Risk-Shifting Provisions and Antitrust Risk: An Empirical Examination

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MERGING PARTIES FREQUENTLY allocate antitrust risk through contractual provisions in the merger agreement. At one extreme, these risk-shifting contractual provisions allow the buyer to walk away from the contract if the antitrust agency issues a second request or threatens to challenge the deal. At the other extreme, these provisions require the buyer to agree to any divestiture or other remedy that the antitrust agency demands—in other words, to close the deal "come hell or high water."[1] In between these extremes are a number of variations, including most commonly those that (1) require the buyer to take some level of efforts to obtain regulatory clearance but do not specifically require divestitures, (2) require the buyer to make divestitures of specific assets or a specific dollar amount, or (3) require the buyer to make divestitures up to an undefined level of "materiality."

In the course of negotiating these risk-shifting contractual provisions (or HOHW clauses), buyers frequently argue that the seller's proposed language may have the perverse effect of increasing the antitrust risk.[2] In particular, buyers frequently argue that HOHW clauses: (1) signal to the antitrust authorities that the parties believe that there is an antitrust problem (and in many cases identify the business unit giving rise to the antitrust issue by name or revenue) (the "Signaling Hypothesis"); and (2) reduce, if not eliminate, the ability of the buyer to take the position with the antitrust agencies that it will proceed with the proposed merger regardless of any antitrust concerns raised by the agency (the "Bargaining Hypothesis").[3] Thus, buyers argue that the contract should not expressly allocate antitrust risk other than to impose a general efforts obligation on the parties to obtain regulatory consents.

Using a sample of hundreds of merger agreements filed with the SEC, we performed a series of statistical tests to determine if there is any relationship between the type of HOHW clause in the merger agreement and the ultimate remedy. It should be noted that in performing such an analysis, we were not able to control for the possibility that HOHW provisions are more likely to be included in agreements where the proposed transaction actually includes some antitrust risk. That being said, we did find statistically significant results that are generally consistent with both hypotheses, namely:

- Transactions where the merger agreement expressly allocates antitrust risk are *five times* more likely to get a second request than those that do not,[4] a result that is consistent with (while not necessarily confirming, as discussed below) the Signaling Hypothesis.
- Once a second request is issued, transactions where the merger agreement expressly requires the buyer to make divestitures result in divestitures almost *three times* as frequently as when the agreement expressly permits the buyer to refuse to make divestitures. This result is consistent with the Bargaining Hypothesis.

We have been careful to note that these results are "consistent with" both hypotheses, but do not "prove" them because we are unable to control for the underlying antitrust risk raised by the transaction. Specifically, in the context of the Signaling Hypothesis, it is possible that mergers with HOHW clauses are more likely to receive second requests not because the HOHW clause provides any useful signal, but rather because the presence of a HOHW clause is correlated with an underlying antitrust risk. This makes sense because parties are unlikely to spend negotiating capital to include a HOHW clause unless there is a significant antitrust risk to allocate. Because we are unable to exclude this possibility, we discuss the conditions under which the Signaling Hypothesis is likely to be true, namely, when neither the 4(c) documents nor press reports indicate to the staff that there are significant antitrust issues. In other words, the presence of a HOHW clause may signal underlying antitrust risk prior to any investigation by the antitrust agencies, especially when there are few other signals that the transaction presents antitrust issues.

If we believe that antitrust risk is correlated with the presence of a HOHW clause, we can use this assumption to at least partially control for antitrust risk when testing the Bargaining Hypothesis. This is done by examining only those agreements that include HOHW clauses. The results of this restricted analysis are consistent with the Bargaining Hypothesis—specifically, transactions where the merger agreement expressly permits the buyer to refuse to make any divestitures requested by the agency are *half* as likely to result in divestitures than the average transaction receiving a second request.

