THE FAILING FIRM DEFENSE—AN EQUITY-BASED APPROACH

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“It is very difficult to predict—especially the future”.1

ABSTRACT

The failing firm defense allows parties to an anticompetitive merger one of whom is a financially distressed firm to defend the merger by proving that enjoining it may generate no better, perhaps even worse, effects on market competition if the financially distressed firm will liquidate and exit the market. The problem with the doctrine lies in antitrust regulators having to make highly uncertain predictions as to the state of competition in the market if the merger is allowed or enjoined. As a result, in practice, regulators are pushed to extremes, succumbing to either type I errors (enjoining mergers that should have been approved) or type II errors (approving mergers that should have been blocked). For example, in the United States, more than eighty years after its introduction into case-law, the doctrine is rarely invoked or accepted—a state of affairs suggesting the presence of type I errors.

The paper offers a novel approach that arguably could better minimize the costs of both types of errors combined. We argue that rather than merely approve or disapprove of the merger antitrust regulators should also consider a third possibility: approval of the merger under the condition that the State receive an equity stake in the merged entity in proportion to the actual post-merger decrease in market competition. The decrease in competition and the subsequent dilution of incumbent equity-holders in favor of the State is to be decided ex-post-facto by comparing the change in an agreed upon competition measure (for example, the Herfindahl-Hirschman Index, or even generally the market price) before and after the merger, even at several time intervals (to reverse the process, if necessary), and by translating such a change to an amount of (hypothetical) monetary compensation, to be paid by the issuance of equity-rights to the State. Such an approach transforms the ex-ante complex and uncertain regulatory decision transforms to a rather simple

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1 Words of the Danish physicist Niels Bohr, as quoted in Alan G. Mencher, On the Social Deployment of Science, 27 BULL. ATOMIC SCI 34 (December 1971), at 37.
ex-post measurement problem. In addition, the proposed solution also deters firms from post-merger exploitation of market power, allows the general public to be compensated for the actual lessening of competition caused by the merger and reduces the costs of administrating the regulatory process. It is an approach which also allows to consider the interests of stakeholders other than consumers in the relevant market (for example, employees and creditors of the financially distressed firm).
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1. INTRODUCTION

Merger policy aims at promoting mergers beneficial to society while enjoining those harmful to competition. Unfortunately, predicting the effects on market competition of any given merger is often a complex task, as not all mergers fall neatly into one category or another. In this context, how should antitrust regulators approach a horizontal merger to which one party is a financially-distressed firm?

Within the confines of the well-known “failing firm defense”, antitrust regulators worldwide are occasionally asked to approve of such mergers—between a financially-distressed firm and one of its actual or potential competitors in the relevant market. 2 The conventional assumption underlying the “failing firm defense”, introduced as early as 1930 by the United States Supreme Court in the case of International Shoe Co. v. FTC, 3 is that enjoining such an anticompetitive merger may nonetheless result in no better—and perhaps even worse—effects on market competition. It is feared that the financially-distressed firm, if not allowed to merge with its competitor, would end up in liquidation and exit the market, leaving the market no better—perhaps even less competitive—than if the merger was allowed. For example, evidence gathered from the American airline industry between 1995 and 2010 reveals that liquidations have led in that market to substantially larger and permanent price increases (of about 12%) than merger-related exits. 4 Thus, even ignoring distributional effects (e.g. harm to employees, creditors, and other stakeholders), allowing failing firms to merge with their competitors may be an improvement over the alternative.

Thus, in failing firm defense cases antitrust regulators, while not required to execute a general economic effects analysis (evaluating the effects of their decision on employment, or growth, for example), are nonetheless required to predict the effects of the merger on market competition, well before these effects can actually be measured. Making such a prediction presents a dilemma: on the one hand, approving the merger may regrettably lessen competition in the relevant market as a result of an increase in the market power of the merged entity. On the other hand, forbidding the merger may result in the financially-distressed firm exiting the market anyway, in a manner which may possibly result yet again in an increased market power of the remaining competitors.

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3 280 US 291 (1930).
Solving this dilemma compels antitrust regulators to make two difficult predictions. First, antitrust regulators are required to predict how approving the merger will affect market competition and market power of the firms involved. This includes the merging firms, as well as their competitors’ and suppliers’ reactions to the changing marketplace. Second, antitrust regulators are required to predict how forbidding the merger will affect the same players and markets, given the possibility of the failing firm exiting the market. In the latter context, regulators are required, at least implicitly, to evaluate the nature of the failure experienced by the failing firm—whether merely financial or also economic.\(^5\) Indeed, a reasonable assumption would be that financially-but-not-economic distressed assets would not exit the market even if the proposed merger is disallowed. The potential of such assets can reasonably be expected to be recognized by the market. Market competitors will buy them from the financially distressed firm. On the other hand, if the financially distressed assets are also economically distressed, enjoining the merger would most likely end in these assets exiting the market as part of the market’s screening process of inefficient assets and firms. Discerning between financial and economic distress is, needless to say, quite an elusive task.\(^6\)

Note, that a competition effects market analysis should consider not only the short run, in which an exit by the firm may bring about, for example, an increase in prices as a result of decreased competition; but also the medium and long run, during which entry-inducing effects are created.\(^7\) Errors are inevitable, as even occasional empirical work indicates.\(^8\)

Moreover, the antitrust regulators’ problem in dealing with the failing firm defense is exacerbated further by the inherent bias exhibited by the distressed firm’s stakeholders—particularly its creditors and its employees. These will almost always prefer the anticompetitive merger over other alternatives. The more detrimental the merger is to competition,

\(^5\) An *economically* distressed firm—unlike a firm that is only *financially* distressed—is characterized as a firm whose operating expenses exceed its operating revenues, thus inefficiently draining the economy. Assets of such a firm are more valuable if redeployed and put to some other use in the economy. See Michelle J. White, *Corporate Bankruptcy*, in 1 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 483, 486 (Peter Newman ed., 1998); Lemma W. Senbet & James K. Seward, *Financial Distress, Bankruptcy and Reorganization*, in 9 FINANCE – HANDBOOKS IN OPERATIONS RESEARCH AND MANAGEMENT 921-22 (R. A. Jarrow et al. eds., 1995).

\(^6\) White, *id.*, at 486-87.


the more the acquiring firm will be willing to pay, due to the ‘monopoly premium’ expected with the increase in market power.\(^9\)

Due to the uncertain nature of assumptions it needs to adopt in order to arrive at a decision, antitrust regulators seem to be pushed to extremes—to commit either type I errors (enjoining mergers that should have been approved) or type II errors (approving mergers that should have been blocked).\(^10\) In the United States, more than eighty years after it has first been articulated by the United States Supreme Court in the case of International Shoe v. FTC, the failing firm defense is rarely used, and even more rarely accepted\(^11\)—a state of affairs suggesting the existence of type I errors. Parties to such potential mergers seem to be unable to convince the Federal Trade Commission, the Department of Justice, or the courts, mostly, in the nonexistence of an alternative to the merger.\(^12\)

A similar state of affairs is reported for the European Union. Over the 20 years that passed since the doctrine was first articulated by EU case law, and despite attempts in a significant number of mergers to evoke the failing firm defense, either at agency or court level, only in a few cases has it been successfully used.\(^13\)

In contrast, antitrust regulators may occasionally be forced to commit type II errors. Such a state of affairs may occur when antitrust regulators

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\(^10\) See e.g., OECD 2009, at 21.

\(^11\) See e.g., PHILLIP E. AREEDA AND HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION 274 (3rd ed., 2009) (“The failing firm defense rarely succeeds in the case law and has often been proclaimed by both commentators and even occasionally a representative of one of the enforcement agencies to be a waste of litigants' time”).


