

# ONLINE APPENDIX TO “STEALTH CONSOLIDATION: EVIDENCE FROM AN AMENDMENT TO THE HART-SCOTT-RODINO ACT” [2018]

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## 1 Supplementary figures and tables

### 1.1 Detailed summary statistics

Table I supplements Figure II in the body of the main text with summary statistics in tabular form.

[Table I about here.]

### 1.2 Blocked mergers

Figure I plots the number of blocked mergers each year. As stated in the body of the main text, these are infrequent, since most challenged US mergers are restructured rather than abandoned by the parties.

[Figure I about here.]

### 1.3 Robustness of main results

One potential concern with the research design is that the transaction values of the mergers have very wide support, with the sample including many mega-mergers that may provide a poor control group for mergers near the amended threshold. To assess the issue, Table II replicates Table I in the body of the main text but excludes all mergers whose adjusted transaction value exceeds \$150 million. This cuts the number of mergers in the control group in half, providing a comparison set of transactions much nearer to the post-Amendment \$50 million size-of-transactions test threshold. Yet, this leaves the parameter estimates nearly unchanged in magnitude and precision, which mitigates the concern.

[Table II about here.]

Another potential concern is that software mergers drive the results. Table II in the body of the main text shows that this industry accounts for a large number of horizontal, exempt mergers—about

10% of the total number of this type of transaction. To assess this concern, Table III replicates Table I in the body of the main text but excludes mergers in this industry. In particular, it excludes mergers in “Prepackaged software,” SIC code 7372. Once again, the resulting estimates are very close to those that appear in the body of the paper, which mitigates the concern.

[Table III about here.]

## 2 Calculating effected output

Critical to the paper are various estimates of output. This section provides step-by-step calculations behind those estimates. Note that all dollar-based estimates are stated in terms of constant 2018 currency.

### 2.1 Output associated with mergers induced by the Amendment<sup>1</sup>

The first approach to approximating output affected by the Amendment yields an estimate of \$53.0 billion over ten years. The approach assumes that the mean revenue of target firms involved in those mergers equals, on average, the mean revenue among target firms involved in all newly-exempt horizontal mergers (in which target firms were recorded by Thomson Reuters). The \$53.0 billion estimate equals the product of (a) 324, which is the DDD estimate in levels from Table I of the main text, (b) 10, which is the number of years in the post-Amendment period, and (c) \$15.42 million, which is the the mean revenue among target firms involved in all newly-exempt horizontal mergers (in which target firms were recorded by Thomson Reuters).

A second approach to approximating output affected by the Amendment yields an estimate of \$60.6 billion over ten years. The approach assumes that newly-exempt horizontal merger transaction values can be converted to target firm revenues using a “price-to-sales” ratio based on sample averages transaction values and target firm revenues associated with newly-exempt horizontal mergers. In other words, while the first approach takes a standard on target firm revenues per merger, the second approach takes a stand on target firm revenues per dollar of transaction value. The \$60.6 billion estimate equals the product of (a) \$9.002 billion, the aggregate per year increase in transaction values induced by the Amendment, which is reported below, (b) 10, which is the number of years in the

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<sup>1</sup>Note that one could, ideally, arrive at estimates of effected output by aggregating up transaction-level data on target firm revenues. However, as stated in Section II of the body of the main text, target firm revenue frequently goes unrecorded by Thomson Reuters.

post-Amendment period, and (c) 0.6734, which equals the ratio of the mean target firm revenues associated with newly-exempt horizontal mergers (for mergers in which target firm revenues and transaction values are reported in Thomson Reuters) to the mean transaction values associated with newly-exempt horizontal mergers (for mergers in which target firm revenues and transaction values are reported in Thomson Reuters).

To arrive at the \$9.002 billion figure, I re-estimate the main specifications of the paper but replace the number of mergers with the transaction value associated with those mergers. In other words, I re-estimate the main specifications in terms of a dollar-based outcome measure. Table IV reports these results in a layout identical to that of Table I in the main paper. As shown above, the coefficients imply very similar levels of consolidation, though they are less precise than the prior ones. Primarily this is due to large outliers among never-exempt mergers—many or most of which have massive international operations outside the purview of the Act. Exxon’s acquisition Mobil, Pfizer’s of Wyeth, and Vivendi’s of NBC Universal are a few examples. Column 5 provides the DDD estimates in levels used in the calculations above.

