

A study for security analyst's conflict of interest based on SEM model

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Abstract – This article analyzes the behavior of Chinese security analysts' conflicts of interest from an entire new perspective by establishing SEM model with PLS algorithm based on investor questionnaire, implying the existence of security analysts' conflict of interest in Chinese stock market is significant. Finally the corresponding regulating measures are proposed.

Keywords: Securities analysts, Conflict of Interest, SEM, PLS algorithm

1. Introduction

Security analysts act as middlemen by delivering information to investors and improving the market efficiency. Unfortunately, they often face conflicts of interest which can interfere with the independence and objectivity of their analysis. The behavior of security analyst's conflict of interest has always been the topic issue in finance. The securities analysts are classified into three types with different service objects—sell-side analyst, buy-side analyst and independent analyst (SEC, 2002). The sell-side analyst, usually employed in the security agencies or the investment bank, provides the securities comments which are announced for the institutional and individual investor for free. The buy-side analyst, usually service for the fund company, the investment consultant agencies or the investment management consulting institutions, provides the analysis for the institution inside. The independent analyst, not related to any institution, provides the security analysis report for those users in the way of subscription or agreement.

Among all the securities analysts, the buy-side analysts mainly serve for the institutional investors, whose analysis report is only for the reference of the internal investment but unavailable to the other investors.

The buy-side analyst works for the security company, the security consultancy or the investment bank, whose securities comments are provided for the various investors. In this way, the position of the buy-side analysts is in a conflict because they both work for the company and service for the investors.

A emerging literature examines analysts' role in providing information to security markets. For example, [1]-[3] illustrate that analyst security recommendations offer useful information to investors. Several other papers analyze how distortions in analysts' incentives can lead to biased forecasts and recommendations. One possible reason of bias, studied theoretically by [4] and established empirically by [5]-[6], is that analysts may “herd” in their forecasts and recommendations in order to develop reputations for ability. [7] examine how conflicts of interest related to investment banking can lead to biased analyst recommendations and less informative stock

reports. To the best of our knowledge, ours is the only study to analyzes the behavior of Chinese security analysts' conflicts of interest from an entire new perspective by establishing SEM model by means of PLS algorithm based on investor questionnaire, suggesting the existence of security analysts' conflict of interest in China is significant. The relative regulating measures against it are proposed.

2. Selection of Sample and Index

Select four stock exchange business departments in Shanghai as the samples randomly based on the method of the field questionnaire survey. The questionnaires are distributed and taken back after being filled in the researcher's presence during May and June, 2010. The questionnaire includes such contents as the motivation, the professional quality and the interest conflict of the stock analysts. The survey applies the closed questionnaire and evaluates the specific contents of the securities comments by the measure scale of the Five Levels of Likert Scale based on the designed questions.

The sample size of this survey is defined by the measure of the sample size selected randomly, using formula $n = Z^2 \sigma^2 / d^2$. Here, n means the required number of the sample; Z means the statistic of Z at the confidence level; σ means the overall standard deviation; d means 1/2 of the confidence interval or the allowable error or the survey error in the practical application. Based on the trial of the questionnaire, the overall standard deviation of this research is estimated as 0.23, the confidence level of 95% and the sample error less than 2.5%, which are substituted into the formula with $Z=1.96$ to reach the minimum sample size of the questionnaire as 325. After the definition of the sample size, 420 pieces of questionnaires were distributed, 387 of which were returned. And the total number of valid return was 330 and the valid return rate was 78.57% which is larger than 70%[8], so it is conform to the minimum sample size and does not violate the principle of random selection.

3. Empirical analysis

3.1. The questionnaire for securities analysts

The outstanding feature of the securities comments different from the other securities consultation is the obtaining approach with low cost and its influence to the mass media communication. The securities comments in our country are disseminated to the communicates mainly through the mainstream media, such as the newspaper, the broadcast, TV and so on, so the cost of obtaining the information is lower. Therefore, compared to the professional securities consulting service with higher lost the various investors of small or middle sizes are inclined to receive the free and convenient securities comments. Because of this feature, the securities comments are characterized with some complexity. Just as the saying says "There is no such thing as a free lunch", the reason why the profit of the securities comments is less than the membership consultation with higher charge but the influence is bigger is that there is some complex profit motivation hidden in the securities comments. Differ from the professional investment consulting service, the chargeable analysts need to establish the principle-agent relationship with the investors and the provided comments should be responsible for the investors. If their comments cannot be satisfied with the requirements of the investors, the investors will terminate their trust relationship. In this way, the securities consulting analysts should provide the

analyst report with high qualities to avoid the customer churning. However, although the securities comments are regulated by the relative laws and regulations, the provided comments are not responsible for the investors because there is no principle-agent relationship between the securities analysts and the investors. Based on this, the quality of the securities comments is restricted from the perspective of encouragement. Meanwhile, some analysts help the relative stakeholders realize their purposes but damage the investors' interest by securities interest, which makes the securities comments are mixed with some interests during the process of wide spread.

