

Banking development and transformation in Ukraine more relied on the global economic and financial factors: better access to international financial markets, wider implementation of information and financial technologies.

References:

1. IMF. 2016 Debt: Use it Wisely. Fiscal Monitor. October 2016. - Washington, International Monetary Fund. 2016.111p. URL: <http://www.imf.org/external/pubs/ft/fm/2016/02/pdf/fm1602.pdf>
2. IMF. 2018. Global Financial Stability Report 2018 IMF - Washington, International Monetary Fund. 2018. URL: : <http://www.imf.org/imf/>
3. NBU. Ogljad bankivskogo sektoru. 2018. Serpen 2018. K., Natsionalny Bank Ukrainy, 2018.
4. IMFC World Economic Outlook. Challenges for steady growth. October 2018. Washington, International Monetary Fund. 2018. 215 p. URL: <https://www.imf.org/en/Publications/WEO/Issues/2018/09/24/world-economic-outlook-october-2018>

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SELF-REGULATION AND META-REGULATION IN FINANCIAL INDUSTRIES – REGULATING THE MEMBERS OR THE SRO? A THEORETICAL AND EXPERIMENTAL STUDY

Introduction

Regulatory investigations by Self-Regulatory organizations (SROs) in financial industries have been recognized to usually be cheaper than investigations by the government (DeMarzo et al., 2005). However, in practice, oversight by an SRO is mostly still supplied with forms of governmental oversight (FINRA, 2018; Carson, 2011). The government may exert oversight over the SRO itself, a construction referred to as "meta-regulation" or "co-regulation", or over the members of the SRO. Indeed, the overall performance of SROs has been mixed and theoretical models show that SROs have incentives to set lax standards or cover up detected violations. However, some research indicate that meta-regulation, oversight of the SRO itself, may nonetheless not be necessary in some settings. Using a costly-state-verification model, DeMarzo et al. (2001; 2005) show that when the government implicitly threatens to perform additional investigations of the SROs members, a relatively "good" outcome can be established as an equilibrium. In this "good" outcome, the SRO chooses to follow high performance standards in order to pre-empt any of the (relatively costly) governmental investigations. As a result, no costly governmental investigations of the SRO's members take place, and no meta-regulation of the SRO is necessary.

Theory: Simultaneous moves

I extend this model to include plausible settings where the actual rigor of oversight by the SRO can be verified only ex-post. I show that in such settings, the SRO may have incentives to announce stricter regimes than it effectively implements and that, as a result, a "bad", Pareto-inefficient outcome is established as an equilibrium. In the "bad" outcome, the SRO relinquishes all oversight to the government. Proposition 1 summarizes the result.

Proposition 1

When the GOV and the SRO set their investigation probabilities simultaneously, then, provided oversight by the GOV is effective in the sense that $p_{S^0} < p_{G^0}$ and $a_{S^0} < a_{G^0}$, the SRO does no investigations, $p_S = 0$, and the GOV does investigations given by p_{G^0} . Proof: see Van Koten (in Print)

Experimental test

The results have been tested experimentally.

Table 1 gives an overview of the sessions. A total of 6 sessions were run in December 2011 in the "LEE" experimental lab of the University of Economics in Prague.² In each session 24 participants made decisions, as SRO or GOV, over 10 rounds. Following well-documented experimental practice, participants in each session were divided into 4 groups of 6 to increase the number of independent data points. In each group, 3 participants were randomly assigned the role of GOV and 3 the role of SRO. Roles were fixed throughout the session. In each round, participants were randomly matched with a participant of the other role within their group. Each session thus resulted in 4 ($24 \div 6$) independent observations. In total 6 sessions were run, involving 144 participants and generating 24 independent data points. Participants in the role of SRO and participants in the role of GOV made their choices simultaneously. Neutral language was used in the instructions, and all treatments were implemented using the direct-response method. Participants earned on average CKZ 360 ($\approx$ €14, $\approx$ \$19), more than four times the gross hourly average wage in the Czech Republic in 2011) in a session of 50 minutes (including the reading of the instructions).