[Table IV about here.]

## **2.2 Output associated with all horizontal exempt mergers**

The text states that the approximate output effected by all horizontal exempt mergers equals \$407.0 billion over the full panel. To arrive at this figure, I assume the following: that the average target firm revenue of newly-exempt horizontal mergers for which Thomson Reuters records target firm revenue equals the average target firm revenue of all newly-exempt horizontal mergers; and that the average target firm revenue of always-exempt horizontal mergers for which Thomson Reuters records target firm revenue equals the average target firm revenue of all always-exempt horizontal mergers. There are 10,302 newly-exempt horizontal mergers and 29,239 always-exempt horizontal mergers over the full panel. Thomson Reuters reports average target firm revenues for these groups of \$8.15 million and \$16.36 million, respectively. I multiply the number of mergers of each type by their respective average target firm revenues, and then sum the two figures, which yields \$407.0 billion.

## **2.3 Comparisons to economy-wide output and concentration changes**

The text states that \$407 billion equals 2% of US of the total US revenue measured at the midpoint of the panel. To arrive at this figure, I turn to the 2002 Economic Census of the US, a comprehensive

survey of commercial activity administered every five years.<sup>2</sup> To provide an appropriate comparison to target firm revenue, I use total receipts rather than value added, the latter of which captures only net output. I also remove industries that have been excluded from the analysis thus far: banks and other depository institution, investment-only vehicles, entities holding certain types of natural resources, entities holding certain types of real property including real estate investment trusts, and hotels without casinos. I also remove tax exempt organizations as well as religious organizations, historical sites, and entities engaged in the performing arts, which are negligible in terms of total output.<sup>3</sup> The remaining industries fall into six broad sectors: manufacturing, retail, wholesale, services, utilities/transportation, and finance. The Economic Census indicates that these sectors accounted for revenue of \$4.943, \$4.084, \$6.193, \$3.726, \$1.017, and \$1.380 trillion, respectively. The sum of these figures equals \$21.3 trillion, of which \$407 billion is 2%.

The text also states that \$407 billion is about 30% of the change in four-firm concentration, i.e. the amount of total US revenue accounted for by the largest four firms in each six-digit NAICS industry. To approximate the change in four-firm concentration, I rely on percentage changes in four-firm concentration reported in Figure 4 of Autor et al. [2017]. For the six aforementioned sectors, these changes equal roughly 3.7%, 14.0%, 4.1%, 3.8%, 8.3%, and 20.7%, respectively. (The change for utilities/transportation industries is reported only from 1992 to 2007, not 1992 to 2012, as the other sectors' industries are. To maintain comparability to the other figures, I scale this figure up by 31/26.) I then scale all figures down by 28/31, since my analysis runs from 1994 to 2011. I multiply the adjusted percentage changes in four-firm concentration by the respective revenue of the six sectors and then sum across sectors for an economy-wide change. The result is \$1.4 trillion, of which \$407 billion is 30%.

### **3 Information pertaining to the research design**

#### **3.1 Assumptions related about the Amendment**

An assumption of this paper is that the Amendment does not substantively affect the outcome variables except through the size-of-transactions test threshold change. Several facts support this. Congress confined the Amendment to changes in the Act, and as the congressional report on the original 1976 legislation emphasizes, the “bill in no way alters the substantive legal standard of Section 7 [of the

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<sup>2</sup>The Census Bureau hosts this data on the American Fact Finder website as of July 10, 2018. <https://factfinder.census.gov/>.

<sup>3</sup>Specifically, this results in removing three-digit NAICS industries 521, 522, 523, 525, 531, 532, 533, 711, 211, 236, 237, 238, 324, 813, 711, and 712.

Clayton Act]” which is the section of US law governing governing merger control. That is, the Act did not dictate any changes about which mergers should and should not be challenged. Further supporting this point, one of the Act’s sponsors, Representative Peter Rodino, stated that “The [Act] makes procedural, rather than substantive changes in the Nation’s antitrust laws” [Howell, 2001].

