

DETERMINANTS OF CAPITAL ADEQUACY AT THE EGYPTIAN INVESTORS COMPENSATION FUND

Dr. Ahmed Saad*, Dr. Mahmoud Elsayed**

* Cairo University, Faculty of Commerce, Giza, Egypt

** Cairo University, Faculty of Commerce, Giza, Egypt

Abstract

The purpose of this study is to investigate the protection system of investors in the Egyptian stock markets, using a number of econometric techniques and hand-collected data of Egyptian Investor Protection Fund over the period from 2006 to 2014. We measure the capital adequacy through two variables, which may be a benchmark in it selves or can be compared to similar regimes at developed stock markets, these variables are: the fund reserves as a percentage of market capitalisations and fund reserves available to compensate owners of the market capitalisations, which in turn depend upon the number of customers accounts subject to compensations, number of the market portfolio owners, the value of the investor securities account at every compensation fund member, number of stock traders, number of listed shares and number of transactions. Overall, there is significant positive coefficient/relationship between market capitalisation, retained earnings and reserve. However, there is significant negative coefficient/relationship between Number of listed companies and fund reserves capital.

Keywords: Investor Protection Fund, Capital Adequacy, Stock Markets, Insurance Companies, Egypt

1. INTRODUCTION

The role of investor protection regime is crucial to the development of capital markets. Investor protection regime promotes investor confidence by reassuring them that their interests are being safeguarded against market malpractices and that recourse against such malpractices is available. Issues of investor protection regimes have become starker in the context of recent high-profile revelations in the US and elsewhere that have shaken investor confidence. These touch on issues such as corporate governance, conflicts of interest, adequacy of accounting standards, auditing oversight, sell-side research, investment banking, and more recently, the late trading and market timing practices in the mutual fund industry and governance of exchanges.

Protect the interests of investors need to compensate for the losses of investor assets, repayment of the Securities. Investor Protection Fund is the most effective system of investor protection regime as it is a necessary instrument to market conditions arrangements. Securities Investor Protection Fund system for States generally accepted, and the protection of investors, play an important role in maintaining the stability and development of the securities market.

Extraterritorial Securities Investor Protection Fund compensation system is very mature, generally divided into the scope of compensation, the maximum amount of compensation, terms of compensation, and compensation program.

The Securities Investor Protection Fund compensation system is the core content of the Securities Investor Protection regime in Egypt, Construction and design of the system can achieve

the purpose of the Fund and the results are a major impact. The design of the system and improvement of the compensation mechanism in Egypt should be subject to the funds were originally created to protect the interests of investors, to follow the practice of maintaining the protection of the interests of investors, and to prevent the internal mechanism of the balance of the compensation mechanism between the moral hazard such as dishonesty or character defects in an individual, that increase the chance of loss (faking accidents, inflating claim amounts). Learning from foreign mature markets; can play its due role in the protection of investors' interests, to maintain securities market stability and healthy development of the fund compensation.

According to World Bank Development Indicators (2010), Egypt is a secondary emerging economy but the importance of investor protection fund is as significant as in developed markets but unfortunately there seems a limited work on investor protection fund to focus on financial sector of Egypt. Little evidence in this context is found where studies have investigated the financing patterns of financial sectors. World Bank highlighted the determinants of target investor protection fund in African capital markets. Likewise; as consequence of financial sector importance in the development of economy; to fill the existing research gap, the study in hand is focused on financial sector to investigate the protection regime of investors in the Egyptian stock market and insurance companies in Egypt.

As seen in Table 1, the Egyptian Investors Protection Fund accepts premiums (contributions) from member firms, which are greater than the total

amount paid for claims. Further, Egyptian Investors Protection Fund holds more money than the predicted pay-out in claims because it can predict on average how much should hold to pay all claims.

