

Oral Testimony of

Luigi Zingales

on

"Causes and Effects of the Lehman Brothers Bankruptcy"

Before the

Committee on Oversight and Government Reform

United States House of Representatives

October 6, 2008

Chairman Waxman, ranking minority Davis, members of the Committee, thank you for inviting me.

The demise of Lehman Brothers is the result of its very aggressive leverage policy in the context of a major financial crisis. The roots of this crisis have to be found in bad regulation, lack of transparency, and market complacency brought about by several years of positive returns.

A prolonged period of real estate price increases and the boom of securitization relaxed lending standards. The quality of these mortgages should have been checked by the capital market that bought them, but several problems made this monitoring less than perfect.

First, these mortgages were priced based on historical records, which did not factor in the probability of a significant drop in real estate prices at the *national* level nor did they factor the effect of the changes in the lending standards on the probability of default.

Second, the massive amount of issuance by a limited number of players (of which Lehman was one) changed the fundamental nature of the relationship between credit rating agencies and the investment banks issuing these securities. As a result, instead of submitting an issue to the rating agency's judgment, investment banks shopped around for the best ratings and even received handbooks on how to produce the riskiest security that qualified for an AAA rating.

The market was not completely fooled by this process. AAA-rated asset backed securities had a higher yield than corporate AAA, a clear indication of the higher risk. Unfortunately, regulatory constraints created inflated demand for these products. Fannie Mae and Freddie Mac were allowed, even induced, to invest their funds on these securities, creating an easy arbitrage: they issued AAA rated debt and invested in higher-yield

AAA debt. Another source of captive demand was money market funds. Being required to hold *only* highly rated securities, money market funds loved these instruments that satisfied the regulatory requirements and boosted their yields. Most managers of these funds were aware of the gamble they were taking, but could not resist taking it, under an intense competition for yield-hungry customers. These managers were also hoping that if a shock occurred, all their competitors would face the same problem, thereby reducing the reputational costs and possibly triggering a Government support. The September 19 decision to insure all money market funds validated this gamble, forever destroying money market managers' incentives to be careful in regard to the risks they take.

The pooling of mortgages, while beneficial for diversification purposes, became a curse as the downturn worsened. The lack of transparency in the issuing process made it difficult to determine who owned what. Furthermore, the complexity of these repackaged mortgages is such that small differences in the assumed rate of default can cause the value of some tranches to fluctuate from 50 cents on the dollar to zero. Lacking information on the quality and hence the value of banks' assets, the market grew reluctant to lend to them, for fear of losing out in case of default.

In the case of Lehman (and other investment banks), this problem was aggravated by two factors: the extremely high level of leverage (asset-to-equity ratio) and the strong reliance on short-term debt financing. While commercial banks cannot leverage their equity more than 15 to 1, Lehman had a leverage of more than 30 to 1. With this leverage, a mere 3.3% drop in the value of assets wipes out the entire value of equity and makes the company insolvent.

In turn, the instability created by the leverage problem was exacerbated by Lehman's large use of short-term debt. Reliance on short-term increases the risk of "runs" similar to the ones bank face when they are rumored to be insolvent.

The Lehman CEO will likely tell you that his company was solvent and that it was brought down by a run. This is a distinct possibility. The problem is that nobody knows for sure. When Lehman went down, it had 26 billion in book equity, but the doubts about the value of its assets combined with its high degree of leverage created a huge uncertainty about the true value of this equity: it could have been worth 40 billion or negative 20. It is important to note that Lehman did not find itself in that situation by accident; it was the unlucky draw of a consciously-made gamble.

Lehman's bankruptcy forced the market to reassess risk. As after a major flood people start to buy flood insurance, after the demise of Lehman the market started to worry about several risks previously overlooked. This risk-reassessment is crucial to support a market discipline. The downside is that it can degenerate into a panic.

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Abstract

I argue that the demise of Lehman Brothers is the result of its very aggressive leverage policy in the context of a major financial crisis. The roots of this crisis have to be found in bad regulation, lack of transparency, and market complacency brought about by several years of positive returns. Lehman's bankruptcy lead to a reassessment of the risk, in particular in the market for credit default swaps.

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The demise of Lehman Brothers can only be understood within the context of the current financial crisis, the biggest financial crisis since the Great Depression. The roots of this crisis have to be found in bad regulation, lack of transparency, and market complacency brought about by several years of positive returns. I will start by explaining these three roots and then I will discuss how Lehman contributed to its own demise and what the consequences of its filing for bankruptcy are.

1. Market Complacency

The seeds of current crisis were sewn during the real estate boom. As Figure 1 shows, a prolonged period of low interest rates lead to a rise in house prices that was completely abnormal by historical standards. From March 1997 to June 2006 the Case and Shiller national index of real estate prices increased every month, except for two. During the same period the average increase in real estate prices was 12.4% per year. This increase was in part fueled by extraordinary low interest rates. Between January 2002 and January 2004 the average 3-month T-bill rate was 1.3%, while the average in the previous forty years was 6.1%.

