

Table 4: Hazard Model predicting exit of hedge funds from the market

This table reports a hazard model that relates the survival rate of each hedge fund to its performance and its use of Lehman Brothers as prime broker. The sample includes all hedge funds in existence as of 2002, as well as all hedge funds formed after 2002 (based on TASS). Hedge funds are assumed to have failed if they drop out of the TASS database. A coefficient greater than one indicates an increasing relationship between the co-variate and the survival probability; a coefficient below one indicates the opposite. We report a Z-statistics that are asymptotically normally distributed under the null that the coefficient equals one.

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
2008 Dummy	2.175	1.5406	1.7103	1.7386	1.7433	1.7414
	19.17**	7.66**	7.18**	7.15**	7.18**	7.18**
Lehman Fund Dummy	0.8025	0.7555	0.7385	0.7164	0.7173	0.6953
	1.31	1.65+	1.32	1.35	1.35	1.45
2008 Dummy*Lehman Fund Dummy	1.9794	2.089	2.3139	2.3112	2.3117	2.2428
	2.91**	3.13**	2.56*	2.48*	2.48*	2.38*
Raw Fund Return	-	0.7308	0.7748	0.8056	0.806	0.8018
	-	16.20**	9.83**	8.11**	8.10**	8.24**
Percentage Net Fund Flow	-	-	0.5566	0.6701	0.6689	0.6685
	-	-	7.14**	5.55**	5.55**	5.60**
Ln(Fund Assets)	-	-	-	0.7417	0.7411	0.744
	-	-	-	9.07**	9.01**	8.98**
Ln(1+ Lockup Period)	-	-	-	-	1.0286	1.0304
	-	-	-	-	1.16	1.22
Ln(1+Redemption Notice Period)	-	-	-	-	0.987	0.991
	-	-	-	-	0.34	0.22
Hedge_Fund Style Fixed Effects?	No	No	No	No	No	Yes
N	13,981	13,680	9,425	8,977	8,977	8,977

Robust z statistics in parentheses

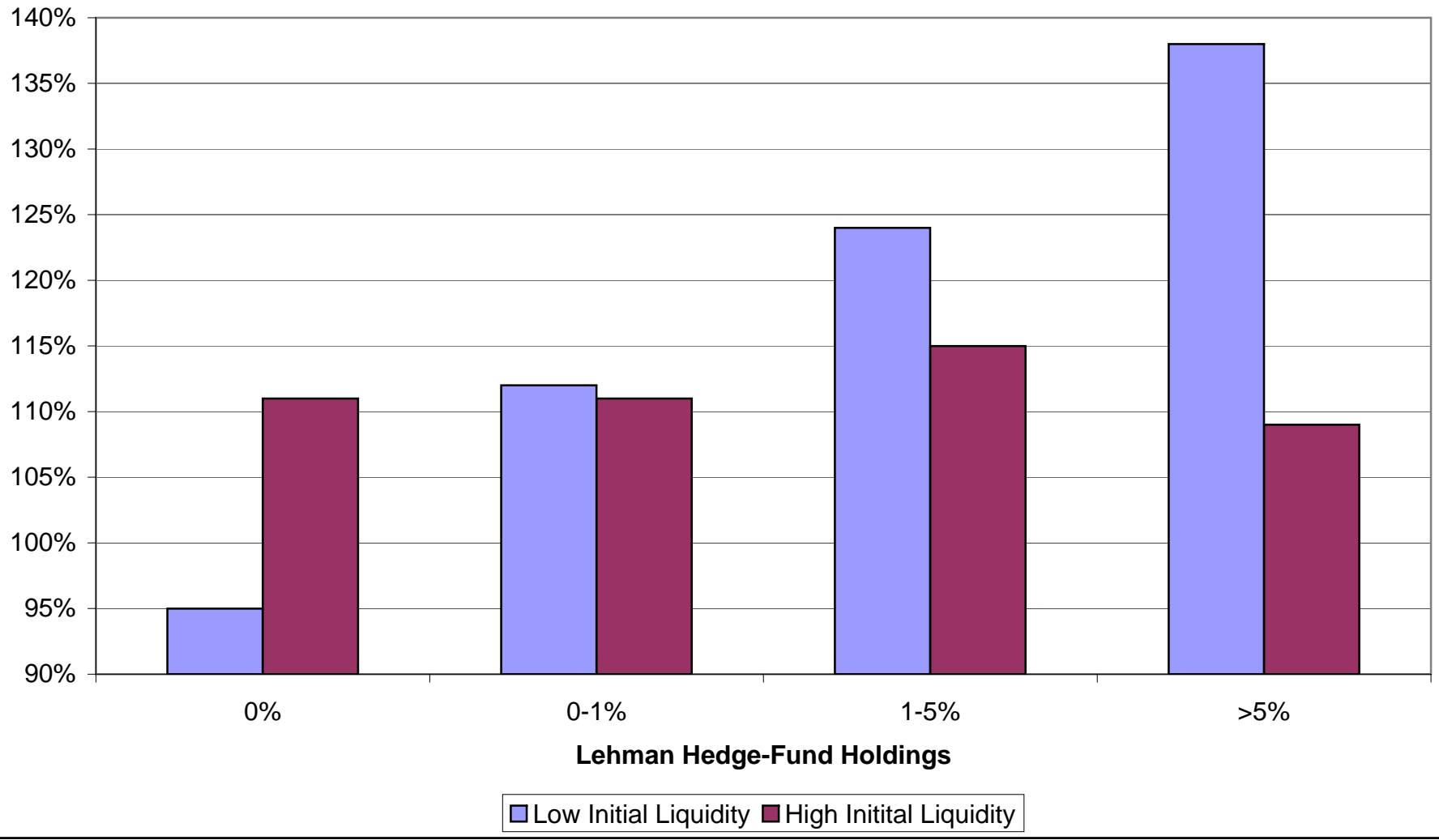
+ significant at 10%; * significant at 5%; ** significant at 1%

