Internet Appendix for "Bankruptcy and the Collateral Channel"

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This appendix contains tables that supplement the analysis in the published article. Table IA.I displays results that allows for heterogeneous responses to the 9/11 shock. Table IA.II presents results on the interaction between the bankrupt buyers measure and the redeployability of tranche collateral. Table IA.III reports the effect of bankrupt buyers on tranches with and without liquidity facility, and Table IA.IV separately analyzes the relation between bankrupt buyers and credit spreads for buy and sell transactions. Table IA.V shows that the relation between bankrupt buyers and credit spreads is robust to the inclusion of insurance company type fixed effects. Similarly, Table IA.VI controls for both buyer and seller effects. Finally, Table IA.VII presents results for the 2006 to 2007 time period.

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I. Additional Robustness Tests

A. Industry Conditions and Airline Heterogeneity

We add to the analysis in Table VI a dummy variable for the post-9/11 period, during which average American airline profitability fell drastically.¹ We use the post-9/11 dummy as an additional industry control and find that, indeed, credit spreads are much higher in the period following the 9/11 attacks. Moreover, we interact airline fixed effects with the 9/11 dummy to control for heterogeneity in airlines' response to this severe industry shock. As Table IA.I shows, the coefficient β_1 is still statistically significant and is again stronger than in our baseline regressions.

TABLE IA.I ABOUT HERE

B. The Collateral Channel and Aircraft Redeployability

Following Shleifer and Vishny (1992), we hypothesize that if assets are more redeployable, potential buyers entering financial distress should have a smaller impact on collateral values and credit spreads. Therefore, the positive relation between *Bankrupt Buyers* and tranche credit spreads exhibited in Table VI should be lower for tranches with more redeployable collateral.

To test this conjecture, we regress tranche credit spreads on the *Bankrupt Buyers* measure, our measure of tranche redeployability that is based on the number of aircraft, and the interaction between *Bankrupt Buyers* and tranche redeployability. As independent variables we also include our regular set of tranche and airline controls, employing both year and either airline or tranche fixed effects. As can be seen in Table IA.II, we find that the interaction term between *Bankrupt Buyers* and the tranche aircraft redeployability measure is indeed negative and significant. While increases in *Bankrupt Buyers* lead to increased spreads, this effect is weaker in more redeployable tranches. For example, for tranches in the 25th percentile of redeployability, having one bankrupt buyer increases spreads by 76.6 basis points, while in contrast the same effect in tranches at the 75th percentile of redeployability is only 20.3 basis points.

TABLE IA.II ABOUT HERE

¹Benmelech and Bergman (2008) report that the average profitability of airlines in their sample is 13.31% for the period 1994 to 2000, and only 4.77% for the period 2001 to 2005.

C. Liquidity Facility and Credit Enhancement

As Table IA.III demonstrates, our results continue to hold for both measures of redeployability, even amongst those tranches with no liquidity enhancement and hence without the possibility of contagion through credit enhancers. The results hold when we include airline or tranche fixed effects, in addition to year fixed effects. Indeed, we find that β_1 , the coefficient on our *Bankrupt Buyers* and *Bankrupt Aircraft* measures, is larger for tranches without liquidity enhancements. Put differently, spreads of tranches without a liquidity enhancement are more sensitive to bankruptcy shocks. This is to be expected: since in default there is no liquidity enhancement, fire sales are more likely, and hence having more potential buyers in financial distress (i.e., *Bankrupt Buyers* is high) is more costly. Similarly, attempting to sell collateral when similar assets are already flooding the market (i.e., *Bankrupt Aircraft* is high) is costly as well.

TABLE IA.III ABOUT HERE

D. Buy vs. Sell Transactions

We address the concern of contagion through holders of securities by subdividing our sample based on whether a transaction represents a sale or a purchase of a tranche by an insurance company and rerunning our regressions for each subsample separately. As Table IA.IV shows, we find that both of our measures, *Bankrupt Buyer* (Columns 1-4) and *Bankrupt Aircraft* (Columns 5-8), are statistically significant and positively related to credit spreads in both subsamples. Indeed, we find that the coefficient on the bankruptcy measures is twice as large in the "buy" sample as compared to the "sell" sample, in contrast to the hypothesis of contagion by holders of securities.

