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Success and failure of bargaining in merger control: The case of asset divestitures☆

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ABSTRACT

This paper studies the bargaining over merger asset divestiture in the shadow of appeal litigation. We provide theoretical foundations for a recurrent empirical finding, namely that the opportunity cost born by the merging firms due to merger control has direct consequences for the remedy divestiture agreement. Increased severity of the appeal court improves the imperfect merger screening implemented by the agency through remedy negotiation, which possibly argues in favor of a judicial complement to the "regulatory" merger policy enforcement. But the main recommendation for agencies is to devise tools to better deal with the asymmetric information that limits the effectiveness of their merger policy enforcement.

1. Introduction

Nowadays merger control enforcement relies heavily on negotiation of merger remedies to solve the anticompetitive concerns. Out of the roughly 4000 mergers investigated by the Commission in Europe since the first merger regulation in 1990, there have been some 300 in which anti-competitive effects have been identified: only 30 of them lead to either prohibitions or firms giving up their merging plans, the other 270 were all conditionally approved subject to remedies (Ormosi (2012b)). In fact, 46.9% of the 228 Phase II investigations ended in a conditional approval (as of January 2015[1]). In the US, 142 public challenges in merger cases by the Department of Justice out of 229 Hart–Scott–Rodino Act 2nd requests for the period 2004–2013 left 38% of these requests being solved with fix-it-first remedies[2]. Because of the low proportion of actually adjudicated cases, merger enforcement has been often characterized as a regulatory system, rather than law enforcement as such[3]3In the words of a former President of the American Antitrust Institute, "Today, relatively few merger cases are litigated, and a new body of administrative law has consequently evolved outside of the judiciary's sight." — Foer (2001). And while an increasing part of the literature on merger control is devoted to the welfare effects of conditional approvals involving asset divestitures[4], there is very little economic analysis of the behavior of the competition agency (CA hereafter) as a negotiator and/or litigator where mergers are concerned. This is what this paper is about.

We study the divestiture negotiation upon the merger's conditional approval in the shadow of litigation. We focus on the role of asymmetric information and opportunity cost of litigation to derive the competition agency's optimal merger settlement strategy. This is in stark contrast to the Industrial Organization literature that typically focused on the amount of divested assets and left aside the probability for this to occur.

To fix ideas we devise a model inspired from the Law & Economics literature: specifically, we build on Bebchuk's (1984) settlement-before-litigation game with asymmetric information[5]. In our model the merging firms submit their merger project to the CA but are privately informed on the amount of cost savings their merger can generate. Accordingly, and given that the merger also leads to a market power increase, the CA ignores whether the submitted merger will eventually result into higher prices or not. In order to make sure consumers are not hurt following the merger, the CA will engage in remedy bargaining to grant conditional approval of the merger. This divestiture negotiation has the CA make a settlement offer in the form of a take-it-or-leave-it divestiture request to the merging firms, which they are free to accept or reject. However, if the remedy request is declined, the merger will be

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[1] http://ec.europa.eu/competition/mergers/statistics.pdf.

[2] Antitrust Division, Workload Statistics FY 2004–2013, available at http://www.justice.gov/atr/public/workload-statistics.html.

[3] In the words of a former President of the American Antitrust Institute, "Today, relatively few merger cases are litigated, and a new body of administrative law has consequently evolved outside of the judiciary's sight." — Foer (2001).

[4] See Cosnita-Langlais and Sørgard (2014) for a recent review of this literature.

[5] For a recent review of the theoretical literature on settlement, see Daughety and Reinganum (2012).

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litigated in court. While it does not address the form or the structure of the remedy, our model endogenizes simultaneously both the amount and the likelihood of the remedy divestiture.

We thereby substantiate Salop's (2013) remark that the behavior of courts has an important role to play for the understanding of the merger bargaining process. In particular, we show that the impact on the negotiation equilibrium depends on the type of marginal merger, poorly efficient or not. Thus, the costlier the merger procedure for pro-competitive insiders, the higher the likelihood of a remedy divestiture, i.e. more chances that the merger be conditionally cleared[6]. On the contrary, a more severe appeal court will lower the probability of conditional approval of poorly efficient merger projects, and thus help prevent more often anti-competitive mergers.

As a policy insight, our analysis argues in favor of a judicial complement to the "regulatory" merger policy enforcement, since the possibility of appeal may improve the outcome of the imperfect screening implemented by the CA through remedy negotiation, by further discriminating between merger projects. Indeed, a change in the severity of the appeal court is shown to trigger different changes in the equilibrium settlement behavior of different types of merging firms. However, the appeal court's decision is an exogenous parameter, beyond the CA's control. Therefore our analysis, if anything, highlights the need for CAs to find ways to better deal with the asymmetric information that is likely to limit the effectiveness of their merger policy enforcement.