The securities comments should be provided in line with the objective attitude and deliver the marked information of the market to the investors through personal interpretation. Just because the securities comments include the subjective attitude of the analysts, the securities comment is not only the transmission tool of the market information, but also contains the artificial motivation. The content of the securities comments are usually influenced by the personal position and standpoint of the analysts. This research analyzes and discusses how the analysts' position and standpoint influence on the content of the securities comments by the statistics of the samples.

Table 1. Statistics on the securities analysts with different motivations

Comments on security analysts Security analysts' performance	Absolutely agree		Comparatively agree		Not clear		Comparatively disagree		Absolutely disagree		Average value
	Counting	row %	Counting	row %	Counting	row %	Counting	row %	Counting	row %	
Independent analysts make their life relying on the accuracy of their securities comments	39	11.78%	80	24.17%	123	37.16%	66	19.94%	23	6.95%	2.86
Pursue reputation to operate stocks or do research in some institution	31	9.37%	128	38.67%	100	30.21%	60	18.13%	12	3.63%	2.68
Help to speculate in the stock market by themselves	25	7.55%	101	30.51%	110	33.23%	63	19.03%	32	9.67%	2.93
Conspire with the institution to cheat the investors	49	14.80%	112	33.84%	103	31.12%	40	12.08%	27	8.16%	2.65

Based on the evaluation of the communicatees to the securities analysts, the overall evaluation of the investors on the securities analysts is general with the approximate average value of three. The predictive performance of the analysts is the poorest, which is conform to the empirical viewpoint referred in the last chapter. The "Very Poor" attitude of the communicatees to the analysts' predictive performance is about 12.69% which is bigger than the

evaluation of "Very Poor" to the other professional performance. And the attitude of "Not So Good" is about 29% with the average value of 3.39 which is also higher than that of the other items with the poorest evaluation among all the professional performances. In this way, compared to the other professional performances, the poorest evaluation of the investors is the predictive performance of the analysts. (See table 2).

Table 2. Professional performances of Organization Analysts

Comments on security analysts Security analysts' performance	Excellent		Good		General		Not so good		Very poor		Average value
	Counting	row %	Counting	row %	Counting	row %	Counting	row %	Counting	row %	
Theoretical foundation	20	6.04%	118	35.65%	147	44.41%	31	9.37%	15	4.53%	2.71
Operation performance	8	2.42%	74	22.36%	169	51.06%	65	19.64%	15	4.53%	3.02
Professional background	13	3.93%	94	28.40%	152	45.92%	54	16.31%	18	5.44%	2.91
Experiences	2	0.60%	101	30.51%	150	45.32%	69	20.85%	9	2.72%	2.95
Predictive performance	7	2.11%	38	11.48%	148	44.71%	96	29.00%	42	12.69%	3.39

Based on the interest conflict of the analysts, the evaluation is general and inclined to “Not so good”. The average values of these evaluation items is comparatively poor with the average value of 3.42, 3.44 and 3.27 separately to the item of “The analysts only stand for their individual viewpoints without any other relative interests”,

“The predictive comments of the analysts is not related to the interest of any persons or institutions” and “The viewpoints of the analysts are not influenced by their own positions”. (See Table 3).

Table 3. Statistical evaluation of the analysts' interest conflicts

Comments on security analysts Security analysts' performance	Excellent		Good		General		Not so good		Very poor		Average value
	Counting	row %	Counting	row %	Counting	row %	Counting	row %	Counting	row %	
The analysts are objective with little subjective characteristics.	2	0.60%	45	13.60%	151	45.62%	100	30.21%	33	9.97%	3.35
The analysts only stand for their individual viewpoints without any other relative interests	3	0.91%	51	15.41%	136	41.09%	85	25.68%	56	16.92%	3.42
The analysts are careful with more analysis and less suggestion	16	4.83%	88	26.59%	126	38.07%	77	23.26%	24	7.25%	3.02
The predictive comments of the analysts is not related to the interest of any persons or institutions	7	2.11%	32	9.67%	148	44.71%	95	28.70%	49	14.80%	3.44
The viewpoints of the analysts are not influenced by their own positions	19	5.74%	40	12.08%	140	42.30%	95	28.70%	37	11.18%	3.27

Table 5 shows the examination of obviousness of the path or load coefficient. Suggest the original coefficient is zero. CR Test supplied by AMOS. The P value of all the paths is examined under the confidence level of 0.05.

