Internet Appendix: The Supply-Side Determinants of Loan Contract Strictness*

Tables IA.I to IA.III provide additional summary statistics regarding the measure of covenant strictness and default frequencies, as well as several alternative specifications for the main results of the paper. Table AI.1 begins by detailing the distribution of contract strictness by firm rating. Consistent with much of the prior literature linking tighter covenants to riskier firms, highly rated borrowers receive much looser contracts than poorly rated borrowers. Unrated borrowers receive contracts roughly equivalent to those of firms rated between the investment grade and junk cutoff.

Table IA.I also documents the average strictness by year to supplement Figure 1, for which values were smoothed via a moving average filter and then standardized to compare with the senior loan officer survey. Consistent with Figure 1, contract strictness peaked in 1999 and 2001 before a decline in lending standards in 2003 through 2007. This lines up intuitively with default counts by year, also reported in IA.I. As described in the main text, defaults are reported by S&P and only include borrowers in *Compustat* and *DealScan*.

Table IA.II considers a number of alternative specifications to those in Tables III and IV in the main paper. Column I allows for lender fixed effects, where lenders that acted as lead arrangers in less than 50 loans are aggregated into a single group. Column II repeats the lender fixed effects regression, eliminating the top three banks in the sample (37% of all transactions). Columns III through VI replace annual time effects with quarterly time effects. The results are quantitatively similar to those of specifications for which only annual dummies are included.

Finally, Column VII of Table IA.II re-estimates the paper's main result replacing the proposed measure of contract strictness with the slack of the net worth covenant, as defined in Table I of the main paper. The effect of defaults on the slackness of the net worth covenant is negative (more defaults begets tighter covenants). However, the number of observations declines as many firms do not receive a net worth covenant.

Table IA.III documents the symmetry of lenders' response to default news, using both the prior year's and prior quarter's default count. In each case, I replace the default count

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variable with two variables–one that captures a relatively low number of defaults (those default counts that are below the lender's average) and one that captures a relatively high number of defaults (those default counts that are above the lender's average). For the variable capturing a relatively high number of defaults, it is zero when the default count is smaller than the lender's average; otherwise it is the observed default count (a variable for below average defaults is similarly constructed). Note that I also standardize both variables so that they are mean zero with a standard deviation of one. Otherwise, the right-skewed distribution of defaults muddles interpretation. The coefficients for both worse and better-than-average default outcomes are surprisingly close (and not statistically distinct). Included in the same specification, neither variable is significant by itself, although a test of joint significance rejects the null that both coefficients are zero. In both Columns III and VI the coefficients are jointly significant at the 10% level.

Table IA.I Additional Summary Statistics

	Strictness by S&P LT Debt Rating						
	Unrated	AAA-AA(+/-)	A(+/-)	BBB(+/-)	BB(+/-)	B(+/-)	CCC(+/-)
Mean	22.90	0.64	7.17	18.16	29.91	30.99	36.38
N	1357	15	175	497	425	168	5
S.D.	19.90	1.91	12.25	17.77	20.80	22.86	29.52

	Strictness by Year						
	1994	1995	1996	1997	1998	1999	2000
Mean	15.73	23.29	20.83	23.01	23.71	29.89	23.94
N	25	67	174	236	142	190	216
S.D.	16.17	23.07	18.79	19.95	19.02	22.31	21.42
	2001	2002	2003	2004	2005	2006	2007
Mean	27.95	23.28	25.59	19.95	18.54	17.29	17.13
N	218	212	254	276	254	189	140
S.D.	22.09	20.02	20.66	19.28	19.08	17.92	17.77

	DealScan Borrower Defaults by Year						
	1994	1995	1996	1997	1998	1999	2000
	1	10	2	1	1	40	49
	2001	2002	2003	2004	2005	2006	2007
	75	52	31	15	11	7	4

Table IA.II Alternative Specifications I

Table IA.II presents borrower fixed effects regressions with bank fixed effects and quarterly time dummies. Bank fixed effects regressions in Columns I and II group lenders with less than 50 observations under a single dummy. Column II excludes transactions led by the top three banks by number of transactions over the sample. Columns III to VI re-estimate the main tables in the paper with quarterly fixed effects. Recent default counts in Columns IV, V and VI exclude defaults in the same state (or country for non-U.S. borrowers) as the contracting borrower, the same one-digit SIC code, or both, respectively. Finally, Column VII (next page) re-estimates the paper's main result replacing the proposed measure of contract strictness with the slack of the net worth covenant, as defined in Table I of the main paper. In each column, covenant controls include the borrower's debt to tangible net worth, fixed charge coverage, current ratio, and ln(tangible net worth). Other variables are as defined in the Appendix of the paper. Standard errors are clustered by borrower and lender, are robust to heteroskedasticity, and are reported in parentheses. ***, **, and * signify results significant at the 1%, 5%, and 10% levels, respectively.