This sustained price increase engenders the illusion in many actual and aspiring home owners that prices will always go up. In a 2005 survey of San Francisco home buyers Case and Shiller find that the mean expected price increase over the next ten years was 14% per year, while the median 9% per year (Shiller, 2008).

As Table 1 shows, during the real estate boom delinquency rates dropped. The reason was not only the relatively good economic conditions, but the sustained real estate price increase. First of all, home owners fight hard to be able to pay their mortgages when their home equity increases.

Second, the availability of innovative mortgage options, like interest only and negative amortization, allowed buyers to purchase houses for which they could not sustain the mortgage payments in equilibrium counting on the ability to refinance them continuously at higher prices. As Table 2 shows, the share of interest-only mortgages went from zero to 38%.

As a result of these favorable conditions, lending standards deteriorated. Dell'Ariccia et al. (2008), for instance, show that lending standards declined in areas of high home price appreciation and attribute this decline to increased competition among lenders. As Table 2 shows, the share of low documentation mortgages went from 29% to 51% and the debt-to-income ratio from 39.6 to 42.4. This relaxation was exacerbated by securitization, i.e. the practice of pooling mortgages together to resell them in packages. For the first time, this practice, which had been used for decades on standard mortgages with beneficial results for both mortgage rates and home ownership, was applied to lower quality mortgages. Knowing that they would not bear the ultimate risk of default, many mortgage originators further relaxed their lending standards. As Keys et al. (2008) show, loans with a higher probability of being securitized default at a rate 20% higher for comparable FICO score.

The quality of these mortgages should have been checked by the capital market that bought them, but several problems made this monitoring less than perfect.

First, pooled mortgages were resold in tranches that had different seniority. By using the historical record of defaults, the senior tranches were considered extremely safe; but historical records did not factor in the probability of a significant drop in real estate prices at the *national* level since we did not experience any since the Great Depression and all the most

commonly used time series do not go back that far. Nor did these models factor the effect of the changes in the lending standards on the probability of default. As Rajan et al. (2008) show, a default model fitted in a low securitization period breaks down in a high securitization regime in a “systematic” and “predictable” way: it underpredicts defaults especially at low FICO scores. Finally, these models did not properly account for the cross-correlation among defaults and between defaults and the rest of the economy. In the words of Darrell Duffie, one of the intellectual fathers of these models, “Banks, insurance companies and other financial institutions managing portfolios of credit risk need an integrated model, one that reflects correlations in default and changes in market spreads. Yet no such model exists,” Duffie (2004).

Second, the massive amount of issuance made by a limited number of players (of which Lehman was one) changed the fundamental nature of the relationship between credit rating agencies and the investment banks issuing these securities. In their sample of 1,257 mortgage securitization deals Nadauld and Sherlund (2008) find that Lehman alone had 128 deals.

In the past each customer, issuing only a couple of securities, had no market power over the rating agencies. With the diffusion of collateralized debt obligations, the major investment banks were purchasing hundreds of rating services a year. As a result, instead of submitting an issue to the rating agency’s judgment, investment banks shopped around for the best ratings and even received manuals on how to produce the riskiest security that qualified for a AAA rating. For example, the Standard & Poor’s website used to provide a CDO Evaluator Manual (Benmelech and Dlugosz, 2008). The CDO Evaluator is an optimization tool that enables issuers to achieve the highest possible credit rating at the lowest possible cost. One of the

outputs of this evaluator was to provide the issuer with a measure of “excess collateral” which, according to S&P, “tells what percentage of assets notional needs to be eliminated (added) in order for the transaction to provide just enough (i.e. ROC equals to 100%) support at a given rating level.” (Benmelech and Dlugoszb, 2008).

The market was not completely fooled by this process: AAA-rated assets backed securities had a higher yield than corporate AAA, a clear indicator of the higher risk. Benmelech and Dlugoszb (2008), for instance, reports that in their sample average spread over the Libor for AAA tranches in our sample is 32 basis points.

2. Bad Regulation

Unfortunately, regulatory constraints created inflated demand for these products. Fannie Mae and Freddie Mac were allowed, even encouraged, to invest their funds in these securities (Mian et al, 2008).

The Federal Housing Enterprises Financial Safety and Soundness Act of 1992 requires the Department of Housing and Urban Development (HUD) to ensure that Fannie Mae and Freddie Mac operate in compliance with their charter purposes. This act mandates that HUD carry out specific responsibilities that include setting annual housing goals for the GSEs and monitoring and enforcing the GSEs' performance in meeting these housing goals.

In 2004, to encourage Fannie Mae and Freddie Mac to facilitate greater financing and home ownership opportunities for families and neighborhoods targeted by the housing goals, especially first-time homebuyers, the HUD established goals for the two Government Sponsored Entities (GSE). These goals are expressed as percentages of the total number

of mortgages purchased by the GSEs that finance the purchase (not refinance) of single-family and owner-occupied properties located in metropolitan areas for low and moderate income people. Table 3, obtained from a HUD press release, reports these goals for 2005 with the relative performance of the two GSE along these lines.

While there is no penalty for failure to meet these goals, it is clear from the press release that HUD exerts political pressure. Since these goals could be met also with the purchase of subprime collateralized debt obligations (CDOs), such pressure found no resistance from the GSE who loved the arbitrage this opportunity created: they could issue AAA-rated debt and invest in higher-yield AAA debt, gaining the spread.