TABLE IA.IV ABOUT HERE

E. Controlling for Buyer Effects

In an attempt to control for the identities of the insurance companies transacting in tranches, we split the sample into transactions made by Life Insurance firms and those made by Property & Casualty firms.² Our sample comprises 4,780 transactions made by Property & Casualty firms and 11,297 transactions by Life Insurance firms. The analysis in Table IA.V (Columns 1-4) shows that our results are almost identical across insurance company types. We also supplement the analysis by

²The FISD data do not provide the identity of the insurance companies – only their type.

pooling together both types of insurance companies (Life and Insurance & Casualty) and controlling for the state of the insurance industry using the industry average market-to-book ratio (Q). Using Compustat we calculate the average market-to-book ratio of insurance companies in either the Life insurance industry (four-digit SIC 6311) or the Property & Casualty Insurance industry (four-digit SIC 6331). Our results remain unchanged.

TABLE IA.V ABOUT HERE

F. Controlling for Vendor Fixed Effects

In order to further alleviate concerns about contagion through security holders we collect data on the identity of the vendors involved in the transaction. For 3,205 of our sample transactions we are able to identify the vendor (broker or dealer) selling or buying the security from the insurance company. There are 45 individual vendors (typically, investment banks, commercial banks, or brokers) in this subsample. Using this subsample, the last four columns of Table IA.VI report regression results from estimating the effect of both *Bankrupt Buyers* (Columns 1-2) and *Bankrupt Aircraft* (Columns 3-4) on credit spreads, controlling for either airline+year or tranche+year fixed effects as well as vendor fixed effects. As Table IA.VI shows, our results hold in this cut of the data as well. Consistent with the collateral channel, both *Bankrupt Buyers* and *Bankrupt Aircraft* are positively related to tranche credit spreads, even when controlling for vendor fixed effects.

TABLE IA.VI ABOUT HERE

G. The Financial Crisis

One concern with our analysis is the possibility that unusual circumstances related to forced asset sales during the current financial crisis are driving our results. Indeed, Table IA.VII reports regression results for the years 2006 to 2007 only, and confirms that the collateral channel had a much bigger effect during these years. In the paper, to alleviate concerns that the financial crisis is driving our results, we exclude the last two years of our sample from our regressions and show that the results continue to hold using this slice as well (see Table XII). Hence, while the collateral channel may be even more important during financial crises, our results are not driven by the sell-off of asset-backed securities during the crisis.

TABLE IA.VII ABOUT HERE

References

Benmelech, Efraim, and Nittai K., Bergman, 2008, Liquidation values and the credibility of financial contract renegotiation: evidence from U.S. airlines, *Quarterly Journal of Economics* 123, 1635-1677.

Shleifer, Andrei, and Robert W. Vishny, 1992, Liquidation values and debt capacity: A market equilibrium approach, *Journal of Finance* 47, 143-66.