\(^13\) See Helder Vasconcelos, Can the Failing Firm Defense Rule Be Counterproductive?, 65 OXFORD ECON. PAPERS 567 (2013). One should also keep in mind, when evaluating the current regulatory regime, the amount of potential mergers that parties are deterred from undertaking to begin with as a result of the regulator’s strict stand.
approve of an anticompetitive merger to which one party is a financially distressed firm for reasons that do not pertain to enhancing competition in the markets. One such reason may be the need to assist stakeholders of the financially-distressed firm (e.g., employees, creditors, etc.) In such cases, the current regulatory regime, again, may push regulators to extremes. For example, in 2005 the Israeli Antitrust Authority approved the merger of two giant retail firms although the IAA already envisioned in its decision of approval the harmful competitive effects to be expected as a result of the merger, in terms of increasing the market power of the merged entity, as in fact ultimately happened.

It therefore seems that particularly in the context of financially distressed firms, the uncertainties associated with striking a decision regarding the effects of an anticompetitive merger seem to have become a regulatory burden.

In this paper we offer a novel approach to the failing firm defense quandary. We argue that antitrust regulators rather than merely approve or disapprove of the suspected merger, should consider a third possibility: approval of the merger under the condition that the State receive an equity share of the merged entity. The share of equity allotted to the State will be determined by assessing the harm to competition caused by the merger—as measured ex post rather than as anticipated ex ante.

Thus, as a result of applying the proposed solution, at one (or more) time intervals following approval of the merger, the State shall be issued with securities of the merged entity (for example, common stock shares) that would have the effect of diluting the entity’s incumbent equity-holders. The extent of dilution would derive from comparing an agreed upon competition measure (for example, the Herfindahl-Hirschman Index, or even generally the market price) before and after the merger; and by translating the decline in market competition to an amount of monetary compensation to be awarded to the public in the form of an equity stake in the merged entity (for example, by computing the resulting decrease in consumer welfare). Obviously, the success of the mechanism depends on choosing appropriate measures, first, to quantify the decline in market competition; and second, to convert the harm to market competition into an amount of monetary compensation. However, it is argued that choosing such measures should be a relatively easier task than that which regulators currently need to perform, i.e., predict the post-merger future of markets. To be sure, proxies may be employed in order to implement the mechanism in real-life settings.

The equity approach to the failing firm problem solves three interrelated problems: the antitrust regulators' need to make complex future predictions (within the confines of a rather costly administrative
regulatory process); compensating the public for the harm caused to competition as a result of an anticompetitive merger being approved; and aligning market incentives in order to prevent such harm in the first place.

Beginning with the latter problem, the proposed solution can deter, at least to some extent, firms and their controlling shareholders from exploiting post-merger market power, even if such was in fact accumulated. Indeed, once a direct link is created between a decrease in a certain competition measure and the firm's shareholders' stake in the firm, it can reasonably be expected that these shareholders would avoid causing harm (or at least measurable harm) whenever possible.

The proposed solution also allows the general public in the relevant market, represented by the State, to be compensated for the actual lessening of competition caused by the merger. The public may also be compensated in this way for a so-called “residual” harm—having the regulatory network deployed to protect it breached. Indeed, sometimes allowing a firm to accumulate market power (as a result of the merger) may cause future harms to competition that even the most zealous of regulators will not be able to contain.

Most importantly, however, the proposed mechanism minimizes the costs of decision-making errors: first, in cases in which the antitrust regulator fears to err in underappreciating the harm to market competition if the merger would in fact be approved (type II error). The costs of such errors are minimized as compensation for any competitive harm becomes guaranteed (in the form of equity issued to the State); and as controlling shareholders are deterred from engaging in anticompetitive mergers to begin with, fearing post-merger dilution of their holdings in the merged entity.

Second, in cases in which the regulator fears to err in overstating the harm to competition if the merger is enjoined although, for example, the firm is economically distressed and would exit the market anyway (type I error). The costs of such errors are minimized since competition regulators can be more sympathetic to suspected mergers in which a failing firm defense is evoked. Again, the guaranteed compensation for measureable competitive harm, along the deterrence mechanism created, can drive antitrust regulators not to overstate future harm to competition in order to block suspected mergers.

Thus, as a result of employing the proposed mechanism, the costs of type I and II errors would be minimized and incurred only in cases in which the proxies chosen to measure the decline in competition are inaccurate and do not mirror real-life events in the market.
Note in this context, that the proposed solution converts the complex problem of predicting the future in the market following the merger to a rather straightforward measurement issue. The mechanism also excels in doing so flexibly. Thus, at several time intervals following the merger the social planner can examine, and reexamine, the anticompetitive effects of the merger on the market, and accordingly change the State’s equity stake in the merged entity—diluting the incumbent equity-holders or, if the anticompetitive effects of the merger decline over time—concentrating once again their share of the firm’s equity.

The proposed solution may also reduce the administrative costs associated with a failing firm defense review. It has been acknowledged that failing firm defense investigations by antitrust regulators “may be too lengthy”, and oftentimes undermine attempts by the failing firm to avoid imminent liquidation, as its finances rapidly deteriorate.14 Our proposal eliminates the need to pursue complex investigations such as with regard to the existence of alternative acquirers, or concerning alternative factual future scenarios.

Finally, the proposed solution allows a delicate balance to be struck between the interests of consumers in the relevant market and those interests of the financially-distressed firm’s stakeholders—employees, creditors etc. Such a balance currently cannot be struck: not only because of that fact that current antitrust law shuts out the welfare of stakeholders other than consumers in the market; but also because the two interests are in fact incommensurable.

The obvious normative inference of our proposal is having antitrust regulators consider the option of approving the suspected merger under the condition of being issued an equity share in the merged entity in proportion to the lessening of competition in the market. Another important normative implication concerns the possibility of relaxing the preconditions for approving suspected mergers under the failing firm defense. Adoption of our proposal enables antitrust regulators to become less adamant with parties to a failing firm merger as to establishing each and every one of the conditions of the failing firm defense. In this way, the failing firm defense can be reinstated to pursue its objectives, which are blocking anticompetitive mergers but allowing mergers which are not as anticompetitive as their alternative to go through.

In contrast to other solutions to anticompetitive mergers, such as increased taxation or penalties, our solution minimizes the real effects over the financially distressed firm even after the merger. Indeed, the "compensation" is not being paid directly from the assets of the firm, but rather from "the asset" of its residual owners.

Clearly, applying the proposed solution would also affect the ex-ante behavior of the parties to the merger, and their willingness to engage in the transaction to begin with. However, holding to the assumption that antitrust law is interested in the survival in the market of only viable firms (that is, firms the failure of which is merely financial and not economic), it should be noticed that the proposed solution eliminates the incentive of parties to engage in mergers motivated only by the desire to obtain increased market power. The incentive of parties to undertake mergers that can economize on financial-but-not-economic distress are left unaffected by the proposed mechanism.

The suggested mechanism comes with certain implementation difficulties. Two such obvious difficulties concern the manner in which a decrease in competition is to be measured, and the manner in which such a decrease is to be translated to an allocation of the merged entity's equity to the State. However, these problems can be solved, even if second-best solutions need to be adopted, for example, by using reasonable proxies to measure the necessary information.

Finally, the proposed solution may be condemned as a form of government taking or de-privatization. However, setting aside any ideological, non-economic, arguments, which are irrelevant in the current context, in recent years lawmakers and scholars have begun to appreciate the advantages to be found in having the State become an equity-holder in private firms, at least in times of need. It is now understood that such equity holding, other than compensating the State and the public for a more lenient regulation applied with respect to the firm, may often be rather easily secured as passive and short-termed, thus minimizing its real effects on markets.15

The paper proceeds as follows. Section 2 briefly introduces the legal framework associated with the failing firm defense, focusing mainly on the American legal context. Section 3 describes the suggested solution of approving the merger subject to the post-merger issuance of equity-rights of the merged firm to the State, in proportion to the decrease in competition in the market. Section 4 contains a discussion of the results and some of the implications deriving from our proposal. Section 5 concludes.

