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THE RELATIONSHIP BETWEEN IRANIAN CO. CASH FLOW WITH THEIR STOCKHOLDER RETURNS

Gholamhassan Taghizad *, Dr. HosienPanahian

* Accounting and Management Department, Kashan Branch of IAU, Kashan, Iran

Accounting and Management Department, Kashan Branch of IAU, Kashan, Iran

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ABSTRACT

One of the most important criteria for performance evaluation is stock return. It is defined based on EPS, share price to EPS ratio or other criteria. In this paper we determined the relation between stock return with operating cash flow based on Iranian Co. performance. Using fixed firm effects in factors of regression method selected for a sample from Tehran exchange market containing about 54 firms during a six financial year's analysis. In this paper, the relation between dependent and independents variables was evaluated based on multi-variables linear-regression.

The results showed that; the operating cash flow, profitability and the returns of all stakeholders had a significant relationship. However, with increasing profitability and cash flow of information asymmetry in proportion to their correlation with the economic efficiency of shareholder returns. Also refer to the information content of accounting figures, no further explanation is the cash flow Information asymmetry in the relationship between accounting numbers and cash flow model to determine the performance of Gunther is the company's stock return is offered in Tehran Stock Exchange. Hence one-size-fit-all performance measures are provided for performance measurement in managerial accounting.

INTRODUCTION

When corporations have developed, by passing the time a group of investors expanded who were not involved in running the company directly. This group is led and monitored the affairs of the company by choosing the board of director. This transformation created a new group of professional managers that were sharer in little capital of institutions which they run or they have no share and thus, management of institutions was separated from their ownership (Shabahang and Hassan Ghorban, 1998).

Separation of management from ownership caused creating conflict of interest between managers and shareholders and the emergence of the representation theory issue. From an economical perspective, assuming rational behavior of people, it is assumed that all at first seek to maximize their interests; managers also are not exempt from this rule. Managers are interested to present favorable picture of the financial position of the business unit to shareholders and other interested parties along with maximizing its own interests, welfare and strengthen their job positions. But in some cases, necessarily raising the capital of managers is not in line with raising the capital of other groups, including stockholders. This shows that benefits of managers and other interested groups in the business unit are not in one side. With regard to the theory of conflict of interest between managers and owners, managers of business unit have high incentive to manipulate earnings to maximize their own interests. Along with analysis of value created for shareholders, the company's free cash flow is important. Managers through identification of appropriate investment opportunities can invest mentioned funds in projects with positive net present value and thus will increase the wealth of their shareholders. According to the theory of the conflict of interest between owners and managers, some customers may be persuaded that invest their free cash flow in projects with negative net present value so that in short term provide some of their personal interests (Mehrani and Bagheri, 2009).

Grant, J.L. (1996) said that; based on agency theory perspective, the optimum motives related with performance evaluation criteria are variables that related to stockholder return evaluation. These variables show the results of management decision-making. The specific performance criteria were introduced the describe direct relation between management decision- making and results of the real performances .The main goal of these criteria is development a measure for estimation results of the management decisions.

Worthington, A.C. and T. West (2001) said that; The Cash Value Added (CVA) and Economic Value Added (EVA) are related to same assumption. They are based on comparison between utilized resources and performance results.CVA and EVA are two separated procedures for performance evaluation. EVA criterion evaluates operational performances based on the accounting profit.

LITERATURE REVIEW

Khoshdel Nezamy (2006) investigated the relationship between operating profit and free cash flow with stock return, return on equity, return on total assets and net value growth of operational assets of corporations during time period 1998-2004. He showed that, there is not a significant relationship between free cash flow, stock return, return on equity and return on total assets has no

significant relationship. He found a reverse relationship between free cash flow with growth of operational assets has negative and significant relationship.

Esmzadeh (2010) investigated the relationship between cash operating profit, accrual operating profit and free Cash flow with stock returns of companies listed in Tehran Stock Exchange. He showed that, cash operating profit, accrual operating profit and free cash flow have impact on stock returns. Furthermore free cash flow compared to the other two variables has a greater impact on stock returns.