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Finally, we note that the possible correlation between underlying antitrust risk and the type of risk-shifting clause being used does not fully explain why merger agreements where the buyer expressly states that it has no obligation to make divestitures are *more* likely than the average agreement in the sample to get a second request but *less* likely than the average agreement in the sample to be challenged. This result is consistent, however, with the proposition that agreements where the buyer preserves its right to litigate are more likely to get a second request because they have a higher antitrust risk than the average agreement but, *notwithstanding the higher antitrust risk*, are less likely to be challenged because the buyer can force the agency to litigate.

The Anecdotal Evidence

Anecdotal evidence confirms that enforcers look at HOHW clauses in the course of their investigations, though it is unclear how frequently this occurs and what weight enforcers place on these clauses.[5] However, the anecdotal evidence of the impact that HOHW clauses have in an investigation is mixed. For example, Cingular's merger agreement to acquire AT&T Wireless required Cingular to divest up to $8.25 billion in assets if demanded by the Justice Department. Notwithstanding this clause, the Justice Department only sought divestitures in a limited number of markets, far below the materiality cap.[6] On the other hand, Thomson's merger agreement with Reed Elsevier required Thomson to make divestitures to obtain regulatory clearance and, at the end of the investigation, the DOJ required Thomson to divest ASI, a company that administered, proctored, and graded pen and pencil tests on behalf of state agencies.[7] Absent such a clause, it seems unlikely that Thomson would have agreed to make these divestitures given the low barriers to entry in the market in which ASI operated.[8]

Because both advocates and detractors of the hypothesis that there is a relationship between HOHW clauses and the agencies' antitrust review can cite multiple anecdotes to support their position, we have undertaken a more comprehensive statistical analysis in the following sections.

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The Signaling Hypothesis

The Signaling Hypothesis was tested by looking at the relationship between the type of commitment the buyer makes to the seller and the frequency with which the merger received a second request. Because there is no source for all merger agreements filed with the antitrust authorities, and no source for all second requests issued in a particular year, it is important that we closely examine our sample to ensure that it is sufficiently representative to support statistical inferences.

Signaling Hypothesis Data. The Signaling Hypothesis was tested by reviewing all merger agreements involving HSR-reported transactions that were filed with the SEC in 2002.[9] This resulted in a sample of 347 merger agreements. The HOHW clauses in these merger agreements were then reviewed and categorized according to the level of general efforts required of the buyer (e.g., best efforts, reasonable best efforts, reasonable efforts) as well as the specific efforts required of the buyer (e.g., requirement to divest, requirement to divest up to materiality—or a dollar amount—and no requirement to divest). Then the news database in LEXIS was used to determine if the agency issued a second request,[10] and the FTC/DOJ Annual Report to Congress was used to determine if the reviewing agency challenged the merger, and to what extent (e.g., consent decree, full stop injunction, or parties withdrawing from the merger after being informed by the agency).

The 368 merger agreements in the sample represent 31 percent of the HSR-reported mergers in 2002, and generated 46 percent of all second requests and 38 percent of all challenges in that year. The frequency of a merger in the sample receiving a second request was approximately 6 percent (versus 4 percent for all HSRs filed in 2002), and the frequency of a merger in the sample being challenged was approximately 3.5 percent (versus 2.8 percent for all HSRs filed in 2002). The transactions analyzed range from large transactions, such as the $72 billion merger between Comcast and AT&T Broadband, to Catapult's $42 million acquisition of Tekelec. They cover a wide range of industries, from software, to hardware, to mining, to ice cream.

The 368 merger agreements in the sample used to test the Signaling Hypothesis are not perfectly representative of the average transaction (i.e., they are *more* likely to receive second requests and to be challenged than the average HSR-reported mergers in 2002). This presents a problem if the reason that a transaction is included in the sample is correlated with the likelihood of challenge. At first glance, there does not appear to be any relationship between the underlying antitrust risk and inclusion in the sample. For example, there is no particular reason to believe that HSR-reportable mergers between private companies, or HSR-reportable mergers that are not material to U.S. public companies, are less likely to have significant antitrust issues than mergers that are material to U.S. public companies.[11] In any event, if there is a concern about selection bias, the results in this paper should be confined only to transactions that are material to U.S. public companies.

