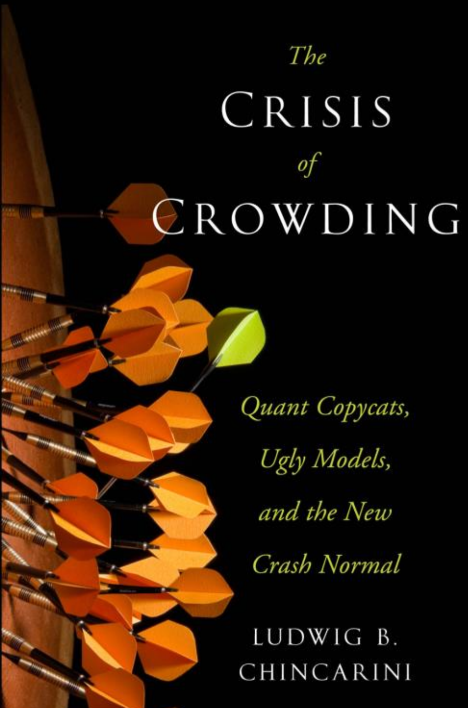
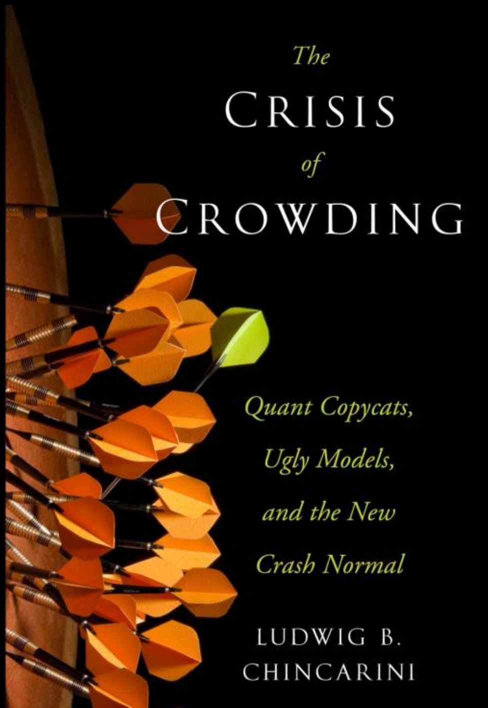


Crowds, Crashes, and the Carry Trade

Discussion

June 29, 2018



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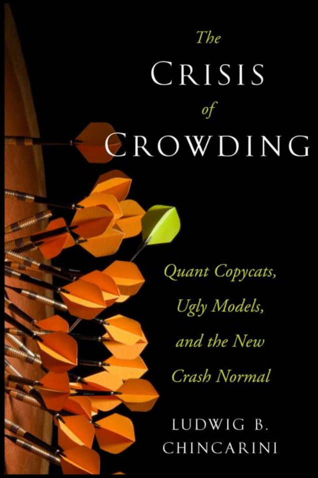
United States Commodity Fund Investments

THE EUROPEAN FINANCIAL MANAGEMENT CONFERENCE
JUNE 29, 2018

- Thank you for coming to this session

1. New Idea of Crowding



- *The Crisis of Crowding* by Ludwig Chincarini.

- 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.

2. Intro to Crowding

How does crowding differ from herding?

They are similar. However, herding represents many similar investors following the same strategy and liquidity may not be fragile.

Crowding represents similar and/or different investors following the same or different, but correlated strategies to an extent that the opportunity or trading space is crowded/saturated. When the saturation is severe, the return and risk of the space is no longer determined by fundamentals, but determined by the behavior of the participants in the space. Exit is difficult. This makes all historical return and risk calculations less useful.

Practitioners and **Academics** are Acknowledging this New Risk

3. Market Acknowledges Crowding

Crowding measures and reports are regularly included in major bank reports, including Bank of America, Credit Suisse, Goldman Sachs, MSCI Barra, Bernstein, JP Morgan, IMF, Nomura, and others.

For more details, see my website: www.ludwigbc.com Go to Presentations

4. Academic Studies on Crowding

- Three areas of contribution:

  A. Portfolio Construction
     - Copycat Techniques
     - Copycat Alpha

  B. Impact of Crowding

  C. Implications

4. Academic Studies on Crowding

A. "The Failure of LTCM," Chincarini (1998)
B. "Sophisticated Investors and Market Strategy," Stein (2009)
C. The Crisis of Crowding, Chincarini (2012)
D. "The Externalities of Crowded Trades," Blocher (2013)
E. "Standing out from the Crowd. Measuring Crowding in Quantitative Strategies," Cahan and Luo (2013)
F. "Stock portfolio structure of individual investors infers future trading behavior," Bohlin and Rosvall (2014)

