**(not so) Fine Disclosure: Strategic Underreporting of Fines**

*Abstract*

*The last two decades have witnessed an unprecedented increase in the fines imposed on corporations by government agencies such as the SEC and the DOJ. In many cases the amount of fine imposed* *constitutes a large share of the companies’ market value, and as such should be disclosed once becomes likely.*

*However, companies face a unique strategic dilemma when required to disclose an expected fine: The amount the company would initially disclose becomes the starting point for negotiations with the regulatory agency, ultimately influencing the final fine. Consequently, if a higher initial assessment is disclosed, the resulting fine is likely to be higher.*

*This strategic consideration may drive companies to underreport the estimated fine, leading to serious implications for market efficiency and deterrence of companies from engaging in wrongdoing.*

*This Article is the first to discuss fines disclosure and the strategic consideration involved. It provides an original empirical analysis of corporate fines higher than $100 million levied over the last two decades and demonstrates that public companies actually engage in underreporting.*

*The Article further discusses the negative ramifications of such underreporting practices. In order to ameliorate fine underreporting, it suggests revising the fines disclosure mechanism on two levels. First, redesigning the form of disclosure of fines by separating the assessment of the expected fine from any other legal expense. Second, reforming the decision-making process by appointing an independent monitor within the firm that would assess the expected fine.*

# Introduction

The last two decades have witnessed an unprecedented increase in mega fines imposed on corporations in response to legal transgressions and wrongdoing, both in magnitude and volume.[[1]](#footnote-2) Until 2005, the highest fine ever imposed on a corporation in a settlement of criminal charges did not reach one billion dollars.[[2]](#footnote-3) However, since 2005 there have been more than 15 fines in amounts higher than one billion dollars. The trend in the context of corporate criminal settlements has accelerated in the last decade. Out of the 15 fines higher than one billion dollars, 13 were imposed after 2013;[[3]](#footnote-4) and three of the six highest fines ever imposed—all higher than two billion dollars—were imposed in the last three years (2020-2023).

The magnitude of fines has reached a new record high in the last decade. Bank of America, accused in misleading investors for the actual risk embedded in financial instruments marketed to their clients and other third parties during the Subprime Mortgage Crisis was fined $30.6 billion in 2014.[[4]](#footnote-5) JP Morgan Chase has settled similar accusation for $13 billion and Deutsche Bank for $7.2 billion.[[5]](#footnote-6)

All in all, a corporate fine—when, and if imposed—may constitute a large share of the company’s market value. For example, when Deutsche Bank settled for a $7.2 billion fine, the amount constituted over 10 percent of its book value.[[6]](#footnote-7) Accordingly, at the opening of a public investigation by a federal agency bearing a potential massive fine for the corporation, a company is required to provide investors with adequate information regarding the expected fine,[[7]](#footnote-8) so investors can respond and the market can price companies’ securities correctly.

Yet, there is an inherent problem in the disclosure of the expected fine. In addition to the obvious motivation of managers[[8]](#footnote-9)—to minimize any expected loss in order to fend off any deflation in the share price that can affect their position in the company as well as their compensation[[9]](#footnote-10)—there is a unique important consideration in the cases of federal fines: In most cases, the final fine imposed by a federal agency, i.e., the amount of USD the company will have to pay to the Treasury as a settlement of criminal charges, is determined in a bilateral voluntary agreement between the company and the agency following a prolonged negotiation. Accordingly, an estimation disclosed by the company regarding the company’s expectation of the fine before or during the negotiation will affect the outcomes and can damage company’s efforts to minimize the fine.[[10]](#footnote-11)

This strategic consideration for the underreporting of an expected fine is different than the traditional motivation for underreporting of expected losses discussed in the literature.[[11]](#footnote-12) Studies show that companies underreport future losses as an earning management technique,[[12]](#footnote-13) e.g., to meet-or-beat analysts’ predictions,[[13]](#footnote-14) thus protect existing share value,[[14]](#footnote-15) but not necessarily the company’s overall interests.[[15]](#footnote-16) In contrast, underreporting of fines serves directly the interest of the company by reducing its actual expected liability.

The powerful incentive for underreporting of fines may translate into a systematic and significant underreporting of highly material financial information about public companies. Such systematic underreporting can cause significant harm to investors who would be trading companies’ shares without full knowledge of material information.

Furthermore, underreporting is detrimental to the deterrence of companies and management from engaging in wrongdoing independently from its effect on the correct pricing of companies’ share. First, underreporting of fines enables management to offset a fine’s effect on management’s compensation thus earn what essentially, they do not deserve.[[16]](#footnote-17) Second, it enables the management to “kick the can down the road” with respect to the negative financial ramification of their wrongdoing.[[17]](#footnote-18) As behavioral literature demonstrates, the time lag between the wrongdoing and the facing of its negative consequences affects the willingness of wrongdoers to engage in the activity.

This Article is the first to discusses fine disclosure and the strategic consideration involved. It provides an empirical examination, based on hand-picked data about all fines higher than $100 million imposed on corporation as part of settlement agreements reached in criminal prosecutions from the last two decades. It points to systematic underreporting of fines by public companies. The Article further analyzes the negative ramifications of such underreporting practice, and it suggests revising the fines disclosure mechanism on two levels. First, redesigning the form of disclosure of fines by separating the assessment of the expected fine from any other legal expense. Second, reforming the decision-making process by appointing an independent monitor within the firm that would assess the expected fine.

The article proceeds as follows: Part I, reviews the disclosure rules stipulated by GAAP[[18]](#footnote-19) for contingencies in general and expected fines in particular.[[19]](#footnote-20) It underscores that if a fine is even mearly reasonably probable, the company has to disclose the expected fine. Part II presents the results of an original empirical study that shows that systematic underreporting practice indeed exists among public companies. The study's methodology, conducted to test whether companies underreport fines, is straightforward:[[20]](#footnote-21) We examine fines higher than $100 million imposed on U.S. public companies in settlements of corporate criminal charges; then, we compare the actual fine imposed with the initial disclosure the company provided about the expected outcome, and test statistically whether a systematic gap exist between the company’s initial fine disclosure and the actual fine. We use information about settlements and actual fines’ amount from University of Virginia School of Law’s and Duke University Schools of Law’s “Corporate Prosecution Registry;”[[21]](#footnote-22) information about companies’ estimations of fines are obtained from company’s annual reports. Part III of the Article discusses the ramifications of the systematic underreporting of fines. The Part first explains fine underreporting’s distortionary effect on the share price of the company. Second, based on existing behavioral literature, it argues that fine underreporting has a detrimental effect on the deterrence role of fines for companies engaging in wrongdoing: fines underreporting enables management to offset a fine’s expected effect on management’s compensation and enables managers to “kick the can down the road”[[22]](#footnote-23) with respect to the financial ramification of their wrongdoing, thus avoid facing the music of the negative consequences of their wrongdoing. Part IV suggests curtailing fines underreporting by altering two dimensions of current disclosure: The format of the disclosure itself and the mechanism in which the decision regarding the disclosure is reached. First, redesigning the form of disclosure of fines by separating the assessment of the expected fine from any other legal expense. Second, reforming the decision-making process by appointing an independent monitor within the firm that would assess the expected fine.

# Reporting of Expected Fines

Capital markets rely on accurate and timely information to operate efficiently.[[23]](#footnote-24) Investors need access to relevant data about companies to make informed decisions.[[24]](#footnote-25) Transparent and readily available information[[25]](#footnote-26) helps ensure that market participants have a fair and level playing field, and securities are priced accurately;[[26]](#footnote-27) accurate pricing enables optimal allocation of capital.[[27]](#footnote-28)

## 1.Market impact of corporate wrongdoing

Previous studies have examined the impact of the announcement by regulators of a corporations’ misconduct and the imposition of a fine and the companies’ share price. Davidson & Worell and Davidson, Worrell & Lee found that market reacts significantly to announcements of bribery, tax evasion and violation of government contracts, but do not find any impact in announcements regarding other corporate wrongdoings.[[28]](#footnote-29) Karpoff & Lott found that firms committing private frauds suffer from a reputational loss – the decrease in share price is much larger than the actual fine imposed.[[29]](#footnote-30) In contrast, Karpoff, Lott and Wehrly found that with respect to environmental violations, the decrease in share price are similar to the legal penalties imposed on them.[[30]](#footnote-31) Similar results, differentiating between misconduct toward second parties and third parties with respect to reputational loss was found by Murphy et al.[[31]](#footnote-32)

These studies face a serious challenge in capturing the full impact of the regulatory enforcement on the share price. They are all based on U.S. data, in which regulators announce publicly on an investigation, but only much later the actual fine is determined. Thus there is a long period in which the regulatory enforcement trickles down to the share price, increasing the possibility of “leakage” – an impact on the share price which is not captured. For that reason, John Armour et al., have executed a similar study in the U.K., in which the relevant regulators—the Financial Service Authority and the London Stock Exchange—go public only after the misconduct had been established and the appropriate fine has been determined.[[32]](#footnote-33) They also have found that the reputational loss is only relevant to second-party violations, but its magnitude much larger—the decrease in the share price was nine time as larger than what the monetary fine can explain.[[33]](#footnote-34)

While scholarship has examined the impact of announcement of investigations and fines on share price, no studies have examined the disclosure of companies regarding the expected fine, and the actual fine. The dynamic regarding the disclosure of fines is an especially interesting type of disclosure, due to the strategic considerations that accompany it. While with respect to any disclosure regarding loss, the typical motivation of the management is to low-ball the estimation in order to maintain a high level of earnings per share in the short run, with respect to disclosure of expected fine there is a more powerful consideration. After the initial investigation, the company is in constant negation with the regulator regarding the fine that it is willing to pay. In most fines, the regulator and the company reach a settlement with respect to the fine it would pay.[[34]](#footnote-35) For negotiation purposes, the company has an interest to maintain its assessment of the fine it expects to pay as low as possible. Any assessment it makes, is the starting point for negotiations—the regulator could easily ask the amount company has disclosed it expects to pay. How can the company object to pay the sum it anticipates to pay? For this reason, the company has an interest to low-ball the assessment of the fine as low as possible.

The importance of disclosing the expected fine has grown especially in the last decade, due to the trending increase in the size of fine imposed by federal regulators. Since 2013, 13 fines of over 1 billion dollars have been imposed.[[35]](#footnote-36) In all the years before 2013, only twice such fines were imposed.[[36]](#footnote-37) Fines have reached staggering amount such as the $31 billion imposed on Bank of America in 2013[[37]](#footnote-38) and 13 Billion on JPMorgan Chase in 2014.[[38]](#footnote-39) The increase in fines is not only limited to their size, but also to their prevalence. [[39]](#footnote-40)167 fines of over 100 million dollars have been imposed, only one of them before 2001.[[40]](#footnote-41)

## Contingencies disclosure

Relevant information for investors includes company’s realized performances in the reported period, e.g., company’s revenue for the last quarter; as well as other matters which the company is aware of and although were not yet realized can affect company’s financial performance and future results.[[41]](#footnote-42) One prominent example of such information that companies must report are contingencies that arose during the reported period—existing circumstances involving uncertainty as to a possible loss or gain in the future. GAAP define a reportable contingency as “[a]n existing condition, situation, or set of circumstances involving uncertainty as to possible gain (gain contingency) or loss (loss contingency) to an entity that will ultimately be resolved when one or more future events occur or fail to occur.”[[42]](#footnote-43)

Accordingly, loss contingencies are routinely reported[[43]](#footnote-44) by companies for product warranties and litigation exposure,[[44]](#footnote-45) and should also be reported if a current investigation by a federal agency is expected to result in a fine levied in the future.[[45]](#footnote-46) The next section will discuss the rules that apply to the disclosure of contingencies in general. The section that follows will implement the rules in the context of expected fines.