Table 1. Egyptian Investors Protection Fund
In (L.E)

Item Quarter Year	Premiums				Claims			
	First quarter	Second quarter	Third quarter	Fourth quarter	First quarter	Second quarter	Third quarter	Fourth quarter
2006	46128056	28777136	30046715	36112484	828994	621746	414497	207249
2007	19693609	24058139	25229110	37471084	382162	327568	219378	162784
2008	101181768	74337625	33268382	20649340	1217631	811754	1623508	405876
2009	15869291	43909016	26965863	32573808	87158	116210	23053	64104
2010	36236159	37498742	24115353	28408138	60530	24212	20580	15738
2011	19711692	27782621	18237196	11873578	448284	672425	784496	336213
2012	12563405	16510316	14898197	11618370	14605	43816	58421	29211
2013	20858551	8481640	18156991	15329778	37394	49858	74788	87252
2014	24699402	23336676	18141285	18992988	600000	1200000	750000	450000

Source (Egyptian Investors Protection Fund EIPE, 2015)

The analysis in this paper is innovative in several ways. It is, to our knowledge, the first attempt to analyse and investigate the fund capital adequacy, using a number of econometric techniques, a set of different firm characteristic determinants and their relationship to investor protection fund in emerging markets.

The remainder of the paper is set out as follows. Section 2 is a brief literature review on the main an overview of the Securities Investor Protection Fund compensation system, so that the Egypt Securities Investor Protection Fund system can absorb. At section 3 we focus on the Egyptian Securities Investor Protection Fund system current situation and existing problems. Of existing legislation introduced a hurry, leading to more problems, many provisions not keep up with the development of the securities market, has not well protect the interests of small investors, to identify gaps in the future development, not detours for the prosperity and development of the securities market sector. At section 4 we set our thoughts on how to improve the Egypt Securities Investor Protection Fund as a compensation system. Mainly from the repayment terms, the scope of reimbursement, reimbursement object, reimbursement procedures, reimbursement limits has made the idea so that the same international standards and thus better serve the development of the securities market and safeguard the interests of investors and section 5 concludes .

2. LITERATURE REVIEW

A group of concept legal rules has been discussed by La porta et al. (1998). These rules safeguard shareholders and creditors and prevail in 49 different countries in the world. La porta et al. (1998) also grouped these rules into indicators for the rights of shareholders and creditors in each country and considered some measures of applied quality, for example, the efficiency of the judicial system and the quality of accounting standards.

David and Brierley (1985) argue that most of the countries' commercial legal systems deduce from very few legal genres. Nowadays, the commercial legal systems deployed in the world through globalisation process.

Indeed, recent researches indicate that the degree to which the legal protection of external

investors against exercising of expropriation by managers or shareholders is likely to shape the differences in the financial systems of the countries. The results suggest that a higher legal protection of external shareholders is usually accompanied by: (1) stock markets of higher value (La Porta et al., 1997); (2) more listed firms (La Porta et al., 1997); (3) bigger listed firms with regards to the value of their assets or sales (Kumar et al., 1999); (4) greater valuation of the listed firms in comparison to their assets (Claessens et al., 2002; La Porta et al., 2002); (5) more dividend pay-outs (La Porta et al., 2000a); (6) less focus on control and ownership (European Corporate Governance Network, 1997; La Porta et al., 1999; Claessens et al., 2000); (7) less private benefits provided by control (Zingales, 1994; Nenova, 1999); and finally (8) a stronger correlation between opportunities for investment and actual investments (Wurgler, 2000). Numerous studies truly outline the impact of controlling shareholders on the expropriation of minority shareholders (Grossman and Hart, 1988; Harris and Raviv, 1988; Hart, 1995; Burkart et al., 1997; Johnson, 1999) and the legal framework that highlights it (La Porta et al., 1998; Johnson et al., 2000a). Some other studies took the initiative to explain theoretically the reason for the concentration of control in countries that are characterized by having low protection of shareholders (Zingales, 1995; La Porta et al., 1999; Bebchuk, 1999), and also the reason for the abundance of pyramidal organizational structures (Wolfenzon, 1999). Studies, such as the one conducted by Bennedsen and Wolfenzon (2000), suggest that countries characterized by poor protection of their shareholders can adopt control systems with many large shareholders.

La Porta et al. (2000) describe the legal protection of investors as a probably help procedure for corporate governance. A good investor's compensation may be a special urgent requirement for the much more important safeguarding of property rights against the interference of politics in numerous countries of the world. Additionally, good investor compensation is accompanied with effective implementation of corporate governance, as reflected invaluable and wide financial markets, dispersion of ownership of shares, and efficient capital allocation in different firms. Using investor compensation to describe differences in corporate governance regimes across countries. Furthermore,

financial markets require some kind of protection of outside investors in courts, agencies of the government and participants of the market. On the other hand, systems of investor compensation are politically feasible in certain situations, and can obtain outstanding benefits. It might take the shape of adopting more protective legal systems or adding more drastic changes in the legal structure. The capital markets of the world capital integrate in order to have strong investor compensation systems.

