The Crisis of Crowding: Tales from the Financial Crisis and the Ongoing Risk of Copycat Trading

October 13, 2013

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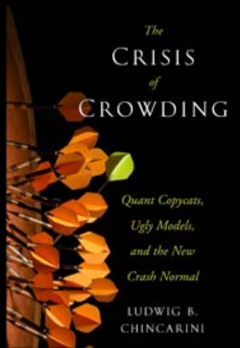


Unitarian Universalist Breakfast Forum
October 13, 2013

What is the book about?

- The book tells the real stories of the financial crisis of 2008 and beyond how they are all connected by elements of crowding.

- The book is easy to read and informative with lots of interviews with insiders, including Goldman Sachs executives, Jimmy Cayne, Myron Scholes, John Meriwether, Vice Chairman of Citibank, government regulators, and others.

Definition

Crowding takes place when multiple market participants begin to follow the same trade altering the risk and return dynamics of the trade.

- Not always east to detect – holders matter
- Risk will be incorrectly measured if not accounted for, both market and liquidity risk.
- Can lead to levered firms failing rapidly.

How Crowding Typically Happens

1. Attractive Trading Opportunity Develops
2. Copycats rush to follow the leader (even if it's not their core business)
3. Herding occurs, but sometimes very hidden (not obvious)
4. The trading space becomes crowded
5. Not all crowded spaces are similar.
    a. 1 type of holder (all traders similar)
    b. N types of holders (different motivations and behaviors to risk)
    c. Holders can have exactly same position or slightly different positions, still leading to crowded behavior.
    d. Inadvertent Crowding (see Chincarini & Davis (2013)).

Examples of Crowding

- Portfolio Insurance in the 1980s

- Dynamic put option replication
- Works fine if small number of investors do it.
- Too many can lead to spiral effect as stock prices plunge...

Examples of Crowding

- LTCM in 1998

➢ Sophistication to bond markets brought lots of profits

➢ Hedge funds, bank prop desks, and others began copying

➢ Space saturated (crowded) and opportunities vanished...but risk was higher than thought

Examples of Crowding

- Internet Bubble of 2000

- Everyone and their cab driver was buying internet stocks, even *liberal arts college professors*

- Valuation out of whack, space saturated, prices had to go up...

- Crowd runs for the exits, market collapses...

Examples of Crowding

- Internet Bubble of 2000: PALM Mystery

March 2, 2000 3COM sold part of it's stake in PALM (about 5%).

Issued at $38 and rose to $165 on first day of trading, closing at $95.06.

An owner of 1 share of 3COM owned 1.5 shares of PALM (by relative share issuance).

3COM held 95 % of PALM and had cash/securities worth about $10 per share

Thus, we would expect 3COM to trade at somewhere greater than 1.5*95.06+10=152.59

Examples of Crowding

- Internet Bubble of 2000: PALM Mystery

Ironically, it traded down that day at $81.81. This implied a negative value for everything else in 3COM...not possible?

The crowds were racing for anything internet-like regardless of valuation.

Examples of Crowding

- Financial Crisis of 2008 and Beyond

- ➢ Crowded spaces and their problems, including mis-measurement of risk were everywhere in the crisis of 2008.

Story 1:

- Freddie, Fannie and Housing Bubble (real crowd)

➢ Why did the world like Freddie and Fannie? Implicit government bailout.

➢ They were the gigantic hedge fund, making Lehman’s 33 to 1 leverage look like child’s play…81 to 1.

