

## #MeToo: Sexual Harassment and Company Value

Borelli-Kjaer, Mads ; Schack, Laurids Moehl ; Nielsson, Ulf

*Document Version*

Accepted author manuscript

*Published in:*

Journal of Corporate Finance

*DOI:*

[10.1016/j.jcorpfin.2020.101875](https://doi.org/10.1016/j.jcorpfin.2020.101875)

*Publication date:*

2021

*License*

CC BY-NC-ND

*Citation for published version (APA):*

Borelli-Kjaer, M., Schack, L. M., & Nielsson, U. (2021). #MeToo: Sexual Harassment and Company Value. *Journal of Corporate Finance*, 67, Article 101875. <https://doi.org/10.1016/j.jcorpfin.2020.101875>

[Link to publication in CBS Research Portal](#)

**General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

**Take down policy**

If you believe that this document breaches copyright please contact us ([research.lib@cbs.dk](mailto:research.lib@cbs.dk)) providing details, and we will remove access to the work immediately and investigate your claim.

Download date: 04. Jul. 2025

# #MeToo: Sexual Harassment and Company Value\*

Mads Borelli-Kjaer

Laurids Moehl Schack

Ulf Nielsson

December 2020

## Abstract

We identify the impact of reported sexual harassment on firm value through the use of a unique hand-collected sample consisting of around 200 incidents that all include novel event- and firm-specific characteristics. The average effect of a sexual harassment scandal is significantly negative and robust, with around 1.5% abnormal decrease in market value over the event day and the following trading day. In the cross section, the effect is considerably amplified by the involvement of a CEO in the scandal, high news coverage and number of accusers, while firms' self-disclosure of misconduct mitigates the effect. The average magnitude of impact is unchanged before and after the #MeToo movement, but the frequency of scandals in the media translates to a four-fold increase in the risk of becoming embroiled in a scandal. Proxies of public sentiment rather than direct penalties and loss of productivity are found to correlate with the magnitude of impact.

Key words: Corporate scandals, sexual harassment, company value, MeToo

JEL classification: G14, G30, G40

---

\* We thank Renée Adams, Peter Carøe, Rebel A. Cole, Michael Halling, Sofia Johan, Chandra Krishnamurti, Jesper Rangvid, Denis Schweizer and Herdis Steingrimsdottir for comments, as well as participants at various seminars and conferences. Mads Borelli-Kjaer and Laurids Moehl Schack are at Boston Consulting Group. Ulf Nielsson is at Copenhagen Business School. Ulf gratefully acknowledges support via association with the Danish Finance Institute, PeRCent and the University of Iceland. Emails: Mads: madsborelli@gmail.com, Laurids: lau.schack@gmail.com, Ulf: un.fi@cbs.dk (corresponding author).

# 1 Introduction

On October 5, 2017, The New York Times (2017) published a story alleging systematic sexual harassment and misconduct by media mogul, Harvey Weinstein. Besides causing a media uproar, this event was characterized by significant public outcry, marking the beginning of the #MeToo movement, which brought attention to the human consequences of sexual harassment and created an unprecedented level of public attention on the subject.

Consequentially, sexual harassment has been making its way onto the agenda of shareholder annual meetings for the first time in American business history (The Financial Times, 2019). The potential damaging effect on reputations and market value is similarly recognized within the investment industry, where wealth managers are setting up response committees against sexual harassment scandals (Walker, 2018; CalSTRS, 2019) and M&A clauses related to sexual harassment are increasingly found in merger agreements (Quinlivan, 2018). It is estimated that 11% of all fund managers directly inquire about sexual harassment risks when making investment decisions (Walker, 2018).

Existing literature documents significant losses in company value associated with corporate scandals, whether it be related to financial misrepresentation (Karpoff et al., 2008) or employees' personal indiscretions (Au et al., 2020; Cline et al., 2018; Jory et al., 2015). But in contrast to the fields of psychology and sociology, which have widely documented the negative consequences of sexual harassment on the individual (see e.g. Willness et al., 2007), the instant impact of sexual harassment reports on company value has, to the best of our knowledge, not been separately studied. Moreover, sexual harassment scandals are different from typical corporate scandals such as fraud or labor violations, in that they are arguably not motivated by profit or monetary betterment. As such, they appear more idiosyncratic and therefore harder to predict and protect against, and it seems less clear what financial impact a sexual harassment scandal has on company value, and what determines the size of this impact. This paper quantifies these effects.

To measure the average impact of sexual harassment scandals, and what determines the magnitude thereof, we collect a sample of a total 199 observations of sexual harassment scandals for public firms worldwide using online news archives dating back to 2005. The sampling procedure, which incorporates the news archives of NexisUni and GoogleNews, collects cases of unwelcome sexual advances, requests for sexual favors, and other physical and non-physical conduct of sexual nature. The sampled incidents range from verbal sexual suggestions to forced sexual relations. For each observation, a large number of event- and firm-specific factors are hand-collected, providing a unique and highly detailed data set with

over 4,000 data points in total. This allows for a very granular and detailed analysis of the cross-sectional variations in the impact of sexual harassment on company value.

Using an event study methodology, we find a negative 1.5% cumulative abnormal return over the event day and the following trading day, which corresponds to an average impact of 450m USD for the companies in our sample. This effect is significant and robust across a wide array of inference tests and model choices.

We explore the cross-sectional variation in the effect of reported sexual harassment by letting the abnormal returns constitute the response variable in a regression framework. Using a large set of novel explanatory variables collected from various news and data outlets we find that the consequences for a company embroiled in a sexual harassment scandal depend on the circumstances of the scandal. Throughout our analysis the involvement of a CEO is consistently a strong driver of negative abnormal returns (a further of 5% point drop in return on top of the average effect). We also find that abnormal increases in media coverage of the firm around the scandal strongly associate with negative return (around -5% points per standard deviation increase in coverage), whereas instances where companies self-disclose the misconduct are found to be punished less by the market (3% points less so). A mild mitigation of the detrimental effect also appears if litigation has been, or is expected to be, initiated (1% point lower drop).

The paper proceeds to specifically study the implication of the #MeToo movement on the overall results. Interestingly, the impact of sexual harassment scandals on company value is on average the same in controlled regressions before and after the emergence of the #MeToo movement. However, the volume of sexual harassment scandals for public companies covered in the news after #MeToo has risen dramatically, with a fourfold increase in the average number of scandals revealed each month. Assuming that the underlying behavior responsible for creating scandals is unchanged, this implies that the probability of a scandal being revealed has quadrupled.

We next examine the potential mechanism through which sexual harassment scandals negatively impact firm value. Direct penalties, such as compensation claims, are relatively modest compared to the average market impact. The market also reacts relatively milder to cases where an accused CEO is fired, as opposed to staying with the firm, which indicates that the negative market impact is not driven by costs associated with the loss of personnel. Instead, we find evidence of the effect being related to several proxies of public sentiment. First, we find that reputational repair, as proxied by the firing of an accused CEO and firms' self-disclosure of sexual harassment, to correlate with a relatively lower market impact. Second, we find the market impact to vary across countries that differ in gender equality and public perception of women in the workforce. Third, we find that announcements of sexual harassment are

more likely to appear among companies with high consumer awareness and vulnerability with respect to public opinion, such as those producing consumer products and well-known brand names. Fourth and finally, we present case studies where we proxy public sentiment with the tone used in Twitter posts that refer to companies involved in sexual harassment, where we find that public opinion highly correlates with companies' stock returns. Several examples of investors activism similarly showcase the emphasis large shareholders place on repairing reputation following a scandal. All these results collectively indicate that the negative market impact correlates with the public's sentiment and ethical perception of sexual harassment.

Lastly, we study the long-term return dynamics following sexual harassment scandals, finding that the initial negative impact on abnormal returns reverts to a long-term impact of around -0.8%, corresponding to an approximate 250m USD loss in market value per company involved in a scandal. We find that the overreaction to scandalous news is lower for firms with faster information flow, as proxied by the amount of regular media coverage. We also find that the consumer industry and highly recognized brand name companies experience a relatively lower annual growth rate in market value following sexual harassment scandals.

The paper proceeds by reviewing the literature on corporate scandals in Section 2. In Section 3 we describe our data and sampling procedure before Section 4 presents our main analysis, showing both results for the average market impact (the event study) and for the cross-sectional variation in market returns (regression analysis). Section 5 provides additional perspectives on the impact of the #MeToo movement and Section 6 digs deeper into the potential channels of the negative market impact. Lastly, Section 7 presents the long-term dynamics of the effect of sexual harassment, and a final Section 8 concludes.

## 2 Literature

Corporate scandals have been widely studied in the literature. Corporate wrongdoing – defined loosely as a set of questionable, unethical and/or illegal actions performed by a person within an organization in a capacity of employment – turns into a scandal as it becomes published and creates general public outrage. Table 1 summarizes the estimated market value effects of corporate scandals reported in the literature using standard event study methodology.

< INSERT TABLE 1 HERE >

Several papers study miscellaneous categories of scandals simultaneously, such as financial misconduct, restatements, insider trading, options backdating and fraud (Karpoff and Lott, 1993; Long

and Rao, 1995; Carberry et al., 2018). Other papers narrow down by scandal type, for example studying CEO insider trading (Engelen, 2012), environmental scandals (Karpoff, et al., 2005), human rights violations (Kappel et al., 2011), financial misrepresentation events (Palmrose et al., 2004; Karpoff et al. 2008), managerial backdating of stock options (Narayanan et al., 2007), etc. Generally, the findings in this literature show a short-term negative effect of around 1-2% points in cumulative abnormal returns (CAR) surrounding the event. The exception is restatement events, or, using the terminology of Karpoff et al. (2008), events of "cooking the books", which in essence indicate severe financial misrepresentation, to which the market reacts stronger (cf. Table 1).

A few studies include scandals beyond those that are financially motivated. Jory et al. (2015) investigate CEO-involved scandals of both financial and non-financial nature. This spans accounting fraud, bribery, insider trading, price fixing, etc., in addition to extramarital affairs, resume lies, personal loans and sexual harassment. However, the impact of personal CEO indiscretions, including those of sexual harassment, are not examined separately. Cline et al. (2018) focus specifically on misconduct by executives unrelated to companies' business activities. This includes CEO scandals involving substance abuse, violence, dishonesty and sexual misadventures. These managerial indiscretions are found to associate with numerous negative company outcomes, such as reduced wealth and operating margins, lost business partners, increased probability of unrelated lawsuits and federal investigations, etc. Sexual misadventures are not the primary focus point of their study, nor is the sampling thereof limited to cases of sexual harassment but also includes noncriminal sexual activity, such as extramarital affairs, senior-subordinate interoffice romances, etc. Lastly, in contrast to the event-studies listed in Table 1, Au et al. (2020) take a different approach by scanning U.S. online job reviews and showing that firms with the highest proportional number of sexual harassment claims earn a negative risk-adjusted return over the following year. Their study is partly complementary to ours, but differs in that it assesses online claims of sexual harassment, rather than news reports thereof, and it evaluates long term correlations compared to our focus on immediate market responses and the associated dynamics in the days that follow a scandal. We also differentiate between several diverse types of harassment (physical vs. non-physical, degree of physical harassment, number of accusers, personnel involved, etc.) and examine further the channels through which the impact can arise (penalties, loss of personnel or in public opinion, etc.), using among other a cross-country variation in our sample.

In short, our contribution lies in studying the immediate market impact of news reports on sexual harassment using a new detailed dataset. Namely, we specifically examine the market impact of sexual harassment separate from other misconduct, the drivers thereof, the potential channels through which the impact arises and the characteristics of firms that announce sexual harassment in the first place. We

also further employ the #MeToo movement as a ‘natural experiment’ of a potential change in the market reaction to sexual harassment scandals, as well as extending the analysis across different countries where the public’s opinion towards such incidents may similarly differ.

Within other fields the impact of sexual harassment has been separately studied, such as within psychology and sociology, where studies mostly focus on the individual and direct victims. This literature finds a multitude of negative effects of sexual harassment for victims, such as lower job satisfaction and commitment, physical and mental health issues, which in return can lead to company costs in terms of lower productivity, legal fees, negative publicity, derivative effects on recruitment and retention of employees and more (see e.g. the large meta-study by Willness et al., 2007). As such, it seems very relevant to attempt to quantify the size of these effects, as observed by the market reaction to a scandal. Few studies, however, relate sexual harassment to direct and measurable monetary costs. Exceptions include Hersch (2018), who calculates a theoretical value of sexual harassment costs to society, and Faley et al. (1999), who estimate the annual direct cost associated with sexual harassment in the US Army. Common to these studies is that they do not measure the impact on company market value. This distinction is important, not only because it redefines the research question, but also because the market value effect goes beyond direct costs and essentially captures all the costs that the market might price in as a result of a scandal, for example reputational costs, lower sales, lack of investors, etc. To the best of our knowledge, no study focuses specifically on estimating the immediate market value of reported sexual harassment, despite the prominence in the news, the public sphere of the subject, increased attention within the business community, and the high implied costs.

### 3 Data and sampling

The sampling of corporate scandals is challenging for at least two reasons. First, most studies on scandals apply historical news reports to sample a dataset of misconduct. However, acts of misconduct, whether it may be financial fraud or personal indiscretions, presumably often go unnoticed or unreported. This naturally limits studies to a sample within the broader population of all disclosed and undisclosed acts. This limitation is important for the interpretation of the results. In our case it implies that we do not capture the effect of the act of sexual harassment itself, but rather the likelihood and impact of its disclosure.<sup>1</sup>

---

<sup>1</sup> Relying on alternative sources to historical news reports may not circumvent this challenge. For example, Au et al. 2020, who filter through online job reviews to create a sample of sexual harassment, are similarly likely to get a noisy measure of acts of sexual harassment. First, online job reviews are claims of sexual harassment. News reports both include claims and

Second, unlike sexual harassment, financial fraud is more naturally quantifiable and events can be well-defined and dated as information is typically released from official governmental bodies in press releases (see e.g. Karpoff et al. 2008). Beyond strictly defined samples of financial character, the sampling process is relatively less structured in the literature or limited to quite specific news outlets or newspapers (see e.g. Bernile and Jarrell, 2009; Carberry et al., 2018). Sample sizes are also naturally smaller within scandal type-specific studies, compared to studies where several types of scandals are covered (Jory et al. 2015; Carberry et al., 2018; Cline et al., 2018). We attempt to address such shortcomings by applying a robust sampling methodology that returns a sizable sample of sexual harassment scandals.

### 3.1 Sexual harassment

Due to the novelty of the research question and area of study, we construct a new dataset, where the sample of events is gathered on the basis of applying three different systematic search approaches to ensure collective exhaustiveness. Table 2 summarizes the sampling procedure of events.

< INSERT TABLE 2 HERE >

The first source consists of utilizing the widely used news-aggregation website Nexis Uni (formerly known as LexisNexis). The search consists of systematically identified relevant keywords.<sup>2</sup> The process in identifying keywords is to include three sub-groups of search terms: 1) Terms indicating that sexual harassment was mentioned in the article, 2) terms indicating the involvement of a company, and 3) terms indicating a scandal, i.e. news unfolding and not summaries or historical descriptions. The sexual harassment indications are found using the word “sexual harassment” and all its synonyms.<sup>3</sup> The process of identifying search-terms for respectively company and scandal is done in a similar manner, yet utilizing the keywords used by Kappel et al. (2011) and Carberry et al (2018) as starting points.<sup>4</sup> This procedure

---

verified cases (e.g. when act has been admitted or conviction has been reached). Second, as not all acts are disclosed in online job reviews, many acts will similarly go undisclosed, as with news reports.

<sup>2</sup> The exact search string, as justified in what follows, was: ("sexual harassment" or "sexual pressure" or "sexual irritation" or "sexual coercion" or "sexual molestation" or "sexual intimidation" or "sexual abuse" or "sexual assault" or "indecent assault" or "sexual molestation" or "sexual seduction" or "sexual interference" or "sexual molesting" or "sexual assault" or "sexual misconduct" or "sexual interference" or "rape") w/25("company" or "business" or "corporate" or "enterprise" or "corporation" or "ceo" or "vice president" or "executive") and ("scandal" or "wrongdoing" or "misbehaviour" or "misbehavior" or "reveal" or "uncover" or "incident" or "episode").

<sup>3</sup> These are listed in the previous footnote. We use all synonyms found using Oxford dictionary (Oxford University Press, 2019) in both British and American. Subsequently, all these synonyms are analyzed using Google’s linguistic tool “Google Books Ngram Viewer”, which searches all of Google’s corpora of text (Google, 2019). All synonyms not currently in use in British or American were not included. Following the Ngram Viewer analysis, 17 terms remained.

<sup>4</sup> The search structure is coded such that a term for company and scandal needs to be within 25 words of a sexual harassment term, on either side, to appear in the search. This is done in order to only find articles actually covering a corporate scandal rather than consisting of two separate unrelated events combined in an aggregate news article. Only news articles under the Nexis Uni categories of “Business News” or “Company Activities & Management” are selected, so as to avoid backward looking industry research (“Trends and Events”) and sole legal texts (“Crime, Law Enforcement & Corrections”) in the results.



results in a combined list of search terms including 17 synonyms of sexual harassment, 8 terms for company and 8 for scandal (cf. footnote 2). Finally, the time-period covered by the search is January 2005 to February 2019 (time of last data collection). The sample period goes back far enough to include both high and low cyclical periods in the economy, and the topic is generally much less prominent in the news prior to 2005. This results in a list of news articles covered by 14,857 articles. There is no geographic restriction included in our search, but articles are limited to those published in English (non-reported tests reveal robust results when only including countries where English is the primary language). Consequently, each article is manually examined, and each company linked to a scandal is added to the sample, given that the company at the time of the scandal was publicly traded. For many scandals identified, the companies are privately held or the company is not directly connected to sexual harassment, even though both terms were used within the article. Such scandals are not included. Each scandal is also typically mentioned across multiple articles. In the end, the Nexis Uni search results in 130 identified sexual harassment events.

To make sure we capture as many relevant events as possible, a second data source consists of a combined Nexis Uni and GoogleNews search targeting all current and previous constituents of the S&P500 index during the sample period. This amounts to 878 current or non-current traded firms, retrieved from CRSP, where for each firm we run a targeted search using both Nexis Uni and Google News. This results in an additional 73 scandals (cf. Table 2).

The third and final source consists of scanning through all press releases from the American Equal Employment and Opportunity Commission (EEOC) related to sexual harassment cases. The EEOC is an American federal agency administering and enforcing civil rights and preventing workplace discrimination, where a subcategory of workplace discrimination is sexual harassment. Of specific interest are lawsuits filed by the EEOC on behalf of plaintiffs who allege having been victims to sexual harassment. Whenever each of these lawsuits had a publicly traded US company as a defendant, not previously identified through the other sampling approaches, it is included in the sample. This produces 9 additional events (16 events that classify as EEOC lawsuits are already collected via NexisUni and GoogleNews).

As a last step, the date of each event is found and the events are validated. The event date is based on the first piece of news representing the initial broadcasting to the public (again using Nexis Uni and Google News), which implies that for an event to be included, it needs to release some new information to the market, which could be in the form of an announced litigation, the release of a piece of investigative journalism or the voluntary announcement by a firm. The first trading day following the initial news is

defined as the event date.<sup>5</sup> Additionally, in our validation stage some events are excluded due to proximity to other confounding events for the relevant firm that could have an impact and as such obfuscate the effect of a sexual harassment scandal. Such contaminating actions include release of important shareholder information, such as earnings announcements, that we identify using Nexis Uni, the financial calendar of MarketWatch, and financial calendars of company websites. This validation process is in line with the methodology surrounding event definitions in other studies (see e.g. Hosono and Isobe 2014; Ricci 2015). It also includes a few cases of other confounding events, such as announced bankruptcy around the event (but for reasons unrelated to the event) and an attempt of an activist investor to gain control of the board at the same time of the scandal being revealed. This overall procedure, including validation, yields a final sample size of 199 sexual harassment incidents, scandals or events (used synonymously throughout this paper), as shown in Table 2. The sample size is comparable to those of related studies (cf. Table 1) and is deemed large enough to draw inferences about the average effect of a sexual harassment scandal on company market value.<sup>6</sup> In short, this sample of scandals relating exclusively to sexual harassment is unique and offers high statistical confidence to conclude about the average effect of such specific events, rather than merely assess more broadly defined corporate misconduct scandals.

The full list of events is given in the appendix. The scandals range from verbal sexual comments or requests, to unwelcomed physical advances or forced sexual relations. Table 3 provides a few exemplifying cases from the US and elsewhere, which vary in both the number and rank of the accused employees, and the nature of the sexual misconduct. To take one example, in 2010 news broke out about sexual misconduct of the CEO of the Australian company David Jones. The CEO, Mr. Mark McInnes, resigned after allegations that included repeated unwanted kisses, touching, and text messages from him towards five female employees. One female employee alleged that McInnes made sexual comments in public view of other employees, tried to kiss her on the mouth, made physical advances including placing his hands under her clothing, and made repeated requests for her to visit his home with the implication of sexual intercourse (ABS news, 2010). The company reportedly knew about his behavior and the

---

<sup>5</sup> For each scandal we identify the timestamp showing when during the day the first identifiable article on the subject is published, as well as whether it was on a weekend or holiday. We also check the market opening hours for the countries in our sample. If news breaks within market opening hours then the respective day defines the event date. If the news breaks during closing hours the event date is the next day at which the market is open.

<sup>6</sup> This is supported by Brown and Warner (1980; 1985)-type simulations, see e.g. (Bartholdy et al., 2007), who show that for the combination of 1) thickly traded stocks (as is the case for our sample), 2) a sample size of 50 (i.e. a quarter of our sample size) and 3) an abnormal return of 2% (slightly larger than the  $t = 0.1$  abnormal return presented in this paper), the null hypothesis of zero CAAR will be correctly rejected in virtually 100% of the simulated scenarios across all types of significance tests.

company’s general manager of public relations allegedly told the female employee that she “just needed to be very clear and say ‘no Mark’ and he’ll back off” (ABS news, 2010). The incident received wide attention, with the Australian prime minister Julia Gillard speaking out and defending the right of women to work in places free of sexual harassment (The Sydney Morning Herald, 2010).

< INSERT TABLE 3 HERE >

The other cases listed in Table 3 exemplify both the range of allegations as well as the evident common denominator of sexual scandal. These include allegations of systematic sexual harassment and hostile work environment (EMC and Under Armour), sexual misconduct against a large number of women across numerous company branches (Carrol’s Restaurants), allegations of sexual requests and acts against a non-executive employee (EW Scripps), etc. As cases vary in terms of location, public attention, implicated personnel, type of (physical) harassment, etc., we collect a range of event-specific variables, which summarize the nature and frequency of the different incidents. We next turn to the specific details of all variables collected.

