higher fees for these agencies.

[6] In the literature on the potential conflict of interest induced by the "issuer pays" model (e.g., Jiang et al. 2012), skeptics (e.g., Bonsall 2012) have pointed out that the issuer pays model enables the rated company to provide the rating agency with non-public information that might actually make the rating more informative. This "informativeness" defense seems less germane to the incentives imposed on the rating agency by going public. That is, the access to the rated company does not change in our setting for Moody's or for S&P.

[7] For instance, an email in which a UBS banker warned an S&P senior manager not to use a new, more conservative rating model for CDOs read: "[H]eard you guys are revising your residential mbs [mortgage backed security] rating methodology - getting very punitive on silent seconds. [H]eard your ratings could be 5 notches back of [Moody's] equivalent. [G]onna kill your resi[dential] biz. [M]ay force us to do moodyfitch only cdos!" (Permanent Subcommittee on Investigations 2011, pp. 278).

Thus, an alternate hypothesis is that S&P, Moody's chief competitor, was equally susceptible to maximizing short term profits and to investment banker pressure. That is, the act of Moody's going public, per se, did not affect their incentives to compromise ratings quality. To accommodate this alternate perspective, our research design relies on a difference-in-difference approach, explained in greater detail in the next section.

2.4 Research design

We begin by estimating the difference in the initial ratings provided by both Moody's and S&P for new bond issues. The variable Rating_Diff is the S&P's numerical rating for a new bond issue minus Moody's numerical ratings for that issue. We then examine how Rating_Diff changes in the period after Moody's IPO relative to before its IPO.

Becker and Milbourn (2011) document that greater competition from a bigger Fitch negatively impacted standards for credit quality at all rating agencies. However, such a reduction in the quality of the credit ratings ought to apply equally to both Moody's and S&P and hence leave the Rating_Diff measure relatively unaffected. In general, any change in the overall economy or the rating environment should not materially impact the Rating_Diff measure.

Studying the relative difference between the two set of ratings is particularly effective as S&P is the ideal benchmark for Moody's. As discussed earlier, both rating agencies are the same size and are the two oldest and largest firms in the industry. Moreover, both agencies rate about 99% of corporate bonds. Hence, we can obtain a common set of new bond issues and the associated ratings from both agencies without any material selection biases. Such a difference-in-difference methodology in the context of credit ratings is also used by Jiang, Stanford, Xie (2012).[8] Note that this difference-in-difference design does not imply that Moody's credit ratings have

[8] Jian, Stanford and Xie (2012) use historical data between 1971 and 1978 to examine the impact on ratings when S&P adopted the issuer-pays business model. In a difference-in-difference setting they use Moody's rating for the same bond as a benchmark. The report that S&P assigns better rating once it switches to collecting fees from issuers.

declined or improved on an absolute scale. Rather, the interpretation is whether relative to the S&P, Moody's ratings are laxer or tougher after it went public.

The second aspect of our research design is the focus on the credit rating of corporate bonds. As mentioned earlier, most of the congressional allegations about lax Moody ratings post its IPO in a quest to garner market share were made in the context of structured products. Studying corporate bonds instead of structured products has several advantages. First, the risk assessment models for corporate bonds are relatively established, unlike those for structured financial products. Hence, it becomes harder to argue that any differences in ratings between Moody's and S&P are attributable to (i) differential learning about the nature of the financial products between these agencies; or to (ii) important innovations in the structuring and delivery of such products. As Kroezner and Shiller (2011, 59) argue, corporate bonds are less opaque than structured financial products because there is substantial amount of public information available about corporate debt. Consequently, the "information advantage" that a credit rating agency might have compared to an industry analyst in rating a corporate bond, relative to a structured finance product, is not great. This feature reduces the opportunity Moody's has to be lax making it harder to detect the effect of the IPO on ratings of corporate bonds. Thus documenting the effect in corporate bonds suggests stronger effects on structured products and sheds light on the magnitude of the impact of Moody's going public.

Second, most corporate bonds (99%) are rated by both Moody's and S&P creating a sample of comparable securities with little selection bias. In contrast, all structured financial product do not have ratings from both Moody's and S&P. Lastly, there is little issuance of MBS and CDOs in the pre public period, which covers the years 1995 to 1999. Hence, we cannot readily use the difference-in-difference methodology with ratings of structured financial products. Moreover, data on ratings on structured financial products are not readily available in a machine readable format.

A skeptic can wonder whether an examination of corporate bonds, as opposed to structured products, has any power to detect the impact of Moody's IPO on its ratings. McLean and Nocera (2011, 116) report that there had long been tension between the corporate bond side of Moody's and its structured finance side. However, rapid promotions of Brian Clarkson, mentioned earlier, signaled that the culture advocated by the structured finance side had won. Bond analysts, even in the pre-IPO days, regularly faced pressure to issue favorable ratings, but Moody's had always backed them when they resisted. After Clarkson's ascension, the corporate bond side was unable to resist the pressure to be favorable to issuers. Hence, we expect to find statistical and economic power in our analysis of corporate bonds with the caveat that the impacts we document could potentially be even higher for MBS and CDOs.

3.0 Data and Results: New Issues

We obtain data on bond characteristics and credit ratings by Moody's and S&P from the Mergent's Fixed Income Securities Database (FISD). The "pre-public period" spans a five-year period, from 1995 to 1999, before Moody's went public in 2000. The "post-public period" is a symmetric five-year window, from 2001 to 2005 after Moody's went public. We exclude 2000, the year of Moody's IPO, from our analysis.

