

# Innovations in Credit Markets: the Impact on Credit Supply

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# The Economic Impact of Credit Market Innovations

*Which innovations?*

- Loan sales
- Securitizations
- Credit derivatives
- Structured credit products

*Affect whom?*

- Institutions / Intermediaries / Lenders
- Markets
- Borrowers

# The Traditional Credit Process

- Three steps in process:
  - Origination
  - Funding
  - Holding credit risk
    - Traditional risk management
    - “Monitoring”
- In bank-centered system, all three steps done by banks.
  - spillover to other markets via “certification”.
- Credit market innovations have severed the links between these steps.

# What Does Theory Suggest?

- Credit market innovations will lead to increases in the supply of credit:
  - Better diversification and risk-spreading.
  - Leverage use of (scarce) capital.
  - More liquid credit – “originate to sell”.
  - Wider dissemination of knowledge about firms’ credit quality.

→ Key role of banks: credit origination.
- Credit market innovations will lead to decreases in the supply of credit:
  - Less monitoring.
  - Certification function undercut.
  - Dissemination of (formerly private) information about firms’ credit quality.

→ Key role of banks: monitoring and risk management.

## What Does Empirical Work Suggest?

- Banks' use of innovative credit market techniques associated with more bank lending.
  - Loan sales.
  - Credit derivatives.
  - Securitizations.
- Meta result → banks undo the impact of risk reduction/ diversification by taking on more risk, expanding lending.

## Focus on Credit Derivatives

- Review preliminary results of studies underway at FRBNY on the impact of credit derivatives on credit supply.
- Early results of these studies suggest that borrowers that are “named credits” benefit, though evidence is not overwhelming.

## Credit Derivatives at U.S. Banking Companies (Updating Minton, Stulz, and Williamson 2005)

- Few bank holding companies (BHCs) report holding any credit derivatives:
  - Just 26 BHCs in Q3 2006.
  - But these 26 BHCs account for three-quarters of overall assets.
- More than half both buy and sell protection:
  - buy and sell protection: 15
  - buy protection, but not sell: 7
  - sell protection, but not buy: 4
- Amount of protection bought appears small:
  - for a typical BHC, net protection bought is less than 1 percent of C&I loans.

# Credit Derivatives and Bank Credit Supply: I

- Look at how use of credit derivatives by lending bank affects volume of lending and loan terms.
- Large data set of individual corporate loans made by a sample of banks between 1997 and 2005.
  - principal amount, spread, risk rating, maturity, loan terms.
  - know the bank, but not the borrower.
- For small corporate borrowers, mixed results:
  - more lending, but at higher spreads.
- For large corporate borrowers, some evidence of increased supply:
  - no change in volume of lending, but lower spreads and longer maturities.

# Credit Derivatives and Bank Credit Supply: II

- Impact of CDS “listing” on frequency and terms of syndicated lending.
  - focus is on individual corporate borrowers.
  - change before and after “listing”, as compared to changes for similar firms that are “unlisted”.
- Limited evidence of an increase in credit supply:
  - no impact on spreads or non-price loan terms.
  - higher rate of syndicated loan issuance and more leverage.
- Corporate leverage results possibly suggest increase in supply from both bank and market sources.

# Credit Derivatives and Equity Trading Characteristics

- Impact of CDS “listing” on equity trading efficiency and liquidity.
  - focus is on individual corporate borrowers (equity).
  - separate sample into segments based on visibility, efficiency of trading, and liquidity before listing.
- CDS “listing” increases market efficiency for less visible, less liquid, and relatively inefficiently traded stocks.
- During stress events (ratings downgrade), CDS trading is stabilizing for smaller, less liquid stocks.
- Overall, CDS “listing” improves trading characteristics for smaller, less liquid, less visible, less efficiently traded stocks.

## Drawing the Results Together: Credit Derivatives and Credit Supply

- Impact depends on the borrower and on the bank.
- Results in Study I are strongest for banks that are active hedgers using other type of derivatives.
  - Complementarity between hedging via credit derivatives and other hedging at the bank?
- Loan supply results strongest for large borrowers and/or “named credits”.
- Trading characteristics results strongest for stocks with weaker ex ante characteristics.
- Suggests benefits to particular firms, but not widespread increase in credit supply.

# Summary and Bottom Line

- Economic theory provides conflicting implications about the impact of credit market innovation on credit supply.
- General thrust of empirical evidence supports the idea that credit market innovations have increased the supply of credit from banks.
- Same general result from recent FRBNY studies of credit derivatives, though findings suggest impact varies across banks and borrowers.
- As always, more empirical work needed! Explore:
  - impact on non-bank credit sources.
  - interaction of bank and non-bank credit.
  - long-run impact on performance, growth of borrowers.

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