DID THE STOCK MARKET CARE ABOUT #METOO?

STOCK MARKET REACTIONS TO SEXUAL HARASSMENT ALLEGATIONS DURING THE #METOO MOVEMENT

A CORPORATE REPUTATION AND FIRM VALUATION PERSPECTIVE

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Abstract:

Gender equality is still one of the most pressing issues of our time. The struggle for gender equality and the fair treatment of women began in earnest during the suffragette movement of the late 19th and early 20th centuries. One-hundred years later in 2017, the Twitter-based #MeToo movement brought the issue of sexual misconduct into the limelight. This paper investigates the effect that the #MeToo movement had on stock performance, by way of an event study on the share prices of US firms whose top executives were accused of sexual harassment. The study finds that these firms experienced statistically significant and severe negative abnormal returns following sexual harassment allegations. We analyze the findings using a causal framework which draws on historical corporate reputation research and makes links to sexual harassment literature and behavioral and traditional asset pricing models.

Keywords: ***MeToo, Corporate Reputation, Corporate Valuation, CEO Misconduct, Event Study***

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All faults are our own.

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1. Introduction

On 15 October 2017, actress Alyssa Milano wrote the following text on Twitter

"If you've been sexually harassed or assaulted write 'me too' as a reply to this tweet."

Little did she know that his tweet would trigger a global movement, which would bring a moment of reckoning for politicians, movie magnates, and business leaders around the world. Bloomberg estimates that over 420 prominent people across a range of industries stand accused of different forms of sexual misconduct in the US alone (Griffin et al, 2018). Some of their cases are well publicized. Yet in 2019, over 18 million "MeToo" tweets later (Pew Research Center, 2018), questions remain unanswered - what happens to a company when their leaders and figureheads are accused of sexual harassment? Do investors care?

This paper aims to answer that question, by measuring the stock price impact of allegations of sexual harassment levelled against company leaders. This is carried out within the scientific framework of a quantitative event study on 23 instances of sexual misconduct allegations spread across 18 listed US companies during the MeToo movement, from October 2017 to May 2019. Each event is defined as the first public report of sexual harassment allegations targeting a prominent figure in a company. The sample portfolio of all 18 companies yielded a cumulative average return of -3.59% during the periods surrounding the events, which was also significantly different from 0 at the 5% level.

The results are explained using a theoretical framework which argues that decreases in firm value related to the events can be attributed to damages to corporate reputation ("CR"). As there is no unifying theory within corporate reputation research (Sabate and Puente, 2003), we have developed a resource-based theoretical framework which makes new connections between different studies within corporate reputation research. We also make new connections to other academic disciplines, including sexual harassment literature, and the "Popularity Asset Pricing Model", which represents a combination of classical and behavioural finance research. The framework used in this paper provides an explanation of the antecedents to corporate reputation, a definition of corporate reputation, a discussion of the value-creating mechanisms of corporate reputation, and a discussion of investor behaviour related to corporate reputation.

The result is an explicit analysis of how the events studied impacted corporate reputation, and how changes in corporate reputation impacted firm value.

1.1. Contribution

To the best of our knowledge, this is the first paper that quantitatively studies the economic costs associated with the "MeToo" movement. We also believe that this paper is interesting with regards to corporate reputation research, as it examines a set of comparable reputation-impacting events which affected public companies over a short period of time in a single country. This is a rare occurrence which provides a unique opportunity to measure the value of corporate reputation.

We also argue that this paper takes a novel approach towards measuring corporate reputation. Prior research often identifies CR as a resource, and then seeks to measure the positive results generated by that resource (Deephouse, 2000). Although we also identify CR as a resource, we posit that attempting to measure the positive results generated by CR is difficult, as the positive effects are subtle, multi-faceted and develop slowly over time, making them difficult to disaggregate and quantify (Deephouse, 2000). On the other hand, corporate reputation can be destroyed very quickly (Lev, 2002), which we take advantage of by adopting a reversed version of the approach described above and measuring negative changes in CR. Firstly, an event (in this case a sexual harassment allegation) is identified which led to the devaluation of the corporate reputation resource; secondly, the negative value effect associated with the damage caused to corporate reputation is measured. We argue that the speed at which corporate reputation is reduced significantly simplifies the measurement of corporate reputation, solving a problem found in much previous research.

We believe our theoretical framework contributes to corporate reputation research for several reasons. Firstly, it is explicitly founded on the resource-based theory of the firm, improving on previous research, as the theoretical foundations for other CR models are often implicit or lacking (Sabate and Puente, 2003). Our framework also draws new linkages within corporate reputation research, providing a robust and simple model for explaining how corporate reputation is created, and what corporate reputation is, and how it impacts firm value. To the best of our knowledge, previous CR research rarely explains the firm-value consequences of CR through established asset pricing models, unlike the current study. Finally, our framework makes new connections to sexual harassment research, and contributes to the field by quantifying the economic impact of sexual harassment. To the best of our knowledge, this is the first study that measures the economic costs of sexual harassment.

Our quantitative analysis uses stock return data, which differs from much of the previous research in corporate reputation, which has relied on reputation quotients (Sabate and Peunte, 2003). We argue that our use of stock market data avoids many criticized issues related to reputation quotients.

1.2. Delimitation

We have chosen to limit our study to what we refer to as the MeToo Period, defined as being between October 2017 and the April 2019. It should be noted that the event impacting 21st Century Fox occurred briefly prior to October 2017, on April 1st, 2017. This event was included as we believe it can still be classed as being in the "MeToo era", and as it was a very high-profile case. We have chosen to only include sexual harassment allegations that have been reported by major media outlets. Furthermore, only US-listed firms are included in the study, and we only study situations where the accused have had a high-status role within their firm.

2. Theoretical Framework and Literature Review

This section provides an overview of the field of corporate reputation. We will discuss the development of different perspectives on corporate reputation, and integrate these perspectives into a definition of CR. Further, we will provide a framework which links CR to sexual harassment, accounting and firm valuation. Please see Figure 1 in the Appendix for an overview of the theoretical framework discussed in Section 2.

2.1. Defining Corporate Reputation

2.1.1. An Introduction to Corporate Reputation Research and Early Perspectives

The Oxford dictionary defines reputation as the beliefs or opinions that are generally held about someone or something (Oxford English Dictionary Online, 2019). Researchers provide a plethora of definitions on corporate reputation, which are heavily influenced by their respective academic disciplines, such as marketing, accounting, finance, management and sociology (Money et al, 2017). As a result, there is no ubiquitous definition of CR, many definitions don't take prior research into consideration, and at times even contradict each other (Sabate and Puente, 2003; Money et al, 2017).

The first study of "reputation" within a business environment is widely attributed to Edward Bernays, nephew to Sigmund Freud, who pioneered the field of public relations research in the 1920's through his books "*Crystallizing Public Opinion"* (1923) and *"Propaganda"* (1928). An example of his work was the use of high-status actors, actors and fashion models in this case, to promote cigarette smoking amongst women (Gunderman, 2015). Subsequent researchers, such as Shapiro, developed theories which explicitly linked CR to financial performance (Shapiro, 1983).

Shapiro's 1983 paper, *"Premiums for High Quality Products as Returns for Reputations"* is regarded as being a milestone in CR research (Money et al, 2017). Shapiro studied markets in which products could not be assessed by consumers prior to product purchase, and modelled the effects of corporate reputation under perfect competition and near-perfect information conditions. Near-perfect information conditions were assumed as corporate reputation is predicated on the existence of information asymmetries. Shapiro states that consumer evaluations of past product quality inform new purchase decisions, meaning historical product quality serves as a signalling device which reduces consumer uncertainty. This reduction in

uncertainty increases demand, which makes it possible for firms to charge pricing premiums. Therefore, firms which choose to invest in product quality are compensated by higher future earnings. According to Shapiro, the signalling device of historical product quality serves as the foundation of corporate reputation (Shapiro, 1983). CR research based on Shapiro's theory can be categorized into the "perceived quality" stream of research (Rindova et al, 2005).

Since the publication of Shapiro's paper, CR research has been widened by introducing a complimentary perspective, focused on articulating CR as a construct that reflects the multitude of economic and non-economic criteria of different stakeholders (Money et al, 2017).

2.1.2. Defining the Prominence Component of Corporate Reputation

The term "prominence" was first introduced by Rindova et al's 2005 paper, *"Being good or being known: An empirical examination of the dimensions, antecedents, and consequences of organizational reputation"*. Prominence refers to how stakeholder perceptions, or their collective awareness, create CR (Rindova et al, 2005). Therefore, this introduces a separate perspective of CR which compliments the perceived quality perspective, which takes a purely economic view of CR (Rindova et al, 2005). Using prominence as a generic term is important as previous research focused on this perspective is influenced by a variety of academic disciplines, resultingly, a broad range of terminology is employed when referring to what we call prominence (Money et al, 2017; Sabate and Puente, 2003). In other words, we use term prominence to provide structure for our analysis, which is important as the differences in terminology used in previous research could create unnecessary confusion if employed in this paper. We will now give a more concise definition of prominence, drawing on relevant studies within this stream of CR research.

The prominence dynamic links corporate reputation to an organizational field's perceptions of a firm relative to its sector (Rindova et al, 2005). A firm's organizational field is composed of stakeholders (such as investors and consumers), and third-party actors (which include institutional intermediaries and high-status actors). Institutional intermediaries can be disaggregated into general institutional intermediaries, such as media companies, and specialized institutional intermediaries, such as ratings agencies (Deephouse, 2000; Fombrun et al, 1990; Rindova et al, 2005). High-status actors include influential individuals, such as celebrities (Deephouse, 2000). The individual perceptions stakeholders and third-party actors hold of a firm can be referred to as "images" (Money et al, 2017). These images reflect the

extent to which firms fulfil the varying expectations held by relevant third-party actors or stakeholders (Rindova et al, 2005; Brown et al, 2006; Money et al, 2017; Brammer and Pavelin, 2006). These expectations may be related to economic or non-economic factors (Fombrun and Shanley, 1990). The aggregation of individual stakeholder images impacts a firm's corporate reputation (Fombrun and Shanley, 1990) through the prominence component (Rindova et al, 2005).

Paradoxically, firm prominence can itself influence stakeholder images in a feedback loop (Fombrun and Shanley, 1990). Deephouse (2000) explains that these stakeholder images are also partially influenced by the decisions and images held by other stakeholders. Further, Deephouse writes that the level of influence a stakeholder has depends on its relative power in an organizational field, i.e. a powerful stakeholder has more influence on stakeholder images than a weak stakeholder. However, the formation of stakeholder images is more significantly influenced by decisions made by third-party actors (Fombrun et al, 1990; Rindova et al, 2005; Deephouse, 2000). We argue that general institutional intermediaries, or media companies, are the most relevant third-party actors in our study. Institutional intermediaries have more influence than regular stakeholders, due to their credibility and their ability to distribute large amounts of information (Deephouse, 2000; Pollock and Rindova, 2003; Fombrun et al, 1990). Deephouse (2000) explains their role in the quotation below,

"Institutional intermediaries…screen, spin, and broker information for us (stakeholders)*; they help us make sense of companies' complex activities – and so affect company reputations."*

Thus, Deephouse (2000) moves media from being a passive information provider to an active participant in corporate reputation generation. In other words, media provides information and directs attention within organisational fields. This responds to Thompson's (1995) criticism that media is often mistakenly overlooked as a "conveyor belt" of information, rather than an active participant in reputation formation. With that being said, media's role as an information provider is still important, as the mere availability of information about a firm can impact stakeholder images (Fombrun et al, 1990; Kahneman and Tversky, 1974).

Although the firm can still influence its own prominence through firm decisions (Deephouse, 2000; Fombrun et al, 1990), these decisions are mediated by the "noisy" actions and reactions of the organisational field. Therefore, the prominence view differs from the perceived quality

view, as the influence of third-party actors decouples the generation of corporate reputation from the firm's control (Rindova et al, 2005).