La Porta et al. (2002) argue that a greater concentration of not only control, but also a cash flow ownership can be found in countries characterized by poor protection of their shareholders. A number of researches concentrated on particular components of legal environments with lower protection of its shareholders. However, it is still important to develop a corporate finance model in the case of market equilibrium that works well in these environments.

Shleifer and Wolfenzon (2002) outline a model of an entrepreneur who goes in public in an environment that is characterized by weak legal protection of external shareholders. They investigate the market equilibrium, as well as, the decision of this entrepreneur. The model suggests numerous assumptions that are required in order to get empirically reliable predictions on dividend policies, the patterns of corporate ownership, valuation of firms, and financial development in the systems of weak external shareholder protection. It is assumed that consistency persists concerning the suggested model and the empirical evidence regarding the association between corporate finance and the protection of investors. Additionally, the model can predict certain capital flow patterns in the different countries, along with the procedures for reforming corporate governance. These predictions are found to be in conformance with recent empirical studies.

Lynn and Mohammad (2003) note the existence of some base line level of investor protection among some of the respondents, if not already in the whole region of Asia Pacific. Examples of crimes that should be punished are: inaccuracies in prospectuses, market misconduct and recommendations that are made with no reasonable basis. A number of measures are outlined to discover conflicts. These measures require cooperative efforts of the public along with SROs (by showing the regulators misconducts of one of the intermediaries). Regulators are also given the authority to act civilly and administratively against violations of laws, based on the nature and the degree of this violation. Finally, there are some procedures that permit aggrieved investors to search for compensation, either in courts, or funds that are specified for the compensation of investors, or even through the help of arbitrary tribunals and systems for resolving disputes. Lynn and Mohammad (2003) also focused on specific areas that regulators of the Asia Pacific could take into consideration to better improve the level of investor protection: Investor Education-Investor Recourse to Remedies-Dispute Resolution Schemes- Administrative Powers.

Michael (2007) describes that registration and monitoring are likely to continue growing and affect hedge fund retained earnings margins, but they are not likely to hamper the growth of hedge funds in

emerging markets. He also explains that both the United States and United Kingdom are exerting pressure in order for regulation and monitoring to increase. They usually do so by focusing largely on reporting requirements. On the other hand, the European Union is permitting the strategies of hedge funding in the currently existing products. He suggests that both countries account for about 85 percent of the hedge fund market.

Richard (2007) sets an initial assumption that incentives for profit are more likely to reduce fraud and other sources of misconduct compared to government regulation systems that necessitate expensive measures. On the other side of this, are individuals who believe that private markets actors have limited ability to find and to stop fraud.

In the same line, John (2009) examines select investor protection provisions of The Markets in Financial Instruments Directive (MiFID) and their analogues in the American legislative system concerned with securities. He suggests two models about investor behaviour and explains theories of investor protection. Furthermore, he critically assesses the paradigmatic theories of investor protection. Also, he conducts a comparative analysis of the provisions for investor protection between MiFID and the analogues in the US.

Mariassunta and Koskinen (2010) investigate the impact of investor protection on allocation decisions of portfolios and returns on stock. They argue that in cases of poor investor protection, wealthy investors are more likely to become controlling. In a state of equilibrium, the price of stock is based on the demand from portfolio investors, as well as, controlling shareholders. Owing to the controlling shareholders' high demand, it can be argued that the prices of stocks in situations of poor corporate governance might not be low enough to justify a 100% discount on private benefits extraction. Thus, the weaker the investor protection, the lower the expected returns of stocks. A number of implications are thus derived concerning both domestic and foreign stockholdings of investors. Additionally, they argue that there exists a positive relation between the participation of portfolio investors in domestic stock markets and equity bias. They have provided evidence in support for their arguments.