2. THE LEGAL FRAMEWORK

2.1 Merger Analysis

Antitrust regulators are charged with blocking mergers which tend to diminish competition in the relevant market. For example, in the United States, Section 7 of the Clayton Act prohibits any acquisition “where in any line of commerce... the effect of such acquisition may be substantially to lessen competition, or tend to create a monopoly”. A merger is considered to be harmful in this sense to the extent that it is likely to “encourage one or more firms to raise price, reduce output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints or incentives”.

Obviously, such regulatory decisions require making predictions as to the state of the market following the merger. For example, when a regulatory decision to challenge an anticompetitive merger is litigated, US courts generally approach Section 7 cases under a burden-shifting framework, whereby the State has to establish a prima facie case regarding the relevant market and show that the merger is likely to lessen competition. The State can establish such a case either quantitatively or qualitatively. If a prima facie case is established by the State, the burden of rebutting the presumption shifts to the respondent, to show that the evidence provided by the State inaccurately predicts the likely competitive effects of the transaction.

However, there can be no question about the uncertainties associated with enforcing such a regulatory regime. Indeed, the United States Supreme Court has long ago declared that “Congress used the words ‘may be’ [in § 7 of the Clayton Act] ... to indicate that its concern was with probabilities, not certainties”. The Court further emphasized, as it described the legislative background of the § 7, that “[s]tatutes existed for dealing with clear-cut menaces to competition; no statute was sought for

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16 15 USC § 18.
17 § 1 of the Horizontal Merger Guidelines of 2010.
18 See, e.g., Chicago Bridge & Iron Co. v. FTC, 534 F.3d 410, 423 (5th Cir. 2008).
dealing with ephemeral possibilities. Mergers with a probable anticompetitive effect were to be proscribed by this Act”. Competition regulators themselves thus approach the question of approving or disapproving of the merger as one which is inherently uncertain. For example, the Horizontal Merger Guidelines issued by the United States Department of Justice and the Federal Trade Commission in 2010 specifically indicate that “[m]ost merger analysis is necessarily predictive, requiring an assessment of what will likely happen if a merger proceeds as compared to what will likely happen if it does not”. 

Indeed, merger analysis in general is at least to some extent speculative. It requires regulators to predict the future effects on the market of a single event—elimination of one independent firm as a result of the merger. The illegality of a merger will be announced despite the fact that "certainty about anticompetitive effect is seldom possible and not required...". Thus, while competition regulators would announce an effort "to prevent this forward-looking analysis from veering into mere speculation...", they are nonetheless forced to admit that "[t]he task of merger review is to predict with some level of confidence—but not absolute certainty—whether the merger’s likely competitive effects based on facts, economic learning, and reasoned analysis require intervention to prevent substantial harm to competition and consumers". Moreover, regulators admit making mistakes, as was recently observed by the an FTC Commissioner: "[i]n order for enforcement to be both forward-looking and meaningful, we must be willing to accept the possibility of the occasional false positive... But false negatives in enforcement—those cases that should be brought, but are not—can be every bit as harmful to consumer welfare as false positives."

In making their prediction competition regulators rely on various sources of information—"economic evidence" in FTC terminology. Regulators rely on historical market facts and data (for example, market shares of various firms, competitive patterns in the relevant industry, and so on); on evidence submitted by the parties involved; on evidence collected on consumer groups and third parties (for example, what do customers expect from next-generation products); on expert testimony; on

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22 Brown Shoe, at 323.
23 § 1 of the Horizontal Merger Guidelines of 2010.
24 § 1 of the Horizontal Merger Guidelines of 2010.
25 See a speech lately delivered by the Director of Competition in the FTC: Deborah L. Feinstein, The Forward-Looking Nature of Merger Analysis (Advanced Antitrust U.S.—San Francisco, 2014) (discussing the American context in which Section 7 of the Clayton Act, which employs the term "may be substantially to lessen competition", was interpreted to be concerned "with probabilities, not certainties").
27 See McSweeny, supra note 26.
information from industry participants; and on information from other agencies (for example, information from the Federal Drug Administration as to which firms have filed applications for product approval).

However, note that several dimensions of the process exacerbate the problems plaguing regulators' efforts to generate accurate predictions. First, the need to comprehend the dynamic nature of events in markets. For example, a new competitor may be committed to entering the market in the near future and therefore its influence on competition should be integrated into the merger analysis. Second, the need to assess the effect of the merger not only on competition over prices but also with regard to competition on others difficult-to-quantify aspects, such as quality or innovation. Third, regulators need to appreciate short-term versus long-term effects of various sorts.

2.2 The Failing Firm Defense

Mergers involving financially-distressed firms pose an even more complicated predictive task. The “failing firm defense” was first introduced into the world of antitrust in 1930 by the United States Supreme Court in the case of International Shoe Co., a manufacturer of leather shoes. International purchased in May 1921, in exchange for its own stock in the amount of $9,460,000, all the capital stock of the financially distressed W. H. McElwain Company, a manufacturer of men’s dress shoes. A complaint filed by the Federal Trade Commission charged that “the effect of such acquisition was to substantially lessen competition between the two companies; [and] to restrain commerce in the shoe business in the localities where both were engaged in business in interstate commerce”. Reversing the decision of the lower courts to affirm the Commission’s decision, the Supreme Court wrote:

“In the light of the case thus disclosed of a corporation with resources so depleted and the prospect of rehabilitation so remote that it faced the grave probability of a business failure with resulting loss to its stockholders and injury to the communities where its plants were operated, we hold that the purchase of its capital stock by a competitor (there being no other prospective purchaser), not with a purpose to lessen competition, but to facilitate the accumulated business of the purchaser and with the effect of mitigating

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28 § 5.1 of the Horizontal Merger Guidelines of 2010
30 International Shoe, at 294.
seriously injurious consequences otherwise probable, is not in contemplation of law prejudicial to the public and does not substantially lessen competition or restrain commerce within the intent of the Clayton Act”. 31

In a 1969 case, Citizen Publishing Co. v. United States,32 the United States Supreme Court defined more accurately the terms of the failing firm defense as it added to the requirement for proof that the failing firm cannot be sold to an outsider, a requirement for a showing that the failing firm “made substantial affirmative efforts to sell to a non-competitor”. 33 In that case, the only two newspapers in Tucson, Arizona—one of which was in poor financial condition although not on the verge of going out of business or liquidating its assets—entered into a joint operating agreement that terminated competition between them.34 Rejecting an attempt to invoke the failing firm defense, due to the absence of any effort made to sell the financially distressed firm,35 and highlighting also the rule that the burden of proof is “on those who seek refuge under [the defense]”,36 the United States Supreme Court noted that “[t]he failing company doctrine plainly cannot be applied in a merger … unless it is established that the company that acquires the failing company or brings it under dominion is the only available purchaser. For if another person or group could be interested, a unit in the competitive system would be preserved and not lost to monopoly power”. 37

Historically, there were those who explained the failing firm defense as based on the social costs of financial distress,38 or on the interests of various stakeholders of the firm. 39 Conventional wisdom nowadays suggests for the failing firm defense a more limited welfare rationale, focusing solely on the effects on competition in the relevant market. The

31 International Shoe, at 302-3.
33 Citizen Publishing, at 143.
34 Citizen Publishing, at 137 (quoting the District Court findings).
37 Citizen Publishing, at 138 (Justice Stewart, dissenting). However, later U.S. Supreme court decisions have not referred to the requirement for a showing of an inability to reorganize, and the existence of such a requirement remains debated. See, e.g., ABA SECTION OF ANTITRUST LAW, MERGERS AND ACQUISITIONS: UNDERSTANDING THE ANTITRUST ISSUES 279 (3rd ed., 2008).
38 Derek C. Bok, Section 7 of the Clayton Act and the Merging of Law and Economics, 74 Harv. L. Rev. 226, ___ (1960).
39 RICHARD A. POSNER AND FRANK H. EASTERBROOK, ANTITRUST: CASES, ECONOMIC NOTES, AND OTHER MATERIALS 472 (2d ed. 1981); Note, All the King’s Horses and All the King’s Men: The Failing Company Defense as a Conditional Defense to Section 7 of the Clayton Act, 4 Hofstra L. Rev. 643 (1976); PHILIP AREEDA AND DONALD F. TURNER, ANTITRUST LAW, ___ (Vol. __, 1980); LAWRENCE A. SULLIVAN, HANDBOOK OF THE LAW OF ANTITRUST §§ 197-200 (1977).
economic rationale translates to an assumption that if the relevant distressed assets would otherwise exit the market, customers are no worse off after the merger than they would have been if the merger is enjoined. In other words, the legal rationale targets the absence of “a strict causal link” between the merger and the decline in competition, or the attempt to identify “situations where the markets affected by the merger will experience an increase in concentration and a significant lessening of competition whether or not the merger takes place”.