### 3.2 Firm- and event-specific data

The financial trading data for each company in our sample consists of stock prices (adjusted for splits and dividends) on a daily basis, retrieved from CRSP for US firms and CompuStat for non-US firms. Market indices, namely S&P500 for US and the country-specific MSCI index for international stocks, form a proxy for the market portfolio and are retrieved from Bloomberg. Worldwide data for applying a Fama-French factor model are from the online and continuously updated data resources of Frazzini and Pedersen (2014).<sup>7</sup> This financial data provides the foundation of an event study analysis based both a classical market model and a three-factor Fama-French model, as described in section 4.1.

In addition to standard financial data, and in conjunction with the sampling and dating of each event, a large number of firm- and event-specific variables are defined and collected, to perform regression analysis on the results of the event study. Description of all variables and their source is listed in Table 4. Several variables are hand-collected by scanning the news articles (e.g., the number of accusers, seniority of personnel involved, etc.), while data on other variables (e.g., corporate governance scores, assets, etc.) was collected through CRSP, Compustat, Thomson Reuters Eikon or the US Census Bureau. In total, more than 4,000 data points were collected. To the best of the authors’ knowledge no prior data

---

<sup>7</sup> Except for India, South Korea and Philippines. For these countries, the SMB and HML portfolios of respectively *World excl. USA*, *Pacific* and *Pacific* are used.

collections exist that provide as detailed information on sexual harassment cases. This allows for a granular analysis that goes beyond studying only an overall average effect.

< INSERT TABLE 4 HERE >

Several variables are compiled mostly for control purposes (return on assets, size, leverage, country, etc.), while the collection of other variables is guided and rationalized by the characteristics of sexual harassment in general, as well as their potential channels of impact. These variables include the personnel implicated in a scandal (CEO, vice president, or below), severity of the scandal (physical vs. verbal, number of accusers, repeated occurrence, litigation status, etc.), the location of the event within the firm (headquarters, parent company, etc.), a corporate governance score, competition and product substitutability (C4 measure of market concentration), media coverage, self-disclosure of misconduct, the timing of #MeToo, and others. All variables are listed and described in Table 4. Each variable was collected, as available, for each of the 199 events in our sample.

In Table 4, the variable *Abnormal News* is the only variable based on the authors' own calculations, and as such deserves further attention. Existing research has defined media coverage in various forms, such as number of words in newspapers (Carberry et al., 2018) and number of articles (Fang and Peress 2009; Solomon et al., 2014). In contrast, we define a measure of abnormal rather than total news, in order to control for the fact that different companies receive different amounts of news. Our methodology consists of quantifying a normal quantity of news (prior to the event) for each firm implicated in a scandal, as well as an event-related-quantity of news (measured after the event). Dividing these two numbers produces our measure of abnormal news. More specifically, this measure can be written as

$$Abnormal\ news\ factor_i = \frac{Event\ news_{i,weekly}}{Normal\ news_{i,weekly}} = \frac{\sum_{t=0}^7 News_t}{\frac{1}{52.1428} \sum_{t=-365}^{-1} News_t} \quad (1)$$

where *Event news<sub>i,weekly</sub>* is the event related news quantity and is found by manually searching the Factiva database for all English language news for one week following the event (i.e.,  $t = 0$  to  $t = 7$ ), using the automatic company variables of Factiva, which yields all news articles related to a given company.<sup>8</sup> The normal news coverage, *Normal news<sub>i,weekly</sub>*, is found by counting the number of articles over the course of a year, ending a day before the announcement day 0, i.e. just before the one-week abnormal news period begins. That sum of articles is divided by the number of weeks in a (non-leap) year, 52.1428, to yield normal weekly news coverage. This ratio of news coverage after event, relative to normal news coverage,

---

<sup>8</sup> Factiva is favored over Nexus Uni in this instance, due to the comparable ease of searching for company-specific news using Factiva. Nexus Uni is used for sampling events due to its larger database of news journals and prevalent use within academia (see e.g. Fang and Peress 2009; Karpoff et al. 2008).

enables both relativity among events, and helps to reduce the extremes observed in the news variable, as the total number of news arguably vary greatly between companies, based on various factors such as size, industry etc.

Summary statistics on all variables is provided in Table 5. Continuous variables are shown in Table 5a, showing 3.95 times more news coverage in the event week compared to normal weeks. Since this variable is severely non-normally distributed and interpretation is difficult in the subsequent regression analysis, abnormal news is Box Cox transformed to have a mean 0 and standard deviation 1 (Box and Cox, 1964; Fox, 2016).<sup>9</sup> Other variables are as defined in Table 4.

< INSERT TABLE 5 HERE >

Categorical variables are summarized in Table 5b, which capture the nature and circumstances of the sexual harassment events. The table shows that a large majority, or 78% (155 events), occur in the US. Consistent with our sampling procedure the remainder of cases mostly occur in English speaking countries (adds up to 18%). About half of the sample occurs after #MeToo (45%), despite this post-period being only two years. The accuser is mostly female (88% of cases) and there tends to be only one accuser (73%). The type of sexual harassment is equally split between physical (53%) and non-physical (47%) harassment, where the type of physical misconduct is sub-categorized as groping (44%), sexual assault (34%) or rape (22%). In 57% of cases the initial news announcement of sexual harassment includes information on a litigation process, where thereof the litigation is in most cases merely planned (76%), as opposed to being settled (7%) or already concluded in a court of law (17%). In 25 out of the 155 US based cases, the American Equal Employment and Opportunity Commission (EEOC) acts on the behalf of the accusers. The accused personnel are classified into the categories of CEOs (14%), other executives (26%) or non-executives (60%). An incident of sexual harassment gets reported equally across firm headquarters (52%) as compared to other local outlets (48%), and most cases are at the parent company level (72%) as opposed to a subsidiary (28%). Finally, sexual harassment is allegedly a repeated occurrence for the firm in question in 21% of cases and only in 14% of cases the initial news of sexual harassment is announced and self-disclosed by the company itself, as opposed by the news outlets. All these variables are hand-collected from news outlets following sampling procedure already described in section 3.1.

---

<sup>9</sup> Our subsequent results carry through using a log transformation, but the Box Cox transformation provides a higher degree of normality and interpretability. The Box Cox transformation for a given explanatory variable,  $x$ , has the form  $(x^\lambda - 1)/\lambda$ . Lambda,  $\lambda$ , determines the exact transformation and the  $\lambda$  that results in the most normal transformation will depend on the data that is to be transformed.  $\lambda$  can vary from -5 to 5 and selecting the one yielding the most normal transformation can be automated in statistical software (Fox and Weisberg, 2019), in our case  $\lambda = -0.57$ .

Lastly, in Table 6 we also present the correlation matrix of continuous variables, which overall depicts fairly low correlation across variables, implying limited concern for multicollinearity, which we return to in Section 4.2.

< INSERT TABLE 6 HERE >

## 4 Results

### 4.1 Average market reaction

We employ an event study methodology to quantify the effect of news being published about sexual harassment on company stock returns (MacKinlay 1997; Cambell, Lo, and MacKinlay 1997). The estimation window for calculating normal returns consists of 250 trading days, namely from day  $t = -270$  to  $t = -21$ , relative to the event day  $t = 0$  (cf. MacKinlay, 1997; Corrado, 2011; Ricci, 2015). Our event window, the period in which the event is observed and abnormal returns calculated, is that of  $t = -20$  to  $t = 20$ , where we focus our statistical inference on  $t = 0$  to  $t = 1$  (cf., Jory et al., 2015; Carberry et al., 2018). To estimate the normal (or expected) return we apply two models, namely the classical market model and three-factor Fama-French model. We calculate abnormal returns as the difference between realized returns and the estimated normal returns as follows, for the market model,

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}) \quad (2)$$

and, for the Fama-French model,

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt} + \beta_{SMB_i} R_{SMB_t} + \beta_{HML_i} R_{HML_t}) \quad (3)$$

for stock  $i$  at time  $t$ , where  $R_m$  is the market return and  $R_{SMB_t}$  and  $R_{HML_t}$  are the return of the size and value portfolios, respectively (Fama and French 1992, 1993). For non-US companies we compare the realized stock returns in local currency with the country-specific stock index and factor returns (MSCI indices from Bloomberg and country-specific Fama-French factors from Frazzine and Pedersen, 2014), which produces abnormal percentage returns comparable to similarly produced percentage returns of US firms. Following standard methodology (MacKinlay, 1997), we then proceed to calculate for both models i) the cumulative abnormal returns (CAR) as the sum of abnormal returns for each day within the event window and ii) cumulative average abnormal returns (CAAR) as the average abnormal return across all firms in an event window.

Figure 1 plots the average impact (the CAARs) surrounding a sexual harassment scandal. The figure shows that, regardless of choice between the market model and the Fama-French model, there is a large drop in abnormal returns around the time of the event. The CAAR drops to around -1.5% on the day

following the scandal. The sharp drop in CAAR around  $t = 0$ , and a steady CAAR of around 0% prior to the event date, supports the notion that the events are exogenous and unpredictable in nature. The drop of 1.5% corresponds to an impact of 450m USD on average for the companies in our sample (in 2019 dollars terms).<sup>10</sup>

< INSERT FIGURE 1 HERE >

In Table 7 we present inference on the statistical significance of the size of the initial market reaction, using both parametric and non-parametric tests. Of parametric tests, we apply the traditional  $t$ -test and the cross-sectional test of MacKinlay (1997), that is more robust to event induced variance, as it does not rely on estimation period abnormal returns, for which the volatility could be understated relative to the volatility of abnormal returns after the event. Additionally, we apply the standardized cross-sectional test (BMP test), which improves further on the cross-sectional test by standardizing abnormal returns and adjusting for forecast error (Boehmer, Masumeci and Poulsen, 1991). The standardization ensures robustness against highly volatile or risky stocks as it ensures that stocks with large variances in historical returns, and potentially large absolute levels of abnormal returns, do not dominate the test (see further Mikkelsen and Partch, 1988a, 1988b; Harrington and Shrider, 2007). Finally, we also apply two non-parametric tests to check that the results of the parametric tests are not overly influenced by outliers, i.e. a few extreme abnormal returns. First, we apply the generalized sign test (GSIGN) of Cowan (1992), which is based on the ratio of the number of positive CARs to the expected number of positive CARs (based on the ratio given in the estimation period). As only the sign of the abnormal return matters, the GSIGN is effective against outliers. The second non-parametric test is the generalized rank test (GRANK) of Kolari and Pynnonen (2011) that generally has higher test power than the GSIGN and the rank test of Corrado (1989). In short, the method standardizes abnormal returns and ranks the standardized CAR of the event window that is being tested, against the standardized ARs of the estimation period. The GRANK test is useful not only in determining significance when faced with the potential existence of outliers, but it is also robust to serial correlation in abnormal returns, event-induced volatility and, to a certain degree, cross-correlation caused by event clustering (Kolari and Pynnonen, 2011).

< INSERT TABLE 7 HERE >

---

<sup>10</sup> We estimate this dollar impact by multiplying the percentage change in the stock price for each firm by the market capitalization of corresponding company during the year of the announcement. Since the market capitalization of firms on average increases over our sample period, we make dollar denominated market values comparable across time by value-adjusting them by the S&P500 index to 2019 values. The 450m USD impact is the average of those value-adjusted firm-level effects.

Table 7 shows that on the event day (the event window of day 0 to 0, or  $t = 0:0$ ), the negative CAAR of -0.82% is significant across all parametric inference measures, while not across the non-parametric tests. Looking at the event window of day 0 to 1 ( $t = 0:1$ ), the CAAR of -1.46% deviates significantly from 0 as measured by the whole array of inference measures. This result supports that sexual harassment scandals on average are associated with a drop in market value. The size of the impact is on par to that of other corporate scandals documented in the literature, cf. Table 1. The stronger cumulative market reaction over the course of the day where the scandal is revealed and the following trading day is not unexpected. It is well documented that information is diffused to the market through the media and that reactions are often gradual (see e.g., Peress, 2014). In addition, the significance of the negative CAARs of the prolonged event windows of  $t = 0:2$  and  $t = 0:3$  are pervasive as well.

The analysis employing the Fama-French model confirm these results. We observe that the CAAR of  $t = 0:1$  when using the Fama-French model is -1.51% and significant across all applied test statistics. The following event periods follow the same pattern. Lastly, the weak or non-significant effect over  $t = -1:-1$  supports exogeneity and unpredictability of the events, ruling out e.g. leakage.<sup>11</sup> This is further supported with non-significant effects over  $t = -2:-1$  and  $t = -3:-1$ . In summary, a significant negative CAAR is observed after the event date and is highly significant across a wide array of significance tests. It is worth reiterating that the various characteristics of the different test statistics imply that these results are quite robust and not spurious or the result of outliers.

As a final note on the average effect of a sexual harassment scandal, it appears in Figure 1 that the strong and significant initial market reaction to some extent reverses as time goes towards 20 trading days after the event, or roughly a single calendar month. This pattern is explored in Section 7, e.g., showing correlation between news diffusion and the return reversal.

## 4.2 Cross sectional variation in market reaction

To determine whether there are certain factors or circumstances around each event that help explain and quantify the market reaction for that particular event or firm, we perform a regression analysis where the response variable is that of the  $t = 0:1$  CAR for every sample event. The explanatory variables considered in the regression analysis are those of the summary statistics in Table 5.

---

<sup>11</sup> Weak significance arises due to a couple of events experiencing a large, positive abnormal return on the day prior to the announcement date (specifically, the cases of Insys Therapeutics in May 2018 and Southern Cross Media Group in February 2018 have a pre-announcement return above +5%). Recreating Table 7 without these two observations results in a non-significant  $t = -1:-1$  effect (not reported). In the regression analysis that follows in section 4.2, we apply the DFBETA measure to more systematically capture any data points excessively influencing our estimates.



In specifying the regression model, we took a couple of cautionary steps. First, we identify outliers by detecting if any single data point influences excessive bias on the parameter estimates. For this we apply the DFBETA measure for each event (cf. Belsley, Kuh, and Welsch, 1980; Fox and Weisberg, 2011), which highlights two specific events as highly influential and we therefore drop from the regression analysis.<sup>12</sup> Similarly, four events for which news data is judged to be excessively affected by unrelated events are excluded only from regressions that include the abnormal news variable.<sup>13</sup> Second, to apply a linear regression model we apply a monotonic transformation to any explanatory variable that exhibits a non-linear relationship with the response variable (cf. Stock and Watson 2010).<sup>14</sup> Our analysis supports logging two variables (assets and claim size) and the aforementioned Box-Cox transformation of abnormal news.

#### *Univariate analysis*

In order to assess which of the sampled regression variables may have a relationship with returns, we fit univariate models in order to assess each variable on its own. Table 8a shows the  $t = 0:1$  CAR regression relating to event-specific variables. The variables are presented in order of their explanatory power.

< INSERT TABLE 8 HERE >

First, our personnel variable shows that the involvement of a CEO in a sexual harassment scandal has the largest negative impact on market returns. Other studies have found similar amplified effects of CEO involvement, i.e. this seems to generalize across various studies of corporate scandals. For example, Engelen (2012) finds that the effect of insider trading on stock returns is stronger when the CEO is involved and Cline et al. (2018) find managerial indiscretion to be more detrimental to firm value when

---

<sup>12</sup> The two scandals are those of RYB Education in November 2017 and the scandal of National Beverage Corp in July 2018 (refer to appendix for the full list of events). RYB Education realized a  $t = 0:1$  CAR in excess of -40%, while exhibiting an extreme increase in abnormal news coverage. Likewise, National Beverage Corp experienced an extreme increase in abnormal news coverage alongside a very high return on assets, indicating outlier behavior, as confirmed by the DFBETA-measures. We further employ Cook's distance (Robinson et al., 1982) of outlier detection of the data with the two identified outliers removed, which concludes no outliers/influential observations after the removal of RYB Education and National Beverage Corp. The event study results in Table 7 are robust to excluding these two observations (not reported).

<sup>13</sup> This includes Disney during an event period in which the news coverage was affected by the planned release of a new movie in the cinema and three firms which released new planned product concepts during the event period, i.e. events of supermarket chain Lowe's, fashion company Kate Spade and beverage company Dr. Pepper.

<sup>14</sup> To examine whether the continuous explanatory variables of interest for the OLS regressions should be transformed, three types of plots were constructed: 1) Univariate scatterplots with the  $t = 0:1$  CAR and each explanatory variable with a straight and smoother line fitted, the latter to reveal non-linear relationships, showing the need for transformations, 2) QQ-plots of the explanatory variables and 3) histograms of the explanatory variables to assess their distribution. We omit these plots for brevity.

committed by the CEO. Similarly, Bennedsen et al. (2020) find that CEO's hospitalization correlates with declines in firm performance, whereas hospitalization of other senior executives does not have similar effects. Second, the magnitude of abnormal news also strongly relates to the market reaction. A one standard deviation increase in abnormal news corresponds to a 1.69% drop in market value. This aligns to both Huberman and Regev (2001) and Palomino et al. (2008), who have, in other settings, shown that investors react strongly to news with very high salience. In addition, Carberry et al. (2018) finds that media coverage enhances clarity and credibility of a scandal which in turn is associated with more negative returns. Third, *Many accusers* (more than 5) associates with stronger negative effect. This likely indicates that the systematic nature of the misconduct in cases of many accusers can send a different, more negative signal to stakeholders and investors. Fourth, a locally occurring scandal is less negative than one taking place in the headquarters. Similarly, a scandal taking place in a subsidiary, as opposed to the parent company, has a relatively more modest effect (cf. column 6). It is expected that a scandal occurring in headquarters (locally) or in the parent company (subsidiary) will increase (decrease) the negative magnitude of the effect through higher (lower) prominence in the news (cf., Palomino et al., 2008).<sup>15</sup> Finally, a litigation presented in a news story, compared to a news story without litigation being mentioned, is associated with a relatively more modest effect in the cross section (column 5). This is similar to the pattern in Karpoff et al. (2005) who, like us, find that market returns respond more negatively to a news announcement revealing misconduct, without a legal accusation, than to a news story including a legal accusation.<sup>16</sup>

All other event-specific variables are not relevant when tested individually. We therefore do not report these individually for the sake of brevity, but instead collect the remaining variables in the rightmost the rightmost column of Table 8a in a single regression (the exception is claim size shown in column 7 and excluded from column 8, as there are only 42 observations where this information is available). One of

---

<sup>15</sup> Palomino et al. (2008) show that investors overreact to information with high salience (i.e., prominent in news) but low informational value (no real impact), and underreact to information with low salience and high informational value. So one would expect scandals in headquarters or parent companies to increase the effect of scandals as they are expected to have high salience, regardless of their informational value, while scandals locally or in subsidiaries are expected to be of lower magnitude, due to lower salience, even though they could be of high informational value (e.g., be representative of a sexual harassment culture which is bad for business).

<sup>16</sup> Karpoff et al. (2005) do not provide an interpretation, but one potential explanation is that cases reported in the media, *before* they turn into litigation, are potentially emblematic of more widespread, systematic issues of sexual harassment within a company, where litigation is not straightforward or easily engaged in, whereas for cases that are reported on *after* litigation has started, it may have been smaller one-off cases of harassment, where litigation is easier to start. Alternatively, there could be a media bias in the selection of coverage, such that the events covered *before* litigation are deemed more newsworthy or expected more impactful, which explains the positive parameter estimate of litigation. Carberry et al. (2018) also find a negative relation between formality of investigation and impact of overall scandals. We do not speculate on this further, as we cannot assess the validity of these potential explanations.

these insignificant variables is a dummy capturing the period after the #MeToo movement, which we return to for a more detailed analysis in Section 5.

In Table 8b we test for firm-specific factors that may influence abnormal returns. Overall, firm-specific variables explain the variation in returns much more poorly than event-specific data. The variables are again presented in their order of explanatory power and no single firm-specific variable exceeds an  $R^2$  of 4%. Of the factors that are significant, Table 8b shows that a higher asset value is associated with less negative abnormal returns, indicating that larger firms are associated with smaller relative decreases in market value following scandals (i.e., smaller percentage drop, not necessary less decrease in USD terms). Table 8b further shows that the governance score is weakly significant with a small economic magnitude and that market concentration is positively associated with abnormal returns. Although all of these effects in Table 8b can easily be rationalized, we do not pursue this further as these results do not carry through in multivariate regressions.<sup>17</sup> The fraction of female employees and female managers are also shown separately in Table 8b (as there are significantly fewer observations due to data availability) and all additional firm-specific variables are for brevity collected in the rightmost column of Table 8b a single regression, as none of these are statistically relevant when tested individually.

In conclusion, the univariate regressions suggest that the consequences for a company embroiled in a sexual harassment scandal depend more on the circumstances of the scandal than on the characteristics of the company. The negative effect of sexual harassment scandals is the strongest when involving the CEO and with a higher degree of abnormal news surrounding the event. The effect is in contrast dampened in cases where litigation is already underway. Also noteworthy are the many variables that, perhaps surprisingly, do not significantly affect the market's reaction, such as type of harassment, repeated events, fraction of female employees, and the period after the #MeToo movement that we revisit in section 5.

---

<sup>17</sup> For merely a brief elaboration, the asset size relation is in line with the findings of (Peress, 2014), but the effect is relatively modest as a one standard deviation increase in asset size can be calculated to translate into a cross sectional increase in returns of 1% point. Additionally, the weak association with the governance score is consistent with existing evidence that measures of corporate governance can help explain reactions to scandals (Paruchuri and Misangyi, 2015; Carberry et al., 2018). Lastly, market concentration is positively associated with abnormal returns, which could imply that firms in more concentrated and therefore arguably less competitive industries are associated with a less severe scandal effect. This means that the higher the switching costs, the more expensive it is for customers to punish a company embroiled in a sexual harassment scandal, which aligns to Hou and Robinson (2006), who find that firms in industries of higher switching costs are shielded from risk. Hou and Robinson (2006) also argue that the best proxy for barriers to entry when relating them to stock returns is market concentration. In Table 8b there is one less observation for market concentration/C4, as the US Department of Commerce does not publish concentration data for mining industries, hence the event of Hudbay Minerals is not associated with a C4 value.

### *Multivariate analysis*

To fully assess the cross-section variation the market impact of sexual harassment scandals we next include all covariates simultaneously in the regression analysis. We additionally include interaction terms that are considered relevant for explaining the variation in cumulative returns.<sup>18</sup> Table 9 shows the results of multivariate regressions for different periods and the two different models. The main results are contained within in column (1), which those the  $CAR_{t=0:1}$  impact for the market model.

< INSERT TABLE 9 HERE >

First, column (1) of Table 9 shows that the presence of a CEO is a strong driver of negative return, as a CEO involvement in a scandal is associated with a further 5.07% points negative impact on abnormal returns, compared to scandals where the implicated employee is below vice president (VP) level. Likewise, litigation remains a significant explanatory variable as it mitigates the negative effect by 1.52% points compared to a news story that does not mention of litigation. An additional result from the Table 9, not already observed in univariate results, is that scandals where firms announce the misconduct themselves first, i.e. self-disclose before it is discovered by the media, are associated with a 3.00% point more moderate effect on abnormal returns. This indicates that when firms themselves are allowed to present and frame the misconduct, they can to a larger extent contain the damage, thus making it less costly (cf. Pompian, 2012). This argument is supported empirically by Janney and Gove (2011) who find that self-disclosing information of a scandal is associated with a less negative reaction and argue that self-disclosing connotes more responsiveness of the firm as well as help build or repair a firm's reputation. This is also supported by the findings of Does et al. (2018) who find that firms responding to sexual harassment scandals in a proactive way rather than being dismissive and/or minimizing it (including showing no response at all) suffer smaller reputational losses.