Several studies have demonstrated the relationship between prominence and firm performance. Fombrun and Shanley (1990) found a positive correlation existed between market performance and corporate reputation, where corporate reputation was partially defined as being driven by prominence-related factors such as media attention and firm reputation. Rindova and Pollock (2003) strengthened these results, finding that media attention is positively correlated with IPO performance. In a similar study, Guldiken et al. (2014) found that negative media coverage negatively impacted IPO performance. Rindova et al (2005) showed that prominence of a scholar's alma mater was a major factor in determining the future salary of scholars, whereas actual perceived quality had no impact on future salary level. The importance of prominence relative to quality is also reflected in Lee (2001), which demonstrated that adding ".com" to company names positively affects firm valuation, we believe this can be explained by the prominence dynamic.

2.1.3. Defining Corporate Reputation

We draw on Rindova et al (2005) to propose that Corporate Reputation is the result of two components, prominence and perceived quality. As discussed in Section 2.1.2, prominence represents the aggregation of dynamic stakeholder images, which are influenced within an organizational field by other stakeholders, firm decisions, and, most importantly, third-party actors. As discussed in Section 2.1.1, perceived quality is the result of dynamic stakeholder evaluations of historical product quality. Historical product quality is influenced by historical firm decisions.

Following the discussion of these different perspectives on corporate reputation, we define corporate reputation as the following,

Corporate Reputation represents stakeholder perceptions of a firm's ability to fulfil expectations over time relative to other firms in an organisational field.

This definition draws on literature outlined in Section 2.1.1 – 2.1.2. Note that by expectations, we refer to the aggregation of stakeholder-specific expectations related to a firm's economic, non-economic, and product-related performance.

We have now provided a definition of corporate reputation, and the antecedents to this definition. We will now seek to provide additional clarifications on corporate reputation, and outline mechanisms and consequences related to corporate reputation and firm value.

2.1.4. Corporate Reputation from an Accounting Perspective

We regard CR as an intangible asset which can be associated with the goodwill value of a firm's brand name or customer loyalty (Shapiro, 1983). This is supported by the unifying resource-based theory of the firm, which essentially states that performance differences between firms can be explained by the ownership of costly-to-copy resources which produce above-average rents (Conner, 1991). We define a resource as being rare, valuable, imperfectly imitable, and non-substitutable (Barney, 1991, Deephouse, 2000). These traits are reflected by our definition of Corporate Reputation.

Treating CR as an intangible asset reflects previous corporate reputation research and is supported by several studies, which have found that CR supports superior financial performance, as it allows a firm to lower costs, increases prices, and create competitive barriers, among other benefits (Fombrun and Shanley, 1990; Fombrun, 2000). From a capital markets perspective, corporate reputation implies relative increases in investment security and may also increase investor loyalty, which decreases the risk of hostile takeovers, decreases share price volatility, reduces investor relations costs, and improves a firm's ability to implement long-term strategies (Helm, 2007). As an intangible asset, CR should impact firm value (Teece, 1998). A definition of corporate reputation, the classification of CR as an intangible asset, and the implicit link this has to firm value, has now been established.

2.2. Measuring Corporate Reputation

Several empirical studies have used Fortune's survey of America's Admired Corporations to measure reputation (Sabate and Puente, 2003). The Fortune survey has been published annually since 1982, with ratings compiled from surveys of executives, directors and analysts. Respondents score different companies on eight attributes on a scale of 0 to 10. Research has found that the overall score of Fortune rankings has had a positive effect on stock market performance (Deephouse, 2000).

Many of the attribute scores are reliant on financial performance, therefore the Fortune reputation quotient is highly correlated with financial performance (Deephouse, 2000). This

bias towards financial indicators is known as the financial halo (Sabate and Puente, 2003). The financial halo criticism essentially states that defining corporate reputation as a product of historical financial performance and then using corporate reputation as a factor in explaining future financial performance is a circular argument, hence the "halo" metaphor.

"This absence of theoretical explanations, coupled with analyses that acknowledge a two-way relationship (between financial performance and corporate reputation), *leads us to wonder whether there really is a mutual influence between these variables, or whether the existence of one direction gives the impression, artificially, of inverse direction. If so, which direction is the legitimate one and which is the spurious?"* (Sabate and Puente, 2003).

Attempts to circumvent the financial halo of Fortune ratings have been criticized as too complex, and difficult to recreate (Deephouse, 2000). Furthermore, the Fortune selection of respondents represents a limited stakeholder group (Fombrun 1996), the study only represents US firms, and Fortune has admitted that primary purpose of the survey is to increase magazine sales (Soderman 1995). These factors damage the reliability of using reputation quotients such as the Fortune ratings. On the other hand, the inaccuracy of these rankings doesn't make their consequences any less real (Rindova & Fombrun, 1999). The role inaccurate media reports can play in impacting prominence is illustrated by the Dow Corning Silicone Implant controversy, where unsubstantiated claims of silicone implant product deficiencies resulted in serious reputational and economic consequences for the implant producer Dow Corning (Argenti, 1998; Zarina Lam and Dileep Hurry, 1992). It may also be wrong to entirely discount the "Financial Halo", as it is reasonable to argue that good financial performance positively impacts corporate reputation (Fombrun et al, 1990; Roberts et al, 2002), especially for certain stakeholder groups such as investors (Fama, 1970).

Due to these shortcomings, we have chosen to measure corporate reputation as directly as possible through firm stock market prices. We assume the stock market will capture changes in corporate reputation, reflecting the semi-strong theory of market efficiency, which states that the current stock price fully reflects all public knowledge concerning the firm (Fama, 1970). We believe that measuring stock price changes is the most direct approach in measuring reputation, arguably making it the most effective (Money et al, 2017).

2.3. Valuing Corporate Reputation as an Intangible Asset

"Knowledge, competence, and related intangibles have emerged as the key drivers of competitive advantage of developed nations… There is implicit recognition of this with the growing emphasis being placed on the importance of intangible assets, reputation, customer loyalty, and technological know-how." (Teece, 1998)

Ibbotson and Kaplan, in their 2018 book *"Popularity, A Bridge between Classical and Behavioral Finance"* develop a new asset pricing model, the Popularity Asset Pricing Model, or "PAPM". The PAPM combines elements of classical and behavioral finance, to develop a

"…framework for understanding how popularity predicts the direction of various premiums and anomalies relative to the CAPM and, eventually, to develop a formal asset pricing model that incorporates the central idea of popularity." (Ibbotson and Kaplan, 2018).

By popularity, Ibbotson and Kaplan (2018) refer to certain characteristics that investors find inherently popular, for rational or irrational reasons. Reputation is one such factor.

Ibbotson and Kaplan (2018) write that the economic benefits of corporate reputation are reflected in the economic valuation of a company in efficient and rational markets. Further, Ibbotson and Kaplan (2018) show in the PAPM that investors are willing to pay a price premium in excess of the efficient and rational valuation of a company, in order to own companies with good reputations. The role of reputation is captured by an additional popularity factor in Ibbotson and Kaplan's (2018) PAPM model.

Ibbotson and Kaplan's (2018) results support our hypothesis that corporate reputation should be reflected in stock prices, and that investor decision making is influenced by reputational factors, either consciously or subconsciously. Consequently, events that impact corporate reputation should change stock prices, and thus firm value. In addition, this implicitly supports our use of stock price as a tool for measuring corporate reputation.

2.4. Sexual Harassment Research

Given the nature of this study, it is relevant to define and discuss sexual harassment in the workplace. Sexual harassment is illegal under federal US law, and is defined as,

"unwelcome, verbal, visual, or physical conduct of a sexual nature that is severe or pervasive and affects working conditions or creates a hostile work environment." (U.S. Equal Employment Opportunity Commission, 2010)

A common academic definition is attributed to Fitzgerald, who writes,

"...unwanted sex-related behaviour at work that is appraised by the recipient as offensive, exceeding her resources, or threatening her well-being" (Fitzgerald et al, 1997, p15).

2.4.1. Sexual Harassment in Business Literature

Sexual harassment has negative consequences for employee well-being (Fitzgerald, 1994). Job-related consequences include decreased job satisfaction, decreased productivity, job loss and career interruption (Fitzgerald, 1994). Targets of sexual harassment also experience a range of negative health-related outcomes (Fitzgerald et al, 1997). Studies have found that co-workers of targets of sexual harassment also experience similar negative job, psychological and health related outcomes (Miner-Rubino and Cortina, 2007).

McDonald writes that "direct organizational costs" include those related to turnover, recruitment and training, as well as legal and investigation costs (McDonald, 2011). McDonald (2011) also refers to "less quantifiable costs" such as reduced employee morale, absenteeism, damage to external reputation and loss of shareholder confidence (McDonald, 2011). Studying and counteracting sexual harassment is difficult, due to the "subjective perception" of the target, the ambiguity of intent, and the violation of norms. (McDonald, 2011; Popovich and Warren, 2010).

Previous studies have quantified the impact of sexual harassment in economic terms (see Faley et al, 1999; EEOC, 2010). However, scholars have noted that research on the economic impact of sexual harassment is still lacking. To the best of our knowledge, research also seems to be focused on more tangible and direct costs related to e.g. lawsuits and recruiting, resulting in a lack of research on "less quantifiable" factors such as the economic impact of reputational damage related to sexual harassment.

2.4.2. Sexual Harassment, Social Norms and Corporate Reputation

Fombrun and Shanley (1990) developed the term "signals" to refer to "alterable observable attributes" that stakeholders use to evaluate firm activities. These signals are broadcasted by firms and "external monitors" to different stakeholders, and effect CR (Fombrun and Shanley, 1990). By external monitors, Fombrun and Shanley (1990) refer to what we call institutional intermediaries (Deephouse, 2000). Fombrun and Shanley (1990) categorized signals into three groups: market and accounting signals, institutional signals and strategy signals. Institutional signals indicate conformity to non-economic social norms, which may be important in establishing important relationships with powerful stakeholders (Fombrun and Shanley, 1990). The Oxford Dictionary defines a norm as a standard pattern, especially of social behaviour, that is typical or expected (Oxford English Dictionary Online, 2019). Norms are subject to change and ambiguous subjective interpretation (Popovich and Warren, 2010). The dynamic nature of norms is reflected by Serafeim and Ioannou (2015) research on stock market analysts, these analysts initially viewed firm CSR activities as an agency cost in the early 1990's, but now view CSR in a positive light (Serafeim and Ioannou, 2015). We believe it is reasonable to assume that the "MeToo" movement shifted social norms surrounding sexual harassment.

Institutional signals relate to firm size, institutional ownership, social responsibility, and media visibility (Fombrun and Shanley, 1990). We argue that these are the most relevant institutional signals for this paper's analysis. Given our definition of CR, we posit that these institutional signals impact the prominence component of CR. Firms can generate social responsibility signals through e.g. charitable donations, which was shown by Williams and Barrett (2000) to positively impact CR. Firms can generate media visibility by propagating information through institutional intermediaries (Fombrun and Shanley, 1990).

In this paper, we hypothesize that sexual harassment allegations generated negative social responsibility signals and increased negative media visibility. This negatively impacted stakeholder images and the prominence component of CR.

2.4.3. Effect of Potential Litigation Costs

Falls in firm value following regulatory fines and punishments are often much larger than the actual fine (Karpoff and Lott, 2008). Furthermore, as fines are non-recurring items, investors are less likely to take them into account when making investment decisions (Schilit and Perler, 2010). Therefore, litigation costs usually have a negligible impact on firm value (Schilit and Perler, 2010).

2.4.4. The Role of CEOs in Corporate Governance and the Wealth Effects of CEO Turnover

CEOs appear to be especially important in certain firm decisions, such as acquisition or diversification decisions, dividend policy, interest coverage, and cost-cutting policy (Bertrand and Schoar, 2003). Further, research has found that CEOs based in the US have more discretion than non-US counterparts, given strong US values of individualism and tolerance for uncertainty (Hofstede, 2001). US firms also often have formal institutions and governance mechanisms that allow or encourage significant CEO risk-taking behaviour (Hambrick, 2007). Research has also found that different managers have a significant impact of firm performance, and that manager performance can partially be attributed to the fit of management style to a firm's needs (Bertrand and Schoar, 2003).