The Amendment made two other changes, though these are either inconsequential to the results of the paper or are directly accounted for in the analysis. First, the Amendment increased fees levied on some mergers, though these are negligible from the standpoint of the merging parties. Specifically, the fee for transactions valued at less than \$50 million remained at \$45,000. For transactions valued at at or above \$50 million but below \$500 million, fees increased from \$45,000 to \$125,000; for transactions at or above \$500 million, fees increased to from \$45,000 to \$200,000. Thus, the fee increase amounted to less than 0.0016 of the transaction value in the worst case.

Second, the Amendment stipulated that all thresholds will increase at the annual rate of growth of gross national income, based on a September 30 fiscal year basis, beginning fiscal year 2005. The nominal, observed transaction size, target revenue, and target asset values are deflated accordingly in the data to maintain consistent transaction-related values relative to the HSR-imposed thresholds. (The adjustments are described precisely in the following section.)

### **3.2 Choice of empirical framework**

The setting tends to preclude the use of a “regression discontinuity” research design, i.e. one that relies on a discontinuity in the probability mass function of transaction values at the amended threshold. One reason is that merging parties tend to agree on salient round number values and the US legislature selected such a value for the amended threshold. To illustrate, there are 5, 7, 9, and 10 deals valued on the intervals [\$49.75MM, \$49.85MM), [\$49.85MM, \$49.95MM), [\$50.05MM, \$50.15MM), and [\$50.15MM, \$50.25MM), respectively, but 293 deals at exactly \$50,000,000. One has look as far below \$50MM as \$45MM and as far above \$50MM as \$55MM to find comparable mass in the distribution, and even still, only 200 and 142 targets transact at these values, respectively.

Note that one possible—even ostensibly likely—response to the Amendment is to adjust transaction values so that they fall just below the revised threshold of \$50 million. (Data that “bunches” above or below a threshold, reflecting individuals’ or organizations’ attempts to avoid or be bound by regulation, is certainly common elsewhere in the economics literature.) With respect to the US premerger notification program, though, this behavior is explicitly forbidden. The language of the Act

per se prohibits the manipulation of transaction values, assets, or sales to avoid notification. Violations would presumably entail very large penalties, as well as subject the firms to intense subsequent scrutiny (and the legal costs associated with it).

## 4 Dataset construction

### 4.1 Where the source is the “Hart-Scott-Rodino Annual Report”

Individual HSR filings are neither published publicly nor subject to FOIA requests. However, the agencies conveniently bin the filings based on their characteristics—most critically, transaction size—and then report the number of filings within each bin each year. The agencies also report raw, aggregated counts of transactions by month. The data can be accurately extracted via optimal character recognition back to 1994.<sup>4</sup> The raw values require adjustments, e.g. from a September 30 fiscal year basis to a calendar year basis. These are described below. It may be useful to point out, though, that these adjustments do not drive any results in the paper, and in particular, that they do not “create” the dramatic decline in notifications evidenced by Figure I in the body of the main text. The proportional drop is nearly identical when one uses the raw counts of notifications.

To arrive at *Newly-exempt notifications*, I start with the number of filed transactions valued below \$50 million, provided in the Annual Report’s Exhibit A Table I. To arrive at *Never-exempt notifications*, I start with the number of filed transactions valued at or above \$50 million, also provided in the Report’s Exhibit A Table I. I make three adjustments. First, some deals involve transfers of small ownership stakes, which are not relevant for the purposes of my paper. They presumably do not transfer control, and indeed they are hardly ever investigated, as the Annual Reports show. To exclude these deals, I turn to the Annual Report’s Exhibit A Table V. In the pre-Amendment years, the table reports deals that involve transfers of less than 25% but do not meet any dollar-based threshold. I remove these from *Newly-exempt notifications*. In all years, the table reports deals that involve an ownership transfer of less than 25% but met the dollar-based size-of-transactions test threshold. I remove these from *Never-exempt notifications*. Second, some deals involve undefined industry classifications, as shown in the Annual Report’s Exhibit A Tables X and XI. In particular, the SIC and NAICS codes are described as either “not defined,” “not available,” or “non-classifiable,” which the Annual Report states represent “newly-formed companies, companies with no United States operations and notifications filed by some