Another source of captive demand were money market funds. Being required to hold *only* highly rated securities, money market funds loved these instruments because they satisfied the regulatory requirements and boosted their yields. Most managers of these funds were well aware of the gamble they were taking, but could not resist taking it, under an intense competition for yield-hungry customers (see for example, Table 4). These managers were also hoping that if a shock occurred, all their competitors would face the same problem, thereby reducing the reputational costs and possibly triggering a Government support. The September 19th decision to insure all money market funds validated this gamble, forever destroying money market managers' incentives to be careful in regard to the risks they take.

To be fair, the problem was even more severe in the ultra short bond funds. Unlike money market funds, these funds are not restricted as to which types of instruments they can own. Their aim is to beat money market funds without delivering much more volatility. In the last year, the ultrashort-term

bond category has performed very poorly. The category's worst performers have lost between 10% and 30% over the past year (Dolan, 2008). As the mutual fund rater *Morningstar* admits, “We can't say that we saw this coming. We didn't. There were risks in these portfolios that were hard to see and had never materialized in the past, so backward-looking risk measures such as standard deviation and past losses proved unreliable. Given the near-term maturities of the bonds in the portfolio, we underestimated the damage that subprime and other low-quality bonds could cause.”

More generally, regulation relied heavily on credit-rating agencies measures of risk without understating the incentives this creates on the regulated to game the system and lobby the credit-rating agencies for sweet deals.

First of all, the bin-approach to risk advocated by Basel risk-based capital requirements induce banks to invest in the highest risk security in each bin, sensibly altering the distribution of asset risk. For example, most non-OECD countries attach a zero percent risk weight to their own government paper. As a result, during the Argentina crisis, domestic banks loaded up on government bonds, in spite of the declaration of default, because they provided a regulation arbitrage: a very high yield and zero capital requirement (Rojas-Suarez, 2008).

This problem is present also in the United States. Banks are allowed to allocate zero capital to loans which are hedged with credit default swaps. But the insurance buy is less than certain because of the possibility that the insurer will default – what it is known as counterparty risk – since the amount of collateral posted for this contract is often zero.

Second, this regulation failed to appreciate the enormous pressure it put on the shoulder of credit-rating agencies. As figure 2 shows, Moody's

revenues from structured finance ratings increased from a little more than \$100 million in 1998 to more than \$800 million in 2006, representing more than 80% of its total rating revenues. Since Standard and Poor's is a division of McGraw Hill it does not disclose disaggregated data, but the pattern is likely to be similar. Given the high degree of concentration of the issues of structured products among a few investment banks, it is hard to see how this change in the revenue source will not alter the balance of power between credit rating agencies and their customers.

To worsen the problem, at least as far as investment banks are considered, comes a Security and Exchange Commission ruling in April 2004, which relaxed the pre-existing limits on leverage. As a consequence, the leverage of the five independent investment banks shot up (Labaton, 2008).

The accounting of subprime mortgages deserves a separate discussion. Many commentators have accused the so-called mark-to-market method (more properly called fair value accounting) for the spreading of the crisis. Before passing any judgment it is helpful to review what are the rules that regulate the accounting of these instruments contained in Financial Accounting Statement (FAS) 115 (for a thorough discussion see Ryan, 2008). First of all, buyers have an option to treat these securities as trading or available for sale (AFS) or held to maturities (HTM). AFS securities are accounted for at the lower of cost or fair value (see FAS 157). HTM securities are accounted for at amortized costs, subject to other-than-temporary impairments. Originators usually treat mortgages as available for sale.

FAS 157 defines fair value as "the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between

market participants at the measurement date.” FAS 157 provides a hierarchy of inputs that go to determine the fair value. The first level are market prices for identical items. This is extremely rare for mortgage-backed securities (MBS), since they are tailor-made. The second level is represented by market data for similar items or illiquid market data for the same item. At the beginning of the crisis most MBS were valued in this way. But as the crisis made the market increasingly illiquid, MBS started to be valued using level three, i.e., unobservable, firm-supplied estimates (also called mark-to-model valuations).

While this system was designed to increase the transparency of reporting it did encounter some problems, especially at the time of a major generalized crisis.

First, as market liquidity dried out, more and more firms had to move to mark-to-model. Given the relative novelty of this approach, there was not a well-established method to deal with this. Hence, firms were at the mercy of their external auditors, who had different approaches. Since, there is not an adequate disclosure of all the assumptions that go in the models, a rule that was invented to increase transparency lead to more opacity at a time the market needed transparency the most.

Second, write-offs calculated in this way had major impact in the rating-firm decisions to downgrade financial institutions, which in turn had strong effect on their ability to survive. In a different scenario the credit rating agencies could have helped reduce the impact of write-offs by using their direct knowledge of the firm balance sheets to overrule the verdict of some excessively conservative accounting decisions. Unfortunately, given the limited credibility credit rating agencies enjoy in this moment, they could not afford to be seen as overruling the implications of the write offs.