the hypothesis that the Lehman hedge-fund ownership effect is equal to the effect of other institutional ownership variables at the 5% level in all four models for Table 6, and in the random effects models in Table 7). In contrast, we find no statistically significant difference in the effects of non-Lehman hedge fund (Row b in Tables 6 & 7) ownership relative to ownership by other institutional investors (Row c in Tables 6 & 7). Our findings thus suggest that institutional ownership overall mitigated the drop in market liquidity that followed Lehman's collapse, which as we have mentioned was followed in quick succession by a series of shocks to the market, including the AIG bailout, runs on money market funds, and dramatic actions taken by the U.S. Treasury, the Federal Reserve and the European Central Bank to try to halt the panic. Thus institutional holdings moderated the adverse consequences of these shocks on market liquidity, but Lehman's hedge-fund clients could not contribute to this moderating effect because their positions were frozen in bankruptcy.¹⁹

In Table 8, we find that the permanent component of price impact for stocks held by Lehman hedge funds actually *declines* significantly, relative to stocks held by others (columns 1-4). This suggests that while overall liquidity is dampened because the Lehman funds could not trade after September 15, the information component of trades, which drives the permanent effect of volume on price, is reduced. Other liquidity suppliers – market makers – face an exogenous drop in the likelihood of trading against potentially well-informed hedge funds when Lehman fails, thus lowering the impact of

¹⁹ We have also tested whether the Lehman-connected stocks earned abnormal returns. To do so, we create a portfolio that includes all stocks in which the Lehman-connected hedge funds owned more than 5%. From these stocks, we compute the daily return (from CRSP), weighted by market values, during the pre and post-Lehman bankruptcy period. The estimate of alpha is not statistically significant in the post-Lehman sample (September 15 – December 30, 2008) in either model; nor is alpha significant in the pre-Lehman sample.

**Figure 2: Percentage Change in Price Impact (Amihud)
by Ex Ante Liquidity Level**



Bitcoin wallet service Company Electrum was hacked, resulting in the loss of user funds.

11 Bitcoin wallet Electrum was hacked and at least 1450 BTCs were stolen.

SBTC-supported wallets are: Coin Letter, Bitpie, Kussin (Hardware Cold Wallet), BYING, Electrum, etc. There are several Litecoin wallets to choose from! Such a good wallet - Electrum Litecoin wallet! View exclusive reviews on Electrum.

Electrum Litecoin Wallet created a 12-word "Wallet Generation" seed. This is just the password that you can recover your wallet in some cases.