Table IA.I Industry Conditions and Airline Heterogeneity

The table presents coefficient estimates and standard errors (in parentheses) for credit spread regressions. All regressions include an intercept, yield curve, and default spread controls (short rate, term spread, and default spread), and tranche, year, and airline \times (9/11 dummy) fixed effects. Tranche controls are not included in the explanatory variables as they are absorbed by the tranche fixed effects. Standard errors are calculated by clustering at the tranche level. Variable definitions are provided in Appendix B of the published paper. a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent	Tranche	Tranche	Tranche	Tranche	Tranche	Tranche
Variable=	Spread	Spread	Spread	Spread	Spread	Spread
Bankrupt Buyers	72.657 b	72.561 b	72.657 b			
	(33.558)	(33.482)	(33.558)			
Redeployability	22.985	22.849	22.985			
(operators)	(84.544)	(84.503)	(84.544)			
Bankrupt Aircraft				12.578 b	12.583 b	12.578 b
				(6.169)	(6.181)	(6.169)
Redeployability				7.331	7.005	7.331
(aircraft)				(85.379)	(85.384)	(85.379)
Fuel Price	16.725	16.527	16.725	27.562	27.284	27.562
	(33.233)	(33.157)	(33.233)	(33.159)	(33.088)	(33.159)
Post 9/11/2001	449.652 a	448.698 a	449.652 a	464.231 a	463.264 a	464.231 a
, ,	(114.656)	(114.634)	(114.656)	(120.763)	(120.790)	(120.763)
Number Bankrupt	6.724			8.826		
- · · · · · · · · · · · · · · · · · · ·	(5.975)			(5.844)		
Number Bankrupt/Total		481.291			620.949	
· · · · · · · · · · · · · · · · · · ·		(405.066)			(397.386)	
Number Healthy			-6.724			-8.826 c
			(5.975)			(5.844)
Controls	Airline+	Airline+	Airline+	Airline+	Airline+	Airline+
	Trance+	Trance+	Trance+	Trance+	Trance+	Trance+
Fixed Effects	Tranche+	Tranche+	Tranche+	Tranche+	Tranche+	Tranche+
I IAGU LIIGUUS	Year+	Year+	Year+	Year+	Year+	Year+
	(Airline $FE \times$	(Airline FE:				
	Post $9/11$	Post $9/11$				
# of Tranches	126	126	126	126	126	126
# of Airlines	126 12	126 12	126 12	126 12	120 12	$126 \\ 12$
# of Alfilines Adjusted R^2						
5	0.43	0.43	0.43	0.42	0.42	0.42
Observations	16,877	16,877	16,877	16,877	16,877	16,877

Table IA.II The Collateral Channel and Aircraft Redeployability

The table presents coefficient estimates and standard errors (in parentheses) for credit spread regressions. All regressions include an intercept, yield curve, and default spread controls (short rate, term spread, and default spread), and year fixed effects. Standard errors are calculated by clustering at the tranche level. Variable definitions are provided in Appendix B. a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent	Tranche	Tranche	Tranche
Variable=	Spread	Spread	Spread
Bankrupt Buyers	829.870 b	697.815 b	916.790 b
	(300.870)	(359.758)	(380.413)
Redeployability	-19.824	-61.135 a	34.037
(aircraft)	(13.466)	(16.615)	(77.556)
Bankrupt Buyers	-100.569 b	-84.491 c	-109.411 b
×Redeployability (aircraft)	(48.917)	(46.480)	(49.846)
Fuel Price	30.360	32.934	18.680
	(38.163)	(37.939)	(31.790)
Industry Bankruptcy	10.421 c	12.643 b	8.181
•	(5.828)	(5.741)	(5.235)
Amortizing	-147.202 a	-149.039 a	. ,
	(29.970)	(29.551)	
Liquidity	-118.465 a	-107.718 b	
Facility	(38.635)	(42.332)	
Seniority	59.895 a	74.919 a	
	(24.086)	(25.117)	
Tranche Size	-51.281 a	-38.277 c	
	(17.167)	(20.117)	
Call Provision	9.867	11.277	
	(26.641)	(25.919)	
Term-to-Maturity	7.632 a	9.257 a	
· ·	(2.766)	(2.950)	
Airline Size	20.492	10.056	60.729
	(26.864)	(54.486)	(70.868)
Market-to-Book	72.609 c	142.563 a	158.362 a
	(40.445)	(36.358)	(36.002)
Profitability	-825.178 a	-759.749 a	-835.000 a
	(177.675)	(183.694)	(214.498)
Leverage	371.033 a	469.315 a	532.243 a
	(104.170)	(139.444)	(131.639)
Year	Yes	Yes	Yes
Airline	No	Yes	No
Tranche	No	No	Yes
# of Tranches	126	126	126
# of Airlines	12	12	12
Adjusted R^2	0.29	0.30	0.42
Observations	16,877	$16,\!877$	16,877