Finally, as Morris and Shin (2002) have shown in a situation where there are multiple equilibria, increasing public information is not necessarily welfare enhancing, because it can lead to inefficient bank runs (Diamond and Dybvig, 1983).

3. Lack of Transparency

The other major source of problems that contributed to the crisis was the lack of transparency in major markets. As Figure 3 shows, during the last ten years the market for credit default swaps (CDS) grew unregulated from almost zero to more than \$44 trillion (more than twice the size of the U.S. stock market). More importantly, the level of collateral posted for these contracts was very low or non-existent, generating the possibility of a systemic failure. If in the middle of the hurricane season all of a sudden all Florida homeowners lost the insurance for their house, there would be an enormous run to buy new insurance. Given that in the short term, insurance capacity is limited, the prices will go to the roof. If some home owners could not afford these prices, their mortgages will automatically default, triggering foreclosures and a real estate crisis. This is one of the reasons why the insurance market is regulated.

The same would be true if a large CDS player, like AIG, defaulted. As Table 5 shows, large commercial banks have massive exposure to CDS. Most of their positions are hedged; hence the net exposure is much smaller. Nevertheless, if they a major player defaults, all the other ones will find themselves un-hedged, triggering a run to buy insurance, with consequences not dissimilar from the case described above. In spite of its potential systemic effects, the market for CDS is completely unregulated.

The same is true for the mortgage-backed security market. In 2007 there were almost 6 trillion mortgage-backed securities outstanding (Gorton,

2008). Most of these securities were issued under the 144A rule, with limited disclosure. This lack of transparency in the issuing process made it difficult to determine who owned what. Furthermore, the complexity of these repackaged mortgages is such that small differences in the assumed rate of default can cause the value of some tranches to fluctuate from 50 cents on the dollar to zero. Lacking information on the nature and hence the value of banks' assets, the market grew reluctant to lend to them, for fear of losing out in case of default. One often-used measure of this reluctance is the spread between Libor and the overnight indexed swap (OIS) rate of the same maturity. Before the beginning of the crisis the multi-year average of this spread was 11 basis points. On August 10 2007 it was over 50 basis points and it was over 90 basis points by mid-September. While fluctuating it has mostly remained above that level ever since (Gorton, 2008).

4. Lehman Financial Policy

In the case of Lehman (and other investment banks), this problem was aggravated by two factors: the extremely high level of leverage (asset-to-equity ratio) and the strong reliance on short-term debt financing. While commercial banks are regulated and cannot leverage their equity more than 15 to 1, at the beginning of the crisis Lehman had a leverage of more than 30 to 1, i.e. only \$3.30 of equity for every \$100 of loans (Table 6). With this leverage, a mere 3.3% drop in the value of assets wipes out the entire value of equity and makes the company insolvent.

In turn, the instability created by the leverage problem was exacerbated by Lehman's large use of short-term debt, which financed more than 50% of the asset at the beginning of the crisis (Table 6). In a low interest rate environment, reliance on short-term borrowing is very profitable,

but increases the risk of “runs” similar to the ones bank face when they are rumored to be insolvent. Any doubt regarding the solvency of the borrower makes short-term lenders leery to renew their lending. These doubts can be self-fulfilling, in that if enough short-term lenders withdraw their funds, the borrower faces a liquidity shortage, which cannot be easily dealt with in the current economic environment, forcing a firm to default.

After the beginning of the crisis, Lehman did try to reduce its leverage and reduce its reliance on short term debt (see Table 6). But it was too little, too late. Lehman succumbed.

The Lehman CEO will likely tell you that his company was solvent and that it was brought down by a run. This is a distinct possibility. The problem is that nobody knows for sure. When Lehman went down, it had \$20 billion in book equity, but the doubts about the value of its assets combined with its high degree of leverage created a huge uncertainty about the true value of this equity: it could have been worth \$40 billion or negative 20. It is important to note that Lehman did not find itself in that situation by accident; it was the unlucky draw of a consciously-made gamble.

5. Consequences of Lehman default

Lehman’s bankruptcy forced the market to reassess risk. As after a major flood people start to buy flood insurance, after the demise of Lehman the market started to worry about several risks previously overlooked. One way to value quantitatively this reassessment of risk is to look at the price of credit default swaps. Figure 4 reports the cost of insuring an index of junk bond issuers during the last one and a half year. Before the crisis it cost only \$2.50 to insure \$100 invested in junk bonds. In July 2007 the price moved above \$4. During the Bear Stearns crisis, the price shot above \$6, to return to about \$4.50 in June. After the demise of Lehman the price returned slightly

above \$6, a very high level, but comparable to the one experienced around the time of the Bear Stearns crisis. Given that two different policy responses -- Bear Stearns was saved, while Lehman not -- lead to the same market response, the most likely interpretation is that these extreme events force the market to reassess the risk, regardless of the policy response adopted.