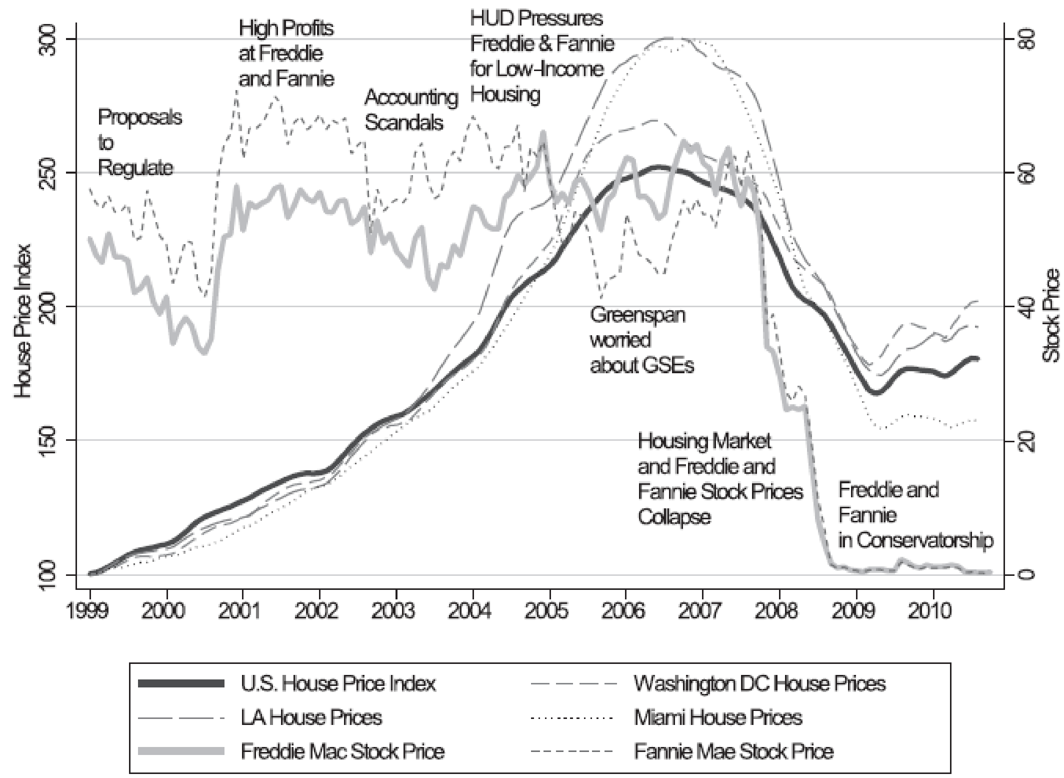
➢ Huge profits, $2 million per employee in 2002, versus Goldman and Citi of $108K and $60K

➢ Fannie and Freddie keep buying sub-prime, but why? In 2000, $50B, in 2005, almost $500B.

Story 1:

- Freddie, Fannie and the Housing Bubble

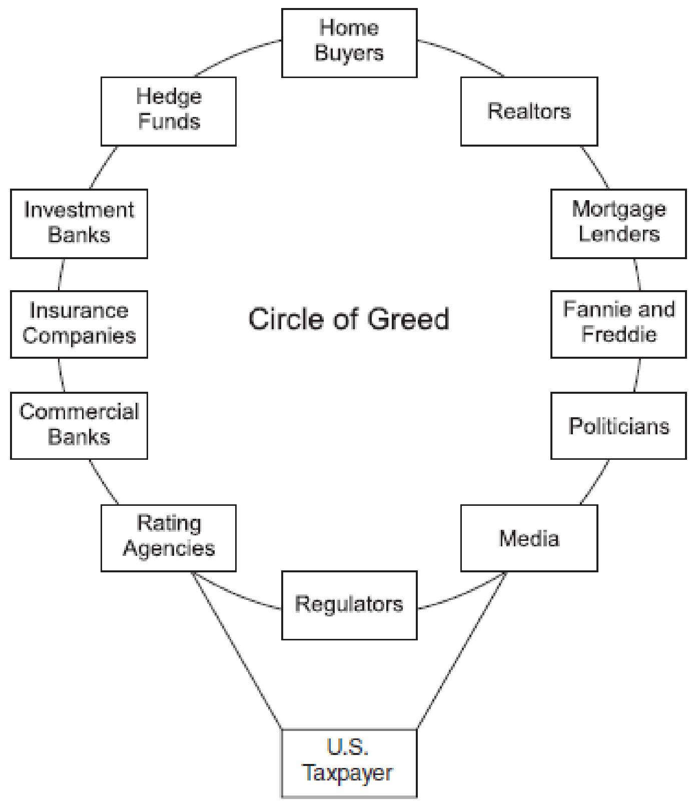
FIGURE 10.4 Fannie Mae and Freddie Mac Stock Prices versus Selected U.S. Housing Prices