Disclosing in the context of contingencies means that the company provides statement’s readers information about the nature of the contingency and “an estimate of the possible loss or range of loss or a statement that such an estimate cannot be made.”[[46]](#footnote-47) When a company is required to accrue, the company must also recognize an expense[[47]](#footnote-48) in its income and expense statement, thus the contingency affect the company’s earnings per share.

Depending on the facts and circumstances there are three separate potential recognition, presentation and disclosure outcomes with regard to loss contingencies.[[48]](#footnote-49) Loss contingencies may require a company to (1) both *disclose* the nature of the contingencyand *accrue* a liability; (2) *disclose* the loss contingency, but not *accrue* a liability; or (3) neither *disclose* nor *accrue*.[[49]](#footnote-50)

### Disclose and accrue a liability

The required accounting treatment of a contingency, that is, whether to disclose and/or accrue, dependents on three parameters: (1) whether the contingency is material for the company;[[50]](#footnote-51) (2) the chances it will materialize; (3) whether the future loss can be estimated.[[51]](#footnote-52)

A material loss contingency should be accrued if it is both (1) probable and (2) reasonably estimable. GAAP defines “probable” as “the future event or events are likely to occur,”[[52]](#footnote-53) which is generally considered a 75% threshold.[[53]](#footnote-54) Thus, if the possibility the company will be subject to a fine is estimated by the company as probable, i.e., larger than 75%, the company must accrue a liability[[54]](#footnote-55) and disclose the contingency.[[55]](#footnote-56)

The amount that needs to be accrued is the loss that can be reasonably estimated.[[56]](#footnote-57) At the same time, companies should not “delay accrual of a loss until only a single amount can be reasonably estimated. To the contrary, when… information available indicates that the estimated amount of loss is within a range of amounts, it follows that some amount of loss has occurred and can be reasonably estimated. Thus, when… the reasonable estimate of the loss is a range… an amount shall be accrued for the loss.”[[57]](#footnote-58) If no single estimation can be provided, then “[i]f some amount within a range of loss appears at the time to be a better estimate than any other amount within the range, that amount shall be accrued;”[[58]](#footnote-59) and “[w]hen no amount within the range is a better estimate than any other amount… the minimum amount in the range shall be accrued.”[[59]](#footnote-60)

### Disclose the loss contingency, but not accrue a liability

Disclosure only, is required when a loss contingency is not both probable and reasonably estimable.[[60]](#footnote-61) Thus, if a loss contingency is probable but not reasonably estimable, the company is required to disclose the nature of the contingency and the fact that an estimate cannot be made.[[61]](#footnote-62) If a material loss contingency is reasonably possible but not probable, i.e., has a lower than 75% to mature, the company is required to disclose the nature of the contingency and an estimate of the possible loss: “Disclosure of the contingency shall be made if there is at least a reasonable possibility that a loss or an additional loss may have been incurred and… [a]n accrual is not made for a loss contingency… [t]he disclosure… shall include both of the following: a. The nature of the contingency b. An estimate of the possible loss or range of loss or a statement that such an estimate cannot be made.”[[62]](#footnote-63)

GAAP do not provide specific guidance as to the level of disclosure required regarding loss contingencies, e.g., whether each individual contingency should be disclosed separately or some other aggregating rules.[[63]](#footnote-64) However, the rules require that reporting entities disclose information in an extent that keeps the financial statements from being misleading.[[64]](#footnote-65)

### Neither disclose nor accrue

GAAP do not require disclosure for non-material contingencies. At the same time if the possibility of a material loss is remote, the company is neither required to disclose nor accrue a liability.[[65]](#footnote-66) However, reporting entities should consider disclosing information in the footnotes if the disclosure would keep the financial statements from being misleading.[[66]](#footnote-67)

## Fines Contingencies

As mentioned above, the last two decades have witnessed an unprecedented increase in the fines imposed on corporations by federal agencies for their legal transgressions and wrongdoing.[[67]](#footnote-68) In many cases the amount of fine imposed are material for investigated companies and constitute a large share of the companies’ market value.

A company under a federal investigation faces a set of circumstances involving uncertainty as to a possible loss “that will ultimately be resolved when one or more future events occur or fail to occur;”[[68]](#footnote-69) hence the company must estimate whether the expected fine is material for the company; the chances it will materialize; and whether its amount can be estimated.

Following GAAP treatment of contingencies explained above, unless there is a remote possibility that the federal agency’ investigation will result in a fine imposed on the company, the company must disclose the expected fine.[[69]](#footnote-70) If a fine is probable, then the company must also accrue a liability for the estimated amount.[[70]](#footnote-71)

This is not only a “rule in the books” – the SEC frequently comments on companies that have incomplete or omitted such disclosures, that have not provided an estimation of the loss or at least a statement that such estimation cannot be made.[[71]](#footnote-72) The SEC also frequently objects to the practice that companies do not provide an estimation of the liability involved in a legal proceeding based on the claim that they cannot make an estimation with “precision and confidence.”[[72]](#footnote-73) It noted that it may ask companies to provide support that an estimation cannot be made, especially as litigation progresses.[[73]](#footnote-74) In addition, the SEC expects a contingent liability to be foreshadowed by a disclosure that proceeds the actual accrual of the liability.[[74]](#footnote-75)

# Fine disclosure: Companies’ Initial Assessment versus Actual Fines

This section presents an empirical study aimed at examining the reporting practices of companies that have been subjected to fines larger than $100 million. Fines of such magnitude often result from significant regulatory violations or misconduct. For example, following the tragic crashes of Lion Air Flight 610[[75]](#footnote-76) and Ethiopian Airlines Flight 302,[[76]](#footnote-77) Boing—the manufacturer of the crashing 737 MAX airplanes—entered into an agreement with the DOJ to resolve a criminal charge related to a conspiracy to defraud the Federal Aviation Administration’s Aircraft Evaluation Group (FAA AEG) in connection with the FAA AEG’s evaluation of the Boeing 737 MAX airplane.[[77]](#footnote-78)

Strategic underreporting of losses may be relevant also to other contingent legal proceedings, and not only fines. There are three reasons why this Article focuses on fines. First, typically, the imposition of a fine is a reasonably probable event given a public investigation is taking place.[[78]](#footnote-79) As such, together with its growing materiality, given the trend of the increasing magnitude of fines,[[79]](#footnote-80) it almost categorically requires disclosure. This is in contrast to other legal proceeding such as class actions, which do not categorically generate reasonably probable liabilities for the company.[[80]](#footnote-81) Second, even when a civil legal proceeding may generate a reasonably probable liability, there is no enforcement agency that directly monitors the disclosure that will prosecute the company for not disclosing the information.[[81]](#footnote-82) In addition, the regulator does not have complete information regarding the legal proceedings in which it is not involved directly, and thus its interference is less practical. In the case of fines imposed by a regulator, the regulator, having complete information regarding the expected fine, has stronger grounds to interfere and also a strong motivation to enforce so that the company will take seriously its investigation. Thus from a practical perspective, monitoring disclosure of fines is more feasible than other legal proceedings. Third, the disclosure of expected fines is socially important independently of market efficiency, for deterrence purposes which will be discussed henceforth.[[82]](#footnote-83)

## 1. Cases included in the Study

The threshold of $100 million was chosen for the study as it represents a significant amount that is likely to be material for the companies involved. Materiality refers to the importance or significance of information in influencing the decisions of users of financial statements.[[83]](#footnote-84) In general, companies are required to disclose information about a fine (and other matters) only if the information is material.[[84]](#footnote-85) By selecting cases, from the last two decades (2003 to 2021), in which companies resolved criminal charges by paying a substantial fine larger than $100 million, we aimed to focus on fines that have the potential to impact the financial statements and disclosures of companies, thereby ensuring the relevance of our investigation into underreporting practice.

Using University of Virginia School of Law’s and Duke University Schools of Law’s “Corporate Prosecution Registry”[[85]](#footnote-86) we managed to trace 51 different cases by 48 companies whose shares are traded in U.S. exchnages[[86]](#footnote-87) that included a fine larger than $100 million.[[87]](#footnote-88) These 51 cases constitute the population of the study.[[88]](#footnote-89)

Table 1 provides key information about the study’s population:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number of Cases** | **Number of Companies** | **Years** | **Highest Fine in Population** | **Lowest Fine in Population** | **Average Fine** |
| 51 | 47 | 2003-2021 | $3,000 million  Wells Fargo & Company, 2020 | $93.6 million  Daimler AG., 2010 | $619.5 million  (Std. Dev. $655.1 million) |

Table 1: Key information about Study’s population.[[89]](#footnote-90)

## Disclosed Assessments

We then turn to examine the disclosure companies provided in their annual financial statements (10-K) regarding the criminal charges and the possible fine, before the fine is determined and publicly known. We look at the earliest financial assessment companies provided regarding the prospective financial outcomes of the criminal investigation. For every case, we use the earliest financial assessment provided by the company in its annual financial statements published in the years preceding the agreement. Cases where no assessment was provided before the imposition of the fine are treated as having an initial assessment of zero with respect to the expected outcomes. Remember, a company is required to disclose an assessment when a future expense is higher than remote;[[90]](#footnote-91) having no assessment disclosed for the financial outcomes of a criminal investigation against the company, means the company conveys to statements users it does not expect a reasonably probable material future expense to result in the case.[[91]](#footnote-92)

Table 2 presents key statistics regarding the initial assessment companies provided:

|  |  |  |  |
| --- | --- | --- | --- |
| **Number of Cases** | **Highest Initial Assessment** | **Lowest Initial Assessment** | **Average Initial Assessment** |
| 51 | $2,138 | 0 | $281.9  (Std. Dev. $496 million) |

Table 2: Fine assessment disclosure

As presented in the table, the lowest assessment in the study’s population is zero: In 29 cases of the 51 cases resulting with a fine larger than $100 million, companies did not provide any financial assessment for the prospective outcome of the criminal investigation before entering into an agreement with the DOJ.[[92]](#footnote-93) In other words, in 29 cases, which represent 57 percent of the study’s population, companies most recent annual financial statements published before becoming subject to a fine close to or larger than $100 million, did not disclose an expected fine estimation.

Thus, although being aware of the investigation and the criminal procedures, and the possible financial outcomes the company may face, most of the study’s population did not disclose an assessment for the fine. Companies justified the lack of a financial assessment disclosure and a provision as (1) impossible due to the high uncertainty involved; or, (2) as not required in the given circumstances (i.e., due to an insurance coverage). In some cases, the two justifications were both used to justify the lack of an assessment disclosure. For example, in its 2019 statements, released less than a year[[93]](#footnote-94) before the company agreed to pay over $2.5 billion to resolve the criminal charges the company was facing,[[94]](#footnote-95) Boeing mentioned that “[m]ultiple legal actions have been filed against us as a result of the October 29, 2018 accident of Lion Air Flight 610 and the March 10, 2019 accident of Ethiopian Airlines Flight 302. Further, we are subject to ongoing governmental and regulatory investigations and inquiries relating to the accidents and the 737 MAX, including investigations by the U.S. Department of Justice and the Securities and Exchange Commission[;]” yet, the company did not provide an assessment to the expected financial outcomes since it “cannot reasonably estimate a range of loss, if any, not covered by available insurance that may result given the ongoing status of these lawsuits, investigations, and inquiries.”[[95]](#footnote-96)

## Comparing Disclosed Assessments and Actual Fines

When comparing disclosed initial assessments and the actual fines, we find that in 38 cases out of 51 included in the study, companies provided a disclosure that underreported an expected fine. Thus, in almost 75 percent of the cases which concluded with a substantive fine greater than $100 million, the information companies disclosed in their annual report did not provide investors with information that reflected the actual future outcomes.