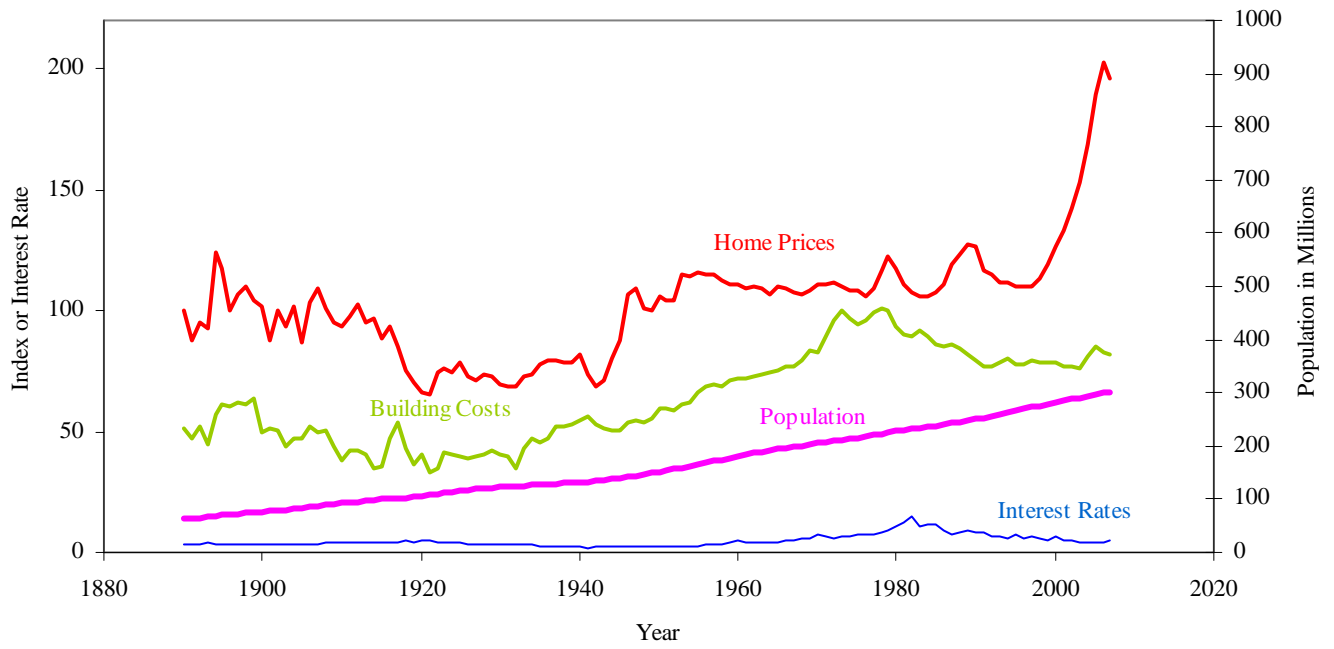
Lehman's filing for bankruptcy had a more dramatic impact on money market funds. On September 16th Primary Fund, a \$62 billion fund, announced that because of the total loss it suffered on its \$785 million holding of Lehman Brothers debt, it was forced to put a seven-day freeze on redemptions, since the net asset value of its shares fell below \$1. By contradicting a long-standing belief that money market fund will never "break the buck," this decision did contribute to increase the sense of uncertainty. The guarantee offered by the Government, however, has minimized this side effect.

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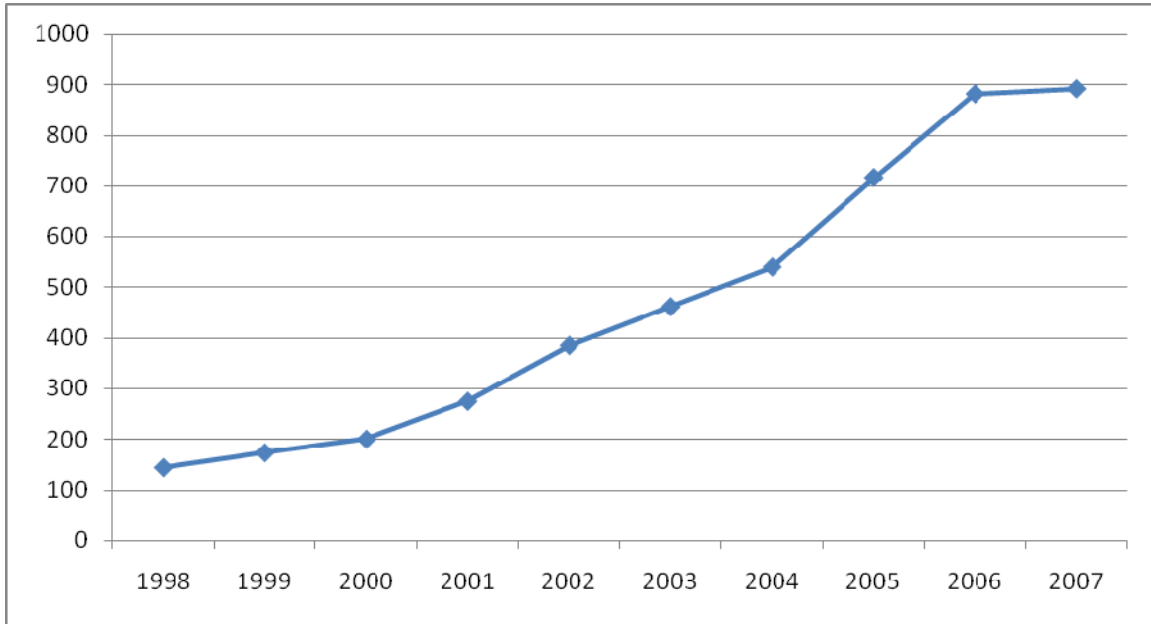
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Figure 1: Abnormal rise in house prices in the new millennium