Mehrani and Bagheri (2009) in their study investigated the effect of free cash flows and institutional Shareholders on earnings management of companies listed in Tehran Stock Exchange. They studied 90 corporation's performances the years 78 to 84. In this survey, they have concluded that there is a direct significant relationship between earnings management and high free cash flows in the companies with low growth, however, it was not found a significant relationship between earnings management and institutional shareholders in the companies with high free cash flows and low growth.

Study is performed by Rezvani Raz and Haghghat (2005) namely investigation the relationship between free cash flows and debt level by considering investment opportunities and size in the companies listed in Tehran Stock Exchange. Hypotheses testing of this study show that in the companies with low investment opportunities and in Hypotheses testing of this study show that in the companies with low investment opportunities and in the

Large companies, there is significant and positive relationship between free cash flow and debt level. In addition, the results show that in the listed companies in Tehran Stock Exchange, investors and creditors in their decision to invest and giving credit consider internal finance supply and assessment criteria of the debt repayment power, namely free cash flow.

Dastgir and Sharifi Moghadam (2011) investigated the relationship between cash flows with stock return of companies. The research results are as follows:

In the analysis of cross-sectional data, there is no significant relationship between operating cash flows and stock returns except in 2003 and in the analysis of mixed data, it was concluded that there is no significant relationship between operating cash flow and stock return using mixed data. In fact at 5% error level, operating cash flows havenot necessary information content for determining stock returns. Also in the analysis of cross-sectional data, there is significant relationship between free cash flows and stock return. The calculated results for year 81 and 82 showed that, there is not a relation between variables. Therefore the analysis based on these results showed that the H1 hypothesis is rejected. For other years the H1 hypotheses was accepted. Therefore for these years, there is a significant relationship between free cash flows and stock return. The R-squared was near to zero, which indicating a weak linear-relation between variables. The amount of this parameter was 0.03. It is meaning that 3% of dependent variable was determined during 6 years at 5% error level. Therefore based of this estimated relation 3% of changes in the stock return can justify with free cash flows. Another result from this study is that free cash flow has greater information content than operating cash flow in the amount of variability in stock return.

Yang and Jiannng in 2008 concluded that companies that have high free cash flow, have stronger correlation between the quality of accounting information and overinvestment.

Jones and Sharma (2001) investigated the relationship between Management earnings and free cash flow on Australian firms with low growth and high growth. After investigation they showed that, in companies with low growth, there is direct significant relationship between discretionary accruals and free cash flow because in this kind of companies, managers try to improve the poor performance of their business unit through discretionary accruals. But they did not find a significant relationship in the companies with high growth.

Habib (2008) performed a research namely the role of accruals and cash flows in explaining stock returns. He used the multi-variables linear-regression for variables relation measuring. Their test period is during the years 1995 and 2004. The results of this study showed the profit has greater explanatory power than cash flows, although this difference is negligible statistically and also the profit and cash flows have information content for stock returns. In addition, the results show that in small and large companies, the relationship between stock returns with profit and cash flows for the companies with financial leverage and high growth become more.

Ghaemi and Vatan Parast (2006) studied relation between accounting information with information dissymmetry. Their founding's showed that there is a meaningful relation between accounting information and information dissymmetry. There is an information dissymmetry for investors before profit announce. They also found that information dissymmetry increases shares trade and stock prices changes.

Noravesh and Ebrahimi (2006) studied relation between ownership structure with information symmetry and accounting performance profitability criteria. They showed that there is a direct relation between institutional ownership with information symmetry.



International Journal OF Engineering Sciences & Management Research

Ghasemi and Rahimpour (2010) studied impact of seasonal profit announces on the information dissymmetry decreasing. They found that after seasonal profit announce, dissymmetry does not decrease. On the other words these announcements do not have efficient information for information dissymmetry decreasing.

Ahmadpour at el. (2011) studied relation between commit mental figures quality with information dissymmetry on Iran. They showed that commit mental figures quality do not have any impact on the information dissymmetry.

Samadi Largani and fathi (2012) showed that there is not a significant relation between stocks return with value added. They measured stock return based on EPS, ROE and price share to EPS ratio. They used multi variables linear regression for variables relation evaluation.

RESEARCH HYPOTHESES

This research was performed base on three hypotheses that are as follows:

1. If there is information dissymmetry, accounting figures will have more explanative ability than cash flow for stock market performance evaluation.
2. There is a direct relation between information dissymmetry with figures accounting explanative and net cash flow figures.
3. There is an in-direct relation between information dissymmetry with explanative of the stock market performance and net cash flow figures.