Sidebar 1 depicts the difference between the initial assessment disclosed by companies and the actual fine, and the contribution each case had for the cumulative difference between the assessment provided by examined companies, that is $14.4 billion, and the actual fine they become subject to, that is $31.5 billion.

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million USD

Intial Assessment Disclosed

The potency of this study is that it can expose underreporting that cannot be exposed in the case of an individual company. One would expect that underreporting would be deterred by the threat of private lawsuits. Eventually, the information regarding the actual fine would be publicized, and if the company has underreported the fine in its previous disclosures, the company and the fiduciaries involved are exposed to lawsuits by shareholders. Yet a specific case of underreporting is not problematic—because of the uncertainty involved in estimating a prospective fine, it is legitimate for a company to err and underestimate the fine. It would be very hard for a plaintiff to overcome a motion to dismiss in such cases: actual underreporting does not necessarily entail the company intended to underreport, but constitute a mere error due to the inherent uncertainty of such estimations.[[96]](#footnote-97) This is not the case when analyzing *all* companies on which a fine was levied and their disclosures regarding the expected fine in previous years. If we find a *systematic* error to a certain direction which is statistically significant, we can deduce these are not mere unintentional mistakes of estimating a highly uncertain event, but an intentional outcome of low-balling the fine. Mere mistakes should be normally distributed around the actual fine. If the distribution of the estimations is around a number that is considerably lower than the actual fine, it is not a mere mistake. It still may not be possible to sue a specific company for intentional underreporting—it may be able to claim that in its case it was a mere reasonable mistake—but it can be determined that a systematic problem of underreporting exists.

Accordingly, to examine whether companies systematically underreport expected fine outcome, we compare the aggregate disclosure companies provided regarding the expected outcomes (Table 2) with the aggregated actual outcomes, i.e., the actual fine (Table 1) and test whether the difference is substantial and statistically significant.

Table 3 provides information about the comparison:

|  |  |  |  |
| --- | --- | --- | --- |
| **Number of Cases** | **Average Initial Assessment** | **Average Fine** | **Difference** |
| 51 | $281.9 million  (Std. Dev. $496 million) | $619.5 million  (Std. Dev. $655.1 million) | \*\*\*$337.6 million  (Std. Dev. $736.4 million) |

Table 3: Comparing Disclosed Assessments and Actual Fines

As presented in Table 3, the difference between the average assessment initial companies provided regarding the expected fine’s outcomes and the average fine companies faced is more than $337 million. The difference and its direction, meaning that the average fine is larger than the average assessment disclosed—thus constituting systematic underreporting—are statistically significant at the 1% level.[[97]](#footnote-98)

The substantive and statistically significance difference between the initial assessment companies provided in their annual reports and the actual fine companies were later subject to, suggests a systematic underreporting of fines by public companies.

## The Actual Underreporting Gap May be much Larger

The actual degree of underreporting is likely to be much greater. In almost all cases we have examined (44 out of 51) there wasn’t a separate estimation for the fine—companies have provided a general estimation for all contingent legal processes in which they are involved, including civil suits. In almost in all of them there are a few other legal processes in which they are involved. Thus the actual underreporting gap is likely to be much larger: we compare the estimation of potential liabilities stemming from all contingent legal processes to the fine levied on the company alone while it is likely that the company will incur other liabilities besides the fine. For this reason it is fairly likely that even in the few companies in which it seems they have overreporte, because we compare their estimation to the actual fine alone, they may have also underreported when taking into account the other legal liabilities they have incurred. Such assessment is much more complicated, especially since some of the legal proceeding may not have been resolved, so it is not possible to compare the assessment to all legal liabilities. We may try to examine the full scope of underreporting in a future study. Yet, even without taking into account other legal liabilities, we still find significant systematic underreporting which implies that the actual underreporting is much greater.

# The Problems with the Underreporting of Fines

The systematic underreporting of fines should not be ignored. This part notes three main problems underreporting of fines raises: creation of market inefficiencies, enabling manipulation of compensation and reducing the celerity of the sanction which compromises deterrence. The first is a general problem that pertains to any misreporting of information by public companies. The latter two focus on the particular problematic aspects of underreporting in the context of fines linking the issue of underreporting to the more general problem of inadequate deterrence for corporate wrongdoing.

## Market Inefficiencies

The first problem that may arise from underreporting is the creation of market inefficiencies. The main purpose of public markets is to provide accurate prices for financial assets.[[98]](#footnote-99) Public markets facilitate this process by providing full information regarding the financial assets sold on the market, including quarterly financial reports and annual reports which include all financially material information.[[99]](#footnote-100) Assuming information has to be reported in order to be internalized by the market, missing material information which is not reported disables the ability of the market to accurately price the financial asset.[[100]](#footnote-101) As noted above, the fines imposed on corporation by federal agencies are highly material for the company in many cases—they have reached the 30 billion dollar mark in the case of Bank of America,[[101]](#footnote-102) and in several other cases have crossed the one billion dollar mark and in tens of cases crossed the 1oo million mark.[[102]](#footnote-103) In extreme cases, such as the 7 billion dollar fine an Deutsche Bank mentioned above, the fine has constituted over 10% of the company’s market cap.[[103]](#footnote-104) Such fines are super-material for assessing the value of the company, and thus should be disclosed when there is a reasonable probability that they will be levied on the company. Excluding such information from the market may distort significantly the pricing of the companies’ share—it is a significant liability that is not incorporated into the share price. People who buy the share, without knowing the magnitude of this probable fine, may over-pay much above the fair price of the share. The possibility that one may over-pay for share due to these concealed liabilities may deter some investors from investing and thus markets will not fulfill their full promise of attracting investments. Such inefficiency of the market may cause significant social welfare costs.

The assumption above that markets will misprice shares without full disclosure of such estimates is not trivial. It depends on one’s view regarding the market—whether markets are efficient in the strong sense and incorporate all relevant information whether private or public, or only weakly efficient, in the sense that they incorporate all public information but not private information.[[104]](#footnote-105) According to the view that markets are efficient in the strong sense, it doesn’t really matter if companies don’t provide the full assessment of such significant and probable fines. The market are able to asses and incorporate such information, even without the assessment of the company. Professional analysists could asses the expected fine as well as the company itself.[[105]](#footnote-106) If the price of the share is too high they will sell the share, and make a profit, and can even short sell the share in order to increase their profits from assessments. The price will drop to the point where it completely includers the expected fine as a result of smart investors selling and shorting the share.

The Jury is still out whether markets are strongly efficient or only weakly efficient. Even if they are considered to be inefficient, how inefficient are they? What types of information does it fully embrace, and which types does it leave out? Allegedly, we could have examined whether the market is strongly efficient in the case of underestimation of fines—whether even though corporation provide low estimation for fines, the market incorporates the true expectancy of the fine. The classic method for examining whether the market is efficient in the strong sense and incorporates the true expected fine is through an event study that analyzes the impact around the time of the public announcement of the fine.[[106]](#footnote-107) If returns are systematically abnormal around the time of the announcement, it reflects that the market did not incorporate the true expectancy of the fines and thus the under-reporting caused market uncertainty.[[107]](#footnote-108) If there are no abnormal returns around the time of the public announcement of the fine it reflects that the market has incorporated the true expectancy of the fine, even though the company has underreported the expected fine.[[108]](#footnote-109)

Although such examination may seem straightforward and feasible, it is not necessarily possible to execute. Event studies of announcements are almost useless in cases of “leakage”—that information regarding the announcement has leaked over time.[[109]](#footnote-110) This is very likely to happen in such announcements regarding fines—even though the formal press conference of the federal agency announcing the fine took place in T1, the information may have been published in T0 or T-1. The final negotiations between the company and the federal agency may have leaked to the press by one of the parties. There are indication that such leakage has actually happened in the context of fines.[[110]](#footnote-111) There may be methodological methods to overcoming this hurdle worthwhile exploring in future research.[[111]](#footnote-112) Although it cannot be concluded decisively that the underreporting of fines generates market inefficiency in terms of the pricing of the shares, evidence exist for market inefficiency generated by the underreporting.

### Evidence for Market Inefficiency

Three examples of such evidence are noted bellow: The impact of the announcement of the fine in the cases Boeing, Deutsche Bank and Facebook.

#### Boeing

On January 7, 2021, the DOJ and Boeing have reached an agreement that Boeing will pay a total criminal monetary amount of over 2.5 billion dollars.[[112]](#footnote-113) In its last disclosure before the announcement, the company’s public report published on October 27, 2021, Boeing claimed that it cannot “cannot reasonably estimate a range of loss, if any, not covered by available insurance that may result given the current status of the lawsuits, investigations and inquiries related to the 737 MAX.”[[113]](#footnote-114) The day after the announcement, Boeing’s share dropped 1.4%,[[114]](#footnote-115) while the S&P 500 has increased 0.55%.[[115]](#footnote-116) This represents a net fall of almost 2% following the announcement indicating that the market did not incorporate accurately the expected sanction.[[116]](#footnote-117)

#### Deutsche Bank

On April 23, 2015 Deutsche bank reached an agreement of $2.519 billion for its role in the manipulation of the LIBOR.[[117]](#footnote-118) In the notes to the last financial statement released before the announcement, the company did not provide a specific estimate for the fine but rather an estimate of 2.0 billion for all contingent legal proceeding.[[118]](#footnote-119) The day after the announcement the share price of Deutsche Bank dropped by 2.7%[[119]](#footnote-120) (the S&P 500 remained steady).[[120]](#footnote-121) Once again, the announcement’s effect indicates that the market had not anticipated the fine.[[121]](#footnote-122)

#### Facebook

On July 24, 2019 the Fair Trade Commission (FTC) imposed a $5 billion penalty on Facebook for deceiving users about their ability to control the privacy of their personal information.[[122]](#footnote-123) In the report of the first quarter that proceeded the announcement of the fine, Facebook did not provide a specific estimation for the fine of the FTC, but rather a range of 3 to 5 billion dollars. Facebook's share price dropped 2% the day following the announcement[[123]](#footnote-124) as the actual fine exceeded the middle of the range [[124]](#footnote-125) (The S& 500 declined modestly by 0.6%).[[125]](#footnote-126)

### Wasteful Use of Resources

If the market accurately accounts for the true expectancy of fines, successfully addressing companies' tendency to underreport expected fines, there remains an additional inefficiency apart from mispricing. Since the markets can independently factor in the true expected fine regardless of firms' estimations, the need for such estimations becomes redundant, leading to a wastage of company resources devoted to their preparation. Therefore, underreporting is inefficient, regardless of its impact on prices. If it affects prices, it results in pricing inefficiency; if it does not, the reports themselves become meaningless and contribute to a wasteful use of resources, making them inefficient.

## Effecting Executives’ Compensation

Another problem caused by underreporting is the ability of managers to manipulate their performance-based compensation. A significant element of top-corporate executives compensation is performance-based. A recent study published by the Harvard Business Review found that 82% of executives’ compensation scheme of Russel 3000 companies, is performances based.[[126]](#footnote-127) Two main performance-based parameters to which managers’ compensation are linked are companies’ earning and share price.[[127]](#footnote-128) By underreporting fines, managers postpone fines’ effect on companies’ earnings and its share price, hence on their compensation.[[128]](#footnote-129)

Suppose in November 2022, managers have a suspicion that there is a reasonable probability that the company will face a $100 million fine in 2025. They have the option to delay the investigation and thus avoid any disclosure in the company's 2022 annual reports. Then, by initiating the investigation only at the beginning of 2023, the estimation will only be disclosed in the financial reports of the first quarter of 2023.

Although deferring disclosure might not appear critical at first glance, it can significantly impact managers' compensation. Managers may have shares or options set to mature at the end of 2022. By postponing the disclosure until the first quarter of 2023, they gain the opportunity to sell the shares and options in the initial months of 2023, obtaining a higher price not yet effected by the impending fine. This timing advantage can greatly affect their financial gains.