Lastly, column (1) of Table 9 shows that there is again a strong negative effect associated with abnormal news for the  $t = 0:1$  event window of cumulative returns. For each standard deviation increase in abnormal news, the company market value is 5.13% points lower, all else equal. As before, this is in line with the literature that argues that investors' response to misconduct depends on the extent to which they notice it (Barnett, 2014). The abnormal news effect can empirically be related to other settings as well, e.g. that of Breberina and Schwaiger (2016), who investigate CEO scandals and find that more news coverage, is associated with a stronger reaction in terms of market value. Column (1) of Table 9 further

---

<sup>18</sup> To identify those interactions terms we follow the procedure of Dalggaard (2008) and Fox (2016), which involves evaluating all interactions and including only those that significantly contribute to explaining the variation of the response variable. This procedure identifies three significant interaction terms of the abnormal news variable, which we include in the regressions.

shows that the negative association of abnormal news is dampened if the event takes place in a subsidiary and for larger firms (by assets). A possible explanation for the interaction of news and size, is that scandalous news is able to change the reputation of a small firm relatively more than a large firm, as a scandal to a higher extent is able to create a negative framing effect for firms which market participants have no prior opinion about, such as smaller firms, unlike larger firms which market participants arguably already have constructed opinions about (Pompian, 2012). This assumes that there is less existing public knowledge about smaller firms relative to larger firms in the market. Supporting this argument is Breberina and Schwaiger (2016), who find that prior media presence contributes with a "healing effect" to the scandal, meaning a less negative effect for more well-known firms. Finally, the results indicate that there is not a differential impact after the #MeToo movement started. We return to this in Section 5.

Overall, the model in column (1) of Table 9 can explain 35% of the variation in returns, which is relatively high compared to related literature,<sup>19</sup> confirming the involvement of relevant explanatory variables and the inferences drawn above. To ensure robustness of the findings, we further run the regression using event windows  $t = 0:2$  and  $t = 0:3$ , cf. columns (2)-(3) that overall provides the same key results. Finally, repeating the exercise using the Fama-French model in columns (4)-(6) for calculating normal returns similarly confirms the robustness of the results, as they show no material differences in the significance of various parameters. In further robustness checks we also verify that the results are robust to including year fixed effects (not reported), which we otherwise leave out as we already control for time-dependent variation in returns via the abnormal return measure.<sup>20</sup>

To round off the analysis in Table 9, it is worth mentioning a few econometric issues. First, there is the issue of potential multicollinearity among the explanatory variables. Table 6 already indicates a general low correlation across continuous variables, but to fully distinguish between essential and non-essential collinearity, we calculate generalized variance inflation factors (GVIFs), namely the amount of the variance of variable already accounted for by the other regressors, for each explanatory variable in our regressions (Fox and Monette 1992; O'Brien 2007). It shows no signs of any multicollinearity (thus

---

<sup>19</sup> Karpoff and Lott (1993) find adj.  $R^2$ s of approx. 6%, while Jory et al. (2015), Carberry et al. (2018) and Cline et al. (2018) find an adj.  $R^2$  around 20%. Palmrose et al. (2004) find 17% when looking at restatement announcements and Bernile and Jarrell (2009) and Janney and Gove (2011) find adj.  $R^2$ s of 26% and 37%, respectively, when looking at options backdating scandals.

<sup>20</sup> For additional robustness we assess whether the negative impact can spill over to other companies within the same industry. For that we examine if the industry return as a whole is impacted when one company within that same industry is embroiled in scandal. For each industry we compare the average industry return on scandal dates to the average market return and find no statistical difference. The results are available upon request.

excluded for brevity). Second, despite the large number of explanatory variables collected for the purpose of this study and the relatively high explanatory power in regressions, it cannot be ruled out that a relevant variable is still missing, leading to omitted variable bias. For example, a potential issue could lie with extreme, negative return events, where a potentially omitted variable could be that of a "public outrage" or the like (Lyons, 2019), which would cover cases going viral beyond what can be measured by abnormal news. To investigate such possibilities, we assess whether the residuals are independent of the explanatory variables by performing a regression with the model residuals as response variable on all explanatory variables. All parameter estimates are zero (results excluded for brevity), indicating no relation between the error term and the explanatory variables. Third, and finally, is the issue of potential reverse causality, where one might for example point out that extreme price movements, reflected in the CAR, could attract and create more news. Even though the literature supports media coverage as a predictor and/or a causal factor of stock prices (see e.g. Tetlock, 2007; Tetlock et al., 2008; Engelberg and Parsons, 2011; Peress, 2014; Solomon et al., 2014), this paper does not set out to establish causation, but merely documents a strong negative relation between news coverage of sexual harassment and stock returns. Also, even if a sizable return was to cause abnormal news, this does not rule out that sexual harassment reports produce negative returns, e.g. through factors such as severity or personnel involved. As such the key results of this paper are not dependent on causality from abnormal news to negative returns.

To summarize this section, our regression results show that abnormal media coverage and the personnel involved in scandals are the largest determinants of the magnitude of the impact of a sexual harassment. In contrast, cases where litigation is present by the time it reaches the media, or where firms self-disclose the misconduct, are punished less by the market.

## 5 Additional perspectives on #MeToo

The #MeToo movement brought about a significant change in news coverage and public opinion regarding sexual harassment scandals (Does et al., 2018). Interestingly, however, #MeToo did not have a direct effect on the abnormal return impact of a scandal, once controlling for other variables. Here we provide an assessment of how the #MeToo movement may otherwise have had an impact, such as in terms of the volume of scandals and the average cost per scandal.

Despite there being no differential impact in the post #MeToo period in controlled regressions, a simple comparison of the average market impact before and after #MeToo is in order. Table 10a presents such a comparison, which mimics the methodology of Table 7, but now broken down across sub-periods. We define the beginning of the #MeToo movement to be that of the first major publications of the Harvey Weinstein scandal on October 5th, 2017 (The New York Times, 2017). The  $t = 0:1$  event window

shows a negative 0.98% market impact of a sexual harassment scandal before #MeToo, compared to a larger drop of 2.04% after #MeToo. Although this difference is not present in controlled regressions (there could e.g. be more CEO involvements in the post #MeToo period), these results nonetheless justify additional investigation.

< INSERT TABLE 10 HERE >

Accordingly, in Table 10b we examine the market impact of sexual harassment scandals before and after #MeToo using propensity score matching. This methodology accounts for any potential differences in firm characteristics by matching each firm involved in a scandal before #MeToo to another similar firm involved in scandal after #MeToo. The procedure is to calculate a propensity score using a probit model, i.e. find the probability of being in the pre-MeToo sample given observed firm characteristics. Thereafter the matching is based on finding the nearest neighbor, i.e. each ‘pre-MeToo firm’ is matched with an ‘post-MeToo firm’ with the closest propensity score. The difference in market impact between the matched sub-samples is the object of interest. After verifying the quality of the match – namely that the means of each covariate does not significantly differ between the matched groups – we report the estimates of the difference in market impact in Table 10b. The results show that there is no statistical difference in the market reaction across the matched sample pairs, thereby supporting controlled regression results.

Although the #MeToo movement has not systematically influenced the market response to sexual harassment scandals, it may nonetheless have been impactful in other dimensions. When examining the pure volume of scandals, we find that out of 199 events in our sample 90 took place after the emergence of the #MeToo movement, i.e. after October 2017. The remaining 109 occurred from January 2005 to October 2017. Since approximately 10% of the sample period takes place after the emergence of the #MeToo movement in October 2017, this roughly represents a 380% over-occurrence of scandals in the #MeToo period, relative to if the scandals were evenly distributed across total sample period.<sup>21</sup> In other words, based on our sample, there has been an almost fourfold uptick in the volume of sexual harassment scandals for public companies covered in the news after the emergence of #MeToo. This change is documented in Figure 2a, which shows that the average number of scandals quadruples from 1.4 scandals to 5.7 scandals per month.

---

<sup>21</sup> The sample is 169 months and 16 months are after MeToo, which corresponds to  $16/169 = 9.47\%$  of the sample period. If scandals were distributed equally through time, 9.47% of scandals would occur during this period, corresponding to 18.84 out of the total of 199 scandals in the sample. Instead, the number of scandals post MeToo is 90, which is 478% higher than 18.84, thereby representing a 378% over-occurrence.

< INSERT FIGURE 2 HERE >

Assuming that the underlying behavior responsible for creating scandals is unchanged, this implies that the probability of a scandal being revealed is higher. This can indicate at least two things. First, the media covers scandals more, which reflects a growing public interest and concern for sexual harassment related news after the emergence of #MeToo. Second, it can indicate that victims and/or firms have become more aware of the public sentiment, prevalence of sexual harassment scandals and/or their value destroying potential, which could explain why more acts of misconduct after #MeToo are flagged and acted upon.

Finally, to further examine the impact of #MeToo, we assess the average cost of a scandal, in terms of the absolute market value eroded within the  $t = 0:1$  event window. For each scandal, this is simply the CAR multiplied by the market value of the firm at the time prior to the scandal. To make numbers comparable across time, we adjust our estimates for the overall change in market capitalization over the sample period using the S&P500 index. Figure 2b highlights the results, showing that average cost of a sexual harassment scandal in our sample went from 226m USD before #MeToo up to 719m USD after #MeToo (both numbers in 2019 terms). This implies that the average sexual harassment scandal costs shareholders more than three times as much in the short-term after #MeToo, compared to earlier.<sup>22</sup>

Increased scandal volume and average nominal cost of scandals after the emergence of #MeToo indicates that the movement has potentially changed the effect sexual harassment events have on the market value of firms. This could for example happen via the increased media coverage of sexual harassment and public reaction to the #MeToo movement (The Guardian, 2017; Does et al., 2018). Additionally, these effects provide a justification for the initiatives of large asset managers (Walker, 2018; CalSTRS, 2019), participants in M&A transactions (Quinlivan, 2018) as well as shareholders (The Financial Times, 2019). These actors' recent increase in protection towards the detrimental effects of sexual harassment scandals indicate a belief that scandals are more damaging now than before. Based on the analysis presented in this section and the previous one, we can nuance this perception by concluding

---

<sup>22</sup> Further investigation shows the higher nominal impact is not only because of an increase in the average percentage impact of a sexual harassment scandal changed, cf. Table 10a, but also because larger firms are on average subject to scandals after #MeToo. This follows from the average market value of the companies in our sample being 56bn USD prior to #MeToo vs. 73bn USD after #MeToo (both numbers in 2019 terms and controlled using S&P500 index as detailed above). This suggests that larger firms are embroiled in scandal in the latter period. The data in hand does not allow for testing why this difference may be, but one can speculate that it could be due to e.g. more whistleblowing by employees in large organizations, where whistleblowing possibilities could be better than in smaller firms, or due to an increased media scrutiny on large corporations under the assumption that news of a scandal about a large company will be read by more people than news of a scandal in a small company. We refrain from making conclusions on this.



that while the average short-term impact of scandals has not significantly changed according to a controlled regression analysis, there is a much larger volume of scandals, and as thus a higher risk, along with the companies involved being larger, making the absolute value of market value eroded greater.

## **6 Why does sexual harassment lower market value?**

Drawing from existing studies on corporate scandals there are several proposed channels through which a negative impact from sexual harassment may occur. Based on the literature we propose three channels of impact.

First, a negative market impact can be due to direct penalties associated with a scandal. This includes any fines the company will have to pay to potential plaintiffs and/or governmental bodies for any civil or legal wrongdoing. This is exemplified in Karpoff et al. (2008) and Hemel and Lund (2018), where the latter list and study the legal aspects of shareholder lawsuits arising specifically from workplace sexual misconduct.

Second, a potential channel of negative impact is the possible loss of personnel and/or productivity as a result of a scandal, for example through the firing or resignation of the implicated personnel (see e.g., Raver and Gelfand 2005, Engelen 2012, Jory et al. 2015, Cline et al., 2018).

Third, companies may incur a loss of reputation and public sentiment following a scandal. If customers value not only the function of the products they use, but also place value in using products of, or from a firm of good reputation surrounded by positive public sentiment, then a loss of reputation following a scandal can arguably lead to perceived lower value of products in the eyes of customers, employees, investors, suppliers, collaborators or other stakeholders (Keller and Lehmann 2006, Does et al., 2018, Walker, 2018; CalSTRS 2019). This could result in e.g. lost goodwill, lost business relationships and opportunities, lower future sales of the company's products, etc. In principle this should all get factored into the market's overall perception of the scandal as it is announced.

In this section we investigate the relative importance of these three different channels of impact. Our data offers new empirical evidence on the abovementioned channels within the setting of sexual harassment scandals, and additionally provides possible variation in the public perception of such scandals via the #MeToo movement. We do not claim to be fully able to distinguish between the different channels, as at least two challenges arise in pursuing the underlying mechanism. Despite our sample size being reasonably large compared to related studies (cf. Table 2), there is limited scope for splitting it into subcategories of firms and/or events as the number of observations quickly drop. Also, even though the

data provides some degree of cross-country evidence, the events nonetheless mostly occur in relatively developed and uniform settings.

First consider the impact of direct penalties associated with a scandal on firm value. Out of the 199 announcements of sexual harassment we study, there are 114 cases stating that litigation will or has been initiated. In 42 of those cases the size of the claim is mentioned, where the median claim is 2.5m USD. This amount only corresponds to 0.6% of the average market impact of 450 million USD (cf. section 4.1). Furthermore, as already documented in Table 8a (column 7), the market reaction to an announcement of sexual harassment is not significantly affected by claim size. In line with existing literature, which extensively documents that legal fees, court fines and other direct penalties imposed on firms following corporate scandals are relatively small compared to the market impact (Karpoff et al., 2008; Karpoff and Lott, 1993; Cline et al., 2018), we similarly conclude that direct penalties are not likely to drive the negative impact of sexual harassment scandals.

A second potential channel is through costs associated with the termination of the accused personnel. Not only can this lead to severance pay but also to loss of knowledge and/or productivity as the personnel involved is replaced (see e.g., Engelen, 2012, and Jory et al., 2015). This is arguably particularly relevant for key employees such as CEOs. To investigate this, we further identify news announcement reporting that the CEO has been fired, has resigned, or is to take leave of absence. Out of the 27 cases where a CEO is accused, there are 7 cases mentioning immediate departure. We report the results distinguishing between CEOs staying and departing in column 1 of Table 11. While keeping the limited number of observations in mind, the results show a milder effect for when a CEO departs a firm following sexual harassment claims, compared to cases where the CEO stays. This contrasts the personnel and/or productivity channel, which would predict relatively higher costs for CEO departure.

< INSERT TABLE 11 HERE >

For the third channel, it is not feasible to directly observe loss of reputation and public sentiment resulting from scandals. We can however use signals of attempted reputation repair and cross-sectional differences in the perceived seriousness of sexual harassment as proxies for the importance of reputation and public sentiment on the market impact of scandals.

With regards to reputation repair, two measures we have assessed provide clear indications towards this channel being of importance. Firing a CEO, as noted above, which arguably is associated with more immediate and direct costs than the alternative and hence to some degree can be considered a measure of reputational repair, is associated with a less significant market impact than not firing the CEO. In addition, we show a milder market impact on firms who self-disclose (cf. Table 9), which can also be

considered a form of reputational repair. This aligns with Chakravarthy et al. (2014) who study reputation repair following serious accounting restatements and find that replacing management has a positive effect on subsequent cumulative abnormal returns.

With regards to differences in perceived seriousness of the act of sexual harassment, we can apply indices of gender equality and perceptions of working women across countries. If scandals that occur in countries where sexual harassment is culturally perceived as less of an issue result in a less pronounced market impact this would be an indication of a reputational and public sentiment channel. To assess this, we use OECD's Gender, Institutions and Development Database that provides cross-country survey data on the average attitudes towards working women. The data shows the percentage of people across countries that disagree with the following statement: "It is perfectly acceptable for any woman in your family to have a paid job outside the home if she wants one." We take this as a proxy for gender roles in labor markets and the public's perception of how women are generally viewed and treated in the workplace. In the US 1% of the population disagrees with this statement. We classify countries as having relatively negative attitudes toward working women if they deviate one standard deviation or more away from the sample median.<sup>23</sup> Only nine observations of sexual harassment belong to countries classified as such. Yet the differential market impact is large and statistically significant, where column 2 in Table 11 shows that the impact of sexual harassment scandals is 2.26% points milder on firms in countries where people have relatively negative attitudes towards working women. In those countries the market reacts less severely to news of sexual harassment, which also holds true when not filtering out differences in event circumstances and firm characteristics (column 3). The non-controlled comparison in column 5 also reveals that there is on average no absolute effect of sexual harassment events in countries with relatively negative attitudes towards working women (non-significant absolute effect of  $-1.35\% + 1.38\% = 0.03\%$ ). In other words, in our sample, the negative impact of sexual harassment on firm market value only applies to countries with more liberal views towards women in the workplace.

We test the robustness of the above conclusions on gender roles and sexual harassment perception using two additional measures of gender inequality, the Gender Inequality Index provided by the United Nations Development Program and the OECD Employment Database on gender wage gap. These

---

<sup>23</sup> The sample median corresponds to the attitude in the US, which is where most events in our sample occur. We classify countries into two groups given that there is little time variation in this variable across countries, where the group of countries categorized with relatively more negative attitudes towards working women (from most negative to least negative) are India, Israel, Philippines, South-Korea and Germany. This results in only 9 observations of sexual harassment, which in itself may reflect a gender biased attitude of those countries. The remainder occurs in countries categorized with relatively positive attitudes, i.e., Canada, Spain, Australia, Italy, USA, New Zealand, UK and France, where 0-3% disagree with the statement. The OECD's database on Gender, Institutions and Development is available at [stats.oecd.org](http://stats.oecd.org). Similarly, the UNDP Gender Inequality Index is available at [hdr.undp.org](http://hdr.undp.org) and data on the gender wage gap obtained from [data.oecd.org](http://data.oecd.org).

measures capture different aspects of gender inequality. The Gender Inequality Index is a relatively broad index that not only captures gender biases in labor markets, but also inequality in education, reproductive health, etc. In contrast, the gender wage gap more directly captures gender imbalances in the workplace in terms of economic outcomes.<sup>24</sup> Table 11 shows that both inequality measures directionally provide the same conclusion albeit the UNDP index not significantly so (t-stat. of 1.64). Columns 4-5 respectively show that if gender inequality worsens, as per a one standard deviation increase in the inequality index, that correlates with a 0.50% milder market impact (standard deviation of 0.07 multiplied by the coefficient of 7.20%), and similarly, an increase in the gender wage gap by one standard deviation (2.74%) correlates with a 0.44% milder market impact ( $2.74 * 0.16$ ). In conclusion, labor market inequality measures, namely the gender wage gap and the public's attitude towards working women, significantly correlate with the market impact of sexual harassment scandals.

In summary, immediate attempts at reputational repair are associated with alleviated market responses, indicating that the reputational/public sentiment channel is important. Cross-country differences in gender-perception and equality are taken as proxies for the culturally perceived seriousness of sexual harassment and are shown to associate with the market impact of sexual harassment scandals. The results indicate that the reputational effect and impact on public sentiment is an important channel of impact on market value for companies embroiled in a sexual harassment scandal. The wider literature on corporate scandals similarly argues that a negative stock market reaction is largely driven by loss in trust and public opinion (e.g., Karpoff and Lott, 1993; Karpoff et al., 2008; Engelen, 2012; Cline et al. 2018).

## 6.1 What makes announcements of sexual harassment likely?

If public sentiment partially explains the market impact of sexual harassment scandals, it may further associate with the likelihood of sexual harassment being reported in the first place. For example, it may be that firms with high consumer awareness, such as those catering directly to retail investors, are more likely to be reported in the media. We next investigate if this is the case, and if any other observable firm characteristics positively associate with the frequency of sexual harassment announcements.

Table 12 reports the results of logit regressions where the dependent variable takes the value of one if a sexual harassment announcement has been made involving the firm (the 199 observations of our

---

<sup>24</sup> The Gender Inequality Index provided by the United Nations Development Program measures gender inequalities in reproductive health (maternal mortality, adolescent birth rates, etc.), empowerment (female parliamentary members, female education, etc.) and economic status (female labor market participation, etc.). For our sample events this index ranges from 0.05 (France) to 0.55 (India), where a higher value represent more gender inequality. The OECD Employment Database provides data on the gender wage gap across different countries, defined as the difference between median earnings of men and women relative to median earnings of men. In our dataset this ratio ranges from 14.3% (Australia) to 36.7% (India).

sample), but the value of zero for a control sample of listed firms for which no such announcements have appeared.<sup>25</sup> The coefficients show the proportional change on the announcement probability (odds ratio) when the covariate changes by one unit. A reported estimate above (below) one corresponds to a positive (negative) association with the announcement probability. For ease of interpretation of economic magnitudes, the non-binary explanatory variables are standardized such that they are measured in units of standard deviations. For example, an estimate of 2 (0.5) implies that a firm is twice (half) as likely to be involved in a sexual harassment scandals if the corresponding firm characteristic increases by one unit (standard deviation).

< INSERT TABLE 12 HERE >

In Table 12 we step-by-step add all the explanatory variables available for both the treatment and control sample. Several variables associate with higher probability of sexual harassment announcements. However, it is important to note that i) no causation is established and ii) a positive relationship does not necessarily indicate that the act of sexual harassment is more likely, but merely the public announcement thereof. For example, the results show that sexual harassment announcements positively correlate with more female representation in a company.<sup>26</sup> Although the underlying mechanism is not established, it is intuitive to interpret this as victims being more likely to step forward in workplaces with relatively many female colleagues or superiors (as opposed to a high female representation positively associating with the harassment act itself). Second, sexual harassment announcements are found to positively correlate with firm size, in line with existing literature that points to greater agency issues at larger firms and larger firms attracting increased media attention (Jory et al., 2015; Cline et al., 2018). Also, even if every harassment case is equally likely to become public, larger firms will naturally be more reported on if more incidents occur among a larger set of employees. Third, firms producing consumer cyclicals are relatively more likely to be associated with sexual harassment announcements compared to other industries. In our sample of sexual harassment scandals, 81 out of 199 cases (41%) involve firms in the consumer cyclicals industry (cf. Table 5b). Only 13% of firms in the non-harassment control sample belong to this sector. This suggests that either sexual harassment is more prevalent in the consumer industry, or that this sector

---

<sup>25</sup> For feasibility we limit the control sample to US listed companies. Given the vastness of an alternative global control sample, this additionally minimizes the risk of overseeing sexual harassment scandals in the control group. The control sample totals 755 companies that have been in the S&P500 index at any time during the 2005-19 sample period, for which all non-binary variables are averaged across the sample period (following the methodology of e.g., Nielsson, 2013). For consistency, the treatment sample is similarly limited only to US firms involved in sexual harassment scandals. The data sources are the same as those of the treatment sample, cf. Table 4.