In terms of related literature, there are to our knowledge only two other theoretical contributions tackling both merger control *and* merger settlement negotiation in a context of asymmetric information: Kwak (2013), and Cosnita and Tropeano (2009). While the former focuses on the deterrent effect of a stricter strategy for the competition agency, involving fewer settlements and more court challenges, the latter proposes a revealing mechanism based on the remedy negotiation to extract the merging firms' private information on their merger synergies. Some other papers do mention however the possibility for merger remedies to result from negotiation between the public agency and the private parties, but either in a purely informal way (Farrell (2003)), or in a framework where stress is laid on the costly investigation procedure used by the public agency during the bargaining process (Lyons and Medvedev (2007)). By the same token, Gürtler and Kräkel (2009a) combine a litigation contest with an application to the adversarial US merger control, while Gürtler and Kräkel (2009b) analyze the role played by the parties' litigation costs during merger trials — but neither of these papers deals with merger remedies or asymmetric information.

The remaining of the paper is organized as follows. We start by presenting the general framework, before determining the negotiation equilibrium in terms of likelihood of remedy settlement and amount of divested assets. Then we run a comparative statics exercise and identify the changes in equilibrium due to an increase in the probability that the CA wins the appeal initiated by the firms when the remedy negotiation fails. We discuss our results and provide some policy insights before concluding. The proofs are all grouped in the final Appendix A.

2. Framework, assumptions and notations

The model involves two risk-neutral players, the merging firms (or insiders) and the CA. The horizontal merger increases market concentration and is therefore likely to increase market power, but it may also generate some efficiency gains in the shape of cost savings, which may benefit consumers. The crucial point is that the CA lacks full information on the merger's net competitive effect, because it ignores the amount of merger cost savings. More precisely, the merging partners are privately informed on the size of efficiency gains, which will eventually determine the market price and consumers' surplus (Motta, 2004). Consequently, so as to prevent any price-increasing market concentration through merger, the CA will only clear the merger conditional on an asset divestiture. Below we present the reduce-form bargaining model.

2.1. Pre-merger payoffs

Let $\overline{\Pi}$ be the pre-merger total joint profit of the insiders. For simplicity, assume two perfectly symmetrical merging partners, making each a stand-alone pre-merger profit of π. Thus $\overline{\Pi} = 2\pi$. Assume also that the CA maximizes consumers' surplus, and let then CS denote the level of consumers' surplus prevailing on the pre-merger market.

2.2. Post-merger payoffs

As before mentioned, we assume that the merger leads to both a market power increase and some cost savings. These are opposite competitive effects, the former pushing the market price upwards, and the latter downwards. However, both market power and cost savings benefit the merging firms (insiders). To keep the analysis both simple and tractable, we normalize the market power increase to 1. Denote by α the efficiency gains or cost savings: basically, α captures the essential complementarity between the merger partners (their technological or administrative capabilities, as in Röller et al. (2001)), which will allow them to cut down their joint cost after the merger. The global impact of market power and synergies on the joint post-merger profit of the insiders is assumed to be $2\alpha\pi$, where $\alpha \geq 1$, indicating that the efficiency gains translate into enough cost savings to make the merger internally profitable. In other words, we consider that only viable merger projects are submitted for approval[7].

At this point let us discuss the implications of the insiders' post-merger payoff in the absence of any remedies, $2\alpha\pi$. To start with, the normalization of the market power effect is not restrictive in our framework to the extent that it does not take market power out of the model: the merger will still affect negatively consumers, as long as they do not benefit enough from the cost savings, which is typically the case when the efficiencies' pass-trough rate is lower than one (see below). Secondly, note that absent efficiency gains, i.e. for $\alpha = 1$, the merger is only weakly profitable for the insiders. Thus our normalization actually points at cost savings as a motivation for the merger[8], while replicating the merger profitability paradox[9] from the literature on horizontal mergers.

Not only do the efficiency gains improve the merger profitability, but they may also mitigate its anti-competitive market power effect, to the extent that consumers benefit from a lower market price. However, and in line with the empirical IO literature dealing with the price effects of

[6] This is actually a recurrent empirical finding (see Garrod and Lyons (2011) and Ormosi (2012b) in particular), for which our results provide a possible theoretical foundation.

[7] We do not deal here with the issue of unprofitable mergers taking place, however frequent these may be (see Ravenscraft and Scherer (1987), Banerjee and Eckard (1998), Tichy (2001) Gugler et al.(2003) or Rezitis (2008) for empirical studies concluding on the poor performance of M&As). This is not the point of our analysis, hence it is left aside.

[8] Other motivations consist of the creation of a Stackelberg leader through the merger (Daughety, 1990), or the presence of convex costs (Perry and Porter, 1985), or that of managerial delegation (Ziss, 2001), or the possibility of multi-divisional firms (Creane and Davidson, 2004), or that of spatial price discrimination (Rothschild et al., 2000), as well as allowing for cross-border mergers in the case of a mixed oligopoly market (Heywood and McGinty, 2011).

[9] Accordingly, the market power effect of the merger is a positive externality for the other firms in the industry. These enjoy a free lunch in the shape of a price increase, which is accompanied by a business stealing effect, since due to the slope of the reaction functions, the outsiders will either increase their quantities in response to the insiders' output decrease (in the Cournot case), or increase their prices as well but by less (in the Bertrand case). As a result, the Cournot insiders lose profits (Salant et al., 1983), whereas the Bertrand merging firms enjoy a lower profit gain than the outsiders (Deneckere and Davidson, 1984). Hence the merger profitability paradox: it is often more profitable to stay outside a merger than take part to it.