This scenario is based on the premise that the market is not efficient in the strong sense, thus underreporting. i.e., the delay of disclosure, affects share price.[[129]](#footnote-130) Yet it is possible for managers to influence their performance-based compensation by underreporting of fines even if markets are efficient. A portion of managers’ compensation is linked to financial parameters as reported in the company’s financial statements and according to GAAP. For example, Managers may get a bonus if company’s earnings per share (EPS) surpasses a $1 threshold. In November 2022, managers know the company is very close to surpassing the threshold, and if the fine will not be disclosed and no provision recognized in the statements, company’s EPS will pass the threshold and managers will receive the bonus. Although managers have also a performance-based bonus in 2023, postponing the disclosure and provision to 2023 may not make any difference with respect to the bonus—or that the managers expect that in 2023 the earning would far exceed the $1 earning per-share and thus the liability of $100 million would not make a difference.[[130]](#footnote-131)

The ability to underreport the expected fine enables management to maximize their performance-based compensation and thus shield and minimize the impact of the fine on their personal compensation. This ability to shield the impact of the fine on the compensation of management through underreporting is highly troubling from a deterrence perspective. There is wide array of criticism on the utilization of corporate fine as a deterrence mechanism by scholars,[[131]](#footnote-132) judges[[132]](#footnote-133) and journalists.[[133]](#footnote-134) At the end of the day, almost all wrongdoings are committed by certain individuals within the firm. Many argue that without personal liability of individuals and especially management, effective deterrence cannot be achieved.[[134]](#footnote-135) When sanctions are imposed on the company, it is mainly shareholders—who have not committed any wrong—who suffer from its consequences.[[135]](#footnote-136) Managers and other wrongdoers suffer only indirectly from the impact that the reduced earning of the company may have on its share value and therefor on certain elements of their compensation. The ability of managers to manage earnings weakens the indirect effect of the corporate fine on them personally. This hinders the most effective element for deterrence—personal liability of managers—which is scarcely imposed directly; the indirect personal impact of fines on compensation of management is the center piece of current mechanisms of deterrence. Its weakening through underreporting decrease significantly the deterrence of corporate wrongdoing.

## Underreporting and Underdeterrence

Besides maintaining the informational efficiency of markets, disclosing as early as possible is highly important on an additional dimension. It may have a significant impact on deterring managers and other corporate fiduciaries from engaging in wrongdoing.

Criminology literature emphasizes three main factors in effective crime deterrence: (1) The severity of the sanction; (2) the certainty of the sanction; and (3) the celerity of the sanction (the immediacy of the sanction).[[136]](#footnote-137) Even when holding the severity and certainty of the sanction constant, deterrence is much stronger when there is not time lag between the wrongdoing and the sanction than when there is a time lag.[[137]](#footnote-138)

Modern theory of hyperbolic discounting provided additional support to the relevance of celerity to deterrence. According to the hyperbolic discounting literature, individual’s decision’s is affected by how close a given time interval is to the present.[[138]](#footnote-139) They impose a steeper discount for costs and benefits that occur closest to the present. Thus according to hyperbolic discounting, an individual would attribute a much higher negative value to a cost he incurs in the near future, than the negative value she attributes to the same cost in the future. In other words, a cost or a sanction in the near future are much more ‘costly’ than one in the more distant future.[[139]](#footnote-140)

Professor Legge and Professor Park have found empirical support for the impact of celerity on deterrence in the context of sanction on drunk drivers: Immediate punishment for drunk drivers such as an immediate license suspension, was found to be more effective deterrent in reducing significantly fatalities resulting from drunk driving, than other more sever non-immediate sanctions.[[140]](#footnote-141)

The disclosure of fines is analogous to the sanction of license suspension: in both cases, the sanction examines is not the final sanction, but a pre-trial sanction that is closer in time to the wrongdoing than the final sanction. Furthermore, Professor Manuel Utset argued that corporation are more sensitive to celerity than natural persons.[[141]](#footnote-142) Thus, early disclosure of fines is expected to have a higher impact on the deterrence of corporations.

Professor Hollander-Blumoff explains that the difference between the immediate sanction and the future sanction is not necessarily the value the individual attributes to the time element directly, but that immediate sanctions are more concrete while the one in the future is more abstract and thus is felt more ‘weakly’ at the time of the committing of wrongdoing.[[142]](#footnote-143) This what explains the inconsistency of the individual’s temporal preferences. Post-facto after being sanctioned by the late sanction, the individual would regret committing the wrong, and would not tell himself that it was worth committing the crime because the sanction came in late. The greater weight attributed to immediate sanctions is not driven by the time-element per-se, but by the concreteness of the closer sanction.

This raises the question how can one transform a sanction to be more concrete, even though it has to be imposed only after trial, or in the least a settlement, which both are lengthy procedures and required much time before the actual sanction is imposed? Professor Miriam Baer, suggests what she labels a “targeted enforcement device”, which aim at accelerating the sanctions.[[143]](#footnote-144) The classic example of such device is the speed bump: it efficacy is that it stops the driver from speeding by forcing him to experience an immediate concrete cost of such behavior—at the moment he is tempted to place his foot on the accelerator. Even though the cost of speed bumps are negligible, it is effective because of its immediate timing and concreteness.[[144]](#footnote-145) It may enable a heavy sanction to kick-in, thus the driver thinks concretely of the ramification of his wrongdoing.[[145]](#footnote-146)

Disclosure of the ramification of the wrongdoing is an ideal manifestation of immediate sanctions, that their main function is to intensify the concreteness of the negative consequences of the wrongdoing. In this respect it is very similar to the sanction of license suspensions, which their effectiveness has been proven.[[146]](#footnote-147) In both cases the immediate sanctions, i.e., disclosure of an expected fine and license suspensions, do not replace the full sanction. Furthermore, the immediate sanction is not identical to the subsequent full sanction—in the case of drunk driving actual time in jail and in the case of corporate wrongdoing the actual payment of the fine, which is more impactful that the disclosure of the fine. The reason the sanction are only a fracture of the subsequent full sanction is that in both case the immediate sanction is imposed before conviction, which bars the ability to impose a sanction close to the magnitude of the subsequent post-conviction sanction.

# Policy Implications

The systematic underreporting of fines is a problem which may have far-reaching implications on the deterrence of corporations from engaging in wrongdoing. As noted above, the ability of ‘kicking the can down the road’ and deferring the acknowledgement of the negative ramifications of the wrongdoing, may decrease significantly the deterrence from engaging in wrong-doing. Furthermore, it may also enable the management to manipulate and shield their bonuses and performance-based compensation from taking a hit due to the expected sanction that would decrease share value and the company’s financial parameters.

This part suggests policy interventions that span on two levels to tackle the issue of underreported fines. The first level focuses on the form of the disclosure: segregating fine contingencies from other legal contingencies. The second level centers on the decision-making process that governs the disclosure of anticipated fines: appointing an independent monitor within the firm that would assess the expected fine.

## Adjusting the disclosure: segregating fine contingencies from other legal contingencies

As mentioned, GAAP do not provide specific guidance as to the level of disclosure required regarding loss contingencies, e.g., whether each individual contingency should be disclosed separately or some other aggregating rules.[[147]](#footnote-148)

Accordingly, one of the challenges the study faced was retrieving the exact estimates of fines. The main hurdle was that in most cases, corporations did not provide a separated estimation for the fine imposed by federal agencies, i.e., a specific amount attributed to the fine contingency, but rather an estimation for all legal contingencies faced by the company. Out of study’s population (n=51), in only 10 cases companies provided a distinguished estimation for a fine. In all other instances, companies either presented a combined total or provided no amount at all, encompassing all the contingencies the company was confronting.[[148]](#footnote-149)

Aggregating all contingencies into one estimation of loss is a central cause for the underreporting of fines, as it allows the company to mask the underreporting from being scrutinized by the regulator. Once investigated by a federal agency, company’s disclosures are monitored closely by the investigating agency. The agency has the information, power and motive to sanction a company that did not fully disclose the expected fine. The agency has all the relevant information for determining the expected penalty, and most likely has a model for the appropriate penalty from an early stage. Some agencies, especially the DOJ and SEC, have also the power to penalize companies for partial disclosure of the expected fine, and have made use of their power in several cases in the past.[[149]](#footnote-150) They also have a motive to sanction parties which underreport the expected sanction: low-baling the estimation of the sanction can be understood as an indication that the company ‘is not taking seriously’ the matter at hand, and can be interpreted as disrespect to the relevant agency. In addition, for the same strategic reasons that the company wants to low-ball the estimation, the federal agency wants the estimation to be as high as possible—it would increase the likelihood that the company will agree to eventually pay a higher sum.

Aggregating fine contingency with all other contingencies, shields the low estimation from the scrutiny of the agency. While the agency has high value information regarding the expected penalty it would impose in the future, it does not not have a comparative advantage in assessing the outcomes from other civil legal proceedings. Thus when a company consolidates the assessment of the fine together with other contingent legal losses, is essentially masks the estimation of the fine from scrutiny of the regulator: there is not independent assessment of the fine.

Mandating companies to disclose separately the expected fine from all other contingent expected losses, may reduce significantly the underreporting. It will expose companies’ assessment to the relevant agency, and as such will be deterred to low-ball the estimation in the fear that it may signal to the regulator that it is has not taken the investigation seriously enough, or even end up with an additional penalty for not fully disclosing the initial expected penalty.[[150]](#footnote-151)

Adjusting the disclosure and requiring companies to separate fines contingencies from all other contingencies does not require amending securities law, but rather an interpretative release by the SEC. As mentioned, currently the GAAP do not provide specific guidance as to the level of disclosure required regarding loss contingencies, the SEC has the power an authority to issue such a guidance.[[151]](#footnote-152)

Moreover, not only is this proposal straightforward to implement, but its associated costs are negligible. Adopting fine contingencies disclosure would not demand any significant additional investments from companies. In cases where estimates are aggregated, the company already possesses estimates for each contingency; companies merely need to report the information separately. This technical separation in the report would not entail a substantial expense.

At the same time, it is possible that the company lacks estimations for each of the contingencies, which motivates the aggregate disclosure. If this is the situation, separating the various contingent reports may incur real costs for the company. Nevertheless, such costs are highly warranted since the company should have had a proper estimation of each contingent loss, which is a critical requirement.

## Altering the Decision-making structure

As mentioned, companies face a unique strategic dilemma with respect to the disclosure of expected fines: The amount the company would initially disclose becomes the starting point when negotiating with the regulatory agency, ultimately influencing the final fine. Consequently, if a higher initial assessment is disclosed, the resulting fine is likely to be higher.

This strategic consideration may drive companies to underreport the estimated fine, leading to serious implications for market efficiency and deterrence of companies from engaging in wrongdoing.

### Why auditing does not solve the problem

The amount the firm discloses is essentially the opening point for negotiations.[[152]](#footnote-153) Thus underestimation in the context of fines, does not only serve the interests of the management, but is serves the interests of the firm at large and its shareholders.[[153]](#footnote-154) It is true that the estimation of the expected fine is audited by the company’s independent accountants. Yet their audit is based mainly on the information provided to them by the management. If management has an interest to lowball the estimation of the expected fine, it can influence the scrutiny of the accountant by controlling the content of the information regarding their wrongdoing, transferred to the accountant.