Results. To test the Signaling Hypothesis, the HOHW clauses were divided into four categories: (1) those that required the buyer to make any and all divestitures demanded by the agency as a condition to approval, regardless of materiality; (2) those that required the buyer to make all non-material divestitures demanded by the agency as a condition to approval; (3) those that expressly stated that the buyer was not required to make any divestitures to obtain regulatory approval; and (4) those that were silent as to whether the buyer had an obligation to make divestitures.

The frequencies of second requests issued for each type of HOHW clause are reported below in Table 1. As predicted by the Signaling Hypothesis, the stronger the buyer's obligations to make divestitures, the greater the frequency of a second request being issued.

Table 1

	SECOND REQUEST		
TYPE OF CLAUSE	NO	YES	PERCENT
Unconditional Obligation to Divest	6	2	25%
Obligation to Divest Non-Material Assets	43	7	14%
Express Right Not to Divest	137	10	7%
No Express Obligations to Divest	161	3	2%
Total	**347**	**22**	**6%**

This result is particularly interesting because the frequency of obtaining a second request is higher for all types of agreements that expressly allocate the antitrust risk than for all agreements that do not. Put another way, as reported in Table 2, a merger agreement that makes any sort of express reference about the possibility of divestitures (including an obligation not to make divestitures) is more likely to receive a second request than a merger agreement that is silent with respect to divestitures.[12]

Table 2

	SECOND REQUEST		
TYPE OF REFERENCE	NO	YES	PERCENT
Express	186	19	10%
Silence	161	3	2%
Total	**347**	**22**	**6%**

Discussion. There are two possible explanations for the fact that merger agreements that expressly allocate the antitrust risk are significantly more likely to receive second requests. The first is that parties are more likely to expressly allocate the antitrust risk where there is, in fact, a significant antitrust risk. This makes sense because, as noted above, parties are unlikely to expend negotiating capital on a particular clause unless that clause addresses a significant problem. The second explanation is that the presence of a HOHW clause provides a signal to the antitrust authorities that the parties believe that there is a significant antitrust risk. The best way to distinguish between the two hypotheses is to control for actual underlying antitrust risk, which is something that we are unable to do, and to control for the presence or absence of other signals.[13]

In the absence of these controls, we consider the conditions in which the HOHW clause may have some utility as a preliminary signal. There are, broadly speaking, two types of mergers that raise antitrust issues: first, those mergers where the antitrust issues are readily apparent (e.g., the antitrust issues are clear because of the 4(c) documents, press reports, or the reviewing agency's prior experience with the markets at issue); and second, those where the antitrust issues are not apparent (e.g., the 4(c) documents are "clean," the antitrust issues have escaped media attention, and the agency has little experience with the markets at issue).

The Signaling Hypothesis is unlikely to account for the increased frequency of the issuance of a second request in the first type of deal because, quite simply, there are other more reliable signals that the transaction raises antitrust issues. For example, in the case of the recent Whirlpool-Maytag transaction, the HOHW clause was certainly not needed as a signal that the transaction may raise significant antitrust issues.

In the second case, however, the transaction may escape scrutiny by the antitrust authorities and slip through the cracks. In such a case, the fact that the parties sought to expend negotiating capital to allocate the antitrust risk may provide the first signal that there is an underlying antitrust issue. As a result, the staff may be more likely to conduct additional research that would reveal the substantive antitrust issues (e.g., call the parties or call customers) than would otherwise be the case. Put another way, if merger agreements that expressly allocate the antitrust risk are more likely to raise significant antitrust issues, then a reviewing attorney with scarce resources would be well served to examine the HOHW clause for that very reason.[14]

The Bargaining Hypothesis

The Bargaining Hypothesis was tested by examining the relationship between HOHW clauses and the frequency of the merger being challenged. As with the Signaling Hypothesis, a simple table of frequencies was calculated for each type of clause. In addition, a more complex model was also used to control for a number of other factors thought to influence whether a challenge was likely, including the general level of the buyer's obligation to close, whether the merger was cleared to the FTC or the DOJ, and whether the administration was Republican or Democratic. Unfortunately, as in the Signaling Hypothesis model, it is not possible to control for underlying antitrust risk, an omitted variable that will be discussed in greater detail below.