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<sup>4</sup>They are currently hosted on the FTC website as of May 15, 2018. <https://www.ftc.gov/policy/reports/policy-reports/annual-competition-reports>.

individuals” as well as “filings by newly-formed entities.” These are irrelevant for the purposes of my paper, so I remove them. Third, the resulting counts are converted from a September 30 fiscal year end basis to a calendar year end basis. To do so, I multiply the figures that result from the steps up until this point by the ratio of calendar year HSR-related transactions to fiscal year HSR-related transactions. It is straightforward to compute this ratio from the Annual Report’s Appendix B Table 1, which provides HSR-related transaction counts by month.

To arrive at *Never-exempt investigations*, I count “clearances” related to transactions valued below \$50 million. (See the body of the main paper for why these actions are labelled as such.) Analogously, to arrive at *Newly-exempt HSR-only investigations* within the purview of the Act, I use “clearances” related to transactions valued at or above \$50 million.

To arrive at *Blocked mergers*, I count the number of deals that the agencies state were abandoned due to a filed challenge or were abandoned when the agencies informed the parties of their intent to challenge. These are not broken down by deal size, though there are very few, as shown in Table I, so I omit an otherwise lengthier discussion of the measurement issues this could have introduce.

#### **4.2 Where the source is the DOJ “Workload Statistics Report”**

To arrive at *Newly-exempt investigations*, I add the number of *Newly-exempt HSR-only investigations* and the number of investigations into mergers outside the purview of the Act. To arrive at the latter measure, I turn to the Statistics Report, which reports “non-HSR civil investigative demands” each year. Two aspects of this measure should be noted. First, I do not observe the FTC’s figure, so I approximate the total by merely doubling the DOJ’s figure. Along all other merger control measures, the agencies are highly correlated, so this is very unlikely to impact the results. (For example, the correlation between FTC and DOJ formal merger enforcement actions between 1994 and 2011 is 77%, and each contribute almost equally to the total, with the FTC taking 414 actions and the FOJ taking 411.) Second, “non-HSR” measures in the Statistics Report technically include both newly-exempt and always-exempt mergers, so there are so few of these in total that this limitation does not affect the analysis in a meaningful way. Thus, I omit an otherwise lengthier discussion of the measurement issues this could have introduced.

#### **4.3 Where the source is Thomson Reuters**

I extract data from the “Thomson Reuters Mergers & Acquisitions” database using “Thomson ONE,” an web-based graphical user interface. The database is the industry-leading source of information

on worldwide ownership changes and serves as the basis for a host of Thomson Reuters products. For example, it is the basis for SDC Platinum, Deals Business Intelligence, and Eikon, which provides critical, real-time analysis to practitioners, including investment and commercial bankers. Note that each product is based on the same underlying merger data. They differ only in their presentation, timeliness of reporting, or non-merger data. Thomson Reuters data is updated as information is released. Among deals of a non-trivial size, i.e. those that satisfy the Act's size-of-persons test, the coverage and accuracy is likely to be very good, provided one does not use data from the prior few years. As evidence of this, the number and value of US M&A deals it provides track closely to aggregates provided by FactSET, an unrelated data source, until about 2012 to 2013. Note that adding these additional years does not affect the magnitude or significance of the main estimates.

Within the Thomson ONE interface, I extract data that satisfies the following criteria: "Deal Type" = "All Mergers & Acquisitions", and either "Target nation" = "United States of America" or "Acquiror nation" = "United States of America." The restrictions to US-based transactions follows from 16 CFR Sections 802.50 and 802.51, which exempt the acquisition of non-US interests and assets. Once the data is downloaded, I facilitate the use of string commands by placing acquirer and target names, "macro" and "micro" descriptions, and short business descriptions into lower case to facilitate string commands. As per the Act, some transactions are excluded.

