

**Readme file for data and code submitted to *Management Science* for:
“The Information Asymmetry Effects of Expanded Disclosures about
Derivative and Hedging Activities”**
Thomas D. Steffen, Yale University

The following table lists the various tabulated and untabulated analyses from the main paper and the internet appendix, along with the corresponding code and datasets that were submitted to *Management Science* in conjunction with the final manuscript.

<i>Tabulated results from the main paper</i>		
Analysis	Dataset(s)	Code
Table 1, Panel A*	N/A	N/A
Table 1, Panel B	tds_data1.dta	tds_code_main.do
Table 2	tds_data1.dta	tds_code_main.do
Table 3, Panel A	tds_data1.dta	tds_code_main.do
Table 3, Panel B	tds_data1.dta	tds_code_main.do
Table 4	tds_data1.dta	tds_code_main.do
Table 5, Panel A	tds_data1.dta	tds_code_main.do
Table 5, Panel B	tds_data1.dta	tds_code_main.do
Table 5, Panel C	tds_data1.dta	tds_code_main.do
Table 6, Panel A	tds_data2.dta	tds_code_main.do
Table 6, Panel B	tds_data1.dta, tds_data_boot.dta	tds_code_boot.do
Table 7	tds_data1.dta	tds_code_main.do
Table 8, Panel A	tds_data1.dta	tds_code_main.do
Table 8, Panel B	tds_data1.dta	tds_code_main.do
Table 9	tds_data1.dta	tds_code_main.do
<i>Untabulated results from the main paper</i>		
Analysis	Dataset(s)	Code
Factor analysis (footnote #21)	tds_data1.dta	tds_code_main.do
Pearson's χ^2 (Section 3.2)	tds_data1.dta	tds_code_main.do
Coarsened exact matching and entropy balancing (Section 4.3.1 and footnote #30)	tds_data1.dta	tds_code_main.do
Alternative specifications from Table 8 Panel B (footnote #34)	tds_data1.dta	tds_code_main.do
Wald tests in Table 9 (Section 5)	tds_data1.dta	tds_code_main.do
<i>Tabulated results from the internet appendix</i>		
Analysis	Dataset(s)	Code
Figure IA.2, Panel A	tds_data4.dta	tds_code_intappendix.do
Figure IA.2, Panel B	tds_data4.dta	tds_code_intappendix.do
Figure IA.2, Panel C	tds_data4.dta	tds_code_intappendix.do
Figure IA.2, Panel D	tds_data4.dta	tds_code_intappendix.do
Table IA.2, Panel A	tds_data1.dta	tds_code_intappendix.do
Table IA.2, Panel B	tds_data1.dta	tds_code_intappendix.do
Table IA.3	tds_data3.dta	tds_code_intappendix.do
Table IA.4	tds_data3.dta	tds_code_intappendix.do
Table IA.5	tds_data5.dta	N/A ⁺

Untabulated results from the internet appendix

Analysis	Dataset(s)	Code
Main results from Table 4 with <i>DHCI</i> as additional control (p. 2)	tds_data1.dta	tds_code_intappendix.do
Real effects results with $POST \times \Delta DHCI$ as additional control in <i>DHDISC</i> models from Table 8 (p. 2)	tds_data1.dta	tds_code_intappendix.do

* The sample selection procedures and number of firms lost with the various criteria shown in Panel A of Table 1 were recorded manually by reviewing log files during the data assembly described below.

+ There is no code file associated with Table IA.5 because the dataset (tds_data5.dta) contains the counts for each dictionary item as a separate column. The dataset itself was simply exported to Excel and sorted in descending order to create Table IA.5.

For each of the Stata .do files mentioned in the table above, I have submitted a Stata log file (.smcl) to confirm that the .do files run correctly and produce the desired output. For details on the assembly of the final datasets mentioned in the above table, see the submitted file titled “tds_data_flowchart.pdf”, which presents a flowchart showing the links among the many intermediate programs and datasets that were used. The intermediate programs referenced in this flowchart are also included as part of the data submission to *Management Science*. If any researcher has questions about the programs or processes described in this document, please contact me at thomas.steffen@yale.edu.

The following tables provide descriptions of the variables in each of the datasets referenced above. Many of the descriptions will reference Appendix B of the main paper where detailed definitions are already provided.