David et al. (2012) suggest that Investor protection is strongly related to a higher sensitivity of investment to Tobin's q and a lower sensitivity of investment to cash flow. These effects might be attributed to the role played by finance; in countries that have good investor protection, external funding is more likely to rise up more with Tobin's q , and falls down more with cash flow. They also argue that each of Tobin's q and cash flow sensitivities are related to ex post investment efficiency; where investment suggests a higher growth rate and more profits in countries that have lower sensitivities to cash flow and greater sensitivities to Tobin's q . This is also in consistence with investor protection that promotes accurate price of shares, empowering efficient investment, and lowering financial constraints.

Anthea (2014) argues that the re-appearance of country-to-country arbitration is essential for two main purposes. First of all, country-to-country arbitration provides a system for the involved

parties of agreement that are looking to re-engage with the investment agreement system in order to impact and affect the interpretation and implementation of these agreements. Moreover, knowing that investor-state arbitration co-exists with and country-to-country arbitration suggests the development of a hybrid theory. This theory should consider the design and structure of the investment agreement system.

Egyptian Investor Protection Fund (EIPF) was created under the capital market law as a non-profit membership independent entity. EIPF is neither a governmental agency nor a regulatory authority. EIPF was not chartered to combat fraud. EIPF is not an agency or establishment of the government and it has no authority to investigate or regulate its members.

EIPF is an important part of the overall capital market system of protecting investors in listed securities in Egypt. While Egyptian Financial Supervisory Authority (EFSA) deals with cases of investment fraud, EIPF's focus is to compensate customers for missing their cash and securities left in the hands of bankrupted or otherwise financially troubled securities member firms.

The role of EIPF begins when a member firm is insolvent and customer assets are getting lost. EIPF steps in and through certain outlines, works to get back customers' cash, stocks, and other securities held at the member firm within a certain limit. EIPF is the first stage of protection against a brokerage firm or any other kind of financial member firms fail to deliver customers their cash or securities. Furthermore, EIPF has advanced over 20 million Egyptian pounds for at least 600 investors dealing through stock brokerage member firms. If EIPF doesn't exist, investors at financially troubled member firms might miss all of their investments forever. EIPF may not cover all losses or all investors.

The purpose of EIPF is to compensate investors when a brokerage or any other member firm is insolvent and customer assets are getting lost, EIPF steps in and within certain limits, works to return customers' cash, stock, and other securities held by the member firm. If a member firm closes, EIPF protects the securities and cash in a customers' account up to L.E.500,000. The L.E.500,000 protections includes up to L.E.100,000 protections for cash in the account.

EIPF protects customers if the securities firm is an EIPF member, the customer has securities at the brokerage or any member firm, and the customer has cash at the brokerage or the member firm on deposit in connection with the purchase or sale of a security.

In addition, EIPF protection is only available if the brokerage or any other member firm fails and EIPF steps in.

On the other hand, EIPF does not protect Investments if the firm is not an EIPF member, Promises of investment performance, Securities are not listed in the Egyptian stock exchanges, and Cash balances not concerned with investment transaction.

In the same time, the market losses cannot be protected by EIPF because market losses are a normal part of ups and downs of the risk oriented world of investing.

Indeed, EIPF gets involved when brokerage firm or any other member firm fails and owes customers cash and securities that are missing from customer account. Furthermore, EIPF receives a referral from the security regulator. With this referral EIPF deals directly with customers in an out-of-court direct payment procedure.

Equipped with above analysis Protection of customers have more than one account at the same brokerage or other member firm is determined by "separate capacity" Each account, owned by a customer in a separate capacity is covered up to L.E.500,000 for securities and cash (including a L.E. 100,000 limit for cash only).

Examples for separate capacities are Individual account, an account for corporation, an account of a son or a daughter managed by a parent that has his own account, and an account of individual managed by a portfolio firm.

Therefore, EIPF protects cash in a customer's brokerage firm accounts or at in any other member firm resulting from the sale of customer's securities or held in a customer's account for the purchase of securities and EIPF protects cash held by the securities firm for customers in the connection with the customers' purchase or sale of securities whether the cash is in Egyptian pounds or denominated in non-Egyptian pounds currency.

Finally, EIPF urges all investors to understand the danger of investment fraud. Securities companies required to issue confirmations of transactions and account statements at appropriate intervals. The investors should always review your confirmations and statements carefully when they arrive. EIPF asks all investors to verify that the confirmations and statements properly reflect all activity in their accounts. EIPF asks all investors to check to see if the statements they receive accurately reflect their understandings of what cash and what securities are in their accounts, and if the investors discover an error in a trade confirmation or brokerage statement they should immediately bring the error to the attention of the securities firm in writing.

