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The Impact of Dodd-Frank on S&P Credit Ratings & Bond Yields: The Municipal Securities' Case

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Dodd-Frank's Impact on S&P Ratings: Summary of Research Results – Credit Ratings

- Empirical evidence supports disciplining effect of Dodd-Frank on S&P ratings.
  - Higher ratings;
  - More stable ratings –
    - Fewer total rating changes;
    - Fewer overall negative rating actions;
    - Fewer rating downgrades; more rating upgrades.

- Also, we find stability and change in credit rating model.

Dodd-Frank's Impact on S&P Ratings: Summary of Research Results – Bond Yields

- After Dodd-Frank bond yields are lower, and the impact is significant across all rating classes.
  - Yield spread across rating classes is wider.
  - We find no significant impact for non-rated bonds.
- Also, recently upgraded bonds are associated with a significantly greater reduction in yield spread after Dodd-Frank (compared to bonds with established rating).

Dodd-Frank Wall Street Reform and Consumer Protection Act

- Signed by President Obama on July 21, 2010
- 2,319 pages of new laws intended to fundamentally change how financial markets and financial service providers operate.

"Promote the financial stability of the United States by improving accountability and transparency in the financial system, to end "too big to fail", to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial service practices, and for other purposes." H.R. 4173

Dodd-Frank Strengthens Regulation of Credit Rating Agencies

- Credit Rating Agency Reform Act of 2006
  - Gave SEC authority to regulate credit rating industry.
  - Established in federal law the term “Nationally Recognized Statistical Rating Organization (NRSRO)” and asked rating agencies to apply to SEC for registration as an NRSRO.
- Dodd-Frank. Subtitle C – Improvements to the Regulation of Credit Ratings, including requiring “Universal Ratings Symbols”
  - Builds on 2006 Reform Act and transforms regulatory relationship from clerical registration to ongoing federal oversight of internal operations, procedures and methodologies, and ratings performance.

Dodd-Frank, Title IX, Subtitle C
Increases Regulatory and Litigation Risks

- Regulatory Risk - Requires “Universal Ratings Symbol”
  - Requires probability of issuer default assessment
  - Consistency across all types of securities
  - Requires CRAs to review their systems and methodologies to make adjustments as necessary to maintain consistency
- Litigation Risk - Lowers liability shield protections for CRAs
  - Culpable for material misstatements and fraud
  - Increases liability exposure for issuing inaccurate ratings

Dodd-Frank's Expected Impact on CRAs: Reputation vs. Disciplinary Hypotheses

- Reputation Hypothesis

  (Dimitrov et. al. 2015; Becker & Milbourn 2011; Schwarz 2002; Shapiro 1983)

  - Increased penalties may result in CRAs issuing lower ratings than warranted by entity's credit fundamentals (Goel & Thakor 2011).
  - Corporate studies support reputation theory (Dimitrov et. al. 2015)

- Disciplinary Hypothesis

  (Dimitrov et. al. 2015; Goel & Thakor 2011)

  - To reduce regulatory and legal exposure CRAs may perform more due diligence, improve their methodology, increase surveillance operations, resulting in more accurate and informative ratings.

Impact of Dodd-Frank on Municipal Market May Be Different than Other Sectors

- Disciplining effect may be more likely for municipal ratings because municipal market is different.

- Muni Market –
  - Default rates are much lower than corporates.
  - CRAs widely criticized for underrating municipal sector.
  - Dodd-Frank enacts portions of Municipal Bond Fairness Act of 2008 bill intended to “ensure uniform and accurate credit rating of municipal bonds.”
  - Muni investors may be more reliant on CRA information.
    - Not subject to same comprehensive primary and secondary market financial disclosure regulation as corporate market.
    - Not all issuers follow GASB accounting standards, and reporting is frequently delayed, untimely and incomplete.
    - Secondary market is opaque; dominated by individual investors, rather than institutional investors.

Dodd-Frank increases CRA Regulatory and Litigation Risk

- Expected empirical impact from Dodd-Frank:
  - Higher ratings (lower yields)
    - Reduced downward rating bias
  - Greater rating stability
    - Rating methodological adjustments

Methods & Data: Credit Rating Analysis

- Ordered Probit

- 418 S&P observations from 38 states
  - GO ratings from 2004 to 2014 at year end

- Core Model –

  BUDGET, REVENUE, TAX RATIO, POPULATION, UNEMPLOYMENT, DEBT, and CAFR FINANCIAL variables.

- Test Variable –
  - **After-Dodd-Frank (*AFTER-DF*)** for year-end ratings from 2010 to 2014; Pre-Dodd-Frank = 2004-2009

Empirical Tests & Results: Credit Rating Analysis

- Credit ratings before & after DF (see Table 4 in paper).
  - In base model, ratings significantly higher *AFTER-DF.*
  - In base model and interactive variables, S&P's model shows both stability and change.
  - 3 of 10 interactive variables are significant:
    1) POPULATION**AFTER-DF*;
    2) DEBT**AFTER-DF*;
    3) TAX RATIO**AFTER-DF*.

- Chi-square test indicates that interactive *AFTER-DF* model is statistically different than the base *AFTER-DF* model.

- Interactive *AFTER-DF* model has greater predictive power.

Empirical Tests & Results – Rating Outlooks & Rating Actions

- Rating Outlooks (Table 6) –
  - Results similar to credit ratings

- Rating Actions –
  - Did the number and composition of rating actions change after-DF? (Tables 7 & 8)
    - Overall rating actions decreased;
      - Total negative actions decreased.
    - Fewer rating changes;
      - Downgrades decreased; Upgrades increased.

- Empirical results provide evidence of greater rating stability after Dodd-Frank.

Methods & Data: Bond Yields

- 22,785 individual state GO bond yields, 2004-2015 (Tables 11-17)

- Base Model Estimation:
  - $YIELD_{it} = \beta_0 + \beta_1 RATING_{it} + \beta_2 AFTER - DF_{it} + \beta_3(RATING_{it} * AFTER - DF) + CONTROLS + \varepsilon$
    - Year and state fixed effects; robust standard errors

- Expectations After Dodd-Frank:
  - Lower yields (aligns with higher ratings and more positive rating actions)
  - Yield differences across rating classes will be wider (market is better able to separate bonds based on default risk)

Empirical Tests & Results: Bond Yields

- Yields *AFTER-DF* are lower for newly issued bonds.
  - Finding is significant across all rating classes.
  - No significant difference for non-rated bonds, indicating the yield effect likely goes through credit ratings.

- Yield risk spread is higher *AFTER-DF*.

- Yield spread between newly upgraded bonds and bonds with established ratings narrows after Dodd-Frank.

Conclusion

- Dodd-Frank had a significant impact on ratings and yields.

- Credit ratings significantly higher after Dodd-Frank, as well as more stable as evidenced by fewer total rating changes.
    - Fewer overall negative rating actions, fewer rating downgrades, and more rating upgrades after Dodd-Frank.

- S&P increased state credit ratings and changed its credit rating model in response to increased litigation and regulatory risk, but without a major public announcement.

Conclusion

- Bond yields lower across all rating classes after Dodd-Frank.
  - No evidence of before & after yield differential for non-rated bonds.

- Dodd-Frank impacted yields through ratings.

- Market uses after Dodd-Frank credit information to further separate bond yields based on their default risk.

- Market interpreted post-Dodd-Frank rating upgrades as providing new, positive information.

- Overall, empirical evidence supports disciplining hypothesis, not reputation hypothesis.