RESEARCH METHODOLOGY

This research methodology is practical based on its goal, because it utilizes exist models and theories for firm's problems evaluation.

Our research methodology is descriptive – analytic because we used random statistical sample. We describe sample observations and then we used statistical tests for result extrapolation.

The research design is Expose-Facto, because we used past data performances.

a) Sampling

The statistical community in this research is Iranian corporation s. We are selected 54 firms randomly based on Cochran's formula. Their data was related with 2005-2011 annual performances

b) Research Model

The general relation for variables relationship

$$R_{it} = f(EAR_{it}, CF_{it}... DOMINATED_{it})$$

That R_{it} is i th firm return for t th year, EAR_{it} is i th firm accounting profit for t th year, CF_{it} is i th firm cash flow for t th year, $K1_{it}, \dots, K_{nit}$ are various firms as especial control variable.

We used multi-variables linear regression for R_{it} computation. Our linear equation is estimated as follows:

$$R_{it} = \alpha + \beta_1 EAR_{it} + \beta_2 CF_{it} + \beta_3 BETA_{it} + \beta_4 SIZE_{it} + \beta_5 MTB_{it} + \beta_6 ETP_{it} + \beta_7 LEV_{it} + \beta_8 DOMINATED_{it}$$

That EAR is operational earning, CF is cash flow, $BETA$ is firm risk $SIZE$ is firm size, MBT share market value to share book value, ETP profit to equity ratio, LEV is total liabilities to total assets ratio and $DOMINATED$ is free stock ratio.

b) Statistical Methods

Our main statistical methods in this research are:

- 1) **Descriptive methods:** The descriptive indices such as mean, standard deviation were calculated for variables description. Furthermore frequency table and trend chart were used.
- 2) **Kolmogorov-Smirnov Tests:** Based on econometric preliminary this test was used. This test was used for normality distribution evaluation.
- 3) **Multi-variables linear- regression:** Based on this econometric method was evaluated the relation between variables estimation
- 4) **Fisher test:** This statistical test was evaluated the meaningful of estimated relation extrapolation.
- 5) **Founding:** The sample data were selected based on six financial performances. The period of investigation was 2005-2011. In this section, at the first it was described the variables trends. At the second stage, it was investigated preliminaries of parametric statistical methods. At the end, it was estimated the relation between dependent and independents variables.

International Journal OF Engineering Sciences & Management Research

A) Variables Description:

At the first, it was described variables with statistical indices. The summary of this description is as figure 1:

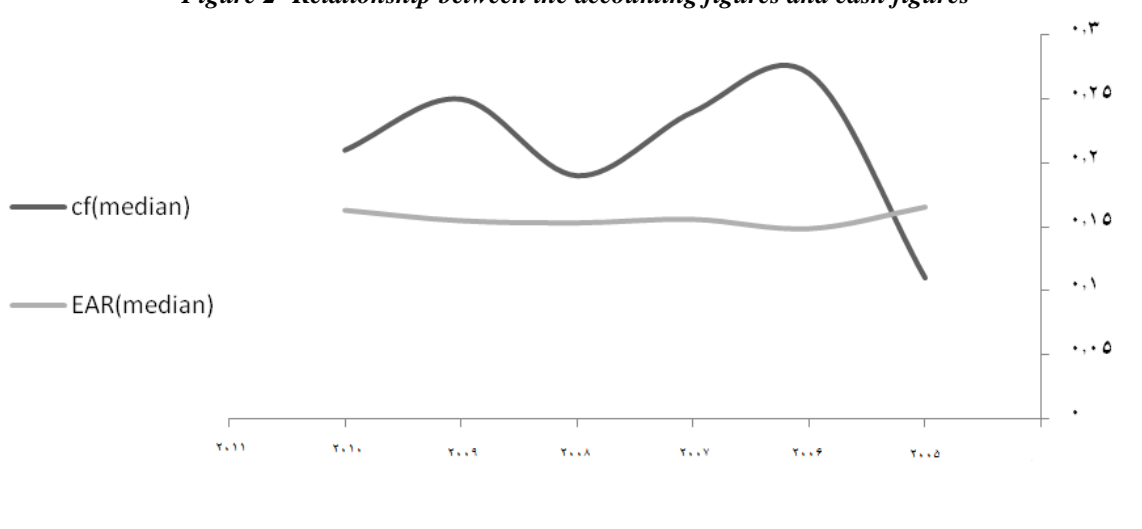
Table 1: Summary of Description Results

Variable	Minimum	Maximum	Mean	St. Deviation	skewedness	Kurtosis
Rit	25364	859465	653256	6582	2.3152	4.235
EARit	2354	95642	54261	2315	1.235	5.231
CFit	85468	956487	658497	45684	2.3154	1.3265
BETAit	0.123	0.5624	0.2361	0.2315	2.3564	5.125
SIZEit	95867	875468	546231	52364	7.1235	4.325
MTBit	4215	56324	7584	2315	3.125	4.5214
ETPit	45216	986574	654897	23546	0.5236	2.5326
LEVit	1.235	8.0264	6.4125	1.546	0.6584	0.9564
DOMit	0	1	0.524	0.235	0.123	0.012

As it showed on figure 1, all of Skewedness and Kurtosis coefficients are bigger than 0.1. Therefore, the distribution of research variables are not normal.

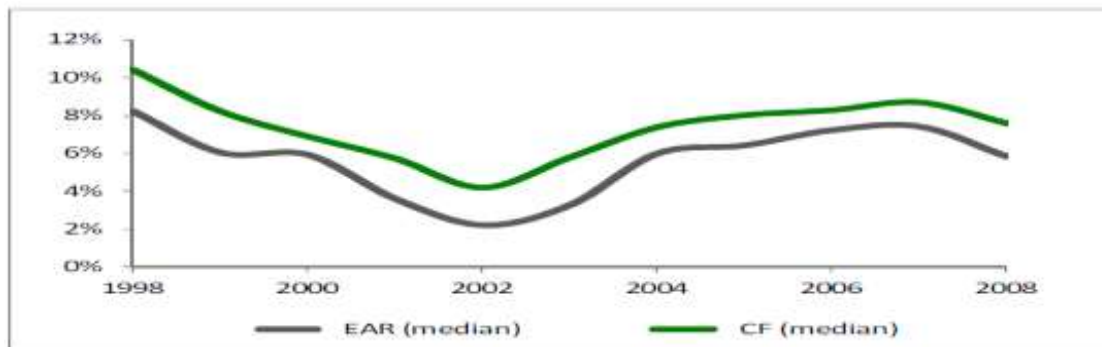
The trend of the basic variables EAR and cash figures (CF) in the selected sample in stock exchange market of Tehran is as figure 2:

Figure 2- Relationship between the accounting figures and cash figures



The relationship between the two variables, with respect to the point that in the researches carried out by employing Gandry model and Hondurans Model in Stock Exchange Market of Germany by Gandfidner in the last 10 days, is presented in figure 3.

Figure 3-Relationship between CF and EAR variables in Gandert and Hoydens models in German Stock Exchange Market



By paying attention to figure 2, of the outputs of the stocks and describing the data, one may conclude that our static data is non-parametric and Spearman Test should be used for this data.

B) Normality Test:

The normality of the model remains is one of the most important regression hypotheses. To assess the final model of the research, the main dependent and independent, and auxiliary variables have been used and the final regression of the model is evaluated

International Journal OF Engineering Sciences & Management Research

afterwards. The differentiation between the assessed values and the actual values is the model remainders. Nevertheless, it is possible to ascertain the distribution of remainders prior to model assessment through dependent variables and auxiliary variable distribution tests. The hypothesis zero and the counter hypothesis are as follows:

H0: The remainders of regression model follows normal distribution.

H1: The remainders of regression model do not follow normal distribution.

As it was showed on the figure 4, for all of variables, the significance level at the end row, are near to zero. Therefore hypothesis H0 is rejected. That is, the distribution of each variable is not normal. Therefore, the parametric methods such as Pearson Correlation Coefficient or Multi-variables Linear-Regression are not suitable methods for the evaluation of variables relationship.