Moreover, an additional reason exists for firm not to provide the full information to its external auditor. Unlike information which is passed on to its legal advisors which its confidentiality is protected by the attorney-client privileges, the confidentiality of information passed from the company to its auditor is not protected.[[154]](#footnote-155) In SEC v. RPM International Inc., the SEC charged the firm for failing to disclose a probable loss contingency for a pending DOJ investigation , accusing company’s chief legal counsel for not providing the external auditor with adequate information regarding the investigation.[[155]](#footnote-156)

In addition, as scholarship the has pointed out, although the auditor is supposed to function as an independent gatekeeper, he may be captured by the interests of the firm.[[156]](#footnote-157) It may be more prone to tilt toward the interests of the firm especially with respect to fine contingency disclosure. Estimation of fine contingency is the kind of issues the company has leeway due to the great amount of uncertainty involved and the low visibility thereof (due to the aggregated contingency disclosure). Knowing the clear interests of the firm, the auditor could opt for the lowest estimation within that range, without any exposure to liability.

### Appointing a Monitor

Given the firm’s strong interest to lowball the estimation which may trickle down to the firms’ auditor, it is suggest altering the decision-making mechanism that regulate fine estimation. Specifically, overcoming the incentives management has to underreport by appointing a monitor that will provide an estimation.

A monitor is an independent third party typically appointed to oversee a company’s compliance following resolution of a criminal case.[[157]](#footnote-158)

For example, in 2005, the DOJ has reached a Deffered Prosecution Agreement with KPMG after porsecuting it for tax fraud and tax evasion.[[158]](#footnote-159) As part of the agreement, KPMG agreed to the appointment of an independent monitor, that will make sure that the company establishes a compliance program. In the same year, the DOJ has reached a non-prosecution agreement with MCI which was prosecuted for securities fraud, for the imposition of a monitor who will make sure that MCI is complient with its commitment to add 1600 jobs.[[159]](#footnote-160) In 2006 the DOJ has reached a non-prosecutio agreement with Mellon Bank after it was prosecuted for theft of government property, in which MCI agreed to appointment of an external monitor that will oversee the establishment of a new ethics program in the company.[[160]](#footnote-161)

Typically, monitors are not tasked with enforcement but instead provide an extra layer of oversight, examining corporate compliance programs and reporting findings back to enforcement officials. [[161]](#footnote-162) With respect of disclosing fine contingencies, it is suggested to broaden the scope of the monitor as to include estimation and determination of the contingency and the required disclosure. Accordingly, it is suggested that once an investigation opens, the company will appoint a monitor that will make such determination. While monitors are typically appointed by the DOJ, and for the purpose of passive oversight, the proposal expands the use of monitor into active decision making.

It is further suggested that the monitor will be an independent external lawyer who will provide a mandatory assessment and disclosure services to the company in regards to fine contingencies. The monitor will have unlimited access to all corporate resources and documents, and thus unlike an auditor will not have to rely on firm insider’s for information regarding the contingency.

Using a monitor—instead of company’s management and its auditor for the purpose of assessing and deciding fine contingencies disclosure—is expected to neutralize company’s strategic consideration and therefore result with a more accurate reporting of expected fines.

In addition, there are two advantages of having lawyers making the estimation instead of accountants. First, lawyers have the necessarily skill set for estimating the expected fine. The question regarding the expected fine is a legal question. Lawyers are equipped with the necessary skills for weighting the evidence and inferring from past cases the probability and the size of the fine. Inference from past cases requires to analyze the relevancy of past cases to the present case. Such analysis is in the heart of the legal profession and accountants do not seem to poses the capabilities for mastering it.

Furthermore, we have noted above that one of the sources of underreporting may be rooted in the fact that accountants do not receive the full information regarding the investigation, due to the fact that the confidentiality of the information is not protected. By transferring the estimation role to lawyers, the confidentiality of the information may be covered by attorney-client privileges, and thus reinforcing the flow of information to the estimating party.

Ideally, for the estimation to be as accurate as possible, it would be optimal if the estimator had skin in the game. That would make sure the estimator does his best to reach the true expectancy of the fine. Yet this may not be practical—almost no estimator would be willing to engage in such function that would expose them to personal liability. A more feasible suggestion is that the estimator would have to purchase insurance that would cover a portion of any difference between the estimation and the actual fine. Even though the estimator would not have a direct interest in making an accurate estimation, the insurance industry would monitor the accuracy of the auditors—if they are not accurate, they would have to pay a high premium in order to be covered, which would require such estimators to charge strikingly high prices which would push them out of the market. Yet in the case of monitors for specific type of decision, even without the emergence of an insurance market, it would be able to rely on a conventional reputational mechanism in order to maintain accurate estimations. Because the monitor is designated for a specific decision and is a repeating player in regards to this decision, a clear reputational signal can emerge, which will keep the monitor at bay in making accurate decisions.

# Conclusion

In the last decade there has been a tremendous increase in fines that have been imposed on corporations. Yet scholars,[[162]](#footnote-163) policy makers[[163]](#footnote-164) and lawyer[[164]](#footnote-165) have voiced concerns that corporate fines are not sufficiently effective in deterring wrongdoing. Some argue that sanctions should be imposed on top executives in order to be effective.[[165]](#footnote-166) This Article has suggested a different angle that may lead to more effective deterrence: confronting the underreporting of expected fines in companies’ financial reports.

The Article underscores the strategic consideration that leads to underreporting and provides an empirical analysis based on hand-picked data that unveils systematic underreporting of fines in the time-window between an investigation goes public and the imposition of a fine years later.

The Article highlights how systematic underreporting can diminish deterrence by allowing management to manipulate earnings and conceal the impact of fines on their personal compensation. Additionally, it weakens the celerity (speed) of punishment, which behavioral economic literature has identified as a crucial aspect of deterrence.

The Article suggests policy recommendations on two levels in order to confront the strategic underreporting of fines. First, it suggests mandating a separate disclosure for the expected fine so it would not be bundled up with the estimations of all other contingencies; Hence, would increase the ability to monitor the disclosure of fine contingencies. The second is altering the decision mechanism regarding the disclosure of the expected fine. Given the strategic considerations for underreporting, the disclosure should be determined by an outside monitor. These mechanisms are expected to decrease underreporting of fines and thus not only improve pricing efficiency but increase deterrence and thus decrease corporate wrongdoing.

1. *See, e.g.,* Tory Newmyer, “Bank of America to pay $250M in refunds, fines over customer practices,” *The Washington Post,* (July 11, 2023)(reporting Bank of America will pay more than $250 million in refunds and fines after the company systematically overcharged customers, withheld promised bonuses and opened accounts without customer approval.) <https://www.washingtonpost.com/business/2023/07/11/bank-of-america-settlement/> [↑](#footnote-ref-2)
2. 42 fines of over $500 million were imposed, the earliest in 2002, but only 4 were imposed till 2008 – all the rest which is over 90% of the fines, were imposed later than 2008. 167 fines of over $100 M have been imposed, only one before 2001. [↑](#footnote-ref-3)
3. Corporate Prosecution Registry, https://corporate-prosecution-registry.com/browse/ [↑](#footnote-ref-4)
4. This includes Bank of America’s settlement with both the Federal Housing Finance Agency and Fannie Mae. [↑](#footnote-ref-5)
5. U.S. Department of Justice, *Press Release: Dequtsche Bank Agrees to Pay $7.2 Billion for Misleading Investors in its Sale of Residential Mortgage-Backed Securities*, Jan. 17, 2017, <https://www.justice.gov/opa/pr/deutsche-bank-agrees-pay-72-billion-misleading-investors-its-sale-residential-mortgage-backed>. It should be noted that not the whole sum would be paid to the U.S. government – $4.1 billion were imposed as a relief fund for distressed borrowers and other affected communities [↑](#footnote-ref-6)
6. The book value of Deutsche Bank in Q4 2016, right before the imposition of the fine was $68.2 billion. [↑](#footnote-ref-7)
7. [↑](#footnote-ref-8)
8. הפניה שליח על שורטרמיזים ולונגטרמיסים, מניעים של מנהלים [↑](#footnote-ref-9)
9. מאמר ביצועי מניות ושכר [↑](#footnote-ref-10)
10. To wit, once a company disclose an initial monetary assessment regarding an expected fine, i.e., a probable fine —it must create (accrue) a financial provision, and according to generally accepted accounting principles recognize that amount as an immediate expense in its profit and loss statement; thus, affect the company’s earnings-per-share parameter (EPS). Once a company facing criminal accusation already recognized a loss, that loss may become the starting point, so-called ‘the floor,’ for the company’s negotiations with the federal agency. At the same time, a low starting position, i.e., a low floor, is likely to lead to a lower final settlement and save the company millions of dollars. Thus, the company’s management has a very strong incentive to disclose the lowest estimation possible (if at all). More so, according to GAAP, if the final fine is lower than the provision accrued during the investigation, then the company will recognize an immediate profit resulting from the settlement. Thus, driveaway the DOJ from settling a case where the company be depicted as obtained a profit from rather then deterred. [↑](#footnote-ref-11)
11. ספרות על earnings management [↑](#footnote-ref-12)
12. מה זה EM [↑](#footnote-ref-13)
13. מחקר על meet or beat [↑](#footnote-ref-14)
14. שורטרמיזים [↑](#footnote-ref-15)
15. כנ"ל [↑](#footnote-ref-16)
16. Infra [↑](#footnote-ref-17)
17. [↑](#footnote-ref-18)
18. Gap in the gaap [↑](#footnote-ref-19)
19. [↑](#footnote-ref-20)
20. by examining the annual reports in the interim between the period the investigation goes public and the decision regarding the fine. A systematic gap between the assessment and the fine in which the former is lower than the latter will indicate a systematic under-reporting problem regarding fines of federal agencies. [↑](#footnote-ref-21)
21. The Corporate Prosecution Registry is a joint project of the Legal Data Lab at the University of Virginia School of Law and Duke University School of Law. The goal of this Corporate Prosecution Registry is to provide comprehensive and up-to-date information on federal organizational prosecutions in the United States. The Registry, available at <https://corporate-prosecution-registry.com/>, contains more than 2,500 documents related to corporate plea agreements, many of them previously hard to find or once shielded from the public eye. (<https://www.law.virginia.edu/news/201706/%E2%80%98go-resource%E2%80%99-researching-corporate-prosecution-just-got-more-powerful>). [↑](#footnote-ref-22)
22. הפניה למקור הביטוי [↑](#footnote-ref-23)
23. [↑](#footnote-ref-24)
24. [↑](#footnote-ref-25)
25. [↑](#footnote-ref-26)
26. See also Gideon Parchomovsky & Zohar Goshen, *The Essential Role of Securities Regulation,* 55 Duke L. J. 711, (2006) (arguing that in order to reach the objective of appropriate pricing, one does not have to protect all investors, but serve the interest of key investors who are “information traders”). [↑](#footnote-ref-27)
27. *See, e.g.,* Ronald Gilson & Reinier R. Kraakman, *The Mechanism of Market Efficiency*, 70 Va. L. Rev. 549 (1984). Public markets have an additional function – supplying liquidity, but which is based on the prerequisite of accurate pricing. [↑](#footnote-ref-28)
28. Wallace N. Davidson et al., *Stock Market Reaction to Announced Corporate Illegalities*, J. Bus. Ethics 979 (1994); Wallace N. Davidson & Dan L. Worrell, *The Impact of Announcement of Corporate Illegalities on Shareholder Returns*, 31 Ac. Mgmt. J. 195 (1988) [↑](#footnote-ref-29)
29. Jonathan M. Karpoff & Jonh R. Lott Jr., *The Reputational Penalty Firms Bear from Committing Criminal Fraud*, 36 J. L. & Econ. 757 (1993) [↑](#footnote-ref-30)
30. Jonathan M. Karpoff et al., *The Reputational Penalties for Environmental Violations: Empirical Evidence*, 48 J. L. & Econ. 653, 654 (2005). [↑](#footnote-ref-31)
31. D. L. Murphy et al., *Understanding the Penalties Associated with Corporate Misconduct: An Empirical Examination of Earnings and Risk*, 44 J. Fin. & Quan. Anal. 55 (2009). [↑](#footnote-ref-32)
32. John Armour et al., *Regulatory Sanctions and Reputational Damage in Financial Markets*, J. Fin. & Quan. Anal. 1430 (2017). [↑](#footnote-ref-33)
33. Id. at 1431. [↑](#footnote-ref-34)
34. Cindy R. Alexander & Mark A. Cohen, *The Evolution of Corporate Criminal Settlements: An Empirical Perspective on Non-Prosecution, Deferred Prosecution and Plea Agreements*, 52 Am. Crim. L. Rev. 533, 543 (2015) (noting that 95% of criminal sanctions were imposed through settlements). The number have not change much since their study – according to the U.S. Sentencing Commission, in 202 91.8% of sanctions were imposred through settlements. *See*