- Following 16 CFR Section 802.30, which exempts intraperson transactions, I exclude any deals where the acquirer and target name are the same. This involves dropping only 300 observations. These are presumably buyback tender offers (or other financial or legal maneuvers unrelated to control changes).
- Following 16 CR Section 802.3(a), effective 1996, which exempts carbon-based mineral reserves acquisitions, I exclude deals where the "target short description" includes "coal " or "oil and gas" starting in 1996. (Technically, this exempts only said assets below \$500 million, but since it may be combined with other exemptions, this probably covers all carbon-based acquisitions. In any case, there are only 150 such deals in question.)
- Following 16 CFR Section 6802.2(e), which exempts hotels and motels without casinos, I exclude observations where the "target micro code" equals "HOTEL" and the "target short business description" does not include "casino."
- Following 16 CFR Section 802.9, which exempts "investment purposes only" deals, I exclude observations where the acquirer is an investment entity and Thomson ONE does not provide

the proportion of shares acquired or owned. I assume the acquirer is an investment entity if the “acquirer macro description” is “financials” but the following phrases do not appear in the “acquirer short business description”: “credit,” “ins br,” “ins co,” “insurance,” “risk mgmt,” “financing,” “audit,” “accounting.”

- Following 16 CFR 802.63, which excludes acquisitions related to default on bona fide credit transactions, I exclude observations where the acquirer name is “creditor” or the “acquisition techniques” include “liquidation” or “bankruptcy acquisition.”
- Following Section 18(a)(c)(1), which exempts real estate investment trusts, I exclude observations “acquirer short business description” includes “reit.”
- Following 16 CFR 802.10, which exempts stock dividends/splits, reorganizations, management buyouts, and related transactions, I exclude observations where the “Acquisition techniques” include “Management Buyout,” “Management Buy-in,” “Recapitalization,” “Leveraged Buyout,” “Repurchase,” “Restructuring,” “Reverse Takeover,” “Acquiror Includes Management,” “Reverse LBO,” “Sale and Leaseback,” “LBO + Management + Employee,” or “LBO + Employee Stock Plan.”
- Following the Federal Deposit Insurance Act, the Bank Holding Company Act, and the Change in Bank Control Act, firms that provide banking services are always subject to at least one antitrust review, and oftentimes overlapping reviews, depending on their size and affiliation. Since these are unaffected—or at least much less affected—by the Amendment, I exclude banks. In particular, I exclude observations where the “target short business description” includes “bank,” the latter of which is Thomson Reuters’ common abbreviation.

I exclude observations where the percentage of shares acquired or owned is less than 15%. Only about forty observations are dropped. I also drop deals where one of these acquisition measures is over 100%. These are obviously errors, and there are only ten such observations. When these measures are missing, I replace them with 100%; a very large share of observations entail 100% transfers of ownership, so if Thomson Reuters failed to record the value, the number is very likely to be 100%. I replace the target’s total assets with its net assets when the the former is missing but the latter is not; this applies only to a very small number of transactions.

I define a transaction as never-exempt when its adjusted transaction value is greater than or equal to \$50MM, or the target’s adjusted net sales are greater than or equal to \$50MM, or the target’s adjusted

