

# The Investigation of the Relation between Performances of Portfolio Companies Operating in the Petrochemical Industry Grade Liquidity in Tehran Stock Exchange

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## ABSTRACT

The present study examines the relationship between performances of companies operating in the petrochemical industry with portfolio can check out their liquidity. The population used for all companies operating in the petrochemical industry in the Tehran stock exchange by the end of 2011, no sample whole community has been studied researchers using monthly reports and annual financial reports of the company stock, and some of the data such as: Risk portfolio return, Beta and liquidity ratings to calculate and index Sharp and trainer for companies earned portfolio. T-tests comparing the mean of the two tests and the regression are used to accept or reject the research hypothesis the results show the impact of the liquidity rank based on performance indicators of companies operating in the petrochemical industry, is the Sharp and trainer in the entire study period.

**KEYWORDS:** Investment, Sharpe Index, trainer index, liquidity. Portfolio firms, Venture capital, Firm performance, Venture capital firms, Investment policies, Cooperation.

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## 1. INTRODUCTION

At present, the development of an important debate in most developed countries and the developing is world. One important aspect of economic development in each country's capital market since the capital market where supply and demand for medium and long-term financing is the market as a supply center for investment funds Savings and the liquidity of the financial intermediaries and brokers to the long-term productive investment and trade lead [1]. Today the stock market performance of developed countries as a measure to evaluate the policies and decisions of economic, financial and trade of these countries used to be. Continue to operate as a stock exchange in any country's economic growth and development is a continuous process this is only for investors who are attracted to different tastes and preferences. People follow different investment objectives some for power and status, and some attempt to influence companies to invest in most investors use to earn income and return on investment, they invest their money. Investment returns or bonus, including current income and annual earnings increase or decrease the value of assets such as capital gain or loss [2].

The rate is expressed in terms of a percentage of the amount invested, the current income and capital gains are. Capital markets and the financial markets that its primary role to help individuals and institutions transform savings into investment business is Capital market, along with other financial facilities to transfer funds to the investor's savings provides [3].

Investors tend to invest to be notified of the results of the financial period Output and compare it with the returns of other investments risk and return on investment are key factors compare and evaluate the performance of most companies is based on these two variables.

### The concept and nature of investment:

The term "investment" can be a wide range of activities including:

The term can include investments in certificates of deposit, bonds, stock or mutual fund is an investment. The investment of funds into one or more of the assets will be maintained for some time in the future [4].

Take two important aspects in investment, "analysis" and "management" investment [5].

Investment is defined as the change in volume of "Capital" in an enterprise during a period ", usually a year "Investing in stock means stock which is usually double vision and purpose [6]:

Benefit from the share price means that the share price higher prices to buy and sell or investment to benefit from the growth in annual profit share price at the time of sale will also include The development of venture investment is stagnant and lead them to productive sectors.

Capital markets and financial markets is regarded as a subset of the primary role of financial markets in general and capital markets in particular is Individuals and businesses to help transform savings into investments that are made by other economic units necessary facilities for the transfer of funds in the capital markets, savings and other investment opportunities that are provided to other units In addition, these units are the basic tools needed to finance long-term assets such as financial process the two main pillars of the capital markets as the banking sector and securities markets are stock markets can be more readily compared to the banking sector about the need to allocate resources to units capital market includes those securities that reached maturity more than one year reached due to the long term nature of the securities and capital markets; most of the money market risk in these markets Including debt and equity capital market is. According to materials provided by the banking sector and stock market capitalization in two area stock not as competing but rather complementary to the financial needs of manufacturing firms and investors are gathering savings William Sharp (1966) composite measure for the evaluation of reward to variability portfolio presented Sharp-scale basis for calculating the capital market line is the standard deviation of the share spent on portfolio risk sing the Sharpe index can be spent per unit of risk, where risk is calculated scale Trainer is a portfolio's performance minus the risk-free rate of return relative to beta as a measure of systematic risk Jack Trainer scale variability in 1965 was presented the award RVOR called[7].

