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Original Research Article

Industry Index Performance in Tehran Stock Exchange and Fluctuations of Dollar Rates

Mohammad Qezelbash[*] **Saeid Tajdini**[†]
Mohsen Mehrara[‡] **Majid Lotfi Ghahroud**[§]

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This study aimed to investigate the performance of diverse stock market indices on the Tehran Stock Exchange during two distinct phases: a boom from September 2022 to December 2022 and a recession from December 2022 to September 2022 in the foreign exchange market. The results of this study diverged from the anticipated outcomes and show that by using dynamic conditional beta and conditional Treynor ratio during the period of exchange rate boom, export-oriented companies such as metals and chemicals in the Tehran Stock Exchange did not perform better than non-export-oriented companies such as Insurance and medicine. While it is always believed that export-oriented firms outperform the others when the Rial depreciates.

Keywords: Foreign Exchange Market, Tehran Stock Exchange, Dynamic Conditional Beta, Conditional Treynor Ratio
JEL Classification*: G19, G21*

1 Introduction

Valuing various assets, including stock market indices, has been one of the most important and challenging tasks for financial experts and economic researchers. In this study, similar to other previous studies by Tajdini and colleagues (2019 and 2021), measures for more precise valuation of various asset values were applied. In this research, the evaluation of Tehran Stock Exchange indices during periods of foreign exchange market boom and recession was conducted using conditional risk models, dynamic conditional

[*] Department of Mangement and Accounting, Allameh Tabataba'I University, Tehran, Iran; ghezelbash@ice.ir
[†] Faculty of Economics, University of Tehran, Tehran, Iran; saeidtajdini@ut.ac.ir
[‡] Faculty of Economics, University of Tehran, Tehran, Iran; mmehrara@ut.ac.ir
[§] Department of Technology and Society, The State University of New York, Incheon, Korea; majid.lotfi@sunykorea.ac.kr(Corresponding Author)

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correlation coefficients, dynamic conditional beta, and finally, the conditional trainer ratio in two periods: the boom period from September 1, 2022, to December 29, 2022, and the recession period from December 30, 2022, to September 30, 2023. Dollar-based indices of the Tehran Stock Exchange, including basic and chemical metal indices, as well as Rial indices, including insurance, pharmaceutical, and food (excluding sugar) indices, were examined. The objective of this research is to investigate the behavior of dollar-based indices or export-oriented indices, such as basic and chemical metal indices, and compare them with Rial indices or non-export-oriented indices, such as insurance, pharmaceutical, and food (excluding sugar) indices on the Tehran Stock Exchange during periods of foreign exchange market boom and recession. There are a lot of research regarding Index performance in Tehran Stock Exchange with different indicators. For example, A study aimed to investigate how ownership structure influences the performance of companies listed on the Tehran Stock Exchange. It used statistical analysis to examine the relationship between ownership variables and performance indicators. The research involved 102 listed companies over a five-year period from 2007 to 2011. The findings confirmed that different ownership structures significantly impact performance evaluation criteria. Specifically, metrics like Return On Assets (ROA), Return On Equity (ROE), Market to Book Value (MBV), and Market Value Added (MVA) exhibited notable variations across diverse ownership structures. Additionally, the study revealed that ownership structure differences across various industries also affect performance evaluation indices. This research provides valuable insights into how ownership structure influences the assessment of listed companies' performance on the Tehran Stock Exchange (Asadi, Pahlevan, 2016).

Technical analysis, a key tool in financial market analysis, involves predicting market trends by examining historical data. It leads to the creation of indicators that guide decisions on buying and selling financial assets. In a study, we assess the performance of ten traditional technical analysis indicators applied to the Tehran Stock Exchange indices. The evaluation covers the total stock exchange index, the OTC market index, and eight unrelated industry indices over the period from 2008 to 2018, utilizing Meta Trader software. We also compare the returns of these indicators to the 'buy and hold' strategy. Notably, our findings reveal significant variations in returns across different indicators and indices, highlighting the diverse effectiveness of technical analysis strategies. Specifically, the Exponential Moving Average (EMA) and Simple Moving Average (SMA) strategies outperform others, while Bollinger Bands (BB) show less consistent

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performance. This research sheds light on the efficacy of these strategies in different industry sectors, with valuable insights for investors (Abbasi et al., 2020).