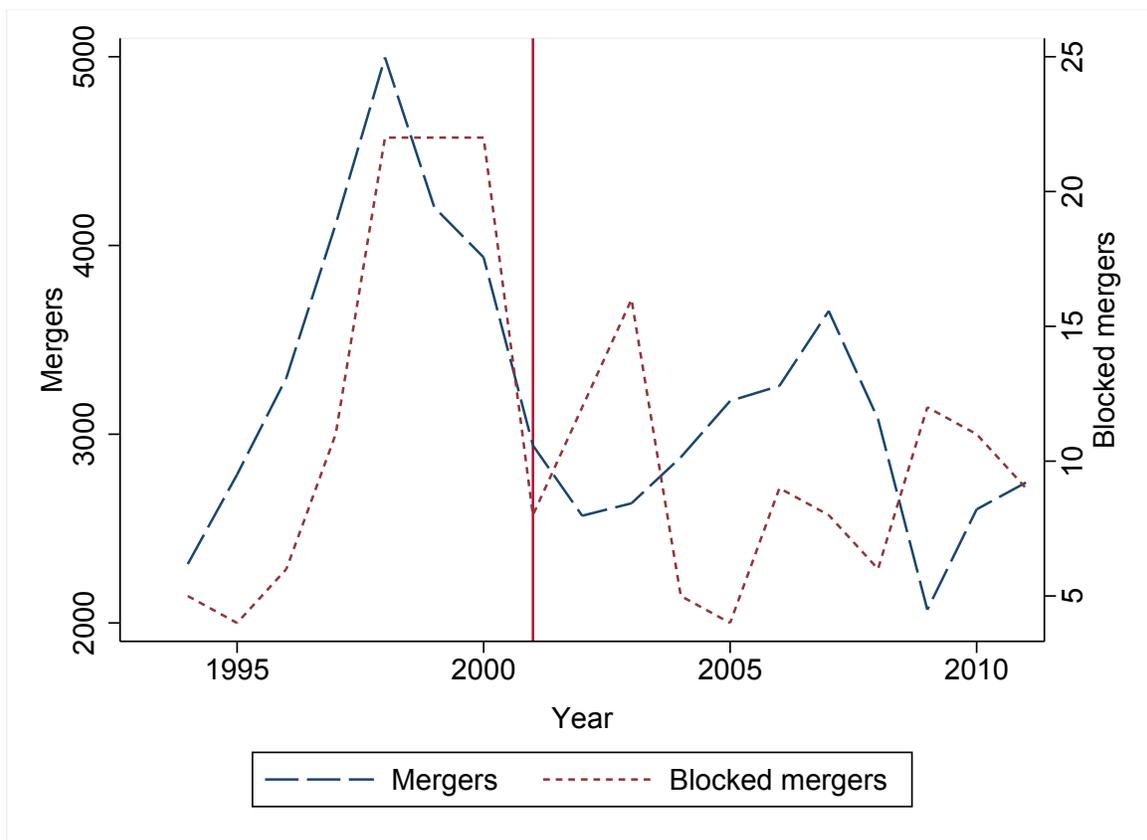
total assets are greater than or equal to \$50MM. I define a transaction as newly-exempt when its adjusted transaction value is less than \$50MM, or the target's adjusted net sales are between \$10MM and \$50MM, or the target's adjusted total assets are between \$10MM and \$50MM. Finally, I exclude all deals where I observe that the target's adjusted total assets are less than \$10MM. These transactions do not meet the size-of-persons test, i.e. they are always exempt from the Act.

"Adjusted" values are merely raw values that are deflated as per the Amendment. Beginning in 2005, asset, revenue, and transaction value cutoffs are scaled by GNI relative to its 2003 value. (See the following section for details.) Thus, I multiply these figures by 1/1.063, 1/1.1324, 1/1.196, 1/1.262, 1/1.303, and 1/1.269 for transactions completed in the periods beginning March 2005 and February 2006, 2007, 2008, 2009, 2010, and 2011, respectively. As an example, a transaction meets the size-of-transaction test if the transaction value is \$51MM in April of 2004 but not April of 2005, since the test's threshold was revised upwards by GNI growth of 6.3% by the later date. These provide "adjusted" dollar values.

## References

- David Autor, David Dorn, Lawrence F Katz, Christina Patterson, and John Van Reenen. The fall of the labor share and the rise of superstar firms. NBER Working Paper No. 23396, 2017.
- Andrew G Howell. Why premerger review needed reform-and still does. Wm. & Mary L. Rev., 43: 1703, 2001.
- Thomas Wollmann. Stealth Consolidation: Evidence from an Amendment to the Hart-Scott-Rodino Act. Working paper, 2018.

## Figures



**Figure I:** Blocked mergers track closely with mergers but are very infrequent.

This figure plots blocked transactions and mergers over time, with the primary y-axis counting the former and the secondary y-axis counting the latter. (Note the difference in the axes' scale.) A vertical line marks 2001, the year the Act was amended to raise the size-of-transactions threshold.