3. METHODOLOGY

In this study we aimed to show how the use of different methodologies may affect the results of the empirical studies that analyze investors' protection fund performance. Therefore, we first estimated the future fund premiums and the future fund reserves for the next nine years between year 2015 and 2023 depends on the previous nine years data.

Hence, in this study we adopt multiple regressions to examine a number of explanatory variables using the regression models discussed above.

4. MODELS

In the following section, the research methodology is set up to examine different firm characteristic determinants that affect fund's level of claims and available reserve capital. Based on the above analysis, the following two models are employed:

Model (1)

Fund Reserves = f (Premiums, Market capitalisation, No of traders, No of new investors, No of securities holders, No of listed companies, and retained earnings)

Model (2)

Claims = f (No of traders, No of securities holders, No of listed companies, and market capitalisation)

Dependent Variable

Our study adopts Reserves and Claims as dependent variables for the two models respectively.

*Independent Variables***Model (1)**

The first independent variable adopted in our study is premiums, the second independent variable adopted in our study is the market capitalisation; we thought that customers' claims are closely related to this variable as long as financial investors should be compensated for their losses based on the market price of their lost stocks. And market capitalisation is the benchmark for securities market prices that determine the sum of customers' compensations for both missing cash relevant to securities and missing stocks. And over and above we take into consideration the in-kind compensation against missing securities.

The third independent variable adopted in our study is the number of traders. We thought that trading of listed shares through brokerage member and custodian firms is of a great importance because those traders have two kinds of accounts one of them at a brokerage firm, and the second one at a custodian firm and every customer has a cash account and a securities account in his name, and both accounts are protected by the fund, the fourth independent variable adopted in our study is the number of new investors that enters the market every period and have the right to be compensated as long as their transactions fulfil the requirements mentioned above .

The fifth independent variable adopted in our study is the numbers of securities holders or the owners number of listed securities; as long as the second important member in the EIPF is the custody members, and every trader should has a securities account for the stocks he or she owns, and according to the fund compensations rules, it compensates every customer for the missing cash or securities, and some custody members have no cash accounts for their customers.

The sixth independent variable adopted in our study is the number of listed companies, as long as EIPF compensate customers when missing their stocks or securities, we thought that the more listed companies, the more volume of trade, cause investors will have more options to diversify their portfolios, and this may lead to more capital reserves available to the fund for compensation.

The seventh independent variable adopted in our study is the fund retained earnings, as long as EIBF invest its capital reserves balance available for compensation in risk free assets, and uses its revenues to pay salaries, pay its expenses, and pay

dividends to its members and board members, we thought that this variable may have significant effect on of the fund reserves capital.

We thought the number of fund members as a source of risk as long as the fund protects the interests of customers against their insolvency or their incompetence to fulfil their obligations toward their customers. And the more the number of members, the more the risk of their investors, this stem from the notion of market competitiveness or the lack of regulations awareness of new member employees.

As a result of the importance of premiums, the market capitalisation, the number of traders, the number of new investors, the number of securities holders, the number of listed companies, and the fund retained earnings are used in explaining the available reserve capital of investor's protection fund.

Model (2)

The first independent variable adopted in our study is the number of traders. Regardless of the way of collecting premiums from members as a percentage of the trade transaction or a percentage of their activities; we thought that if those trades were executed by a large number of traders it may lead to more premiums than if it took place through small number of traders.

The second independent variable adopted in our study is the number of securities holders or the owners numbers of listed securities; as long as the premiums are collected from members based on their securities marketing activities in the capital markets that provided to their customers, and that every member should attain at least the break-even to survive, we thought that the more the fund members, the more premiums to the fund, and hence the more available reserve capital to the fund.

The third independent variable adopted in our study is the number of listed companies, as long as EIPF compensate customers when missing their stocks or securities, we thought that the more listed companies, the more volume of trade, cause investors will have more options to diversify their portfolios, and this may lead to more capital reserves available to the fund for compensation.