Table IA.IIIBankruptcy, Collateral, and Liquidity Facility

The table presents coefficient estimates and standard errors (in parentheses) for credit spread regressions. Regressions are estimated separately for tranches with and without a liquidity facility. All regressions include an intercept, yield curve, and default spread controls (short rate, term spread, and default spread), and year fixed effects. Columns 1, 2, 5, and 6 include airline fixed effects, and Columns 3, 4, 7, and 8 include tranche fixed effects. Standard errors are calculated by clustering at the tranche level. Variable definitions are provided in Appendix B of the published paper. a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent Variable=	Tranche Spread	Tranche Spread	Tranche Spread	Tranche Spread	Tranche Spread	Tranche Spread	Tranche Spread	Tranche Spread
Variable	oproud	opread	oproad	oproud	oproad	opredu	Spread	opreda
Liquidity	Yes	No	Yes	No	Yes	No	Yes	No
Bankrupt	67.777 a	135.395 b	82.764 a	166.967 a				
Buyers	(25.533)	(63.067)	(25.449)	(61.483)				
Redeployability	-97.229 a	-69.606 b	150.033	-79.775 c				
(operators)	(35.489)	(30.878)	(114.787)	(44.012)				
Bankrupt	, , , , , , , , , , , , , , , , , , ,	· /		· · · ·	12.400 c	29.277 b	21.709 a	30.093 b
Aircraft					(6.875)	(14.685)	(6.276)	(14.871)
Redeployability					-90.211 a	-57.361 a	132.924	-88.878 c
(aircraft)					(32.425)	(21.335)	(111.723)	(51.387)
Fuel Price	18.400	-3.231	-13.723	33.086	21.004	1.290	-3.439	54.592
	(29.715)	(92.084)	(25.737)	(88.143)	(30.214)	(92.483)	(26.115)	(89.226)
Bankrupt Aircraft	8.506	18.317	0.572	18.254	12.841 b	18.611	2.700	21.738
*	(5.303)	(18.516)	(4.023)	(19.001)	(5.083)	(19.150)	(3.650)	(19.725)
Amortizing	-169.183 a	-524.282	× /	· · · ·	-167.178 a	-45.903	()	()
0	(37.972)	(50.119)			(37.807)	(49.841)		
Seniority	51.341 b	17.430			51.116 b	14.781		
0	(25.268)	(14.521)			(25.145)	(13.167)		
Tranche Size	-58.547 a	8.589			-56.845 a	5.172		
	(19.315)	(39.959)			(18.867)	(38.313)		
Call Provision	13.497	80.722			13.248	132.850		
	(27.165)	(101.094)			(26.737)	(99.730)		
Term-to-	7.673	16.247 a			7.240	17.490 a		
Maturity	(4.647)	(5.677)			(4.616)	(5.522)		
Airline Size	105.648 c	-571.781 a	279.037 a	-645.399 a	94.487 c	-557.362 a	265.443 a	-646.690 a
	(55.535)	(148.925)	(77.233)	(141.341)	(55.924)	(141.116)	(78.573)	(139.232)
Market-to-	102.137 b	233.445 a	156.539 a	243.953 a	92.499 c	225.804 a	180.131 a	226.486 a
Book	(48.156)	(52.513)	(48.921)	(51.984)	(49.099)	(54.061)	(55.328)	(53.230)
Profitability	-736.675 a	-1419.003 a	-758.271 a	-1281.584 b	-707.494 a	-1457.341 a	-724.380 b	-1344.972
U	(226.233)	(477.808)	(285.640)	(477.655)	(223.452)	(481.730)	(283.973)	(491.560)
Leverage	231.231 b	873.821 b	300.723 b	922.223 b	280.112 b	875.744 b	366.212 a	933.772 b
0	(108.597)	(391.267)	(115.008)	(402.482)	(118.055)	(384.146)	(128.752)	395.724
Fixed Effects	Airline+	Airline+	Tranche+	Tranche+	Airline+	Airline+	Tranche+	Tranche+
	Year	Year	Year	Year	Year	Year	Year	Year
# of Tranches	74	52	74	52	74	52	106	52
# of Airlines	8	8	8	8	8	8	8	8
Adjusted R^2	0.34	0.39	0.48	0.43	0.34	0.39	0.47	0.43
Observations	11,922	4,955	11,922	4,955	11,922	4,955	11,922	4,955