However, it should be noted that not all managers are important for firm performance, as certain managers are unremarkable in terms of skill/style (Bertrand and Schoar, 2003). Bertrand and Schoar (2003) continue by stating that a CEOs style is also reflective of corporate governance, stating that a good corporate governance structure should result in a beneficial CEO management style. Interestingly, Bertrand and Schoar (2003) also linked management style and performance to two observable managerial attributes, age cohort and MBA education, with statistically significant results. These studies support the hypothesis that individuals do matter in the determination of firm policies, in contrast to e.g. the neoclassical view, which holds that managers are simply *"homogenous and selfless inputs into the production process"* that do not matter (Bertrand Schoar, 2003).

Thus, given the importance of top management on firm policy, changes in top management should be of interest to shareholders (Furtado and Karan, 1990). This is important in our case as corporate scandals and illegal activity are often accompanied by the dismissal of incumbent executives (Zona et al, 2011; Niehaus and Roth, 1999). Several event studies have been undertaken to study the potential effect of CEO turnover on shareholder wealth effects. One

such study conducted by Weisbach (1988) found that CEO resignations had a statistically positive effect on firm value, which is attributed to corporate governance signals related to the removal of bad management by the board of directors. Further, Weisbach (1988) observed that the presence of external board members may further improve corporate governance, although this observation was not statistically significant. These results are supported by Denis & Denis (1995) who found that forced CEO turnovers had a significant positive impact on firm value, attributed to signalling effects related to future organizational changes.

However, event studies on CEO turnover have been far from conclusive, as demonstrated by Furtado and Karan's 1990 paper, "*Causes, Consequences, and Shareholder Wealth Effects of Management Turnover: A Review of the Empirical Evidence"*. In their review, Furtado and Karan (1990) found that event studies on general CEO-turnovers provide inconclusive results. However, they do state that certain sub-samples of specific types of changes, such as CEOs which were replaced by external hires, resulted in significant positive value effects for certain firms (Furtado and Karan, 1990). With that being said, many of the results which proved significant are contradicted by other studies (Furtado and Karan, 1990). Although most research has focused on stock prices, CEO turnover has also been found to increase long-term equity price volatility, which is explained by two "uncertainty" factors: signals related to changes in firm strategy, and doubts about the successor CEO's ability (Clayton et al, 2005). This is in line with much of the explanations provided by CEO-turnover literature – that changes in firm can be attributed to two factors: the loss of human capital and signals related to firm performance (Furtado and Karan, 1990).

2.5. Hypothesis

Given the theories and studies discussed in Section 2, we wish to examine whether MeToo events had an effect on firm valuation through the corporate reputation mechanism. Therefore, we develop the following empirical hypothesis:

> **H_1:** Sexual harassment allegations during the "MeToo" period led to decreased valuation for accused firms, due to the negative impact these accusations had on the corporate reputation of accused firms

3. Data Collection and Sample Selection

3.1. Sample Selection and Delimitation

We define the #MeToo period as being between October 2017, the date of Alyssa Milano's tweet which triggered the MeToo hashtag, and April 2019. We define a MeToo event as a case of sexual harassment or misconduct perpetrated by senior or prominent employees of publicly traded corporations during the MeToo period.

We chose to limit our study to listed companies as this enables the measurement of stock price movements. We also only studied companies listed on a US stock exchange, improving the comparability of our data. The US was chosen as a region due to its relatively high number of MeToo events. We selected companies which did not have overlapping event windows or exhibited clustering. This was to avoid the complications and loss of explanatory power associated with clustering (Mackinley, 1997). This also ensures the maximum amount of independence within the sample, which is important for the statistical models which we have used (Boehmer et al, 1991). Although one pair of event windows overlapped, we do not believe this had a significant impact on our results.

We focus on allegations targeting high-status employees, such as executives or media personalities, as allegations levied against lower level employees are often not widely publicized, which would create issues with data collection and likely lead to a limited stock market reaction. Also, lower level employees have less power in the company (see Section 2.4.4).

Given these delimitations, we were able to compile a list of 23 data points, with each data point related to the publication date of a MeToo event. These 23 points were related to 18 different companies (certain companies were subject to more than one allegation).

3.2. Selection of a Comparable Index

A benchmark must be used to estimate the abnormal returns of individual firms. As we have decided to use the market model approach, our benchmark must serve as a proxy for the market portfolio. We have decided to use the capital weighted Russell 3000 index, widely regarded as being the broadest market index in the US, which includes ca. 3000 of the largest listed US firms by market capitalization (FTSE Russell, 2018). The reason for using a broad US

benchmark was that the firms studied in this paper are listed in the US, are of different sizes, and operate in a variety of industries.

3.3. Construction of our Shadow Portfolio

We have matched every firm in our sample (18 firms having 23 MeToo-events), with a comparable company without a MeToo event (See section 4.1). These were chosen based on industry, revenue growth and market size, from a universe of listed US companies, using suggested comparable companies provided by Bloomberg and the research department of a major US investment bank. The selection of comparable companies is subject to subjective judgements.

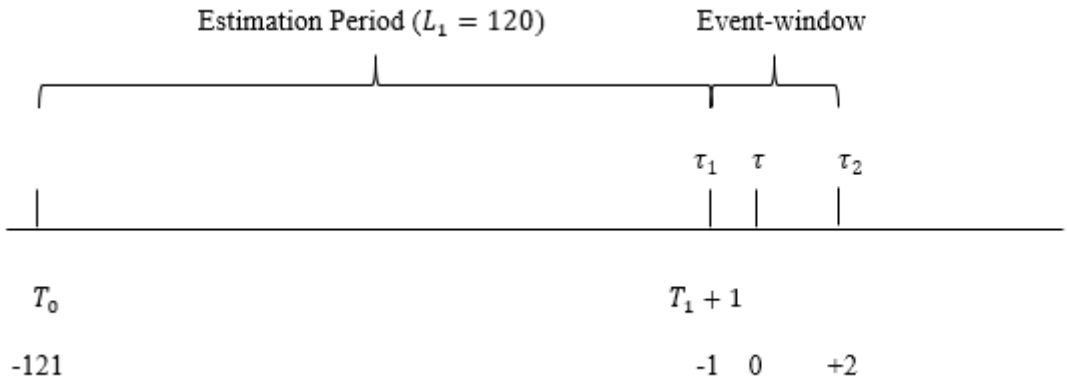
3.4. Determining the Estimation Period and the Event Window

The *estimation period* is the number of days for which the security is benchmarked in relation to the market, using the least-square regression to estimate Alpha and Beta. We used a 120 trading day estimation period for each firm, ensuring meaningful estimates (Marks and Musumeci, 2017). A 120 day estimation period is also recommended by MacKinley (1997). As we have chosen 120 trading days, rather than 120 days, we have adjusted for days when the US stock market was closed e.g. national holidays and weekends.

The event window refers to the number of days surrounding the event of interest, over which abnormal returns are calculated. There are no fixed definitions on what the appropriate length of an event window should be. For example, Lee (2001) as well as Kumar (2005) used a three-day event window, whilst Godfrey et. al (2009) used a 19-day event window. However, prior research has shown that shorter event windows are more effective, as longer event windows increase the risk that market noise and return model inaccuracies damage the accuracy of results (McWilliams and Siegel, 1997; Fama et al, 1998)

We chose to set our event window at one day prior to the first media report to adjust for potential information leakages, and two days thereafter. The latter two days capture potential "rebounds" or lagged effects in stock price (Bremer and Sweeney, 1991).

Figure 2. Overview of the Time Period



3.5. Data Collection

The daily closing price for the stocks in our sample and the Russell 3000 index was compiled through Bloomberg, which were used to calculate daily returns. The prices were adjusted for stock splits and dividends using Bloomberg terminal software.

4. Methodology

4.1. Research Approach

As outlined in Section 2.5, we seek establish our hypothesis that the MeToo-events had an impact on valuation for sample firms. We primarily used the event-study framework, supported by robust statistical methods, with the purpose of gaining statistical evidence for whether or not our null hypothesis of no effect of sexual misconduct allegations on stock price performance could be rejected. The event study framework is well-established and widely applied in the economics, finance and management literature (MacKinley, 1997). We explain this method in detail in Sections 4.2 to 4.3. This method provides a scientific structure to the measurement of abnormal returns compared to a benchmark.

Our sample portfolio consists of 23 events derived from 18 sample companies. Further, we have constructed an additional "shadow portfolio" composed of 18 comparable companies (see Section 3.3). Our sample portfolio is analyzed using the event-study framework by calculating the cumulative abnormal return ("CAR") over the event window. The CAR is the sum of the abnormal returns over the event window, while the event window represents one day prior to the announcement day, the announcement day, and two days post the announcement days.

Furthermore, as we explain in Section 4.3.4, we standardize the abnormal returns for our sample portfolio, and adjust for event-window variance through the BMP-method, in order to improve the reliability of our t-test results. These adjustments will result in the variable "standardized cumulative abnormal returns" ("SCAR") and its associated variance.

The use of a shadow portfolio is similar to the use of randomized control trials in medical experiments. Our shadow portfolio consists of 18 companies, where each shadow portfolio company is paired to a comparable sample company. As the shadow portfolio is a control sample, none of the shadow portfolio companies have been impacted by a MeToo event during the measurement period. We measure the abnormal returns of shadow portfolio companies over the same period as for the sample company. This is done to ensure that industry-wide factors haven't impacted sample portfolio returns, which serves as a robustness check for our results. We have not conducted a t-test or sign test on the shadow portfolio.

We also conducted a sign-test on the sample portfolio. The use of a non-parametric test which isn't influenced by potentially outsized abnormal returns of specific firms serves as an additional robustness check on our t-test.

4.2. The Event Study Framework

The event study method is simple in its nature, and we have primarily used the method outlined in Mackinley's 1997 paper, "*Event Studies in Economics and Finance"*. The steps outlined in MacKinley (1997) are as follows: The events of interest are selected, often some sort of announcement, with the purpose of studying the market reaction in the time period adjacent to the event. The reaction is measured through abnormal returns, which is the performance of a security relative to a benchmark, often a market index. Abnormal returns can be estimated using a variety of models, such as the CAPM, the mean return model, and the market model. The output is then analyzed. The various steps of this process are explained in Section 4.3.

4.2.1. The Use of Stock Market Data as the Performance Measure

In other words, the semi-strong efficient market hypothesis states that the current stock price fully reflects all public knowledge concerning the firm, and that new information results in stock price adjustments (Fama et al, 1969). This hypothesis has been tested and found to be consistent on a range of stock market exchanges (Jensen, 1978).

4.3. The Construction of our Event Study

The following section is broken down into three parts. Firstly, through Section 4.3.1 to 4.3.3, we explain how the abnormal returns have been calculated. Secondly, in 4.3.4 we explain the standardization and the variance adjustments that have been made in accordance with the BMP-method, as well as the layout of the t-test. Finally, in Section 4.3.5, we explain the sign-test methodology.

4.3.1. The Market Model:

We used the market model in our event study, based on the approach outlined in MacKinley (1997). The market model is a statistical model which relates the return of any given security to the return of the market portfolio (Russel 3000 in our case), assuming a constant linear relationship between the market and the specific stock, giving us the normal return of a firm. The market model-based event study is well established in strategy and management literature (Godfrey et al, 2009; Kumar, 2005; Lee, 2001; MacKinley, 1997). Although it is a relatively simple model, we have chosen the market model approach as prior research has shown that adding more factors often has limited marginal explanatory power in event studies (MacKinley, 1997). The market model approach also eliminates biases and sensitivities related to the APT and CAPM model (MacKinley, 1997).