<sup>26</sup> Table 12 only includes the fraction of female board members, but the results are verified for the fraction of females in management and among general employees in univariate regressions (not reported). In the multivariate regressions of Table 12 we merely exclude the ratios of female managers and female employees as they restrict the sample size substantially.

receives disproportionate public attention and overrepresentation in the media. To further investigate the latter, we also identify 57 companies with highly recognized brands, defined as those appearing in publicly available reports on the top 100 US and/or worldwide brands, as classified by BrandZ rankings.<sup>27</sup> Consistent with some sectors or recognizable companies receiving disproportionate public attention, column (5) of Table 12 shows that well-known brand name companies are much more likely to appear in media announcements of sexual harassment. Overall, the results show that i) firm size, ii) the consumer cyclical industry, and ii) brand names companies, positively correlate with the likelihood of sexual harassment announcements. The ratio of females on the company board, however, turns insignificant in the fully controlled regression in column 5.

In columns 6-8 of Table 12 we dig deeper across various subcategories of sexual harassment announcements by changing the dependent variable. The number of announcements accordingly falls as we study specific subcategories thereof, and we exclude all industry dummies besides the consumer cyclicals industry, as there are no or very few announcements left for each of those industries.<sup>28</sup> Column 6 examines the subsample of cases that occur in the post-#MeToo period. The results show that the same factors significantly correlate with sexual harassment announcements after the #MeToo movement, now including female representation on the board of directors. Column 7 studies the propensity of companies to self-disclose sexual harassment, as opposed to it first being reported in the media. Interestingly, for this subsample of announcements the governance score of companies becomes significantly positive. This implies that better corporate governance makes self-disclosure of sexual harassment more likely. Similarly, column 8 examines announcements where CEOs are accused of sexual harassment and immediately leave the company, where better corporate governance positively associates with CEO departure. Better corporate governance thereby makes both self-disclosure and the departure of an accused CEO more likely. From Tables 9 and 11 we also know that self-disclosure and CEO departure mitigates the negative market impact of a scandal. Taken together, good corporate governance

---

<sup>27</sup> BrandZ rankings are based on combining financial and market data with worldwide consumer surveys covering 3.7 million consumers in 51 countries. The rankings are compiled by Kantar, which is a company specializing in data collection and research on consumers behavior. Their rankings of US and worldwide companies are available via [www.rankingthebrands.com](http://www.rankingthebrands.com) and [www.brandz.com](http://www.brandz.com), as well as being regularly reported in media, such as The Financial Times (<https://www.ft.com/content/3a3419f4-78b1-11e9-be7d-6d846537acab>).

<sup>28</sup> To elaborate, when including all industry dummies for this smaller sample of announcements, several industries only contain firms in the control group (those with no announcement) and therefore these firms automatically drop out of the sample as they perfectly predict the outcome variable. Additionally, other industries only include a small number of firms in the treatment group, which makes coefficient estimates unstable and extreme. We therefore exclude the non-significant industry dummies when studying announcement subsamples in columns 6-8, which are all the industries except consumer cyclicals. Importantly, coefficients on other explanatory variables are robust to including industry dummies (not reported, but available upon request).

increases the likelihood of decisive action taken by the company, which again can mitigate the impact of a scandal if were it to arise.

In summary, we find that a higher female representation positively correlates with sexual harassment announcements, in particular after #MeToo, and that better corporate governance makes self-disclosure of sexual harassment and immediate departure of an accused CEO more likely. A primary conclusion is that the propensity of sexual harassment announcements positively associates with firm size, the consumer industry and well-known brand name companies. This suggests that reports of sexual harassment are more likely among firms with greater consumer awareness. In Section 7 we return to this sample of firms to investigate whether these firms also experience a different longer-term market reaction compared to other firms.

## 6.2 Case studies of public sentiment and investor reactions

The results so far indicate that both the likelihood of sexual harassment reports and the negative impact thereof associates with measures that intuitively relate to public opinion and market sentiment. To round of this analysis, we provide two case studies that showcase how a more direct measure of sentiment correlates with stock returns following a sexual harassment scandal and how influential investors may accordingly react.

We undergo an exhaustive data collection for the two cases, that is well beyond what we can do for all available events. The purpose of this section is primarily to exemplify different cases and the reactions that follow, rather than to make general claims. The cases are those of the Australian upmarket department store David Jones (discussed in section 3.1) and the British luxury clothing retailer Ted Baker. Both companies were involved in disruptive scandals with considerable media attention. The cumulative abnormal returns (CARs) of both are plotted in Figure 3. The aim is to investigate whether there is a relation between CAR and the public's opinion on these companies, thereby further lending support to market sentiment being a factor of impact.

< INSERT FIGURE 3 HERE >

To establish a measure of public sentiment we collect tweets from Twitter.com that refer to either of these companies following their respective sexual harassment scandals. We utilize the content of these to proxy public sentiment. Since Twitter imposes data restrictions, we limit the search to the event date and following 20 trading days.<sup>29</sup> This results in thousands of tweets that we textually analyze by counting

---

<sup>29</sup> Twitter severely limits the number of historical tweets one can retrieve and the number of requests one can make. This restricts the analysis in terms of number of companies to be analyzed, the type of companies (as some companies are generally more tweeted about), and the length of the period under study. For the two chosen companies we download all tweets except

the number of positive and negative words on each day against a pre-defined categorization of such words in the Bing Sentiment Lexicon (2020). We then define our sentiment measure as the difference between the number of positive and negative words divided by the total number of positive and negative words (Davis et al., 2012; Henry and Leone, 2016; and similar definitions in Feldman et al., 2010; Garcia, 2013). This measure of positive word frequencies minus negative word frequencies has been described as the abnormal positive tone (Huang et al., 2014).

To graphically investigate how the abnormal positive tone aligns with cumulative abnormal returns, we plot the cumulative sentiment measure by summing up the abnormal positive tone for each day over the 20 trading days that follow the reported sexual harassment. Figure 3a compares this cumulative measure of public sentiment to the cumulative abnormal returns of David Jones. The stock performance of David Jones is initially negative but fully recovers over the period. Similarly, the public sentiment is initially very negative, but gradually the tone of the tweets about the company improves. Overall, the pattern of improved public sentiment (i.e. the fraction of positive words compared to negative) aligns with higher cumulative abnormal returns. This is confirmed by a very high correlation coefficient of 0.86. This indicates that even though public sentiment may not necessarily explain day-to-day returns, the overall stock performance and public sentiment are highly correlated.

Figure 3b offers one additional example of this relation following reported sexual harassment in the high-end retailer Ted Baker. The two companies, Ted Baker and David Jones, are in similar lines of business and in both cases the CEO was accused of sexual harassment. For Ted Baker, however, the initial drop in stock returns is more dramatic and the cumulative return does not fully recover. Interestingly, although the public sentiment did not drop to the levels of that of David Jones, the figure nonetheless reveals that again the pattern of cumulative abnormal returns highly correlates (0.78) with public sentiment. This applies both to the relatively more turbulent performance in the first 10 trading days and to the relatively more stable period that follows. So even though public sentiment may not be the only factor at play, we take this as evidence that public opinion relates to stock performance following reports of sexual harassment.

Besides public sentiment, the reactions of large shareholders or activist investors are also likely to impact company value. Whether such affluent investors react on their own initiative or in response to

---

those classified as retweets and those classified as being in another language than English. Tweets from a weekend or bank holiday are mapped to the following trading day. For both companies we perform cursory diagnostics of the tweets to ensure they indeed refer to the company and not to another topic or unrelated news. We also filter any obvious noise, such as the same account sending over 500 automated tweets (out of about 7,000 tweets) on fashion sales related to Ted Baker. The remaining tweets are textually analyzed using open source packages provided by Kearny (2019).



public outcry, it can in either case have direct consequences for the company involved. We find several examples of this via Factiva news searches (described in section 3.2). One example is the case of Wynn Resorts, where the stock price fell sharply following allegations of sexual misconduct by its founder and CEO Steve Wynn. Individual investors other than insiders held only 4% of outstanding shares, but at least one major institutional investor was confirmed to have sold its entire stake in the company in response to the announcement of sexual harassment (CNN, 2018). Other large shareholders in Wynn Resorts also responded, such as The California Public Employees' Retirement System, CalPERS, the largest public pension fund in the United States. The fund, known for its wide-reaching shareholder activism, demanded in a joint public statement with other pension trustees, institutional investors and asset managers in California, that anti sexual harassment principles be put in place across their entire portfolio, citing the case of Wynn Resorts as evidence for sexual harassment being detrimental to company value (The Orange County Register, 2018; California State Treasurer, 2019). In another case in 2019, CalPERS similarly pressed a private equity management company, in which it invested \$1.7 billion, over its co-founder's relationship with registered sex offender Jeffrey Epstein. A spokesperson stated that the pension fund "...recognizes that sexual harassment ... can result in significant ... reputational risks" and that the pension fund "continually monitors its holdings, engages companies and collaborators to ... implement action plans" (Pensions & Investments, 2019). The pension fund has also called out for data and analyses of the costs that companies face as a result of sexual harassment, noting that it has a unique opportunity to take this on, being "at the top of the investment chain." (Los Angeles Times, 2019).

Several more cases directly demonstrate concerns of reputational risks among large shareholders. As a last example, the investor Arjuna Capital represented 30% of Comcast shares when several news reports of sexual harassment in the company arose in 2017-18, including accusations against Comcast-owned NBC and its prominent host Matt Lauer. In response, Arjuna Capital filed a shareholder resolution asking for an independent investigation, citing the need to avoid legal and reputational risk.

Overall, such examples indicate that the impact of corporate scandals is not limited to the stock return effect illustrated in e.g. Figure 1, but are likely to be more widespread if damage to public opinion is not addressed. Consistent with this notion, Chakravarthy et al. (2014) study several means of reputation repair after serious accounting restatements and find that a combination of actions targeting various stakeholders generate positive market returns as reputation is repaired. This includes improving corporate governance by changing the board composition or replacing senior management. These results align with several of our findings. We show that improved corporate governance and higher female representation on the board makes self-reporting of sexual harassment more likely (Table 12). These factors additionally

increase the probability replacing an accused CEO (Table 12), which again softens the negative impact of sexual harassment scandals on stock returns (Table 11). The channel of public sentiment is further supported by sexual harassment scandals i) having a stronger impact with high media coverage (Tables 8 and 9), ii) being concentrated in countries where public opinion is favorable towards working women (Table 11), iii) being more likely among companies vulnerable to public opinion (Table 12).

In sum, the damaging effect on company value is likely to associate with both negative sentiment among the general public and reactions of large shareholders. Accordingly, the importance of repairing company reputation is well recognized as several examples of investor activism demonstrate. These overall conclusions from case studies align well with the empirical results of the sentiment-based correlations with market impact.

## 7 Beyond the initial market reaction

For completeness we further examine the apparent reversal of the significant initial market reaction, as mentioned in the final part of Section 4.1 and observed in Figure 1. Although our data and associated event study approach is not designed to study the long-term impact of reported sexual harassment, compared to e.g. the long-term approach of Au et al. (2020), it is nonetheless of interest to examine the market dynamics in the days following the announcement. We simultaneously recognize the challenges in making conclusive statements with respect to the statistical significance over long event windows. Specifically, a non-significant long-run CAAR is not unusual, nor necessarily an indication of complete reversal, as the variance of the CAAR is generally an increasing function of time. For the  $t$ -stat, for example, the variance of a CAR is a simple linear function of the length of the event window and the estimation period variance (MacKinlay, 1997). This issue and low statistical power of long-term inference testing using event study methodology has been documented widely, see e.g. Mitchell and Stafford (2000) and Kothari and Warner (2007). For this reason, the analysis that follows does not focus on statistical inference.

Another complication arises when using CAARs over a longer time frame. Since CAARs are the *sum* of returns over a time frame, returns are not compounded. This is typically unimportant over shorter time frames when returns are neither of extreme magnitude nor volatility, which is why CAARs are employed on and around the event date but can be problematic for longer time periods. If returns instead

are compounded, or synonymously, if we compute the buy-and-hold return, we capture the real change from the initial to the final price.<sup>30</sup>

For the purpose of calculating the long-term impact of a sexual harassment scandal, we employ buy and hold abnormal returns (BHAR), averaged across all firms (ABHAR), instead of CAARs. This means that the initial  $t = 0:1$  impact shown here, calculated using ABHAR, deviates very slightly in the final digits from that shown in Section 4.1, which was calculated as a CAAR. In Figure 4, the ABHARs using the market model of  $t = 0:60$  are presented. The short-term  $t = 0:1$  impact of -1.48% is the significant and robust initial market reaction as presented in Table 7 (when CAARs are employed the exact number is -1.46%). The shaded area from day 16 to day 60 shows the basis for calculating the long-term impact of -0.78%. The period is selected on the basis of day 16 being the day where the ABHAR has reverted the most from the initial market reaction. The shaded area then extends from this high point on until day 60, being a quarter calendar year after the event. The low point in this long-term window is at day 42, which constitutes the bottom of the shaded area. The red line is the midpoint (-0.78%) between the high and the low point of the timeframe which is considered to represent the long-term impact. The -0.69% difference between the long-term and short-term impact is labelled as the market overreaction (different from  $1.48 - 0.78 = 0.70$  due to rounding). These results are fully robust to the choice of expected return model (Fama-French results excluded merely for brevity).

< INSERT FIGURE 4 HERE >

One can speculate about the reasoning for return reversal. For example, if further information is revealed following the initial news announcement that casts doubt on the accuracy and/or truthfulness of the original harassment claim, then a pattern of reversal rationally follows. However, under the assumption that there is a balance between accurate descriptions and any over- or understatement, i.e., there is no systematic bias in the reporting of events, this justifies further investigation of the initial overreaction. Specifically, if the observed reversal pattern relates to how news is incorporated into stock prices, then the impact may differ across firms depending on the level of news coverage they typically get. For example, new information may be more quickly and accurately evaluated and incorporated in market prices for firms that appear more regularly in the media, as by definition that makes market participants more accustomed to pricing in those firm-specific events, resulting in a low level of

---

<sup>30</sup> As an example, consider a stock that trades at a price of 100. Now assume that its value halves for two consecutive months, but then doubles back up from 25 to 50 from the second to the third month. If those three monthly returns are simply added together, i.e.  $-50\% - 50\% + 100\% = 0\%$ , one is left with the impression that nothing has changed, while the stock has actually lost half its value from 100 to 50. Compounded return in this case would be  $((1 - 0.5) \cdot (1 - 0.5) \cdot (1 + 1)) - 1 = -50\%$ , or equivalently the buy and hold return computed as the final price divided by the initial price, less one:  $50/100 - 1 = -50\%$ .

overreaction. Conversely, the short-term overreaction should be more pronounced for stocks characterized by a slower rate of news diffusion, all else equal.<sup>31</sup> In order to assess this, we have split our sample based on the level (low, medium, high) of annual news articles per firm during the estimation period of the event study (i.e. prior to the particular event).<sup>32</sup>

In Figure 5, we show the different short-term ABHARs for companies with different rates of information flow, as proxied by their annual level of news coverage. The impact over the first 10 trading days shows that the initial overreaction is largest for the firms with a low rate of information flow, then medium and lastly high. In other words, slow information flow, as proxied by the annual number of news articles, is associated with a higher overreaction. Conversely, the overreaction to scandalous news is intuitively the lowest for firms with a higher annual number of news articles. This pattern remains the same if made on the basis of a Fama-French normal return model (excluded for brevity).

< INSERT FIGURE 5 HERE >

#### *Multivariate analysis*

Given the challenges in investigating statistical differences via an event study methodology, we lastly turn to a multivariate regression analysis to study the long-term market impact. In Table 13 we study the impact of sexual harassment reports on the market value of companies involved in such scandals, relative to a control sample of listed firms for which no such announcements have been made. The control sample of S&P500 firms corresponds to that previously introduced in Table 12. The dependent variable is the annual percentage change in year-end market capitalization. The explanatory variables include the same controls as applied in Table 12, along with a dummy variable that takes the value of one if a sexual harassment announcement has been made involving the firm and zero for the control group.

< INSERT TABLE 13 HERE >

Column (1) in Table 13 shows that companies involved in sexual harassment scandals on average experience 7% point lower growth in year-end market capitalization relative to companies not involved

---

<sup>31</sup> Hong and Stein (1999) investigate this in a private information setting and predict such a pattern in a model where the overshooting among stocks of slower news diffusion is explained by more momentum driven price changes among those firms. Their results broadly align with ours.

<sup>32</sup> The annual measure of news coverage is different from our measure of abnormal news, as used in the regression analysis, as we in this setting are interested in proxying the rate of information flow of a company *in general*, not relative to the news coverage during the event. Upon assessing the distribution of annual news coverage (articles per year) amongst all the firms in the study, we categorize firms such that 50% are considered to have a medium level of news coverage, while 25% would be considered low and high news coverage. This is motivated by wanting a roughly normal distribution of the categories. This categorization was accomplished by marking firms with annual news below 1,000 as "low" news, between 1,000 and 10,000 as "medium" news and above 10,000 as "high news". This results in the total level of news observed across sampled firms being roughly log-normal (results available upon request). The categorization yielded 59 observations in the "low" category, 98 in the "medium" category and 42 in the "high" category.

in scandals. Not only does this confirm that the short-term results presented in previous sections persist over a longer horizon, it also highlights the strong economic impact of sexual harassment scandals.

To study further the possible channel of impact, we examine whether the impact differs across the cross-section of firms involved in scandal. Variables that only capture the immediate response of companies to a scandal, such as instant CEO departure or self-disclosure, are by definition not ideal to capture relatively long-term market reactions.<sup>33</sup> Instead, company characteristics that are more permanent in terms of their vulnerability to public opinion may associate with a longer-term impact. In particular, market participants may react differently to sexual harassment announcements in companies that they tend to recognize and be potential customers of. Accordingly, we investigate whether the long-term impact is stronger for firms with high consumer awareness, such as those selling products directly to consumers or for companies that are generally well-known household brands. This is further motivated by the results of Table 12 showing that such firms are relatively more likely to be involved in sexual harassment scandals.

Column 2 in Table 13 separately studies the relative impact on companies involved in scandal and operating in the consumer cyclical industry, as defined using the Thomson Reuters Business Classification (cf. Table 5b). The results show a larger negative market impact of scandal for firms in the consumer industry (-9%) compared to the control sample of companies in the same industry not involved in scandal. We also separately study companies with highly recognized brands that are involved in sexual harassment scandals, as classified in Section 6.2. Column 3 of Table 13 shows that these brand name companies are even more adversely affected by sexual harassment reports (-12%). Further constraining on the small subsample of firms that are categorized as both being in the consumer industry and also having highly recognized brands (only 26 firms) reveals 19% points lower growth in market value relative to the comparable set of firms not involved in scandal.

Our results generally align with those of Au et al. (2020), who specifically focus on measuring the longer-term impact of sexual harassment. They find that firms with higher incidents of sexual harassment claims earned a five-factor annualized alpha ranging from -8.4% to -21%. These complementary studies therefore imply that sexual harassment has a strong damaging impact on firm value in both the short-term and the long-term.

To summarize this section, the strong initial impact of sexual harassment scandals (450m USD) partly rebounds to a milder impact that corresponds to approximately a 250m USD loss in market value per

---

<sup>33</sup> We verify this and expectedly find that these factors do not significantly soften the negative long-term impact on market value (not reported).

company involved in a scandal. The overreaction is stronger among firms with relatively slower information flow, as proxied by the annual number of news articles involving the company. The negative market impact is still present in long-term regressions, where companies more vulnerable to public opinion experience relatively lower growth.

## 8 Conclusion

Following the increased salience and importance of sexual harassment scandals to corporations, we explore the average impact of a sexual harassment scandal on the market value of the implicated company, and the determinants of the magnitude of this impact. We apply a structured and systematic approach in sampling sexual harassment scandals. Our sampling yields a total of 199 observations of sexual harassment scandals for public firms. For each observation, a large number of event-, firm- and media-specific factors are hand-coded and retrieved from databases, providing a unique and detailed data set.

We find the average negative impact of a sexual harassment scandal on company market value to be around 1.5%, based on the cumulative abnormal return over the event day and the following day. This result is significant and robust across a wide array of significance tests and model choices. We further find that event-specific factors are strong drivers of impact, while firm-specific variables were less important. Specifically, the relative increase in media coverage on the firm around the scandal strongly associates with negative returns. Beyond media, the involvement of the firm CEO in the scandal is also a strong driver of the magnitude of negative abnormal returns. Firms self-disclosing misconduct, rather than the media being the first to report it, are found to be less negatively affected.

There is a clear increase in the volume of sexual harassment scandals after the emergence of the #MeToo movement, constituting an approximately four-fold increase in the risk that firms will be embroiled in sexual harassment scandals in more recent times.

We rule out that relatively modest penalties and compensation claims of sexual harassment scandals can explain the extent of the negative market impact. Similarly, costs associated with loss of personnel are unlikely to drive the negative impact, since the market reacts relatively milder to cases in which the accused CEO gets fired from the company. We find that reputation and public sentiment is a more viable channel through which the company is affected. Consistently, we find a relatively milder market impact in cases where firms self-disclose the sexual harassment and fire the accused CEOs, which we consider proxies for reputational repair. The market impact is also milder in countries with gender biases in labor markets and the probability of announcements of sexual harassment is higher for companies with higher consumer awareness. We lastly present case studies that show that public sentiment, as measured by the

tone of tweets, correlates highly with cumulative abnormal returns of companies involved in sexual harassment scandals. This collectively supports a sentiment-based channel of impact.

In terms of the long-term return dynamics of a sexual harassment scandals, we find that the initial market impact reverts to a long-term effect around -0.8%. We find that stocks covered less by the media (proxying a lower rate of information flow) overreact more to news of sexual harassment. We also find that year-end growth rates in market capitalization is lower among firms more likely to be in the public eye, namely consumer cyclicals and well-known brand name companies, consistent with our findings on the importance of reputation and public sentiment as a channel of impact.

In sum, this paper shows that there is a highly significant negative market reaction to sexual harassment scandals that can wipe off enormous amounts of market value in a matter of days. Any remaining contemplation among managers and investors about whether sexual harassment is a real business risk, should be put to rest. The impact is shown to be both real and economically significant.