Analyzing Risk-Return Relationship is so important in this research, particularly in the Tehran Stock Exchange. There are several papers regarding this subject for example Rezagholizadeh et al., 2022 published an article. This paper explores the influence of various risk factors on stock returns in the Tehran Stock Exchange over a 14-year period. It employs a multi-factor model that considers the asymmetric effects of risk factors on returns. The study covers different industry groups and identifies significant conditional relationships between risk and return, shedding light on the dynamics of Iran's stock market (Rezagholizadeh et al., 2022).

In innovative research for revolutionizing Modern Portfolio Theory, we can find the popularity of modern portfolio theory and the Sharpe ratio in investment. It suggests that using the Sterling and Treynor ratios may lead to higher returns, offering better performance and more robust results than current methods. The research also encourages further exploration of these ratios and advanced optimization algorithms for investment purposes (Surtee, and Alagidede, 2022).

In a chapter of a book regarding Portfolio Selection with Particle Swarm Optimization and Varied Risk Measures we can find innovative ideas. This chapter delves into the significant problem of portfolio selection in finance, where investors aim to strike a balance between risk and return expectations. The Markowitz model, a complex multi-objective optimization framework, is traditionally challenging to solve efficiently. The chapter explores portfolio optimization models and their application of the particle swarm optimization (PSO) technique. A constrained portfolio selection model is introduced and solved using PSO, using data from the Tehran Stock Exchange (TSE) for evaluation. The study analyzes the impact of three different risk measures on the portfolios. Results reveal that conditional value at risk (CVaR) outperforms semi-variance and variance as a risk measure. Nevertheless, the variance-based risk measure leads to a more diversified portfolio, although the differences between them are minor (Esfahanipour, and Khodaee, 2021).

In the field of portfolio management, the primary objective is to create and manage portfolios for investors that maximize efficiency while adhering to specified risk and duration parameters. Achieving efficiency primarily involves minimizing risk, which is addressed through portfolio selection. Dynamic portfolio optimization models tackle the complexities arising from various influencing factors by systematically examining these factors and

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integrating their findings. This research focuses on addressing the challenge of selecting investment portfolios when firms vary in liquidity. The study uses an asset liquidity index in combination with two Taylor series expansion methods to optimize portfolios, and it demonstrates a significant impact on portfolio weight, yield, and risk compared to the traditional Markowitz model. Moreover, the results indicate that the optimization model derived from the Taylor series expansion of the value function outperforms portfolios generated using the Taylor process (FatehPour et al., 2020).

There is related research in Saudi Arabia, a dissertation. This dissertation investigates the influence of financial reforms introduced by the Capital Market Authority (CMA) in Saudi Arabia in 2015, inspired by Islamic financial principles (IFP), on the performance of stock market segments. These reforms aimed to enhance the regulatory framework and promote growth in the capital market. The study assesses how these reforms have affected stock market performance by comparing pre-and post-reform periods, examining factors like returns, volatility, market interdependence (spillover effects), and asset allocation.

Using a 12-year dataset starting from January 2010, encompassing five Saudi stock indices adhering to IFP (IS1, IS2, IS3, MS, and CS), alongside global indices (Brent, WTI, and S&P 500), the analysis focuses on two periods: pre-reform (2010–2015) and post-reform (2016–2021). The research reveals that in the post-reform period, all indices experienced a decrease in average returns and risk-adjusted return measures while witnessing increased overall risk levels. This could be attributed to improved market regulation.