The model's linear specification follows from the assumed joint normality of asset returns. For any security *i* the market model is:

$$R_{it} = \alpha_i + \beta_i R_{mkt\,t} + \varepsilon_{it} \qquad [1]$$

Where α measures the average return for a firm with no market movement, β captures the stock's performance relative to the market. R_{it} measure the return for a specific stock on a given day considering these market-based fluctuations, whilst ϵ_{it} is the abnormal return on a given day.

The formula above can be re-arranged to calculate the abnormal return:

$$AR_{i\tau} = \varepsilon_{it} = R_{it} - \alpha_i - (\beta_i R_{mkt\,t}) \qquad [2]$$

We will then calculate the abnormal return of the stocks over a four-day event window (including one day prior to the event day, the event day, and two days after the event).

4.3.2. Estimating Beta (β) and Alfa (α) of our Sample

Alpha and Beta are calculated using ordinary least squares regression using the estimation period data of 120 trading days.

This estimation assumes that the joint distribution of returns is stationary and that the Gauss-Markov theorem holds (Newbold et al, 2013):

1. $E[\varepsilon_i] = 0$ (for i= 1…. N)
2. $E[\varepsilon_i \varepsilon_j] = 0$ (for all $i \neq j$)
3. $E[\varepsilon_i{}^2] = \sigma^2$ (for i= 1…. N)
4. Cov $[\varepsilon_i, R_i]$ (for i= 1…. N)

$$\beta_i = \frac{\sum_{t=T_{0+1}}^{T_1}(R_{it} - \mu_i)(R_{mkt_t} - \mu_{mkt})}{\sum_{t=T_{0+1}}^{T_1}(R_{mkt_t} - \mu_{mkt})^2} \quad [3]$$

Where,

$$\alpha_i = \mu_i - \beta_i \times \mu_{mkt} \quad [4]$$

$$\mu_i = \frac{1}{L_1}\sum_{t=T_{0+1}}^{T_1}(R_{it}) \quad [5]$$

$$\mu_{mkt} = \frac{1}{L_1}\sum_{t=T_{0+1}}^{T_1}(R_{mkt}) \quad [6]$$

($L_1$is the length of the estimation period, in our case L_1=120)

4.3.3. Cumulative Abnormal Returns

The cumulative abnormal return is the sum of the abnormal returns (AR_{it}) for a specific stock over the event window.

$$CAR_i = \sum_{t=1}^{N} AR_{it} \quad [7]$$

CAR (cumulative abnormal return) gives us the sum of the daily differences between actual and expected return across our event window. The potential abnormal returns will be independent across securities, as there is no clustering across our event windows (Brown and Warner 1982, 1985).

Given *n* events, the sample aggregated abnormal returns is:

$$\overline{CAR} = \frac{1}{n}\sum_{t=1}^{N} AR_{it} \qquad [8]$$

Using the "standard" t-test method, the $\overline{CAR}$ test statistic is as follows (MacKinley, 1997):

$$\frac{\overline{CAR}(t_1, t_2)}{\sqrt{Var(\overline{CAR}(t_1, t_2))}} \qquad [9]$$

However, there are two potential issues related to t-tests, the assumption of normality and the assumption of heteroscedasticity (Newbold et al, 2013). As discussed in Section 7, stock market data and consequently abnormal return data is not normally distributed. Secondly, we would need a sample where the variance in the sample a characterized by homogeneity. To overcome these issues, we chose to apply the BMP-method, which is explained in Section 4.3.4.

4.3.4. Standardizing Cumulative Abnormal Returns & Hypothesis Testing

Estimation period cross-sectional standard deviation is often used when calculating t-statistics in event studies, which is problematic as this method doesn't take event-induced variance increases into account (Brown and Warner, 1985; Corrado and Zivney, 1992). Research has shown that failing to account for event-induced variance results in an over-rejection of the null hypothesis, increasing the probability of Type I errors – the rejection of null hypothesis when it is true (Boehmer, Musumeci, and Poulsen 1991; Brown and Warner, 1985; Corrado and Zivney, 1992). We found that variance during the event window increased significantly in our study, meaning that our study suffered from event-induced variance. We use Boehmer, Musumeci, and Poulsen's (1991) "BMP" method to adjust for cross-sectional event-induced variance in this study.

The BMP method has been shown by numerous studies to improve t-test accuracy without noticeably impacting the power of the test statistic (Boehmer et al 1991; Corrado and Zivney, 1992; Corrado 2011). This should significantly improve the accuracy of our results.

Furthermore, issues regarding homoscedasticity will also be resolved, as this does not need to be adjusted for when using the BMP method (MacKinley 1997).

According to Boehmer et al's BMP method (1991), the cumulative abnormal returns ("CARs") of individual securities during the event window should be standardized, by dividing them by the standard deviation of the securities' Abnormal Returns during the estimation period (see formula 10, 11 and 12). This results in the standardized cumulative abnormal return of individual securities ("SCAR").

The average SCAR is used in the numerator of the test statistic. The denominator is composed of is the cross-sectional standard deviation of SCARs, which have been adjusted for event-induced variance (see formula 14).

The following formulas are used to standardize the abnormal returns (Boehmer, Musumeci and Poulsen's 1991; Luoma and Pynnönen 2010; Corrado 2011):

$$SCAR_i(\tau_1, \tau_2) = \frac{CAR_i(\tau_1, \tau_2)}{S_{CAR_i(\tau_1,\tau_2)}} \qquad [10]$$

An estimator for the variance is used, which is based on the estimation window abnormal returns.

$$S^2{}_{CAR_i(\tau_1,\tau_2)} = \sigma_i^2(\tau_1, \tau_2) = (\tau_2 - \tau_1 + 1)\,\sigma_{\varepsilon_i}^2 \qquad [11]$$

Where:

$$\sigma_{\varepsilon_i}^2 = \frac{1}{L_1 - 1} \sum_{\tau = T_0+1}^{T_1} (AR_{i\tau})^2 \qquad [12]$$

L_1 *is the estimation window length, which ranges from* T_0 *to* T_1*, and is 120 days in our case.*

Further, we form the mean SCAR across the sample, calculated in the following way:

$$\overline{SCAR}(\tau_1, \tau_2) = \frac{1}{n} \sum_{i=1}^{n} SCAR_i(\tau_1, \tau_2) \qquad [13]$$

Finally forming our test statistic which is the following:

$$t_{BMP} = \frac{\overline{SCAR}(\tau_1, \tau_2)}{\frac{S_{SCAR(\tau_1,\tau_2)}}{\sqrt{n}}} \quad [14]$$

$S_{SCAR(\tau_1,\tau_2)}$ is the cross-sectional standard deviation of SCARs:

$$S_{SCAR(\tau_1,\tau_2)} = \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}\left(SCAR_i(\tau_1, \tau_2) - \overline{SCAR}(\tau_1, \tau_2) \right)^2} \quad [15]$$

We form the null hypothesis that our mean SCAR is larger or equal to 0. In other words, our null hypothesis is that the identified MeToo events have no impact or a positive impact on stock prices. This is given by:

$$H_0: \overline{SCAR} \geq 0$$
$$H_1: \overline{SCAR} < 0 \quad [16]$$

This null hypothesis is formed under the condition that the following necessary assumptions are met:

(1) The distribution of the test statistic, $\overline{SCAR}$, follows a normal distribution.
(2) The underlying observations, $AR_{i\tau}$, are independent of one another.
(3) $\overline{SCAR}$ is a continuous variable.
(4) There should be no significant outliers in the underlying data.

H_0 was tested using the t_{BMP} test statistic described above. As it is the standardized *cumulative* abnormal return which has been tested, the underlying standardized abnormal returns during the event window must follow a normal distribution under H_0. However, the test statistic will follow a student t-distribution, as an estimator is used for the variance (Newbold et al, 2013). In Section 7, we therefore test whether the standardized abnormal returns over the *estimation period* are normally distributed. If this is the case, the standardized abnormal returns during the event window should also be normally distributed, under H_0.

4.3.5. Binomial Sign Test with Normal Approximation

To further test the statistical significance of our results, we have conducted a sign test with normal approximation. This is a non-parametric test, which means that we do not need to make assumptions regarding the distribution of our data. Furthermore, this sign test measures the significance of the move in stock price irrespective to the size of the movement, meaning that the results will not be disproportionately impacted by large movements related to one or two firms (Newbold et al, 2013; Corrado and Zivney, 1992).

Using the formulas laid out by Newbold et al (2013):

Mean: $\mu = nP$	[17]

Variance: $\sigma^2 = nP(1-P)$	[18]

Where the probability P, is equal to 0.5.

The test statistic is given by:

$$Z = \frac{S^* - \mu}{\sigma}$$	[19]

Forming our hypotheses:

$H_0: P \leq 0.5$ $H_1: P > 0.5$	[20]

As this is an upper-tail test, $S^* = S - 0.5$ (Newbold et al, 2013).

Further, S, represents the number of securities with a negative $\overline{CAR}_i$. The assumption that P≤ 0.5 is discussed in Section 7.1.2.

5. Results

In this section we will present our results from our market model analysis. Further analysis and discussion will be presented in Section 6.

5.1. Portfolio Results

Table 2 shows the results of our market model calculations, which were performed on a portfolio of 18 companies across 23 me-too events over a four-day event window. The mean portfolio CAR, or the CAAR, was -3.59% over the event window. The CAR of individual events ranged from -15.91% to 6.27%. On average, the largest change in AR occurred on the event date, t=0.

The portfolio experienced an average volatility increase of 42.8% during the event window period relative to the estimation period.

5.2. Portfolio BMP t-test

A BMP t-test was performed on the original portfolio to test whether the standardized variance-adjusted CAAR is significantly different from zero under the null hypothesis (see Section 4). The test statistic result was -2.83. This implies a p-value of 0.3%, therefore the null hypothesis can be rejected at a 1% significance level.

5.3. Portfolio Sign Test

A sign test was performed on the original portfolio to test whether the CAR of individual securities is significantly different from a binomial distribution under the null hypothesis. There were 17 negative CARs and 6 positive CARs. These results yielded a z-score of 2.09. This is equivalent to a p-value of 1.8%, therefore the null hypothesis that there is an equal probability of having a negative or positive CAR can be rejected at a 5% significance level.

5.4. Shadow Portfolio

Table 3 shows the results of our market model calculations, which were performed on a shadow portfolio of our original portfolio companies. The shadow portfolio consisted of 18 companies. The mean portfolio CAR, or the CAAR, was 0.34% over the event window. The CAAR of individual events ranged from -4.46% to 5.03% over the event window. Event window CAAR did not change significantly relative to the estimation period CAAR for shadow portfolio companies. The shadow portfolio did not experience a significant volatility increase during the event window.

6. Analysis

This paper investigates the following hypothesis:

> **H1**: Sexual harassment allegations during the "MeToo" period led to valuation decreases of accused firms, which can be explained by the negative impact these accusations had on the corporate reputation of accused firms

The results in Section 5 demonstrate that sample companies experienced a cumulative average abnormal return of -3,59% during the event window, a statistically significant result at a 5% confidence level. The sign test shows that negative returns were not disproportionately driven by a small number of firms. Our shadow portfolio didn't experience a notable abnormal return during the same period. We believe these results provide evidence which supports our hypothesis, and that the market punishes firms where senior employees have been accused of sexual harassment.

This section will analyze and discuss the results in Section 5, based on the theoretical framework outlined in Section 2. Firstly, alternative explanations that contradict our line of reasoning will be discussed – namely that the change in firm valuation can be attributed to lawsuit and CEO-turnover related costs, rather than reputational costs. Secondly, the value-related mechanisms of corporate reputation as an intangible asset will be analyzed. Thirdly, we will examine the role media played in relation to our results. This section will conclude with a short case study of Lululemon Athletica, whose positive event window CAR deviated from sample results. These arguments draw on previous research to qualitatively explain observed changes in sample firm value.

6.1.1. The Observed Decline in Market Value is Not the Result of Lawsuits

It may be argued that potential litigation costs, rather than CR, were the primary driver of declines firm value. We argue that the observed decline in sample firm value is disproportionate relative to associated litigation costs. This result is supported by previous research on this topic (Karpoff and Lott, 2008).