Table IA.IV Bankruptcy and Collateral: Buy vs. Sell Transactions

The table presents coefficient estimates and standard errors (in parentheses) for credit spread regressions. Regressions are estimated separately for buy vs. sell transactions. All regressions include an intercept, yield curve, and default spread controls (short rate, term spread, and default spread), and year fixed effects. Columns 1, 2, 5, and 6 include airline fixed effects, and Columns 3, 4, 7, and 8 include tranche fixed effects. Standard errors are calculated by clustering at the tranche level. Variable definitions are provided in Appendix B of the published paper. a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent	Tranche	Tranche	Tranche	Tranche	Tranche	Tranche	Tranche	Tranche
Variable=	Spread	Spread	Spread	Spread	Spread	Spread	Spread	Spread
Variable	oproud	opreud	opread	Spread	oproad	oproad	oproad	oproad
Transaction type:	Buy	Sell	Buy	Sell	Buy	Sell	Buy	Sell
Bankrupt	110.444 a	60.383 b	144.433 a	59.143 b				
Buyers	(30.642)	(30.503)	(25.856)	(29.387)				
Redeployability	-81.692 a	-82.999 a	6.833	42.143				
(operators)	(20.979)	(26.885)	(47.072)	(95.116)				
Bankrupt					$19.297 { m b}$	11.105	32.537 a	12.460 b
Aircraft					(7.833)	(7.384)	(5.450)	(5.835)
Redeployability					-61.481 a	-71.082 a	-25.457	2.767
(aircraft)					(19.136)	(18.949)	(46.323)	(105.003)
Fuel Price	23.362	40.727	30.476	28.395	23.577	43.507	31.527	42.280
	(34.318)	(53.327)	(30.007)	(43.316)	(35.036)	(53.404)	(30.564)	(43.049)
Industry	18.502 b	10.975	8.826	10.765 c	22.749 a	13.603 c	11.387	13.041 b
Bankruptcy	(7.831)	(7.469)	(7.684)	(6.429)	(8.331)	(7.243)	(8.013)	(6.134)
Amortizing	-69.682 a	-216.750 a	· · · ·	· · · ·	-68.845 a	-216.360 a	· · · ·	· · · ·
	(23.002)	(41.982)			(23.034)	(41.990)		
Liquidity	-63.234 a	-130.696 b			-60.732 a	-127.394 b		
Facility	(24.062)	(53.901)			(23.606)	(53.860)		
Seniority	56.103 a	88.491 a			54.267 a	89.020 b		
	(15.309)	(32.788)			(15.091)	(32.446)		
Tranche Size	-30.322 b	-42.569			-32.621 b	-43.071 c		
	(14.868)	(25.895)			(14.328)	(25.228)		
Call Provision	-3.922	27.100			-1.954	27.414		
	(23.143)	(30.860)			(22.811)	(30.823)		
Term-to-	3.694	(001000) 14.194 a			3.767	14.317 a		
Maturity	(2.541)	(3.834)			(2.619)	(3.737)		
Airline Size	-182.706 a	8.121	-108.010	48.105	-169.864 a	8.968	-124.258 c	26.609
	(50.800)	(60.782)	(67.256)	(71.252)	(52.520)	(61.561)	(64.999)	(72.391)
Market-to-	27.051	(00.10 <u>2</u>) 195.413 a	66.158	204.087 a	21.832	(01.001) 185.797 a	58.886	206.652 a
Book	(40.389)	(44.798)	(45.517)	(42.082)	(45.511)	(44.591)	(46.334)	(41.357)
Profitability	-867.058 a	-883.864 a	-894.242 a	-945.221 a	-898.133 a	-844.964 a	-934.818 a	-973.882 a
1 1011000011109	(218.800)	(241.481)	(292.371)	(259.099)	(220.394)	(246.806)	(281.143)	(254.734)
Leverage	(210.000) 389.907 b	(241.401) 503.097 b	(252.571) 518.619 a	(205.055) 532.689 a	(220.554) 419.167 b	(240.000) 519.958 a	(201.145) 568.598 a	(204.134) 558.007 a
20101050	(161.977)	(146.750)	(154.216)	(136.532)	(167.753)	(144.601)	(160.831)	(134.779)
Fixed Effects	Airline+	Airline+	Tranche+	Tranche+	Airline+	Airline+	Tranche+	Tranche+
I IACU LIICUS	Year	Year	Year	Year	Year	Year	Year	Year
# of Tranches	122	125	122	125	122	125	122	125
# of Airlines	9	9	9	9	9	125 9	9	125 9
Adjusted R^2	0.41	0.29	0.53	0.44	0.40	0.29	0.52	0.44
Observations	$0.41 \\ 4,543$		$0.53 \\ 4,543$	0.44 12,334	$0.40 \\ 4,543$	0.29 12,334		0.44 12,334
Observations	4,040	12,334	4,040	12,334	4,040	12,334	4,543	12,334