Story 1:

- Freddie, Fannie and the Housing Bubble

FIGURE 10.6 The Circle of Greed in the Housing Bubble



Story 1:

- Freddie, Fannie and the Housing Bubble

➢ Home Buyers: Second mortgages, buying homes they could not afford, home equity loans to consume – 2005, of $750billion in HE, 2/3 used for personal consumption, home improvements, credit card debt. Zero down with zero responsibility. 2005, 30% home equity used to buy 2nd place.

➢ Some ignorance, but usually greed w/ free option.

Story 1:

- Freddie, Fannie and the Housing Bubble

- Real Estate Agents & Mortgage Brokers: "Real estate prices are always steady in this area".
- Tell story of Long & Foster
- "Remember me, your buyer's agent with Long & Foster? How's California? Just came across an old email and wanted to give you the credit for predicting the market `shedding'. A total shed..." May 12, 2010.
- Realtors get 6% on house prices and had incentives to inflate. *Pro-cyclical valuation* methods (comparable sales).

Story 1:

- Freddie, Fannie and the Housing Bubble

➢ Real Estate Agents & Mortgage Brokers:

- Also peripheral players associated with them. In 2003, 55% of appraisers felt pressed to inflate the values of homes. By 2006, it rose to 90%. Who's side are they on anyway? New rules?
- Mortgage Brokers designed clever schemes to make housing "appear" affordable. GPM, ARMS, etc. Mortgage of $3500 to $500 with the sign of paper.

Story 1:

- Freddie, Fannie and the Housing Bubble

➢ Politicians:

- Pushed low-income housing – why? To get votes, to appear compassionate. Clinton and Bush. And even used “BS” justifications: “those who argue that housing prices are now at the point of a bubble seem to be missing a very important point. Unlike previous examples, where substantial excessive inflation of prices later caused some problems, we are talking here about an entity, home ownership, homes, where there is not the degree of leverage that we have seen elsewhere. This is not the dot-com situation. Barney Frank, June 27, 2005

Story 1:

- Freddie, Fannie and the Housing Bubble

➢ Rating Agencies:

- Conflicts of interest, 1970s. Issuer-pays model. Complex and complicated CDOs. Moody's revenue grew from $199 million (2000) to $887 million in 2006 from CDO ratings.

- "When I joined Moody's in late 1997, an analyst's worst fear was that he would…[give an incorrect rating and ruin Moody's reputation]…When I left in 2007, an analyst's worst fear was that he would do something to impairing Moody's profits by damaging relationships and get fired…Mark Froeba, SVP of Moodys

Story 1:

- Freddie, Fannie and the Housing Bubble

MARKETS | Updated February 5, 2013, 12:37 a.m. ET

U.S. Sues S&P Over Ratings

Justice Department Says Endorsements of Risky Mortgage Bonds Fueled Crisis

By JEAN EAGLESHAM, JEANNETTE NEUMANN and EVAN PEREZ

The Justice Department sued Standard & Poor's Ratings Services late Monday, alleging the firm ignored its own standards to rate mortgage bonds that imploded in the financial crisis and cost investors billions.

Story 1:

- Freddie, Fannie and the Housing Bubble

➢ Banks, Investment Banks:

- Leverage, more home mortgages, securitization, and short-term financing.

- Crowds Exited – suddenly as house market halted and defaults rose, everyone dumped it and ran for the exits. Freddie and Fannie were bailed out by US government and still owe the US taxpayer $56 Billion (Freddie-35, Fannie-21), all investment banks have paid with interest. *Down from $151 a year ½ ago.*

Story 2:

- JP Morgan and the Relative Value HF Community

- J.P. Morgan had large losses in the 2nd quarter of 2012 due to bad hedges. $5-7 billion.

- Losses related to bets on corporate credit indices.

- Bruno Iksil (aka London Whale) was involved.