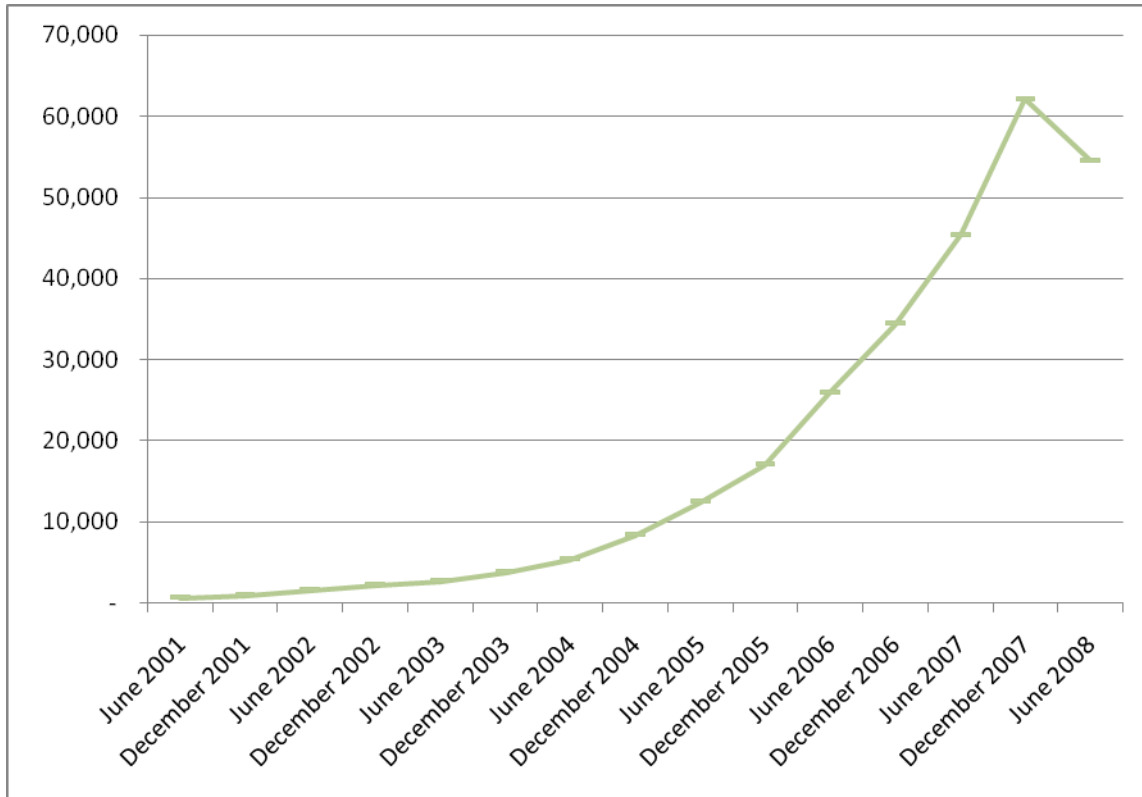
Source: Shiller (2005).

**Figure 2: Importance of Structured Finance Products for Credit Rating Agencies
(Rating revenues by business unit: Structured Finance (in Millions of Dollars))**