Table IA.V Bankruptcy and Collateral: Controlling for Buyers Effects

The table presents coefficient estimates and standard errors (in parentheses) for credit spread regressions. Columns 1 to 4 split the sample into transactions made by Life Insurance firms and Property & Casualty firms. Columns 5 to 8 include vendor fixed effects when this information is available. All regressions include an intercept, yield curve, and default spread controls (short rate, term spread, and default spread). Standard errors are calculated by clustering at the tranche level. Insurance Industry Q is defined as the average market-to-book ratio of insurance companies in either the Life Insurance industry (four-digit SIC 6311) or the Property & Casualty Insurance industry (four-digit SIC 6331). Variable definitions are provided in Appendix B of the published paper. a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent Variable=	Tranche Spread	Tranche Spread	Tranche Spread	Tranche Spread	Tranche Spread	Tranche Spread
			Insurance C	ompany Type		
	Life	Property & Casualty	Life	Property & Casualty	All	All
Bankrupt	64.308 b	70.635 b			67.903 b	65.795 b
Buyers	(29.855)	(35.199)			(27.713)	(27.809)
Redeployability	-24.288	126.973			-66.963 a	60.617
(operators)	(45.639)	(147.948)			(22.754)	(76.267)
Bankrupt	()	(11.681 b	16.761 b	()	()
Aircraft			(5.665)	(8.560)		
Redeployability			-103.125 c	142.723		
(aircraft)			(59.012)	(146.438)		
Insurance Industry Q			(39.012)	(140.430)	100.716	104.257
insurance industry Q						
	0.070	9.649	11.950	9 701	(111.634)	(98.489)
Fuel Price	-2.678	-3.643	11.350	3.791	-13.780	-52.056 b
- - .	(37.308)	(36.199)	(36.962)	(40.958)	(21.944)	(22.181)
Industry	11.974 b	11.948	14.148 b	13.666	-1.682	-1.083
Bankruptcy	(5.854)	(8.560)	(5.569)	(8.797)	(2.676)	(2.761)
Amortizing					-151.772 a	
					(29.998)	
Liquidity					-105.614 a	
Facility					(39.878)	
Seniority					78.515 a	
					(24.195)	
Tranche Size					-37.378 c	
					(20.137)	
Call Provision					13.921	
Cuil 1 10Vibioli					(25.820)	
Term-to-					(25.820) 10.440 a	
Maturity						
v	60 FFF	239.292 b	00.050	233.267 b	(3.018)	49.969
Airline Size	-62.555		-99.056		27.565	42.863
	(68.533)	(102.731)	(73.144)	(100.531)	(32.188)	(35.395)
Market-to-	182.051 a	198.587 a	175.113 a	215.834 a	135.690 a	141.119 a
Book	(40.943)	(50.977)	(39.482)	(51.683)	(38.033)	(34.527)
Profitability	-964.045 a	-1080.114 a	-1010.071 a	-1125.129 a	-645.984 a	-650.139 a
	(242.686)	(377.630)	(242.862)	(362.531)	(169.794)	(208.386)
Leverage	526.587 a	453.477 a	538.220 a	503.149 a	$356.020 {\rm \ b}$	427.584 a
	(170.395)	(118.046)	(165.950)	(127.332)	(138.548)	(133.255)
Fixed Effects	Tranche+	Tranche+	Tranche+	Tranche+	Airline	Tranche
	Year	Year	Year	Year		
# of Tranches	125	114	0125	114	126	126
# of Airlines $\#$	9	8	9	9	9	9
Adjusted R^2	0.40	0.51	0.40	0.51	0.29	0.40
Observations	$11,\!297$	4,780	11,297	4,780	16,077	16,077

