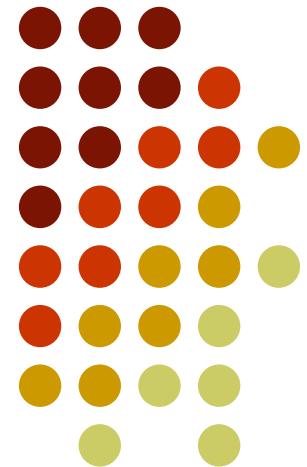


# Liquidity and Correlation Risk: A Clinical Study of the GM and Ford Downgrades of May 2005

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# The Regime Switching Approach to Understanding Liquidity



- Most of the time markets have plenty of liquidity and prices are determined by economic fundamentals
- Periodically the market becomes liquidity constrained and the liquidity plays a key role in determining market prices and correlations increase

# The Story



- As a result of the downgrade, many investors did not want to, or could no longer, hold Ford and GM bonds
- When they sold, market makers were forced to increase their inventory positions
- This created funding problems for the market makers and meant that they had less capacity for market making across all bonds
- As a result all bonds were more difficult to sell and all credit spreads tended to increase
- This leads to an increase in the observed correlation between credit spreads across the board (but no corresponding movement in equity prices)

# What the Research Finds



- Big increase in CDS spreads for GM and Ford starting in mid March 2005
- Big increase in CDS spreads for banks immediately after May 5, 2005
- Unusually high imbalance of bids and offers before the downgrade (but not immediately after the downgrade)
- Correlation of all CDS spreads higher during the crisis period (defined as Oct 2004 to July 2005)
- Correlation of all CDS spreads related to imbalance measure during crisis period, but not at other times

# Concerns



- Are there lags in the story?
  - When did people decide to sell Ford and GM bonds?
  - When did spreads increase for other companies?
  - When was relation between spread correlation and imbalance most pronounced?
- Bonds are used for the liquidity measure and CDS spreads are used for the calculation of spread innovations and correlations

# Another Reason Why Intermediaries were Overloaded after Downgrade



Two “arbs” were popular with hedge funds during the period leading up to the downgrade

- Sell protection on GM and short equity
- Take (what you think are) offsetting positions in equity and mezzanine tranches of CDX NA IG or iTraxx

Both types of trades lost huge amounts of money at the time of the GM and Ford downgrade and had to be unwound

# A Generalization of the argument: How liquidity/correlation crises typically happen



- Many traders following the same strategy
- Trade starts to go bad
- Traders unwind their positions
- As a result the market moves further against the traders
- More traders unwind their positions
- Liquidity problems
- Correlation increases

# How do we avoid liquidity/correlation crises?



- We need more diversity in the trading strategies being followed
- Unfortunately the current regulatory environment does not encourage diversity
- The trading strategies followed by hedge funds are not as diverse as one would like

# Conclusions



- Understanding liquidity is a very important task for finance researchers
- This paper is an important contribution