Antitrust agencies decide whether to challenge proposed mergers based on factual and economic analyses, supported by evidence provided by the parties. They focus on the competition effects of the merger versus that of counterfactual scenarios under which the merger is enjoined. Regulators worldwide approach the failing firm issue quite similarly. In most jurisdictions, the parties must demonstrate that blocking the merger will cause the financially distressed firm to exit the market, and that the effects of the proposed merger are less harmful to competition than any viable alternative (including a restructuring and reorganization of the failing firm itself).

In order to accept the "failing firm defense", antitrust regulators require proof of all the following: (1) imminent financial distress of the target firm; (2) merger is the only real alternative allowing the financially distressed firm to continue its market operations (in one form or another), and that there exists no other buyer or form of reorganization—for example, merger with a non-competitor—that would result in retaining the financially distressed assets in the market; and (3) that merger is competitively superior to having the financially distressed firm exit the market and leave its market share to be taken by its competitors. The conditions to successfully arguing the failing firm defense thus require a

41 See OECD 2009, at 19; Areeda and Hovenkamp, supra note 11, at 278.
43 Note the difference between these two conditions, as an exit of the financially-distressed assets from the market may yet result, at least in the long run, in increased (or identical) intensity of market competition if a new entrant would enter the market.
44 See, e.g., § 11 of the Horizontal Merger Guidelines of 2010 (“The Agencies do not normally credit claims that the assets of the failing firm would exit the relevant market unless all of the following circumstances are met: (1) the allegedly failing firm would be unable to meet its financial obligations in the near future; (2) it would not be able to reorganize successfully under Chapter 11 of the Bankruptcy Act; and (3) it has made unsuccessful good-faith efforts to elicit reasonable alternative offers that would keep its tangible and intangible assets in the relevant market and pose a less severe danger to competition than does the proposed merger”).
45 See Areeda and Hovenkamp, supra note 11, at 275.
more complex analysis than standard merger proceedings, posing more of a predictive quandary for antitrust officials.

Consider the meaning of each condition. While condition (1) requires a showing of financial failure, condition (2) necessitates a showing of economic failure—making reorganization of the financially distressed firm a moot possibility—and proof of having sufficiently shopped around the financially distressed assets to solicit alternative acquisition offers. Proof of economic failure is rather complex and subject to a number of assumptions regarding future cash flows, discount rates and rates of return.\textsuperscript{46} Moreover, in this context the parties to the merger need to convince the antitrust regulator that the firm sufficiently pursued transactions alternative to the merger that would keep the failing assets in the market. Under United States law, for example, any offer to purchase the assets of the financially distressed firm that is above liquidation value is considered to be a reasonable one.\textsuperscript{47}

Condition (3) calls upon the parties to establish the effects on competition of various factual and counterfactual scenarios.

Obviously, conditions (2) and (3) are therefore quite difficult to establish. Both necessitate a series of assumptions and predictions as to the assets of the financially distressed firm and as to state of the market in the future, under different possible circumstances. Parties thus not only have to establish future factual scenarios and convince an unwilling regulator as to their competitive effects; they also have to tackle rather high evidentiary hurdles even with regard to past events.

Unlike the case of a standard merger in which the two merging firms are financially sound, the predictive effort in failing firm cases requires antitrust regulators, and parties to the merger, to conduct a more complex analysis. In a standard merger’s analysis, the pre-merger market structure is usually assumed to persist, absent the merger.\textsuperscript{48} However, in failing firm cases, parties to the merger and antitrust regulators alike are required to

\textsuperscript{46} OECD, 2009, at 32.

\textsuperscript{47} § 11 of the Horizontal Merger Guidelines of 2010 (“[A]ny offer to purchase the assets of the failing firm for a price above the liquidation value of those assets will be regarded as a reasonable alternative offer. Liquidation value is the highest value the assets could command for use outside the relevant market”). Since liquidation value is often much lower than that of selling the firm as a going concern, the failing firm’s stakeholders view this as deeply problematic. From their perspective, they are required to forgo a much more lucrative offer made by the firm’s competitor, in order to take a much lower “alternative offer” made by an outside party.

\textsuperscript{48} In some cases this is taken to an extreme, using analytical techniques which make unduly strong assumptions. See, e.g., Joseph Farrell and Carl Shapiro, \textit{Horizontal Mergers: An Equilibrium Analysis}, 80 AM. ECON. REV. 107 (1990) (exposing the problem as demonstrated in the US Merger Guidelines).
depict and evaluate two alternative factual scenarios: one in which the merger occurs, and a second, counterfactual scenario, in which the merger is enjoined. This is to be done without the backdrop of relying on current market structure, which is about to change whether the merger is allowed or not. It has already been noted that such complication actually calls for introducing into the analysis more than one counterfactual scenarios.\textsuperscript{49} To illustrate, failing firm cases may require up to four different counterfactual scenarios to be evaluated other than the scenario of the merger itself: (1) an exit scenario, according to which the financially distressed assets exit the market; (2) a third party scenario, according to which another incumbent competitor purchases the financially distressed assets; (3) an entrant scenario, according to which a potential entrant purchases the financially distressed assets; (4) a “zombie” scenario, according to which a legally-enabled restructuring or reorganization of the financially distressed firm allows it to maintain some or all of its assets, but the non-viable firm pursues “gambling” strategies in hope of a miracle, in a manner which hampers market competition.\textsuperscript{50}

Note in this context, that a competition effects market analysis should consider not only the short run, in which an exit by the firm may bring about, for example, an increase in prices as a result of decreased competition; but also the medium and long run, during which entry-inducing effects are created: the high prices may attract new competitors to enter the market. As a result of such effects, a new competitor, perhaps even more efficient than the exiting firm, may enter the market increasing yet again the intensity of competition.\textsuperscript{51} Thus, antitrust regulators are required to predict rather far into the future. Errors are inevitable, as even occasional empirical work indicates.\textsuperscript{52}

The antitrust regulators’ problem in dealing with the failing firm defense is exacerbated further by the inherent bias exhibited by the distressed firm’s stakeholders—particularly its creditors and its employees. These will almost always prefer the anticompetitive merger over other alternatives, as their interest is in maximizing the funds allotted to the firm, and they tend to ignore externalities and anticompetitive effects. The more detrimental the merger is to competition, the more the acquiring firm will be willing to pay, due to the ‘monopoly premium’ expected with the increase in market power.\textsuperscript{53} While antitrust regulators focus on competitive effects and ignore the welfare of the financially-distressed firm's stakeholders;\textsuperscript{54} bankruptcy courts, employees, creditors,

\textsuperscript{49} OECD 2009, at 33.
\textsuperscript{50} OECD 2009, at 33-34.
\textsuperscript{51} See Werden and Froeb, supra note 7, at ___.
\textsuperscript{52} See, e.g., Duso et al., supra note 8, at ___.
\textsuperscript{53} See, e.g., Huffman, supra note 9, at ___.
\textsuperscript{54} See supra, the text accompanying note 40.
and others may very well attempt to influence the antitrust regulator's decision and exert pressure to authorize a failing firm defense even where alternatives exist.\footnote{Indeed, the mere fact that stakeholders of the financially distressed firm, sometimes with the support of a bankruptcy court overseeing the corporate reorganization of the financially distressed firm, clearly prefer the anticompetitive merger—is of no relevance to the competition regulator (other than being informally affected by pressure applied by these stakeholders). However, since in real-life settings regulators do not know, or cannot establish in court, the true motives of those arguing before it, the preferences of the parties to the anticompetitive merger may nonetheless be of considerable significance.}

