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The Effect of Sanctions on Financial Instability of Iranian Banks

Zohreh Asadi *, Kazem Yavari **

* *Ph.D. Student of Financial Economics, Department of Economics, Faculty of Management and Economics, Sharif University of Technology, Tehran, Iran (Corresponding Author)*

Email: zohreh.asadi@gsme.sharif.edu



[0000-0002-7002-6156](https://orcid.org/0000-0002-7002-6156)

Postal address: Iran, North Khorasan Province - Bojnourd - Imam Reza Blvd - Setayesh Street -9416694371

** *Professor of Economics, Department of Economics, Faculty of Economics, Management and Accounting, Yazd University, Yazd, Iran.*

Email: kyavari@yazd.ac.ir

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EXTENDED ABSTRACT

INTRODUCTION

Financial institutions, especially the banking system, play a key role in the economic system; on the one hand, they provide economic growth and development and on the other hand, they may lead to the conditions of disorder and collapse in an economic system. Therefore, the existence of an efficient and stable banking system to prevent or reduce the likelihood of financial and consequently economic crisis is critical. For this reason, Western governments try to affect our economy through financial sanctions. This increases the business risk and costs of the banking system and economic activists, disrupting all international businesses and financial transactions. sanctions as an external shock can potentially have destabilizing effects on the financial system, especially on the banking system and consequently the economy of a country (in terms of revenue and expenditure). In contrast, some economists believe that sanctions do not affect Iran's banking system. In this case, the inefficiency of Iran's banking system regarding international regulations, as well as high credit risk at the international level, is pseudo-sanctioned, causing the unwillingness of foreign banks to cooperate with Iran. Due to this disagreement, the main purpose of this study is to investigate the effect of banking sanctions and their channels on the financial instability of Iran banks using the Z-score index.

METHODOLOGY

To obtain the purposes of this research, a hypothesis has been formulated that bank sanctions have a significant negative effect on banks' financial stability. To test the hypothesis, the financial data relating to a sample of 18 Iranian banks are collected for the period 2007-2017. Dynamic panel data approach

especially two-stage system-generalized method (SYS-GMM) is used. This can dynamically present the results with less error.

Specifying research model

The model is specified based on Kayaza et al. (2014) as follows:

$$Z_{it} = b_0 + b_1Z_{i,t-1} + b_2SANC_t + b_3CR_{it} + b_4LR_{it} + b_5MR_{it} + b_6INEFFI_{it} + b_7size_{it} + b_8GDP_t + b_9INF_t + b_{10}DSC_t + \epsilon_{it}$$

In this model i: Banks, t: time, α : intercept and b: the coefficients of the explanatory variables, banking stability index: (Z). Dummy Variable Sanctions: (SANC), Credit Risk: (CR), Liquidity Risk: (LR), Market Risk: (MR), Inefficiency: (INEFFI), Bank Size: (size), GDP per capita: (GDP), Inflation rate: (INF), current account (DCA).

FINDINGS

Sanctions have a significant negative effect on the banking stability of Iran. In addition, inefficiency, credit risk, and liquidity have led to a decline in bank stability but the size of the bank and market risk have a significant positive effect on banking stability. Also, inflation and GDP have significant negative effects and the current account is significantly positively associated with banking stability.

CONCLUSION

The research hypothesis, that sanctions have a significant negative effect on the stability of Iranian banks, can not be rejected. It may be interpreted that banking sanctions lead to international invalidity and increase the credit risk, resulting in banking instability due to increasing financial costs through bypassing sanctions and finance at a higher cost. Therefore, the central bank is recommended to adopt policies to reinforce the banking system against sanctions, including the use of a SWIFT's alternative messenger system or new financial technologies, especially Blockchain and digital currencies with decentralized supervision.