We begin by studying new bond issues. We examine potential differences between the first or initial credit ratings assigned by Moody's and S&P for each new bond issue. For all firms covered by both CRSP and Compustat we retrieved the list of new bond issues rated by both Moody's and S&P over 1995 to 2005 but excluding 2000.[9] This results in a sample of 30,484 bonds issued by 903 unique firms. However, a substantial fraction of these new bond issues were

[9] FISD assigns a unique Issuer ID to each issuing firm. For each Issuer ID, we first identify the list of associated unique 6-digit issuer cusips. We then match the CRSP and Compustat information to all bonds with the same Issuer Id as long as one of the Issuer ID's 6-digit firm cusip is covered in CRSP and Compustat at the time of issuance. Further, we exclude bonds where the initial rating by Moody and S&P are different by four or more notches. This mismatch is most likely attributable to errors but such mismatches account for less than 1% of the bond issues.

made by Freddie Mac and Fannie Mae, and almost all these bonds received a AAA rating from both the rating agencies. Eliminating these government agency bonds reduces our sample to 8,505 new bond issues made by 901 firms. To ensure that our results are not impacted by this screen, we also estimate and report results including bonds issued by Fannie and Freddie later in section 5.1.

We begin by tabulating (i) all the credit ratings categories used by Moody's and the equivalent ratings by S&P; and (ii) the distribution of new issues across these categories. As can be seen in Table 1, there is a total of 21 rating categories for both Moody and S&P. For ease of comparison, we convert these rating categories to numerical values. Note that more favorable ratings have smaller numerical values. We find that a substantial fraction of the new issues are investment grade with very few new issues in the highest or lowest credit rating quality. Table 2 reports that the size of the average debt issue is $141 million whereas the median debt issue is smaller at $50 million. The average time to maturity is eight years. Not surprisingly, firms issuing debt are large as the average issuer's market value (sum of the market value of equity and the book value of debt) is $94 billion though the median issuer's market value is much smaller at $39 billion.

3.1 Univariate analysis

To study the difference in the ratings assigned by Moody's and S&P for new issues, we create the variable Rating_Diff, which is the numerical value of the S&P rating minus the numerical value of Moody's rating for the same bond issue. As favorable ratings are coded as smaller values, a positive value of Rating_Diff means that Moody's rated the new issue as higher credit quality relative to S&P.

As seen in Table 3, in the pre-public period, there were 5,722 new issues with a mean Rating_Diff of -0.302. The negative number implies that Moody's has, on average, assigned a tougher credit rating than S&P in the five years prior to going public. The average Rating_Diff in the post-public period, however, is 0.286, implying that in the five years after its IPO, Moody's, on average, assigns a laxer credit rating relative to S&P. The move from -0.302 in the pre public

period to the 0.286 in the post public period is statistically significant at less than the 1% level. In sum, Moody's is significantly more likely to assign a laxer rating of more than half a notch relative to S&P in the years after its IPO.

We also examine how Rating_Diff changes over the individual years relative before and after Moody's IPO. Figure 1 shows that the average value of Rating_Diff was consistently negative in the "pre public period" of 1995 to 1999. After the IPO in 2000, the average Rating_Diff is marginally positive in 2001 and becomes progressively more positive in 2002 and years after that. We conjecture that the change in the conservative culture of Moody's due to market pressures from going public did not happen overnight. This assumption is consistent with a small degree of loosening in 2001 which gets greater as time progresses.

To ensure that the results are not driven by a few extreme observations, we also examine the median values of Rating_Diff. As expected, the median value of Rating_Diff is zero for both periods. However, the distribution of Rating_Diff moves significantly towards the positive end, or towards laxer ratings by Moody's, after the IPO. To make sure that this relative loosening of Moody's standards after its IPO is not restricted to a few classes of bonds, we examine the rating differences separately for investment grade and high yield bonds. As seen in Table 3, Moody's relatively lax standards post-IPO are seen across the board. For the high yield category, we find that Moody's is tougher than S&P both before and after the IPO, though it is relatively laxer after the IPO. The Rating_Diff measure changes from an average value of -0.567 in the pre-public period for the high yield group to a significantly higher value of -0.158 in the post-public period.

We also examine the small group of new issues where the rating differences between the two rating agencies span the investment grade and high yield groups. In other words, one agency initially issues a credit rating that is investment grade while the other agency first issues a credit rating that is in the high yield group. Such mismatches provide a stark case of differences between the two rating agencies. When medians are considered, we find that Moody's is one notch tougher than S&P in the pre-public period but is one notch laxer in the post-public period and the

differences are significant at a p-value of less than 5%. Similar results are also obtained when we examine the means.

3.2 Multivariate analysis

Although the univariate results are strongly consistent with the Congressional allegations, a skeptical reader might want to see controls for factors that might account for the difference in the ratings of the two agencies. Hence, we control for a host of issuer and bond characteristics in line with those employed by prior work (Pinches and Mingo 1973; Kaplan and Urwitz 1979; Blume, Lim and Mckinlay 1998; Campbell and Taskler 2003; and Jiang, Stanford and Xie 2012). Specifically, we include (i) issuer size via the logarithm of the market value of the firm; (ii) issuer leverage by including the ratio of long term debt to total assets; (iii) issuer firm performance via the ratio of operating performance before depreciation to sales; (iv) firm volatility by including standard deviation of stock returns. The standard deviation of stock returns is estimated from daily stock returns in the year prior to the new issue. Consistent with Jiang, Stanford and Xie (2012), to enable easier interpretation of the intercept and the Post_2000_Dum, our key variable defined next, we demean the control variables.[10] To capture the impact of the IPO on Rating_Diff, we create an indicator variable, Post_2000_Dum, that takes the value of one for all bonds issued after 2000, i.e., in the post-public period. It is likely that Moody's rating models for issuers or bonds with specific characteristics changes after its IPO, relative to S&P's model. To control for this potential confound, we include interactions of all the control variables with Post_2000_Dum. We cluster standard errors by the issuing firm, for all regressions reported in the paper. This is because multiple bonds can be issued by the same firm.