Bargaining Hypothesis Data. The Bargaining Hypothesis was tested by searching for transactions that had received second requests between 1996 and 2004—a search that resulted in approximately 300 mergers. The SEC database was then used to find the merger agreements relating to these transactions, resulting in a final sample of 164 mergers. Put another way, roughly half of the merger agreements were filed with the SEC.

The 164 mergers in the sample represented approximately 22 percent of all second requests issued in that time frame. Of these 164 mergers, 82 were challenged by the antitrust agencies, representing approximately 16 percent of all challenges in that time period. The probability of a transaction in this sample being challenged was 50 percent, 18 percent less than the 68 percent of mergers receiving second requests that were challenged between 1996 and 2004.

As with the Signaling Hypothesis data, the data used to test the Bargaining Hypothesis are not perfectly representative of the HSRs filed between 1996 and 2004. Specifically, the 164 merger agreements used to test the Bargaining Hypothesis are *less* likely to be challenged than the average merger receiving a second request between 1996 and 2004. There does not appear to be any intuitive reason why this would be the case and, to the extent that there is a concern about selection bias, the results should be confined to transactions that are material to public U.S. companies.

Simple Model. In order to test the Bargaining Hypothesis we first calculated simple frequencies for the occurrence of a challenge for each type of HOHW clause. These frequencies, reported in Table 3, reveal that the frequency of government challenge is higher where the buyer has an express obligation to divest. Indeed, in more than 80 percent of the cases where the buyer has an unconditional obligation to divest assets in response to a government demand, the government, in fact, demands a divestiture. This compares to an overall challenge rate of 50 percent for the sample and a rate of 30 percent for transactions where the merger agreement expressly permits the buyer to refuse to make divestitures.[15]

Table 3

	CHALLENGE		
DATA	NO	YES	PERCENT CHALLENGED
Unconditional Obligation to Divest	2	10	83%
Obligation to Divest Non-Material Assets	28	38	58%
Silent as to Divestiture	24	22	48%
Express Right Not to Make Divestitures	82	82	50%

A More Complete Model. The simple model may not precisely isolate the effect of specific HOHW clauses on the likelihood of a government challenge because it omits a number of variables that we believe should affect the bargaining position of the parties. For example, it fails to isolate the effect, if any, of the general level of obligations to close set forth in the merger agreement, e.g., whether the buyer has an obligation to take reasonable efforts, reasonable best efforts, or best efforts to close.[16]

In addition, the simple model fails to distinguish the years when the agencies' leaders were Democratic appointees from the years when they were Republican appointees. This omission may be significant because we know that between 1996 and 2000, the agencies issued an average of 56 second requests, of which 36 resulted in challenges (challenging 64 percent of transactions in which a second request was issued); and between 2001 and 2004, the agencies issued an average of 24 second requests, of which 19 resulted in challenges (challenging 79 percent of transactions in which a second request was issued). In other words, in those periods Republican appointees issued fewer second requests than Democrats, but challenged a higher percentage of them.

The simple model also fails to distinguish between the agencies that reviewed the transaction. This omission also may be significant because we know that, in the past, the FTC has challenged a higher percentage of transactions than the DOJ. Specifically, between 1996 and 2004, the FTC challenged 77 percent of the transactions in which it issued a second request, while the DOJ challenged 63 percent of transactions in which it issued a second request. This difference exists during both Republican and Democratic administrations.

Finally, the simple model fails to control for underlying antitrust risk, an omission that likely biases the results because it may be correlated with the presence of a HOHW clause and may be correlated with whether a transaction is challenged.