- Fudging marks, lying, and misunderstanding real risk of instrument partly due to crowds and holders

Story 2:

- JP Morgan and the Relative Value HF Community

Excerpts from the internal JP Morgan Report

the priorities would be simultaneously addressed;[11] (2) the trading strategies that were designed in an effort to achieve the various priorities were poorly conceived and not fully understood by CIO management and other CIO personnel who might have been in a position to manage the risks of the Synthetic Credit Portfolio effectively; (3) CIO management (including CIO's

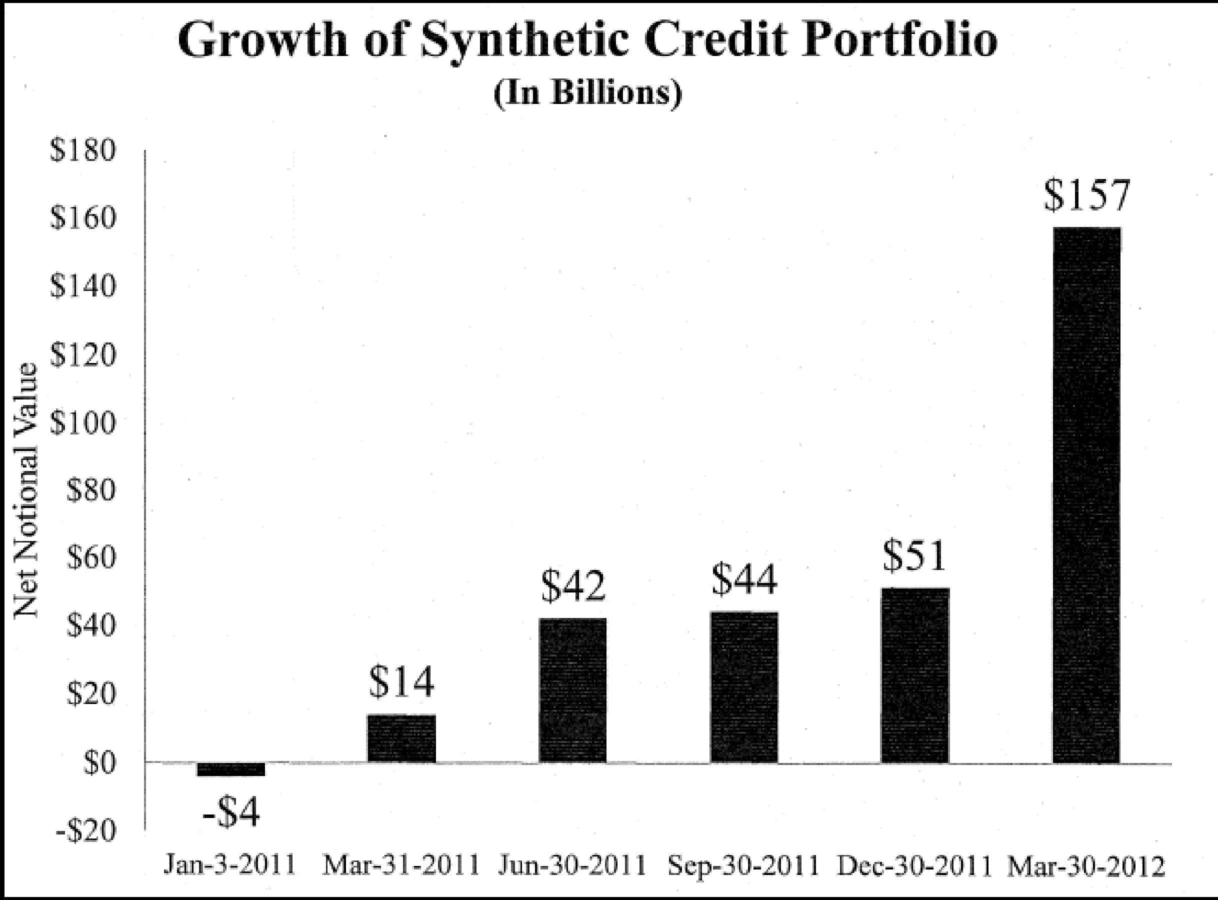
The positions in the Synthetic Credit Portfolio consisted of standardized indices (and related tranches[21]) based on baskets of credit default swaps ("CDS") tied to corporate debt issuers. CIO bought, among other things, credit protection on these instruments, which means

multiple maturities and tranche positions. In the fourth quarter of 2011, the Synthetic Credit Portfolio was in an overall short risk posture (as measured by CSW 10%), with a short risk position in high-yield offset to some extent by a long-risk investment-grade position.