The fourth independent variable adopted in our study is the market capitalisation, this is because it is a volatile figure on a daily bases, and members pay less than average when it goes down and pay more than average when it goes up, but still there some doubt about volume of trade that has a direct effect on available capital reserves of the fund and capitalisation that may have significant effect on the reserves capital available to compensate customers.

As a result of the importance of the number of traders, the number of securities holders, the number of listed companies, and the market capitalisation are used in explaining the claims of investor's protection fund.

5. DATA AND EMPIRICAL RESULTS

The data adopted in this study are the quarter financial data related to the Egyptian Investors Protection Fund performance over the period from 2006 to 2014. The rest of data has been collected

from various sources. Data on stock prices are obtained from Data Stream and Egyptian disclosure book. The data for basic dependent variables are obtained from Egyptian Investor Protection Fund (EIPF).

We start our empirical analysis by reporting the descriptive statistics, Table 3 reports descriptive statistics (mean minimum, maximum, and standard deviation). It is observed that variables show a large dispersion based on the mean and standard deviation over the period of study.

Table 2. Descriptive Statistics
In (L.E)

Variable	Mean	Max	Min	Std. Dev.
Reserve	856087726.24	2011699136	46769476	574031732.181
Claims	368652.64	1623508	14605	402378.105
Premiums	27881180.67	101181768	8481640	17643703.915
Market Capitalisation	480219916666.67	874810000000	293593000000	134407493948.679
No of Traders	95803.44	168270	52163	31641.390
No of new Investors	12567.39	76913	3126	12888.758
No of Securities holders	714808.08	959878	459879	184850.755
No of listed Companies	303.00	593	207	126.008
Retained earnings	27999350.89	92001009	400152	28587999.214

Table 2 shows that Capital Reserves; Claims; Premiums; Market capitalisation; Number of Traders; Number of new Investors; Number of Securities holders; Number of listed companies; and retained earnings all have positive means. The mean Claims ranges from L. E. 14605 to L.E. 1623508.

On average retained earnings of EIPF grew annually over the nine years under investigation.

The mean retained earnings ranges from L.E. 400152 to L.E. 92001009.

As a first attempt to identify the strength and direction of the relationship between the variables, the correlation matrix is computed with the results also shown in Table 3. It is observed that all variables show the expected direction of relationship.

Table 4. Spearman Correlation between Selected Variables

Variable	Reserve	Claims	Premiums	Market Capitalisation	No of Traders	No of new Investors	No of Securities holders	No of listed Companies	Retained earnings
Reserve	1.000								
Claims	-.208 .222	1.000							
Premiums	-.635** 0.000	0.303 0.072	1.000						
Market Capitalisation	-.454** 0.005	0.343 0.041	0.608** 0.000	1.000					
No of Traders	-.858** 0.000	0.286 0.091	0.802** 0.000	0.714** 0.000	1.000				
No of new Investors	-.872** 0.000	0.344* 0.040	0.710** 0.000	0.605** 0.000	0.898** 0.000	1.000			
No of Securities holders	-.885** 0.000	0.348* 0.037	0.677** 0.000	0.704** 0.000	0.892** 0.000	0.863** 0.000	1.000		
No of listed Companies	-.763** 0.000	0.454** 0.005	0.423* 0.010	0.581** 0.000	0.702** 0.000	0.678** 0.000	0.749** 0.000	1.000	
Retained earnings	0.966** 0.000	-0.189 0.268	-0.513** 0.001	-0.448** 0.006	-0.792** 0.000	-0.805** 0.000	-0.864** 0.000	-0.823** 0.000	1.000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 5. OLS Pooled Regression for model (1)

Reserve	Coefficient	Standard Error	P-value
Constant	1496737155.547	266821373.783	0.000
Premiums	-2.409	2.428	0.330
Market Capitalisation	0.001	0.000	0.011
No of Traders	-3761.123	3023.789	0.224
No of new Investors	677.919	3850.005	0.861
No of Securities holders	-943.134	559.883	0.103
No of listed companies	-851406.266	387920.750	0.037
Retained earning	9.019	2.026	0.000
F-test	69.065 (0.000)		
Adjusted R ²	0.932		

Table 6. OLS Pooled Regression for model (2)

<i>Claims</i>	<i>Coefficient</i>	<i>Standard Error</i>	<i>P-value</i>
Constant	77453.875	289126.954	0.791
<i>No of traders</i>	2.541	4.941	0.611
<i>No of securities holders</i>	-0.103	0.935	0.913
<i>No of listed companies</i>	400.357	868.671	0.648
F-test	0.775 (0.517)		
Adjusted R ²	-0.020		

Since the correlation matrix examines only one-to-one relationships, without detecting any significance level, we need a better estimation that would allow us to understand how various variables collectively and significantly influence the overall impact of the independent variables on Available reserve capital and Claims.