Figure 4- Kolmogorov-Smirnov Tests

Variable	Rit	EARit	CFit	BETAit	SIZEit	MTBit	ETPit	LEVit	DOM.it
No.	324	324	324	324	324	324	324	324	324
Mean	78695	876543	657432	0.254	8764	98866	98654	2.543	86554
St.	65433	5433	8765	98766	7643	8765	5643	1.432	4543
Deviations	23432	6543	35542	676543	8765	7665	78654	0.8976	9876
Positive	4532	765	7654	43257	5432	6543	76541	0.2135	987
Negative	7654	65432	34211	453214	3421	5643	12321	0.5234	89765
Z-Statistic	9.235	7.5234	6.5324	4.5235	7.3254	6.3254	5.2315	5.96587	8.12547
Sig. Level	0.0003	0.00452	0.00986	0.00653	0.00452	0.00432	0.0043	0.00426	0.00425

C) The Evaluation of Relation between Variables:

In this section based on related and similar pervious research, it was used the parametric method for evaluation of the relation between dependent and in-dependents variables. This regression estimation is summarized on figure 5:

Figure 5: The Estimation of Multi –Variables Linear-Regression

Variable	Rit	EARit	CFit	BETAit	SIZEit	MTBit	ETPit	LEVit	DOM.it
Type	Dep.	In-Dep.	In-Dep.	In-Dep.	In-Dep.	In-Dep.	In-Dep.	In-Dep.	In-Dep.
Parameter	78695	0.123	0.542	0.012	0.125	0.635	0.526	0.235	0.325
St.	5246	0.189	0.3423	0.011	0.056	0.564	0.4231	0.1524	0.4521
T-Statistic	8.1254	6.0213	5.0324	4.2315	7.0325	9.135	4.0254	3.1254	2.0315
Sig. Level	0.0003	0.00452	0.00986	0.00653	0.00452	0.00432	0.0043	0.00426	0.00425

As it showed on figure 5, all of estimated parameters are positive. Therefore there is direct relation between all of id-dependents and dependent variables. The R-Squared for this relation was 0.0025, and then the linear relation between variables is weak.

Because as it was showed on the pervious section, the distribution of dependent and in-dependent variables are not normal. It was used Spearman Correlation Coefficient for this reason. As it mentioned on the research hypothesis, the main hypothesis was defined main variables relation. Based on this hypothesis, in the condition of an increase in information asymmetry, the explanatory capability of accounting figures on the cash flow in Pearson correlation in determining the output performance of stocks of selected companies enlisted in the Stock Exchange Organization has a significant relationship in level one with 0.00 error, while the cash flow shows a significant correlation in 5 percent level (0.05 error) with output performance of the stock. Therefore, the accounting figures and the cash flow have significant relationship with the stocks output performance. The table of the minor hypothesis is shown as figure 6 as following:

Figure 6-The type of relationship and the results of minor hypothesis

No.	Hypothesis	Type of relationship	Significance	Results of hypothesis
1	The accounting figures relationship has more explanatory value than the figures of cash flow in Gandfidner’s model.	Direct	0.01	The accounting figures have more explanatory values.
2	The cash flow figures relationship has more explanatory value than the figures of cash flow in Gandfidner’s model.	Direct	0.05	The cash flow figures have more explanatory values.
3	The relationship between the accounting figures with cash flow, in lack of information asymmetry in Günter model determines the performance of stock outputs of the selected companies in Tehran Stock Exchange market.	Direct	0.416	The correlation between the two variables is significant in 0.000 error level.

International Journal OF Engineering Sciences & Management Research

Comparing the correlation of variables of the research and the model presented by Michael Wolf and Bernhardt Gand-finder: As figure 7 shows, the MTB, ACCRUALS, EAR variables in both researches have significant relationship in one percent level with 0.000 error.

In addition, the variables LEV, DOMINATED, SIZE variables in both researches showed no significant relation with the model; however, the BETA systematic risk of Michael Wolf and Bernhardt Gandfinder showed stronger significant relationship than the selected sample in stock exchange of Tehran; however, in our research, there did not exist a significant correlation. The figures of the cash flow have strong relationship in 1 percent level with 0.000 error in the model presented by Wolf and Gandfinder; however, in the selected companies of stock exchange of Tehran, the relationship was significant in 5 percent level and 0.045 error. The proportion between the profit prior to interest and tax to the stockholders' equity in the model presented by Wolf and Gandfinder had significant relationship in 5 percent level while in the selected companies of Tehran Stock Exchange Market, the relationship was significant in 1 percent level and 0.000 error.