Story 2:

- JP Morgan and the Relative Value HF Community

Excerpts from Senate Report



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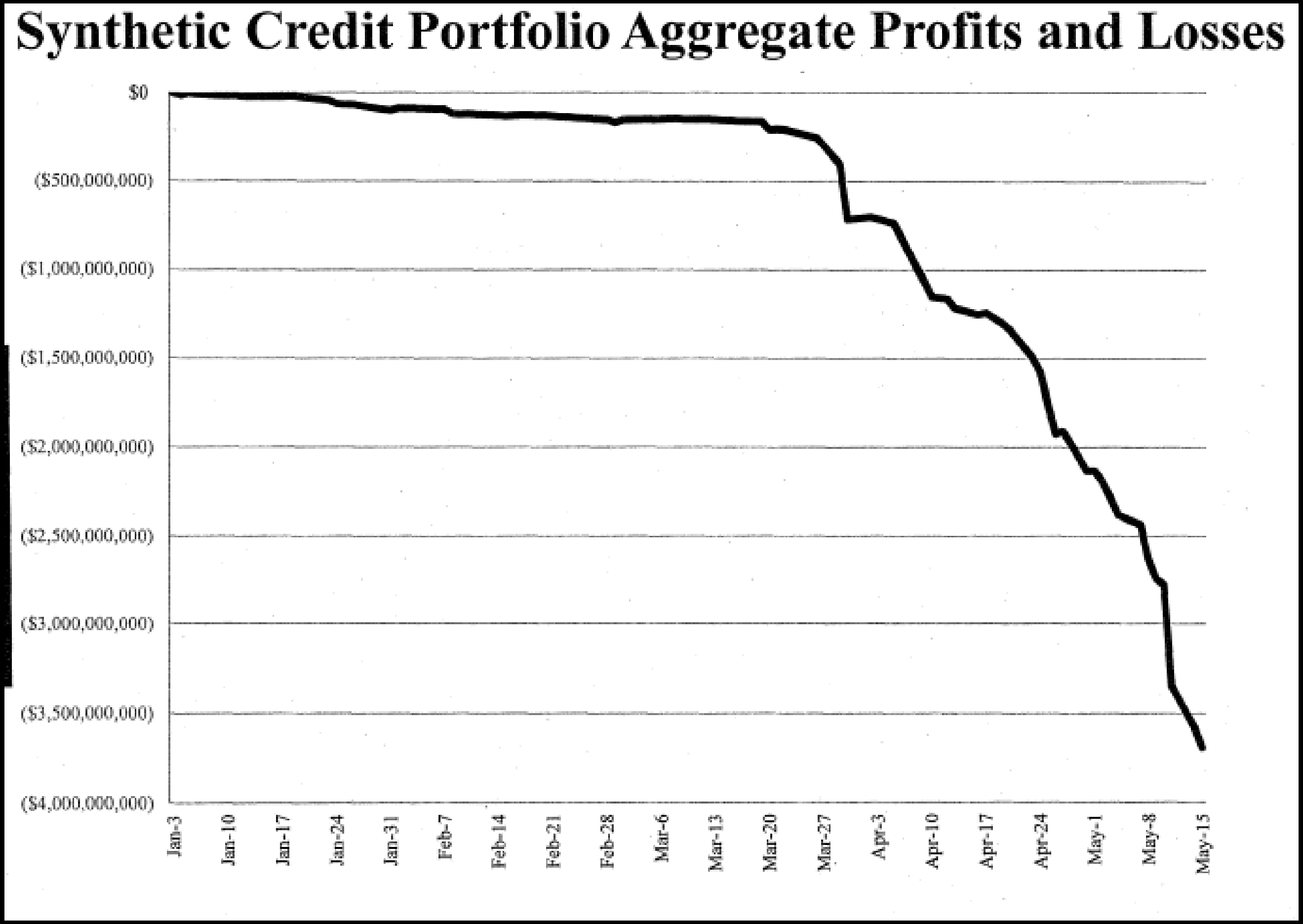