Guess' market capitalization fell by USD 266m on the event day, whilst sexual harassment allegations were settled out of court for USD 500,000 (Safranova, 2018). Finally, Wynn Resorts

experienced a USD 2.2bn decline in firm value on the event day, although it was "only" fined USD 55m (Yakowicz, 2019; Hsu, 2019). This argument is supported by previous research which shows that, as legal fees are non-recurring items, investors are less likely to consider them when making investment decisions (Schilit and Perler, 2010). Clearly, decreases in sample firm value during the event window cannot be explained by litigation costs.

6.1.2. The Observed Decline in Market Value is Not the Result of CEO-Turnover Costs

Sexual harassment allegations targeting top executives increases the likelihood of CEO turnover (Zona et al, 2011; Niehaus and Roth, 1999). CEO turnover-related changes in firm value can be attributed to two factors: the loss of human capital and signals related to firm performance (Furtado and Karan, 1990). In this case, signals can either be related to positive corporate governance signals, i.e. that the firm has taken action against sexual harassment in the workplace, or vice versa. Positive corporate governance signals should benefit firm value (Furtado and Karan, 1990; see Denis and Denis, 1995).

Although CEOs are important to firm performance (Bertrand and Schoar, 2003), event studies have proven inconclusive in determining the shareholder wealth effect if CEO-turnovers (Furtado and Karan, 1990). Although CEO-turnovers have had little impact on share performance in general, certain studies have shown that sub-sets of CEO turnovers impacted share performance (Furtado and Karan, 1990). It is important to note that a wide range of studies have shown that CEO-turnover has a positive effect on abnormal returns, whereas in our case, abnormal returns were negative (see for example Furtado and Karan, 1990; Denis and Denis, 1995; Dahyaa et al, 2000; Beatty and Zajac, 1987; Weisbach, 1988). Furthermore, even in cases where changes in abnormal return is statistically significant, it has been relatively small compared to our sample abnormal returns (Furtado and Karan, 1990). Therefore, we argue that the negative change in sample abnormal return cannot be explained by CEO turnover costs. Commenting on the signal / human capital factors related to CEO turnover in relation to each individual sample firm is beyond the scope of this paper.

CEO turnover has also been shown to increase long-term share price volatility (Clayton et al, 2005). Although we do not focus on this issue, our sample empirically supports the theory that volatility increased during the event window. Our sample volatility increase could be explained by the increased uncertainty related to doubts surrounding successor CEO abilities and firm strategy (Clayton et al, 2005).

6.1.3. The Value Destroying Mechanism

In this section, we argue that the observed changes in firm value are primarily driven by changes in corporate reputation. According to the causal framework used in this paper, corporate reputation has two components, perceived quality and prominence. We argue that prominence is the primary driver of corporate reputation loss in our sample (see Section 2 for definitions and Appendix for an illustration of the causal framework).

6.1.4. Breaking Social Norms Damages Prominence

The question remains as to how sexual harassment allegations damage firm prominence. The components of firm prominence can be influenced by institutional signals targeting social responsibility and media attention (Fombrun and Shanley, 1990). These institutional signals are fundamentally linked to social norms and the active role that institutional intermediaries play in providing information and directing attention within the organizational field (Fombrun and Shanley, 1990). Just as positive institutional signals improve corporate reputation, negative institutional signals damage corporate reputation (Williams and Barrett, 2000; Fombrun and Shanley, 1990).

Sexual harassment breaks social norms (McDonald; Popovich and Warren, 2010). Therefore, sexual harassment allegations directed towards prominent figures at a firm lead to negative social responsibility signals and heightened negative media attention. Negative social responsibility signals decrease the quality of the images that stakeholders hold of the firms (Fombrun and Shanley, 1990; Rindova, 2005). The aggregated decrease in the quality of separate images held by various stakeholder groups leads to a decrease in the value of firm prominence (Rindova, 2005). Negative media attention further damages prominence within the organizational field by providing information on the event, directing stakeholder attention to the event, and increasing the importance stakeholders attribute to the event (Fombrun and Shanley, 1990; Deephouse, 2000).

These signals damage prominence, which subsequently decreases the value of corporate reputation, which in turn leads to decreases in firm value (Rindova et al, 2005). The decrease in firm value can be explained partially by investors discounting the expected decrease in future cash flows related to diminished corporate reputation (Ibbotson and Kaplan, 2018; Rindova et al, 2005; Fombrun and Shanley, 1990).

One example of decreased future cash flows directly related to a sample event is provided by 21st Century Fox, where the O'Reilly's popular Fox News show suffered an advertiser boycott, following sexual harassment allegations levelled at O'Reilly (Maheshwari, 2017). Another example is Wynn Resorts, whose gambling license for its new USD 2.6bn casino in Boston was placed under review by Massachusetts regulators as a direct result of the sexual harassment allegations (Shakil and Raymond, 2019). Although the license was not revoked, Wynn Resorts received a USD 35m fine related to the incident in May 2019, a similar investigation in Nevada also resulted in USD 20m fine for Wynn Resorts in February 2019 (Shakil and Raymond, 2019). The decrease in firm value can also be explained by investor preferences for owning high reputation stocks (Ibbotson and Kaplan, 2018). This preference would lead to diminished investor demand for a firm which has suffered a decrease in corporate reputation (Ibbotson and Kaplan, 2018).

6.1.5. The Role of Institutional Intermediaries and High-Status Actors

We propose that institutional intermediaries played a significant role in impacting sample firm CR, by validating and drawing attention to the event. Evidence supporting this proposition is provided by our results, which show that sample firm value decreased immediately after the publication of the first news articles, at t=0. It is also interesting to note that events did not seem to experience information leakages prior to t=0. Our proposed argument explains this occurrence, as prior to t=0, institutional intermediaries had not validated or directed attention to the information prior to t=0, and it was unclear when or if this would occur. As a result, we hypothesize that it is likely the information was not acted on by investors. We believe that these observations strengthen the argument that institutional intermediaries played a key role in impacting sample firm CR and value.

Our results show that sample firm value tended to decrease immediately after the publication of news articles (i.e. when t=0). These results suggest that institutional intermediaries had a significant role in impacting the CR of sample firms.

The institutional intermediaries themselves can be impacted by other institutional intermediaries. The MeToo hashtag emerged on Twitter, a social microblogging website, which can be classed as a general institutional intermediary. The MeToo hashtag / movement clearly had a role in directing media coverage towards sexual harassment allegations. Furthermore, the development of the "MeToo" hashtag can itself be attributed to high-status actors, reflecting

previous research which argues that individuals can impact corporate reputation in organizational fields (see for example Bernays, 1928; Rindova et al, 2005).

6.1.6. The Role of Perceived Quality

The role that perceived quality played in impacting sample firm corporate reputation is less clear. Sexual harassment in the workplace has a negative impact on firm effectiveness and efficiency (McDonald; Popovich and Warren, 2010), therefore the quality effects related to sexual harassment allegations should already have flowed into the firm's operations, financial statements and subsequent valuations (Fama, 1970). Although newly-acquired knowledge of sexual harassment in the workplace would decrease employee morale which affects product quality (McDonald; Popovich and Warren, 2010), we do not believe this effect was significant. Therefore, we propose that in general, quality-related factors did not have a significant role in damaging sample firm corporate reputation and firm value.

However, in certain cases it can be argued that sexual harassment allegations negatively impacted perceived product quality. This may have been the case for Fox, where Bill O'Reilly, a main news anchor, was accused of sexual harassment. We believe that in these cases, the perceived quality of O'Reilly's TV news show was damaged by the accusations leveled against O'Reilly. This change in perceived quality would in turn impact corporate reputation.

6.1.7. Variations in Firm-Specific Event Window CARs

Certain firms experienced a greater negative CAR than other firms following the events. The small sample size makes it difficult to disaggregate results and draw conclusions from individual firms. With that being said, we provide potential explanations for differences in sample firm event window CARs below.

One factor may be that certain firms broke social norms more intensely than others, which resulted in greater decreases in prominence. Another factor may have been that higher status individuals had a greater impact on corporate reputation when accused of sexual harassment. The vulnerability of firms to stakeholder action (e.g. regulatory action or consumer boycotts) may also have been a factor (Fombrun and Shanley, 1990).

Alternatively, the extent to which allegations could be verified by institutional intermediaries could also have impacted the magnitude of corporate reputation loss (Deephouse, 2000). Firm-specific factors are discussed by the following case study on Lululemon Athletica.

6.1.8. Lululemon Athletica Case Study

Lululemon experienced a positive event window CAR of 6.27%, contrary to other sample event firms, which on average experienced negative CARs. It is interesting to note that Lululemon's stock price initially fell 3% (Hsu, 2018) in intraday trading immediately following the announcement of the CEO's resignation/dismissal, which was described by Lululemon as being due to the CEO's behaviour. This decrease is in line with the results of the sample. We attempt to explain this result using the theoretical framework outlined in this paper, and draw comparisons to Wynn Resorts, which experienced a negative event window CAR of -15.09%.

Firstly, Lululemon stock had performed strongly prior to the event, which would have improved its popularity among investors according to the PAPM and behavioural finance models (Ibbotson and Kaplan, 2018; Kahneman and Tversky, 1974). This popularity may have made the company more resilient to damages to corporate reputation.

Secondly, the Lululemon event was less severe than other sample events studied, as it related to a consensual but "inappropriate" relationship between the CEO and a firm employee (Farr et al, 2018). We argue that this event breached norms to a lesser extent than other sample events, and consequently had a reduced impact on corporate reputation and firm value. This argument is strengthened by the fact that during intraday trading hours, there were speculations that the reason behind the dismissal/resignation was more severe. This inaccurate speculation may have damaged Lululemon's CR, explaining why Lululemon's stock price fell c.3% during intraday trading before rebounding (Argenti, 1998; Lam and Hurry, 1992). Several news publications drew links between the Lululemon event and instances of more severe sexual harassment (see for example Thomas, 2018; Hsu, 2018)

Thirdly, Lululemon announced the news related to the event itself, and the CEO immediately resigned from the company in conjunction with the announcement. This can be compared to Wynn Resorts, where company executives allegedly covered up allegations for several years, the CEO denied allegations, and initially did not resign (O'Keefe and Berzon, 2019). The significant decrease in CAR of Wynn Resorts relative to Lululemon supports the reasoning outlined in our interview with Scandinavia's leading public relations expert, who stated that firm reactions to scandals are often as important if not more important than the actual scandal when protecting a firm's corporate reputation (Stjernberg, 2019). This may also explain why the Lululemon's stock price initially fell – at first the company responded with an inadequate level of information and did not dispel inaccurate CR-damaging rumours, which was punished

by investors in intra-day trading. Only after clarification was provided by other news sources did the stock price recover.

Finally, we believe that the resignation of Lululemon's CEO can be defined as "forced". The subsequent increase in firm value therefore supports studies which hypothesize that forced CEO turnovers can signal effective corporate governance, which is positively priced by the market (Weisbach, 1988; Denis and Denis, 1995). In Lululemon's case, the potential positive signalling effects of the forced CEO turnover may have exceeded the potential reputational damage and human resource costs associated with the event (Fombrun and Shanley, 1990; Furtado and Karan, 1990). According to this reasoning, the signalling benefits should have contributed to an increase in firm value.

7. Evaluation and Future Outlook

7.1.1. Normality in Data

We have used stock returns to calculate the daily abnormal returns of our sample firms. In doing this, we have applied the market model. As described above, these abnormal returns are analysed using a t-test, which requires the assumption that the underlying data follows a normal distribution (Newbold et al, 2013).

There has been extensive research examining the distribution of stock returns. Anderson and Robinson (2001) showed that these daily returns tend to follow a bell shape, but with thicker tails compared to the normal distribution, i.e. higher levels of skewness and kurtosis. This is in line with previous research, such as Fama (1969). This means that although stock return distributions are similar to normal distributions, making assumptions about the normality of stock returns can lead to inaccurate results for hypothesis tests which rely on this assumption.