## 9 References

- ABC News. 2010. "David Jones faces \$37m sex misconduct suit." August 2. <https://www.abc.net.au/news/2010-08-02/david-jones-faces-37m-sex-misconduct-suit/929184>
- Au, Shiu-Yik, Ming Dong and Andreanne Tremblay. 2020. "Me Too: Does Workplace Sexual Harassment Hurt Firm Value?", working paper.
- Barberis, Nicholas, Andrei Shleifer, and Robert Vishny. 1998. "A model of investor sentiment." *Journal of Financial Economics* 49 (3): 307–43.
- Barnett, Michael L. 2014. "Why Stakeholders Ignore Firm Misconduct: A Cognitive View." *Journal of Management* 40 (3): 676–702.
- Bartholdy, Jan, Dennis Olson, and Paula Peare. 2007. "Conducting event studies on a small stock exchange." *European Journal of Finance* 13 (3): 227–52.
- Belsley, D A, E Kuh, and R E Welsch. 1980. *Regression diagnostics: Identifying influential observations and sources of collinearity*. 1st ed. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Bennedsen, M., F. Pérez-González and D. Wolfenzon. 2020. "Do CEOs matter: Evidence from CEO Hospitalization Events." *Journal of Finance*, 75 (4), 1877-1911.
- Bernile, Gennaro, and Gregg A. Jarrell. 2009. "The impact of the options backdating scandal on shareholders." *Journal of Accounting and Economics* 47 (1-2): 2–26.
- Bing Sentiment Lexicon. 2020). Available at <https://www.cs.uic.edu/~liub/FBS/sentiment-analysis.html#lexicon>. Accessed in May, 2020.
- Boehmer, Ekkehart, Jim Masumeci, and Annette B. Poulsen. 1991. "Event-study methodology under conditions of event-induced variance." *Journal of Financial Economics* 30 (2): 253–72. [https://doi.org/10.1016/0304-405X\(91\)90032-F](https://doi.org/10.1016/0304-405X(91)90032-F).
- Box, G. E. P., and D. R. Cox. 1964. "An Analysis of Transformations." *Journal of the Royal Statistical Society: Series B (Methodological)* 26 (2): 211–52.
- Breberina, Jovica, and Manfred Schwaiger. 2016. "Black Sheep in the C-Suite: Investigating the Financial Impact of CEO Scandals." In *AMA Educators Proceedings*, 27:37–39.
- Brown, Stephen, and Jerold Warner. 1980. "Measuring security price performance." *Journal of Financial Economics* 8 (3): 205–58.
- Brown, Stephen, and Jerold Warner. 1985. "Using Daily Stock Return: The Case of Event Studies." *Journal of Financial Economics* 14 (1): 3–31.
- California State Treasurer. 2019. "State Treasurer Fiona Ma Joins Assault Victims, Pension Trustees, Urges Investors to Adopt Safe Workplace Principles." April 24. Available online: <https://www.treasurer.ca.gov/news/releases/2019/20190424/29.asp>
- CalSTRS. 2019. "Institutional Investor Trustees Representing \$635 Billion in Assets Launch Principles Addressing Sexual Harassment and Workplace Misconduct." <https://www.businesswire.com/news/home/20190114005562/en/Institutional-Investor-Trustees-Representing-635-Billion-Assets>.
- Cambell, John, Andrew W. Lo, and A. Craig MacKinlay. 1997. *The Econometrics of Financial Markets*. 2nd ed. Princeton University Press.
- Carberry, Edward J., Peter-Jan Engelen, and Marc Van Essen. 2018. "Which Firms Get Punished for Unethical Behavior? Explaining Variation in Stock Market Reactions to Corporate Misconduct." *Business Ethics Quarterly* 28 (02): 119–51.
- Chakravarthy, J., Ed deHaan, and Shivaram Rajgopal. 2014. "Reputation Repair After a Serious Restatement." *The Accounting Review*, 89(4): 1329-1363.



- Cline, Brandon N., Ralph A. Walkling, and Adam S. Yore. 2018. "The consequences of managerial indiscretions: Sex, lies and firm value." *Journal of Financial Economics* 127: 389-415.
- CNN. 2018. "Steve Wynn allegations punish his company's stock." February 6. Online source: <https://money.cnn.com/2018/02/06/news/companies/steve-wynn-investors/index.html>
- Corrado, Charles J. 1989. "A nonparametric test for abnormal security-price performance in event studies." *Journal of Financial Economics* 23 (2): 385-95.
- Corrado, Charles J. 2011. "Event studies: A methodology review." *Accounting and Finance* 51 (1).
- Cowan, Arnold Richard. 1992. "Nonparametric event study tests." *Review of Quantitative Finance and Accounting* 2 (4): 343-58.
- Dalgaard, Peter. 2008. *Introductory Statistics with R*. 2nd ed. New York: Springer.
- Daniel, Kent, David Hirshleifer, and Avanidhar Subrahmanyam. 1998. "Investor psychology and security market under- and overreactions." *Journal of Finance* 53 (6): 1839-85.
- Davis, A.K., J.M. Piger, and L.M. Sedor. 2012. "Beyond the Numbers: Measuring the Information Content of Earnings Press Release Language." *Contemporary Accounting Research*, 29: 845-868.
- Does, Serena, Seval Gundemir, and Margaret Shir. 2018. "How Sexual Harassment Affects a Company's Public Image." *Harvard Business Review*, <https://hbr.org/2018/06/research-how-sexual-harassment-affects-a-companys-public-image>.
- Engelberg, Joseph E, and Christopher A Parsons. 2011. "The Causal Impact of Media in Financial Markets." *Journal of Finance* 66 (1): 67-97.
- Engelen, Peter Jan. 2012. "What is the reputational cost of a dishonest CEO? Evidence from US illegal insider trading." *CESifo Economic Studies* 58 (1): 140-63. <https://doi.org/10.1093/cesifo/ifr031>.
- Faley, Robert H, Deborah Erdos Knapp, Gary A Kustis, and Cathy L Z Dubois. 1999. "Estimating the organizational costs of sexual harassment: The case of the U.S. Army." *Journal of Business and Psychology* 13 (4): 461-84.
- Fama, Eugene F., and Kenneth R. French. 1992. "The Cross-Section of Expected Stock Returns." *The Journal of Finance* 47 (2): 427-65.
- Fama, Eugene F., and Kenneth R. French. 1993. "Common risk factors in the returns on stocks and bonds." *Journal of Financial Economics* 33 (1): 3-56.
- Fang, Lily, and Joel Peress. 2009. "Media coverage and the cross-section of stock returns." *Journal of Finance* 64 (5): 2023-52.
- Feldman, R., S. Govindaraj, J. Livnat, and B. Segal. 2010. "Management's Tone Change, Post Earnings Announcement Drift and Accruals." *Review of Accounting Studies*, 15: 915-953.
- Fox, John, and Eds Sanford Weisberg. 2011. "Diagnosing problems in linear and generalized linear models." In *An R Companion to Applied Regression*. Thousand Oaks, CA: SAGE.
- Fox, John, and Georges Monette. 1992. "Generalized collinearity diagnostics." *Journal of the American Statistical Association* 87 (417): 178-83.
- Fox, John. 2016. *Applied regression analysis and generalized linear models*. 3rd ed. SAGE Publications.
- Frazzini, Andrea, and Lasse Heje Pedersen. 2014. "Betting against beta." *Journal of Financial Economics* 111 (1): 1-25.
- Garcia, D. 2013. "Sentiment during Recessions." *Journal of Finance*, 68: 1267-1300.
- Google. 2019. Google Books Ngram viewer. Retrieved on January 27, 2019 from <http://storage.googleapis.com/books/ngrams/books/datasetsv2.html>.
- Griffin, John M. 2002. "Are the Fama and French Factors Global or Country Specific?" *Review of Financial Studies* 15 (3).
- Harrington, Scott E., and David Shrider. 2007. "All Events Induce Variance: Analyzing Abnormal Returns When Effects Vary Across Firms." *Journal of Financial and Quantitative Analysis* 42 (1): 229-56.

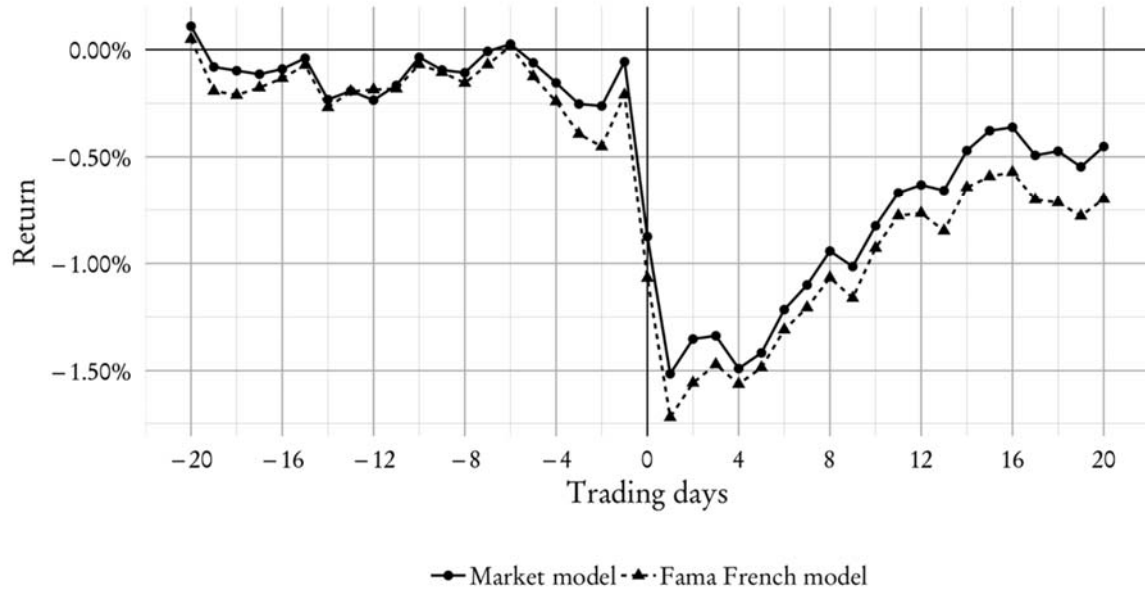
- Hemel, Daniel, and Dorothy S. Lund. 2018. "Sexual Harassment and Corporate Law", *Columbia Law Review*, vol. 118, no. 6.
- Henry, E., and A.J. Leone. 2016. "Measuring qualitative information in capital markets research: Comparison of alternative methodologies to measure disclosure tone." *The Accounting Review*, 91(1): 153-178.
- Hersch, Joni. 2018. "Valuing the risk of workplace sexual harassment." *Journal of Risk and Uncertainty* 57: 111-32.
- Holm, Sture. 1979. "A simple sequentially rejective multiple test procedure." *Scandinavian Journal of Statistics*, 6 (2), 65-70.
- Hong, H., and Jeremy C. Stein. 1999. "A Unified Theory of Underreaction, Momentum Trading and Overreacting in Asset Markets." *The Journal of Finance* 54 (6): 2143-84.
- Hosono, K., and S. Isobe. 2014. "The Financial Market Impact of Unconventional Monetary Policies in the U.S., the U.K., the Eurozone, and Japan." *PRI Discussion Paper* 14A (05).
- Hou, Kewei, and David T. Robinson. 2006. "Industry concentration and average stock returns." *Journal of Finance* 61 (4): 1927-56.
- Huang, Xuan, Siew Hong Teoh, and Yinglei Zhang. 2014. "Tone Management." *The Accounting Review*, vol. 84(3), pp. 1083-1113.
- Huberman, Gur, and Tomer Regev. 2001. "Contagious speculation and a cure for cancer: A nonevent that made stock prices soar." *Journal of Finance* 56 (1): 387-96.
- Janney, Jay J., and Steve Gove. 2011. "Reputation and corporate social responsibility aberrations, trends, and hypocrisy: Reactions to firm choices in the stock option backdating scandal." *Journal of Management Studies* 48 (7): 1562-85.
- Jory, Surendranath R., Thanh N. Ngo, Daphne Wang, and Amrita Saha. 2015. "The market response to corporate scandals involving CEOs." *Applied Economics* 47 (17): 1723-38. <https://doi.org/10.1080/00036846.2014.995361>.
- Kappel, Vivien, Peter Steffen Schmidt, and Andreas Ziegler. 2011. "Human Rights Abuse and Corporate Stock Performance - An Event Study Analysis." *SSRN Electronic Journal*.
- Karpoff, Jonathan M, D Scott Lee and Gerald S Martin. 2008. "The Cost to Firms of Cooking the Books." *Journal of Financial and Quantitative Analysis* 43 (3): 581-611.
- Karpoff, Jonathan M., and John R. Lott. 1993. "The Reputational Penalty Firms Bear from Committing Criminal Fraud." *Journal of Law and Economics* 36 (2): 757-802.
- Karpoff, Jonathan M., John R. Lott, Jr., and Eric W. Wehrly. 2005. "The Reputational Penalties for Environmental Violations: Empirical Evidence." *The Journal of Law and Economics* 68 (October): 653-75.
- Kearney, Michael W. (2019). "rtweet: Collecting and analyzing Twitter data." *Journal of Open Source Software*, 4(42), 1829.
- Keller, Kevin Lane, and Donald R. Lehmann. 2006. "Brands and Branding: Research Findings and Future Priorities." *Marketing Science* 25 (6): 551-765.
- Kolari, James W., and Seppo Pynnonen. 2011. "Nonparametric rank tests for event studies." *Journal of Empirical Finance* 18 (5): 953-71.
- Kothari, S. P. and Warner, J. B. (2007). *Econometrics of Event Studies*. In *Handbook of Empirical Corporate Finance* SET. Elsevier, Amsterdam.
- Long, D. Michael, and Spuma Rao. 1995. "The wealth effects of unethical business behavior." *Journal of Economics and Finance* 19 (2): 65-73.
- Los Angeles Times. 2019. "California pension trustees call for disclosure of #MeToo costs." January 14. Available at <https://www.latimes.com/business/la-fi-calpers-calstrs-metoo-20190114-story.html>.
- Lyons, Terence. 2019. "Public outrage meter." <https://tsc.ai/news/2019/01/30/public-outrage-meter/>.
- MacKinlay, A. C. 1997. "Event Studies in Economics and Finance." *Journal of Economic Literature* 35 (1): 13-39.
- Mikkelsen, Wayne H., and M. Megan Partch. 1988a. "Withdrawn Security Offerings." *The Journal of Financial and Quantitative Analysis* 23 (2): 119-33.

- Mikkelsen, Wayne H., and M. Megan Partch. 1988b. "Withdrawn Security Offerings, errata." *The Journal of Financial and Quantitative Analysis* 23 (4).
- Mitchell, M. L., and Stafford, E. 2000. "Managerial decisions and long-term stock price performance." *The Journal of Business* 73 (3): 287-329.
- Narayanan, MP, CA Schipani, and HN Seyhun. 2007. "The economic impact of backdating of executive stock options." *Michigan Law Review* 105 (8): 1597-1642.
- Nielsson, Ulf. 2013. "Do less regulated markets attract lower quality firms? Evidence from the London AIM market." *Journal of Financial Intermediation* 22: 335-352.
- O'Brien, Robert M. 2007. "A caution regarding rules of thumb for variance inflation factors." *Quality and Quantity* 41 (5): 673-90.
- Palmrose, Zoe Vonna, Vernon J. Richardson, and Susan Scholz. 2004. "Determinants of market reactions to restatement announcements." *Journal of Accounting and Economics* 37 (1): 59-89.
- Palomino, Frederic, Luc Renneboog, and Chendi Zhang. 2008. "Information salience, investor sentiment, and stock returns: The case of British soccer betting." *Journal of Corporate Finance* 15 (3): 368-87.
- Paruchuri, Srikanth, and Vilmos F. Misangyi. 2015. "Investor perceptions of financial misconduct: The heterogeneous contamination of bystander firms." *Academy of Management Journal* 58 (1).
- Pensions & Investments. 2019. "CalPERS asks Apollo about Epstein news." August 19. Available online: <https://www.pionline.com/alternatives/calpers-asks-apollo-about-epstein-news>.
- Peress, Joel. 2014. "The media and the diffusion of information in financial markets: Evidence from newspaper strikes." *Journal of Finance* 69 (5): 2007-43.
- Pompian, Michael M. 2012. *Behavioral finance and wealth management: how to build investment strategies that account for investor biases*. Hoboken, New Jersey: Wiley.
- Quinlivan, Stephen M. 2018. "#MeToo Clauses Being Added to Merger Agreements." Stinson Leonard Street. <https://www.lexology.com/library/detail.aspx?g=bdaea9ef-70ac-4357-9ad6-d0a7fa7654b>.
- Oxford University Press. 2019. Oxford Dictionaries. Retrieved on February 16, 2019 from <https://www.oxforddictionaries.com>.
- Raver, Jana L., and Michele J. Gelfand. 2005. "Beyond the individual victim: Linking sexual harassment, team processes, and team performance." *Academy of Management Journal* 38 (3): 387-400.
- Ricci, Ornella. 2015. "The impact of monetary policy announcements on the stock price of large European banks during the financial crisis." *Journal of Banking and Finance* 52: 245-55.
- Robinson, Anthony, R. Dennis Cook, and Sanford Weisberg. 1982. "Residuals and Influence in Regression." *Journal of the Royal Statistical Society. Series A (General)*.
- Solomon, David H., Eugene Soltes, and Denis Sosyura. 2014. "Winners in the spotlight: Media coverage of fund holdings as a driver of flows." *Journal of Financial Economics* 113 (1): 53-72.
- Stock, James, and Mark Watson. 2010. *Introduction to Econometrics*. Edited by 3rd Ed. London: Pearson.
- Tetlock, Paul C. 2007. "Giving Content to Investor Sentiment: The Role of Media in the Stock Market" *Journal of Finance* 62 (3): 1139-68.
- Tetlock, Paul C., Maytal Saar-Tsechansky, and Sofus Macskassy. 2008. "More Than Words: Quantifying Language to Measure Firms' Fundamentals." *Journal of Finance* 63 (3): 1437-67.
- The Financial Times. 2019. "US companies face shareholder votes over #MeToo concerns." April 30. <https://www.ft.com/content/d37e8638-6882-11e9-9adc-98bf1d35a056>
- The Guardian. 2017. "#MeToo movement named Time magazine's Person of the Year." <https://www.theguardian.com/media/2017/dec/06/metoo-movement-named-time-magazines-person-of-the-year>.
- The Orange County Register. 2018. "CalPERS weighs push for sexual-harassment corporate disclosure." April 11. Available online: <https://www.ocregister.com/2018/04/11/calpers-weighs-push-for-sexual-harassment-corporate-disclosure/>

- The New York Times (2017). "Harvey Weinstein Paid Off Sexual Harassment Accusers for Decades." October 5. <https://www.nytimes.com/2017/10/05/us/harvey-weinstein-harassment-allegations.html>
- The Sydney Morning Herald. 2010. "Treat women as equals: Gillard." June 18. <https://www.smh.com.au/business/treat-women-as-equals-gillard-20100618-ylkt.html>
- Walker, Danielle. 2018. "Pension funds lead charge to expose Wall St sexual offences." <https://www.ft.com/content/1a481b4c-5ff6-11e8-9334-2218e7146b04>.
- White, Halbert. 1980. "A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity." *Econometrica* 48 (4): 817–38.
- Willness, Chelsea R., Piers Steel, and Kibeom Lee. 2007. "A meta-analysis of the antecedents and consequences of workplace sexual harassment." *Personnel Psychology* 60 (1): 127–62.

**Figure 1. Average Market Reaction**

The figure shows average impact (the CAARs) surrounding a sexual harassment scandal. The normal (or expected) return is estimated using both a market model,  $R_{it} = a_i + \beta_i \cdot R_{mt} + \varepsilon_{it}$ , and a three-factor Fama-French model,  $R_{it} = a_i + \beta_i \cdot R_{mt} + \beta_{iSMB} \cdot R_{SMBt} + \beta_{iHML} \cdot R_{HMLt} + \varepsilon_{it}$ , for stock  $i$  at time  $t$ , where  $R_m$  is the market return and  $R_{SMBt}$  and  $R_{HMLt}$  is the return of the size and value portfolios, respectively (Fama and French 1992, 1993). The explanatory factors are all country specific (cf. Griffin, 2002).



### Figure 2. Number of Scandals and Average Cost per Scandal

Figure 2a shows the average number of scandals per month respectively before and after the emergence of the #MeToo movement in October 2017. There are 109 public scandals in our dataset before #MeToo (between January 2015 and October 2017) while there are 90 between October 2017 and the end of January 2019. Figure 2b shows average cost to shareholders in the  $t = 0:1$  event window, which is calculated as CAR during  $t = 0:1$  multiplied by the market capitalization of the company. The effect is controlled for general fluctuations in equity values over time using the S&P 500 index, thus figures are shown in 2019-dollars.