The more complete model includes as independent variables not only the specific obligation to divest (e.g., yes, material, no, silent), but also the level of general efforts (e.g., best efforts, reasonable best efforts, commercial efforts), whether materiality is defined in the agreement (e.g., in terms of business unit or assets), whether the administration is Republican or Democratic, and whether the second request is issued by the FTC or the DOJ.

Moreover, we attempt to control for underlying antitrust risk by examining a subset of merger agreements that expressly allocate the antitrust risk—either by agreeing to make all divestitures regardless of materiality, only material divestitures, or no divestitures. In other words, we exclude from the model those contracts that do not allocate the antitrust risk on the grounds that these agreements are less likely, in fact, to have antitrust risk.[17]

The results of the regression are reported in Table 4.[18] The coefficients[19] indicate the marginal effect of the presence of a particular variable, controlling for all other variables in the model. All but one[20] of the variables are binary—either 1 or 0—meaning that the presence of a particular variable increases the frequency of challenge by the amount of the coefficient. The results are consistent with the Bargaining Hypothesis: agreements that give the buyer an express right to refuse to make divestitures are 25 percentage points *less* likely to be challenged and merger agreements that require the buyer to make divestitures are 27 percentage points *more* likely to be challenged. Moreover, the greater the buyer's obligation to get regulatory consent, the greater the probability that the buyer will make divestitures. In the absence of all of the variables in the equation, the probability of a transaction being challenged is 51 percent.

Table 4

DEPENDENT VARIABLE	COEFFICIENT	PROBABILITY THAT OBSERVED DIFFERENCE OCCURED BY CHANCE
Unconditional Obligation to Divest	.27	.13
Express Right to Refuse to Divest	–.25	.02
Rank Efforts	.12	.10
Reviewed by FTC	.15	.13
Democratic Administration	.21	.03
Predicted Probability of Challenge if All Variables Absent	.51	

The Omitted Variable Bias

As discussed above, the substantive antitrust risk presented by the underlying transaction is undoubtedly correlated with the probability that the agency will issue a second request or challenge the deal. While we cannot quantify the bias with any degree of precision, it would appear unlikely that the *entire* marginal effect of the particular type of HOHW clause is driven by the underlying antitrust risk.

First, recall that the Bargaining Hypothesis was tested by looking only at those agreements that expressly allocated the antitrust risk in a HOHW clause. This means that the question is not whether the level of antitrust risk is correlated with the presence of a HOHW clause, but rather whether the level of antitrust risk is correlated with the precise type of HOHW clause that is utilized. To take a specific example, the question is whether mergers where the buyer expressly agrees to make divestitures are more likely to raise significant antitrust issues than mergers where the buyer expressly refuses to make divestitures. It is unclear whether this question should be answered in the affirmative.

Second, the relationship between underlying antitrust risk and the precise type of HOHW clause is unclear. For example, while a seller is always more likely to *ask* that the buyer have an obligation to divest assets where there is an antitrust issue than where there is not, the seller is more likely to *receive* such a clause where it is in a strong bargaining position—for example, where there are a number of strategic buyers bidding for the assets. Put another way, the precise type of HOHW clause is at least in part a function of the relative bargaining power of the parties.[21]

Third, the possible correlation between underlying antitrust risk and the type of risk-shifting clause being used does not fully explain why merger agreements with "no obligation to divest" are *more* likely than the average agreement in the sample to get a second request but *less* likely than the average agreement in the sample to be challenged. What would explain this result is that agreements with "no obligation to divest" are more likely to get a second request because they have a higher antitrust risk than the average agreement but, *notwithstanding the higher antitrust risk*, are less likely to be challenged because the buyer can force the agency to litigate. Put another way, if we included antitrust risk in the equation, the effect of "no obligation to divest" may disappear in the model used to test the Signaling Hypothesis but increase (in absolute value) in the model used to test the Bargaining Hypothesis.