    U.S. Sentencing Commission, *2022 Annual Report and Sourcebook of Federal Sentencing Statistics*, https://www.ussc.gov/sites/default/files/pdf/research-and-publications/annual-reports-and-sourcebooks/2022/2022-Annual-Report-and-Sourcebook.pdf [↑](#footnote-ref-35)
35. [↑](#footnote-ref-36)
36. [↑](#footnote-ref-37)
37. [↑](#footnote-ref-38)
38. [↑](#footnote-ref-39)
39. [↑](#footnote-ref-40)
40. Id. (the reason the number of companies with fines over $100 million is much higher than those we have in the study, is that we have limited the study to companies which are traded in U.S. stock markets so we can examine their reports. Manyu fines have been leveid on foreign companies which their stock are not traded in U.S. or U.S. private companies). [↑](#footnote-ref-41)
41. *See, e.g.,* [*https://www.sec.gov/litigation/admin/2021/33-10967.pdf*](https://www.sec.gov/litigation/admin/2021/33-10967.pdf)(“Section 13(a) of the Exchange Act requires issuers to file such periodic and other reports as the Commission may prescribe and in conformity with such rules as the Commission may promulgate. Exchange Act Rules 13a-1, 13a-11, and 13a-13 require issuers with securities registered under Section 12 of the Exchange Act to file annual, current, and quarterly reports, respectively. The obligation to file such reports embodies the requirement that they be true and correct. See, e.g., SEC v. Savoy Indus., Inc., 587 F.2d 1149, 1165 (D.C. Cir. 1978), cert. denied, 440 U.S. 913 (1979). In addition to the information expressly required to be included in such reports, Rule 12b-20 of the Exchange Act requires issuers to add such further material information, if any, as may be necessary to make the required statements, in the light of the circumstances under which they are made, not misleading. A violation of these reporting provisions does not require scienter. See SEC v. Wills, 472 F. Supp. 1250, 1268 (D.D.C. 1978). 46. Section 13(b)(2)(A) of the Exchange Act requires Section 12 registrants to make and keep books, records, and accounts that accurately and fairly reflect the transactions and dispositions of their assets. Section 13(b)(2)(B) of the Exchange Act requires all reporting companies, among other things, to devise and maintain a system of internal accounting controls sufficient to provide reasonable assurances that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP. Scienter is not an element of the books-and-records and internal accounting controls provisions. See Ponce v. SEC, 345 F.3d 722, 737 n.10 (9th Cir. 2003) (noting that a “plain reading of Section 13(b) reveals that it also does not 11 impose a scienter requirement.”). Also, Exchange Act Rule 13a-15(a) requires issuers to maintain internal control over financial reporting. 47. Rule 13b2-1 prohibits any person from directly or indirectly falsifying or causing to be falsified, any book, record, or account subject to Section 13(b)(2)(A).”) [↑](#footnote-ref-42)
42. ASC 450-20-20 [↑](#footnote-ref-43)
43. *See, e.g.,* PwC*, 23.4 Contingencies Publication,* Pwc.com(30 Apr., 2022)[*https://viewpoint.pwc.com/dt/us/en/pwc/accounting\_guides/financial\_statement\_/financial\_statement\_\_\_18\_US/chapter\_23\_commitmen\_US/234\_contingencies\_US.html*](https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_23_commitmen_US/234_contingencies_US.html) [↑](#footnote-ref-44)
44. ASC 450-20-05-3; *see also Y. Accounting and Disclosures Relating to Loss Contingencies,* Sec.gov(“he staff believes that product and environmental remediation liabilities typically are of such significance that detailed disclosures regarding the judgments and assumptions underlying the recognition and measurement of the liabilities are necessary to prevent the financial statements from being misleading and to inform readers fully regarding the range of reasonably possible outcomes that could have a material effect on the registrant’s financial condition, results of operations, or liquidity.”) <https://www.sec.gov/oca/sab-code-t5#Y> [↑](#footnote-ref-45)
45. הפניה למכתב אכיפה אם יש [↑](#footnote-ref-46)
46. ASC 450-20-50-4(b) [↑](#footnote-ref-47)
47. See ASC 450-20-50-1 (FASB recommends that reporting entities use terms such as “estimated liability” or “a liability of an estimated amount” in describing the nature of the accrual. The term “reserve” should not be used); 450-20-05-8 (“Accrual of a loss related to a [contingency](https://asc.fasb.org/1943274/1793651/fasb-asc-publication/contingency) does not create or set aside funds to lessen the possible financial impact of a loss. Confusion exists between accounting accruals (sometimes referred to as accounting reserves) and the reseradving or setting aside of specific assets to be used for a particular purpose or contingency. Accounting accruals are simply a method of allocating costs among accounting periods and have no effect on an entity's cash flow.”) [↑](#footnote-ref-48)
48. PwC*, 23.4 Contingencies Publication,* Pwc.com(30 Apr., 2022)[*https://viewpoint.pwc.com/dt/us/en/pwc/accounting\_guides/financial\_statement\_/financial\_statement\_\_\_18\_US/chapter\_23\_commitmen\_US/234\_contingencies\_US.html*](https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_23_commitmen_US/234_contingencies_US.html) [↑](#footnote-ref-49)
49. PwC*, 23.4 Contingencies Publication,* Pwc.com(30 Apr., 2022)[*https://viewpoint.pwc.com/dt/us/en/pwc/accounting\_guides/financial\_statement\_/financial\_statement\_\_\_18\_US/chapter\_23\_commitmen\_US/234\_contingencies\_US.html*](https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_23_commitmen_US/234_contingencies_US.html) [↑](#footnote-ref-50)
50. "Materiality” refers to the importance or significance of information in influencing the decisions of users of financial statements. In general, companies are required to disclose information about a contingency (and other matters) only if the information is material. XXX [↑](#footnote-ref-51)
51. *See* PwC*, 23.4 Contingencies Publication,* Pwc.com(30 Apr., 2022)[*https://viewpoint.pwc.com/dt/us/en/pwc/accounting\_guides/financial\_statement\_/financial\_statement\_\_\_18\_US/chapter\_23\_commitmen\_US/234\_contingencies\_US.html*](https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_23_commitmen_US/234_contingencies_US.html)*,* At 23.4.1.1 [↑](#footnote-ref-52)
52. ASC 450-20-20 [↑](#footnote-ref-53)
53. PwC*, 23.4 Contingencies Publication,* Pwc.com(30 Apr., 2022) [↑](#footnote-ref-54)
54. *Supra* note 12. [↑](#footnote-ref-55)
55. 450-20-50-1 ("Disclosure of the nature of an accrual made pursuant to the provisions of paragraph 450-20-25-2, and in some circumstances the amount accrued, may be necessary for the financial statements not to be misleading.") [↑](#footnote-ref-56)
56. 450-20-25-2(b) [↑](#footnote-ref-57)
57. 450-20-25-5 [↑](#footnote-ref-58)
58. ASC 450-20-30-1 [↑](#footnote-ref-59)
59. ASC 450-20-30-1 (“Even though the minimum amount in the range is not necessarily the amount of loss that will be ultimately determined, it is not likely that the ultimate loss will be less than the minimum amount.”) [↑](#footnote-ref-60)
60. ASC 450-20-50-5, [↑](#footnote-ref-61)
61. *See* PwC*, 23.4 Contingencies Publication,* Pwc.com(30 Apr., 2022)[*https://viewpoint.pwc.com/dt/us/en/pwc/accounting\_guides/financial\_statement\_/financial\_statement\_\_\_18\_US/chapter\_23\_commitmen\_US/234\_contingencies\_US.html*](https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_23_commitmen_US/234_contingencies_US.html)*,* At 23.4.1.2 [↑](#footnote-ref-62)
62. 450-20-50-3 & 450-20-50-4 [↑](#footnote-ref-63)
63. *See* PwC*, 23.4 Contingencies Publication,* Pwc.com(30 Apr., 2022)[*https://viewpoint.pwc.com/dt/us/en/pwc/accounting\_guides/financial\_statement\_/financial\_statement\_\_\_18\_US/chapter\_23\_commitmen\_US/234\_contingencies\_US.html*](https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_23_commitmen_US/234_contingencies_US.html)*,* At 23.4.1.2 [↑](#footnote-ref-64)
64. ASC 450-20-50-1 ("Disclosure of the nature of an accrual made pursuant to the provisions of paragraph 450-20-25-2, and in some circumstances the amount accrued, may be necessary for the financial statements not to be misleading. Terminology used shall be descriptive of the nature of the accrual, such as estimated liability or liability of an estimated amount.") [↑](#footnote-ref-65)
65. *See* ASC 450-20-50-6 (“disclosure is not required of a loss contingency involving an unasserted claim or assessment if there has been no manifestation by a potential claimant of an awareness of a possible claim or assessment unless both of the following conditions are met: a. It is considered probable that a claim will be asserted. b. There is a reasonable possibility that the outcome will be unfavorable.”); *See* PwC*, 23.4 Contingencies Publication,* Pwc.com(30 Apr., 2022)[*https://viewpoint.pwc.com/dt/us/en/pwc/accounting\_guides/financial\_statement\_/financial\_statement\_\_\_18\_US/chapter\_23\_commitmen\_US/234\_contingencies\_US.html*](https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_23_commitmen_US/234_contingencies_US.html)*,* At 23.4.1.3 [↑](#footnote-ref-66)
66. *See* PwC*, 23.4 Contingencies Publication,* Pwc.com(30 Apr., 2022)[*https://viewpoint.pwc.com/dt/us/en/pwc/accounting\_guides/financial\_statement\_/financial\_statement\_\_\_18\_US/chapter\_23\_commitmen\_US/234\_contingencies\_US.html*](https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_23_commitmen_US/234_contingencies_US.html)*,* At 23.4.1.3 [↑](#footnote-ref-67)
67. *See, e.g.,* Tory Newmyer, “Bank of America to pay $250M in refunds, fines over customer practices,” *The Washington Post,* (July 11, 2023)(reporting Bank of America will pay more than $250 million in refunds and fines after the company systematically overcharged customers, withheld promised bonuses and opened accounts without customer approval.) <https://www.washingtonpost.com/business/2023/07/11/bank-of-america-settlement/> [↑](#footnote-ref-68)
68. ASC 450-20-20 [↑](#footnote-ref-69)
69. *Supra* note {450-20-50-1 ("Disclosure of the nature of an accrual made pursuant to the provisions of paragraph 450-20-25-2, and in some circumstances the amount accrued, may be necessary for the financial statements not to be misleading.") [↑](#footnote-ref-70)
70. *Supra* note 12. [↑](#footnote-ref-71)
71. PWC Viewpoint, *Contingencies* (30 Nov. 2021), <https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_23_commitmen_US/234_contingencies_US.html>. For example, the S.E.C. has charged Healthcare Services Group for failing to accurately report loss contingencies related to litigation settlements for which there was mounting evidence that the liability was probably and reasonably estimable. It has imposed a $6 million on the company for failing to report. *See* U.S. Securities and Exchange Commission, *SEC Charges Healthcare Services Company and CFO for Failing to Accurately Report Loss Contingencies as part of Continuing EPS Initiative* (Aug. 24 2021), https://www.sec.gov/news/press-release/2021-162. [↑](#footnote-ref-72)
72. [↑](#footnote-ref-73)
73. Jessica Everett-Gracia, *Top 10 Issues to Consider When You are Sued: Issue #8: Disclosing Litigation and Reserving for Litigation Losses*, Perkins Coie (April 11, 2007), https://www.jdsupra.com/post/contentViewerEmbed.aspx?fid=9fb16a5c-8bde-444a-9e36-065e83fc388e. [↑](#footnote-ref-74)
74. Id. [↑](#footnote-ref-75)
75. Muktita Suhartono & Austin Ramzy, *Indonesian Report on Lion Air CrashFinds Numerous Problems*, NY Times, Oct. 25, 2019, https://www.nytimes.com/2019/10/25/world/asia/lion-air-crash-report.html. [↑](#footnote-ref-76)
76. Natalie Kitroeff et al., *Ethiopian Crash Report Indicates Pilots Followed Boeing’s Emergency Procedures*, NY Times, April 4, 2019, https://www.nytimes.com/2019/04/04/business/boeing-737-ethiopian-airlines.html. [↑](#footnote-ref-77)
77. U.S. Department of Justice, *Boeing Charged with 737 Max Fraud Conspiracy and Agrees to Pay Over $2.5 Billion*, Jan. 7 2021. <https://www.justice.gov/opa/pr/boeing-charged-737-max-fraud-conspiracy-and-agrees-pay-over-25-billion> (“misleading statements, half-truths, and omissions communicated by Boeing employees to the FAA impeded the government’s ability to ensure the safety of the flying public”). [↑](#footnote-ref-78)
78. *See supra* note 87 [↑](#footnote-ref-79)
79. *See supra* notes 86-90 and accompanying text. [↑](#footnote-ref-80)
80. [↑](#footnote-ref-81)
81. [↑](#footnote-ref-82)
82. *See infra* part IV.3. [↑](#footnote-ref-83)
83. PWC—Contingencies Publication, *supra*, note 40 [↑](#footnote-ref-84)
84. *Id.* [↑](#footnote-ref-85)
85. *Supra* note 28. [↑](#footnote-ref-86)
86. Deutche received two fines, one in 2010 and another in 2015. Also Lloyds received to fines, one in 2009 and the other in 2014 and also Credit Suiss received two fines—in 2009 and 2014. [↑](#footnote-ref-87)
87. There are two reasons for focusing on fines impose on companies in the context of a criminal prosecution. First, it is a comprehensive database. Second, it strengthens the assumption that the fine was probable, or reasonably probable. The evidentiary requirement for criminal prosecution are much higher and thus such prosecution is executed only when there is a firm ground. It is much rarer that a criminal prosecution will end up with no consequences than ordinary administrative investigations. *See supra* note 84. [↑](#footnote-ref-88)
88. Id. All in all there all 164 companies on which fines of over 100 million dollar was levied, when not limiting to companies whose share is traded on U.S. markets. [↑](#footnote-ref-89)
89. The “Years Involved” represents the range of years from the earliest to the latest fine year in the dataset. The “Mean Final Fine"” is calculated to consider all cases in the study. The “Standard Deviation” measures of the variability or dispersion of the final fines from the mean. [↑](#footnote-ref-90)
90. *Supra* note *{*450-20-50-1 ("Disclosure of the nature of an accrual made pursuant to the provisions of paragraph 450-20-25-2, and in some circumstances the amount accrued, may be necessary for the financial statements not to be misleading.")} [↑](#footnote-ref-91)
91. *See* PwC*, 23.4 Contingencies Publication,* Pwc.com(30 Apr., 2022)[*https://viewpoint.pwc.com/dt/us/en/pwc/accounting\_guides/financial\_statement\_/financial\_statement\_\_\_18\_US/chapter\_23\_commitmen\_US/234\_contingencies\_US.html*](https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_23_commitmen_US/234_contingencies_US.html)*,* At 23.4.1.2 (“The SEC staff also cautions reporting entities that the recording of a material accrual for a contingent liability should typically not be the first disclosure regarding the material contingency. A foreshadowing disclosure that precedes an accrual for a material contingent liability is typically expected.”) [↑](#footnote-ref-92)
92. In our analysis we treat these cases as a disclosure of an expected outcome of zero expense due to the criminal procedures the company faces. [↑](#footnote-ref-93)
93. The company filed its 2019 K-10 on January 31, 2020, *see*  [↑](#footnote-ref-94)
94. <https://www.justice.gov/opa/pr/boeing-charged-737-max-fraud-conspiracy-and-agrees-pay-over-25-billion> (January 7, 2021) [↑](#footnote-ref-95)
95. <https://www.sec.gov/Archives/edgar/data/12927/000001292720000014/a201912dec3110k.htm> page 111 [↑](#footnote-ref-96)
96. Regarding additional limitations which bar private securities litigation see Coffee and Shapira &Eckstein *supra*  note XXX(183). [↑](#footnote-ref-97)
97. We use a one tailed t-test to test the difference between average assessment and the average fine (mean(diff) > 0).