## Tables

**Table I: Summary statistics**

|                                      | N  | Mean  | Median | Std. Dev. | Minimum | Maximum |
|--------------------------------------|----|-------|--------|-----------|---------|---------|
| <i>Panel A. Full sample</i>          |    |       |        |           |         |         |
| All notifications                    | 18 | 1,748 | 1,147  | 1,125     | 562     | 3,886   |
| Never-exempt notifications           | 18 | 1,055 | 994    | 352       | 558     | 1,750   |
| Newly-exempt notifications           | 18 | 694   | 14     | 885       | 0       | 2,226   |
| All mergers                          | 18 | 3,180 | 3,011  | 749       | 2,070   | 4,996   |
| Never-exempt mergers                 | 18 | 1,379 | 1,335  | 370       | 675     | 2,119   |
| Newly-exempt mergers                 | 18 | 1,801 | 1,699  | 414       | 1,395   | 2,877   |
| All investigations                   | 18 | 317   | 300    | 102       | 154     | 516     |
| Never-exempt investigations          | 18 | 263   | 254    | 49        | 154     | 358     |
| Newly-exempt HSR-only investigations | 18 | 54    | 1      | 69        | 0       | 186     |
| Never-exempt investigations          | 18 | 71    | 18     | 77        | 2       | 216     |
| Blocked mergers                      | 18 | 11    | 9      | 6         | 4       | 22      |
| <i>Panel B. Pre-2001</i>             |    |       |        |           |         |         |
| All notifications                    | 7  | 2,972 | 3,184  | 790       | 1,872   | 3,886   |
| Never-exempt notifications           | 7  | 1,240 | 1,350  | 427       | 645     | 1,750   |
| Newly-exempt notifications           | 7  | 1,732 | 1,825  | 382       | 1,227   | 2,226   |
| All mergers                          | 7  | 3,664 | 3,937  | 919       | 2,312   | 4,996   |
| Never-exempt mergers                 | 7  | 1,536 | 1,618  | 468       | 897     | 2,119   |
| Newly-exempt mergers                 | 7  | 2,128 | 2,074  | 487       | 1,415   | 2,877   |
| All investigations                   | 7  | 421   | 391    | 72        | 339     | 516     |
| Never-exempt investigations          | 7  | 286   | 267    | 44        | 248     | 358     |
| Newly-exempt HSR-only investigations | 7  | 135   | 130    | 31        | 89      | 186     |
| Newly-exempt investigations          | 7  | 160   | 150    | 37        | 101     | 216     |
| Blocked mergers                      | 7  | 13    | 11     | 9         | 4       | 22      |
| <i>Panel C. Post-2001</i>            |    |       |        |           |         |         |
| All notifications                    | 10 | 955   | 967    | 261       | 562     | 1,440   |
| Never-exempt notifications           | 10 | 950   | 965    | 259       | 558     | 1,439   |
| Newly-exempt notifications           | 10 | 5     | 3      | 6         | 0       | 21      |
| All mergers                          | 10 | 2,866 | 2,811  | 444       | 2,070   | 3,653   |
| Never-exempt mergers                 | 10 | 1,271 | 1,293  | 284       | 675     | 1,739   |
| Newly-exempt mergers                 | 10 | 1,595 | 1,520  | 173       | 1,395   | 1,914   |
| All investigations                   | 10 | 251   | 247    | 49        | 154     | 304     |
| Never-exempt investigations          | 10 | 250   | 247    | 49        | 154     | 304     |
| Newly-exempt HSR-only investigations | 10 | 0     | 0      | 1         | 0       | 2       |
| Newly-exempt investigations          | 10 | 12    | 12     | 5         | 2       | 18      |
| Blocked mergers                      | 10 | 9     | 9      | 4         | 4       | 16      |

*This table summarizes the variables used in the analysis. Since the Amendment to the Act is effective February 2, 2001, the calendar year containing the effective date is eliminated from both the "Pre" and "Post" samples for clarity.*

**Table II:** Parameter estimates excluding mergers valued over \$150MM

| VARIABLES                                     | (1)<br>Newly-<br>exempt | (2)<br>All<br>mergers | (3)<br>Never-<br>exempt | (4)<br>Newly-<br>exempt | (5)<br>All<br>mergers | (6)<br>Never-<br>exempt |
|---|-------------------------|-----------------------|-------------------------|-------------------------|-----------------------|-------------------------|
| $I_i^H \cdot I_t^{Post}$ (Newly-exempt)       | .183<br>(.0419)         |                       |                         | 293<br>(81.8)           |                       |                         |
| $I_i^H \cdot I_s^{Exempted} \cdot I_t^{Post}$ |                         | .19<br>(.041)         |                         |                         | 235<br>(50.9)         |                         |
| $I_i^H \cdot I_t^{Post}$ (Never-exempt)       |                         |                       | -.00683<br>(.0537)      |                         |                       | 57.9<br>(37.8)          |
| Observations                                  | 36                      | 72                    | 36                      | 36                      | 72                    | 36                      |
| R-squared                                     | .989                    | .999                  | .986                    | .96                     | .996                  | .947                    |