Variables in tds_data1.dta, the main firm-quarter panel dataset used for most results in the paper:	
Variable	Description
ABSdRISKEXP	See references to $ \Delta RISKEXP $ in the definition of $\Delta RISKEXP$ in Appendix B
BTM	See Appendix B for <i>BTM</i>
d10KSIZE	See Appendix B for $\Delta 10KSIZE$
datadate	Compustat <i>DATADATE</i> for each firm-quarter
dCASH	See Appendix B for $\Delta CASH$
dCRATING	See Appendix B for $\Delta CRATING$
dCRISIS	See Appendix B for $\Delta CRISIS$
dGROUP	See Appendix B for $\Delta GROUP$
dGROUPscale	dGROUP, scaled by its sample standard deviation obtained from observations with DHFIRM = 1
DHACTIVITY	See Appendix B for <i>DHACTIVITY</i>
DHACTIVITYscale	DHACTIVITY, scaled by its sample standard deviation obtained from observations with DHFIRM = 1
DHACTquint	Quintile ranking of DHACTIVITY used for parallel trends plots in Table 5. Because DHACTIVITY = 0 for 63% of the sample, I group these observations together in the lowest quintile, and the remaining observations with non-zero DHACTIVITY are divided into two groups with each having roughly the same number of observations as each DHDISC quintile.
DHCI	$100 \times CIDERGLQ/ATQ $ using Compustat data. Also see the definition of <i>DHACTIVITY</i> in Appendix B.
DHDISC	See Appendix B for <i>DHDISC</i>
DHDISCquint	Quintile ranking of DHDISC used for parallel trends plots in Table 5

DHDISCscale	DHDISC, scaled by its sample standard deviation from obtained from observations with DHFIRM = 1
DHFIRM	See Appendix B for <i>DHFIRM</i>
DHFIRM_DHACT	An alternative version of DHFIRM used in the coarsened exact matching and entropy balancing analyses. It is an indicator equal to one if DHACTIVITY > 0.
DHFIRM_DHDISC	An alternative version of DHFIRM used in the coarsened exact matching and entropy balancing analyses. It is an indicator equal to one if DHDISC is greater than the median value of -0.2821576.
dLINECREDIT	See Appendix B for <i>dLINECREDIT</i>
dNOTESPAY	See Appendix B for <i>dNOTESPAY</i>
dNUMS	See Appendix B for <i>dNUMS</i>
dNUMSscale	dNUMS, scaled by its sample standard deviation obtained from observations with DHFIRM = 1
DRISK	See Appendix B for <i>DRISK</i>
dRISKEXP	See Appendix B for <i>dRISKEXP</i>
dTABNUMS	See Appendix B for <i>dTABNUMS</i>
dTABNUMSscale	dTABNUMS, scaled by its sample standard deviation obtained from observations with DHFIRM = 1
dWORDS	See Appendix B for <i>dWORDS</i>
dWORDSscale	dWORDS, scaled by its sample standard deviation obtained from observations with DHFIRM = 1
fdate	Filing date of the 10-Q or 10-K corresponding to each firm-quarter in the dataset, obtained from the WRDS SEC Analytics Suite.
ff12	Fama/French 12 industry
firmobsnum	A count variable for each sample firm used to verify that each sample firm has 8 observations and to restrict certain analyses to one observation per firm.
FOLLOW	See Appendix B for <i>FOLLOW</i>
gvkey	Compustat GVKEY
LEV	See Appendix B for <i>LEV</i>
NONDHFIRM	An indicator equal to one if DHFIRM = 0
PASTSTDRET	See Appendix B for <i>PASTSTDRET</i>
POST	See Appendix B for <i>POST</i>
POSTxd10KSIZE	Interaction of POST and d10KSIZE
POSTxdCASH	Interaction of POST and dCASH
POSTxdCRATING	Interaction of POST and dCRATING
POSTxdCRISIS	Interaction of POST and dCRISIS
POSTxdDHCI	Interaction of POST and dDHCI
POSTxdGROUP	Interaction of POST and dGROUPscale
POSTxdDHACTIVITY	Interaction of POST and DHACTIVITYscale
POSTxdHDDISC	Interaction of POST and DHDISCscale
POSTxdLINECREDIT	Interaction of POST and dLINECREDIT
POSTxdNOTESPAY	Interaction of POST and dNOTESPAY
POSTxdNUMS	Interaction of POST and dNUMSscale
POSTxdRISKEXP	Interaction of POST and dRISKEXP
POSTxdTABNUMS	Interaction of POST and dTABNUMSscale
POSTxdWORDS	Interaction of POST and dWORDSscale
PRE1	An indicator equal to one for observations coming one quarter prior to SFAS 161 adoption
PRE1xDHACTIVITY	Interaction of PRE1 and DHACTIVITYscale
PRE1xDHDDISC	Interaction of PRE1 and DHDISCscale
PRE2	An indicator equal to one for observations coming two quarters prior to SFAS 161 adoption
PRE2xDHACTIVITY	Interaction of PRE2 and DHACTIVITYscale
PRE2xDHDDISC	Interaction of PRE2 and DHDISCscale