Table 5. Estimate of the acquiescent path coefficient of the model

		Estimate	S.E.	C.R.	P
Objectivity	← Independence	.532	.067	7.997	***
Prudence	← Independence	.459	.072	6.406	***
Predictive proposal	← Independence	1.070	.076	14.171	***
Position	← Independence	.912	.086	10.586	***
Personal opinions	← Independence	1.000			
Prudence	← Objectivity	.146	.028	5.241	***
Objectivity	← Prudence	.146	.028	5.241	***

In the 0.05 confidence level, the overall model goodness of fit test results showed that all fit indices meet the theoretical optimal value[9]-[12] (see Table 6), model fitting is good.

Table 6 Model fitting results

Fit Index	Absolute index					Relative	
	χ^2	GFI	AGFI	RMR	RMSEA	NFI	CFI
Actual examination value	2.093	0.99	0.96	0.02	0.06	0.96	0.98
Theoretical optimum value	<3	>0.9	>0.9	<0.08	<0.1	>0.9	>0.9

From the observed variable reflecting the analysts' independence, the coefficients influencing the predictive proposal and individual opinion is increased to 0.94 and 0.84 separately. When the analysts make out the prediction or proposals and put forward the individual opinions with subjective factors, it is easy to generate the potential interest conflicts. A number of investors reflect that the stocks drop instead of rising after them adopting the analysts' suggestions, so they begin to query the independence motivation of the analysts. Besides, the influencing coefficient of the analysts' position is 0.74 which displays that it have certain influence. The analysts' position is usually hidden so it is difficult to be perceived

during the commenting process. Nevertheless, the relevancy of the position and the independence is still higher, which reflects that the analyst's position influences the analyst's independence to some extent (See Figure 1).

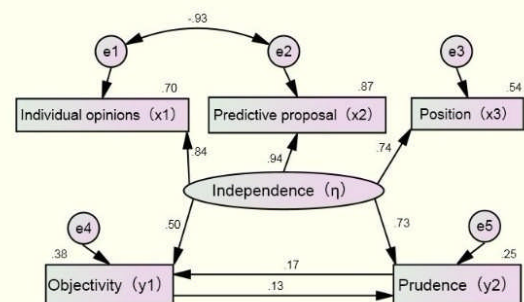


Figure 1 Internal Relationship of the Analysts' interest conflicts

It can be seen from the relationship of the independence, objectivity and prudence, the independence influences the objectivity with the path coefficient as 0.5 to the most extent. The influence of the independence on the prudence is lower with the path coefficient as 0.73. The mutual influence of the objectivity and the prudence is less with the path coefficients separately as 0.17 and 0.13. Theoretically speaking, the analysts' independence directly influences on the objectivity of their securities comments while this influence is less in the actual fact. The influencing coefficient of the independence on the prudence is also significant. The behavior of the analyst will not display the obvious potential interest conflicts. The comments still should meet the principle of prudence and objectivity.

4. Conclusion

From the above statistical analysis, we can see that the investors are comparatively not satisfied with the motivation of the analysts' interest conflict, which is specifically demonstrated by the poor evaluation on the

predictive performance. The lack of the predictive performance of the analysts is because of the influence of the interest conflicts more directly instead of the lack of their professional performance. Meanwhile, the interest conflicts of the analysts' comments also display the imperceptibility.

The income of the companies where the sell-analysts are employed in usually comes from the brokerage business, the self-operated business and the investment banking business. As an employee, every kind of business is related to the interest conflicts of the analysts. For the brokerage business, the income of the company mainly comes from the customers' transaction commission. In the secondary market, the more the transaction frequency and the higher the transaction price, the more income coming from the commission. Under this circumstance, the analysts seldom do the pessimistic comments on the securities market. Just through the optimistic prediction, the exchange quantity of the investors will be increased so as to increase the commission income of the securities dealer. For the self-operated business, the interest conflicts are more obvious. The analysts are very possible to provide some investment proposals in favor of the company based on the requirement of their own self-operated business. For example, the behavior of "Buy before proposing" makes the investors suffer the loss of profit. For the investment banking business, the independence of the analysts is also influenced to large extent. It can make great profit for the securities company by providing the underwriting arrangements and other investment banking business to the enterprises, which makes the reports provided by the analysts have certain potential interest conflicts.