Prior research on the non-normality of stock return distributions casts doubt on the usage of "regular" t-test, which was described in Section 4.

We conducted a Shapiro-Wilk test for normality on the non-standardized estimation period data for the different events, against the null-hypothesis that the data is normally distributed. The test results showed that the null-hypothesis could not be rejected for 4 of the 23 events studied. This did not provide evidence for the normal distribution of abnormal returns in the estimation periods.

As described in Section 7.1.4, we conducted the Shapiro-Wilk test for normality on the *standardized* abnormal returns. The test results showed the null-hypothesis could not be rejected for 21 of the 23 events studies. This provides evidence that the BMP-method improves the accuracy of our results.

As we are using the mean of the 23 cumulative standardized abnormal returns, it is reasonable to assume that the distribution of the mean SCAR will converge towards a normal distribution. Furthermore, the central limit theorem gives additional support for this convergence (Newbold et al, 2013).

7.1.2. Discussion of Sign Test Assumptions

Previous research has discussed that a potential issue with the sign test is that it assumes a binomial distribution under the null hypothesis, whereas studies have found that abnormal returns tend to be skewed to the right (Boehmer et al, 1991; Fama, 1976). Several researchers have adjusted the distribution assumption under Ho to accommodate this finding (Boehmer et al, 1991). However, we found that our estimation period data had a 0.49 probability of assuming a negative abnormal return (or a P=0.51 of assuming a positive abnormal return). Given that this distribution is so similar to the binomial distribution assumed under Ho, we argue that the results produced by the sign test are robust.

7.1.3. Joint-Test Problem

A model of normal returns must be specified before an abnormal return can be defined, as a result event studies of abnormal returns suffer from the joint-test problem (Khotari and Warner, 2006). That is, the accuracy of an event study depends not only on the measurement of abnormal returns, but also on the accuracy of the assumed "normal return" generated by the benchmark, in our case the market model. With that being said, the market model has been shown to be the most effective estimator of normal performance (Mackinley, 1997).

7.1.4. Robustness Test: Shapiro-Wilk Test of Normality

To examine if our assumption that the data used in the BMP-test statistic is normally distributed, we performed the Shapiro-Wilk test in SPSS on the estimation period standardized abnormal returns (AR).

Prior to the Shapiro-Wilk test, we removed outliers from our data. The test was performed on each of our 23 events.

Thus, forming the null hypothesis:

$$H_0: The\ data\ of\ our\ truncated\ sample\ of\ n = 114,\ for\ event\ i, follows\ a\ normal\ distribution$$

The results show that the null-hypothesis cannot be rejected for 21 of our 23 events. Our assumption of normality for our standardized abnormal returns can therefore be assumed to be reasonable.

7.1.5. Heteroscedasticity

The least-square regression was conducted to estimate the beta and alfa for our securities. As the results are unbiased, they will be relevant whether the distribution is homoscedastic or not (Ramsey and Chafer 2012).

7.1.6. Independence of our Data

Our statistical models build on the assumption that there is independence among data points. As previous research has showed, this assumption is legitimate if firms either don't have overlapping event windows or, if they do overlap, operate in different industries (Brown and Warner, 1982; Kolari and Pynnönnen 2010). There is one case where event windows overlap and where the companies arguably operate in the same sector, Disney and 21st Century Fox. We believe the impact of this overlap is negligible, and that the inter-correlations of abnormal returns converge towards zero for the entire sample.

7.1.7. Validity and Reliability

The main challenge and key success of an event study is the measurement of abnormal returns and making the correct statistical assumption (MacKinley 1997). We have taken great care in examining and testing for the factors and statistical assumptions which may affect our results negatively. A central question has been to calculate a correct and reasonable variance, where we've used well-established research to standardize our sample. Furthermore, we have conducted tests on normality, and examined the risks of heteroscedasticity, to assure that our statistical assumptions are correct.

Another central factor in ensuring the validity of our data, has been to select an unbiased sample data. We have thoroughly investigated our data to ensure that there are no other events which could possibly impact our results, e.g. a buyout. This resulted in the exclusion of some MeToo events which occurred during the time period studied.

We consider the reliability and reproducibility of our study as being high. We have thoroughly described the methodology of our study, enabling future researchers to easily understand the manner in which it was conducted. Furthermore, we have used reliable data-sources from respectable journals for the theoretical framework as well as for the event-study methodology.

One limitation is the size of our sample. The relatively small number of firms means that we can't disaggregate our results and provide additional insights into more specific factors.

Another limitation is the lack of prior research on this specific research question. The data-collection was also conducted manually, so there is the possibility we failed to include certain events.

We also approach this topic from a business / accounting perspective. We recognize that an improved understanding of other perspectives of other disciplines, such as psychology and politics, would be useful in this analysis.

7.2. Conclusion and Future Research

To the best of our knowledge, this is the first paper of its kind which quantifies the impact of sexual harassment allegations in the "MeToo Era" in economic terms. The study demonstrated that sexual harassment allegations had a significant impact on firm abnormal returns. Further, this paper structured a causal framework based on previous literature. This framework linked well-established research to explicitly define corporate reputation, and connected this definition to a mechanism that impacts firm value. The framework was grounded in corporate reputation research, and drew linkages to accounting, sexual harassment literature and modern asset pricing models. The framework also explained the important role that media companies and high-status individuals played in shaping sample corporate reputation, and shed light on firm-specific anomalies in the data. However, there is still a need for a strong and established theoretical model which links the antecedents and benefits of CR to firm value.

This paper also contributed to gender equality studies by demonstrating that the market negatively prices gender inequality, manifested as sexual harassment.

To conclude, it is important to recognize that the true costs of workplace sexual harassment are borne by the victims themselves and can never truly be measured in purely economic terms. We hope that this paper can contribute to research focused on gender equality in the workplace.

7.2.1. Future Research

Corporate reputation research is growing in importance, as it is becoming increasingly clear that reputation is a factor in determining firm value (Ibbotson and Kaplan, 2018). We have identified several areas which we consider to be of importance for future research. It would be interesting to study the long-term effects of the events included in this paper in an international context. It would also be interesting to link the firm-specific results in this paper to different measures such as firm prominence. By using larger samples, future research could also disaggregate results and analyse data using more variables, linked to e.g. observable attributed of company boards and responses to sexual harassment allegations. The effect damaged corporate reputation has on firm-specific beta (the risk premium) could also be studied. Comparing the firm value effects of these events with historical events could also provide evidence that norms surrounding sexual harassment have changed, and that markets perhaps punish sexual harassment more stringently now than before.

We also believe that the reliance of CR research on somewhat arbitrary reputation quotients can be bypassed by mining the abundance of online data with word-analysis software. Furthermore, CR measurement techniques and definitions should be established to improve the comparability of future research. Ultimately, we believe that an integrated and well-established CR model needs to be developed, in order to provide a robust theoretical stage on which future research can take place.

8. Bibliography

Anderson, M., & Robinson, J. (2001). **Permutation tests for linear models**. *Australian & New Zeeland Journal of Statistics, 43*(1), 75-88.

Argenti, P. A. (1998). **Strategic employee communications**. *Human Resource Management, 37*(3-4), 199-206.

Barney, J. (1991). **Film resources and sustained competitive advantage**. *Journal of Management, 17*(1), 99-120.

Beatty, R., & Zajac, E. (1987). **CEO change and firm performance in large corporations: Succession effects and manager effects**. *Strategic Management Journal, 8*(4), 305-317.

Bernays, E. (1928). ***Propaganda***. USA, New York: H. Liveright.

Bertrand, M., & Schoar, A. (2003). **Managing with style: The effect of managers on firm policies**. *The Quarterly Journal of Economics, 118*(4), 1169-1208.

Binder, J. (1998). **The event study methodology since 1969**. *Review of Quantitative Finance and Accounting, 11*, 111-137.

Boehmer, E., Musumeci, J., & Poulsen, A. B. (1991). **Event-study methodology under conditions of event-induced variance**. *Journal of Financial Economics, 30*, 253–272.

Brammer, S. J., & Pavelin, S. (2006). **Corporate reputation and social performance: The importance of fit**. *Journal of Management Studies, 43*(3), 435-455.

Bremer, M., & Sweeney, R. (1991). **The reversal of large stock-price decreases**. *The Journal of Finance, 46*(2), 747-754.

Brown, S. J., & Warner, J. B. (1985). **Using daily stock returns: The case of event studies**. *Journal of Financial Economics, 14*(1), 3-31.

Brown, T., Dacin, P., Pratt, M., & Whetten, D. (2006). **Identity, intended image, construed image, and reputation: An interdisciplinary framework and suggested terminology**. *Journal of the Academy of Marketing Science, 34*(2), 99-106.

Clayton, M., & Hartzell, J. (2005). **The impact of CEO turnover on equity volatility**. *The Journal of Business, 78*(5), 1779-1808.

Conner, K. R. (1991). **A historical comparison of resource-based theory and five schools of thought within industrial organization economics: Do we have a new theory of the firm**. *Journal of Management, 17*(1), 121-154.

Corrado, C. (2011). **Event studies: A methodology review**. *Accounting and Finance, 51*(1), 207-234.

Corrado, C. J., & Zivney, T. L. (1992). **The specification and power of the sign test in event study hypothesis tests using daily stock returns**. *Journal of Financial and Quantitative Analysis, 27*(3), 465-478.

Dahyaa, J., Lonie, A., & Power, D. (2000). **Changes in corporate management: Do they have an impact on share prices and company earnings**. *Managerial Finance, 26*(9), 66-79.

Deephouse, D. L. (2000). **Media reputation as a strategic resource: An integration of mass communication and resource-based theories**. *Journal of Management, 26*(6), 1091.

Denis, D., & Denis, D. (1995). **Performance changes following top management dismissals**. *Journal of Finance, 50*(4), 1029-1057.

Equal Employment Opportunity Commission. (2010). ***Sexual harassment charges EEOC and FEPAs combined: FY1997-FY2010***. ().

Faley, R., Knapp, D., Kustis, G., & Dubois, C. (1999). **Estimating the organizational costs of sexual harassment: The case of the US army**. *Journal of Business and Psychology, 13*(4), 461-484.

Fama, E. F. (1970). **Efficient capital markets: A review of theory and empirical work**. *The Journal of Finance, 25*(2), 383-417.

Fama, E. F. (1998). **Market efficiency, long-term returns, and behavioral finance**. *Journal of Financial Economics, 49*(3), 283Ð306.

Fama, E., Fischer, L., Jensen, M., & Roll, R. (1969). **The adjustment of stock prices to new information**. *International Economic Review, 10*(1), 1-21.

Farr, C., Hirsch, L. & Thomas, L. (2018). **Lululemon CEO left in part because of relationship with female designer at the company**. Retrieved from https://www.cnbc.com/2018/02/06/lululemon-ceo-laurent-potdevin-had-inappropriate-employee-relationship.html

Fitzgerald, L., Drasgow, F., Hulin, C., Gelfand, M., & Magley, V. (1997). **The antecedents and consequences of sexual harassment in organizations: An integrated model**. *Journal of Applied Psychology, 82*(4), 578-589.

Fombrun, C., & Shanley, M. (1990). **What's in a name? reputation building and corporate strategy**. *The Academy of Management Journal, 33*(2), 233-258.

Furtado, E., & Karan, V. (1990). **Causes, consequences, and shareholder wealth effects of management turnover: A review of the empirical evidence**. *Financial Management, 19*(2), 60-75.

Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). **The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis**. *Strategic Management Journal, 30*(4), 425-445.

Gotsi, M., & Wilson, A. M. (2001). **Corporate reputation: Seeking a definition**. *Corporate Communications: An International Journal, 6*(1)

Griffin, R., Recht, H. & Green, J. (2018). **#MeToo: One year later**. Retrieved from https://www.bloomberg.com/graphics/2018-me-too-anniversary/

Guldiken, O., Tupper, C., Nair, A., & Yu, H. (2014). **The impact of media coverage on IPO stock performance**. *Journal of Business Research, 72*, 24-32.