Figure 2a. Avg. no. of scandals per month

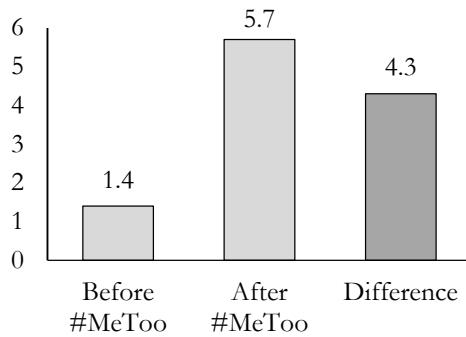
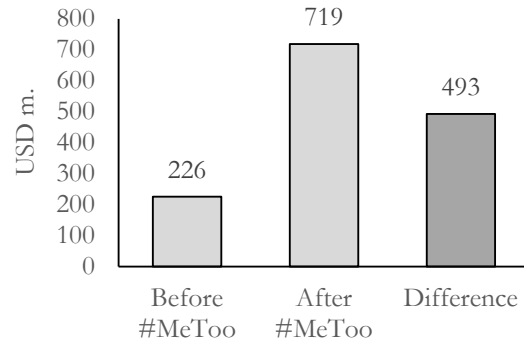


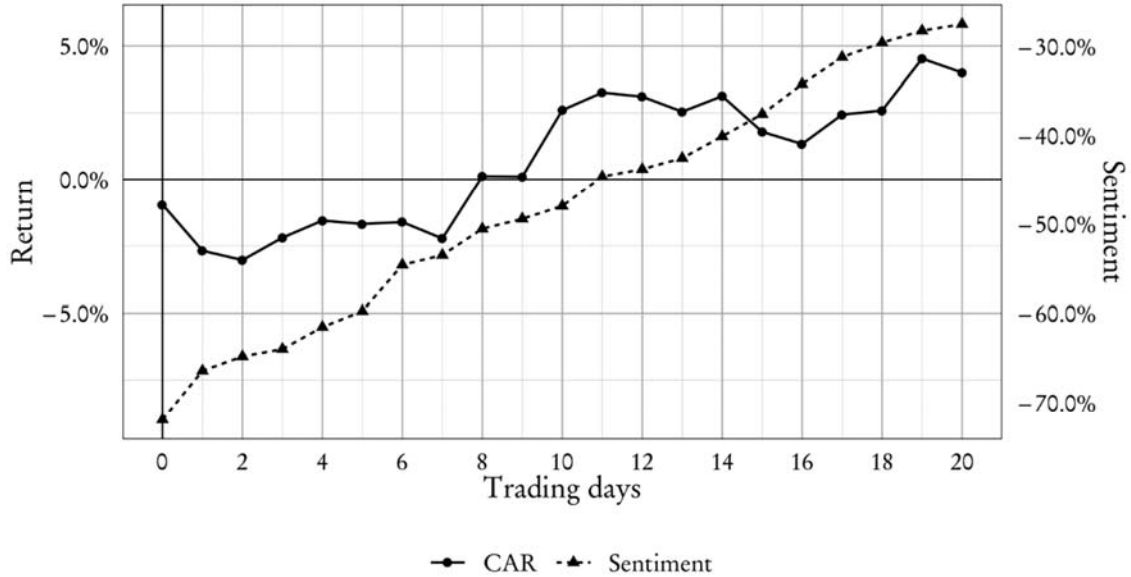
Figure 2b. Avg. cost pr. scandal



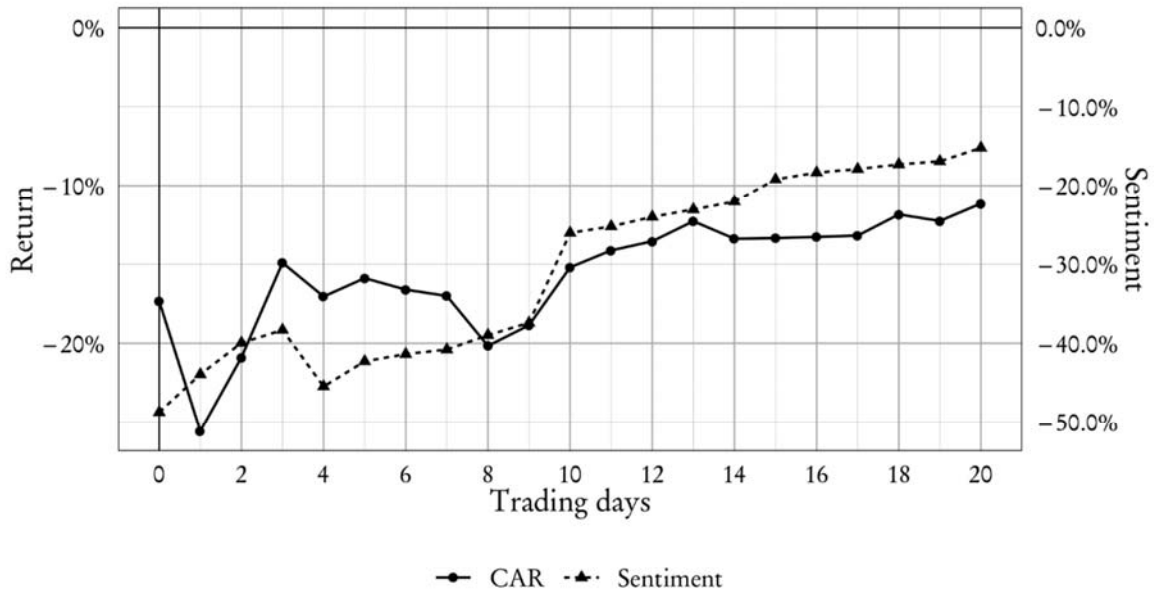
**Figure 3. Case Studies of Public Sentiment**

The figure shows the impact on cumulative abnormal returns (left axis) following reported sexual harassment on day zero for the two companies David Jones and Ted Baker. The normal (or expected) return is estimated using a market model,  $R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$ , for stock  $i$  at time  $t$ , where  $R_m$  is the market return. Public sentiment is measured as the cumulative abnormal positive tone (right axis), which corresponds to cumulative positive word frequencies minus negative word frequencies across all daily tweets that mention the company name.

3a. David Jones

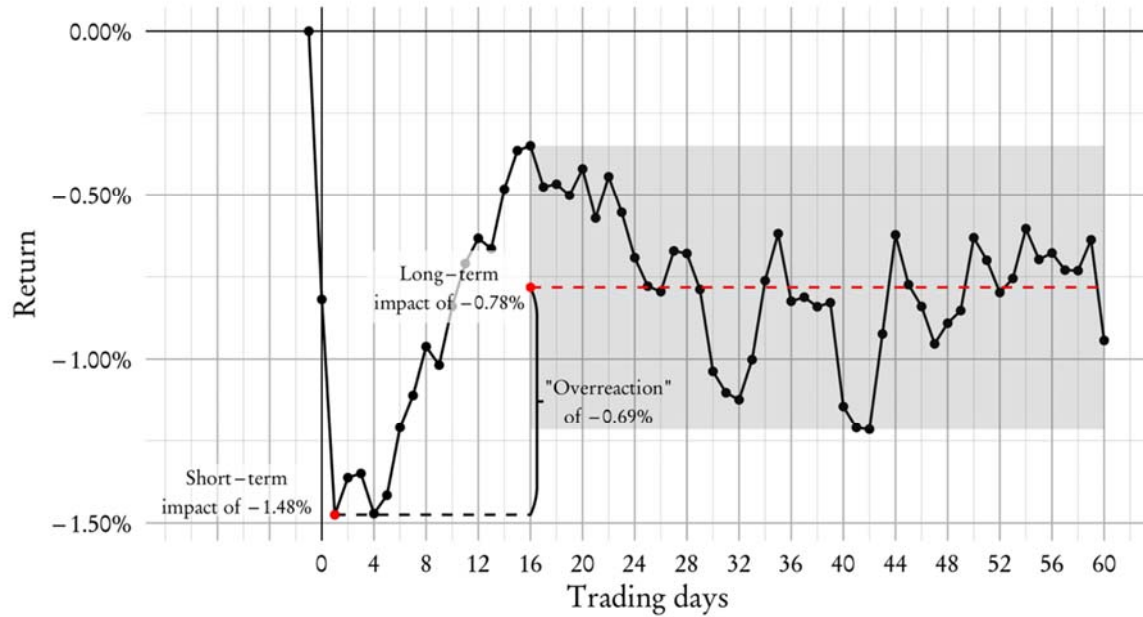


3b. Ted Baker



**Figure 4. Average Market Reaction in the Long Term**

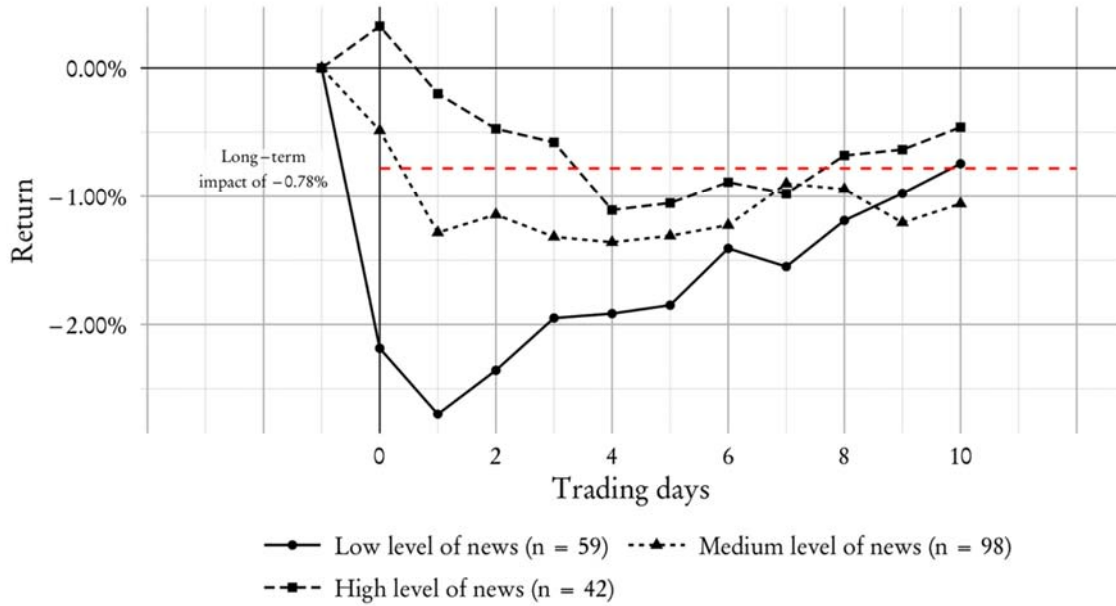
The figure shows buy and hold abnormal returns (BHAR) averaged across all firms (ABHAR) surrounding a sexual harassment scandal. The figure shows the ABHARs from  $t = 0$  to  $t = 60$  using the market model as the normal return model.





**Figure 5. Short-Term Market Reaction Across Rate of News Diffusion**

The dotted red line represents the long-term impact from Figure 4. The figure additionally shows ABHARs from  $t = 0$  to  $t = 10$  of firms split into three categories, "low", "medium" and "high", based on the level of news coverage they receive in a year. These categories are proxies for the rate of information flow, i.e. "low" news coverage indicates a slow rate of information flow. The samples include 59 observations in the "low" category, 98 in the "medium" category and 42 in the "high" category. Results are based on the market model.



**Table 1. Literature Summary of Corporate Scandals and Market Value Impact**

The table shows the market value effects of various types of corporate scandals in the literature. Specifically, it shows cumulative average abnormal returns (CAARs), i.e. the average abnormal effect across all events in the given sample. Event window length of  $t = 0:1$  is included for comparability where possible. Where not disclosed by author, closest window is shown.

Author	Types of corporate scandal	Window	CAAR	Sample size
Karpoff and Lott (1993)	General	$t = 0:1$	-1.30%	132
Long and Rao (1995)	General	$t = 0:1$	0.16%	54
Carberry et al. (2018)	General	$t = -2:2$	-1.42%	34
Jory et al. (2015)	General, CEO scandals	$t = -1:1$	-1.60%	80
Cline et al. (2018)	General, manager scandals	$t = -1:1$	-1.62%	325
Engelen (2012)	Financial (insider trading), CEO scandals	$t = 0:1$	-2.70%	222
Karpoff et al. (2005)	Environmental scandals	$t = 0:1$	-1.00%	478
Kappel et al. (2011)	Human rights violations	$t = 0:1$	-0.11%	122
Palmrose et al. (2004)	Financial (misrepresentation/restatement)	$t = 0:1$	-9.20%	403
Karpoff et al. (2008)	Financial (misrepresentation/restatement)	$t = 0:1$	-6.60%	585
Narayanan et al. (2007)	Financial (options backdating)	$t = 0:1$	-1.80%	84

**Table 2. Sampling Procedure of Sexual Harassment Events**

This table shows the sample selection process by breaking down the contribution to the final sample size from each step, as well as the exclusions. There are three different data sources. The sample covers worldwide events published in English during 2005-18.

Description	+/-	Number
Source 1: Events from structured news search in Nexis Uni	+	130
Source 2: Additional events for scandals related to historical S&P500 constituents	+	73
Source 3: Additional events from EEOC filings related to sexual harassment	+	9
Discarded due to proximity to quarterly/annual financial report release	-	10
Discarded due to company going bankrupt due to reasons not related to event	-	2
Discarded due to company undergoing period of unrelated shareholder activism	-	1
Final sample size	=	199

**Table 3. Examples of Alleged Sexual Harassment**

The table provides a few examples of the cases of alleged sexual harassment that are collected using the sampling procedure described in section 3.1. A full list of all the events in the sample are provided in the appendix.

Year	Company & Country	Accused employee(s)	Description of alleged misconduct
2007	EMC Corp., USA.	Several employees	Two former female employees file lawsuit charging the company with systematic sexual harassment and gender bias that created a hostile and offensive work environment against women. The alleged discriminatory conduct includes concrete examples of sexual harassment by a specific male employee, as well as failure of the company to hire and credit women, systematically paying lower wages to women, and non-promotion as women did not “smoke, drink, swear, hunt, fish and tolerate strip clubs.”
2010	David Jones, Australia.	CEO	CEO is replaced immediately after he admits to lewd behavior towards female employees, including inappropriate language, unwanted kisses, touching and text messages. Company says incident is likely to damage its brand.
2012	Agile, Hong Kong.	CEO	CEO arrested over alleged indecent assault against a female employee following a corporate reception. Accusations include molestation and sexual assault.
2013	Carrols Restaurants, USA.	Several employees	News break of company agreeing to pay a settlement and take remedial steps after an alleged countrywide discrimination against 89 female employees, many of which were teenagers. The harassment ranged from obscene comments or propositions, to unwanted touching, exposure of genitalia and even rape.
2018	EW Scripps, USA.	Non-executive	Former journalist sues company and news anchor for offensive, unwelcome and inappropriate actions, to which the company did not respond to despite proof. This included the male news anchor asking the female employee to engage in sex acts, tricking her into looking at perverse images, spreading sexual rumors, and asking if he could urinate on her.
2018	FirstGroup, UK.	Non-executive	A lawsuit filed against transportation company for negligence and failing to monitor students on school bus, where a teenaged special needs student was continually sexually molested by another student.
2018	Under Armour, USA.	Several employees	News breaks of “boys-club” work environment, including executives visiting strip clubs with coworkers and athletes at the corporation’s expense, as well as inviting female employees to company parties based on physical attractiveness.
2019	Lilly, USA.	Several employees	A former research scientist at the pharmaceutical company claims that he was harassed and discriminated against because of his homosexual orientation, filing a lawsuit against the company. Incidents include supervisors using homophobic slur and co-workers telling him to use women’s restroom as he was a “weirdo transgender”.

**Table 4. List of Variables**

List of variables considered in the regression analysis. The variables that were hand-coded by the authors were done so by searching for relevant details through Nexis Uni. In addition to these variables, stock returns are retrieved from CRSP for US firms and Compustat for non-US firms, returns on S&P500 and country specific MSCI indices from Bloomberg and Fama-French factors from Frazzini and Pedersen (2014). The C4 variable is available for US industries, where non-US observations are assigned the equivalent US industry value by assuming industry level competitiveness in globalized markets.

Variable name	Source	Description
<b>Event</b>		
Abnormal News	Factiva/Authors' calculations	Abnormal volume of news coverage, cf. equation (1)
Accusation, settlement or verdict	NexisUni/GoogleNews/Authors	Litigation cases split into "accusation", "settlement" or "verdict".
After #Metoo	NexisUni/GoogleNews/Authors	1 if after October 2017, 0 otherwise
Claim size	NexisUni/GoogleNews/Authors	Log size of claim in USD of litigation cases with disclosed claim size
Female Accuser	NexisUni/GoogleNews/Authors	1 if accuser is female, 0 otherwise
Self-disclosure	NexisUni/GoogleNews/Authors	1 if the firm self-disclosed the wrongdoing themselves, 0 if media announced it
HQ or local	NexisUni/GoogleNews/Authors	Location of the wrongdoing, 1 if being locally in organization, or 0 if at headquarters
If physical: groping, sex. assault or rape	NexisUni/GoogleNews/Authors	Of cases of physical harassment, factor can be either "groping", "sexual assault" or "rape"
Litigation	NexisUni/GoogleNews/Authors	1 if case is published as litigation as part of news story, 0 if just a news story
Non-physical of physical	NexisUni/GoogleNews/Authors	1 if physical sexual harassment, 0 if non-physical
Number of accusers	NexisUni/GoogleNews/Authors	Factor taking value of either "one" (1), "few" (1:5), or "many" (6 or above)
Personnel	NexisUni/GoogleNews/Authors	Factor being either "CEO", "VP or equivalent" or "Below VP"
Repeated event	NexisUni/GoogleNews/Authors	1 if the firm has been accused within the five previous years, 0 otherwise
EEOC lawsuit	NexisUni/GoogleNews/EEOC/Authors	1 if accuser is EEOC, 0 otherwise (0 for all non-US firms)
Subsidiary	Thomson Reuter Eikon (all firms)/Authors	1 if incident takes place in subsidiary, 0 if in parent
<b>Firm</b>		
Governance score	Thomson Reuter Eikon (all firms)	Corporate governance score from 0-100 (100=best) as measured in TR database
Female Board members	Thomson Reuter Eikon (all firms)	Percentage of female board members
Female Employees	Thomson Reuter Eikon (all firms)	Percentage of female employees
Female Managers	Thomson Reuter Eikon (all firms)	Percentage of female manager
Assets	CRSP (US firms), Compustat (non-US firms)	Log of total assets in USD
Return on assets	CRSP (US firms), Compustat (non-US firms)	Net income / total assets
Leverage	CRSP (US firms), Compustat (non-US firms)	Total liabilities / total assets
Industry	Thomson Reuter Eikon (all firms)	Thomson Reuters Busin. Classifi. using the 10 category defined economics sectors
C4	US Census Bureau (all firms)	C4 score: Sum of market share of four largest firms in industry by 3-digit NAICS
US or international	Authors	1 if US company, 0 otherwise
Year of scandal	Authors	Year as factor

**Table 5. Summary Statistics**

This table shows summary statistics for all variables collected in the dataset, where 5a shows the continuous variables while 5b shows the categorical. For some continuous variables there are less than 199 observations, due to lack of data availability from external sources. All variables presented in USD are inflation adjusted with August 2019 as base. Within the categorical variables, two variables (*Type of physical* and *Type of litigation*) have less than 199 observations due to being subcategories, hence not due to missing data. In Table 5b the number accusers is defined as a few for 2-5 accusers and many if more than that.

Table 5a. Continuous variables

Variable	Obs.	Mean	St.dev.	Median	Min	Max
Abnormal news	195	3.95	18.74	1.34	0.22	255.59
Abnormal news (Box-Cox transform)	195	0	1	-0.02	-2.64	2.74
Claim size (USD m)	42	73.11	309.21	2.43	0.01	2000.00
Female employees (%)	122	42.28	14.84	41	0.84	79.50
Female managers (%)	104	36.09	13.24	35.95	4.34	67.00
Female board members (%)	177	21.43	9.06	20	5.26	50.00
Assets (USD bn)	199	180.02	453.93	22.54	0.02	3345.53
Return On Assets	199	0.05	0.07	0.04	-0.19	0.33
C4 (market concentration)	198	0.26	0.17	0.24	0.04	0.74
Leverage	199	0.67	0.22	0.69	0.00	1.19
Governance score	182	74.52	19.49	81.03	1.70	97.84

Table 5b. Categorical variables

Variable	n	% total	Variable	n	% total
Country			Number of accusers		
Australia	14	7.04%	One	145	72.86%
Canada	4	2.01%	Few	22	11.06%
France	3	1.51%	Many	32	16.08%
Germany	2	1.01%	<i>Total</i>	<i>199</i>	<i>100%</i>
HongKong	3	1.51%	Physical harassment		
India	3	1.51%	Non-physical	94	47.24%
Israel	1	0.50%	Physical	105	52.76%
Italy	1	0.50%	<i>Total</i>	<i>199</i>	<i>100%</i>
NewZealand	1	0.50%	Type of physical		
Philippines	1	0.50%	Groping	46	43.81%
SouthKorea	2	1.01%	Rape	23	21.90%
Spain	1	0.50%	Sexual assault	36	34.29%
UK	8	4.02%	<i>Total</i>	<i>105</i>	<i>100%</i>
USA	155	77.89%	Litigation		
<i>Total</i>	<i>199</i>	<i>100%</i>	No	85	42.71%
Industry			Yes	114	57.29%
Basic Materials	3	1.51%	<i>Total</i>	<i>199</i>	<i>100%</i>
Consumer Cyclicals	81	40.70%	Type of litigation		
Cons. Non-Cyclicals	12	6.03%	Accusation	87	76.32%
Energy	4	2.01%	Settlement	8	7.02%
Financials	44	22.11%	Verdict	19	16.67%
Healthcare	6	3.02%	<i>Total</i>	<i>114</i>	<i>100%</i>
Industrials	23	11.56%	EEOC lawsuit		
Technology	17	8.54%	No	174	87.44%
Telecom Services	4	2.01%	Yes	25	12.56%
Utilities	5	2.51%	<i>Total</i>	<i>199</i>	<i>100%</i>
<i>Total</i>	<i>199</i>	<i>100%</i>	Other harassment also		
Year			No	179	89.95%
2005	2	1.01%	Yes	20	10.05%
2006	6	3.02%	<i>Total</i>	<i>199</i>	<i>100%</i>
2007	7	3.52%	Implicated personnel		
2008	5	2.51%	Below VP	120	60.30%
2009	4	2.01%	CEO	27	13.57%
2010	11	5.53%	VP or equivalent	52	26.13%
2011	8	4.02%	<i>Total</i>	<i>199</i>	<i>100%</i>
2012	6	3.02%	HQ or local		
2013	8	4.02%	HQ	104	52.26%
2014	10	5.03%	Local	95	47.74%
2015	8	4.02%	<i>Total</i>	<i>199</i>	<i>100%</i>
2016	18	9.05%	Subsidiary		
2017	40	20.10%	No	144	72.36%
2018	63	31.66%	Yes	55	27.64%
2019	3	1.51%	<i>Total</i>	<i>199</i>	<i>100%</i>
<i>Total</i>	<i>199</i>	<i>100%</i>	Repeated harassment		
After #MeToo			No	157	78.89%
No	109	54.77%	Yes	42	21.11%
Yes	90	45.23%	<i>Total</i>	<i>199</i>	<i>100%</i>
<i>Total</i>	<i>199</i>	<i>100%</i>	Self-disclosure		
Female accuser			No	172	86.43%
Female	175	87.94%	Yes	27	13.57%
Male	24	12.06%	<i>Total</i>	<i>199</i>	<i>100%</i>
<i>Total</i>	<i>199</i>	<i>100%</i>			

**Table 6. Correlation of Continuous Variables**

The table presents the correlation matrix of continuous regression variables, as defined in Table 3 and summarized in Table 5a. Statistical significance is indicated at the 5% (\*) level. The Holm (1979) correction is applied to protect against Type I errors (false positives).

	Abn. news	Claim size	% W. Empl.	% W. Manag.	% W. Board M.	Assets	Ret. on Assets	C4 (mkt. conc.)	Leverage	Govern. score
Abnormal news (transformed)	1.00									
Claim size	0.36	1.00								
% Women Employees	0.16	-0.28	1.00							
% Women Managers	0.18	0.10	0.81	1.00						
% Women Board Members	-0.01	0.25	0.23	0.24	1.00					
Assets	-0.09	-0.06	0.18	-0.02	0.14	1.00				
Return on Assets	0.04	0.45	-0.15	0.20	0.08	-0.18	1.00			
C4 (market concentration)	-0.11	0.09	0.05	0.03	0.20	0.04	0.19	1.00		
Leverage	-0.11	0.20	0.24	0.14	0.08	0.36*	-0.34*	-0.05	1.00	
Governance score	-0.20	-0.53*	-0.04	0.05	0.15	0.10	0.11	-0.06	0.14	1.00

**Table 7. Average Market Reaction**

The table shows average impact (the CAARs) surrounding a sexual harassment scandal and the associated test statistics across various inference measures. The normal (or expected) return is estimated using both a market model,  $R_{it} = \alpha_i + \beta_i \cdot R_{mt} + \varepsilon_{it}$ , and a three-factor Fama-French model,  $R_{it} = \alpha_i + \beta_i \cdot R_{mt} + \beta_{SMBi} \cdot R_{SMBt} + \beta_{HMLi} \cdot R_{HMLt} + \varepsilon_{it}$ , for stock  $i$  at time  $t$ , where  $R_m$  is the market return and  $R_{SMBt}$  and  $R_{HMLt}$  is the return of the size and value portfolios, respectively (Fama and French 1992, 1993). The explanatory factors are all country specific. The statistical significance of the size of the initial market reaction is tested using both parametric and non-parametric tests, which are described in Section 3.1. Statistical significance is indicated at the 10% (\*), 5% (\*\*) and 1% (\*\*\*) level. The results are based on the full sample of all the 199 identified sexual harassment cases (cf. Table 2).