In August-September, Bitcoin wallet Electrum was hacked twice, and according to multiple sources, at least 1,450 BTCs worth \$11.6 million were stolen from phishing attacks that faked Electrum upgrade tips.

The UB team has now developed Core, Core-QT, Electrum Wallet (where Electrum is a lightweight wallet that supports multiple signatures) and released a complete blockchain browser. More than 18 trading platforms around the world support UBTC trading.

If someone's Electrum wallet connects to one of these servers and tries to send a BTC transaction, they see an official message telling them to update their Electrum wallet, as well as a scam URL.

In short, if you are looking for a Bitcoin wallet, then you must try Electrum.

Electrum Bitcoin Wallet is the safest wallet available today. L

et's talk about it.

In a forum post on Bitcointalk, website administrator Theymos explained: "If at any time in the past you've logged in to Electrum without a wallet password and opened a web page, your wallet might have been stolen." Particularly paranoid people may want to send all bitcoins (BTCs) from their old Electrum wallets to the newly generated Electrum wallet. "

Bitcoin Wallet Electrum releases Selectrum 4.0 beta support for the Lightning Network.

Use BitHD shields and blades to prevent Electrum wallet "message defects" attacks.

By comparing the electrum-wallet with the official website downloaded by the electrum software, it was found that the software added code to steal a user's wallet and key and sent it back to sites such as Robert Paulson.me, pinnacle-consulting.pw, bestoftechforums.org, which is still alive, proving that the attack is still ongoing.

Last month, GitHub discovered a fake Electrum wallet called "Electrvm" designed to steal user funds. In February this year, the wallet was encrypted.

Get alert: Wallet Electrum was upgraded by the DoS attack, with users allegedly losing millions of dollars.

Electrum is a mobile available Bitcoin wallet that can also be used for Windows, Mac, Linux.

A light wallet, Electrum SV, was released in January, and interested old iron can be used to experience it.



Enjin Coin

liabilities, and the rapid and unprecedented creation of new lending facilities by the Federal Reserve.¹⁶ Since our empirical strategy focuses only on cross-sectional variation, the overall effects of these shocks will be absorbed by the intercept. To the extent that the effects of the crisis differed across firms, we absorb these differences with industry effects (and two measures of firm size).

Table 5 also reports the distribution of our measure of Lehman hedge-fund ownership and overall institutional ownership. We report these from just the pre-crisis period (June 2008) because our empirical strategy holds ownership fixed and asks how its impact on liquidity shifts after the Lehman bankruptcy (Eq. 1). Most of the stocks have very low levels of ownership by hedge funds connected to Lehman, but there are more than 650 stocks with ownership above 1.5% for these hedge funds, and more than 200 have ownership above 5% (Table 5).

Results

We report the liquidity results in Tables 6-8. Table 6 contains the models of the bid-ask spread, and Table 7 contains the results using Amihud's illiquidity measure. We take the log of both of these measures so that the effects of the explanatory variables can be interpreted in percentage terms. Because these two measures are always positive by construction, the log transformation does not change the sample size.¹⁷ Table 8 contains the decomposition of price-impact into its permanent (information cost) and temporary (order-processing cost) components. Neither of these measures is constrained to be positive (although most are), so we do not apply the log transformation. We report four

¹⁶ See Strahan (2009) and Ivashina and Scharfstein (2009) for broader discussion of these issues.

¹⁷ The log transformation also mitigates the influence of outliers.

Table 9: Regression of the Liquidity on Lehman-connected Hedge Fund Holdings, High v. Low Pre-Crisis Liquidity

This table reports cross-sectional regressions of each of the four liquidity measures during the three-months following the Lehman bankruptcy on the log spread before the crisis, market capitalization, and the fraction of the stock held by hedge funds that used Lehman as their prime broker. Each of the regressions is run separately for firms above and below the initial median level of liquidity measured in the pre-crisis months.