As can be seen from the results in Table 4, model 1, in a simple difference-in-difference setting, the coefficient on Post_2000_Dum is 0.585 and is significant at less than 1%. That is, subsequent to its IPO, Moody's ratings get laxer by more than half of a rating notch, which is a magnitude of easing that is both statistically and economically significant. These results are

[10] We include each control variables deviation from the annual sample average when estimating the model.

qualitatively unchanged in model 2 when we include all the control variables – the coefficient of Post_2000_Dum is positive and significant at the less than 1% level of significance and the magnitude is higher at 0.851.

With respect to the control variables, Moody's is relatively tougher on firms with higher operating margins (coefficient of -0.006) and those with high stock volatility (coefficient of -1.314). Relative to S&P, Moody's weighs bond characteristics differently as well. Moody's assigns better ratings to bond issues that are larger and have shorter maturity while being tougher on senior issues. This tendency is partly reversed in the post-public period. Overall, the results suggest that Moody's model for assessing credit quality based on bond and issuer characteristics significantly changes after its IPO. More important, controlling for this potential change in their credit rating process does not impact the coefficient on Post_2000_Dum. In sum, the evidence suggests that Moody's assigns relatively laxer ratings for new bond issues in the years after its IPO.

It is worth emphasizing that these results are not affected by inherent differences in the risks and cash flows underlying these new bond issues or by the nature of bond issues by, for instance, more credit worthy firms issuing bonds over time. The difference-in-difference tests investigate the difference between the ratings of S&P and Moody's, keeping the individual new issue constant, and hence evaluate how such difference changes across the two periods. In a similar vein, the results do not imply anything about the absolute quality of credit rating process for either S&P or Moody's.

To shed some light on individual rating agencies, we estimate a model of the absolute level of ratings assigned by each agency instead of the difference between S&P and Moody's ratings (Rating_Diff). In model 3 of Table 4, we regress the numerical value of Moody's ratings for all new issues on issuer and bond characteristics and find a significant negative coefficient on Post_2000_Dum of -0.935. That is, Moody's assigns more favorable ratings after its IPO in 2000. S&P however has a coefficient on Post_2000_Dum in model 4 of -0,084, which is not statistically

significant at any conventional level. In other words, there is no evidence that S&P ratings for corporate bonds became laxer over the post-public period of 2001 to 2005.

3.3 Conflicts of interest

The results documented thus far clearly suggest that Moody's ratings on new issues loosened relative to S&P's after the year 2000 when it went public. To provide further corroborative evidence on this issue, we identify cases where there is likely to be the greatest product market pressure on Moody's to be lax, i.e., where the conflicts of interest are expected to be the highest.

After its IPO in 2000, Moody's management is likely to have greater incentives to keep important clients such as the larger issuers of bonds satisfied as they account for a substantial fraction of its current and future business. We therefore focus on large bond issuers and examine whether there is greater loosening of Moody's ratings for these large issuers after it went public.

Large issuers are identified based on issue size and frequency of issue. This empirical filter has the added advantage of capturing Moody's payment model which includes both a fixed payment for a bond issue and a variable fee based on the size of the bond issue. A bond issue is classified as large if it is greater than the median size of all bond issues in the past three years. An issuer is classified as large if the par value of all bonds issued in the last three years is above the median for the sample. The indicator variable used to capture higher conflicts of interest, referred to as "High_Con_Dum," takes the value of one if the bond issue is large and is issued by a large issuing firm.

Model 1 of Table 5 reports that the coefficient of High_Con_Dum is negative and significant (coefficient is -0.205, p- value < 0.0001) though the interaction of High_Con_Dum with Post_2000_Dum is positive and significant (coefficient = 0.308, p-value < 0.0001). That is, before its IPO, Moody's is relatively tougher on these large issuers. However, Moody's becomes significantly laxer towards these large issuers after going public in 2000. The coefficient on Post_2000_Dum continues to be positive and significant suggesting that though the relatively

loosening of credit ratings after going public is seen for all new issues, it was significantly higher for new issues by large issuers.

Next, we identify bond issues that are on the margin and could benefit from getting a better rating. In particular, we examine all new issues in a rating class assigned by S&P. There is heterogeneity among these issuers in that some are very profitable and almost qualify for a better rating relative to the one assigned to them by S&P. Obtaining such a better rating from a competitor such as Moody's is likely to make a substantial difference to these issuers and is also likely to translate into a better relationship and revenue stream for Moody's with the issuer. Hence, we expect a greater loosening of credit ratings by Moody's for such marginal cases after it went public. The identification of high conflict of interest clients based on this strategy is motivated by Jiang, Stanford and Xie (2012). To seek out the best issuers in any S&P rating class, we use the issuers' operating profits (operating income before depreciation divided by sales) in the year before the new issue. If the operating profits of the issuer are above the median of all issuers in the S&P rating class, then we identify it as a client with greater conflicts of interest. The High_Con_Dum takes the value of one for such bond issues.