Event window	CAAR	Parametric tests			Non-parametric tests		
		T	Cross sectional	BMP	GSIGN	GRANK	
Market model:							
0:0	-0.82%	-6.15 ***	-2.41 **	-2.04 **	-0.57	-0.89	
0:1	-1.46%	-7.75 ***	-4.12 ***	-3.98 ***	-3.83 ***	-3.11 ***	
0:2	-1.30%	-5.63 ***	-3.87 ***	-3.32 ***	-3.55 ***	-2.91 ***	
0:3	-1.28%	-4.82 ***	-3.50 ***	-2.46 **	-2.56 **	-2.86 ***	
-1:-1	0.21%	1.55	1.91 *	1.74 *	1.70 *	1.60	
-2:-1	0.20%	1.05	1.00	0.59	0.99	0.84	
-3:-1	0.10%	0.43	0.42	-0.01	0.56	0.30	
Fama-French model:							
0:0	-0.86%	-6.59 ***	-2.48 **	-2.22 **	-0.89	-1.27	
0:1	-1.51%	-8.19 ***	-4.12 ***	-4.15 ***	-4.29 ***	-3.29 ***	
0:2	-1.35%	-5.97 ***	-3.86 ***	-3.51 ***	-2.44 **	-2.93 ***	
0:3	-1.26%	-4.84 ***	-3.47 ***	-2.47 **	-1.88 *	-2.74 ***	
-1:-1	0.24%	1.85 *	2.19 **	1.98 **	2.23 **	1.94 *	
-2:-1	0.18%	0.99	0.92	0.66	1.10	0.88	
-3:-1	0.03%	0.14	0.13	-0.17	0.82	0.18	



**Table 8. Cross Section Variation in Market Reaction – Univariate Analysis**

The table shows the output of an OLS regression with CAR,  $t=0:1$  as dependent variable, while the explanatory variables are event-specific in Table 8a and firm-specific in Table 8b. The explanatory variables are presented in order of their explanatory power,  $R^2$ , where we for the sake of brevity collect several non-significant variables in the rightmost column. In column 7 of Table 8a there are 42 observations since claim size is reported at announcement in a subset of cases. Similarly, there are relatively less information on the gender composition of employees in columns 4 and 5 in Table 8b. All regression apply White robust standard errors and corresponding  $t$ -statistics are reported in parentheses. Statistical significance is indicated at the 10% (\*), 5% (\*\*) and 1% (\*\*\*) level.

Table 8a. Event-specific variables

	CAR, $t = 0:1$							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Personnel = CEO	-6.11*** (-3.85)							
Personnel = VP or equivalent	-0.78 (-1.56)							
Abnormal News		-1.69*** (-3.28)						
Many accusers			-3.04** (-2.40)					
Few accusers			0.42 (0.62)					
Local scandal = Yes				2.19*** (3.85)				
Litigation = Yes					2.16*** (3.20)			
Subsidiary=Yes						1.25*** (2.63)		
log(Claim size in USD)							-0.15 (-1.01)	
After #MeToo = Yes								-0.83 (-1.23)
Self-disclosure								1.14 (1.49)
Type of phys. har. = Groping								0.91 (1.20)
Type of phys. har. = Rape								-1.14 (-0.90)
Type of phys. har. = Sexual assault								0.51 (0.75)
Repeated event = Yes								0.92 (1.24)
Male accuser = Yes								1.43* (1.88)
EEOC lawsuit = Yes								0.27 (0.27)
Constant	-0.27 (1.41)	-1.40*** (4.48)	-0.85*** (2.99)	-2.33*** (4.37)	-2.53*** (3.92)	-1.63*** (4.01)	1.42 (0.67)	-1.63*** (3.00)
Observations	197	193	197	197	197	197	42	197
Adjusted R <sup>2</sup>	0.22	0.13	0.06	0.06	0.06	0.01	0.01	0.01

Table 8b. Firm-specific variables

	CAR, t = 0:1					
	(1)	(2)	(3)	(4)	(5)	(6)
log(Assets, mUSD)	0.35** (2.03)					
Governance score		0.04* (1.86)				
Market conc. (C4), switching costs			3.64* (1.94)			
Female managers, %				-0.03 (-0.99)		
Female employees, %					-0.03 (-0.98)	
US company = Yes						0.67 (0.74)
Female board members, %						0.02 (0.54)
Leverage						-0.95 (-0.54)
Return on assets						-3.85 (-0.69)
Industry: Consumer cyclicals						-1.65 (-1.38)
Industry: Consumer non-cyclicals						-0.16 (-0.17)
Industry: Energy						-1.00 (-0.45)
Industry: Financials						-0.40 (-0.43)
Industry: Healthcare						-1.10 (-1.06)
Industry: Industrials						-0.40 (-0.48)
Industry: Technology						-0.94 (-0.78)
Industry: Telecommunication						-0.69 (-0.72)
Industry: Utilities						-0.02 (-0.03)
Constant	-4.79** (-2.48)	-3.67** (-2.35)	-2.26*** (-3.06)	0.40 (0.38)	0.11 (0.11)	-0.19 (-0.16)
Observations	197	181	196	104	122	176
Adjusted R <sup>2</sup>	0.03	0.02	0.02	0.01	0.00	-0.04

**Table 9. Cross Section Variation in Market Reaction – Multivariate Analysis**

OLS regressions with CAR  $t=0:1$ ,  $t=0:2$  and  $t=0:3$  as dependent variables. Results are shown both for the market model and the Fama-French model. Regressions include all fully available explanatory variables, i.e. we only drop governance score, fraction of female managers/employees/board members and claim size due to limited number of observations (181 or considerably less). All regression apply White robust standard errors and corresponding  $t$ -statistics are reported in parentheses. Statistical significance is indicated at the 10% (\*), 5% (\*\*) and 1% (\*\*\*) level.

	Market model			Fama French		
	(1) CAR $t=0:1$	(2) CAR $t=0:2$	(3) CAR $t=0:3$	(4) CAR $t=0:1$	(5) CAR $t=0:2$	(6) CAR $t=0:3$
Personnel = CEO	-5.07*** (-3.52)	-4.22*** (-2.97)	-3.51** (-2.30)	-5.13*** (-3.45)	-4.37*** (-2.99)	-3.37** (-2.15)
Personnel = VP or equivalent	-0.81 (-1.31)	-1.09 (-1.27)	-0.31 (-0.34)	-0.79 (-1.23)	-0.97 (-1.12)	-0.18 (-0.21)
Litigation = Yes	1.52* (1.81)	1.31 (1.27)	1.54 (1.56)	1.74** (1.98)	1.70 (1.61)	2.04** (2.05)
Self-disclosure	3.00** (2.55)	1.98* (1.79)	2.55** (2.31)	3.12** (2.59)	2.20* (1.91)	2.76** (2.44)
Abnormal News	-5.13*** (-2.65)	-5.95*** (-2.77)	-4.99** (-2.45)	-4.84** (-2.43)	-5.57** (-2.57)	-4.56** (-2.26)
Abnormal News * Subsidiary	1.27** (2.00)	1.18* (1.68)	0.47 (0.59)	1.24** (2.04)	1.13 (1.64)	0.47 (0.60)
Abnormal News * log(Assets)	0.49** (2.52)	0.59*** (2.80)	0.52** (2.49)	0.47** (2.35)	0.55** (2.60)	0.47** (2.30)
After #MeToo	-0.07 (-0.09)	0.35 (0.47)	0.01 (0.02)	-0.14 (-0.19)	0.22 (0.29)	-0.03 (-0.04)
Many accusers	-1.37 (-1.13)	-0.47 (-0.36)	-0.29 (-0.23)	-1.15 (-0.93)	-0.00 (-0.00)	0.39 (0.31)
Few accusers	-0.00 (-0.00)	0.25 (0.28)	0.03 (0.04)	0.23 (0.28)	0.58 (0.62)	0.52 (0.56)
Subsidiary	0.61 (1.11)	0.56 (0.86)	0.14 (0.18)	0.57 (1.04)	0.57 (0.85)	0.20 (0.25)
log(Assets)	0.14 (0.72)	0.25 (1.05)	0.12 (0.49)	0.22 (1.12)	0.28 (1.16)	0.18 (0.72)
Local scandal = Yes	0.89 (1.47)	1.07 (1.45)	1.11 (1.37)	1.10* (1.71)	1.18 (1.59)	1.14 (1.41)
Male accuser = Yes	0.13 (0.19)	0.86 (1.06)	-0.24 (-0.26)	0.31 (0.47)	1.02 (1.21)	-0.07 (-0.08)
Repeated event = Yes	0.75 (1.20)	0.72 (1.16)	1.05 (1.46)	0.54 (0.86)	0.63 (1.01)	1.05 (1.40)
Physical harassment = Yes	-0.21 (-0.36)	0.06 (0.10)	0.11 (0.16)	-0.26 (-0.45)	-0.10 (-0.16)	0.07 (0.12)
EEOC lawsuit = Yes	-0.07 (-0.06)	-1.47 (-0.88)	-1.34 (-0.85)	-0.46 (-0.41)	-1.88 (-1.12)	-1.85 (-1.18)
Market conc. (C4), switching costs	0.36 (0.27)	1.36 (0.70)	1.88 (0.82)	0.87 (0.62)	2.40 (1.18)	2.68 (1.14)
US company = Yes	-0.68 (-0.83)	-0.31 (-0.37)	0.08 (0.09)	-0.71 (-0.86)	-0.33 (-0.38)	0.08 (0.10)
Leverage	-1.58 (-0.99)	-1.05 (-0.48)	-0.08 (-0.03)	-2.20 (-1.35)	-1.53 (-0.71)	-0.47 (-0.21)
Return on assets	-3.94 (-0.79)	-7.31 (-1.28)	-2.87 (-0.48)	-4.69 (-0.97)	-7.67 (-1.40)	-3.84 (-0.66)
Constant	-0.76 (-0.27)	-2.08 (-0.62)	-3.41 (-1.15)	-1.53 (-0.54)	-2.06 (-0.58)	-3.95 (-1.26)
Observations	192	192	192	192	192	192
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.35	0.26	0.16	0.35	0.27	0.16

**Table 10. Average Market Reaction Before and After #MeToo**

Table 10a shows average impact (the CAARs) surrounding a sexual harassment scandal, both before and after the start of the #MeToo movement (October 2017). The methodology is the same as that of Table 7 with the normal (or expected) return estimated using a market model. The statistical significance of the size of the initial market reaction is tested using both parametric and non-parametric tests, which are described in section 4.1. The table reports the associated test statistics across these inference measures. Table 10b reports the average impact (CAARs) before and after #MeToo after matching each pre-MeToo firm with its nearest post-MeToo firm neighbor in terms of their propensity score calculated from a probit model on all covariates. We consider only the observations whose propensity score belongs to the intersection of the support of the propensity score of before-firms and after-firms. Statistical significance is indicated at the 10% (\*), 5% (\*\*) and 1% (\*\*\*) level. All results in Table 10a are based on the full sample of all the 199 identified sexual harassment cases (cf. Table 2), whereas in Table 10b the econometric procedure automatically excludes 8 observations that cannot be matched with a close neighbor.

Table 10a. Event Study

Event window	CAAR	Parametric tests			Non-parametric tests		
		T	Cross sectional	BMP	GSIGN	GRANK	
Before #MeToo:							
0:0	-0.40%	-2.12 **	-1.27	-0.55	0.35	-0.08	
0:1	-0.98%	-3.62 ***	-2.76 ***	-2.33 **	-2.14 **	-1.75 *	
0:2	-1.12%	-3.39 ***	-2.46 **	-2.15 **	-1.95 *	-1.60	
0:3	-1.10%	-2.88 ***	-2.39 **	-2.17 **	-1.37	-1.77 *	
-1:-1	0.24%	1.24	1.63	1.35	2.46 **	1.81 *	
After #MeToo:							
0:0	-1.32%	-7.27 ***	-2.07 **	-2.12 **	-1.24	-0.59	
0:1	-2.04%	-7.95 ***	-3.14 ***	-3.25 ***	-3.34 ***	-2.09 **	
0:2	-1.51%	-4.79 ***	-3.07 ***	-2.57 **	-3.13 ***	-1.94 *	
0:3	-1.50%	-4.13 ***	-2.56 **	-1.39	-2.29 **	-1.89 *	
-1:-1	0.17%	0.93	1.05	1.11	-0.18	1.09	

Table 10b. Propensity Score Matching

Event window	CAAR:	CAAR:	Difference	T-stat.
	Before #MeToo	After #MeToo		
0:0	-0.01%	-0.01%	-0.00%	-0.57
0:1	-1.72%	-1.69%	-0.03%	-0.03
0:2	-1.29%	-0.92%	-0.38%	-0.41
0:3	-1.51%	-0.74%	-0.76%	-0.81
-1:-1	0.00%	0.00%	-0.00%	-0.77

**Table 11. Channels of Impact**

OLS regressions with CAR  $t=0:1$  as the dependent variable. Binary dummy variable “*Personnel = CEO, Departs*” = 1 if the accused employee is a CEO that departs the company, zero otherwise. Similarly, “*Personnel = CEO, Stays*” identifies cases where the accused CEO stays at the company. The dummy *Negative attitude t/ working women* identifies cases occurring in countries with relatively negative views towards women in the workforce, as defined in Section 6 along with indices *Gender equality index* and *Gender wage gap*. White robust standard errors and corresponding *t*-statistics in parentheses. Statistical significance is indicated at the 10% (\*), 5% (\*\*) and 1% (\*\*\*) level.

	Loss of personnel	Culture and perception of event			
	(1)	(2)	(3)	(4)	(5)
Personnel = CEO		-4.90*** (-3.41)		-5.14*** (-3.59)	-4.60*** (-3.02)
Personnel = VP or equivalent	-0.82 (-1.35)	-0.77 (-1.26)		-0.90 (-1.45)	-0.90 (-1.42)
Litigation	1.51* (1.76)	1.68* (1.96)		1.69* (1.95)	1.77** (1.98)
Self-disclosure	2.42* (1.96)	3.15*** (2.63)		3.18*** (2.65)	3.55*** (2.94)
Abnormal News	-4.93** (-2.52)	-4.82** (-2.52)		-5.30*** (-2.78)	-5.09*** (-2.66)
Abnormal News * Subsidiary	1.21* (1.97)	1.38** (2.08)		1.37** (2.14)	1.46** (2.23)
Abnormal News * log(Assets)	0.47** (2.41)	0.45** (2.35)		0.50*** (2.63)	0.47** (2.44)
After #MeToo	-0.03 (-0.05)	-0.10 (-0.15)		0.16 (0.23)	-0.26 (-0.38)
Many accusers	-1.28 (-1.06)	-1.39 (-1.16)		-1.10 (-0.90)	-1.27 (-1.04)
Few accusers	-0.08 (-0.11)	0.11 (0.14)		0.18 (0.23)	0.19 (0.24)
Subsidiary	0.42 (0.77)	0.55 (1.01)		0.59 (1.11)	0.54 (1.00)
log(Assets)	0.13 (0.69)	0.16 (0.83)		0.15 (0.81)	0.18 (0.93)
Local scandal = Yes	0.76 (1.23)	1.06* (1.73)		0.90 (1.50)	0.90 (1.49)
Male accuser = Yes	-0.03 (-0.04)	0.21 (0.31)		0.11 (0.17)	0.41 (0.68)
Repeated event = Yes	0.76 (1.26)	0.76 (1.23)		0.63 (1.04)	0.57 (0.91)
Physical harassment = Yes	-0.15 (-0.26)	-0.23 (-0.39)		-0.06 (-0.10)	0.02 (0.03)
EEOC lawsuit = Yes	-0.11 (-0.10)	-0.20 (-0.19)		-0.08 (-0.07)	-0.07 (-0.06)
Market conc. (C4), switching costs	0.12 (0.10)	0.18 (0.14)		0.46 (0.35)	-0.00 (-0.00)
US company = Yes	-0.66 (-0.82)	-0.24 (-0.27)		-0.95 (-1.14)	-0.72 (-0.86)
Leverage	-1.64 (-1.02)	-1.53 (-0.96)		-1.38 (-0.88)	-0.99 (-0.63)
Return on assets	-4.61 (-0.93)	-4.06 (-0.81)		-3.98 (-0.79)	-3.64 (-0.74)
Personnel = CEO, Departs	<b>-3.04**</b> <b>(-2.07)</b>				
Personnel = CEO, Stays	<b>-5.86***</b> <b>(-3.25)</b>				

Gender inequality index				<b>7.20</b>	
				<b>(1.64)</b>	
Gender wage gap					<b>0.16**</b>
					<b>(2.21)</b>
Negative attit. t/ working women		<b>2.26**</b>	<b>1.38*</b>		
		<b>(2.17)</b>	<b>(1.90)</b>		
Constant	0.08	-2.58	-1.35***	-2.87	-5.27*
	(0.02)	(-0.94)	(-4.24)	(-0.90)	(-1.72)
Observations	192	192	197	192	185
Industry FE	Yes	Yes	No	Yes	Yes
Adjusted R <sup>2</sup>	0.35	0.35	-0.00	0.46	0.47

**Table 12. Propensity Analysis**

The table presents logistic regressions, where in columns 1-5 the dependent variable takes the value of one if a sexual harassment announcement has been made involving the firm (treatment sample). In columns 6-8 the dependent variable changes, respectively taking the value of one if i) a sexual harassment announcement has been made involving the firm after the #MeToo movement, ii) the firm self-discloses sexual harassment, or iii) the accused CEO immediately departs the company. The dependent variable in all cases takes the value of zero if no announcement has been made (control sample). The coefficients show the probability of a sexual harassment announcement relative to the base case of no announcement (i.e., odds ratio) when the covariate changes by one unit (not marginal change). The non-binary explanatory variables are standardized to be measured in units of standard deviations. All explanatory variables are as defined in Table 4 with the addition of the binary dummy *Brand name* defined in Section 6.2. The sample is restricted to US listed companies, where the control group is US listed S&P500 firms where no announcements have been made. Robust standard errors are applied, with corresponding z-statistics and statistical significance being reported at the 10% (\*), 5% (\*\*) and 1% (\*\*\*) levels, indicating rejection of the null hypothesis that the odds ratio is equal to one.

	Announcement of sexual harassment					After	Self-dis-	CEO
	(1)	(2)	(3)	(4)	(5)	Metoo	closure	departs
	(6)	(7)	(8)					
Governance score	0.99 (-0.07)	0.90 (-0.94)	0.87 (-1.13)	1.02 (0.14)	1.03 (0.18)	1.00 (0.00)	2.47*** (2.77)	5.04** (2.31)
Female board members, %	1.54*** (4.21)	1.49*** (3.75)	1.55*** (3.79)	1.23* (1.70)	1.18 (1.20)	2.34*** (5.02)	1.67** (2.09)	3.35*** (3.24)
Log(Assets)		1.93*** (5.59)	1.94*** (4.90)	2.43*** (5.60)	1.51** (2.33)	1.73** (2.50)	3.57*** (3.19)	1.30 (0.44)
Return on assets			1.16 (1.11)	1.10 (0.59)	1.04 (0.28)	0.89 (-0.53)	0.45* (-1.75)	0.83 (-0.40)
Leverage			1.16 (1.20)	1.12 (0.76)	1.18 (1.20)	1.26 (1.29)	0.97 (-0.09)	0.83 (-0.48)
Industry: Consumer Cyclical				22.23*** (2.98)	16.13*** (2.68)	6.03*** (5.17)	17.43*** (4.14)	16.27** (2.28)
Industry: Cons. Non-Cyclic.				2.83 (0.93)	2.32 (0.73)			
Industry: Energy				1.51 (0.34)	1.44 (0.29)			
Industry: Financials				2.86 (0.97)	3.85 (1.26)			
Industry: Healthcare				2.25 (0.73)	2.73 (0.90)			
Industry: Industrials				4.09 (1.32)	3.14 (1.08)			
Industry: Technology				5.70* (1.65)	3.07 (1.04)			
Industry: Telecom Services				4.32 (1.20)	2.26 (0.65)			
Industry: Utilities				1.79 (0.48)	2.43 (0.74)			
Brand name					6.66*** (5.60)	5.23*** (4.51)	5.53*** (3.22)	16.66*** (2.90)
Observations	838	837	717	717	717	602	585	717
Pseudo R <sup>2</sup>	0.03	0.09	0.10	0.20	0.25	0.43	0.45	0.29

**Table 13. Change in End-of-Year Market Value**

The table present linear regressions where the dependent variable is the end-of-year growth in market capitalization. All explanatory variables are as defined in Table 5 with the addition of the binary dummy *Sexual harassment* that takes the value of one if a sexual harassment announcement has been made involving the firm, and zero otherwise for a control group of US listed S&P500 firms where no announcements have been made. Column 2 restricts on firms in the consumer cyclical industry and column 3 on well-known brand name companies. Column 4 only include firms that fall into both categories, i.e. being both in the consumer cyclical industry as well as being a well-known brand name company. Statistical significance being reported at the 10% (\*), 5% (\*\*) and 1% (\*\*\*) levels.

	All firms (1)	Consumer cy- clicals (2)	Brand names (3)	Cons. cycl. and brand (4)
Sexual harassment = Yes	<b>-0.07**</b> <b>(-2.58)</b>	<b>-0.09*</b> <b>(-1.93)</b>	<b>-0.12**</b> <b>(-2.06)</b>	<b>-0.19*</b> <b>(-1.87)</b>
Governance score	-0.00 (-0.98)	0.00 (1.13)	-0.00 (-0.73)	0.00 (1.26)
Female board memb., %	-0.00*** (-3.54)	-0.01*** (-2.66)	-0.00 (-0.53)	-0.01 (-1.63)
Log(Assets)	0.00 (0.41)	0.01 (0.54)	-0.00 (-0.05)	0.01 (0.29)
Leverage	0.01 (0.23)	-0.05 (-0.45)	0.15 (1.07)	0.13 (0.96)
Constant	0.14 (1.04)	-0.01 (-0.02)	0.22 (0.45)	-0.08 (-0.15)
Observations	680	130	84	26
Industry FE	Yes	No	Yes	No
R-squared	0.09	0.11	0.10	0.16



## Appendix. Sexual Harassment Events

The appendix lists all 199 events used in the analysis of this paper with details. Note that “Date” constitutes the first trading day after the news release, which could be the same day as the day of the news release or at most a couple of days later, if e.g. the news was released on a Friday evening.