To gain deeper insights into return and risk characteristics in the Saudi stock market, the study employs econometric models to examine changes in volatility patterns, finding that bad news has a more substantial and prolonged impact on market volatility in the post-reform period. Mixed and Conventional stock indices appear more vulnerable to bad news than Islamic stock indices, potentially due to differences in investment strategies. The study also explores volatility spillover between Saudi stock indices, global indices, and oil market indices. The findings suggest a bidirectional volatility spillover across all indexes, which intensifies in the post-reform period. This indicates that the integration of the Saudi stock market with Islamic indices has strengthened its interdependence with oil and US stock markets compared to the non-Islamic stock index. These findings offer valuable insights for portfolio management, including optimal portfolio weights and hedge ratios for asset allocation. They suggest that risk-averse investors may consider allocating more capital to Saudi stock indices compared to oil, and a smaller

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proportion of Saudi stocks in a Saudi/S&P 500 portfolio. Another study that analyzes Tehran Stock Exchange indices during recession and boom periods, using the double-sided balanced conditional Sharpe ratio and findings indicate the insurance index performed best (0.123), followed by metallic minerals (0.1215), while the food except for sugar index exhibited the poorest performance (0.035) based on the double-sided balanced conditional Sharpe ratio (Tajdini, et al., 2019). Also, an innovative study that investigates past-oriented behavioral bias in S&P and TEPIX indexes, employing a model aligned with the random walk theory. Analyzing daily price data from 2011/25/03 to 2019/19/03, it employs ARIMA models and Markov switching to measure index rigidity. The results reveal varying degrees of past-oriented bias, with the cement index exhibiting the highest bias (57%), followed by the top 50 companies index (46%), chemicals (41%), and oil product index (12%), while the S&P index shows no past-oriented behavioral bias. The research underscores the significance of behavioral finance in understanding investor behavior and market performance (Mehrara, et al., 2022). In addition, another study in Iran, conducted during Iran's currency crisis in the first nine months of 2018, compares the profitability of dollar speculation and investment in Tehran Stock Exchange indices using the conditional Sharpe ratio. Despite the dollar speculation having the highest mean daily return of 0.6%, it ranked last in terms of performance and profitability (0.096) considering standard deviation and daily conditional risk. Notably, three investment portfolios of Tehran Stock Exchange indices, with equal weight, outperformed portfolios involving dollar speculation and each stock exchange index, highlighting the superior performance of domestic indices. The study emphasizes the risk of insufficient capital diversification by investors compared to the acceptance of higher-level risk (Mehrara, et al., 2020).

Also, there is another dissertation in Malaysia. This dissertation investigates the comparative performance of Islamic stock portfolios (ISP) and conventional stock portfolios (CSP) in the context of the Malaysian stock market. The study employs widely recognized performance measures derived from the Capital Asset Pricing Model (CAPM), such as Jensen's Alpha, Beta, Sharpe ratio, and Treynor ratio. Additionally, it utilizes non-parametric stochastic dominance (SD) analysis, which doesn't assume normal distribution of returns. The analysis spans from January 2010 to December 2017, and it considers both sector-level and market-level portfolios for various sectors including consumer products, industrial products, plantation, properties, and trading services. The CAPM-based performance measures indicate that, at the

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sector level, ISP outperforms CSP in all sectors except plantation. However, at the market level, ISP and CSP exhibit similar performance.

Furthermore, SD analysis reveals that ISP dominates CSP at the market level and across most sectors, except for properties. The findings align with the estimation of Value at Risk (VaR) at a 95 percent significance level, indicating that ISP tends to have higher VaR when it dominates CSP and lower VaR when CSP dominates ISP. This outcome is consistent with finance theory, highlighting that ISP, with higher VaR, commands a greater risk premium and consequently outperforms CSP in line with risk-return trade-offs.In another study, the authors conduct a comprehensive analysis of Islamic and conventional sectoral indexes before, during, and after significant financial crises, specifically the global financial crisis (GFC) and the European sovereign debt crisis (ESDC). They assess the co-movements between these stock sectors and explore portfolio management strategies. The research findings indicate that Islamic sectors generally outperform their conventional counterparts during and following financial crises. Their performance superiority is notably observed during the GFC and ESDC periods. However, there are variations in the co-movements of sectors over time, across different frequencies, and in response to major events. Moreover, the study highlights the effectiveness of portfolio risk management, particularly in the industrial and utilities sectors, where portfolios comprising both Islamic and conventional equity markets offer significant risk reduction, especially concerning portfolio value at risk (VaR). Conversely, portfolios combining Islamic and conventional stock markets in aggregate equities, basic materials, consumer services, and technologies exhibit limited diversification benefits. Notably, sectors such as consumer goods, energy, financial, healthcare, and telecommunications display the least diversification advantages. The research, conducted by Al-Yahyaee et al. (2020), provides valuable insights into the comparative performance of Islamic and conventional stock sectors, their co-movements, and the implications for portfolio management, particularly during periods of financial crisis.