As seen in model 2 of Table 5, the coefficient of High_Con_Dum, based on operating profits, is negative and significant (coefficient = -0.451, p-value < 0.0001) though its interaction with Post_2000_Dum is positive and significant (coefficient = 0.368, p-value < 0.0001). Consistent with previous results, Moody's is relatively tougher on these high conflict of interest issuers in the period prior to 2000 but loosens up after 2000. The coefficient of Post_2000_Dum continues to be positive and highly significant.

4. All Bonds

The preceding section provides consistent evidence on the relative loosening of Moody's credit ratings of bond issuers after its IPO in 2000. In this section, we examine whether this

relative loosening of credit ratings is also seen in the timeliness of rating changes for existing bonds.

Unlike new issues, comparing the timeliness of rating changes by both agencies on outstanding corporate bonds is a challenging task. Credit rating changes frequently are of different magnitudes and occur at different points in time, making direct comparisons of the actions of one agency with that of another somewhat difficult. For instance, consider a typical case with three rating events: (i) S&P downgrades a bond by one notch in May 1999; (ii) Moody's downgrade the same bond by two notches in July 1999; and (iii) finally, S&P downgrades by one notch in September 1999. Whereas S&P was the first to initiate the downgrade, Moody's was the first to downgrade the bond to the right level. To capture these disparate magnitudes and timing in ratings changes, we estimate a measure of the distance between Moody's and S&P ratings on a daily basis. That is, we identify whether Moody's has a laxer rating than S&P every day for an outstanding bond. If that is indeed the case, we set the indicator variable, "Moody_Leads" to one and to zero otherwise. Similarly, if S&P has a laxer rating than Moody's the indicator variable, "S&P_Leads" takes the value of one. To capture the fraction of the year for which Moody's rating is laxer than S&P's, we create a new variable "Lead_Time_Diff" which is the average value of the Moody_Leads variable for the year minus the average value of the S&P_Leads variable over the same year for the same bond. A positive value of Lead_Time_Diff suggests that Moody's has a laxer rating than S&P for a higher fraction of the year for that bond.

Note that the average value of Lead_Time_Diff should be zero if (i) there are no differences between the ratings assigned by the two agencies for the bond; and (ii) the differences between the ratings assigned by these two agencies were randomly distributed across bonds and time. Table 6 reports the results for the estimation of the model for Lead_Time_diff. As can be seen in model 1, the coefficient of Post_2000_Dum is positive and highly significant (coefficient = 0.301, p-value < 0.0001) confirming that Moody's had a more favorable rating than S&P, on average, for outstanding bonds after its IPO in 2000.

Similar to the earlier analysis with new bond issues, we examine whether the loosening of Moody's credit ratings is more likely to occur for clients where Moody's has a higher conflict of interest. The first proxy for high conflicts of interest is large issuers as defined in the previous section. We find that the coefficient of High_Con_Dum is negative and significant (coefficient of -0.128 and p-value of <0.001) whereas the coefficient on the interaction of high conflicts and Post_2000_Dum is 0.052 (p-value = 0.01). Moody was relatively tougher on these high conflicts clients prior to going public and become significantly laxer after its IPO. The coefficient of Post_2000_Dum continues to be positive and significant (coefficient = 0.257, p-value < 0.0001) implying that Moody's loosening is seen broadly across bonds although such loosening is significantly higher for the large bond issuers.

Similar results are found when we use operating profits to identify high conflict clients in model 3. The coefficient of interaction of High_Con_Dum and Post_2000_Dum is positive and highly significant (coefficient = 0.132, p-value < 0.0001). There is significantly greater loosening of Moody's credit ratings for these high conflict clients in the years after 2000. Once again, we find that the coefficient of Post_2000_Dum is positive and significant (coefficient = 0.229, p-value < 0.0001) suggesting that the problem of loosening standards in seen across all bonds.

5. Robustness Tests

In this section, we examine the robustness of our results to four specification checks. First, we investigate the sensitivity of our results to (i) longer time periods that include the financial crisis; as well as (ii) shorter time windows that focus directly on the IPO event. Second, we study whether the results are sensitive to the inclusion of bonds by Freddie and Fannie as such an inclusion substantially increases our sample size. Finally, we examine whether our results are sensitive to the choice of Fitch, as opposed to S&P as our benchmark.

5.1 Impact of the financial crisis

We investigate whether our results are robust to the inclusion of the unique circumstances associated with the financial crisis. Our research design hitherto only includes five years before and after the 2000 IPO and hence excludes the years 2007 to 2009, the years of the financial crisis. To address this issue, we re-estimate our results using a longer window around the IPO i.e., 1991 to 2009. Specifically, we now define the pre-public period as the nine-year period from 1991 to 1999 and the post-public period where the Post_2000_Dum is set to one for the years from 2001 to 2009. As seen in panel A of Table 7, studying the nine year window before and after the IPO does not impact our results. The coefficient of Post_2000_Dum continues to be positive and highly significant for both new issues and existing issues (coefficients = 0.178 and 0.285 respectively).

5.2 Shorter time period around IPO

In the analysis reported thus far, we have implicitly assumed that the impact of going public and the resulting stock market induced pressure to report higher revenues on Moody's culture is likely not instantaneous. Therefore, our research design has focused on studying five years before and after going public. However, a longer time period opens up the possibility of confounding events. Therefore, we also examine the effect of Moody's going public over a short time period, i.e. from 1999 to 2001, considering ratings for one year before and after Moody's went public.