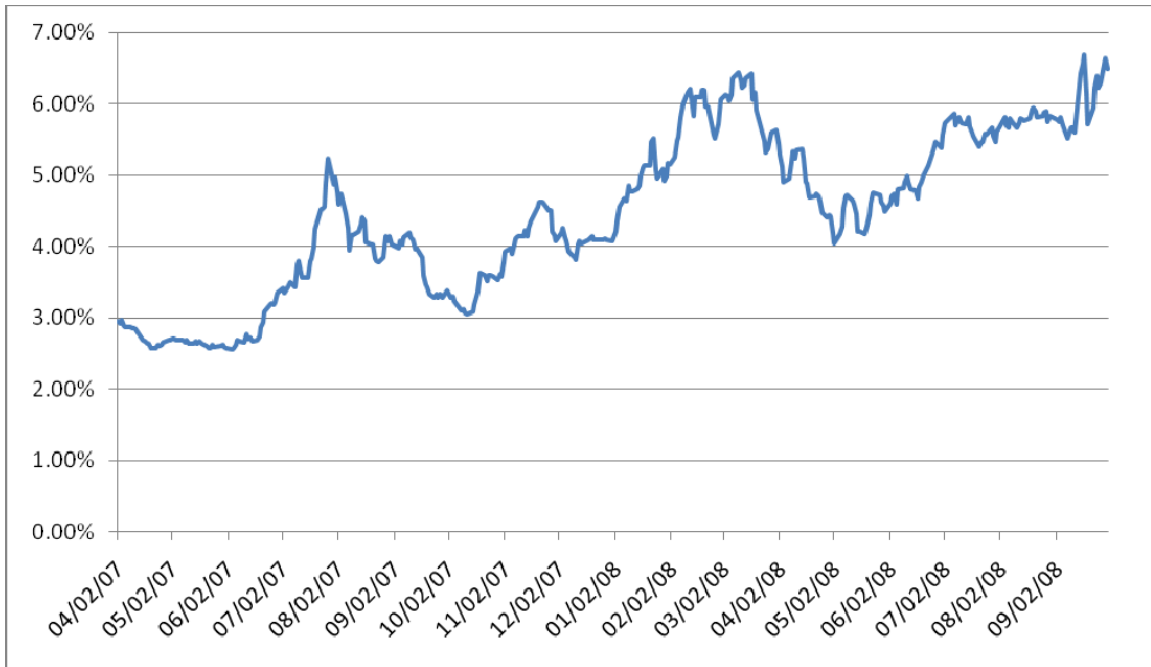
Source: Moody's Annual Reports

Figure 3: Outstanding Value of Credit Default Swaps (in Billions of Dollars)



Source: International Swaps and Derivatives Association (ISDA) Market Survey.

Figure 4: Increase in the cost of CDS in the last year (CDX HY8)
Cost of insuring a basket of junk bond-rated debt securities as a percentage of the nominal value.



Source: Markit quotes

Table 1: Decline in Delinquency Rates During the Boom Among Major Investor Groups

Year-end	CMBS (30+ days and REO)	Life Companies (60+ days)	Fannie Mae* (60+ days)	Freddie Mac (60+ days)	Banks & Thrifts (90+ days)
12/31/1996	n.a.	1.79%	0.68%	1.96%	1.58%
12/31/1997	0.39%	0.90%	0.37%	0.96%	1.18%
12/31/1998	0.54%	0.48%	0.29%	0.37%	0.94%
12/31/1999	0.51%	0.25%	0.12%	0.14%	0.73%
12/31/2000	0.81%	0.28%	0.04%	0.04%	0.69%
12/31/2001	1.26%	0.12%	0.33%	0.15%	0.92%
12/31/2002	1.47%	0.28%	0.13%	0.13%	0.86%
12/31/2003	1.72%	0.12%	0.13%	0.05%	0.78%
12/31/2004	1.29%	0.08%	0.10%	0.06%	0.61%
12/31/2005	0.85%	0.05%	0.27%	0.00%	0.53%
12/31/2006	0.41%	0.02%	0.08%	0.05%	0.56%
12/31/2007	0.40%	0.01%	0.08%	0.02%	0.80%

Source: Mortgage Bankers Association (Commercial-multifamily delinquency survey).

Definitions of delinquency rate for the respective companies:

- CMBS: 30+ days delinquent or in REO;
- Life company portfolios: 60+days delinquent;
- Fannie Mae: 60 or more days delinquent;
- Freddie Mac: 60 or more days delinquent;
- Banks and thrifts: 90 or more days delinquent or in non-accrual.

Table 2: Underwriting Standards for Subprime Mortgages

Year	Adjusted Rate Mortgages Share	Interest Only Share	Low/No Documentation Share	Debt-to- Income Ratio	Average Loan- to-Value Ratio
2001	73.00%	0.00%	28.50%	39.7	84
2002	80.00%	2.30%	38.60%	40.1	84.4
2003	80.10%	8.60%	42.80%	40.5	86.1
2004	89.40%	27.20%	45.20%	41.2	84.7
2005	93.30%	37.80%	50.70%	41.8	83.2
2006	91.30%	22.80%	50.80%	42.4	83.4

Source: Gorton (2008).

Table 3: HUD's official 2005 housing goals and Special Affordable Multifamily subgoal performance figures for Fannie Mae and Freddie Mac

Housing goals	Goal Targets	Fannie Mae Results	Freddie Mac Results
Low- and Moderate-Income	52%	55.06%	54.00%
Central Cities, Rural Areas, and Other			
Underserved Areas	37%	41.43%	42.27%
Special Affordable	22%	26.28%	24.28%
 Special Affordable Multifamily Subgoal			
	Fannie Mae = \$ 5.49 Billions	\$ 10.39 Billions	\$ 12.35 Billions
	Freddie Mac = \$ 3.92 Billions		

Source: U.S. Department of Housing and Urban Development's Homes and Communities (<http://www.hud.gov/news/release.cfm?CONTENT=pr06-136.cfm>)

Table 4: Investments of Some of the Largest Money Market Funds in CDO Commercial Paper.

Money Market Fund	Millions of Dollars invested in CDO Commercial Paper	Percentage of Holdings
AIM	2,300	10.20%
Credit Suisse	1,800	8.00%
Fidelity Investments	1,500	1.50%
Morgan Stanley	1,060	4.00%
Wells Fargo	586	5.10%

Source: Evans (2007).