Reference

- Abel, S., Le Roux, P., & Mutandwa, L. (2018). Competition and Bank Stability. *International Journal of Economics and Financial Issues*, 8(3), 86-94.
- Allen, F., & Gale, D. (1998). Optimal financial crises. *The journal of finance*, 53(4), 1245-1284.
- Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of econometrics*, 68(1), 29-51.
- Asadi, Z., Yavari, K., Heydari, H. (2020). The study of the effects of liquidity and credit risk on bank stability in Iran using the Z-score index. *The Journal of Economic Policy*, 12(23), 1-31. (in persian) Available at: <http://ep.yazd.ac.ir>
- Barros, C. P., Ferreira, C., & Williams, J. (2007). Analysing the determinants of performance of best and worst European banks: A mixed logit approach. *Journal of Banking & Finance*, 31(7), 2189-2203.
- Beck, T., Demirgucx-Kunt, A., & Levine, R. (2006). Bank supervision and corruption in lending, *Journal of Monetary Economics*, 53, 2131–2163.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of econometrics*, 87(1), 115-143
- Caiazza, S., Cotugno, M., Fiordelisi, F., & Stefanelli, V. (2014). *Bank Stability and Enforcement Actions in Banking*.
- Caprio, G., & M Soledad Martinez-Peria.(2000). Avoiding disaster: Policies to Reduce the Risk of Banking Crises, Discussion Paper, Cairo, Egypt: Egyptian Center for Economic Studies.
- Christoph, J. (2004). Express credit and bank default risk an application of default prediction models to banks from emerging market economics. *In International conference on emerging market and global risk management*, university of Westminster, London, UK.
- Čihák, M., & Hesse, H. (2010). Islamic banks and financial stability: An empirical analysis. *Journal of Financial Services Research*, 38(2-3), 95-113.
- Davis, E.P., Zhu, H. (2005). Commercial property prices and bank performance. BIS Working Paper No. 175.
- Delis, M. D., & Staikouras, P. K. (2011). Supervisory effectiveness and bank risk. *Review of Finance*, 15(3), 511-543.
- Delis, M.D., Staikouras, P., Tsoumas, C., 2013. Enforcement actions and bank behavior. MPRA Paper 43557, University Library of Munich, Germany.
- Diamond, D. W., & Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. *Journal of political economy*, 91(3), 401-419.
- Domac, I & Martinez, Peria. M.S.(2003). Banking crises and exchange rate regimes: Is There a Link? *Journal of International Economics*, 61: 41-72.
- Dos Santos, J. V. T. (2004). The world police crisis and the construction of democratic policing. *International Review of Sociology*, 14(1), 89-106.