Except the internal interest conflicts of the company which the analysts are employed in, the external interest conflicts from the public company and the dealer institutions is also the main problem which the analysts have to face to. The public company is the most important information source for the analysts. If an analyst provides too many critical comments on a certain public company, the management of this company will refuse to communicate with the analyst in the future. The institutional clients are not only the major exchange customers but also the main buyers of the underwriting of the securities company and the important source of the brokerage business income in the securities company. So the institutional clients influence the comments of the securities analysts potentially.

Furthermore, there also may be the personal interest conflicts of the analysts themselves. The analysts make profits by their securities comments and make use of the influence of the media communication to gain the income maximization for their investment. To regulate the interest conflicts of the analysts, the following suggestions are proposed:

4.1. Establish a perfect regulatory system of the interest conflicts of the securities analysts

It should establish the effective consulting laws and regulations as the mandatory restriction to govern the interest conflicts of the analysts. The laws and regulations

should have strong operability and the comparative and detailed regulations. Particularly speaking, the laws and regulations should include at least: (1) The information isolation system (the so-called firewall mechanism). This system should make detailed restriction on the specific behavioral norms instead of the principle-based standards. For example, the analysts in the research department should not make reports to the investment bank department; the reward of the analysts should not be directly related to the investment bank exchange, the brokerage business income or the asset management fees; the research reports of the analysts should not be delivered to and examined by the investment bank or the company management. The detailed regulation is made to protect the independence and the justice of the analysts from being influenced. (2) Interest conflicts disclosure system. Hold the principle of "Mainly disclose before the event and secondarily record after the event". The disclosure content should include the following aspects at least: the debtor, investor and salary relations between the analysts and the analyzed public company; the debt and salary relations between the analysts and their serving company; the personal share-holding status of the analysts themselves during certain period when they make the investment proposals. The disclosure should be clear, exact, concrete and obvious enough and should be released in the timely and fair way. The disclosure approach should be conform to the approach of the media through which the securities researches or the opinions or comments of the analysts are delivered. The disclosure content should be restricted in the fact of the related events, but not the details about the quantity or quality. (3) The prohibited behavior of the analysts. It has been regulated when the securities investment consultancy and the employees have the interest conflicts with themselves in the Notice on a number of issues regulating the securities investment consulting behavior to the public. Meanwhile, the new Securities Industry Code of Conduct for Employees to Practice also regulates the prohibited behavior of the employees. It should continue to be kept.

4.2. Strengthen the regulations and self-discipline of the securities consulting industry

Except the mandatory restriction of the laws and regulations, the industry standard and self-discipline of the industry consulting industry is also the effective way to avoid the illegal activities. The industry consulting industry should strengthen their behavioral restrictions with the guidance of the regulation supervising. Firstly, strengthen the professional ethics of the securities employees. At present, the regulation on the analysts' employment has been improved in our country, but the professional ethics education of the employees is comparatively weak. Take ASC as the example. The qualification examination in our country neglects the professional ethics. But in America, the CFA test puts the professional ethics as the principal factor. If the ethics examination fails, the final result will be influenced. Secondly, implement the Censorship of the securities investment consultancy. Strengthen the examination of

professional activity of the securities investment institutions and the investment consultants so as to avoid the illegal activities as much as possible. Finally, ensure the evading system of the employees to be implemented so as to avoid the illegal behavior of the analysts under the interest driven.

4.3. *Strengthen the integrity management of the consultants*

The integrity of the consultants is the foundation to obtain the investors' trust when they are engaged in the securities comments. Based on The Provisional Regulations on the management of the securities employees' integrity information, the association will periodically publish the employees' names who have been punished on their official website. It is regulated in The Execution Behavior Standard of the Securities Employees that the association should survey and adopt the corresponding punishment for the violation of the regulations according to the seriousness of the case and input their punishment information into the Employees Integrity Information System. If the employee is punished by the employing institution or is investigated and prosecuted by the national relevant departments for the illegal behavior, the institution should report to the association within ten working days after making the punishment decision and knowing the investigation and prosecution to the employees. The association inputs the relevant information into the employee's integrity information system. It is helpful for improving the healthy development of the securities comments by strengthening the integrity management of the securities comments consultants.

Finally, some other points could also be added in our study [13]-[14].

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