Starting with data analyses, the impact of independent variables on claims and available reserve capital of Egyptian Investor Protection Fund has been examined by the two models in Table 4 and Table 6 reported the pooled regression. As seen from Table 3 and in line with the pooled regression presented in Table 4 there is insignificant negative coefficient/ relationship between premiums, number of traders, number of securities holders and reserve.

Also, there is insignificant positive coefficient/relationship between number of new investors and reserve. Furthermore, there is

significant positive coefficient/relationship between market capitalisation, retained earnings and reserve. However, there is significant negative coefficient/ relationship between Number of listed companies and reserve.

In the same vein, Table 3 and in line with the pooled regression presented in Table 6 there is insignificant negative coefficient/relationship between number of securities holders and claims. Also, there is insignificant positive coefficient/relationship between Number of traders and claims. Furthermore, there is insignificant positive coefficient/relationship between number of listed companies and claims.

Further, the following table 7 finds expected values for available reserve capital, retained earnings, claims, and premiums to estimate the future values in Egyptian Investor Protection Fund.

Table 7. The future values of Egyptian Investor Protection Fund parameters
In (L.E.)

<i>Year</i>	<i>Expected available reserve capital</i>	<i>Expected retained earnings</i>	<i>Expected claims</i>	<i>Expected premiums</i>
2015	1486431112	310722976	14067582	1175708141
2016	1633391212	350597295	15302215	1282793923
2017	1780351312	390471614	16536848	1389879704
2018	1927311412	430345934	17771481	1496965485
2019	2074271512	470220253	19006114	1604051267
2020	2221231613	510094572	20240747	1711137048
2021	2368191713	549968892	21475380	1818222830
2022	2515151813	589843211	22710013	1925308611
2023	2662111913	629717531	23944645	2032394392

CONCLUSIONS

As conclusion of the assessment of EIPF capital adequacy and its crucial role as it is the last resort for protecting investors in listed securities in the Egyptian stock exchanges, this is a very simple but clear list as the result of the analyses:

Firstly, the existing compensations rules of EIPF are sufficient enough to fulfil the customer's potential claims. And most of the variables that are correlated with claims are insignificant in its effects on values of claims, taking into considerations the negative sign of a three independent variables.

Secondly, the available reserve capital in hand was big enough to cover all claims for the last nine years, and according to our predictions it may exceeds the sum needed to compensate customers of closed or bankrupted members of EIPF for the next nine years. And our findings open the door for reviewing the existing premiums and the maximum limit of compensation per customer.

Thirdly, as long as the premiums that collected by the fund represent one component of transactions costs, we argue that the rapid growth

rate of available reserve capital of the fund compared with the growth rate of claims is demanding for new rules to put ceiling for that balance, as long as it is higher than the growing rates of claims. And it may ask for revisiting the excising premiums itself.

Fourthly, we did not noticed any reason for dividing claims between cash and securities with the percentage 1:4 as long as available reserve capital is a function of number of members and number of traders, and fund annual retained earnings.

Fifthly, number of traders has a great effect on claims rather than its effect on the reserve capital available for compensations.

Sixthly, although all compensations for the last nine years were for brokerage customers, other member firms still paying premiums to the fund, this may raise the question of the real risk that faces member's customers of other than brokerage firms.

Finally, it is important to have a proper methodological frame work to review fund performance periodically for asserting the fund capital adequacy to compensate investors in cases of crises or markets collapses.