The resulting state of affairs in most jurisdictions is considered to be unsatisfactory.\footnote{See, e.g., OECD 2009, at 45, indicating that especially during times of a general economic downturn the current regulatory regime, which is geared to prevent as many anticompetitive mergers as possible seems to be unwarranted.} In particular, current regulatory regimes are inclined to choose an extreme position, intentionally succumbing to either type I (enjoining mergers that should have been approved) in order to avoid type II errors (approving mergers that should have been blocked), or vice versa. For example, most jurisdictions, the United States and Europe included, seem to be inclined to minimize the costs associated with type II errors.\footnote{OECD 2009, at 43.} This means, of course, that antitrust regulators in these jurisdictions knowingly accept that type I errors are made with regard to some mergers.\footnote{OECD 2009, at 21.}

Given the current limited toolbox offered to antitrust regulators and lawmakers contemplating a sound policy with regard to failing firm mergers, currently the only available solution is attempting to somewhat fine-tune the current doctrine, for example, by relaxing the evidentiary burdens born by the parties as they attempt to invoke the failing firm defense.\footnote{OECD 2009, at 44.} Naturally, such fine-tuning can only slightly improve the current state of affairs, but it too “is also likely to produce type I and type II errors”.\footnote{OECD 2009, at 44.}

Notwithstanding, the new approach introduced in the next section can change all that.
3. AN EQUITY-BASED APPROACH

Despite possible arguments that the failing firm defense may be counterproductive to begin with,\textsuperscript{61} the policy discussion in the current paper assumes the existence of the doctrine and focuses on the manner in which it should be implemented by antitrust regulators.

Conventional regulation of potentially anticompetitive mergers tackles the assets side of the firm. Regulators focus on the competitive implications of allowing two (or more) competitors to merge their assets. The problem lies in having to predict future effects and market responses to current regulatory decisions, and the ensuing business behavior of the firms involved. However, there is also another possible approach—to tackle the ownership entitlements to the assets of the firm rather than the assets themselves: "Regulation by equity", so to speak.

Thus, we suggest that instead of a binary choice of allowing or blocking a merger between competitors, one of whom is a financially-distressed firm, antitrust regulators should consider a third possibility: approval of the merger subject to the State receiving an equity share of the merged entity. Such equity will be allotted to the State in proportion to the actual measured decrease in market competition, following the merger. Our suggestion transforms the regulatory problem of ex-ante prediction to an ex-post measurement issue.

The equity approach to failing firm mergers allows antitrust regulators to qualify their approval of a merger they deem better than the alternative business failure, but still potentially problematic. Rather than try to anticipate in advance all future scenarios and their respective probabilities, regulators can condition their approval on the failing firm issuing equity equivalent to the social harm to consumers in the market actually created by the merger.\textsuperscript{62}

\textsuperscript{61}See, e.g., Vasconcelos, \textit{supra} note 13, at ___, arguing that “when the [failing firm defense] is available, firms have an incentive to embark on mergers that force outsiders to exit the industry”.  
\textsuperscript{62}Should “equity” mean any form of securities issued by the merged entity which has the capacity of diluting the incumbent shareholders' holdings? Indeed, one could argue that such equity can take the form of common stock in the merged entity when the potential harm is proportional to the firm's total equity, but it can also be debt issued via bonds (convertible or otherwise), when the anticompetitive effects of the merger, as measured ex-post facto, generate harm which is greater than the total equity of the firm. However, there seems to be no point in issuing any other form of security other than common stock shares. Indeed, once the anticompetitive harm caused by the merger becomes greater than the amount of equity, the firm should actually belong to the State.
In essence, the merging firms are to pay the social costs they create, internalizing any externalities associated with the merger. When these costs are correctly measured, internalizing them perfectly aligns the merging firms’ incentives to create private wealth without harming the public.

Thus, to the extent that the regulator is confident that the examined merger is either anticompetitive or does not threaten whatsoever competition, the regulator should enjoin, or approve, of the merger, respectively. However, if in doubt, the antitrust regulator confronting a failing firm defense can condition the approval of the merger upon the issuance by the merged entity of an equity stake to the State at several time intervals following completion of the merger, and in accordance with the actual lessening of competition (as measured), or lack thereof. Therefore, following approval of the merger, and at several time intervals—for example, every year following the merger—the state of competition in the market will be evaluated.

Obviously, the measure chosen to evaluate the lessening, or strengthening, of competition should be as simple as possible, yet also as accurate as possible.

Suppose, for the sake of the argument, that the measure chosen is the Herfindahl-Hirschman Index (HHI). Suppose further that prior to the merger the relevant market was serviced by four firms, each with a 25% market share. Firm A is facing financial distress, and rather than filing for dissolution requests authorization for a merger with firm B under the failing firm defense. Assume that absent the proposed merger Firm A’s market share, at least in the immediate term, would be divided equally among the remaining firms, raising HHI levels from 2500 to 3267. An HHI of 3267 is therefore the baseline for computing the harm to consumers because of the merger. Indeed, this is an HHI measure which assumes that Firm A’s market share, following its liquidation, would be divided between the remaining competitors. It is a measure which coincides with the financially-distressed firm's argument that absent a merger it would exit the market.

Under these hypothetical conditions, allowing the merger would create a merged entity with 50% market share, alongside two firms with 25% each, thus the HHI would be 3750. In contrast to the predicted liquidation of Firm A, the merger is predicted to raise the HHI level by 483 points.

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63 A more thorough discussion of the appropriate measure is to be found in the next Section. To see how to compute the HHI see infra, footnote 71 and the accompanying text.
Such a merger may easily be considered less competitive than the alternative. Under the current formulation of the failing firm defense, a merger thus described would be forbidden, as the alternative—Firm A liquidating—seems competitively preferable. Still, in some cases the merging firms may argue that expected developments in the market will act to reduce concentration. For example, one of the other firms would increase production in response to the merged entity’s size and business strategy; innovation in the market will increase the share of one competitor, etc. In other words, the increase of 483 points in HHI is expected only if everything else is held constant, and the merging firms argue that there exists no reason to believe such stagnation. Moreover, despite the current trend in antitrust law to ignore other-than-competition interests, these nonetheless may weigh-in, and policy makers may wish to protect employees or other interest groups from the costs of business failure.

In such a case, under the proposed scheme, the merging firms can be given a choice: forgo the merger or pay the social price of increased concentration, if such would in fact occur.

Thus, a year following the merger the market's HHI would be measured again. If a year after the merger the HHI would increase more than 3267—meaning, competition in the marker has lessened—the State shall be issued with securities of the merged entity (for example, common stock shares) that would have the effect of diluting the equity stake of the merged entity’s incumbent equity-holders. The extent of dilution would be decided by comparing the measured HHI to an HHI of 3267; and by translating the decline in market competition to an amount of monetary compensation (representing the resulting decrease in consumer welfare) to be awarded to the State in the form of an equity stake in the merged entity. Thus, if the harm to consumers as a result of the merger is approximated to be $100M and the merged entity's equity is estimated to be $400M, the State will be issued a number of common stock shares which would award the State 25% of the merged entity's equity.

64 Such a merger might be considered less competitive than the alternative, but still be preferable from a public policy perspective, due to the avoidance of liquidation costs and the protection of stakeholders (especially employees and suppliers). See Areeda & Hovenkamp, supra note 11, at 283-86. See also Edward O. Correia, Re-Examining the Failing Company Defense, 64 ANTITRUST L.J. ___, 684 (1995-1996).
65 A more simple, yet inaccurate, way to implement the mechanism is to consider the entire equity holding as the basis for compensating the State, and calculating the extent of dilution of incumbent shareholders to match the percentage of lessening of competition in accordance with the HHI. Thus, if the HHI has increased over that year in 25% (i.e., competition has worsened that much), the State will be issued an absolute number of
Note, that this is a hypothetical "compensation" at this point, as the State cannot immediately collect the monetary amount of $100M from the merged entity. The State's holdings are "on paper" only.