premean_BT	Firm-specific average of BTM based on each firm's four observations with POST = 0
premean_DRISK	Firm-specific average of DRISK based on each firm's four observations with POST = 0
premean_FOLLOW	Firm-specific average of FOLLOW based on each firm's four observations with POST = 0
premean_LEV	Firm-specific average of LEV based on each firm's four observations with POST = 0
premean_PASTSTDRET	Firm-specific average of PASTSTDRET based on each firm's four observations with POST = 0
premean_PRICE	Firm-specific average of PRICE based on each firm's four observations with POST = 0
premean_ROA	Firm-specific average of ROA based on each firm's four observations with POST = 0
premean_SIZE	Firm-specific average of SIZE based on each firm's four observations with POST = 0
premean_SPREAD	Firm-specific average of SPREAD based on each firm's four observations with POST = 0
premean_TRADESIZE	Firm-specific average of TRADESIZE based on each firm's four observations with POST = 0
premean_TURNOVER	Firm-specific average of TURNOVER based on each firm's four observations with POST = 0
PRICE	See Appendix B for <i>PRICE</i>
qtrdiff	Quarter relative to adoption of SFAS 161. For example, qtrdiff = 0 (-1) for the quarter of adoption (quarter before adoption).
RISKEXPpost	See references to <i>RISKEXP_{POST}</i> in the definition of $\Delta RISKEXP$ in Appendix B
RISKEXPpre	See references to <i>RISKEXP_{PRE}</i> in the definition of $\Delta RISKEXP$ in Appendix B
ROA	See Appendix B for <i>ROA</i>
SIZE	See Appendix B for <i>SIZE</i>
SPREAD	See Appendix B for <i>SPREAD</i>
SPREAD_q5_dhact	Mean value of SPREAD across all observations corresponding to each combination of DHACT _{quint} and qtrdiff.
SPREAD_q5_dhdisc	Mean value of SPREAD across all observations corresponding to each combination of DHDISC _{quint} and qtrdiff.
TIME	Variable used for time fixed effects, generated as the year-quarter corresponding to the fdate variable. For example, if fdate = "May 12, 2008", then TIME = "20082".
TRADESIZE	See Appendix B for <i>TRADESIZE</i>
TURNOVER	See Appendix B for <i>TURNOVER</i>
VIX	See Appendix B for <i>VIX</i>

Variables in tds_data2.dta, the alternative firm-quarter panel dataset based on a pseudo adoption date of SFAS 161 for the analyses in Table 6 Panel A:

Variable	Description
BTM	Same as for tds_data1.dta
datadate	Same as for tds_data1.dta
DHFIRM	Same as for tds_data1.dta
DRISK	Same as for tds_data1.dta
FOLLOW	Same as for tds_data1.dta
gvkey	Same as for tds_data1.dta
LEV	Same as for tds_data1.dta
PASTSTDRET	Same as for tds_data1.dta
POST	Same as for tds_data1.dta
POSTxDHACTIVITY	Same as for tds_data1.dta
POSTxDHDISC	Same as for tds_data1.dta
PRICE	Same as for tds_data1.dta
ROA	Same as for tds_data1.dta
SIZE	Same as for tds_data1.dta
SPREAD	Same as for tds_data1.dta

