

Quarterly Journal of Quantitative Economics

Journal Homepage: www.jqe.scu.ac.ir Print ISSN: 2008-5850 Online ISSN: 2717-4271



LME Steel Prices and Iranian Ferrous Companies Value

Mani Motameni*, Yousef Eisazadeh Roshan,** Ali Entezari***

* Associate Professor of Economics, Department of Energy Economics, faculty of Economics and administrative Science, university of Mazandaran, Babolsar, Iran. (Corresponding Author)

Email: m.motameni@umz.ac.ir

0000-0002-4814-3276

Postal address: Mazandaran University Campus, Faculty of Economic and Administrative Sciences, University Blvd., Babolsar-Shahid Zulfiqari Blvd., postal code: 13534-47416, Mazandaran, Iran.

** Associate Professor of Economics, Department of Economics, Faculty of Economics and administrative Science, University of Mazandaran, Babolsar, Iran. **Email:** y.eisazadeh@umz.ac.ir

*** MA Student of Economics, Faculty of Economics and Administrative Science, University of Mazandaran, Babolsar, Iran.

Émail: alientezari2237@gmail.com

ARTICLE HISTORY	JEL CLASSIFICATION	KEYWORDS
Received:	G11, G15, C43, C22	Ferrous, Steel, Exchange
Revision:		Rate, Companies value,
Acceptance:		Tehran Stock Exchange

Further Information:

The present article is taken from the M.A thesis of Ali Inteziri with Supervisor of Dr. Motameni at the University of Mazandaran of Iran.

Acknowledgments: Acknowledgments may be made to individuals or institutions that have made an important contribution.

Conflict of Interest: The authors declare no conflict of interest.

Funding: The authors received no financial support for the research, authorship, and publication of this article.

16 LME Steel Prices and Iranian Ferrous Companies Value



How to Cite:

Motameni, Mani., Eisazadeh Roshan, Yousef., Entezari, Ali. (2024). LME Steel Prices and Iranian Ferrous Companies Value, *Quarterly Journal of Quantitative Economics(JQE)*, 21(3), 55-82. [in persian]

⁽¹⁾ 10.22055/jqe.2022.39150.2435



© 2024 Shahid Chamran University of Ahvaz, Ahvaz, Iran. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0 license) (http://creativecommons.org/licenses/by-nc/4.0/)

EXTENDED ABSTRACT

INTRODUCTION

The main purpose of this study is to analyze the impact of the value of ferrous companies from steel rates on the London Metal Exchange. The export advantage of cheap energy and the existence of arbitrage in the global ferrous market can affect the value of Iranian companies whose activities are related to steel production or iron ore extraction under the financial transfer process. Although financial pass through is one of the natural functions of financial markets, but this issue in the Iranian market is challenged from two perspectives. First, it is not possible to trade in the Iranian stock market through international brokers and in practice no international investment is made in this market, and second, the Iranian economy has been subject to international sanctions in recent years and the path of international trade in the country may face serious problems. For these two reasons, it is possible that there is no mechanism for the commodity prices pass through in the Iranian stock market. On the other hand, government intervention in determining the prices of some basic commodities, such as steel, and the imposition of mandatory prices, can make any connection between the value of these companies and world prices meaningless. Government interference in commodity prices can be achieved through the imposition of a regulated exchange rate. For this reason, in this study, the exchange rate in the informal market has been used to Rialize the world steel rate, which is based on the London metals exchange. In this study, the informal exchange rate is equal to one Etherium in Tehran market. Therefore, to estimate the relationship between the global steel price and the value of ferrous companies, we should consider the effect of the exchange rate on the informal market. Capital



market developments and its sharp fluctuations in recent years should also be considered as an effective component in the value of companies.

Finding a significant relationship between global steel prices and the value of ferrous companies would be an important sign to risk management and optimization of investors' portfolios.

METHODOLOGY

In the category of companies activities in the Tehran Stock Exchange, steel industries are in the group of basic metals and iron ore mines are in the group of metal ores. Both stock exchanges include activities related to other metals such as copper and aluminum, and therefore there are no separate indicators for companies whose activities are only related to ferrous activities. In this study, a separate index by Laspiers method for steel producing companies and iron ore mining companies has been designed and calculated separately, in which all effective events such as increasing the capital of companies have been considered. This index is a research dependent variable. Explanatory variables of the research model are steel rates in LME and exchange rates in the Tehran informal market. The total index of Tehran stock market is also included as a control variable in the research model. The data processing method is ARDL.

FINDINGS

Estimation of the coefficients of the research model indicates that the value of iron companies in Iran has a direct and significant relationship with the LME steel rate, the exchange rate in the informal market and the TSE index of Tehran. According to the findings of the ARDL model, a 10% increase in LME steel rate will increase the index of steel companies by 8.8% and the index of iron ore mining companies by 5.8% in the long run. Also, a 10% increase in the informal exchange rate will cause these two indices to grow by 3% and 5.7%, respectively. The validity of a significant long-run relationship has been investigated and confirmed using the bounds test. Adjustment rate in steel industry is about 3 months but in mining companies is faster and close to 1 month.