A year later the HHI will be examined once more. Suppose it drops to 3267, which means that competition in the market has become stronger, and the harm to consumers, as compared to the eve-of-merger baseline, has dropped to 0. Thus, the State's common stock shares would then expire. A year later the HHI will be reexamined, and so on.

Note, that an important normative implication of our proposal concerns the relaxation of the preconditions for approving suspected mergers under the failing firm defense. Adoption of our proposal enables antitrust regulators to become less adamant with parties to a failing firm merger as to establishing each and every one of the conditions of the failing firm defense. In this way, the failing firm defense can be reinstated to pursue its objectives, which are blocking anticompetitive mergers but allowing mergers which are not as anticompetitive as their alternative to go through.

Moreover, adoption of our proposal enables social planners to allow failing firm mergers, preventing the social harm from liquidation and disruption of commerce, without suffering the social harm stemming from reduction in competition. Thus, the failing firm defense can be used both for its narrow welfare rationale (allowing for assets to be used continuously, avoiding reduction of output) and for distributional objectives (protecting stakeholders such as employees and creditors of the financially-distressed firm).

4. DISCUSSION AND IMPLICATIONS

The proposal put forward in this paper has two (groups of) rationales. While not mutually exclusive, each of these groups is nonetheless independent and can separately justify the new approach we suggest. The first is a conceptual group of rationales, envisioning the deadweight loss to consumer welfare generated by anticompetitive mergers as a reason for the State (the Government) to assume the role of the market and substitute it as the provider of goods. Indeed, from this point of view, the proposal to award the State a stake in the equity of a firm which has gained excessive market power as a result of an anticompetitive merger with a failing firm is nothing more than a regulatory response conceptually identical to the common stock shares that would award the State a 25% holding of the merged entity's equity.
one of having the State take upon itself to fully provide a product or a service when the relevant market is downright monopolistic. Certainly, one could even argue that the current proposal is nothing more than a proportionate—surely, less drastic—intervention of the State in the market, as a complete de-privatization of the market is simply unnecessary. However, this is not a line of inquiry we would like to pursue here.

The second, independent, group of rationales is practical in nature, and is the focus of our discussion in this Section of the paper. As it turns out, the equity of a firm is a rather useful tool with which social planners, committed to the idea of markets often being able to maximize social welfare (and of government intervention only to tackle market failures), can work to dispose of an efficient regulation of anticompetitive mergers to which one party is a financially-distressed firm. This group of rationales calls for regulation by equity to become a permanent tool in any regulator's toolkit.

The purpose of this Section is therefore to discuss some of the implications deriving from the new approach, which was introduced in the previous Section. The main advantages of the new approach—its rationales—are therefore discussed first, followed by a discussion of the practical limitations of our proposal, mainly, the decisions as to which measures competition regulators should employ in order to decide, first, how to evaluate the post-merger change in the intensity of competition in the market; and, second, how much equity of the merged entity is to be allocated to the State as a result. Finally, several possible objections to our proposal are debated.

4.1 Regulation by Equity—The Rationales

4.1.1 Minimizing the Social Costs of Decision Making Errors

The most important feature of the proposed mechanism is that it minimizes the costs of decision-making errors: first, in cases in which the regulator fears to err in appreciating the harm to market competition if an anticompetitive merger would in fact be approved (a false negative, or a type II error, meaning, allowing harmful mergers to proceed). Second, in cases in which the regulator fears to err in overstating the harm to competition if the merger is enjoined although, for example, the firm is economically distressed and would exit the market anyway (a false positive, or a type I error, meaning, blocking mergers which are not anticompetitive).

In practice, the antitrust regulator, when faced with the failing firm defense to a merger, should of course avoid making clear mistakes by either approving an obvious anticompetitive merger or enjoining a merger
which undoubtedly would not lessen competition more than would otherwise occur if the merger was enjoined. However, in those cases in which the regulator faces doubts and feels uncertain she could, rather than simply approve or enjoin, opt for a third solution—approve the merger under the condition that the State be issued equity in the merged firm, in an amount to be decided by examining the post-merger lessening of market competition.

Our proposal creates a third way for antitrust regulators of treating failing firm mergers, conditioning approval on issuance of equity rather than merely providing a yes/no answer. This grants antitrust agencies more leeway in their decisions from both an ex-ante and an ex-post perspective.

Ex-ante, as the antitrust regulator is challenged with the decision to approve of the merger, she knows that when in doubt, it is best to approve of the suggested merger. The costs of type I errors are minimized since the regulator can be more sympathetic to mergers and to the failing firm defense.

Indeed, even if her decision is erroneous—in the sense of making a type II error—the proposed mechanism would mitigate the costs of the error by having the State get a stake in the merged entity's equity. Thus, while a no-errors result may be impossible, the costs of making erroneous regulatory decisions are minimized. The costs of type II errors are minimized in three respects: First, anticompetitive mergers are deterred to begin with. Controlling shareholders in the merging firms can be expected to fear the initiation of an anticompetitive merger, as such a merger would may eventually result in a dilution—as deep as the lessening of competition—of their holdings of the merged entity. Secondly, the merging entity and its controlling shareholders would also fear exploiting excess market power, even if such was in fact accumulated. Again, the reason is that such exploitation would lead to the dilution mechanism to kick in. Thirdly, anticompetitive mergers result in the State taking equity in the merged entity as a form of compensation, thus reducing the overall harm to consumer welfare, i.e., to the public.

In fact, as a result of employing the proposed mechanism, type I and II errors can be expected to occur only in cases in which the proxies chosen to measure the post-merger decline in competition are inaccurate and do not mirror real-life events in the market. Indeed, the proposed solution converts the complex problem of predicting the future in the market following the merger to a rather straightforward problem of analyzing in retrospect the effects of the merger on the market.
The mechanism also excels in doing so flexibly. Thus, at several time intervals following the merger the social planner can examine, and reexamine, the anticompetitive effects of the merger on the market, and accordingly change the State’s equity stake in the merged entity—diluting the incumbent equity-holders or, if the anticompetitive effects of the merger decline over time—concentrating once again the incumbent shareholders' share of the firm’s equity.

4.1.2 Post- and Ante-Merger Deterrence

The proposed solution can deter, at least to some extent, firms and their controlling shareholders from initiating anticompetitive mergers to begin with and from exploiting their post-merger market power, even if such power has been in fact accumulated.

The latter deterrence is rather obvious. Indeed, once a direct link is created between a decrease in a specific competition measure and the shareholders' stake in the firm, it can reasonably be expected that these shareholders would push to influence the firm to act in order for the competition measure in question to at least remain constant and not reflect a deterioration. For example, tying the extent of allotment of equity to the State (and the subsequent dilution of incumbent shareholders) to the price of the product in the relevant market incentivizes the merging firms to keep those prices low. While such deterrence cannot be perfect, it does exist.

Furthermore, since ex-post exploitation of marker power may result in controlling shareholders being diluted in their holdings of the merged entity, the proposed approach may also deter anticompetitive mergers to begin with. Such deterrence would be created as controlling shareholders would understand that pushing for an anticompetitive merger eventually will not be able to yield from them all possible gains from anticompetitive behavior.

4.1.3 Compensation for Anticompetitive Harm

The proposed approach to the failing firm defense allows the general public (including consumers in the relevant market) to be compensated for the actual lessening of competition caused by the merger. While consumers in the relevant market are not compensated directly, the compensation awarded to the general public may be utilized to indirectly also compensate these consumers.
Note, that the public (consumers in the relevant market, to be exact) may also be compensated in this way for a so-called “residual” harm—having the regulatory network deployed to protect it breached. Indeed, sometimes allowing a firm to accumulate market power (as a result of an anticompetitive merger) may cause future problems that even the most zealous of regulators will not be able to contain, but this damage too can be quantified.

