Volume 10, Number 40, Winter 2022

The Effects of Exchange Rate Shock on the Value of Selected Industries in the Tehran Stock Exchange with TVP-FAVAR Approach

Barkhordari Dourbash, S.^{1*}, Abdoli, Gh.², Amiri, R.³

Abstract

Considering the fact that the effects of currency shocks on the capital market can affect the behavioral patterns of different sectors of the economy; Therefore, proper understanding of the mechanism of exchange rate impact on different sectors of the economy, necessarily requires knowledge of the effects of this variable on important financial markets and how institutional factors change in these markets; For this purpose, this study aims to investigate the effects of exchange rate shock on the value of companies operating in different industries of the Tehran Stock Exchange by applying the pattern of variable parameters over time and using seasonal data during the period (2011-2018). The results of this study indicate that the value of companies operating in different industries of the Tehran Stock Exchange is affected by the exchange rate shock in proportion to the type of production and services provided in each of these companies; In addition, the response in each of the studied industries is different over time, which highlights the need to use the parameter-variable approach. Among the selected industries, the value of companies operating in the food and beverage industry has reacted positively to the currency shock in the entire period under review and in the automotive industry; Also, the value of companies operating in other industries has been affected by this currency shock over time; In the cement, lime and gypsum industry, exchange rate shock in (2011-2013) and (2018) has had positive effects on the value of companies operating in this industry and in (2014-2017) the value of companies Active in this industry has reacted negatively to exchange rate shocks. Now, given that the instability of the foreign exchange market poses serious problems for long-term planning for investors and producers, it is suggested that policymakers and decision-makers in adopting economic policies in such a way as to create Avoid fluctuations in capital and foreign exchange markets.

Keyword: TVP approach, Exchange rate shock, Company value, Tehran Stock Exchange.

JEL Classification: G32, E52, L25, C52, C53.

1. Associate Professor, Department of Economics, Faculty of Economics, University of Tehran, Tehran, Iran (Corresponding author) *	Email: barkhordari@ut.ac.ir
2. Professor, Department of Economics, Faculty of Economics, University of Tehran, Tehran, Iran	Email: abdoli@ut.ac.ir
3. PhD candidate, Department of Economics, Faculty of Economics, University of Tehran, Tehran, Iran	Email: amiri@ut.ac.ir

Volume 10, Number 40, Winter 2022

Refrences

- Abolhasan Bigi, H.; Kazeroni, A.R; Bargi Skoei, M. M. & Arsgarpour, H., (2019) "the effect of inflation instability on the relationship between exchange rate and current account in Iran: Nonlinear approach". *Journal of Growth and Economic Development*, No. 51(10), PP: 37-64 (In Persian).
- Ameen, N, M. H. H.; Kamisly, M. & Temizel, F., (2020). "The Impact of Exchange Rate on Stock Market Indices". Business & Management Studies: An International Journal, No. 8(2), Pp: 2044-2062.
- Amiri, F., Derakhshani Dar Abi, K., & Asayesh, H. (2020) "An analysis of exchange rate volatility on valueadded in Iranian sector of the economy". *Iranian Applied Economic Studies Journal*, No. 39(10), 247-267 (In Persian).
- Anisak, N. & Mohamad, A., (2020). "Foreign exchange exposure of Indonesian listed firms". Global Business Review, No. 21(4), Pp: 918-936.
- Bahri Saleth, J. & Hosienin, A., (2016) "An analysis of exchange rate volatility on return of stock price in Tehran Exchange Market (drug and chemical industries)" Sixth National Conference and Fourth International Conference of Accounting and Management, https://civilica.com/doc/604730. (In Persian).
- Branson, W. H. & Henderson, D., (1984). The specification and influence of asset markets.
- Choi, J. J. & Prasad, A. M., (1995). Exchange risk sensitivity and its determinants: a firm and industry analysis of US multinationals. Financial Management, Pp: 77-88.
- Damodaran, A., (2002). *Investment valuation: Tools and techniques for determining the value of any asset* (2nd ed.). Wiley.
- Dornbusch, R. & Fischer, S., (1980). "Exchange rates and the current account". *The American Economic Review*, No. 70(5), Pp: 960-971.
- Frankel, J. A., (1992). "Monetary and portfolio-balance models of exchange rate determination". In: *International economic policies and their theoretical foundations* (Pp. 793-832). Academic Press.
- Gavin, M., (1989). "The stock market and exchange rate dynamics". *Journal of international money and finance*, No. 8 (2), Pp: 181-200.
- Ghlandari, M. & Fellah, M.F. (2021). "The effect of exchange rate shock on anomalies in Tehran Exchange Market", *Business Management*, No. 13(50), PP. 481-502, (In Persian).
- Hasani, A. & Entezar, L., (2019) "An analysis of exchange rate volatility on return of share price and optimizing investment portfolio", *Journal of Research in Investment Knowledge*, No. 31(8), PP. 225-248 (In Persian).
- Heidari, H., Mohammad Zade, Y. & Refah Kahriz, A, (2018) "An analysis of exchange rate on return of share in the drug industry in Tehran Exchange Market", *Journal of Research in Asset Management and Finance*, No. 21(6), PP. 35-56.
- Hoseini Dolat Abadi, S.M. & Taheri Far, A., (2015) "The effect of positive shock on gross national product", *Journal of Majles and Rahbord*, No. 81(22), PP. 171-186 (In Persian).
- Iqbal, J. & Haider, A., (2005). Arbitrage pricing theory: evidence from an emerging stock market.
- Jalali, S.A., Rahimi Pour, A., & Mir, H., (2015) "An analysis of exchange rate shocks on return of share in Tehran Stock Market", *Journal of Iranian Economy Research*, No. 23(12), PP. 135-161.
- Jouvanceau, V., (2019). New Evidence on the Effects of Quantitative Easing.
- Kaviani, M., Saiedi, P., Dide Khani, H. & Fakhr Hosieni, S.F. (2019) "Simulating the effect of oil shocks on systematic risk and return of shares: DSGE approach", *Journal of Strategic Financial Management*, No. 7(25), PP. 123-154, (In Persian).