In another article related to cryptocurrencies, the authors employ the capital asset pricing model to critically evaluate the significance of calculating 'realized' betas using high-frequency returns for Bitcoin and Ethereum, the leading cryptocurrencies. They compare these realized betas with traditional 1-day and 5-day return-based betas for the period between May 15, 2018, and January 17, 2023. The analysis reveals the presence of microstructure noise in high-frequency data for both BTC and ETH, up to a 4-minute interval. To ensure robustness, a 60-minute sampling frequency is selected with a rolling-

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window size of 250 trading days. The study finds that the rolling betas for Bitcoin and Ethereum, relative to the CRIX market index, consistently remain below 1. This suggests that incorporating these cryptocurrencies could enhance portfolio diversification, albeit potentially at the expense of maximizing returns. Tracking errors are minimized at hourly and daily frequencies. However, the dispersion of rolling betas is higher at the weekly frequency, particularly for BTC and ETH. The weekly frequency is identified as less precise in capturing the 'pure' systematic risk for these cryptocurrencies. Notably, Ethereum's high-frequency data is observed to yield more reliable inferences. Given the immediacy of financial data feeds, the study strongly recommends pension fund managers, hedge fund traders, and investment bankers to consider incorporating 'realized' CAPM betas in their risk estimation toolkit. Sensitivity analyses encompass jump detection in high-frequency data and the application of jump-robust estimators of realized volatility, with realized quadpower volatility emerging as a prevalent choice (Sanhaji and Chevallier, 2023).

In addition, there is an article about the Tehran stock exchange. This study explores the practice of index tracking in the Tehran Stock Exchange, focusing on the Tehran Exchange Dividend & Price Index (TEDPIX). Index tracking is a passive investment strategy that aims to replicate the performance of an index without purchasing all of its constituents. The study employs a two-tail mixed conditional value-at-risk (TMCVaR) model to track portfolios and evaluate their performance, emphasizing the reduction of tracking error and the enhancement of the information ratio. The analysis is based on weekly data spanning from March 21, 2011, to March 20, 2018, divided into in-sample and out-of-sample periods. The research findings reveal that the main TMCVaR model effectively tracks the index, as confirmed by statistical tests. However, when comparing it with the mean absolute deviation model, no significant statistical difference is observed, primarily due to tracking error and information ratio. Both models exhibit similar performance in tracking the index. In conclusion, this study introduces a linear mathematical programming model for forming index tracking portfolios. While the main model proves successful in index tracking, it does not outperform the mean absolute deviation model in terms of reducing tracking error and improving the information ratio (Eyvazloo, et al.,2022).

Also, a study that focuses on the equity market, compares the performance of Islamic and conventional stocks within Pakistan's equity market. It employs a variety of parametric and non-parametric approaches to assess risk and returns associated with Islamic and conventional stock prices. Using

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performance measures like the Sharpe ratio, Treynor ratio, Jensen's alpha, beta, generalized auto-regressive conditional heteroskedasticity, and stochastic dominance, the study evaluates the performance of Islamic and conventional stocks. It takes the Karachi Meezan Index-30 (KMI-30) and the Karachi Stock Exchange Index-30 (KSE-30) as proxies for Islamic and conventional stocks, respectively, analyzing daily data from June 9, 2009, to June 20, 2020. The findings indicate that, overall, KMI-30 outperforms KSE-30, demonstrating higher returns while maintaining similar levels of risk and volatility. Additionally, KMI-30 exhibits greater excess returns per unit of total risk, suggesting better performance in this regard. Furthermore, the study shows that the returns of KMI-30 have stochastic dominance over those of KSE-30, further highlighting the superior performance of Islamic stocks. The practical implications of these findings extend to financial and investment decision-making, offering insights for asset allocation, investment strategies, and risk management. Investing in Islamic stocks could potentially mitigate risks within asset portfolios. This research stands out for its comprehensive analysis of Islamic and conventional stock performance in Pakistan's equity market, utilizing both parametric and non-parametric estimation techniques, making it a unique contribution to the field (Jabeen and Kausar, 2022).