Further note, that the compensation does not undermine the real activities, or assets, of the firms in question. Instead, the compensation is based on diluting the incumbent shareholders' equity in the firm, in favor of the State. Thus, the compensation is in fact paid by the "owners" of the firm—the shareholders. Unlike a tax imposed on the firm and therefore changing its assets allocation decisions, the proposed mechanism avoids any such effects.

4.1.4 Minimizing Administrative Costs

Our proposal for regulation by equity not only improves upon the results of the regulatory process, but it also allows for much quicker decisions which reduce costs and increase efficacy.

It has been acknowledged that failing firm defense investigations by competition regulators “may be too lengthy”, and oftentimes undermine attempts by the failing firm to avoid imminent liquidation, as its finances rapidly deteriorate.66 Our proposal eliminates the need to pursue complex investigations such as with regard to the existence of alternative acquirers, or concerning alternative factual scenarios. Antitrust regulators should, of course, investigate to some degree the possible effects of the merger; however, they should not concern themselves too much with doubts, as an automatic correction mechanism would operate in the post-merger reality to correct any type II errors.

4.1.5 Integrating Non-Competition Considerations

Recall that historically, the regulation of anticompetitive mergers to which one party is a financially-distressed firm took into account, other than the harm to competition as a result of the merger, non-antitrust considerations, which pertain to various stakeholders of the firm.67 Indeed, approving of a failing firm merger implicates not only antitrust issues and competition in the market, but also the welfare of employees of the financially-distressed firm, the firm's creditors (particularly those unsecured), the public

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67 See supra, footnotes 38-39 and the accompanying text.
enjoying the firm's products, and so on. However, antitrust law at some point decided to exclude all considerations which were not specifically concerned with the welfare of consumers in the relevant market.

Our approach brings back to the table those considerations, which are obviously important and relevant.

Moreover, in the past these two groups of considerations—consumer welfare in the relevant market, on the one side, and the welfare of other stakeholders of the financially-distressed firm, on the other side—were incommensurable. However, our proposal allows for a balance, and even a reasonable one, to be struck between the two conflicting interests. Indeed, minimizing the costs of type I errors, and at the same time allowing the State of enjoy an equity stake in the merged entity should the harm to competition reveal itself as more severe than expected—allows more financially-distressed firms to be salvaged (and more employees, creditors and other stakeholders to benefit from such a result) without having the interests of consumers in the relevant market sacrificed for that end.

4.2 Regulation by Equity—Quantification Difficulties

4.2.1 The Problem

While in theory the proposed mechanism is certainly coherent, several obvious questions arise as to its implementation: First, which competition measure should be employed to evaluate the post-merger lessening of competition? Second, how should any post-merger harm to consumer welfare be measured? Third, how should these translate to a share of equity to be allocated to the State?

Before turning to the technical discussion one should consider three important points. First, while a perfect quantification method may not exist, a second-best solution, based on reasonable approximation, may nonetheless be superior to the current regulatory regime. As already explained, the current regime is undermined by the presence of type I and II errors. It is afflicted with the pressures stemming from a binary choice

68 Recall that the main goal of the scheme proposed in the paper is to minimize the costs of type I and type II decision-making errors. If lawmakers were to define this goal as their only one—excluding such goals as compensating the public for mistakenly approving an anticompetitive merger—than for the purpose of “regulation by equity”, as suggested in this paper, lawmakers need not necessarily calculate the exact resulting harm to consumers from anticompetitive mergers, nor the precise value of the merged entity' equity. Instead, lawmakers only need to reasonably link any post-merger deterioration in market competition to the dilution of the incumbent shareholders' equity stake in the merged entity, in favor of the State. In this manner, lawmakers can deter anticompetitive mergers to begin with.
between blocking the merger and allowing it. Neither might be appropriate when the issue at hand is as complex, and the social costs associated with business failure intermingle with standard competitive analysis. Employing approximation measures can prevent many of the type I and II errors made by antitrust regulators with regard to mergers.

Second, unlike the ordinary case of reviewing mergers, which revolves around an attempt to predict whether or not a particular merger will turn out to be anticompetitive, the focus on quantification here should be merely on ex-post measurement of actual changes in the relevant market. In other words, for the proposed scheme to succeed, the most important tenet is (only) to measure post-merger factual changes in the market, rather than predict the future. Focusing on measuring only the changing reality of the market is definitely easier than predicting in advance how the market would be like following a merger.

Third, in this context, it should be noted that appropriate measures for measuring post-merger lessening of competition and its resulting harm, can be imported from other contexts where they are currently used. Up until now, in the context of merger analysis, economics as a science, and economists, were all focused on developing ways to predict into the future any possible anticompetitive effects of a proposed merger. However, being a dynamic science, economics can be presented with the challenge of developing measures to estimate the post-merger lessening of competition in the market, rather than the expected effects of a proposed merger; for the purpose of regulating anticompetitive mergers by adjusting the equity of the merged entity, as suggested in this paper. Moreover, the field of assessing cartel damages has enjoyed great advances, due to the need of presenting to courts evidence regarding harm and its compensation. Since private litigation in antitrust is common, many of the issues raised by our proposal can be solved using existing measures, as developed by economists and accepted by courts. Merger policy has to date been focused on prediction of effects and prevention of harm, but our proposal will allow it to be informed by other fields of antitrust where assessment of harm caused is a standard endeavor.

69 See, e.g., The Merger Working Group, "The Role of Economists and Economic Evidence in Merger Analysis—Updated Chapter 4 of the ICN Investigative Techniques Handbook for Merger Review" (2013) ("Economics provides competition agencies with the conceptual framework and tools to distinguish between mergers that are unlikely to have significant anticompetitive effects from those that may, and require further analysis. When more analysis is required, economics and economic evidence can inform predictions of the likely competitive effects of a merger, which can aid in determining whether the applicable legal test is met and whether agency intervention is ultimately necessary").

4.2.2. Potential Measures to be Employed

Antitrust law currently employs several measures which could be used to implement our proposal for regulation by equity. None of them has an established reputation of being perfect, but all of them are helpful in determining the competitive impact of market events, including the type of mergers we consider here. Thus, one regulatory approach, for example, which may prove to be useful, is combining all measures together while allocating each with varying weights, according to the different circumstances of each case.

For each of the measures, a comparison can be made between levels prior to the merger, to levels at several pre-determined points in time after it. In this way, competitive analysis is carried out in a comparative fashion, focusing on the true effects of the failing firm merger on the market.

Lessening of competition. Antitrust regulators already have at their disposal several methods to measure the lessening of competition. For example, the Herfindahl-Hirschman Index ("HHI"), which is a statistical measure of concentration, is employed by US antitrust regulators to measure market concentration. It is relatively easy to calculate, and requires knowledge of the main firms operating in the relevant market and their market shares. It is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers.\textsuperscript{71} Of course, the HHI is not perfect, and various critiques have been leveled against it.\textsuperscript{72} Still, it has long been in use as a relevant statistic, especially in the context of mergers, due to its ease of use on one hand, and simplicity of exposition on the other. Since conditions imposed on mergers are likely to instigate litigation and arguments by the merging firms that the equity stake demanded is too high, clarity of exposition can be important from a practical perspective, as can the HHI’s long history of implementation.

In some cases, the market price of relevant products can serve as relevant measures. The advantage is obviously the direct link between prices and consumer welfare, and the fact that in most merger proceedings, end-product prices are the focal point for discussion. The downside is that prices are affected by a variety of factors, some of which exogenous to the merger itself. This problem, though, is well known in the economic literature and a variety of ways has been developed to deal with it. Again, we do not argue that prices are a perfect measure of competitive

\textsuperscript{71} For example, for a market consisting of four firms with shares of 30, 30, 20, and 20 percent, the HHI is 2,600 ($30^2 + 30^2 + 20^2 + 20^2 = 2,600$).
\textsuperscript{72} Farrell and Shapiro, supra note 48, at ___.