Conclusion

We have shown that the express allocation of antitrust risk is correlated with a higher probability of receiving a second request, that the inability of a buyer to refuse to divest assets demanded by the government is correlated with a higher probability of challenge, and that the ability of a buyer to refuse to divest assets is correlated with a lower probability of challenge. We have discussed our inability to control for underlying antitrust risk, concluding that it is likely to bias our results, but is unlikely to completely account for the observed differences, especially with respect to the Bargaining Hypothesis.

We have not, however, addressed the normative question: In seeking divestitures, should the government consider the ability—or inability—of the buyer to resist such a request?

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While settlements in litigation always reflect the bargaining strength of adverse parties including, most importantly, the credibility of their threat to litigate, the fact that one party is the federal government raises issues that are absent in settlements between private parties. For example, the antitrust agencies' sole mandate is preventing harm to consumer welfare, not maximizing the dollar value of divested assets or even improving consumer welfare.

Given this, perhaps the best suggested outcome is for the agencies to use the same standard in seeking divestitures where the parties have the ability to litigate as where they do not. More specifically, they should seek divestitures only when they believe that they would be able to prevail in court, even when there is no probability that the buyer can litigate.

We would like to conclude with a number of counseling suggestions. First, the possibility that a HOHW clause may serve as a signal to regulators is probably not a sufficient reason to omit the clause. The intuition behind the Signaling

Hypothesis is that this signal has impact only at the margin—which is to say, it only matters where a transaction raises significant antitrust issues but otherwise has "clean" 4(c) documents and no complainants or press reports. In such a case, the downside of failing to allocate the risk (e.g., the buyer walks away from the deal) probably outweighs the downside of signaling the regulators to a possible antitrust issue (e.g., a second request is issued). Second, the Negotiation Hypothesis data and intuition suggest that it will generally be in the buyer's interest to preserve its ability to litigate. It should be noted, however, that such a right will not be costless: if the buyer litigates and loses, the seller could end up with nothing. Thus, if the buyer demands the right to litigate, sophisticated sellers will likely demand a higher price or a significant reverse break-up fee. ■

1 Merging parties frequently refer to the entire range of contractual provisions as "hell or high water clauses."

2 *See, e.g.*, Robert S. Schlossberg, *Negotiating the Transaction: Issues for the Antitrust Dealmaker*, ANTITRUST, Summer 2005, at 34, 35 (identifying specific assets to be divested is like showing "the proverbial red flag to a bull").

3 It is recognized that a buyer may be able to retain the litigation threat by "litigating the remedy," as occurred in *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 114–15 (D.D.C. 2004). Such a retained threat does not militate against the Bargaining Hypothesis as buyers are still required to make divestitures, though not to as significant a degree as demanded by the government.

4 Pursuant to the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (codified at 15 U.S.C. § 18a) (HSR), parties to certain mergers and acquisitions are required to notify the Federal Trade Commission and Department of Justice, and to observe a statutory waiting period. Pursuant to 15 U.S.C. § 18a(e), either agency is empowered to issue a Request for Additional Information or Documentary Material (commonly known as a second request), which extends the waiting period until 30 days after the parties have substantially complied with the second request (10 days in the case of a cash tender offer).

5 The author has been involved in a number of meetings with agencies where the staff has mentioned the terms of the HOHW clause (though typically in terms of disclaiming that the clause will have any effect in their enforcement). In addition, in interviews with ex-staff members the author has been told that, at least in one agency, review of the HOHW clause was common, at least in terms of preparing staff for the probability of litigation.

6 Jaret Seiberg, *Cingular Set for Early Clearance*, DAILY DEAL, Aug. 12, 2004, *at* http://www.thedeal.com ("Regardless, the required divestitures will not come close to giving Cingular the right to back out of the deal. The merger agreement requires the company to sell spectrum and customers worth up to $8.25 billion. That equates to dumping 10 million of the 22 million AT&T Wireless customers that Cingular is gaining in the transaction."). This is not to suggest that more divestitures were, in fact, warranted.

7 *See* United States v. Thomson Corp., No. 1:01CV01419, 2001 WL 761237 (D.D.C. June 27, 2001) (consent decree), http://www.usdoj.gov/atr/cases/f8900/8900.htm.