Applied Economics Studies, Iran (AESI)

Volume 10, Number 40, Winter 2022

- Khan, M. K., (2019). "Impact of exchange rate on stock returns in Shenzhen stock exchange: Analysis through ARDL approach". *International Journal of Economics and Management*, No. 1(2), Pp: 15-26.
- Khani, M. (2014) "The effect of exchange rate on return of drug industry in Tehran Exchange Market: Markov Switching approach", MA Thesis, Faculty of Economics, *University of Tehran, Submitted* No. 1691, (In Persian).
- Kyei-Mensah, J. & Awuah-Werekoh, A., (2020). "The Impact of Exchange Rate and Interest Rate Volatility on Stock Market Returns". *The Journal of Applied Business and Economics*, No. 22(4), Pp: 36-50.
- Levi, M. D. & Sercu, P., (1991). "Erroneous and valid reasons for hedging foreign exchange rate exposure". *Journal of Multinational Finance Management*, No. 1(2), Pp: 25-37.
- Lieberman, M. B. & Balasubramanian, N., (2007). *Measuring value creation and its distribution among stakeholders of the firm.* Available at SSRN 2382099.
- Lindenberg, E. B. & Ross, S. A., (1981). "Tobin's q ratio and industrial organization". *Journal of business*, No. 10(6), Pp: 1-32.
- Mahmodi, M. & Kohansal, M.R. (2020) "An analysis of exchange rate on export and value-added in food industries: SVAR approach" *Journal of Majles and Rahbord*, No. 27(101), PP. 59-94, (In Persian).
- Mashahdi Zadeh, M. & Janbaz, S. (2020). "An analysis of exchange rate shock on return of shares portfolio in Iran", Sixth National Conference New Studies in Human Science, Economics and Accounting", Tehran, Iran, https://civilica.com/doc/1117421. (In Persian).
- Mohseni, H. & Sadeghi Shahdani, M. (2019). "Spil over of exchange rate volatility on financial market in Iran", *Journal of Applied Theories in Economics*, No. 6(1), PP. 77-96, (In Persian).
- Nazemi, B., Sharifi Rannani, H. & Daei Karimzade, S. (2020). "The effect of exchange rate on the profitability of insurance companies: Panel-VAR approach", *Journal of Financial Economics*, No. 14(53), PP. 133-155, (In Persian).
- Reza Zade, H., (2014). "An analysis of exchange rate volatility on price index in chemical, oil, automotive and pieces, drug, metal industries in Tehran Exchange Market based on GARCH and EGARCH approach" *MA thesis, Business and Insurance Filed*, Submitted No. 67202 (In Persian).
- Rezei, Ab., Raeis Pour, A. & Mohseni Jalali, S.A. (2020). "The effect of exchange rate shocks on purchasing power parity: NARDL approach", *Journal of Growth and Development Economic Studies*, No. 23(10), PP. 77-92 (In Persian).
- Salawu, R., (2010). "The Dynamic Model of Capital Structure and Business Risk of Listed Non-Financial Companies in Nigeria (1990-2006)". An Unpublished PhD Thesis Submitted to the Department of Management and Accounting, Obafemi Awolowo University, Ile-Ife, Nigeria.
- Sameti, M., Khanzadi, Az. & Yazdani, Mehdi (2010). "Description of the symmetric effect of exchange rate shocks on production and price: a case study of Iran". *Journal of Money and Economy*, No. 20(12), PP. 35-57(In Persian).
- Shahrazi, M. & Ghaderi, S. (2019). "Comparing the effect of metal price index on return of metal group and mineral extraction: constant rotational transmission probabilities in Markov". *Journal of Econometric Modeling*, No. 4(15), PP. 31-58 (In Persian).
- Shiranin, M.S. (2018). "An analysis of exchange rate on financial performance with focusing on company type and time- period (the period of 2010-2016)" MA Thesis, *Tarbiat Modaress University*, Submitted No. 8269, (In Persian).
- Walid, C.; Chaker, A.; Masood, O. & Fry, J., (2011). "Stock market volatility and exchange rates in emerging countries: A Markov-state switching approach". *Emerging Markets Review*, No. 12(3), Pp: 272-292.
- Wang, V. C.; Le, T. L.; Nguyen, Q. K. & Tran, D. Q., (2020). "Linkage between exchange rate and stock prices: evidence from Vietnam". *The Journal of Asian Finance, Economics, and Business*, No. 7(12), Pp: 95-107.

Applied Economics Studies, Iran (AESI)

Volume 10, Number 40, Winter 2022

- Yahya Abadi, Ab., Samadi, S. & Jahantigh Elahi, M. (2013). "An analysis of a change in oil price, exchange rate and economic sanction on economic growth", *First Virtual National Conference in Iranian Economy Perspective with Focusing on National Production Support*, Islamic Azad Branch of Khrasgan, (In Persian).
- Zolfagari, M. & Sahabi, B. (2016). "An analysis of exchange rate volatility on return of share in automotive, mine and segment industries based on Markov-Switching transitions", *Journal of Financial Engineering and Management of Asset*, No. 29(7), PP. 85-106 (In Persian).