CONCLUSION

The results of this study indicates that the value of steel companies as well as iron ore mining companies in Iran, have a significant response



to changes in LME steel prices. In other words, the lack of access of international traders to this market and also the existence of international sanctions has not been able to prevent financial pass through in the Tehran stock market. The results of estimating the research model show that the value of ferrous companies in Iran is sensitive to the informal exchange rate. Thus, the official government rate of dollar has not eliminated the link between the market value of these companies and the informal exchange rate.

Reference

- Badamvaanchig, M., Islam, M., & Kakinaka, M. (2021). Pass-through of commodity price to Mongolian stock price: Symmetric or asymmetric? *Resources Policy*, 70, 101955.
- Bakhshani, s. (2016). A Study of the Effect of Exchange Rate Changes on Stock Prices and P/E Ratio by Using SEM-PLS . *quarterly journal of fiscal and Economic policies*, *3*(12), 149-164. Retrieved from <u>http://qifep.ir/article-1-319-en.html</u> [in Persian]
- Barakat, M. R., Elgazzar, S. H., & Hanafy, K. M. (2016). Impact of macroeconomic variables on stock markets: Evidence from emerging markets. *International Journal of Economics and Finance*, 8(1), 195-207.
- Blanchard, O. J. (1981). Output, the stock market, and interest rates. *The American Economic Review*, 71(1), 132-143.
- Chiarella, C., Flaschel ,P., Franke, R., & Semmler, W. (2009). *Financial markets and the macroeconomy: a Keynesian perspective:* Routledge.
- Eslamloueyan, K., & Zare, H. (2007). The Impact of Macro Variables and Alternative Assets on Stock Price Movement in Iran: An ARDL Model. *Iranian Journal of Economic Research*, 8(29), 17-46. Retrieved from <u>https://ijer.atu.ac.ir/article_3672_a22dfad2d5137591669284f5f8b64</u> <u>75f.pdf</u> [in Persian]
- Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance*, 25(2), 383-417.
- Ghaderi, S., & Shahrazi, M. (2020). The Impact of World Commodity Price Index on Tehran Stock Exchange Returns: The Bayesian Approach



of Markov Switching Method. *Financial Research Journal*, 22(1), 90-109. doi:10.22059/frj.2019.286990.1006909 [in Persian]

- Gutierrez, J. P., & Vianna, A. C. (2020). Price effects of steel commodities on worldwide stock market returns. *The North American Journal of Economics and Finance*, *51*, 100849.
- Hung, W.-H., Xue, B.-Y., Lin, T.-M., Lu, S.-Y., & Tsao, I.-Y. (2021). A highly active selenized nickel–iron electrode with layered double hydroxide for electrocatalytic water splitting in saline electrolyte. *Materials Today Energy*, *19*, 100575.
- Irandoust, M. (2017). Metal prices and stock market performance :Is there an empirical link? *Resources Policy*, *52*, 389-392.
- Jahangiri, K., & Hoseini Ebrahimabad, S. A. (2017). The Study of Monetary Policy, Exchange Rate and Gold Effects on the Stock Market in Iran Using MS-VAR-EGARCH Model. *Financial Research Journal*, 19(3), 389-414. doi:10.22059/jfr.2018.236370.1006472 [in Persian]
- Jordan, S. J., Vivian, A., & Wohar, M. E. (2016). Can commodity returns forecast Canadian sector stock returns? *International Review of Economics & Finance*, 41, 172-188.
- Kang, W., Ratti , R. A., & Vespignani, J. (2020). Impact of global uncertainty on the global economy and large developed and developing economies. *Applied economics*, 52(22), 2392-2407.
- Kayalar, D. E., Küçüközmen, C. C., & Selcuk-Kestel, A. S. (2017). The impact of crude oil prices on financial market indicators: copula approach. *Energy Economics*, 61, 162-173.
- Omura, A., Todorova, N., Li, B., & Chung, R. (2016). Steel scrap and equity market in Japan. *Resources Policy*, 47, 115-124.
- Rezagholizadeh, M., Elmi, z., & Mohammadi majd, s. (2023). The Effect of Financial Stress on the Stock Return of Accepted Industries in Tehran Stock Exchange. *Quarterly Journal of Quantitative Economics* (JQE), 20(1), 32-73. doi:10.22055/jqe.2021.35405.2284 [in Persian]
- Singhal, S., Choudhary, S., & Biswal, P. C. (2019). Return and volatility linkages among International crude oil price, gold price, exchange rate and stock markets: Evidence from Mexico. *Resources Policy*, 60, 255-261.