Figure 7-Comparison between the effects of main variables

Variables	Spearman Correlation with R in the selected samples of Tehran Stock Exchange Markets	Correlation with R in Stock Exchange Market of Germany by Michael Wolf and Bernhardt Gandfinder
EAR	.682(***)	0.28(***)
CF	.111(**)	0.25(***)
ACCRUALS	.271(***)	0.14(***)
BETA	0.014	0.09(***)
SIZE	-0.014	0.02
MTB	.237(***)	0.11(***)
ETP	.251(***)	0.03(**)
LEV	-0.016	0.01
DOMINATED	0.043	-0.02

Comparison between the effects of correlation in main variables of the research with the assumption of different states in the model presented by Michael Wolf and Bernhardt Gand-finder were performed in this section. The variables testing was performed in different states by comparing the results obtained in information asymmetric conditions and based on Rappaport, that the financial statements could be assessed and checked for their accuracy.

To analyze financial statements with similar conditions, it is possible to use the EAR accounting figures and cash flow figures with the output performance of all stockholders to find a criteria to assess the companies. In the model presented by Gandfinder et al, small companies had significant relationship with EAR and large companies have stronger relationship with cash flow; while in the selected model of Tehran Stock exchange, in first state, EAR and CF have strong significant relationship; while in status two when the companies are larger, there is a strong significant relationship with EAR and a significant relationship with CF. This comparison is summarized as figure 8:

Figure 8- Comparison between correlations among different models

Variables	Spearman Correlation with R in the selected samples of Tehran Stock Exchange Markets	Correlation with R in Stock Exchange Market of Germany by Michael Wolf and Bernhardt Gandfinder
Gandry's model based on small enterprises	Strong significant relation in both.	Strong signification relation with EAR
Gandry's model based on large enterprises	Strong significant relation with EAR and significant relation with CF	Strong signification relation with CF
Gandry model based on companies with no RnD	Significant strong relation with EAR and CF	Strong signification relation with EAR
Gandry's model based on companies with RnD	Strong significant relationship with EAR	Significant relationship with CF
Gandry's model based on enterprises with less than average intangible assets	Strong significant relationship with EA and CF	Strong signification relation with EAR
Gandry's model based on enterprises with more than average intangible assets	Strong significant relationship with EA and CF	Limited significant relationship with CF
Gandry's model based on enterprises with less than average	Strong significant relationship in both	Strong signification relation with CF

free floating stocks than the selected samples		
Gandry's model based on enterprises with more than average free floating stocks than the selected samples.	Strong significant relationship in both	Strong signification relation with EAR

CONCLUSION

Comparing the coefficient of determining the variables of the research and the model presented by Michael Wolf and Bernhardt Gandfinder: The important point is that the free floating rate in German stock exchange is 0.60 in average while the same rate is around 0.25 in Tehran stock exchange. In addition, the selected companies of stock exchange of Germany consisted of 5000 enterprises in 10 years while the selected sample in stock exchange of Tehran consisted of 54 enterprises in six years. The summary of conclusion about research hypothesis is showed as figure 9:

Figure 9-Comparing the coefficient for determining variables of the research by using different models

Description	Coefficient for determining the variables as presented by Gandfidner et al	Coefficient of determining the variables as presented in the selected samples
Gandry's model	0.333	0.465914
Gandfidner et al model	0.357	0.505208
Gandry's model based on small enterprises	0.29	0.4857
Gandry's model based on large enterprises	0.412	0.365
Gandry model based on companies with no RnD	0.275	0.48
Gandry's model based on companies with RnD	0.0443	0.577
Gandry's model based on enterprises with less than average intangible assets	0.331	0.345
Gandry's model based on enterprises with more than average intangible assets	0.408	0.536
Gandry's model based on enterprises with less than average free floating stocks than the selected samples	0.427	0.524
Gandry's model based on enterprises with more than average free floating stocks than the selected samples.	0.323	0.387

According to the above table, it could be seen that the determining coefficient which is obtained in the selected sample reveals strong relationship between variables.

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International Journal OF Engineering Sciences & Management Research

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