Trainer index only measures risk per unit of systematic risk, the Sharpe index, higher values indicate better performance in index portfolios are trainer. the scale used to measure the performance of each portfolio according to the information given is accurate base choose any of the measures from the perspective of an investor depends on the definition of risk If an investor has to consider the risk of Sharp Scale (RVAR) is appropriate f the investor to take a systemic risk measure Trainer (RVOL) is appropriate If the investment portfolio is well diversified and will rank equally as to reduce the possibility of portfolio diversification increases the difference in rankings In a portfolio that is diversified enough that ranking higher on the ranking RVOL it is based on RVAR Sharp returns to scale of the portfolio in terms of risk measures As a result, investors have put their assets in a portfolio Sharp scale (RVOL) are based and investors is systematic risk associated with their investment a small percentage of the portfolio invested in them is to scale the trainer (RVOL) relies[8]. although there are companies that have a significant interest and dividends are but the type of activity requires continuous liquidity is necessary in order to give continuity to the activities specifically, companies that have the cash to buy raw materials and pay the current daily But as credit products (sometimes six months) for sale credit ceiling is high so they cannot take advantage of greater convenience bank or company that is managing the rate of their materials and sometimes proprietary vendors face of such exchanges or markets, metals, rubber stock and because prices are often irregular and unexpected So management has to buy in bulk and store In this case[9], the major stakeholders are aware of when dividends are subject to the availability of liquidity management is required managers of such companies under the pretext of reducing production costs and cost of getting fit lower dividend proposed to provide the required financial resources are available research on portfolio risk management in all companies operating in the financial intermediation industry in Tehran Stock Exchange ranged many investors realize that the stock market is a volatile place to invest their money. The daily, quarterly and annual moves can be dramatic, but it is this that also generates the market returns investors experience. In this article we'll explain how volatility affects investors' returns and how to take advantage of it. all revenue assurance activities –large and small– should always be evaluated, prioritized and carried out with financial benefit as the prime target[10].

In order to deliver tangible results, there is a need for a comprehensive toolbox of methods and solutions – built on hands-on experience and replication of best practices to control activity costs.

The greener the company/portfolios the better the performance, also free cash flow was higher and risk was lower, and beta was substantially lower,” he says. “This paper shows that the relationship between financial performance and sustainability is really there.” all participants had a chance to learn more about the methods of compensation benchmarking, management compensation plan's design, as well as the reasonable relationship between compensation and performance [11].

Mark shared best practices on the long-term incentive for management team of portfolio companies. Such differences regarding time and space, the beginning of the story, or hero's' mental and physical features is the best reason for the imaginary nature of the story and it seems that any insistence on the real nature of hero characters is useless and futile. [12] There is also evidence that commercial and government tenants in particular are increasingly seeking premises with better environmental performance and social amenity. For example, in 2007 survey of corporate real estate professionals in London, Melbourne, Denver and Singapore found that nearly 80 per cent

thought sustainability would be critical to corporate real estate within two years and they would pay at least 1 per cent more in rent for more sustainable spaces [13].

The company is also actively investing in green chemistry projects to find molecules and products that require no solvents or hightemperatureprocessing and is 100 percent biodegradable. If the writer chooses to compare and contrast, adequate details must be provided to describe both the first and the second element. Similarities and differences between the elements must be established. the middle paragraphs of the essay should contain the support for the topic the writer has introduced in the introduction. Each of these paragraphs should contain the facts, statistics, and arguments that have been well researched and thought through by the writer. When analyzing primary sources, historians consider the type of primary source understudy. Different primary sources were created for different reasons. Knowing the different types of primary sources will help you evaluate the reliability of primary sources. Revenue assurance is a combination of organizational structure, processes, technology and information responsible for monitoring the revenue process [14].

### **Research objectives**

This study examined the relationship between performances of portfolio companies operating in the petrochemical industry in Tehran Stock Exchange is the place where liquidity the main goal of this research question is:

Do portfolio performance between companies operating in the petrochemical industry in the Tehran Stock Exchange with respect to the liquidity out there?