There is an innovative paper that explores an enhanced approach to hedging discrete volatilities, particularly within the framework of the generalized autoregressive conditional heteroskedasticity (GARCH) model. While GARCH is elegant, it lacks considerations for key factors such as correlation coefficients between debt and equity, equity parameters, risk premiums, interest rates, and stock market shocks. To address this, the paper introduces an extended model called the capitalized GARCH, which incorporates these previously unaccounted parameters into the GARCH (1,1). The findings indicate that the capitalized GARCH effectively models volatility in various financial sectors, including bonds, commodities, equities, and real estate indices, exhibiting convergence with the GARCH(1,1) model.This research presents a novel approach to enhancing volatility modeling, offering valuable insights into risk management and financial analysis (Kola and Sebehela, 2022).

There is a study which is related to Examining the Uneven Downside Risk Among Various Sectors in the US Equity Market. This study delves into the behavior of sector-specific exchange-traded funds (ETFs) in response to extreme market downturns within the US equity market, spanning from December 1998 to November 2022. It combines a threshold-mean equation with an asymmetric power autoregressive conditionally heteroscedastic

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(APARCH) model. To assess downside risk, predetermined and optimal boundary points are applied to the extreme left tail of the return distribution without segmenting the sample period. The results reveal variations in the behavior of ETFs across different market conditions. ETFs such as XLI, XLP, XLV, and XLY exhibit similar betas under both extreme and non-extreme market conditions. Conversely, XLF, XLE, and XLU demonstrate higher downside betas during extreme market conditions, while XLB and XLK exhibit the opposite pattern. These findings remain robust regardless of how boundary points are determined. Importantly, the study challenges the common perception of asymmetric responses in different market segments, suggesting that market asymmetry does not uniformly apply to all sectors. This research provides valuable insights into the behavior of sector-specific ETFs during extreme market conditions, which has implications for risk management and investment strategies (Valadkhani, 2023). In this study, there are 4 sections: the Introduction provides essential background information and sets the context for the research problem. The Methodology section details the procedures and techniques employed to conduct the research, including data collection and analysis methods. The Results section presents the findings derived from the research, without interpretation, while the Conclusion discusses the significance of these findings, their implications, and potential directions for future research.

2 Methodology

In this article, the dynamic conditional beta and conditional Treynor ratio during the periods of exchange rate boom/recession (a boom from 01.09.2022 to 29.12.2022 and a recession from 30.12.2022 to 30.09.2023), are applied to compare the performance of export-oriented companies with other companies.Dynamic conditional correlation (DCC): DCC allows conditional variances and covariances to react differently to positive and negative innovations of the same magnitude. In this section, we first concisely review the DCC model of Engle (2002) and we then introduce the Pro-DCC model. It is widely used in finance for modeling changing correlations among assets over time. (Aielli, 2013, Engel, 2002). The DCC provides a joint density function with tail dependence greater than normal. This is explored both by simulation and empirically. The time-aggregated DCC is presented as a useful copula for financial decision-making.

Originally, the GARCH model: it was used to calculate asset conditional variance. To calculate the dynamic conditional correlation coefficients

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between assets, you need to normalize the returns by dividing them by their conditional standard deviations, then apply the specified equation.

$$p_{ij,t+1} = \frac{q_{ij,t+1}}{\sqrt{q_{ii,t}\, q_{jj,t+1}}} \quad (1)$$

The exponential technique or the GARCH model can be used to determine the dynamic conditional covariance, $q_{ij,t+1}$,

$$q_{11,t} = (1-\lambda)\left(z_{1,t-1}\, z_{1,t-1}\right) + \lambda q_{11,t-1} \quad (2)$$
$$q_{22,t} = (1-\lambda)\left(z_{2,t-1}\, z_{2,t-1}\right) + \lambda q_{22,t-1} \quad (3)$$
$$q_{12} = (1-\lambda)\left(z_{1,t-1}\, z_{2,t-1}\right) + \lambda q_{12,t-1} \quad (4)$$