Table IA.VI

Bankruptcy and Collateral: Controlling for Both Buyer and Seller Effects

The table presents coefficient estimates and standard errors (in parentheses) for credit spread regressions. Columns 1 to 4 split the sample into transactions made by Life Insurance firms and Property & Casualty firms. Columns 5 to 8 include vendor fixed effects when this information is available. All regressions include an intercept, yield curve, and default spread controls (short rate, term spread, and default spread). Standard errors are calculated by clustering at the tranche level. Variable definitions are provided in Appendix B of the published paper. a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent	Tranche	Tranche	Tranche	Tranche	
Variable=	Spread	Spread	Spread	Spread	
		Insurance C	ompany Type		
	All	All	All	All	
Bankrupt	117.002 a	132.696 a			
Buyers	(26.576)	(26.436)			
Redeployability	-55.104 a	34.563			
(operators)	(17.688)	(70.770)			
Bankrupt	((((((((((((((((((((((((((((((((((((((((27.483 a	35.635 a	
Aircraft			(7.563)	(6.420)	
Redeployability			-44.896 a	-22.862	
(aircraft)			(14.725)	(61.606)	
Fuel Price	15.559	26.080	12.096	22.714	
	(31.096)	(31.218)	(30.874)	(30.316)	
Industry	14.773 b	7.475	16.949 b	8.562	
Bankruptcy	(7.143)	(6.691)	(7.443)	(6.760)	
Amortizing	-81.603 a		-83.122 a	()	
0	(19.624)		(19.965)		
Liquidity	-48.380 b		-48.391 a		
Facility	(21.522)		(21.250)		
Seniority	54.520 a		53.967 a		
U U	(12.704)		(12.864)		
Tranche Size	-24.698 c		-25.654 c		
	(13.686)		(13.524)		
Call Provision	-2.145		-3.338		
	(19.905)		(19.640)		
Term-to-	6.279 a		6.464 a		
Maturity	(2.091)		(2.122)		
Airline Size	-167.674 a	-106.798	-153.443 a	-122.438 c	
	(56.602)	(76.184)	(56.222)	(74.078)	
Market-to-	42.761	60.399	48.4114	61.902	
Book	(40.516)	(50.512)	(44.297)	(53.709)	
Profitability	-836.814 a	-1015.691 a	-855.656 a	-1055.192 a	
	(232.109)	(317.440)	(228.368)	(298.504)	
Leverage	294.690 с	341.623 b	289.991 с	$334.793~{\rm c}$	
	(154.183)	(171.582)	(163.154)	(181.100)	
Fixed Effects	Airline+	Tranche+	Airline+	Tranche+	
	Year+	Year+	Year+	Year+	
	Vendor	Vendor	Vendor	Vendor	
# of Tranches	118	118	118	118	
# of Airlines	9	9	9	9	
# of Vendors	45	45 11	45	45	
Adjusted R^2	0.51	0.62	0.51	0.62	
Observations	3,205	3,205	3,205	3,205	

Table IA.VIIBankruptcy Collateral and Investment Grade: 2006-2007

The table presents coefficient estimates and standard errors (in parentheses) for credit spread regressions. All regressions include an intercept, yield curve, and default spread controls (short rate, term spread, and default spread), tranche, firm, and industry controls, as well as airline and year fixed effects. The first column focuses on transactions of tranches with Moody's investment grade credit ratings, while the second column focuses on transactions of tranches with Moody's ratings that are between Aaa and Aa3. The sample period is 2006 to 2007. Standard errors are calculated by clustering at the tranche level. Variable definitions are provided in Appendix B of the published paper. a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Dependent	Tranche	Tranche
Variable=	Spread	Spread
Rating:	Investment	Aaa-Aa3
	Grade	
	Sam_{I}	ple Period
	2006-2007	2006-2007
Bankrupt	350.878 c	1596.11 c
Buyers	(208.917)	(809.820)
Redeployability	-5.346 b	-17.396 b
(operators)	(2.157)	(7.398)
Fixed Effects	Airline+	Airline+
	Year	Year
# of Tranches	50	28
# of Airlines	8	7
Adjusted R^2	0.52	0.59
Observations	1,321	423