Story 2:

- JP Morgan and the Relative Value HF Community

Excerpts from Senate Report

----- Original Message -----
From: macris@[redacted]
Sent: Tuesday, January 31, 2012 07:58 AM
To: Martin-Artajo, Javier X
Cc: Iksil, Bruno M; Stephan, Keith; Kalimtgis, Evan
Subject: FW: Core book p&l drawdown and main exposures

Hi Javier,

How is it going in NY?
Are you dialling into ISMG?
We need to discuss the synthetic book.

The current strategy doesn't seem to work-out.
The intention was to be more bullish, but the book doesn't behave as intended.

Story 2:

- JP Morgan and the Relative Value HF Community

Excerpts from Senate Report

Why does it impact the book ?
The book used the forward spreads (a ... ure) to buy protection on defaults short term and ... large spread widening. This worked very well last year.
Now January is very bullish and the street owns the protection we sold on the forwards. Towards month end the spread on series 9 remains sticky and tends to widen more than the rest especially the on-the-run indices where the book still has short risk overlay. So the book is squeezed on both ends and we saw this pattern from the first days of the year. It did not really correct since then. This explains why the ig part of the book does not perform as expected.

Holders matter

Story 2:

- JP Morgan and the Relative Value HF Community

➢ It happened in 2008, but slightly differently.

➢ Many relative-value hedge funds and banks were roasted, including Meriwether's new fund.

Story 2:

- JP Morgan and the Relative Value HF Community

Background:

- CDX – new indices based on corporate bond CDS.
- IG index 125 largest, biggest U.S. companies equal-weighted.
- Tranches 0-3, 3-7, 7-10, …30-100.
- If companies begin defaulting on debt, 0-3 takes first losses, then 3-7, and so on.
- For 30-100 to lose, about 63% of U.S. companies must default or fail.

Story 2:

- JP Morgan and the Relative Value HF Community

Which trade would you take if you thought 2008 would be a bad year?

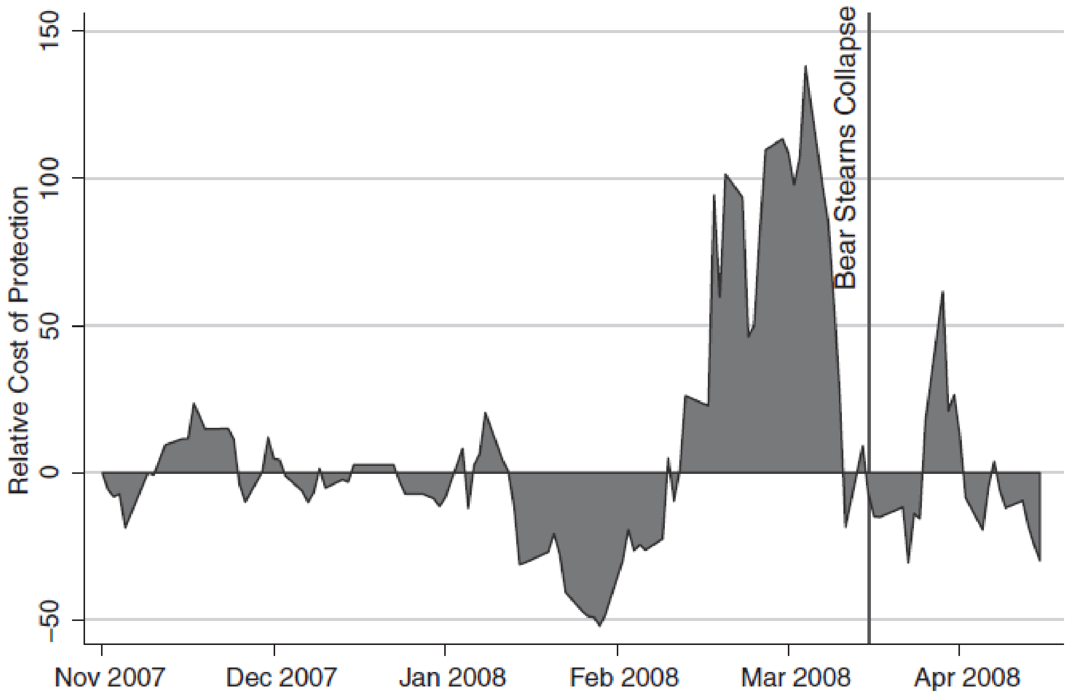
Trade 1:Buy insurance 30-100, sell insurance 0-10