The MLE approach may be used to discover the coefficients by following the target function:

$$L_c = -\frac{1}{2}\sum^{T} \quad \left(ln\ ln\left(1-p_{12,t}^2\right)\right) + \frac{\left(z_{1,t}^2+z_{2,t}^2-2p_{12,t}z_{1,t}z_{2,t}\right)}{\left(1-p_{12,t}^2\right)} \quad (5)$$

The equation presented below is utilized to derive the dynamic conditional correlation coefficient.

$$p_{12,t} = \frac{q_{12,t}}{\sqrt{q_{11,t}\, q_{22,t}}} \quad (6)$$

The GARCH-DCC framework is based on the following factorization of the conditional covariance matrix Σ= Dt, Rt, Dt

where Dt is an n×n diagonal matrix of conditional volatilities (standard deviations) and Rt is the n×n conditional correlation matrix.

$$\beta_{it} = \rho_{i,m,t}\frac{\sigma_{it}}{\sigma_{mt}} \quad (7)$$

$\boldsymbol{\rho}$i,m,t: Dynamic conditional correlation
σit: Conditional standard deviation: Different indexes
σmt: Conditional standard deviation of TEPIX

The GARCH process was used to measure conditional standard deviation.

Also based on the Treynor Ratio

$$\text{Treynor Ration} = \frac{(\text{rp} - \text{rf})}{\beta\text{it}} \quad (8)$$

where:
r_p=Portfolio return

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r_f =Risk-free rate
β_p=Beta of the portfolio
And conditional Treynor is Risk premium divided by dynamic conditional **β**

3 Results

In Table 1, during the peak of Tehran's foreign exchange market, we calculated the average risk premium of each index in the second column based on a daily risk-free return of 0.0006 (a boom from 01.09.2022 to 29.12.2022 and a recession from 30.12.2022 to 30.09.2023). The third column presents the OLS beta. Subsequently, we computed the dynamic conditional correlation coefficient and conditional standard deviation for each of the indices, along with the conditional standard deviation for the overall Tehran Stock Exchange index, serving as the benchmark for the Tehran market index. To assess the performance, we derived the dynamic conditional beta for each of the five indicators examined in this study, and, finally, we estimated the conditional Treynor ratio for each indicator based on its dynamic conditional beta. The last column in Table 1 reveals that the insurance index achieved a conditional Treynor ratio of 0.00373, while the Medicine index performed the best with a conditional Treynor ratio of 0.00215. Conversely, the food except sugar, had the poorest performance with a conditional Treynor ratio of 0.00012.

Table 1
Conditional Beta and conditional Treynor ratio in the period of exchange rate Boom

Index	Risk premium	Beta	Dynamic Conditional Beta	Conditional Treynor ratio
basic metals	0.0018	1.3	1.1	0.00164
Chemical	0.0009	0.92	0.74	0.00122
Insurance	0.0022	0.72	0.59	0.00373
Medicine	0.0014	0.7	0.65	0.00215
Food except sugar	0.0001	0.9	0.82	0.00012

Source: Research findings

As illustrated in Figure 1, during the booming period of the Tehran foreign exchange market, the basic metals index exhibited the highest risk, boasting an average dynamic conditional beta of 1.1. In contrast, the insurance index had the lowest risk with an average dynamic conditional beta of 0.59.