    The t-test helps determine if the observed difference is likely due to chance or if it represents a true difference between the assessments disclosed and the actual fines. A significant result suggests that the average assessment and average fine are unlikely to have occurred by random chance alone, indicating a meaningful distinction between the assessment disclosed and the actual fine. [↑](#footnote-ref-98)
98. [↑](#footnote-ref-99)
99. [↑](#footnote-ref-100)
100. [↑](#footnote-ref-101)
101. *See supra*, notes 1-2 [↑](#footnote-ref-102)
102. *See supra* note [↑](#footnote-ref-103)
103. [↑](#footnote-ref-104)
104. [↑](#footnote-ref-105)
105. Such analysts can assess the expected fine based on the information provided by the federal agency publicly investigating the company and analogies to similar cases, and do not need the assessment of the company. [↑](#footnote-ref-106)
106. For an analysis of the methodology of share price event studies, see Sanjai Bhagat & Roberta Romano, *Event Studies and the Law: Part I: Technique and Corporate Litigation*, 4 Am. L. & Econ. Rev. 141 (2002) [↑](#footnote-ref-107)
107. *Id*. at 143. [↑](#footnote-ref-108)
108. *Id*. [↑](#footnote-ref-109)
109. *Id*. at 144-45. Bhagat and Romano hold the view that cases in which there is an indication of leakage (i.e. Google search that reveals that the event was discussed before the time window in which it actually occurred) cannot be examined through an even study methodology and should be discarded from the data. [↑](#footnote-ref-110)
110. For example, in the case of Volkswagen’s sanction of 14 Billion that was signed on June 27 and announced on June 28. *See* FTC v. Volkswagen Group of America, Inc., No. 3:16-cv-1534 (N.D. Cal), Partial Stipulated Order for Permanent Injunction and Monetary Judgement, June 27 2016, <https://www.ftc.gov/system/files?file=documents/cases/proposed_partial_stipulated_order_filed_copy_0.pdf> (the signed agreement regarding the fine), *see also* Federal Trade Commission, Press Release: Volkswagen to Spend up to $14.7 Billion to Settle Allegations of Cheating Emission Tests an Deceiving Customers on 2.0. Liter Diesel Vehicles, June 28, 2016, <https://www.ftc.gov/news-events/news/press-releases/2016/06/volkswagen-spend-147-billion-settle-allegations-cheating-emissions-tests-deceiving-customers-20>. Yet one week before the press release of the FTC ( and DOJ), information was published regarding Volkswagen agreement to pay over 10 billion dollars, *see* Matthew DeBord and Reuter, VW has struck a deal over its emissions-cheating scandal, and it could cost over $10 billion, Business Insider, April 21, 2016, https://www.businessinsider.com/volkswagen-dieselgate-deal-2016-4. [↑](#footnote-ref-111)
111. ישראל [↑](#footnote-ref-112)
112. U.S. Department of Justice, *Press Release: Boeing Charged with 737 Max Fraud Conspiracy and Agrees to Pay over $2.5 Billion*, January 7, 2021, https://www.justice.gov/opa/pr/boeing-charged-737-max-fraud-conspiracy-and-agrees-pay-over-25-billion [↑](#footnote-ref-113)
113. Boeing Inc., *Quarterly Report on from 10-Q*, Q3 2021, 25, https://www.sec.gov/ix?doc=/Archives/edgar/data/12927/000001292720000076/ba-20200930.htm. [↑](#footnote-ref-114)
114. Yahoo Finance, *The Boeing Company – historical data*, https://finance.yahoo.com/quote/%5EGSPC/history?period1=1609804800&period2=1611014400&interval=1d&filter=history&frequency=1d&includeAdjustedClose=true [↑](#footnote-ref-115)
115. Yahoo Finance, *SP 500 – historical data,* https://finance.yahoo.com/quote/%5EGSPC/history?period1=1609804800&period2=1611014400&interval=1d&filter=history&frequency=1d&includeAdjustedClose=true [↑](#footnote-ref-116)
116. The word “may” should be emphasized here – this is only anecdotal data, there may be various factors that have caused such drop in the share price of Boeing. Only the examination of a large set of companies with underreporting demonstrate a statistically significant relationship between under-reporting and a drop in the share price. The problem with such examination is that nothing can necessarily be inferred from [↑](#footnote-ref-117)
117. U.S. Department of Justice, *Press Release*: *Deutsche bank’s London Subsidiary Agrees to Plead Guilty in Connection with Long-Running Manipulation of LIBOR,* April 23, 2015, <https://www.justice.gov/opa/pr/deutsche-banks-london-subsidiary-agrees-plead-guilty-connection-long-running-manipulation> ( the direct fine imposed by the DOJ was $775 million but the agreement included $344 to the U.K. Financial Conduct Authority, $800 to the Commodity Futures Trading Commission and $600 to the New York Department of Financial Services). [↑](#footnote-ref-118)
118. Deutsche Bank Aktiengesellschaft, *Form F-20*, 2014, 24 https://www.sec.gov/Archives/edgar/data/1159508/000119312515099988/d889901d20f.htm#tx889901\_58 (which is the last report of the company before the imposition of the fine – the first quarter earning have been reported after the imposition of the fine). [↑](#footnote-ref-119)
119. Yahoo Finance, *Deutsche bank Aktiengesellschaft – historical data*, <https://finance.yahoo.com/quote/DB/history?period1=1428883200&period2=1429315200&interval=1d&filter=history&frequency=1d&includeAdjustedClose=true>. (a day later there has been an additional drop of an additional 2.8% totaling a decline of 5.5% in the two-day window after the announcement. [↑](#footnote-ref-120)
120. Yahoo Finance, *S&P 500 – historical data*, <https://finance.yahoo.com/quote/%5EGSPC/history?period1=1428969600&period2=1429401600&interval=1d&filter=history&frequency=1d&includeAdjustedClose=true> (the S&P 500 has declined by a mere 0.08% in the same day). [↑](#footnote-ref-121)
121. [↑](#footnote-ref-122)
122. Federal Trade Commission, *FTC Imposes $5 Billion Penalty and Sweeping New Privacy Restrictions on Facebook*, July 24, 2019 , https://www.ftc.gov/news-events/news/press-releases/2019/07/ftc-imposes-5-billion-penalty-sweeping-new-privacy-restrictions-facebook. [↑](#footnote-ref-123)
123. Facebook Inc, Form 10-Q., Q1 2019, 21, https://www.sec.gov/Archives/edgar/data/1326801/000132680119000037/fb-03312019x10q.htm#s7F37F25A974F5CF28CE46BFED89B499C. [↑](#footnote-ref-124)
124. Yahoo Finance, *Meta Platforms, Inc. – historical data*, https://finance.yahoo.com/quote/META/history?period1=1563753600&period2=1564185600&interval=1d&filter=history&frequency=1d&includeAdjustedClose=true. [↑](#footnote-ref-125)
125. Yahoo Finance, *S&P 500 – historical data*, <https://finance.yahoo.com/quote/%5EGSPC/history?period1=1428969600&period2=1429401600&interval=1d&filter=history&frequency=1d&includeAdjustedClose=true>. (the drop in Facebook exceeded significantly the decline in the market by 1.4 %). [↑](#footnote-ref-126)
126. Boris Groysberg et al., *Compensation Packages that Actually Drive Performance*, Harv. Bus. Rev., Jan.-Feb. 2021, <https://hbr.org/2021/01/compensation-packages-that-acrtually-drive-performance?registration=success>. [↑](#footnote-ref-127)
127. *Id*. (noting that the percentage of equity compensation is 63% in large cap companies and 48% in small-cap companies. 83% of the largest 250 companies in the S&P 500 use a formulaic annual incentive plan, in which the most common metrics are profits (used by 91%) and revenues (used by 49%). [↑](#footnote-ref-128)
128. Keith J. Crocker & Joel Slemrod, *The Economics of Earnings Manipualtion and Managerial Compensation*, 38 Rand J. Econ. 698, 699-670 (surveying the various mechanisms through which managers manage earnings to maximize their pay). [↑](#footnote-ref-129)
129. The Efficient market hypothesis is that share prices reflect all information relevant to the valuation of the company, both private and public information. For survey and evidence of scholars that have rejected the efficient market hypothesis, *see* Alexandra Gabriela Titan, 32 Procedia Econ. & Fin. 442, 443-44 (2015). [↑](#footnote-ref-130)
130. An additional scenario in which managers may prefer postponing disclosure and recognition to 2023 is one in which managers expect 2023’s earnings to be much below the earnings threshold and thus would not receive the bonus anyway. [↑](#footnote-ref-131)
131. Dorothy S. Lund & Natasha Sarin, *Corporate Crime and Punishment: An Empirical Study*, 100 Tex. L. Rev. 285, 289-290 (2021) (finding an increase in the Suspicious Activity Report of leading enforcement agencies, in consumer complaints made to the Consumer Financial Protection Bureau and whisleblower complaints made to the SEC between 2015-2019, all indicating an increase in corporate wrongdoing); Samuel W. Buell, The Responsibility Gap in Corporate Crime, 12 Crim L. & Phi. 471, 475 (2018) (argues that the utilization of criminal law to deter corporat wrongdoing compromises the principles of wrongdoing). [↑](#footnote-ref-132)