8 Among the barriers to entry listed by the Competitive Impact Statement were "secure computer servers, checking each candidate's identification prior to the examination, and providing proctors to ensure that candidates are not using unauthorized materials during the examination period." *Id.* at *5. The Competitive Impact Statement also noted the presence of multi-year contracts, the importance of reputation, and the cost of converting paper and pencil tests to a computer format. *Id.* at *6. These barriers do not appear sufficient in light of the Ninth Circuit holding that there were no barriers to entry in the bar review preparation business, a similar high-stakes testing industry with arguably higher barriers to entry. Am. Prof'l Testing Serv. v. Harcourt Brace Jovanovich Legal & Prof'l Publs., Inc., 108 F.3d 1147, 1154 (9th Cir. 1997).

9 A LEXIS database that included 8-Ks, 10-Ks, 10-Qs, and Proxy Statements was used for this analysis. This would exclude mergers between private companies, foreign issuers, and transactions that were not material to U.S. issuers.

10 This analysis is complicated by the fact that the parties do not always publicly disclose the issuance of a second request and the agencies are prohibited from doing so. However, where a transaction is material, the parties frequently issue a press release that a second request has been issued.

11 However, there is a possibility that transactions that are material to public companies *and* have significant antitrust issues are more likely to generate news reports or otherwise be on the radar of antitrust authorities and thus may be less likely to slip through the cracks. If this is true, however, one would expect the Signaling Hypothesis to be even more true for transactions that were excluded from the sample.

12 We performed a statistical test to determine whether the probability of one particular type of clause getting a second request was statistically different than the probability of another type of clause receiving a second request. In each case, the chi-squared test was higher critical value set at a 1% confidence level. This means that we are 99% confident that the difference in probability of receiving a second request for each type of clause did not occur by chance.

13 One way to control for other signals would be to examine the number of news reports prior to the issuance of a second request that discuss the antitrust issues present in the deal. While this is possible, it was not done in this analysis.

14 This is especially true as only a small portion of all HSRs raise sufficient antitrust issues for the antitrust agencies to issue a second request. In fact, the antitrust agencies issued second requests on only 3% of the 27,000 HSRs filed with the antitrust agencies between 1996 and 2004.

15 We then performed a statistical test to determine whether the observed frequencies were obtained by chance. These results indicate that we are 99% confident that the frequency of a challenge when there is an express obligation to divest is higher than the frequency of a challenge when there is no express allocation of risk. We are also 99% confident that the frequency of a challenge when there is a requirement to divest material assets is higher than the frequency of a challenge when there is no express allocation of risk. Finally, we are 99% confident that the frequency of a challenge where there is an express allocation of risk (whether an unconditional or conditional obligation to divest, or a specific provision that no divestitures be required) is higher than the frequency of a challenge when there is no express allocation of risk. We are only 90% confident that the frequency of a challenge where there is no obligation to divest is higher than the frequency of a challenge where the merger agreement is silent as to antitrust risk.

16 A buyer's general efforts obligations to close may have particular significance where the merger agreement is silent as to specific obligations to make divestitures. In such a case, a buyer with an obligation to take best efforts to obtain regulatory consents may be contractually obligated to make divestitures, while a buyer with an obligation only to take commercial efforts may not.

17 This leaves us with 118 observations, of which 60 were challenged by the government.

18 A probit model was used rather than an ordinary least squares (OLS) regression because the dependent variable is binary—0 if no challenge, 1 if a challenge. As a result, the error terms would not be expected to be normally distributed, a necessary condition for OLS regression.

19 Technically, the reported results are not coefficients but instead represent change in the probability of a challenge for the presence of each variable. The dprobit command in STATA was used to report these "coefficients."

20 The only variable that is not binary is the general level of efforts, which is coded 1 for Reasonable Efforts, 2 for Reasonable Best Efforts, and 3 for Best Efforts.

21 Moreover, at least in some cases, a buyer may be more likely to agree to divest assets where it believes that a divestiture is not likely.