Table 1

SESSIONS, PARTICIPANTS AND INDEPENDENT OBSERVATIONS

Baseline treatment	3 sessions 72 participants 12 independent observations
Robustness tests	
1. Alternative parameterization (normal form)	1 session 24 participants 4 independent observations
2. Complex (normal form)	2 sessions 48 participants 8 independent observations

Figure 1 shows the proportion of paired choices that are congruent with a Nash equilibrium. The baseline treatment is indicated by the thick line with the large round markers. Initially, few paired choices are Nash equilibrium choices. Typically in less than half the cases a pair makes a Nash equilibrium choice in the first three periods. We see, however, a remarkable learning effect. In the last few rounds paired choices are in the range of 75%-85%. While there is some variation in the robustness tests, they follow the same pattern. The proportion of equilibrium choices in the Alternative Parameterization treatments ("Alternative") is higher initially and converges faster to full equilibrium play than the corresponding percentage in the Baseline. This is in line with expectations given the stronger contrast in payoffs due to the higher success probability in the Alternative parameterization (50% versus 25% success probability). The choices for the Complex treatment are very much in line with the Baseline treatment. The results thus corroborate the play of the Nash equilibrium predictions where the GOV does all of the investigations and the SRO none. The results are robust to a different parameterization and a considerable increase in complexity (from 3 to 6 choices for each participant). In line with theoretical predictions, we thus see strong support for the play of the Nash-equilibrium choices and little or no support for profit maximizing choices.

² See www.vse-lee.cz. In addition, I ran 7 sessions where players made their choices sequentially rather than simultaneously. A detailed account can be found in Van Koten and Ortmann (2016).

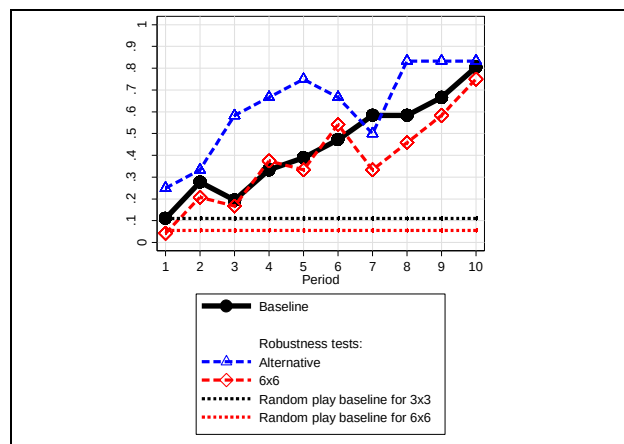


FIG. 1. PROPORTION OF NASH EQUILIBRIUM CHOICES

Conclusion

The predictions of the model are thus supported by experimental tests. The "good" equilibrium can be re-established as an equilibrium with sufficient meta-regulation of the SRO. The results thus indicate a continuing need for meta-regulation in these settings. This form of meta-regulation may be of a relatively light-handed nature, limited to verifying and sanctifying that the SRO implements its announced policies.

References:

- Carson, J. (2011). Self-regulation in securities markets. The World Bank.
 FINRA, 2018, <http://www.finra.org/about>, retrieved on 2018.07.13.
 DeMarzo, P., Fishman, M., & Hagerty, K. (2001). Contracting and Enforcement with a Self-regulatory Organization.
 DeMarzo, P. M., Fishman, M. J., and Hagerty, K. M. (2005), "Self-Regulation and Government Oversight", *Review of Economic Studies*, 72, 687 – 706.
 Van Koten, S., Ortmann, A. (2016). "Self-regulating organizations under the shadow of governmental oversight: An experimental investigation", *Research in Experimental Economics* 19: Experiments in Organizational Economics.
 Van Koten, S. (in print) " Self-regulation and meta-regulation in financial industries – regulating the members or the SRO? A theoretical and experimental study". CERGE-EI working paper.

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THE ROLE OF MUNICIPAL BONDS IN PUBLIC GOVERNANCE AT THE LOCAL LEVEL: FOREIGN AND UKRAINIAN PRACTICES

The Decentralization Reform in Ukraine was designed for the purpose of providing local communities with additional administrative powers and possibilities. It was planned that local authorities would get the access to more complicated and advanced tools for mobilizing funds from all available sources in order to satisfy public demands and needs, develop regional infrastructure and provide stable long-term growth of the territory. In addition to exploiting own resources of local communities (such as local taxes and profits of municipal businesses) authorities may attract external resources from individuals, businesses and even foreign countries. The most commonly used instruments of raising money are bank loans, private and public partnership and issuing of securities.

The legislation of Ukraine allows local authorities (city councils) to issue securities in the form of municipal bonds. In general, municipal bonds are debt obligations in national or foreign currency issued by the Supreme Council of the Autonomous Republic of Crimea or the