No.	Company	Ticker	Date	Country	Description
1	Altaba Inc	AABA	2014-07-14	USA	Female executive sued for harassment
2	Aarons Inc	AAN	2012-03-26	USA	Case involving USD 6m settlement
3	Aarons Inc	AAN	2011-06-10	USA	Case involving USD 95m sue
4	ABM Industries	ABM	2010-09-02	USA	Public settlement of lawsuit
5	Credit Agricole	ACA	2018-03-02	France	Harassment case from Credit Agricole Cheureux
6	Reebok	ADS	2013-04-05	Germany	Allegations of sexual harassment promotion towards Adidas-owned Reebok
7	American International Group	AIG	2017-01-24	USA	Sued for allegations of "boys club" environment including sexual harassment
8	Alaska Airlines	ALK	2018-03-13	USA	Pilot raped during layover by other pilot
9	Alaska Airlines	ALK	2017-11-30	USA	Customer Randy Zuckeburg alleges sexual harassment during flight
10	Allianz	ALV	2018-07-23	Germany	Sexual harassment case involving groping at a subsidiary
11	Amazon	AMZN	2017-10-12	USA	Roy Price, Head of Entertainment, fired amid sexual harassment claims
12	Amazon	AMZN	2018-12-20	USA	Employee at Amazon-owned Wholefoods in San Francisco fire amid allegations
13	ANZ	ANZ	2017-11-29	Australia	Non-executive banker at HQ fired for non-physical harassment
14	ANZ	ANZ	2018-07-23	Australia	Non-physical harassment case at subsidiary in NYC
15	ANZ	ANZ	2016-01-15	Australia	Non-executive traders being sued upon harassment allegations
16	American Apparel	APPCQ	2011-03-08	USA	CEO sued for USD 260m for physical sexual harassment
17	American Apparel	APPCQ	2008-04-14	USA	More sexual harassment allegations introduced to the public by WSJ
18	Bank of America	BAC	2018-01-19	USA	Executive accused of sexual harassment in the news
19	Brisbane Broncos	BBL	2008-09-15	Australia	Several people allege non-physical sexual harassment in the news
20	BB&T	BBT	2006-05-23	USA	Sued for USD 50m amid allegations of misconduct by executive
21	BCE Inc.	BCE	2018-01-26	Canada	Prominent reporter at BCE-owned CTV fired for sexual harassment
22	Brown Forman Group	BF.B	2008-06-23	USA	USD 3.5m sue related incident between two employees in subsidiary Jack Daniels
23	Bank of New York Mellon Corp	BK	2009-08-18	USA	Sued for unspecified amount amid public allegations of non-physical sexual harassment
24	Barnes and Noble	BKS	2018-08-28	USA	Barnes and Noble sued for alleged misconduct related to sexual harassment by CEO
25	BMC Software Inc.	BMC	2010-10-04	USA	Fined for smaller case in UK including two colleagues and physical sexual harassment
26	Burlington Northern Santa Fe Co.	BNI	2006-06-22	USA	Verdict regarding non-physical harassment case locally at railway operations site
27	Bridgepoint Education	BPI	2013-08-15	USA	Head of HR and company sued for ignoring physical sexual harassment claims
28	Broadspectrum	BRS	2015-03-20	Australia	Rapport alleging rapes at Broadspectrum owned refugee camps in Nauru published
29	Boston Scientific Corp	BSX	2015-03-19	USA	USD 50m sue regarding harassment at HQ published
30	BWX Technologies	BWXT	2018-04-09	USA	Accusation of locally committed non-physical sexual harassment
31	Citigroup Inc.	C	2010-06-01	USA	Arbitration case regarding non-physical harassment at subsidiary's HQ published
32	Cheesecake Factory Inc.	CAKE	2012-12-28	USA	Rape accusation locally in subsidiary owned by defendant Cheesecake Factory
33	Commonwealth Bank	CBA	2008-04-17	Australia	Executive accused of sexual harassment in the news in HQ of bank
34	CBRE	CBRE	2012-11-07	USA	Local UK-head fired amid allegations of rape
35	CBS	CBS	2018-07-27	USA	Report alleging harassment including rape at CBS including CEO and others published
36	CBS	CBS	2018-09-10	USA	New allegations towards CBS, including directly against CEO Leslie Moonves
37	Crown Castle Intl. Group	CCI	2012-12-12	USA	Lawsuit for non-physical harassment allegedly committed by non-executive initiated
38	Cedar Realty Trust	CDR	2017-11-03	USA	COO sued CEO for physical sexual harassment, including groping

39	Carlyle Group	CG	2015-01-06	USA	PE-owner Carlyle sued as employee at portfolio-company Manor Care has violated
40	Colliers International	CIGI	2016-06-09	Canada	Documentation against local employee including non-physical harassment published
41	Canadian Imperial Bank of Com.	CM	2016-05-18	Canada	CIBC sued for physical violations taken place at trading floor
42	Comcast	CMCSA	2018-09-21	USA	Comcast-owned NBC News executive Andrew lack accused of harassment
43	Comcast	CMCSA	2018-02-22	USA	Local case of groping alleged at Comcast-owned NBC News
44	Comcast	CMCSA	2017-11-29	USA	Comcast-owned NBC News' prominent host Matt Lauer accused of harassment
45	Chipotle	CMG	2017-09-19	USA	Chipotle sued for incident of physical sexual harassment at single restaurant
46	Chipotle	CMG	2016-10-24	USA	Chipotle published to have settled sexual harassment case for USD 7.65m
47	Consumers Energy (CMS Energy)	CMS	2010-10-08	USA	CMS Energy to receive USD 8m fine in courts over local harassment case
48	Costco Wholesale Group	COST	2016-12-23	USA	Costco awarded USD 250k fine for not preventing harassment adequately
49	Credit Suisse	CS	2018-08-23	USA	Incident from 2010 published, non-executive employee accused of groping at HQ
50	Cisco Systems	CSCO	2018-09-05	USA	Executive accused of violations towards male subordinate at HQ
51	CT Partners	CTPR	2014-12-08	USA	Media NY Post breaks documentation for sexual harassment at CT Partners
52	Convergys Corp	CVG	2018-04-11	USA	Employee at local Indian department reports Convergys to the police for harassment
53	CoreCivic	CXW	2009-08-25	USA	Rapes at privately operated, governmentally contracted, prisons exposed in the news
54	Caesars Entertainm. Corporation	CZR	2013-03-19	USA	Caesars awarded fine of USD 225k to harassment employees
55	Delta Airlines	DAL	2018-07-24	USA	Women accuses Delta of ignoring complaints of sexual harassment in local case
56	Delta Airlines	DAL	2018-10-05	USA	Delta sued for having allowed and ignored physical violations at planes
57	Delta Airlines	DAL	2017-03-01	USA	Delta sued for having allowed and ignored physical violations at planes
58	Dillards Inc	DDS	2007-09-24	USA	EEOC suit against Dillards for physical harassment against employees
59	Discover Financial Services	DFS	2018-11-09	USA	Executive accused of non-physical sexual harassment
60	Dollar General	DG	2018-09-25	USA	Sexual harassment committed locally in a store by staff
61	Dine Brands Global	DIN	2017-09-22	USA	IHOP-owner Dine Brands sued for non-physical sexual harassment at local restaurants
62	Dine Brands Global	DIN	2018-02-07	USA	Media expose wider harassment culture at portfolio companies Applebee's and IHOP
63	Dine Brands Global	DIN	2017-06-09	USA	Applebee's harassment case from state of New York upon alleged harassment locally
64	Disney	DIS	2017-11-16	USA	Disney music executive John Heely charged with sexual abuse
65	Disney	DIS	2017-10-31	USA	Disney sued by Canadian women for involvement in Weinstein-case
66	Pixar	DIS	2017-11-21	USA	John Lasseter, executive a Disney-owned Pixar, sued for harassment
67	David Jones	DJS	2010-06-18	Australia	CEO of David Jones fired due to harassment allegations
68	Dr Pepper Snapple Group	DPS	2018-01-24	USA	Employee of supplier accuses Dr Pepper employee of sexual harassment
69	Darden Restaurants	DRI	2013-09-30	USA	Darden Restaurants-owned Red Lobster sued for local sexual harassment
70	Darden Restaurants	DRI	2017-01-25	USA	Darden Restaurants-owned Olive Garden employee sued for local sexual harassment
71	Duke Energy Corp	DUK	2005-10-20	USA	Employee at HQ systematically harassed by co-worker resulting in public settlement
72	Electronic Arts Inc	EA	2018-12-07	USA	Executive fired for inappropriate language during conference call
73	Consolidated Edison	ED	2015-09-09	USA	ConEd fined USD 3.8m for repeated harassment claims at HQ
74	EMC Corp	EMC	2007-09-12	USA	Two women accuse EMC covered in WSJ based on systematic harassment
75	Express Scripts Holding	ESRX	2009-04-08	USA	Head of sub-divison sued for non-physical harassment
76	Ford	F	2018-02-21	USA	Head of North America division, Raj Nair, fired for non-physical harassment
77	Ford	F	2017-08-15	USA	EEOC sues Ford upon harassment claim, including physical
78	Ford	F	2017-12-19	USA	NY Times covers systemic harassment incidents at Chicago plant
79	Facebook	FB	2015-03-19	USA	Previous employee Chi Hong sue Facebook for non-physical sexual harassment
80	FirstGroup	FGP	2018-03-09	UK	FirstGroup sued locally for violation at school bus operations
81	FirstGroup	FGP	2018-04-26	UK	FirstGroup sued federally for violation at school bus operations
82	National Beverage Corp	FIZZ	2018-07-03	USA	CEO Nick Caporella accused in the media for physical harassment
83	Fannie Mae	FNMA	2018-01-19	USA	USD 20m USD sue against Fannie Mae for alleged harassment including rape
84	Fox	FOX	2016-07-06	USA	News break regarding allegations of sexual harassment by CEO Roger Ailes

85	Fox	FOX	2017-07-05	USA	Fox employees Horowitz and Payne fired for sexual harassment
86	Genpact	G	2018-12-20	USA	Executive accused in the media of non-physical harassment having taken place locally
87	Guess?	GES	2018-02-01	USA	Guess? CEO Paul Marciano accused of sexual harassment towards co-workers
88	Greencore	GNC	2010-12-16	UK	Greencore sued for local sexual harassment having taken place at factory
89	Google	GOOGL	2019-01-11	USA	Google sued revealing golden handshakes to sexual harassment offending executives
90	Google	GOOGL	2018-02-26	USA	Former employee Loretta Lee sues Google for sexual harassment at HQ
91	Google	GOOGL	2018-10-31	USA	NY Times reveal sexual harassment motivated uprising at Googleplex
92	GAP INC	GPS	2018-05-31	USA	Rapport issued documenting sexual harassment at GAP factory
93	Goldman Sachs	GS	2018-04-09	USA	News media cover story featuring several employee accusations at HQ
94	Goldman Sachs	GS	2010-09-15	USA	Class action lawsuit from three women alleging sexual harassment at HQ
95	Goldman Sachs	GS	2018-03-27	USA	Incident from 1994 published creating accusation against Goldman Sachs
96	Goldman Sachs	GS	2016-06-13	USA	GS's use of prostitutes towards customers to facilitate deals revealed in the media
97	Halliburton Inc	HAL	2007-07-02	USA	Two employees sue for alleged rape
98	KBR / Haliburton	HAL	2007-12-11	USA	Case involving alleged rape of employee in Iraq and subsequent cover-up
99	Hudbay Minerals	HBM	2011-03-28	Canada	Canadian mining firm sued for rape of 11 native women of Guatemala near mine
100	Home Depot Inc	HD	2014-08-12	USA	Home Depot sued by mother to daughter raped and molested by manager
101	CLP Group	HKG0002	2013-08-26	Hong Kong	Director sues Australian Energy subsidiary to HK parent for harassment
102	Cathay Pacific	HKG0293	2011-08-05	Hong Kong	Documentation of sexual violations during flight revealed online
103	Agile Group Holdings	HKG3383	2012-08-31	Hong Kong	Sexual harassment case involving CEO of HK company revealed
104	Hewlett Packard	HPQ	2010-08-06	USA	CEO forced to resign upon sexual harassment accusations
105	HSBC	HSBC	2006-03-06	USA	Sexual harassment at UK branch of HSBC involving executive
106	Israel Chemicals	ICL	2016-09-09	Israel	CEO involved in sexual harassment case following rape accusations
107	Infosys	IN500209	2015-01-29	India	Two contract employees at Infosys accused of rape at Infosys HQ in India
108	Indian Hotels Company Limited	IN500850	2017-05-31	India	Sarna, CEO for hotel group, accused of sexual harassment
109	Indian Hotels Company Limited	IN500850	2016-11-11	India	CEO for subsidiary hotel chain, Ginger Brands, Pundit accused of sexual harassment
110	Insys Therapeutics	INSY	2018-05-15	USA	Firm accused in the media for sexual harassment by lower-level employees
111	Interpublic Group of Companies	IPG	2017-12-07	USA	Executive at IPG-owned media company, The Martin Agency, accused of harassment
112	Interpublic Group of Companies	IPG	2018-01-24	USA	Women sues small subsidiary, Initiative, owned by media conglomerate IPG
113	Ingersoll-Rand Inc	IR	2018-03-13	USA	Firm sued as manager allegedly committed non-physical sexual harassment
114	JD	JD	2018-09-04	USA	Chinese JD founder, CEO and chairman, Richard Liu, arrested in USA upon rape claim
115	JP Morgan Chase	JPM	2014-02-03	USA	USD 1.5m settlement published amid allegations of local sexual harassment by many
116	Juventus	JUVE	2018-10-01	Italy	Case including evidence of rape against Juventus-owned Cristiano Ronaldo breaks
117	Kroger	KR	2008-12-12	USA	Kroger sentenced to pay fine of USD 0.5m for harassment in store
118	Kroger	KR	2014-05-06	USA	Kroger sentenced to pay fine of USD 0.5m for harassment in store again
119	Hyundai	KRX005380	2017-11-06	S-Korea	Employee at Hyundai Card in South Korea allegedly raped by colleague
120	Hanssem	KRX009240	2017-11-02	S-Korea	Female employee at furniture chain allegedly harassed by manager
121	KeySpan	KSE	2006-07-26	USA	Natural gas distributor sued for USD 30m upon harassment
122	Loews Corp	L	2015-07-14	USA	Sued for sexual assaults at the spa of Loews Hotels including several incidents
123	Loews Corp	L	2017-02-17	USA	Female race driver publicly accuses Loews of sexual harassment
124	Lilly	LLY	2019-01-02	USA	Lilly sued by homosexual man for sexual harassment
125	Lowe's	LOW	2009-08-24	USA	Case involving EEOC features sexual harassment claims at home construction store
126	Southwest Airlines	LUV	2007-03-27	USA	Southwest Airlines publicly settle case for USD 100k
127	Macy's	M	2010-05-21	USA	Transgender person sues Macy's for sexual harassment
128	Marriott	MAR	2019-01-28	USA	Local incident of sexual harassment at hotel
129	Marriott	MAR	2018-06-27	USA	Demonstration and strikes related to revealed lack of harassment protection for staff
130	McDonalds	MCD	2018-09-17	USA	Protests at McDonalds headquarters over sexual harassment culture

131	McDonalds	MCD	2007-09-07	USA	McDonalds sued for several incidents of sexual assault
132	McDonalds	MCD	2018-05-22	USA	EEOC suit for McDonalds for local sexual harassment
133	McDonalds	MCD	2011-04-13	USA	EEOC suit for McDonalds for local sexual harassment
134	Moody's	MCO	2017-03-15	USA	Former SVP of Moody's accused of sexual harassment
135	Massey Energy Co	MEE	2010-12-28	USA	Operational employee sexually harassed
136	Marsh & McLennan Companies	MMC	2017-12-12	USA	Executive sued by Luisa Santana amid harassment allegations
137	Macquarie Group	MQG	2017-11-17	Australia	Bank sued by women for AUD 40m for local harassment
138	Morgan Stanley	MS	2018-03-28	USA	Executive at Wealth Management, Douglas Greenberg accused of sexual assault
139	Morgan Stanley	MS	2017-12-07	USA	Harold Ford accused of sexual harassment in the news
140	Microsoft	MSFT	2011-09-01	USA	Microsoft sued for non-physical harassm. by executives Simon Negus and Steve Dunn
141	Tinder	MTCH	2018-08-14	USA	Sexual harassment allegations against Match Group owned app Tinder
142	Norwegian Cruise Lines Holdings	NCLH	2018-01-12	USA	Firm sued as crew member allegedly raped passenger
143	Nine Entertainment Co	NEC	2016-12-05	Australia	CEO of paper owned by Fairfax media, owned by Nine Entertainment accused
144	Nike	NKE	2018-08-10	USA	Executive at Nike HQ accused of sexual harassment
145	Novartis	NVS	2017-11-29	USA	Sexual harassment allegedly taken place at Novartis South Korea
146	Newell Brands Inc	NWL	2016-10-03	USA	Josten's owned by Newell Brands Inc. sued for sexual harassment by Minnesota state
147	The New York Times	NYT	2017-11-20	USA	NY Times reporter Glenn Thrush accused of sexual harass. as White House reporter
148	Oracle	ORCL	2014-07-15	USA	Oracle sentenced to pay fine of USD 130k amid sexual harassment
149	Oracle	ORCL	2013-02-20	USA	Oracle sentenced to pay fine of USD 18k amid sexual harassment
150	Pfizer Inc	PFE	2017-11-30	USA	Pfizer in South Korea accused of sexual harassment
151	PPG Industries Inc	PPG	2006-02-21	USA	PPG sentenced to pay USD 1m by courts
152	Prudential Financial	PRU	2007-07-11	USA	Prudential Financial sued for USD 18m for locally committed sexual harassment
153	Publicis Group	PUB	2016-08-01	France	CEO of Saatchi and Saatchi, owned by media conglomerate. Publicis fired for harassment
154	Rizal Commercial Banking Corp	RCB	2017-10-04	Philippines	Philippine Bank executive allegedly raped private maid, as exposed in media
155	Royal Caribbean Cruises	RCL	2016-01-13	USA	Employee allegedly raped by co-worker and subsequently denied help
156	Transocean Ltd	RIG	2016-04-01	USA	Sexually motivated hidden cameras revealed in media
157	Raytheon Co.	RTN	2005-01-11	USA	Raytheon sentenced to pay USD 500k for sexual harassment
158	RYB Education	RYB	2017-11-24	USA	Owner of Chinese kindergartens, listed in NYSE, accused of sexual assaults
159	The Star Entertainment Group	SGR	2012-02-06	Australia	CEO for casino owned by Star Entertainment accused
160	Signet Jewelers	SIG	2017-02-27	USA	Systematic sexual harassment case revealed by Washington Post
161	Skycity Entertainment Group	SKC	2013-09-09	N-Zealand	Employee at casino group allegedly groped by manager
162	Sports Direct	SPD	2016-06-07	UK	Sexual favors for employment and sexual harassment culture exposed in the media
163	Serco	SRP	2015-10-05	UK	Inmates of private prison raped
164	EW Scripps	SSP	2018-03-06	USA	News anchor at subsidiary accused of sexual harassment
165	SunTrust	STI	2014-06-11	USA	Settlement for case of USD 300k revealed publicly
166	SunTrust	STI	2017-06-15	USA	Inappropriate and sexually harassing conduct on social media exposed
167	Seven West Media	SWM	2016-12-19	Australia	CEO of media group allegedly accused of sexual harassment
168	Southern Cross Media Group Ltd	SXL	2018-02-20	Australia	Australian media group-owned radio channel, 2DayFM, accused of sexual harassment
169	AT&T	T	2017-11-13	USA	Canadian firm owned by Warner Bros. owned by AT&T accused of sexual harassment
170	Carrols Restaurants	TAST	2013-01-09	USA	Major franchiser for Burger King settles for USD 2.5m with EEOC
171	Liberty Tax	TAXA	2017-12-13	USA	Founder and CEO John Hewitt accused of sexual harassment
172	Tullett Prebon	TCAP	2010-08-16	UK	US head of British brokerage firm sued for USD 20m for harassment
173	Ted Baker	TED	2018-12-03	UK	CEO of Ted Baker accused of sexual harassment
174	Telefonica	TEF	2017-11-28	Spain	O2, owned by Telefonica, sentenced to pay GBP 35k to harassed employee in Belfast
175	Target	TGT	2018-09-25	USA	Target sued for single sexual harassment case from local case
176	Tenet Healthcare	THC	2011-11-18	USA	Local employee at hospital owned by Tenet Healthcare accused of harassment

177	Toyota	TM	2006-05-02	USA	Head of US market accused of sexual harassment against secretary
178	Tapestry Inc	TPR	2018-05-29	USA	VP sues creative director of Stuart Weitzman, owned by Tapestry, Morelli for harass.
179	Tesla	TSLA	2018-07-25	USA	Tesla-owned SolarCity sued for sexual harassment
180	Tesla	TSLA	2017-02-28	USA	Female engineer at Tesla sues for sexual harassment and retaliation
181	Texas Roadhouse	TXRH	2016-09-22	USA	EEOC case of sexual harassment published as a verdict with an award of USD 1.4m
182	Under Armour	UAA	2018-11-06	USA	Revealed to have had a "boys-club" environment including expensing of strip clubs
183	United Airlines	UAL	2018-08-09	USA	Sued as employee sexually harassed another through posting of pictures
184	United Airlines	UAL	2014-02-04	USA	Sued for alleged sexual abuse in a mentoring program of United Airlines
185	UBS	UBS	2018-07-26	USA	News media revealing physical sexual harassment by non-executive employee at HQ
186	Unilever	UN	2011-04-13	USA	Sexual harassment exposed at tea plantation of Unilever in Kenya
187	Urban Outfitters	URBN	2014-08-12	USA	Former employee sues for sexual harassment including groping
188	Viacom Inc	VIAB	2018-05-02	USA	Viacom sued for USD 100m for alleged rape by CEO
189	Vivendi	VIV	2017-11-30	France	Founder of Def Jam, owned by Universal, owned by Vivendi, accused of sexual assault
190	Vornado Realty Trust	VNO	2017-11-08	USA	CEO of an art fair, which is owned by Vornado, fired for sexual harassment
191	Verizon Communications	VZ	2018-05-02	USA	Verizon involved in case of harassment at operations setup with a logistics provider
192	Westpac	WBC	2017-03-20	Australia	Westpac-owned BT Financial accused of sexual harassment by two employees
193	Wendy's International	WEN	2018-03-15	USA	Wendy's accused of sexual harassment at their farm's causing protests
194	Wells Fargo	WFC	2017-08-31	USA	Sexual harassment in a local bank of Wells Fargo
195	Walmart	WMT	2018-11-12	USA	CEO and founder of Walmart-owned e-retailer Flipkart fired for sexual harassment
196	Woolworths	WOW	2014-01-30	Australia	Employee sues Woolworths for sexual harassment committed by local manager in store
197	WPP	WPP	2016-03-11	UK	CEO of J Walther Thompson, which is owned by media conglomerate WPP, fired
198	Wynn Resorts	WYNN	2018-01-26	USA	Many accusations against founder, Steve Wynn, surfaced, including accusations of rape
199	Xilinx Inc	XLNX	2018-05-02	USA	Employee fired for having exposed women to sexual harassment at Xilinx