Gunderman, R. (2015). **The manipulation of the American mind: Edward Bernays and the birth of public relations**. Retrieved from https://theconversation.com/the-manipulation-of-the-american-mind-edward-bernays-and-the-birth-of-public-relations-44393

Hambrick, D. (2007). **Upper echelons theory: An update**. *Academy of Management Review, 32*(2), 334-343.

Helm, S. (2007). **The role of corporate reputation in determining investor satisfaction and loyalty**. *Corporate Reputation Review, 10*(1), 22-37.

Hsu, T. (2018). **Lululemon's chief executive resigns over behavior**. Retrieved from https://www.nytimes.com/2018/02/05/business/lululemon-ceo-resigns.html

Hsu, T. (2019). **Wynn resorts fined $20 million over handling of Steve Wynn misconduct claims**. Retrieved from https://www.nytimes.com/2019/02/26/business/wynn-vegas-nevada-gaming-commission.html

Ibbotson, R., & Kaplan, P. (2018). **Popularity: A bridge between classical and behavioral finance** (1st ed.). *US, Virginia: CFA Institute Research Foundation.*

Jensen, M. (1978). **Some anomalous evidence regarding market efficiency**. *Journal of Finance Economics, 6*(2-3), 95-101.

Karpoff, J., Lee, S., & Martin, G. (2008). **The cost to firms of cooking the books**. *Journal of Financial and Quantitative Analysis, 43*, 581-612.

Khotari, S., & Warner, J. (2006). ***Econometrics of event studies.*** Unpublished manuscript.

Kolari, J., & Pynnönen, S. (2010). **Event-study methodology: Correction for cross-sectional correlation in standardized abnormal return tests**. *The Review of Financial Studies, 23*(11), 3996-4025.

Kumar, S. M. V. (2005). **The value from acquiring and divesting a joint venture: A real options approach**. *Strategic Management Journal, 26*(4), 321-331.

Lam, Z. S. F., & Hurry, D. (1992). ***Dow Corning and the silicone implant controversy***. Unpublished manuscript.

Lee, P. M. (2001). **What's in a name.com: The effects of '.com' name changes on stock prices and trading activity**. *Strategic Management Journal, 22*(8), 793-804.

Lev, B. (2002). **Where have all of Enron's intangibles gone?** *Journal of Accounting and Public Policy, 21*(2), 131-135.

Louma, T., & Pynnönen, S. (2010). ***Testing for cumulative abnormal returns in event studies with the rank test***. Unpublished manuscript.

MacKinlay, A. C. (1997). **Event studies in economics and finance**. *Journal of Economic Literature, 35*(1), 13-39.

Maheshwari, S. (2017). **With bill O'Reilly gone from fox news, will advertisers return?** Retrieved from https://www.nytimes.com/2017/04/20/business/media/bill-oreilly-fox-news-advertising.html

Marks, J., & Musumeci, J. (2017). **Misspecification in event studies**. *Journal of Corporate Finance, 45*(C), 333-341.

McDonald, P. (2012). **Workplace sexual harassment 30 years on: A review of the literature**. *International Journal of Management Reviews, 14*, 1-17.

McWilliams, A., & Siegel, D. (1997). **Event studies in management research: Theoretical and empirical issues**. *Academy of Management Journal, 40*, 626-657.

Miner-Rubino, K., & Cortina, L. M. (2007). **Beyond targets: Consequences of vicarious exposure to misogyny at work**. *Journal of Applied Psychology, 92*(5), 1254-1269.

Money, K., Saraeva, A., Garnelo-Gomez, I., Pain, S., & Hillenbrand, C. (2017). **Corporate reputation past and future: A review and integration of existing literature and a framework for future research**. *Corporate Reputation Review, 20*(3-4), 193-211.

Newbold, P., Carlson, W., & Thorne, B. (Eds.). (2013). ***Statistics for business and economics: Eighth edition [ebook]*** (8th ed.). United States: Pearson Education, Inc.

Niehaus, G., & Roth, G. (1999). **Insider trading, equity issues, and CEO turnover in firms subject to securities class**. *Financial Management, 28*(4), 52-72.

O'Keeffe, K., & Berzon, A. (2019). **Wynn resorts executives tried to hide misconduct allegations against Steve Wynn, regulators say**. Retrieved from https://www.wsj.com/articles/massachusetts-regulators-release-report-on-investigation-of-wynn-resorts-11554211385

Pew Research Center. (2018). **The #MeToo hashtag has been used roughly 19 million times on twitter in the past year, and usage often surges around news events**. Retrieved from https://www.pewresearch.org/fact-tank/2018/10/11/how-social-media-users-have-discussed-sexual-harassment-since-metoo-went-viral/ft_18-10-11_metooanniversary_hashtag-used-19m_times/

Pollock, T. G., & Rindova, V. P. (2003). **Media legitimation effects in the market for initial public offerings**. *Academy of Management Journal, 46*(5), 631-642.

Popovich, P., & Warren, M. (2010). **The role of power in sexual harassment as a counterproductive behavior in organizations**. *Human Resource Management Review, 20*(1), 45-53.

Ramsey, F., & Schafer, D. (Eds.). (2012). ***The statistical sleuth: A course in methods of data analysis*** (3rd ed.). Boston, Massachusetts, USA: Cengage Learning.

Rindova, V. P., Williamson, I. O., Petkova, A. P., & Sever, J. M. (2005). **Being good or being known: An empirical examination of the dimensions, antecedents, and consequences of organizational reputation**. *Academy of Management Journal, 48*(6), 1033-1049.

Roberts, P. W., & Downing, G. R. (2002). **Corporate reputation and sustained superior financial performance**. *Strategic Management Journal, 23*(September), 1077.

Russel US indexes. (2018). London: FTSE Russel.

Sabate, J., & Puente, E. (2003). **Empirical analysis of the relationship between corporate reputation and financial performance: A survey of the literature**. *Corporate Reputation Review, 6*(2), 161-177.

Safronova, V. (2018). **Paul Marciano will leave guess after sexual harassment settlements**. Retrieved from https://www.nytimes.com/2018/06/12/style/guess-harassment-resignation.html

Schilit, H., & Perler, J. (2018). ***Financial shenanigans: How to detect accounting gimmicks and fraud in financial reports*** (4th ed.). USA, New York: McGraw-Hill.

Serafeim, G., & Ioannou, I. (2015). **The impact of corporate social responsibility on investment recommendations: Analysts perception and shifting institutional logics**. *Strategic Management Journal, 36*(7), 1053-1081.

Shakil, I., & Raymond, N. (2019). **Wynn resorts keeps Massachusetts gaming license with $35 million fine**. Retrieved from https://www.reuters.com/article/us-wynn-resorts-massachusetts/wynn-resorts-keeps-massachusetts-gaming-license-with-35-million-fine-idUSKCN1S62UY

Shapiro, C. (1983). **Premiums for high quality products as returns to reputations**. *The Quarterly Journal of Economics, 98*(November), 659.

Sodeman, W. (1995). **Advantages and disadvantages of using the brown and perry database**. *Business and Society, 34*, 216-221.

Stjernberg, C. (2019-03-29). ***Personal interview***. Stockholm: Blom; Hallgren.

Teece, D. (1998). **Capturing value from knowledge assets: The new economy, markets for know-how, and intangible assets**. *California Management Review, 40*(3), 55-79.

Thomas, L. (2018). **Lululemon CEO Laurent Potdevin resigns; retailer cites misconduct**. Retrieved from https://www.cnbc.com/2018/02/05/lululemon-ceo-laurent-potdevin-to-resign.html

Thompson, J. (1995). ***The media and modernity: A social theory of the media*** (1st ed.). USA, Stanford: Stanford University Press.

Tversky, A., & Kahneman, D. (1974). **Judgment under uncertainty: Heuristics and biases**. *Science, 185*(4157), 1124-1131.

Weisbach, M. (1988). **Outside directors and CEO turnover**. *Journal of Financial Economics, 20*, 431-460.

Williams, R., & Barrett, D. (2000). **Corporate philanthropy, criminal activity, and firm reputation: Is there a link?** *Journal of Business Ethics, 26*(4), 341-350.

Yakowicz, W. (2019). **Wynn resorts fined $35 million but keeps license for Massachusetts casino**. Retrieved from https://www.forbes.com/sites/willyakowicz/2019/04/30/wynn-resorts-fined-35-million-but-keeps-license-for-massachusetts-casino/

Zona, F., Minoja, M., & Coda, V. (2013). **Managerial fraud, and imbalanced corporate strategy**. *Journal of Business Ethics, 113*(2), 265-283.

9. Appendix

Table 1. Sample Companies and Shadow Company Overview

Sample Company	**Comparable Company (Shadow Portfolio)**
Guess	Canada Goose Holdings ("Canada Goose")
Netflix	Tencent Holdings ("Tencent")
CBS Corporation ("CBS")	Sirius XM Holdings ("Sirius XM")
JD.com	eBay
Papa John's International ("Papa John's")	Shake Shack
Nike	Under Armour
Monster Beverage Corporation ("Monster")	Keurig Dr Pepper ("Dr Pepper")
Amazon	Alibaba Group Holding ("Alibaba")
Wynn Resorts	MGM Resorts International ("MGM")
Barnes & Noble	Target Corporation ("Target")
21st Century Fox ("Fox News")	Liberty Media Corporation ("Liberty")
The Walt Disney Company ("Disney")	Discovery
Alphabet ("Google")	Apple
Morgan Stanley	Goldman Sachs Group ("Goldman Sachs")
National Beverage Corp. ("National Beverage")	Boston Beer Company ("Boston Beer")
Tesla	General Motors Company ("General Motors")
Intel Corporation ("Intel")	Microsoft Corporation ("Microsoft")
Lululemon Athletica ("Lululemon")	VF Corporation

Table 2. Overview of Sample Company CARs

Company	Event window date	Abnormal return (AR)	CAR	Δ in Volatility*	Company	Event window date	Abnormal return (AR)	CAR	Δ in Volatility*
Guess	-1	-3,34%	-12,42%	269,59%	Disney	-1	0,00%	-0,95%	-67,76%
	0	-17,85%				0	-0,71%		
	1	-0,30%				1	-0,10%		
	2	9,06%				2	-0,14%		
Netflix	-1	0,65%	-0,13%	-48,91%	Google	-1	1,64%	-4,18%	117,59%
	0	0,08%				0	-2,27%		
	1	-1,43%				1	-2,38%		
	2	0,57%				2	-1,17%		
CBS	-1	0,56%	-7,09%	131,82%	Morgan Stanley	-1	-0,54%	-0,20%	-32,45%
	0	-5,40%				0	0,71%		
	1	-4,49%				1	0,27%		
	2	2,24%				2	-0,64%		
JD	-1	-1,97%	-15,91%	180,69%	National Beverage	-1	1,96%	-2,65%	-13,09%
	0	1,20%				0	-1,09%		
	1	-5,37%				1	-2,39%		
	2	-9,77%				2	-1,13%		
Papa John's	-1	4,00%	-8,69%	189,51%	Google (2)	-1	-0,60%	-2,00%	140,05%
	0	-4,46%				0	1,63%		
	1	1,45%				1	0,57%		
	2	-9,68%				2	-3,60%		
Nike	-1	0,46%	0,60%	-30,42%	Disney (2)	-1	-0,38%	1,27%	40,65%
	0	0,31%				0	-1,26%		
	1	-1,05%				1	2,37%		
	2	0,88%				2	0,54%		
Monster Energy	-1	0,86%	0,41%	-10,96%	21st Century Fox (2)	-1	0,30%	-2,73%	-46,71%
	0	0,75%				0	-0,62%		
	1	-0,33%				1	-1,32%		
	2	-0,87%				2	-1,08%		
Amazon	-1	1,40%	1,74%	-33,32%	Tesla	-1	-1,61%	-4,55%	-45,96%
	0	1,06%				0	-0,16%		
	1	-0,02%				1	-2,61%		
	2	-0,71%				2	-0,17%		
Wynn Resorts	-1	-0,32%	-15,09%	406,71%	Intel	-1	0,51%	-1,88%	-36,15%
	0	-11,51%				0	-1,39%		
	1	-8,91%				1	0,28%		
	2	5,66%				2	-1,29%		
Barnes & Noble	-1	-1,77%	-10,29%	-67,72%	Lululemon	-1	1,34%	6,27%	-18,94%
	0	-2,06%				0	1,60%		
	1	-3,77%				1	0,11%		
	2	-2,69%				2	3,22%		
21st Century Fox	-1	-2,97%	-5,53%	38,11%	*Mean*	-1	0,07%	-3,59% (CAAR)	42,80%
	0	0,53%				0	-1,81%		
	1	0,78%				1	-1,19%		
	2	-3,88%				2	-0,66%		
Amazon (2)	-1	0,60%	1,67%	-64,83%	*Max*	-1	4,00%	6,27%	406,71%
	0	0,79%				0	1,63%		
	1	0,13%				1	2,37%		
	2	0,15%				2	9,06%		
CBS (2)	-1	0,78%	-0,25%	-13,04%	*Min*	-1	-3,34%	-15,91%	-67,76%
	0	-1,44%				0	-17,85%		
	1	1,15%				1	-8,91%		
	2	-0,74%				2	-9,77%		