	Bank Fixed Effects		Quarterly Fixed Effects			
Loan Strictness	I	Excl. top 3 banks II	All Defaults III	Different State/ Country IV	Different Industry V	Different Industry & State/ Country VI
Defaults on lender portfolio- past 90 days	0.43***	0.77***	0.38**	0.40**	0.46***	0.48**
	(0.14)	(0.20)	(0.18)	(0.19)	(0.18)	(0.19)
ln(Maturity)	-0.82	1.61**	-0.74	-0.82	-0.85	-0.84
	(0.87)	(0.77)	(0.93)	(0.94)	(0.94)	(0.94)
ln(Amount)	2.28**	1.92	2.14**	2.17**	2.20**	2.14**
	(0.97)	(1.28)	(1.00)	(1.01)	(1.01)	(1.00)
Secured	0.62	0.55	0.96	1.00	1.04	1.00
	(2.00)	(1.79)	(1.86)	(1.86)	(1.88)	(1.88)
ln(# of participants)	1.22*	0.83	1.34	1.26	1.24	1.27
	(0.68)	(0.90)	(0.87)	(0.87)	(0.86)	(0.86)
Borrower Z-score	-1.39***	-1.80**	-1.38***	-1.40***	-1.39***	-1.40***
	(0.37)	(0.71)	(0.43)	(0.43)	(0.42)	(0.43)
Observations	2,289	942	2,289	2,275	2,275	2,275
R^2 (partial, excluding unreported fixed effects)	0.17	0.22	0.19	0.20	0.20	0.20
Ratings dummies	YES	YES	YES	YES	YES	YES
Borrower fixed effects	YES	YES	YES	YES	YES	YES
Bank fixed effects	YES	YES	NO	NO	NO	NO
Covenant controls	YES	YES	YES	YES	YES	YES
Loan year dummies	YES	YES	NO	NO	NO	NO
Loan quarter dummies	NO	NO	YES	YES	YES	YES
Loan type dummies	YES	YES	YES	YES	YES	YES

Table IA.II Alternative Specifications (cont).

Slack Net Worth Covenant*100	VII
Defaults on lender portfolio- past 360 days	-0.08**
	(0.04)
ln(Maturity)	-1.01
	(0.70)
ln(Amount)	0.13
	(0.72)
Secured	-0.42
	(1.05)
ln(# of participants)	-0.72
	(0.85)
Borrower Z-score	0.93*
	(0.48)
Debt/Tangible net worth	0.48***
	(0.15)
Fixed charge coverage	-0.00
	(0.04)
Current ratio	1.86***
	(0.70)
ln(Tangible net worth)	5.81***
	(1.36)
Observations	914
R^2 (partial, excluding unreported fixed effects)	0.28
Ratings dummies	YES
Borrower fixed effects	YES
Covenant controls	YES
Loan year dummies	YES
Loan type dummies	YES

Table IA.III Symmetry of Response

Table IA.III considers the symmetry of response to lender defaults. Annual and quarterly lender defaults prior to contracting are separated into above-average and below-average default counts. When default counts are above the lender's average count, the above-average variable reflects the default count, otherwise it is zero. Below average default counts are constructed similarly. Both are standardized so the coefficient magnitude reflects the impact of a one-standard deviation change in defaults. Column VII excludes defaults in the same state (or country for non-U.S. borrowers)/one-digit SIC code as the contracting borrower. Covenant controls include the borrower's debt to tangible net worth, fixed charge coverage, current ratio, and ln(tangible net worth). Other variables are as defined in the Appendix of the paper. Standard errors are clustered by borrower and lender, are robust to heteroskedasticity, and are reported in parentheses. ***, **, and * signify results significant at the 1%, 5%, and 10% levels, respectively.

							Different Industry & State/Country
Loan Strictness	I	II	III	IV	V	VI	VII
Defaults on lender portfolio- past 360 days (above ave. #)	0.59		0.49†				
	(0.39)		(0.42)				
Defaults on lender portfolio- past 360 days (below ave. #)		0.61	0.51†				
		(0.43)	(0.47)				
Defaults on lender portfolio- past 90 days (above ave. #)				0.72**		0.58†	0.60*
				(0.36)		(0.39)	(0.36)
Defaults on lender portfolio- past 90 days (below ave. #)					0.67*	0.52†	0.58*
					(0.39)	(0.42)	(0.33)
ln(Maturity)	-0.87	-0.87	-0.88	-0.89	-0.86	-0.88	-0.92
	(0.92)	(0.92)	(0.92)	(0.92)	(0.92)	(0.92)	(0.91)
ln(Amount)	2.32**	2.34**	2.32**	2.35**	2.33**	2.35**	2.26**
	(1.05)	(1.05)	(1.05)	(1.05)	(1.05)	(1.04)	(1.04)
Secured	0.81	0.83	0.82	0.83	0.85	0.85	0.76
	(1.88)	(1.85)	(1.86)	(1.86)	(1.86)	(1.86)	(1.89)
ln(# of participants)	1.27	1.26	1.29	1.26	1.30	1.31	1.36
	(0.86)	(0.86)	(0.86)	(0.86)	(0.86)	(0.86)	(0.84)
Borrower Z-score	-1.39***	-1.37***	-1.39***	-1.40***	-1.36***	-1.39***	-1.40***
	(0.48)	(0.49)	(0.48)	(0.48)	(0.49)	(0.48)	(0.48)
Observations	2,289	2,289	2,289	2,289	2,289	2,289	2,275
R^2 (partial, excluding unreported fixed effects)	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Ratings dummies	YES	YES	YES	YES	YES	YES	YES
Borrower fixed effects	YES	YES	YES	YES	YES	YES	YES
Loan year dummies	YES	YES	YES	YES	YES	YES	YES
Loan type dummies	YES	YES	YES	YES	YES	YES	YES
Covenant Controls	YES	YES	YES	YES	YES	YES	YES

† Implies lender above average and below average defaults are jointly significant at the 10% level.