This table replicates Table I in the body of the main text but removes mergers valued over \$150 million. This excludes about half of mergers in the never-exempt group and may create a better control group for newly-exempt group. The outcome variable counts the number of deals each year by transaction type. (The outcomes are measured in level values in Columns 1-3 and log values in Columns 4-6. The mean of the dependent variable is 6.67, 6.18, 5.69, 862, 597, and 332, for Columns 1-6, respectively. Robust standard errors are reported in parenthesis (See Table I in the body of the main text for other details.)

**Table III:** Parameter estimates excluding the software industry

| VARIABLES                                     | (1)<br>Newly-<br>exempt | (2)<br>All<br>mergers | (3)<br>Never-<br>exempt | (4)<br>Newly-<br>exempt | (5)<br>All<br>mergers | (6)<br>Never-<br>exempt |
|---|-------------------------|-----------------------|-------------------------|-------------------------|-----------------------|-------------------------|
| $I_i^H \cdot I_t^{Post}$ (Newly-exempt)       | .172<br>(.0612)         |                       |                         | 305<br>(91.5)           |                       |                         |
| $I_i^H \cdot I_s^{Exempted} \cdot I_t^{Post}$ |                         | .226<br>(.0594)       |                         |                         | 241<br>(55.5)         |                         |
| $I_i^H \cdot I_t^{Post}$ (Never-exempt) n     |                         |                       | -.0534<br>(.0415)       |                         |                       | 64.2<br>(79.2)          |
| Observations                                  | 36                      | 72                    | 36                      | 36                      | 72                    | 36                      |
| R-squared                                     | .983                    | .996                  | .992                    | .956                    | .995                  | .944                    |

This table replicates Table I in the body of the main text but removes mergers where the acquirer resides in SIC code 7372, "Prepackaged software," which account for a large number of horizontal, exempt deals. The outcome variable counts the number of deals each year by transaction type. (The outcomes are measured in level values in Columns 1-3 and log values in Columns 4-6. The mean of the outcome variable is 6.61, 6.49, 6.37, 832, 747, and 663 in Columns 1-6, respectively. Robust standard errors are reported in parenthesis (See Table I in the body of the main text for other details.)

**Table IV:** Parameter estimates when merger activity is measured in transaction values

| VARIABLES                                     | (1)<br>Newly-<br>exempt | (2)<br>All<br>mergers | (3)<br>Never-<br>exempt | (4)<br>Newly-<br>exempt | (5)<br>All<br>mergers | (6)<br>Never-<br>exempt |
|---|-------------------------|-----------------------|-------------------------|-------------------------|-----------------------|-------------------------|
| $I_i^H \cdot I_t^{Post}$ (Newly-exempt)       | .0889<br>(.0585)        |                       |                         | 3,979<br>(1,971)        |                       |                         |
| $I_i^H \cdot I_s^{Exempted} \cdot I_t^{Post}$ |                         | .14<br>(.0895)        |                         |                         | 9,002<br>(41,986)     |                         |
| $I_i^H \cdot I_t^{Post}$ (Never-exempt)       |                         |                       | -.0511<br>(.0637)       |                         |                       | -5,023<br>(43,347)      |
| Observations                                  | 36                      | 72                    | 36                      | 36                      | 72                    | 36                      |
| R-squared                                     | .983                    | .999                  | .986                    | .938                    | .99                   | .941                    |

*This table replicates Table I in the body of the main text but replaces the number of mergers with the transaction values associated with those mergers. The outcomes are measured in log values in Columns 1-3 and level values in Columns 4-6. The mean of the outcome variable is 9.54, 11.10, 12.64, 15,560, 185,614, and 355,668 in Columns 1-6, respectively. Robust standard errors are reported in parenthesis (See Table I in the body of the main text for other details.)*