	<i>Log of Spread</i>		<i>Log of Amihud Index</i>		<i>Permanent-variable</i>		<i>Temporary-fixed (non</i>	
	<i>High Liquidity₀</i>	<i>Low Liquidity₀</i>	<i>High Liquidity₀</i>	<i>Low Liquidity₀</i>	<i>High Liquidity₀</i>	<i>Low Liquidity₀</i>	<i>High Liquidity₀</i>	<i>Low Liquidity₀</i>
Pre-Crisis Liquidity Measure	0.8047	0.7282	1.0525	0.7687	0.0902	0.2024	0.6027	0.7336
	13.23**	30.54**	22.88**	26.38**	1.06	4.19**	5.01**	9.43**
Log(Market Capitalization)	0.1071	0.0785	-0.0208	0.0723	-0.34	-0.3757	0.0004	0.0054
	3.06**	2.25*	0.59	1.45	1.54	0.54	0.77	0.95
Market Capitalization Rank	-1.1376	-1.375	0.4646	-2.4197	-6.7184	-8.7483	-0.0187	-0.0846
	7.57**	5.34**	1.14	3.15**	2.68**	2.02*	3.07**	2.26*
NASDAQ Stock Dummy	-0.103	0.0542	0.0223	0.1876	-	-	-	-
	4.90**	1.79+	0.5	3.29**	-	-	-	-
(a) Share Held By Lehman Hedge Funds	0.8211	1.0273	-0.4163	1.9126	-7.5403	-19.435	0.0122	0.109
	2.38*	2.14*	0.72	2.52*	1.70+	3.20**	1.16	1.66+
(b) Share Held By Other Hedge Funds	-0.1007	-0.0628	0.1207	-0.4365	-0.28	-1.6518	-0.0068	-0.0483
	0.86	0.45	0.76	2.82**	0.19	0.47	3.08**	3.18**
(c) Share Held By Other Institutions	-0.2026	0.0196	-0.1098	-0.2138	-0.3486	-4.4454	-0.0073	0.0047
	4.01**	0.25	1.54	1.87+	0.4	2.47*	4.16**	0.43
P-value for F-Test that: (a)=(b)	0.018	0.030	0.390	0.004	0.103	0.015	0.080	0.022
P-value for F-Test that: (a)=(c)	0.003	0.035	0.599	0.006	0.118	0.025	0.086	0.131
P-value for F-Test that: (b)=(c)	0.482	0.649	0.229	0.305	0.974	0.530	0.882	0.019
Observations	2,740	3,001	2,706	3,061	1,036	1,031	1,027	1,036
R-squared (within industry)	0.45	0.75	0.89	0.83	0.14	0.17	0.15	0.41
Level of Industry Clustering (Fixed Effects)	3-Digit	3-Digit	3-Digit	3-Digit	3-Digit	3-Digit	3-Digit	3-Digit

+ significant at 10%; * significant at 5%; ** significant at 1%

Lehman failed, Oak Group could not regain its securities or its cash; they became a general creditor of Lehman Brothers. As John James, the head of Oak Group, said, “Without those securities, my strategy has been ruined. Had we had the securities and been able to continue trading, we would have been up about 6% over the last six weeks.” Liu and Mello (2009) show theoretically that even the suspicion of a funding shock can lead to a hedge fund’s demise.

Overall Lehman had lent out in aggregate \$22 billion in securities when it entered bankruptcy (*Euromoney*, 2008). If many of its clients could not trade, the market liquidity of positions held by those clients could reasonably be expected to decline. In fact, this is precisely what is predicted in Brunnermeier and Pedersen (2007). However, linking the failure of Lehman to the level of asset prices is less clear. If liquidity is a priced risk factor, then shocks to market liquidity could lower asset prices, and raise expected returns going forward (e.g. Amihud and Mendelson ,1986; Pastor and Stambaugh, 2003; Acharya and Pedersen, 2005). But in the Lehman case there is anecdotal evidence that some hedge funds faced a short squeeze because securities lenders exposed to Lehman recalled their loans, forcing those borrowers to repurchase shares and putting *upward* pressure on prices (Bloomberg, 2008).³

Measuring Lehman-Exposed Hedge Funds and their Holdings

To implement our empirical tests, we first want to identify those hedge funds that continued to use Lehman as their prime broker when Lehman entered bankruptcy in September of 2008. Second, we want to identify the positions held by those hedge funds. Together these data will allow us to test for spillovers from the bankruptcy to those assets. We are able to build proxies for both of these steps from available data. The

³ See <http://www.bloomberg.com/apps/news?pid=20601213&refer=home&sid=ad09Cf8uGNn0>.