The results for both new issues and exiting issues for this short time period are displayed in panel B of Table 7. The coefficient of Post_2000_Dum for new issues is 0.475 and for existing issues is 0.114 and highly significant. In this shorter time period as well, the results clearly point towards a loosening of Moody credit ratings after going public. This finding also points to potential causality between Moody's IPO and its laxer credit ratings.

5.3 Larger sample

As discussed earlier, we had excluded all bonds issued by Freddie Mac and Fannie May as these are government agencies and the ratings of these bonds are likely affected by factors different from those for bonds issued by corporate entities. Inclusion of these bonds, however, does not

change the inferences reported earlier (see panel A of Table 8). The coefficient of Post_2000_Dum is positive and highly significant for all new bond issues. That is, Moody's assigns more favorable credit ratings, relative to S&P, to new issues after its goes public in 2000. Moody's is also more likely to have a favorable rating, relative to S&P, on existing bonds after 2000.

5.4 Benchmarking against Fitch

Fitch is currently the third largest credit rating agency. It was acquired by IBCA Limited of London in 1997 and in 2000 it acquired Duffs and Phelps, a public listed credit rating agency. The acquisition in 2000, the year of Moody's IPO, raises concerns on the suitability of Fitch as a benchmark. Nevertheless, we identify all new issues as well as existing issues that had both a Moody's ratings as well as a rating by Fitch. After ensuring that data on control variables are available, we have a sample of 5,851 new issues over the period 1995 to 2005 (excluding 2000) and 32,428 bond years for the analysis of existing bonds.

The variable Rating_Diff is now defined as the numerical equivalent of Fitch's rating minus the numerical equivalent of Moody's rating. A positive value of Rating_Diff implies that Moody's has a more favorable rating than Fitch, similar to the previous sections. We find that Moody's assigned significantly more favorable ratings to new bond issues relative to Fitch in the years after 2000 in comparison the years prior to 2000 (see Panel B of Table 8). The coefficient of Post_2000_Dum is positive and highly significant (coefficient = 0.555, p-value < 0.0001). To capture timeliness and rating changes on existing bonds we define Lead_Time_Diff as the percentage of days in the years that Moody's has a laxer rating minus the percentage of the days in the year that Fitch has a laxer rating. The coefficient of Post_2000_Dum for this estimation is also positive and highly significant (coefficient = 0.106, p-value < 0.0001). In summary, even relative to Fitch, Moody assigned more favorable ratings to new issues as well as to existing issues in the years after its IPO in 2000.

6.0 Conclusions

In this paper, we investigate Congressional allegations that going public transformed Moody's from a conservative rating agency to one focused on market share and short term profits. To examine this allegation, we benchmark Moody's ratings to that of its arch rival, S&P, as it did not undergo a change in its ownership status over this time period. We find significant evidence, both in economic and statistical terms, that Moody's was more likely to assign favorable ratings to new corporate bond issues in the period after its IPO relative to S&P. A similar trend is also seen in the timeliness of rating changes of existing bonds, with Moody's being significantly laxer in the years after its IPO. Moreover, these loose standards are more pronounced in the bonds issued by large issuers, consistent with allegations that Moody's was willing to accommodate its repeat customers. In sum, the evidence is largely consistent with conjectures that the act of going public has impaired the independence and the quality of Moody's credit ratings. Hence, our results have implications for the ownership structure of all capital market gatekeepers.

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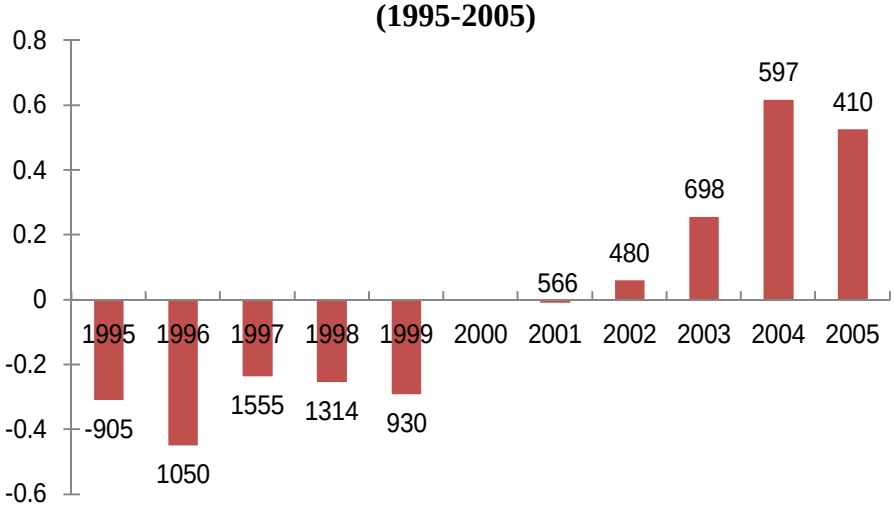
Figure 1: Difference in Credit Ratings Assigned by Moody's and S&P around Moody's IPO in 2000 (1995-2005)



The length of the bar in the figure represents the yearly average of the "Ratings_Diff" variable across the period before Moody's IPO (1995-1999) relative to the period after (2001-2005). Rating_Diff is the S&P's numerical rating minus the Moody's numerical rating for the new bond issue, coded as per Table 1. As smaller numbers mean laxer ratings, a positive (negative) value of Rating_Diff implies that Moody's assigns laxer (stricter) ratings. The number on top of each bar represents the new bond issues over which the "Ratings_Diff" variable was computed every year.