## **MATERIALS AND METHODS**

This study is the use of analogy and induction practices and the data that will be collected hypothesis will be rejected or accepted In terms of the application of research methods and data collection descriptive theoretical basis for explaining the topic of electronic books and articles will be use do through the stock exchange and the use of modern software reheard, each the web and Ryas-hm Companies operating in the petrochemical industry, and monthly and annual reports of the companies required data is collected the analysis and hypothesis testing will be performed using SPSS software.

To test the assumptions of the t test for two independent samples was used survey of all the companies operating in the petrochemical industry in the Tehran Stock Exchange by the end of March is 2011.

From 2010 to 2011, the total separation of the companies operating in the petrochemical industry in the Tehran Stock Exchange are used as population due to lack of active participation in the petrochemical industry, the entire population was chosen.

### **Test hypotheses**

The purpose of this study is looking at whether the performance of portfolio companies petrochemical companies in Tehran stock exchange liquidity rating, whether or not there is a relationship in other words, the goal of this research is to determine average performance of the companies operating in the petrochemical industry with high liquidity and low ratings are equal or not?

T-tests are used to test hypotheses.

### **Research Hypothesis**

Average performance companies operating in the petrochemical industry with high liquidity and low-ranking indexes based on Sharp and trainers are created equal.

The average performance of companies operating in the petrochemical industry with high liquidity with an average ranking performance of firms in the petrochemical industry with lower liquidity rank based on the Sharpe index equal.

the average performance of companies operating in the petrochemical industry with high liquidity with an average ranking performance of firms in the petrochemical industry with lower liquidity rating based on trainer indices are equal.

To test the first hypothesis using 12months average liquidity rating each year to attend the annual liquidity rating is calculated and then using the median liquidity rating all the companies in each year, the companies are divided into two groups: large and small after calculating the median rank firms each year liquidity stars are larger than the median ranked among companies with high liquidity and low liquidity firms in the middle of that year were rated ranked among firms with low liquidity are thus both the firms and companies in the petrochemical industry with high liquidity level and liquidity of lower-rated companies operating in the petrochemical industry are divided. The average equity performance is measured in the two communities together. If the test result is that the average

performance of companies operating in the petrochemical industry with high liquidity and low ratings are equal Rating liquidity means that companies operating in the petrochemical industry does not affect performance if the test result is that the average performance of companies operating in the petrochemical industry with high liquidity and low ratings are not equal, rating liquidity means that companies operating in the petrochemical industry has an effect on performance.

Table 1 - Results of the test of equality of mean performance companies operating in the petrochemical industry variable measured according to Sharp and Trainer in 2011

Test Result	Significant test of the main hypothesis Sig	Variance equality test	Significant variance equality test	Hypothesis Testing	Row
Hypothesis H <sub>0</sub> is accepted.	0/517	Variances are equal top and bottom	0/514	H <sub>0</sub> : The average performance of companies operating in the petrochemical industry with high liquidity and low rank equal to the Sharpe index. H <sub>1</sub> : Average performance companies operating in the petrochemical industry with high liquidity and low rank not equal the Sharpe index.	(1-1)
Hypothesis H <sub>0</sub> is accepted.	0/253	Variances are equal top and bottom	0/145	H <sub>0</sub> : The average performance of companies operating in the petrochemical industry with high liquidity and low ranking index based on equal trainer. H <sub>1</sub> : Average performance companies operating in the petrochemical industry with high liquidity and low ranking on the index are not equal trainer.	(2-1)

In 2010, hypothesis (1-1) that H<sub>0</sub> is expressed as the average performance of the companies operating in the petrochemical industry with high liquidity and low rank equal to the Sharpe index and H<sub>1</sub> are expressed as the mean performance of the companies operating in the petrochemical industry with high liquidity and low ratings are measured according to Sharp Variance equality test significance level of less than significant level because the test is so original hypothesis H<sub>0</sub> hypothesis is accepted. The hypothesis (1-2) that H<sub>0</sub> is expressed as the average performance of the companies operating in the petrochemical industry with high liquidity and low ranking index based on equal Trainer and H<sub>1</sub> are expressed as the mean performance of the companies operating in the petrochemical industry with high liquidity and low ratings are measured according to trainer Variance equality test significance level of less than significant level because the test is so original hypothesis H<sub>0</sub> hypothesis is accepted.