4. Academic Studies on Crowding

G. “Dimensions of Popularity,” Ibbotson and Idsorek (2014)).

H. “Crowded Trades: An Overlooked Systemic Risk for Central Clearing Counterparties,” Menkveld (2014)

I. “The Effects of Short Sales and Leverage Constraints on Market Efficiency,” Yan (2014).

J. “Omitted Risks or Crowded Strategies: Why Mutual Fund Comovement Predicts Future Performance,” Chue (2015).

K. “Fire, Fire. Is Low Volatility a Crowded Trade,” Marmar (2015)

L. “Days to Cover and Short Interest,” Hong et al. (2015)

4. Academic Studies on Crowding

M. "Portfolio Construction and Crowding" Bruno, Chincarini, Davis, and Ohara (2018).

N. "Transaction Costs and Crowding" Chincarini (2017)

O. "The Impact on Stock Returns of Crowding by Mutual Funds," Tay et al. (2017)

P. "Hedge fund crowds and mispricing," Sias et al. (2016)

R. "Individual stock Crowded Trades, Individual Stock Investor Sentiment, and Excess Returns," Yang and Zhou (2016)

4. Academic Studies on Crowding

S. "Omitted Risks or Crowded Strategies: Why Mutual Fund Comovement Predicts Future Performance" Chue (2015).

T. "Crowded Trades" Kinlaw, Kritzman, and Turkington (2018)

U. "Trading in Crowded Markets," Gorban, Obizhaeva, and Wang (2018)

V. "The Equilibrium Consequences of Indexing," Bondy and Garcaz (2018) – not on crowding, but related.

W. "Learning in Crowded Markets," Kondory and Zawadowskiz (2016)

4. Academic Studies on Crowding

X. "Are Exchange-Traded Funds Harvesting Factor Premiums?" Blitz (2017)

Y. "Managing Risks Beyond Volatility," Alighanbari, Doole, and Melas (2017)

Crowds, Crashes, and the Carry Trade

By Valeri Sokolovski

5. Comments

A. General Comments

- I very much like the paper.
- Two exciting areas: The Carry Trade & Crowding

5. Comments

B. Basics of Paper

- Carry Trade can get crowded.

- What is Carry Trade?

Borrow in lower interest rate countries, lend/invest in high interest rate countries and bet that uncovered parity doesn't occur. Make money.

On average this strategy works, but there are "crashes" from time-to-time.

- What is crowding?
  - Hard to measure. Return Based vs. Holdings Based.
  - Holdings hard to do.
  - Uses correlation of trades related to carry trade.

5. Comments

C. Specific Comments

- Make introduction much shorter and remove section on "related literature"
- Lots of assumptions on how "carry-trade" players behave, leverage and fund-constrained. Maybe try to get some actual data to show this more concretely.
- You drop emerging market countries – why not check those too in separate work or separate table?
- You derive your interest rates from assumption of CIP, but recently, CIP has been violated. You need to check this.

5. Comments

C. Specific Comments

- Equation (5) on Page 14. Please expand the details of this equation for the reader.
- You choose the “worst 100 drawdowns” for definition of carry trade crash, why not a percentage, like worst 1%, worst 5%. With 100, we don’t know what percentage that is and how meaningful.
- You talk about the DOL(t) – dollar factor. Can you give more intuition or discussion why this is a good “main factor” for currency investing.
- On page 17, you mention standard illiquidity measure for FX, but do not list them. I think it would be beneficial to discuss each measure for reader.

5. Comments

C. Specific Comments

- On page 17, you use CBOE VIX as a measure of uncertainty and fundamental volatility. You might also try other measures, such as Fed Stress Index (https://fred.stlouisfed.org/series/STLFSI) or Economic Policy Uncertainty (http://www.policyuncertainty.com/) or (https://fred.stlouisfed.org/series/USEPUINDXD)
- On Page 18, you speak about how carry traders use "portfolios" of carry trades. It might be good to get more evidence of this either through data or other sources.

5. Comments

C. Specific Comments

- On Page 19, you describe the method to measure pairwise correlation of residuals. If I understand, 20 trading days, but you need to estimate a regression plus 6 correlations on the currencies. I’m a bit worried about degrees of freedom, but maybe there’s enough – just check.
- On page 21, you look at carry trade returns since 1976. Might you also consider other sub-periods?
- I like your work on connecting currency hedge fund AUM and crowding measure. I think this should be highlighted more (page 23/24)

5. Comments

C. Specific Comments

- Page 24, again, why not PERCENTILE, rather than top 100?
- Page 35 you show that crowding amplifies the predictability of other variables for crashes. You might weave the intuitive narrative into introduction or elsewhere.
- I like your tables/graphs, but you might think of how to limit them in main paper for publication and put in an appendix.
- I like your hedge fund AUM and exposure to carry trade methodology. This might be a separate smaller paper, rather than part of this paper. In this paper, it could be a footnote.

5. Comments

C. Specific Comments

- You might also consider building portfolios of High and Low Crowdedness to see if there is an out-of-sample performance on average.
- Figure 11 could be made a little more "marketable" or "clearer"
- In the conclusion, you mention discover what fundamental factors drive change in crowding:

Maybe consider newspaper discussion of carry trade (awareness factor)

Or recent performance – i.e. copycats following the recent performance of a strategy.

Thank you
& Enjoy Milano

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- University of San Francisco
- United States Commodity Funds

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For more information: Buy the books! ;)