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**DSC5101 Group Assignment 2**

A Relook at “Risk Targeting and Policy Illusions – Evidence from the Announcement of the Volcker Rule”



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**Section 1: Executive Summary**

Enacted into law on July 21, 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act/DFA”), also referred to as the Volcker Rule, prohibits any banking institution from a) engaging in short-term proprietary trading of securities, derivatives, commodity futures and options; b) owning and sponsoring hedge funds or private equity funds. In wake of the 2008 global financial crisis, the Volcker Rule’s primary goal was to enhance banks’ safety and soundness through minimizing exposure to non-banking capital market risks. Exemptions were provided for specific activities including a) underwriting, market making-related, risk-mitigating hedging, trading of government obligations and other activities that improve the U.S. financial stability; b) investing in general corporate purpose companies such as foreign public funds, wholly-owned subsidiaries, joint ventures, acquisition and securitization-related vehicles. Note that an effective implementation of the regulation remained to be seen until 2016 due to the lag in agreement among regulatory agencies as well as the provision of a two to five-year conformance period.

This report will focus on the construction of linear regression model that incorporates an interaction variable, controlling covariates, and fixed time effects. Specifically, results produced from the above model demonstrate several key findings. First, after the announcement of the Volcker Rule, banks decreased their trading assets to a limited extent. Second, banks that previously had significant trading asset ratios responded to the regulation the most, while this effect was not pronounced for those with insignificant pre-DFA trading asset ratios. Finally, robustness tests suggest that the findings are beneficial to both the banking entities and regulatory bodies.

**Section 2: Model Building and Analysis**

**2.1 Assumption and Hypothesis**

**Assumption 1:** Bank holding companies with traditionally relatively large trading books pre-DFA will have the most impact and display substantial reaction to the Volcker Rule.

Note that 41,442 missing observations have been omitted for simplicity.

**Hypothesis 1:** *The affected banks started to reduce their trading asset ratio after the announcement of the Volcker Rule (Jussi Keppo, Josef Korte, 2018).*

**Hypothesis 2A:** *Due to the trading constraints of the Volcker Rule, affected banks became less risky after the announcement of the rule (ibid).*

**Hypothesis 3:** *The affected banks’ remaining trading activities became riskier and were used less in the hedging of banking books after the announcement of the Volcker rule (ibid).*

**2.2 Baseline Model**

Model 1a:

(linear regression)

Model 1b:

(linear regression with control variables)

**2.3 Panel Model**

Model 1c:

(fixed, random effects)

Model 1d:

(time-fixed effect)

Model 1e:

(final model)

**2.3 Difference in Differences**

**2.4 Propensity Matching**

**2.3 Other Considerations**

**Section 3: Summary and Recommendations**

Overall, the results indicate that the Volcker Rule effectively steered a decrease in banks’ trading asset ratios, of which banking entities with predominant trading activities prior to the announcement demonstrated stronger reactions to the regulation. Note that the majority of bank holding companies had close to zero or insignificant trading asset ratios preceding the Dodd-Frank Act. This further warrant robustness testing in order to evaluate the strength of statistical model in the treatment and control groups.

These findings are meaningful for both the financial institutions and its regulatory authorities. Authorities such as the Basel Committee on Banking Supervision and the International Association of Insurance Supervisors concurred and delineated a list of global systematically important banks “G-SIBs”. Historically, such banks maintain considerable equity trading portfolios, and in accordance to the model implications, responded the most after the announcement of the Volcker Rule. Hence, separate regulatory compliance requirements should be imposed on the peer groups. Concurrently, smaller financial institutions will be categorized into another peer group based on factors including total amount of assets, cross-jurisdictional network and reach, interconnectedness, infrastructure, and complexity and diversification of transaction activities. Specifically, risk-based “CAMELS” monitoring system is an ideal barometer for assessing bank entities’ overall well-being. The scoring test is comprised of “Capital Adequacy”, “Asset Quality”, “Management”, “Earnings”, “Liquidity”, and “Sensitivity to Market Risk”.

**Appendix**

***Figure 1: Distribution Chart***

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***Figure 2: Trend Graph***

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