Table 1: Numerical Coding of Rating Categories and Frequencies of Such Categories for New Bond Issues
This table presents summary statistics on the different ratings categories for Moody's and S&P and their numerical mapping. Frequency is the percentage of new issues over the period 1991 to 2009 (excluding 2000) that belong to each category.

	Numeric Rating	Moody's		S&P	
		Credit Rating Letter	Frequency (%)	Credit Rating Letter	Frequency (%)
		Investment-grade			
Highest Quality	1	Aaa	0.21	AAA	0.25
Very High Quality	2	Aa1	0.07	AA+	0.68
	3	Aa2	0.92	AA	1.61
	4	Aa3	17.32	AA-	9.68
High Quality	5	A1	11.13	A+	11.57
	6	A3	22.54	A	32.58
	7	A3	5.62	A-	4.83
Minimum Investment Grade	8	Baa1	8	BBB+	5.02
	9	Baa2	4.67	BBB	4.84
	10	Baa3	3.01	BBB-	3.14
		High-yield			
Low Grade	11	Ba1	1.72	BB+	1.63
	12	Ba2	1.27	BB	7.88
	13	Ba3	6.67	BB-	1.65
Very Speculative	14	B1	5.03	B+	3.64
	15	B3	4.96	B	5.08
	16	B3	5.2	B-	4.26
Substantial Risk	17	Caa1	1	CCC+	0.93
	18	Caa2	0.47	CCC	0.55
	19	Caa3	0.16	CCC-	0.12
Very Poor Quality	20	Ca	0.04	CC	0.06
	21	C	0.00	C	0.00

Table 2: Descriptive Statistics of Firms Issuing Rated New Bonds

Issuer Size is market value of equity plus the book value of debt. Leverage is long term debt divided by total assets. Operating Margin is operating income before depreciation divided by sales. Stock return standard deviation is the standard deviation of daily stock returns in the year prior. Issue size is the par value of the bond issue. All firm characteristics are measured the year prior to the new issue.

	Mean	Median	Std
Issuer Size ($ million)	93,589.51	38,808.46	117,998.88
Leverage	0.27	0.21	0.19
Operating Margin	0.22	0.43	6.58
Stock Return Standard Deviation	0.06	0.02	0.15
Issue Size ($ million)	141.40	50.00	291.00
Time to Maturity at Issuance (Years)	7.75	5.76	8.03

Table 3: Univariate Comparisons of Ratings of New Issues Between Moody's and S&P

This table presents a univariate test for the variable Rating_Diff. Rating_Diff is the S&P's numerical rating minus the Moody's numerical rating for the new bond issue, coded as per Table 1. As smaller numbers mean laxer ratings, a positive value of Rating_Diff implies that Moody gives laxer ratings. The column "Pre-Moody's IPO" covers all eligible new bonds issued over 1991 to 1999. The column "Post-Moody IPO" includes all eligible new bond issues over 2001 to 2009. "Investment grade category (IV)" includes all new issues where both Moody's and S&P assigned an investment grade rating at the time of issue. "High-Yield (HY)" refers to new issues where both Moody's and S&P assigned a high yield rating at the time of issue. "Across IV and HY" refers to the small sample of new issues where one rating agency assigns an investment grade rating and the other assigns a high yield rating.

		Pre-Moody's IPO	Post-Moody's IPO	Test (p-value)
Full Sample	Mean	-0.302	0.286	<.0001
	Median	0.000	0.000	<.0001
	Nobs	5,722	2,783	
Investment-grade (IV)	Mean	-0.189	0.425	<.0001
	Median	0.000	0.000	<.0001
	Nobs	4,076	2,150	
High-yield (HY)	Mean	-0.567	-0.158	<.0001
	Median	-1.000	0.000	<.0001
	Nobs	1,588	582	
Across IV and HY	Mean	-0.966	-0.490	0.057
	Median	-1.000	-1.000	0.037
	Nobs	51	58	

Table 4: Do Moody's Ratings Become Laxer for New Issues after its IPO?

The table displays OLS estimates. The dependent variable in columns 1 and 2 is Rating_Diff and in columns 3 and 4 is Moody's and S&P's numerical ratings respectively. Rating_Diff is the S&P numerical rating minus the Moody numerical rating. Post_2000_Dum takes the value of one for new bond issues from 2001 to 2005. LogTV is natural log of total market value. Leverage is long term debt divided by total assets. OpMargin is operating income before depreciation divided by sales. Stkreststd is the standard deviation of daily stock returns in the year prior. Issue size is the par value of the bond issue. YTM is the years to maturity. Seniordum is one for senior debt. Variables are measured in the year prior to the new issue. LogTV_post is the interaction of LogTV with Post_2000dum. Other interaction variables are similarly defined. Numbers in brackets are heteroscedasticity adjusted p-values. ***, **, * represent significance at 1%, 5% and 10% level respectively. We cluster standard errors by the issuing firm.