Table 2 - Results of the test of equality of mean performance companies operating in the petrochemical industry variable measured according to Sharp and Trainer in 2011.

Test Result	Significant test of the main hypothesis Sig	Variance equality test	Significant variance equality test	Hypothesis Testing	Row
Hypothesis H <sub>0</sub> is accepted.	0/306	Variances are equal top and bottom	0/248	H <sub>0</sub> : The average performance of companies operating in the petrochemical industry with high liquidity and low rank equal to the Sharpe index. H <sub>1</sub> : Average performance companies operating in the petrochemical industry with high liquidity and low rank not equal the Sharpe index.	(1-1)
Hypothesis H <sub>0</sub> is accepted.	0/712	Variances are equal top and bottom	0/594	H <sub>0</sub> : The average performance of companies operating in the petrochemical industry with high liquidity and low ranking index based on equal trainer. H <sub>1</sub> : Average performance companies operating in the petrochemical industry with high liquidity and low ranking on the index are not equal trainer.	(2-1)

In 2011, in hypothesis (1-1), this implies that H<sub>0</sub> is average performance companies operating in the petrochemical industry with high liquidity and low rank equal to the Sharpe index and H<sub>1</sub> are expressed as the mean performance of the companies operating in the petrochemical industry with high liquidity and low ratings are measured according to Sharp Variance equality test significance level of less than significant level because the test is so original hypothesis H<sub>0</sub> hypothesis is accepted The hypothesis (1-2) that H<sub>0</sub> is expressed as the average performance of the companies operating in the petrochemical industry with high liquidity and low ranking index based on equal Trainer and H<sub>1</sub> are expressed as the mean performance of the companies operating in the petrochemical industry with high liquidity and low ratings are measured according to trainer Variance equality test significance level of less than significant level because the test is so original hypothesis H<sub>0</sub> hypothesis is accepted.

Table 3 - Summary of testing whether a linear relationship between returns portfolio companies operating in the petrochemical industry in 2010 with the rank of their liquidity.

Test Result $H_0: \beta = 0$	Significance level of the test $H_0: \beta = 0$	Numerical Size $\beta$	Test Result $H_0: \alpha = 0$	Significance level of the test $H_0: \alpha = 0$	Numerical Size $\alpha$	Test Result $H_0: R=0$	Significance level of the test $H_0: R=0$	Numerical Size R	Independent variable	Dependent variable
Test Result Statistically significant differences are meaningless $\beta$	0/174	0/030	Test Result It is significant $\alpha$	0	8/249	There is a linear relationship	0/174	0/287	Liquidity Rating	portfolio efficiency in the petrochemical industry

Table 4 - Summary of testing whether a linear relationship between returns portfolio companies operating in the petrochemical industry in 2011 with the rank of their liquidity.

Test Result $H_0: \beta = 0$	Significance level of the test $H_0: \beta = 0$	Numerical Size $\beta$	Test Result $H_0: \alpha = 0$	Significance level of the test $H_0: \alpha = 0$	Numerical Size $\alpha$	Test Result $H_0: R=0$	Significance level of the test $H_0: R=0$	Numerical Size R	Independent variable	Dependent variable
Test Result Statistically significant differences are meaningless $\beta$	0/191	0/077	Test Result It is significant $\alpha$	0/023	03/708	There is a no linear relationship	0/191	0/250	Liquidity Rating	portfolio efficiency in the petrochemical industry

Table 5 - Summary of testing whether a linear relationship between returns portfolio companies operating in the petrochemical industry with their liquidity rating of 2010 to 2011.