Table 5: Distribution of Credit Derivative Contracts: Top 25 Commercial Banks and Trust Companies in Derivatives. JUNE 30, 2008

Millions of Dollars (NOTE: DATA ARE PRELIMINARY)

RANK	BANK NAME	TOTAL ASSETS	TOTAL DERIVATIVES	TOTAL CREDIT DERIVATIVES	TOTAL CREDIT DERIVATIVES		BOUGHT		SOLD	
					BOUGHT	SOLD	CREDIT DEFAULT SWAPS	RETURN SWAPS	CREDIT DEFAULT SWAPS	RETURN SWAPS
1	JPMORGAN CHASE BANK NA	1,378,468	83,436,951	7,850,264	4,028,873	3,821,391	3,994,756	15,004	3,817,140	2,771
2	BANK OF AMERICA NA	1,327,429	36,961,254	2,710,538	1,342,595	1,367,943	1,326,855	12,276	1,344,015	22,353
3	CITIBANK NATIONAL ASSN	1,228,445	33,922,675	3,209,678	1,672,423	1,537,255	1,636,972	35,240	1,527,573	8,439
4	WACHOVIA BANK NATIONAL ASSN	670,639	4,061,830	385,616	198,917	186,699	188,712	10,205	178,621	8,078
5	HSBC BANK USA NATIONAL ASSN	177,466	2,822,877	1,240,227	600,803	639,424	584,320	16,333	623,283	16,141
6	WELLS FARGO BANK NA	503,327	1,513,682	2,238	1,411	827	1,411	0	817	0
7	BANK OF NEW YORK	130,062	1,047,852	1,677	1,675	2	1,514	161	2	0
8	STATE STREET BANK&TRUST CO	138,859	836,971	238	238	0	238	0	0	0
9	SUNTRUST BANK	171,501	265,718	3,104	1,806	1,298	831	975	313	975
10	PNC BANK NATIONAL ASSN	128,348	205,342	5,352	3,655	1,697	3,655	0	1,697	0
11	NORTHERN TRUST CO	65,200	183,923	254	254	0	254	0	0	0
12	MELLON BANK NATIONAL ASSN	39,476	183,003	0	0	0	0	0	0	0
13	KEYBANK NATIONAL ASSN	98,048	127,983	8,714	4,684	4,030	4,684	0	3,645	385
14	NATIONAL CITY BANK	151,165	108,341	2,408	1,360	1,048	1,360	0	1,048	0
15	U S BANK NATIONAL ASSN	242,308	85,278	2,170	627	1,543	56	0	0	0
16	REGIONS BANK	139,354	79,872	283	35	248	35	0	248	0
17	BRANCH BANKING&TRUST CO	132,884	63,472	52	52	0	0	52	0	0
18	MERRILL LYNCH BANK USA	58,042	50,421	9,146	9,146	0	9,146	0	0	0
19	RBS CITIZENS NATIONAL ASSN	132,051	57,391	234	214	20	2	0	20	0
20	FIFTH THIRD BANK	67,272	55,663	313	72	241	0	0	0	0
21	UNION BANK OF CALIFORNIA NA	60,228	35,486	0	0	0	0	0	0	0
22	LA SALLE BANK NATIONAL ASSN	68,379	32,781	1,820	412	1,409	0	0	0	0
23	UBS BANK USA	27,316	34,160	0	0	0	0	0	0	0
24	DEUTSCHE BANK TR CO AMERICAS	46,071	28,690	5,197	5,197	0	100	5,097	0	0
25	LEHMAN BROTHERS COML BK	6,418	28,086	0	0	0	0	0	0	0

Source: Office of the Comptroller of the Currency

Table 6: Lehman Brothers Liabilities and Shareholders' Equity

PERIOD ENDING	31-May-08	29-Feb-08	30-Nov-07	31-Aug-07
Current Liabilities				
Accounts Payable	70,888,000	96,148,000	80,346,000	68,986,000
Short Term Debt	163,148,000	428,555,000	359,415,000	336,456,000
Other Current	29,355,000	28,829,000	29,363,000	24,935,000
Total Current Liabilities	-	-	-	-
Long Term Debt	349,765,000	207,671,000	199,449,000	207,106,000
Other Liabilities	-	-	-	-
Deferred Long Term Liability Charges	-	-	-	-
Minority Interest	-	-	-	-
Negative Goodwill	-	-	-	-
Total Liabilities	613,156,000	761,203,000	668,573,000	637,483,000
Stockholders' Equity				
Misc Stocks Options Warrants	-	-	-	-
Redeemable Preferred Stock	-	-	-	-
Preferred Stock	6,993,000	2,993,000	1,095,000	1,095,000
Common Stock	61,000	61,000	61,000	61,000
Retained Earnings	16,901,000	19,880,000	19,698,000	18,915,000
Treasury Stock	-4,922,000	-5,149,000	-5,524,000	-5,658,000
Capital Surplus	11,268,000	11,129,000	9,733,000	9,802,000
Other Stockholder Equity	-4,025,000	-4,082,000	-2,573,000	-2,482,000
Total Stockholder Equity	26,276,000	24,832,000	22,490,000	21,733,000
Leverage ratio (assets over equity)	24.6	32.7	30.7	30.4
Short term ratio (short term debt over assets)	25.51%	54.59%	52.05%	51.09%

Source: Lehman Annual Reports.