* % increase in event window standard deviation compared to estimation period

Table 3. Overview of Shadow Portfolio Company CARs

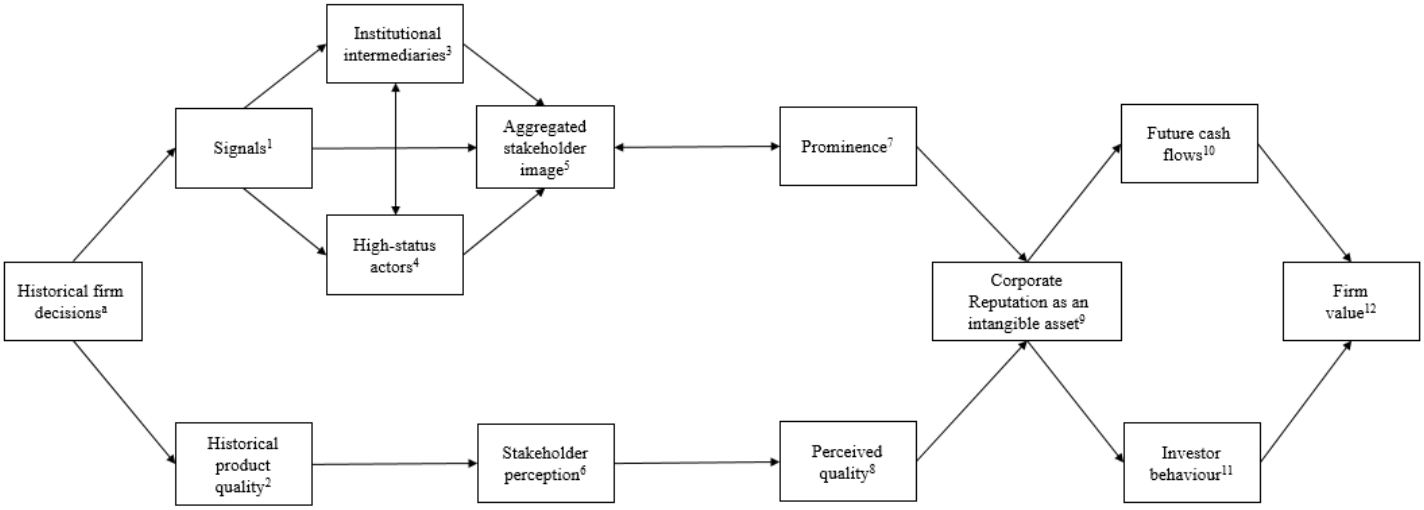
Portfolio Company	Shadow Portfolio Company	Event window date	Abnormal return (AR)	CAR	Portfolio Company	Shadow Portfolio Company	Event window date	Abnormal return (AR)	CAR
		-1	2,24%				-1	-0,83%	
Guess	Canada Goose	0	-1,05%	5,03%	*Disney*	Discovery	0	-0,55%	0,72%
		1	1,41%				1	3,47%	
		2	2,42%				2	-1,38%	
		-1	-0,40%				-1	-0,37%	
Netflix	Tencent	0	-0,04%	1,23%	*Google*	Apple	0	-2,23%	-4,46%
		1	-0,29%				1	-2,07%	
		2	1,97%				2	0,20%	
		-1	0,84%				-1	-0,85%	
CBS	Sirius XM	0	-1,20%	-1,41%	*Morgan Stanley*	Goldman Sachs	0	0,53%	-0,78%
		1	-0,94%				1	0,00%	
		2	-0,11%				2	-0,47%	
		-1	0,26%				-1	-0,32%	
JD	Ebay	0	0,26%	1,07%	*National Beverage*	Boston Brewery	0	0,26%	-0,33%
		1	-0,39%				1	-0,51%	
		2	0,94%				2	0,25%	
		-1	1,91%				-1	0,91%	
Papa John's	Shake Shack	0	0,02%	0,59%	*Google (2)*	Apple (2)	0	1,45%	2,30%
		1	-1,16%				1	0,19%	
		2	-0,18%				2	-0,25%	
		-1	-2,89%				-1	0,48%	
Nike	Under Armour	0	-1,02%	-0,24%	*Disney (2)*	Discovery (2)	0	0,64%	1,24%
		1	1,57%				1	0,62%	
		2	2,10%				2	-0,49%	
		-1	0,12%				-1	-0,60%	
Monster Energy	Keurig Dr Pepper	0	-0,16%	-1,19%	*21st Century Fox (2)*	Liberty Media (2)	0	-0,79%	0,76%
		1	-0,80%				1	1,09%	
		2	-0,35%				2	1,06%	
		-1	0,16%				-1	-0,80%	
Amazon	Alibaba	0	2,19%	3,77%	*Tesla*	GM	0	2,58%	-0,98%
		1	0,44%				1	-2,67%	
		2	0,98%				2	-0,09%	
		-1	-2,25%				-1	0,52%	
Wynn Resorts	MGM Resorts	0	-0,57%	-0,66%	*Intel*	Microsoft	0	0,18%	-0,38%
		1	3,39%				1	-1,04%	
		2	-1,23%				2	-0,05%	
		-1	0,52%				-1	0,42%	
Barnes & Noble	Target	0	-0,85%	0,07%	*Lululemon*	VF Corp	0	1,08%	2,69%
		1	1,33%				1	-0,35%	
		2	-0,93%				2	1,54%	
		-1	-0,48%				-1	0,07%	
21st Century Fox	Liberty Media	0	0,46%	-0,84%	*Mean*		0	0,02%	0,34%
		1	0,30%				1	0,16%	
		2	-1,12%				2	0,10%	
		-1	1,59%				-1	2,24%	
Amazon (2)	Alibaba (2)	0	-0,07%	-0,50%	*Max*		0	2,58%	5,03%
		1	0,33%				1	3,47%	
		2	-2,36%				2	2,42%	
		-1	1,35%				-1	-2,89%	
CBS (2)	Sirius XM (2)	0	-0,76%	0,02%	*Min*		0	-2,23%	-4,46%
		1	-0,35%				1	-2,67%	
		2	-0,22%				2	-2,36%	

Table 4. Overview of Events Studied

Company/Security	Position of the accused	News Publishing
Guess?	Co-founder	http://time.com/5129697/kate-upton-guess-paul-marciano-sexual-harassment-accusation/
Netflix	Leading actor	https://www.buzzfeednews.com/article/adambvary/anthony-rapp-kevin-spacey-made-sexual-advance-when-i-was-14#.ojPYJE985
JD.COM	CEO	https://www.bloomberg.com/news/articles/2018-09-02/jd-com-ceo-arrested-for-alleged-sexual-misconduct-in-the-u-s
Papa John	Top Management	https://www.forbes.com/sites/forbesdigitalcovers/2018/07/19/the-inside-story-of-papa-johns-toxic-culture/#31c549473019
Nike	Brand President	https://www.bloomberg.com/news/articles/2018-03-15/nike-s-edwards-once-seen-as-possible-ceo-successor-is-leaving
Monster Energy	Top Management	https://www.huffpost.com/entry/monster-energy-lawsuits_n_5a6280c1e4b002283002ca27?gucounter=1
Amazon (Audible)	Two Executives	https://www.bloomberg.com/news/articles/2017-12-06/two-executives-depart-amazon-s-audible-after-harassment-probe
Wynn	CEO and founder	https://www.wsj.com/articles/dozens-of-people-recount-pattern-of-sexual-misconduct-by-las-vegas-mogul-steve-wynn-1516985953
Barnes and Noble	CEO	https://www.cnbc.com/2018/07/03/barnes--noble-fires-ceo-demos-parneros.html
21st Century Fox	Morning Anchor	https://www.ftvlive.com/sqsp-test/2017/12/11/breaking-fox-la-fires-longtime-morning-anchor-steve-edwards
Amazon	Top Executive	https://www.hollywoodreporter.com/live-feed/amazon-suspends-top-exec-roy-price-wake-harassment-claim-1000036
CBS Corporation	Talk Show Host	https://www.washingtonpost.com/investigations/eight-women-say-charlie-rose-sexually-harassed-them--with-nudity-groping-and-lewd-calls/2017/11/20/0b168d48-caec-11e7-8321-481f6431f74d_story.html?noredirect=on&utm_term=.f2a7c0ab0c5
Disney (Pixar)	Head Executive	https://www.hollywoodreporter.com/news/john-lasseters-pattern-alleged-misconduct-detailed-by-disney-pixar-insiders-1059594
Google (Android)	Creator and Executive	https://www.theinformation.com/articles/androids-andy-rubin-left-google-after-inquiry-found-inappropriate-relationship
Morgan Stanley	Managing Director	https://www.huffingtonpost.com/entry/harold-ford-fired-morgan-stanley_us_5a29743ee4b0b185c53a0ce6?psa&gucounter=1
National Beverage	Founder	https://www.vox.com/a/sexual-harassment-assault-allegations-list/nick-caporella
Google	Executive	https://www.vox.com/a/sexual-harassment-assault-allegations-list/amit-singhal
21st Century Fox (2)	Show Host	https://www.vox.com/a/sexual-harassment-assault-allegations-list/bill-o-reilly
Disney	Director	https://www.vox.com/a/sexual-harassment-assault-allegations-list/jon-heely
Tesla	Director	https://www.bloomberg.com/news/articles/2017-10-25/tesla-director-jurvetson-investigated-by-his-vc-firm-for-misconduct
Intel	CEO	https://www.nytimes.com/2018/06/21/technology/intel-ceo-resigns-consensual-relationship.html
Lululemon Athletics	CEO	https://www.nytimes.com/2018/02/05/business/lululemon-ceo-resigns.html
CBS Corporation (2)	CEO	https://www.hollywoodreporter.com/news/leslie-moonves-accused-sexual-misconduct-ronan-farrow-expose-1130268

Figure 1. Causal Framework of Corporate Reputation

The following illustration summarizes the causal CR framework which is used in this paper. The framework is based on previous literature outlined in Section 2.



Primary sources for concepts outlined in Figure 1

(a): See for example: Shapiro (1983); Fombrun and Shanley (1990); Sabate and Puente (2003)

(1): Fombrun and Shanley (1990)

(2): Shapiro (1983)

(3): Fombrun and Shanley (1990); Deephouse (2000); Rindova et al (2005)

(4): Deephouse (2000); Rindova et al (2005)

(5): Rindova et al (2005)

(6): Shapiro (1983)

(7) and (8): Rindova et al (2005)

(9): Shapiro (1983); Barney (1991)

(10): See for example Rindova et al (2005)

(11): Ibbotson and Kaplan (2018)