Test Result $H_0: \beta = 0$	Significance level of the test $H_0: \beta = 0$	Numerical Size $\beta$	Test Result $H_0: \alpha = 0$	Significance level of the test $H_0: \alpha = 0$	Numerical Size $\alpha$	Test Result $H_0: R=0$	Significance level of the test $H_0: R=0$	Numerical Size R	Independent variable	Dependent variable
Test Result Statistically significant differences are meaningless $\beta$	0/018	0/024	Test Result It is significant $\alpha$	0	4/799	There is a no linear relationship	0/018	0/227	Liquidity Rating	portfolio efficiency in the petrochemical industry

### CONCLUSION

Petrochemical industries an unmatched role in the supply of raw materials needed many other manufacturing industries. the main base of petrochemical raw materials such as oil and natural gas Iran having a 27 trillion cubic meters of gas storage about 16 percent of the world's total known reserves of natural gas as the world's second largest known gas with well over 138 billion barrels of recoverable oil in the world as a whole accounts for about 11 percent of the Petrochemical industry as one of the most dynamic and productive industry can play a significant role in creating value for oil so in order to better exploit the hydrocarbon resources the petrochemical industry is seen as crucial intake the exports of the country in recent years, the importance of petrochemical exports in recent years has and it is gradually becoming a hub for major petrochemical products in the non-oil exporting countries.

Furthermore, the development of petrochemical products in domestic industries is undeniable, today so many other industries such as automotive supplies, generators, petrochemical industry, agriculture, etc. are considered Petrochemical industry to achieve optimal development and prosperity attention to the most basic prerequisites that they issue to finance its projects; petrochemical industry like oil and gas industry requires high volume of initial investment and as part of the "capital-intensive industries " is considered petrochemical industry including upstream segments (Olefin plants, Aromatic) and complementary industries (intermediate and final (plastic, rubber, etc.) are. Looking towards the development of the industry chain, this is known as a successful model in all advanced countries. Now a "Chemical Park " as a priority in order to realize the principle of "Industry Clusters in " be considered for the petrochemical industry the industry concentration in both the upstream and intermediate petrochemical and chemical parks firms in the petrochemical industry and the slave for the development of the industry is necessary. Also, according to Article 44 of the constitution, the NPC as a public entity can only be contributing 20 percent of the investment, and thus the role of private sector investment is more tangible.

Considering the current situation can be acknowledged the problem of investment in all levels of the industry, upstream, intermediate and downstream petrochemicals have been tremendous importance and the NPC should adopt appropriate strategies for investors to invest in petrochemical, upstream industries, especially the figure at about \$ 90 billion as investors need to encourage so to attract such a huge investment NPC should provide adequate infrastructure, taking advantage of the ability to attract investment advisors large part of investors about the opportunities and threats in this sector and also consider using a lever and incentive for facilities to encourage them to invest in this sector to attract investment certainly investors are aware of the opportunities available in this sector, government support and guarantees, especially if there are also sensible to assess investment risk more inclined to work in this field will be displayed. Another point of interest is typically to attract investment in the petrochemical industry and its supporting industries.

The financial institutions and banks due to high capital requirements and also to reduce the risk involved in their investments.

Given the importance of the petrochemical industry in the research index and Sharpe index for evaluating the performance of portfolio companies operating in the petrochemical industry trainer on the Stock Exchange has been used. The index is based on hypothesis testing. Hypothesis of this study was that:

Yield portfolio companies operating in the petrochemical industry with high liquidity and low ranking index based on equal Sharp and trainer.

1-1) the average performance of companies operating in the petrochemical industry with high liquidity and low ranking index based on equal Sharp.

1-2) the average performance of companies operating in the petrochemical industry with high liquidity and a low rating based on trainer equal.

Statistical analysis was performed the first hypothesis yield companies operating in the petrochemical industry reliability rank high companies in the petrochemical industry with lower liquidity rank based on the Sharpe index is not equal The reliability rating firms performance in the petrochemical industry although research has been influential in terms of yield firms Petrochemical industry with high liquidity and low ranking is based on trainer affect the liquidity rank based on the trainer during the performance of an investment is not research.

The results show the effect of liquidity rating the performance and efficiency of active portfolio companies the petrochemical industry is it is recommended that managers of companies operating in the petrochemical industry are considered. This variable as an important parameter to consider in their decisions, and factors such as turnover, number of shares traded, visit the transaction and the buyer, number of days traded readily trading volume and liquidity factors are contributing factors and to periodic review and analysis of these variables are.

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