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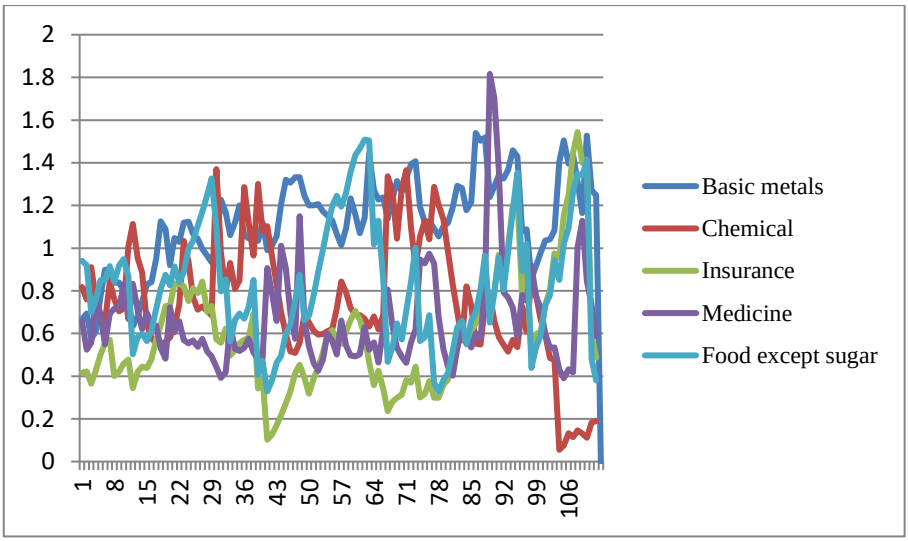

Figure 1. Dynamic Conditional Beta in a period of exchange rate Boom
Source: Research Findings

Based on Table 2, during a phase of stagnation in the Iran foreign exchange market, the second column presents the calculated market risk based on a daily risk-free return of 0.0006, while the third column displays the OLS beta. Following this, we computed the dynamic conditional correlation coefficient and conditional standard deviation for each indicator, as well as the conditional standard deviation for the overall Tehran Stock Exchange index, the benchmark for the Tehran market. Similarly, we derived the dynamic conditional beta for each of the five indicators using a formula and subsequently calculated the conditional Sharpe ratio for each indicator based on its dynamic conditional beta. The last column in Table 2 reveals that the Medicine index achieved a conditional Treynor ratio of 0.0017, and the insurance index had a conditional Treynor ratio of 0.0008, indicating strong performance. However, other indicators examined in this study, namely the basic metals, chemicals, and food expect sugar indexes exhibited negative risk and, consequently, negative conditional Treynor ratios, with the basic metals index performing the worst with a negative conditional Treynor. ratio of -0.00049.

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Table 2
Conditional Beta and conditional Treynor ratio in the period of exchange rate stability

Index	risk premium	Beta	Dynamic Conditional Beta	Conditional Treynor ratio
basic metals	-0.00059	1.06	1.2	-0.00049
Chemical	-0.00043	0.9	1	-0.00043
Insurance	0.0006	1.14	0.78	0.0008
Medicine	0.0014	0.86	0.84	0.0017
Food except sugar	-0.00026	1.2	1.24	-0.0003

Source: Research findings

As we can see in Figure 2, during a period of stagnation in the Tehran currency market, or when the dollar price was declining, the food (except sugar) and basic metals indices demonstrated the highest risk, with average dynamic conditional betas of 1.24 and 1.2, respectively. Conversely, the medicine and insurance indices had the lowest risk with average dynamic conditional betas of 0.84 and 0.78, respectively.

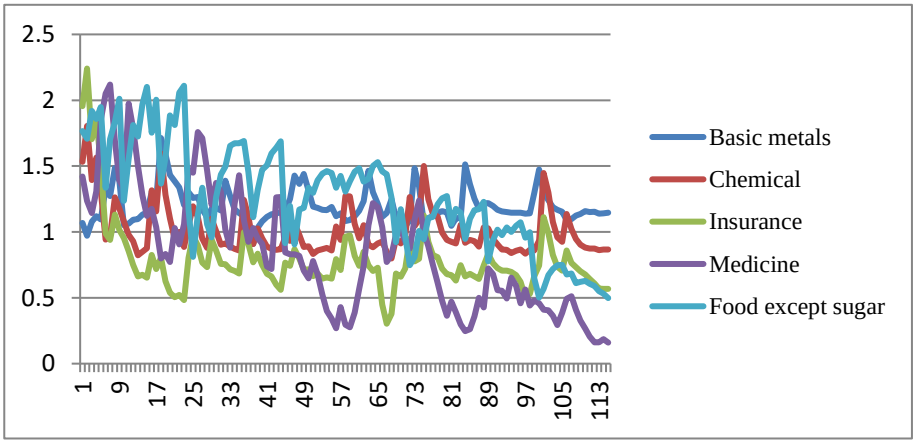

Figure 2. Dynamic Conditional Beta in the period of exchange rate stability
Source: Research findings