132. See Jed Rackoff (Senior Judge of the U.S. District Court for the Southern District of New York), *The Financial Crisis: Why Have No High-Level Executives Been Prosecuted?*, N.Y. Rev. Books, Jan. 9, 2014 at 4,4, <https://www.nybooks.com/articles/2014/01/09/financial-crisis-why-no-executive-prosecutions/#:~:text=The%20reasons%20were%20obvious.,shareholders%20who%20were%20totally%20innocent>.; Brandon L. Garrett, *The Rise of Bank Prosecutions*, 126 Yale L. J. F.22 (2016) (summarizing how federal judges asked why so few prosecutions were brought against large financial institutions) [↑](#footnote-ref-133)
133. Jesse Eisinger, The Chikenshit Club: Why the Justice Department Fails to Prosecute Executives, at xnii (2017) (noting that the Justice Department has lost its will to prosecute top-executives corporate wrogdoers for various reasons). [↑](#footnote-ref-134)
134. Jennifer Arlen, *Corporate Criminal Liability: Theory and Evidence*, in Research Handbook on the Economics of Criminal Law, 144, 170-71 (Alon Harel & Keith N. Hylton eds., 2012) (arguing that corporate liability alone will not deter crime by employees); Barndon Garrett, The Corporate Criminal as Scapegoat, 101 Va. L. Rev. 1789, 1791 [↑](#footnote-ref-135)
135. Jennifer Arlen & Reinier Kraakman, *Controlling Corporate Misconduct: An Analysis of Corporae Liability Regimes*, 72 N.Y.U.L. Rev. 687, 700 (arguing that even though shareholder bare the price of the fine, they do not have the tools to make executives fully accountable for their wrongdoing that has generated the loss). [↑](#footnote-ref-136)
136. The first to introduce celerity as one of the parameters of deterrence was Cesare Beccaria, On Crime and Punishment (1986) XiX. [↑](#footnote-ref-137)
137. *Id.* The connection between celerity and deterrence was based on the Enlightenment psychology of associationists such as John Locke, David Hume and David Hartley. Associationism assert that temporal proximity established the psychological notion of a causal relationship between two events (*id)*. [↑](#footnote-ref-138)
138. George Loewenstein & Richard H. Thaler, *Anomalies: Intemporal Choice*, J. Econ. Perspectives, Fall 1989, 181, 182-3; [↑](#footnote-ref-139)
139. It should be noted, that even without hyperbolic discounting, a sanction in the present is ‘costlier’ that a sanction in the future, due to the more conventional discounted utility model of Paul Samuelson that discounts utility or disutility in the future. Hyperbolic discount theory that changes the discount rate for events that are temporally close, exacerbates this effect. See Paul Samuelson, *A Note of Measurement of Utility*, 4 Rev. Econ. Stud. 155 (1937). An example for how conventional economic exponential discounting, could justify a firm’s wrongdoing, *see* Roy Shapira & Luigi Zingales*, Is Pollution Value-Maximizing? The Dupont Case,* NBER working paper no. 23866, Sep. 2017, 2-3 <https://www.nber.org/papers/w23866> (demonstrating that from a cost-benefit perspective the decision to use the hazardous C8 for manufacturing Teflon was profitable even given the size of the sanction that was eventually imposed, due to the low value of the sanction imposed in 2017 when discounted to dollar value in 1984 when Dupont started the manufacturing process).Regarding the contrast between hyperbolic discounting and the conventional economic exponential discounting, *see* Christine Jolls, Cass Sunstein & Richard Thaler, *A Behavioral Approach to Law & Economics*, 50 Stan. L. Rev. 1471, 1539-40 (1998). [↑](#footnote-ref-140)
140. Jarome S. Legge & Joonghoon Park, *Policies to Reduce Alcohol-Impaired Driving: Evaluating Elements of Deterrence*, 75 Soc. Sci. Q. 594 (1994). While some studies have raised doubts regarding the actual effectiveness of celerity on deterrence, their findings on the opposite effect of celerity were found only in the context of non-financial fines, *See* D. S. Nagin & G. Pogarsky, *Time and Punishment: Delayed Consequences and Criminal Behavior*, 20 J. Quantitative Criminology, 294 (2004) (found higher discounting to be associated with property crimes (shoplifting, car theft and burglary) but not violent crimes (threaten, public disturbance and group fight); C. R. Harris, *Feelings of Dread and Intertemporal Choice,* 25 J. Behavioral Decision Making 13 (2012) Chae M. Jaynes & Theodore Wilson, *Dreading Delayed Punishment: Reconceptualizing Sanction Celerity*, 45 J. Crime & Justice 285, 299 (2022) (finding a statistically significant preference for immediate sanctions, only for non-financial sanctions such as probation or community service). The phenomenon that in some cases, there may be a preference for immediate sanction, was first found by George Loewenstein, *Anticipation and the Value of Delayed Consumption*, 97 Econ. J. 666 (1987). The central explanation for such finding is the concept of dread – in some sanctions, especially in physical sanctions, the individual incurs disutility from the waiting for the sanction because the felling of dread, and thus prefers just “to get over with it.” See Jaynes& Wilson, *id* at 287. [↑](#footnote-ref-141)
141. Manuel A. Utset, *Corporate Actors Corporate Crimes and Time-Inconsistent Preferences*, 1 Va. J. Crim. L. 265, 320-24 (2013) (Claiming that dealing with the timing inconsistency and the disproportionate impact of immediate fines was one of the central objectives of both Sarbanes-Oxley and Dodd-Frank). [↑](#footnote-ref-142)
142. Rebecca Hollander-Blumoff, *Crime, Punishment and the Psychology of Self-Control*, 61 Emory L. J. 501, 529-33 (2012) [↑](#footnote-ref-143)
143. Miriam Baer, *Confronting the Two Faces of Corporate Fraud,* 66 Fla. L. Rev. 87, 110-112 (2014). [↑](#footnote-ref-144)
144. *Regarding the efficacy of speed bumps in curtailing wrongdoing and how the idea behind speed bumps should be extended to other legal areas, see: Leandra Lederman, Statutory Speed Bumps: The Role of Third Parties Play in Tax Compliance, 60* Stan*.* L. Rev. 695, 696 (2007). [↑](#footnote-ref-145)
145. License suspensions, which have also been proven to be an effective sanction in curtailing wrongdoing also inhibit the same feature, and their efficacy compared to years in prison for drunk driving, may also be explained by their ‘symbolic’ significance—the fact that the driver has to think of practical matters—how would he get home if his license is suspended, and turn the negative impact of the wrongdoing to something concrete. [↑](#footnote-ref-146)
146. [↑](#footnote-ref-147)
147. *See* PwC*, 23.4 Contingencies Publication,* Pwc.com(30 Apr., 2022)[*https://viewpoint.pwc.com/dt/us/en/pwc/accounting\_guides/financial\_statement\_/financial\_statement\_\_\_18\_US/chapter\_23\_commitmen\_US/234\_contingencies\_US.html*](https://viewpoint.pwc.com/dt/us/en/pwc/accounting_guides/financial_statement_/financial_statement___18_US/chapter_23_commitmen_US/234_contingencies_US.html)*,* At 23.4.1.2 [↑](#footnote-ref-148)
148. Even out of the rest that have provided a specific estimation, in four them it doesn’t really seem as an estimation—the estimation was provided in the year before the announcement of the fine and the estimation was identical to the actual fine. It seems that in these companies the number provided does not reflect an estimation, but the actual decision of the agency which was informed to the company. It seems that in these companies the number provided does not reflect an estimation, but the actual decision of the agency which was informed to the company. Thus there are strong indications that in only 6 cases out of 51 there was a specific estimation for the fine of the federal agency. [↑](#footnote-ref-149)
149. See *In re Health Care Group*, *supra* note 63; *In re RPM*, *supra* note 85. [↑](#footnote-ref-150)
150. [↑](#footnote-ref-151)
151. Gap in the gap [↑](#footnote-ref-152)
152. *See*  [↑](#footnote-ref-153)
153. *See* [↑](#footnote-ref-154)
154. *See* Michael Y. Scudder & Andrew J. Fuchs, *Securities Litigation—Accounting for Litigation Contingencies*, Skadden Arps Insights, January 2017, https://www.skadden.com/-/media/files/publications/2017/01/accounting\_for\_litigation\_contingencies.pdf [↑](#footnote-ref-155)
155. S.E.C. v. RPM, supra note 85 [↑](#footnote-ref-156)
156. [↑](#footnote-ref-157)
157. <https://www.womblebonddickinson.com/us/insights/articles-and-briefings/doj-signals-expanded-use-independent-monitors-corporate-criminal> [↑](#footnote-ref-158)
158. Brando Garett, *Structual Reform Prosecution*, 93 V. L. Rev. 853, 946 (2007). [↑](#footnote-ref-159)
159. [↑](#footnote-ref-160)
160. [↑](#footnote-ref-161)
161. <https://www.womblebonddickinson.com/us/insights/articles-and-briefings/doj-signals-expanded-use-independent-monitors-corporate-criminal> [↑](#footnote-ref-162)
162. [↑](#footnote-ref-163)
163. [↑](#footnote-ref-164)
164. [↑](#footnote-ref-165)
165. [↑](#footnote-ref-166)