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harm, but they are highly relevant and economists are adept at analyzing their development and inferring the effects stemming from mergers.

A variety of other measures exist that have been employed elsewhere and can form a basis for implementing our proposal. Price/cost differentials are useful for assessing market power, especially where these change in response to an increase in concentration or market share. Entry barriers are sometimes measurable (in time or cost to overcome), as are competitors’ profits as well as those of producers of complements to the relevant products. Stock prices of the relevant firms can be assessed, and time-series analysis of changes over time and after significant announcements is often used when effects of mergers need to be understood.\(^73\)

**Harm to Welfare and the State’s Equity Stake.** One could argue that while competition regulators can investigate mergers to decide whether or not they are anticompetitive, regulators are hardly able to decide "how anticompetitive" a certain merger is.

On the other hand, measures such as those discussed here are most often used in cartel damages cases, where those harmed by anticompetitive conduct sue to recover the damages they suffered. Usually, they rely on before-and-after comparisons regarding the timeline of the cartel, and cross-product comparisons to show trends in the relevant markets and exogenous shocks. Generally speaking, the reality of the relevant market is compared with a ‘but-for’ scenario, where the merger did not occur. Benchmarks are used to compare within industry, and yardsticks are used to compare across industries. Of course, multiple factors need to be taken account of, as many changes occur simultaneously, and it is sometimes difficult to disentangle the disparate effects. Still, economic learning in these areas, as well as legal implementation, is well developed and offers a rich and long experience to learn from.\(^74\)

Beyond changes in prices and characteristics of the products sold in the relevant market, it is important to consider also the reduction of total output, or products left unsold. This ‘lost sales’ component is often overlooked in cartel damages cases, due to legal considerations. Since courts do not grant standing to consumers who did not purchase the relevant product, the fact that output dropped and the public as a whole

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\(^73\) Duso et al., *supra* note 8, at ___.

suffered real harm, is overlooked in litigation.\textsuperscript{75} In our context, where proceedings take place prior to the merger and the agencies involved are focused on overall deadweight loss, such legalistic separation of effects is unwarranted. Merger analysis should take into account all effects, including lost quantities and not just increased prices.

Obviously, even in our contexts many parameters are not completely known, but antitrust regulators are adept at generating useful approximations, and we can safely assume that economic learning will continue to develop and implementation in merger policy will continue to improve.\textsuperscript{76} As stated by scholars and accepted by courts: “The factors that may contribute to a cartel being able to set the profit-maximising cartel price are the same as the factors that have been identified as facilitating non-coordinated effects in a merger context”.\textsuperscript{77}

4.3 Possible Objections

4.3.1 Enforcement Costs

One possible objection would point to the need to conduct ongoing post-merger monitoring of the relevant market in order to implement the proposed solution. Indeed, if burdened by having to decide the extent of equity allocation to the State, should a post-merger decline in competition occur, competition regulators would need to periodically examine the relevant market and evaluate the changes in the intensity of competition. This entails significant administrative costs.

While basically a legitimate objection, as our proposed solution does have enforcement costs attached to it; policy makers should nevertheless be aware of several reservations when evaluating the scope of such costs.

First, these costs should of course be weighed against the social costs associated with the current state of affairs, which is assumed to be generating type I and II errors by competition regulators.

\textsuperscript{75} Christopher R. Leslie, \textit{Antitrust Damages and Deadweight Loss}, 51 \textit{ANTITRUST BULL.} 521 (2006).


Second, there is a difference between the need to constantly monitor markets in general without being aware as to which market suffers from problems in competition intensity and monitoring a specific market when the regulator is already alert to its possible harms. In this respect, competition regulators would need only to "search under the lamp-post" rather than stumble in complete darkness. Moreover, competition regulators would only need to monitor the specific measure of competition chosen. That measure should, of course, be chosen in accordance with its relative ease of use.

4.3.2 Affecting Real Behavior

Of course, in contrast to other solutions, such as increased taxation or penalties, our solution minimizes the real effects over the financially distressed firm even after the merger, because "compensation" is not being paid directly from the assets of the firm, but rather from assets of its residual owners.

But one could argue that the proposed solution would also have a deterrent effect on entrepreneurial behavior. To be sure, controlling shareholders would reject possible efficient merger transactions.

Clearly, applying the proposed solution would also affect the ex-ante behavior of the parties to the merger, and their willingness to engage in the transaction to begin with. However, holding to the assumption that antitrust law is interested in the survival in the market of only viable firms (that is, firms the failure of which is merely financial and not economic), it should be noticed that the proposed solution eliminates the incentive of parties to engage in mergers motivated only by the desire to obtain increased market power. The incentive of parties to undertake mergers that can economize on financial-but-not-economic distress are left unaffected by the proposed mechanism.

4.3.3 Deontological Criticism

The proposed solution may be condemned as a form of taking or de-privatization. The result of the proposed solution maybe having the Government hold equity in private firms.

However, setting aside any ideological, non-economic, arguments, which are irrelevant in the current context, in recent years lawmakers and scholars have begun to appreciate the advantages to be found in having the State become an equity-holder in private firms, at least in times of need. It is now understood that such equity holding, other than compensating the State and the public for a more lenient regulation applied with respect to
Moreover, note, that from a deontological viewpoint, the proposed mechanism should certainly not be misunderstood as a one excessively curbing the freedom or the private property of firms and private entities. On the contrary: it enables regulators to avoid blocking altogether suspected mergers in a manner which would be much more evasive for those mergers which are innocent of any harm to competition but are block mistakenly. Instead, the proposed mechanism allows certain questionably suspected mergers to proceed under the condition of allocating equity to the State if the merger results in a lessening of competition in the market. If the merger does not prove to lessen competition, the State is allocated with nothing.

4.3.4 A Solution for All Mergers?

One could wonder whether the proposed solution, if in fact so effective as we argue, should not actually be adopted with regard to merger regulation in general? Why only in the context of failing firm mergers!?

True, from a technical perspective, our proposal can in fact be adopted as a regulation for all mergers suspected as anticompetitive. However, recall that the working assumption underlying our argument has been the existence of type I and II errors in competition regulators’ decisions with regard to mergers to which one party is a financially-distressed firm, evoking the failing firm defense. If similar errors seem to exist not only in that specific context, but with regard to all mergers, than our proposal should in fact be considered as an across the board solution to competition regulation of mergers. But if evidence for such systematic errors does not exist, than adopting the suggested solution may not be welfare increasing.

Notwithstanding, the context of the failing firm defense could be used as a pilot experiment for the proposed mechanism.

5. Conclusion

Sometimes circles can in fact be squared. The failing firm defense represents the understanding of social planners that it is not enough to suspect a merger as anticompetitive, and enjoining the merger mandates proof that the merger is indeed such that would lessen competition. However, the limited set of tools available for antitrust regulators worldwide has turned the failing firm doctrine to a rather theoretical norm. In the current paper we put forward a proposal to equip antitrust regulators

78 See e.g., Kahan and Rock, supra note 15, at ___.

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with a simple, yet very powerful, tool that would reinstate the doctrine and allow it to effectively pursue its goals. We suggested that antitrust regulators be also allowed to approve of a suspected merger to which one party is a financially distressed firm under the condition that the State be accorded a stake in the merged firm’s equity, in proportion to the actual decrease in competition, to be measured ex post facto. In this manner, the highly uncertain guess of antitrust regulators as to the state of the market following the merger is converted to an ex-post problem of measuring the actual decrease in competition as a result of the merger.

A major caveat is, of course, the problem of measuring the lessening of competition in the market to evaluate the harm to consumers following the merger. However, it is not a prohibitive problem, as employing second-best solutions may nonetheless be superior to the existing situation. Moreover, one can expect that as the new approach becomes more prevalent, regulators and experts would improve of existing measurement tools and methods.