	Rating_Diff	Rating_Diff	Moody	S&P
Intercept	-0.299	0.155	8.401	8.556
	<.0001	0.088	<.0001	<.0001
Post_2000_Dum	0.585	0.851	-0.935	-0.084
	<.0001	<.0001	<.0001	0.676
LogTV		-0.010	-1.259	-1.269
		0.229	<.0001	<.0001
Leverage		-0.105	2.755	2.651
		0.290	<.0001	<.0001
Opmargin		-0.006	-0.026	-0.032
		<.0001	<.0001	<.0001
Stkretstd		-1.314	7.397	6.083
		<.0001	<.0001	<.0001
Issuesize		0.034	0.193	0.227
		0.002	<.0001	<.0001
YTM		-16.560	-65.638	-82.198
		0.000	<.0001	<.0001
Seniordum		-0.188	-1.673	-1.860
		<.0001	<.0001	<.0001
Logtv_post		0.123	0.041	0.164
		<.0001	0.312	<.0001
Leverage_post		-0.052	1.290	1.238
		0.751	0.021	0.021
Opmargin_post		0.006	0.015	0.021
		<.0001	<.0001	<.0001
Stkretstd_post		1.725	9.575	11.300
		0.257	0.047	0.020
Issuesize_post		-0.106	-0.012	-0.118
		<.0001	0.797	0.003
YTM_post		6.859	124.945	131.804
		0.325	<.0001	<.0001
Seniordum_post		0.019	-0.096	-0.077
		0.759	0.560	0.642
Adjusted R-square	0.095	0.216	0.765	0.762
N	8,505	8,505	8,505	8,505

Table 5: Cross Sectional Variation in Moody's Laxer Ratings Post IPO

The table displays OLS results where the dependent variable is Rating_Diff, the difference between S&P & Moody numerical ratings. Post_2000_Dum is one after 2000. High_Con_dum is one for bond issuers with greater conflicts of interest. In model 1 (model 2) High_Con_dum is one for large issuer (the issuer's profit margin is above the median for that S&P's rating grade). High_Con_Dum_post is the interaction of High_Con_dum and Post_2000_dum. Other variables are defined as before. Brackets have heteroscedasticity adjusted p-values. ***, **, * represent significance at 1%, 5% and 10% level respectively. Standard errors are clustered at the firm level.

	Model 1: Large vs. Small	Model 2: High vs. Low Credit
Intercept	0.291	0.228
	0.002	0.009
Post_2000_Dum	0.699	0.744
	<.0001	<.0001
High_Con_Dum	-0.205	-0.415
	<.0001	<.0001
High_Con_Dum_Post	0.308	0.368
	<.0001	<.0001
LogTV	-0.018	-0.019
	0.034	0.032
Leverage	-0.077	-0.066
	0.427	0.515
Opmargin	-0.006	-0.005
	<.0001	<.0001
Stkretstd	-1.229	-1.420
	<.0001	<.0001
Issuesize	0.081	0.047
	<.0001	<.0001
YTM	-18.134	-14.515
	<.0001	0.001
Seniordum	-0.192	-0.238
	<.0001	<.0001
Logtv_post	0.136	0.130
	<.0001	<.0001
Leverage_post	-0.082	-0.097
	0.616	0.561
Opmargin_post	0.006	0.005
	<.0001	<.0001
Stkretstd_post	1.728	1.879
	0.257	0.223
Issuesize_post	-0.171	-0.117
	<.0001	<.0001
YTM_post	9.936	6.101
	0.156	0.381
Seniordum_post	0.025	0.070
	0.687	0.270
Adjusted R-square	0.219	0.213
N	8,505	8,505

Table 6: Moody's Laxer Ratings with All Bond Issues After its IPO

The table displays OLS estimates where the dependent variable is Lead_time_Diff, the percent of days Moody's assigns a higher rating minus the percent of days S&P assigns a higher rating. Post_2000_Dum is one after 2000. In model 2 (model 3), the High_Con_Dum is one for large issuers (where issuer's profit margin is above median for that S&P's rating grade). High_Con_Dum_Post is the interaction of High_Con_Dum and Post_2000_Dum. Other variables are as in prior tables. Numbers in brackets are heteroscedasticity adjusted p-values. ***, **, * represent significance at 1%, 5% and 10% level respectively. Standard errors are clustered at the firm level.

	Model 1:	Model 2:	Model 3:
Intercept	-0.041	0.080	-0.048
	<.0001	<.0001	<.0001
Post_2000_Dum	0.301	0.257	0.229
	<.0001	<.0001	<.0001
High_Con_Dum		-0.128	0.011
		<.0001	0.085
High_Con_Dum_Post		0.052	0.132
		0.010	<.0001
LogTV	0.016	0.020	0.015
	<.0001	<.0001	<.0001
Leverage	0.087	0.114	0.083
	<.0001	<.0001	0.000
Opmargin	-0.005	-0.005	-0.005
	<.0001	<.0001	<.0001
Stkretstd	-0.246	-0.255	-0.244
	0.011	0.008	0.011
Issuesize	0.005	0.005	0.005
	0.001	0.000	0.001
YTM	0.019	0.019	0.019
	<.0001	<.0001	<.0001
Seniordum	-0.044	-0.036	-0.044
	<.0001	0.000	<.0001
Logtv_post	0.099	0.098	0.093
	<.0001	<.0001	<.0001
Leverage_post	-0.538	-0.554	-0.543
	<.0001	<.0001	<.0001
Opmargin_post	0.006	0.006	0.006
	<.0001	<.0001	<.0001
Stkretstd_post	0.225	0.234	0.226
	0.020	0.016	0.020
Issuesize_post	0.009	0.009	0.006
	<.0001	<.0001	0.007
YTM_post	-0.005	-0.004	-0.010
	0.300	0.411	0.038
Seniordum_post	-0.127	-0.134	-0.117
	<.0001	<.0001	<.0001
Adjusted R-square	0.093	0.095	0.187
N	81,641	81,641	81,641

Table 7: Robustness Tests for Different Time Windows Around Moody's 2000 IPO

The sample period for Panel A (Panel B) is from 1991-2009 (1999-2001). The dependent variable for new issues (all issues) is Rating_Diff (Lead_Time_Diff). Rating_Diff is the difference in S&P and Moody numerical rating. Lead_time_Diff, if the difference between percent of days Moody and S&P assigns a better rating. Post_2000_Dum is one after 2000. Other variables are as defined in prior tables. Numbers in brackets are heteroscedasticity adjusted p-values. ***, **, * represent significance at 1%, 5% and 10% level respectively. Standard errors are clustered at the firm level.