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4 Conclusions

The research aimed to assess the behavior of various stock market indices on the Tehran Stock Exchange during boom and recession periods in the foreign exchange market. Two 173-day periods were examined, revealing a 92.5% increase in dollar rate during the boom from September 1, 2022, to December 29, 2022, and a 14.2% decline during the recession from December 30, 2022, to September 30, 2023. The results of this study diverged from the anticipated outcomes and shows export-oriented indices, assessed using dynamic conditional beta and conditional Treynor ratio, outperformed dollar-based indices. The study employed various valuation measures, including conditional risk models and dynamic conditional correlation coefficients. Dollar-based indices like basic and chemical metal indices were compared with Rial indices such as insurance, Medicine, and food (except sugar) indices. The objective was to understand the behavior of export-oriented versus non-export-oriented indices during foreign exchange market fluctuations on the Tehran Stock Exchange. This research contributes to the field of index performance analysis, offering insights into the dynamic nature of stock indices in response to economic conditions on the Tehran Stock Exchange. In addition, the classification of indices within the Tehran Stock Exchange can be broadly divided into two groups: export-oriented and non-export-oriented industries. Export-oriented indices are primarily comprised of companies whose products are predominantly sold in international markets, resulting in a significant portion of their income being denominated in foreign currencies, notably the US dollar. These are commonly referred to as "dollar indices." In contrast, non-export-oriented indices, often termed "Rial indices," consist of companies whose products are primarily consumed within the domestic market.

The objective of this research is to investigate and compare the performance of two distinct groups of indices within the Tehran Stock Exchange. The first group comprises dollar indices, namely the Basic Metals Index and the Chemical Index. These indices are heavily influenced by fluctuations in the foreign exchange market, given their reliance on foreign currency income. The second group consists of Rial indices, including the Insurance, Pharmaceutical, and Food (excluding sugar) indices. These indices are driven by domestic consumption patterns.

The study is conducted over two specific periods: the "boom period" and the "recession period" in Tehran's currency market. The boom period encompasses the 173 days starting from September 14, 1401, when the dollar exchange rate was 30,000 Tomans, to March 8, 1401, when the exchange rate

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increased by 92.5% to reach 57,760 Tomans. The recession period spans from April 8, 1402, when the dollar exchange rate was 51,750 Tomans, to September 31, 1402, when the exchange rate decreased by 14.2% to 49,420 Tomans.

The research findings, obtained through the application of dynamic conditional beta and conditional trainer ratio, challenge the conventional wisdom of economic experts and analysts. Contrary to expectations, during the boom period of Tehran's currency market, Rial indices, such as the Insurance Index (with a conditional Treynor ratio of 0.00373) and the Pharmaceutical Index (with a conditional trainer ratio of 0.00215), exhibited better performance than dollar indices like the Basic Metals Index (with a conditional Treynor ratio of 0.00164) and the Chemical Index (with a conditional Treynor ratio of 0.00122). In the recession period of the Tehran currency market, Rial indices continued to outperform their dollar counterparts, as per the perspective of experts and fundamental economic analysts. The Pharmaceutical Index, with a conditional trainer ratio of 0.0017, and the Insurance Index, with a conditional trainer ratio of 0.0008, demonstrated superior performance compared to dollar indices such as the Basic Metals Index (with a conditional Treynor ratio of -0.00049) and the Chemical Index (with a conditional trainer ratio of -0.00043).

The results of this study diverged from the anticipated outcomes and show that by using dynamic conditional beta and conditional Treynor ratio during the period of exchange rate boom, export-oriented companies such as metals and chemicals in the Tehran Stock Exchange did not perform better than non-export-oriented companies such as the pharmaceutical company. While it is always believed that export-oriented firms perform better when the value of the Rial decreases or during boom periods in the foreign exchange market. As a result, this research shows that exchange rate changes have unusual effects on the stock market and predicting the performance of companies needs more investigation.

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