Trade 2:Sell insurance 30-100, buy insurance 0-10.

Story 2:

- JP Morgan and the Relative Value HF Community

FIGURE 15.3 The Percentage Increase in the Cost of Insuring the 30–100 Tranche versus the 3–30 Tranche (Base Period: November 5, 2007)



Cost of insuring 30-100 rose by **150%** over cost of insuring 0-10 in March 2008!

Source: Chapter 15 The Crisis of Crowding

Story 2:

- JP Morgan and the Relative Value HF Community

A market crisis is coming, what trade would you do in the commercial real-estate market?

Trade 1: Buy A rated and short AAA rated.

Trade 2: Short A rated and buy AAA rated.

Story 2:

- JP Morgan and the Relative Value HF Community

The trade lost them 39% unleveraged from September to November 2008 (November losses along 26%!)

Why?

1. Post-Lehman behavior was chaotic.
2. New Instrument – CMBX – didn’t hedge correctly. Short history, strange holders, AAA held by levered risk averse institutions → J.P. Morgan found this too.
3. Became difficult to trade as prices dropped. Value irrelevant…

The Future: *Lessons from the Crisis*

- 1. **Interconnectedness and crowds** - real estate, haircuts, ratings, all pro-cyclical, OTC Swap market back to LTCM
- 2. **Leverage** again on steroids - Freddie and Fannie
- 3. **Derivatives** - more education needed, less polishing the shoes. Encouragement of honesty rather than greed. Merton example.
- 4. **Conflicts of Interest** - complicated, rating agencies, mortgage lenders comp, real estate comp.
- 5. **Policy Lessons** - not prepared, runs happen faster than ever in today's age Bailouts - yes, needed, but how to prevent moral hazard.
- 6. **Risk Management** - crowds, valuation to measure risk, holders. Incentives.
- 7. **Counterparty Issues** - liquidity on down quote p. 304
- 8. **Hedge funds** - some nuances, dynamic risk hedging
- 9. **Importance of arbitrage** - p. 307 good things of finance