	Pane A: 9 years around 2000 (1991-2009)		Panel B: 1 year around 2000 (1999-2001)	
	New Issues	All Issues	New Issues	All Issues
Intercept	-0.251	-0.051	-0.023	-0.162
	0.002	<.0001	0.931	<.0001
Post_2000_Dum	0.178	0.285	0.475	0.114
	<.0001	<.0001	0.017	<.0001
LogTV	0.025	0.014	-0.025	-0.020
	0.000	<.0001	0.375	<.0001
Leverage	0.128	0.078	-0.697	-0.171
	0.084	<.0001	0.001	0.000
Opmargin	-0.007	-0.004	-0.053	-0.025
	<.0001	0.002	0.000	0.020
Stkretstd	-1.552	0.004	-0.231	-0.260
	<.0001	0.296	0.264	0.065
Issuesize	0.006	0.006	0.054	0.000
	0.444	<.0001	0.005	0.983
YTM	8.794	0.012	-17.931	0.028
	0.016	<.0001	0.144	<.0001
Seniordum	-0.203	-0.002	0.048	-0.045
	<.0001	0.824	0.702	0.038
Logtv_post	0.045	0.089	0.087	0.045
	<.0001	<.0001	0.017	<.0001
Leverage_post	-0.791	-0.384	1.014	-0.292
	<.0001	<.0001	0.003	<.0001
Opmargin_post	0.006	0.004	0.053	0.025
	<.0001	0.002	0.000	0.018
Stkretstd_post	1.359	-0.021	1.270	0.262
	0.148	0.014	0.412	0.067
Issuesize_post	-0.025	-0.004	-0.014	0.046
	0.008	0.008	0.582	<.0001
YTM_post	6.703	-0.028	17.629	-0.017
	0.203	<.0001	0.247	0.085
Seniordum_post	0.460	-0.164	0.035	-0.072
	<.0001	<.0001	0.851	0.019
Adjusted R-square	0.145	0.090	0.092	0.042
N	11,697	137,411	1,496	15,827

Table 8: Robustness Using Freddie and Fannie Bonds and with Fitch as the Benchmark instead of S&P

Panel A includes bonds rated by Freddie and Fannie. Panel B uses Fitch instead of S&P as benchmark. The dependent variable for new (All) issues is Rating_Diff (Lead_Time_Diff). Rating_Diff is the S&P (Fitch) numerical rating minus the Moody numerical rating in Panel A (B). Lead_time_Diff, in Panel A (B) the difference between percent of days Moody's assigns a higher rating minus the percent of days S&P (Fitch) assigns a higher rating. Post_2000_Dum takes the value one after 2000. Other variables are as defined in prior tables. Numbers in brackets are heteroscedasticity adjusted p-values. ***, **, * represent significance at 1%, 5% and 10% level respectively. Standard errors are clustered at the firm level.

	Panel A: Bonds by Freddie and Fannie		Panel B: Fitch as Benchmark	
	New Issues	All Issues	New Issues	All Issues
Intercept	-0.014	-0.301	-1.724	-0.828
	0.766	<.0001	<.0001	<.0001
Post_2000_Dum	0.182	0.271	0.555	0.106
	<.0001	<.0001	0.000	<.0001
LogTV	0.003	-0.076	-0.111	0.019
	0.593	<.0001	0.001	<.0001
Leverage	-0.057	-0.183	-0.651	0.461
	0.469	<.0001	0.001	<.0001
Opmargin	-0.006	-0.009	-0.607	-0.082
	<.0001	0.001	0.148	<.0001
Stkretstd	-1.393	0.071	-1.665	-1.160
	<.0001	0.605	<.0001	<.0001
Issuesize	0.020	0.007	-0.037	-0.075
	0.007	<.0001	0.003	<.0001
YTM	-5.932	0.011	37.851	0.040
	0.010	0.000	<.0001	<.0001
Seniordum	-0.229	0.290	-0.379	0.041
	<.0001	<.0001	<.0001	<.0001
Logtv_post	0.032	0.129	0.172	0.044
	<.0001	<.0001	<.0001	<.0001
Leverage_post	-0.904	-0.501	0.225	-0.705
	<.0001	<.0001	0.428	<.0001
Opmargin_post	0.006	0.009	-0.090	-0.342
	<.0001	0.001	0.842	<.0001
Stkretstd_post	3.070	-0.089	2.345	1.150
	0.016	0.519	0.241	<.0001
Issuesize_post	-0.046	-0.005	0.023	0.094
	<.0001	0.002	0.104	<.0001
YTM_post	0.852	-0.016	-14.810	-0.105
	0.742	<.0001	0.169	<.0001
Seniordum_post	0.397	-0.229	0.045	-0.366
	<.0001	<.0001	0.673	<.0001
Adjusted R-square	0.200	0.178	0.194	0.117
N	30,484	162,572	5851	32428