TIME	Same as for tds_data1.dta
TRADESIZE	Same as for tds_data1.dta
TURNOVER	Same as for tds_data1.dta
VIX	Same as for tds_data1.dta
Variables in tds_data_boot.dta, the dataset used for the bootstrap analysis in Table 6 Panel B where each observation represents one repetition of the model:	
Variable	Description
DHACT_FULL	The $POST \times DHACTIVITY$ coefficient estimate stored for the full sample model.
DHACT_SUB	The $POST \times DHACTIVITY$ coefficient estimate stored for the <i>DHFIRM</i> subsample model.
DHDISC_FULL	The $POST \times DHDISC$ coefficient estimate stored for the full sample model.
DHDISC_SUB	The $POST \times DHDISC$ coefficient estimate stored for the <i>DHFIRM</i> subsample model.
loopnum	The count of the bootstrap repetitions (ranges from 1 to 10,000)
samemean	The sample average over each repetition's data panel for which the value of <i>POST</i> in the true dataset (tds_data1.dta) matches the value of the pseudo values of <i>POST</i> used for the bootstrap repetitions. By construction, samemean should hover around 75%.
Variables in tds_data3.dta, the firm-month panel dataset used for the <i>SPREADRISK</i> models in the internet appendix Tables IA.3 and IA.4:	
Variable	Description
BTM	Same as for tds_data1.dta except that BTM corresponds to the most recent fiscal quarter before the calendar month corresponding to each observation.
datadate	Compustat datadate for the most recent fiscal quarter before the start of the calendar month corresponding to each observation.
DHFIRM	Same as for tds_data1.dta
FOLLOW	Same as for tds_data1.dta except that FOLLOW corresponds to the most recent fiscal quarter before the calendar month corresponding to each observation.
gvkey	Same as for tds_data1.dta
LEV	Same as for tds_data1.dta except that LEV corresponds to the most recent fiscal quarter before the calendar month corresponding to each observation.
MPRICE	Same as for tds_data1.dta except that MPRICE is calculated over the same calendar month corresponding to each observation.
MTRADESIZE	Same as for tds_data1.dta except that MTRADESIZE is calculated over the same calendar month corresponding to each observation.
MTURNOVER	Same as for tds_data1.dta except that MTURNOVER is calculated over the same calendar month corresponding to each observation.
MVIX	Same as for tds_data1.dta except that MVIX is calculated over the same calendar month corresponding to each observation.
PASTMSTDRET	Same as for tds_data1.dta except that PASTMSTDRET is calculated over the calendar month immediately before the month corresponding to each observation.
POST	Same as for tds_data1.dta
POSTxdGROUP	Same as for tds_data1.dta
POSTxdHACTIVITY	Same as for tds_data1.dta
POSTxdHDISC	Same as for tds_data1.dta
POSTxdNUMS	Same as for tds_data1.dta
POSTxdTABNUMS	Same as for tds_data1.dta
POSTxdWORDS	Same as for tds_data1.dta
ROA	Same as for tds_data1.dta except that ROA corresponds to the most recent fiscal quarter before the calendar month corresponding to each observation.
SIZE	Same as for tds_data1.dta except that SIZE corresponds to the most recent fiscal quarter before the calendar month corresponding to each observation.
SPREADRISK	The absolute value of the sum of the coefficients on $DRISK_{d-1}$, $DRISK_d$, and $DRISK_{d+1}$ resulting from firm-month regressions of equation (IA.2) in the internet

	appendix. SPREADRISK captures the association between information asymmetry and movements in a firm's underlying risk factors.
TIME	Variable used for time fixed effects, generated as the year-month corresponding to each observation. For example, if the observation comes from December 2008, then TIME = "200812".
Variables in tds_data4.dta, dataset used for the time series plots in the internet appendix Figure IA.2. This dataset only contains 12 observations because the plots shows averages for two groups of firms for six years:	
Variable	Description
DHFIRM	Same as for tds_data1.dta. If a firm has DHFIRM = 1 in the main dataset, then all its observations for the time series plots have DHFIRM = 1.
fyear_index	Year relative to SFAS 161 adoption. For example, fyear_index = 0 for the year of SFAS 161 adoption, and fyear_index = 1 for the first year after SFAS 161 adoption.
GROUP_avg	The average of the GROUP variable (see Appendix B) across all individual firm-years pertaining to each combination of DHFIRM and fyear_index.
NUMS_avg	The average of the NUMS variable (see Appendix B) across all individual firm-years pertaining to each combination of DHFIRM and fyear_index.
TABNUMS_avg	The average of the TABNUMS variable (see Appendix B) across all individual firm-years pertaining to each combination of DHFIRM and fyear_index.
WORDS_avg	The average of the WORDS variable (see Appendix B) across all individual firm-years pertaining to each combination of DHFIRM and fyear_index.