Thank you

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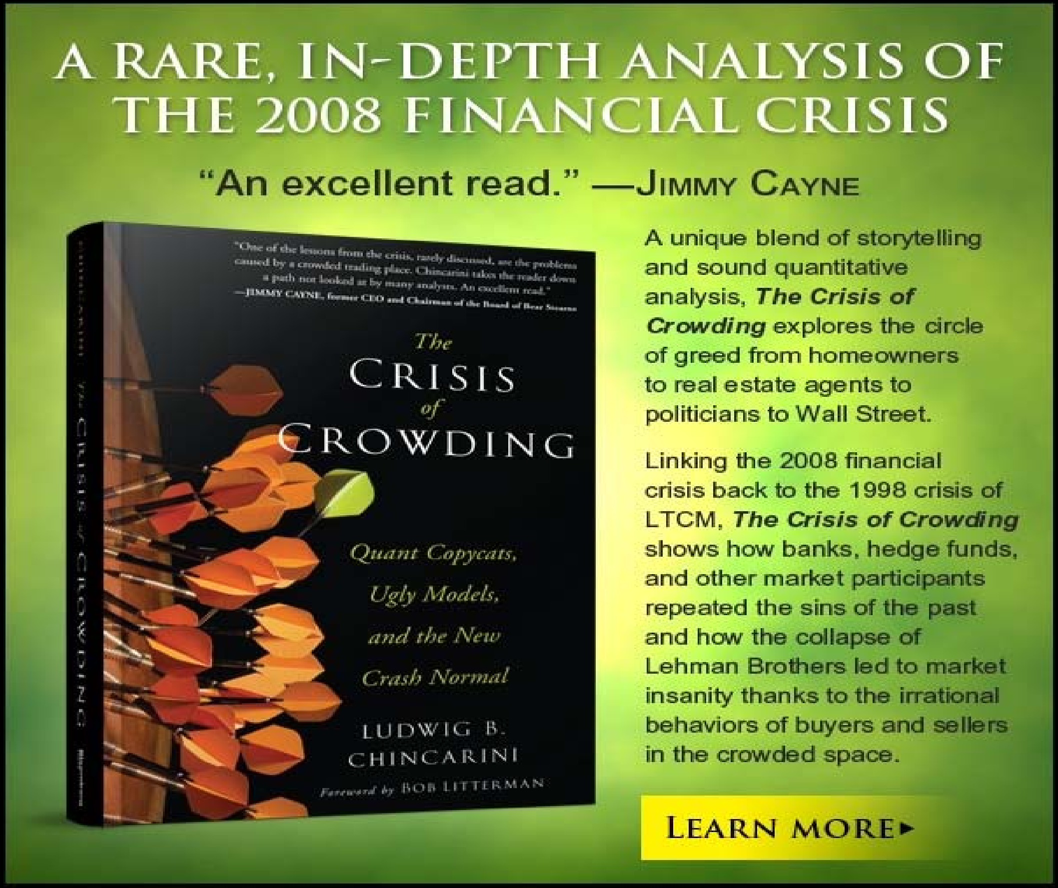

WILEY

Bloomberg PRESS

Stories Discussed in the Book

- The Circle of Greed – *The Housing Bubble how it got started, why it kept going, and everyone's role in its spreading.*
- Fannie and Freddie– *Although Wall Street is often blamed, much of the housing catastrophe started with the quasi-government institutions of Fannie Mae and Freddie Mac. This chapter described their colored past and how they and politicians manipulated the American housing market.*
- The LTCM Debacle – *The fascinating story of a hedge fund's troubles and how a problem in 1998 should have warned us about what could happen.*
- The Lehman Collapse – *The inside story of what led to Lehman's collapse and why no one did anything to save it.*
- The Bear Stearns Hibernation – *With inside interviews of the key players, a detailed analysis of why the market decided to make a run on the Bear.*
- Asleep in Basel – *Discusses how regulation can fail and how rules that regulators made actually helped fuel the housing bubble.*
- The End of the LTCM Legacy – *John Meriwether, the legendary investor, made famous in Liar's Poker, fell again in 2008. Why did it happen? Why didn't their risk models work?*

Stories Discussed in the Book

- The Quant Crisis – *In early August 2007, one of the most efficient areas of portfolio management went into trouble for all the same reasons that would cause banks to suffer in 2008, yet it was hardly noticed. This discusses that amazing event.*
- Absurdity of Imbalance – *We failed to understand that a Lehman Collapse would cause market chaos. This chapter discusses the most bizarre, irrational things that happened due to the Lehman failure.*
- The Flash Crash – *In 2010, one of the most liquid markets in the world led to people buying Apple stock at $100,000 per share and selling Sothebys at 1 cent per share. What in the world happened?*
- Getting Greeked – *The Euro crisis has had its verberations everywhere, including the US. How did the whole problem start? Why did Greek politicians lie? What happened?*
- New and Old Lessons from the Crisis of 2008 – *Discusses the important lessons that we should all understand about the financial system.*

Open Discussion

- What do you think of Paul Krugman’s statement that there is a 50-50 that the government will default?
- Where should I invest now, since there is worry about interest rates and a default?
- You mentioned two words in your talk, “catastophe” and “smart”. Since people use these words recklessly, could you please define your words for us.
- Can you explain the term crowding a bit more?
- What do you think about regulating leverage – I’m a pro regulation person?
- How did other countries reach to our crises?
- What do you think of Robert Reich?