- Eghbali, M., & Ghanbari, B. (2015). The Effects of Economic Sanctions on International Banking, *Quarterly Journal of New Research in the Humanities*, 1(2), 185-212. (in persian) Available at: <https://civilica.com/doc/628481/>
- Elsa, E., Utami, W., & Nugroho, L. (2018). A Comparison of Sharia Banks and Conventional Banks in Terms of Efficiency, Asset Quality and Stability in Indonesia for the Period 2008-2016. *International Journal of Commerce and Finance*, 4(1), 134-149
- Eyler, R. (2007). Economic sanctions: international policy and political economy at work. Palgrave, New York. <http://dx.doi.org/10.1057/9780230610002>.
- Faraji Dizaji, S. (2013). Financial sanctions and Iranian banks' performance. *Journal of Money and Economy*, 8(4), 99-136. (in persian) Available at: <http://jme.mbri.ac.ir/article-1-170-en.html>
- Ghenimi, A., Chaibi, H., & Omri, M. A. B. (2017). The effects of liquidity risk and credit risk on bank stability: Evidence from the MENA region. *Borsa Istanbul Review*, 17(4), 238-248.
- Hatipoglu, E., & Peksen, D. (2018). Economic sanctions and banking crises in target economies. *Defence and Peace Economics*, 29(2), 171-189.
- Hou, X., & Wang, Q. (2016). Institutional quality, banking marketization, and bank stability: Evidence from China. *Economic Systems*, 40(4), 539-551.
- Imbierowicz, B., & Rauch, C. (2014). The relationship between liquidity risk and credit risk in banks. *Journal of Banking & Finance*, 40, 242-256
- khateri, Z., njarzadeh, R., Agheli-Kohnehsahri, L. (2021). The Impact of Economic Sanctions on Capital Account in Iran. *Quarterly Journal of Quantitative Economics*, 18(3), 135-162. (in persian) Available at: https://jqe.scu.ac.ir/article_14639.html
- Kimasi, M., Ghaffari Nejad, A., & Rezaei, S. (2016). The effect of sanctions on the country's banking system on their profitability, *Journal of Monetary And Banking Research*, 9 (28), 171-197. (in persian) Available at: <https://www.sid.ir/fa/journal/ViewPaper.aspx?id=314022>
- Knoop, T. A. (2008). Modern financial macroeconomics: panics, crashes, and crises. *Blackwell Pub.*
- Maji, S. G., Dey, S. O. M. A., & Jha, A. K. (2011). Insolvency risk of selected Indian commercial banks: A comparative analysis. *International Journal of Research in Commerce, Economics and Management*, 1(5), 120-124.
- Mare, D. S., Moreira, F., & Rossi, R. (2017). Nonstationary Z-score measures. *European Journal of Operational Research*, 260(1), 348-358.
- Minsky, H. P. (1982). The financial-instability hypothesis: capitalist processes and the behavior of the economy.
- Mishkin, F. S. (2010). *The Economics of Money, Banking & Financial Markets*. *Prentice Hall*.
- Mitchell, W. C. (1941). *CRISES*. In *Business Cycles and Their Causes* (pp. 71-128). University of California Press.

- Moyo, B. (2018). *An Analysis of Competition, Efficiency and Soundness in the South African Banking Sector*.
- Perez-Campanero, J., Leone, A. M., & Sundararajan, V. (1991). Liberalization and financial crisis in Uruguay (1974-1987). *IMF Working Papers*, 1991(030).
- Shafik, S. (2014). Financial stability and liquidity: evidence from conventional and Islamic banks in the GCC region.
- Tan, Y. (2016). The impacts of risk and competition on bank profitability in China. *Journal of International Financial Markets, Institutions and Money*, 40, 85-110.
- Tankoyeva, V., Bazzana, F., & Gabriele, R. (2018). The stability of the financial system: an analysis of the determinants of Russian bank failures. In *Research Handbook of Investing in the Triple Bottom Line*. Edward Elgar Publishing.
- Tarkhani, A., Nazari, A., niloofar, P. (2020). Investigating effective factors on the Efficiency of Iranian Banking Industry (Simar and Wilson's two-stage method). *Quarterly Journal of Quantitative Economics*, 17(2), 1-41. (in persian) Available at: https://jqe.scu.ac.ir/article_14838.html
- Torbat, A. (2005). Impact of US Trade and Financial Sanctions on Iran. *The World Economy*, 28(3), 407-434.
- Trad, N., Trabelsi, M. A., & Goux, J. F. (2017). Risk and profitability of Islamic banks: A religious deception or an alternative solution?. *European Research on Management and Business Economics*, 23(1), 40-45.
- Van Greuning, H., & Iqbal, Z. (2008). Risk analysis for Islamic banks. *World Bank Publications*.
- Vesali, S., & Torabi, M. (2010). The Effects of Banks' Sanctions on the Economy and the Banking System, *Banking and Economics*, 111, 38-44. (in persian) Available at: <http://ensani.ir/fa/article/218775>
- Vo, D. H., Nguyen, V. M., QUANG-TON LE, P. H. A. T., & Pham, T. N. (2019). The determinants of financial instability in emerging countries. *Annals of Financial Economics*, 14(02), 1950010.
- Zarei, Z., Komijani, A. (2015). Identification and Prediction of Banking Crisis in Iran. *Economical Modeling*, 9(29), 1-23.