REFERENCES

1. Anthea, R., (2014), " State-to-State Investment Treaty Arbitration: A Hybrid Theory of Interdependent Rights and Shared Interpretive Authority", *Harvard International Law Journal*, 55(1), 1-70.
2. Bebchuk, L., (1999), "The rent protection theory of corporate ownership and control", Unpublished working paper, Harvard Law School, Cambridge, MA
3. Bennedsen, M., and D. Wolfenzon, (2000),"The balance of power in closely held corporations", *Journal of Financial Economics*, 58, 113-139.
4. Burkart, M., D. Gromb, and F. Panunzi, (1997)," Large Shareholders, monitoring, and fiduciary duty", *Quarterly Journal of Economics*, 112, 693-728.
5. Claessens, S., S. Djankov, and L. Lang, (2000),"The separation of ownership and control in East Asian corporations", *Journal of Financial Economics*, 58, 81-112.
6. Claessens, S., S. Djankov, J. Fan, and L. Lang, (2002),"Disentangling the incentive and entrenchment effects of large shareholdings", *Journal of Finance*, 57, 2741-2771.
7. David, R., and J. Brierley, (1985),"Major Legal Systems in the World Today", Stevens and Sons, London.
8. David, M., T., Zhang, and M. Zhao., (2012), "Why Does the Law Matter? Investor Protection and Its Effects on Investment, Finance, and Growth", the *Journal of Finance*, LXVII (1).
9. European Corporate Governance Network (ECGN), (1997),"The Separation of Ownership and Control: A Survey of 7 European Countries Preliminary Report to the European Commission", Vol. 1-4, Brussels, European Corporate Governance Network.
10. Grossman, S., and O. Hart, (1988),"One-share-one-vote and the market for corporate control", *Journal of Financial Economics*, 20, 175-202.
11. Harris, M., and A.Raviv, (1988),"Corporate governance: voting rights and majority rules", *Journal of Financial Economics*, 20, 203-236.
12. Hart, O., (1995),"Firms, Contracts, and Financial Structure", Oxford University Press, London.
13. Johnson S., (1999),"Does investor protection matter? Evidence from Germany's Neuer Markt ", Unpublished working paper, MIT Press, Cambridge, MA.
14. Johnson, S., P. Boone, A. Breach, and E. Friedman, (2000a),"Corporate governance in the Asian financial crisis", *Journal of Financial Economics*, 58, 141-186.
15. John, J. (2009), "Re-examining Investor Protection in Europe and the US", *e Law Journal: Murdoch University Electronic*, *Journal of Law*, 16(2), 1-37.
16. Kumar, K., R. Rajan, and L. Zingales, (1999),"What determines firm size?" University of Chicago.
17. La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, (1997), "Legal determinants of external finance", *Journal of Finance*, 52, 1131-1150.
18. La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, (1998), "Law and finance", *Journal of Political Economy*, 106, 1113-1155.
19. La Porta, R., F. Lopez-de-Silanes, and A. Shleifer, (1999),"Corporate ownership around the world", *Journal of Finance*, 54, 471-517.
20. La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, (1999b),"Investor protection and corporate valuation", NBER Working Paper, National Bureau of Economic Research, Cambridge, MA.
21. La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, (2000a), "Agency problems and dividend policies around the world", *Journal of Finance*, 55(1), 1-33.
22. La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, (2000b), "Investor protection and corporate governance", *Journal of Financial Economics*, 58, 3-27.
23. La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. W. Vishny, (2002), "Investor protection and corporate valuation ", *Journal of Finance*, 57 (3), 1147-1170.
24. Lynn, H., and M. Nizam, (2003), "Investor Protection in the Asia Pacific ", Findings of the Asia-Pacific Regional Committee Survey on Investor Protection 5th OECD Roundtable on Capital Market Reform in Asia, 1-27.
25. Michael, J., (2007),"Investor Protection in Europe and the United States: Impacting the Future of Hedge Funds ", *Wisconsin International Law Journal*, 25(1), 161-188.
26. Mariassunta, G., and Y. Koskinen, (2010)," Investor Protection, Equity Returns, and Financial Globalization", *Journal of Financial and Quantitative Analysis*, 45(1), 135-168.
27. Nenova, T., (1999),"The value of a corporate vote and private benefits: a cross-country analysis", Unpublished working paper, Harvard University, Cambridge, MA.
28. Richard, A., (2007)"The Dangers of Investor Protection in Securities Markets ", *Texas Review of Law & Politics*, 12, 411-424.
29. Shleifer, A., and D. Wolfenzon, (2002), "Investor protection and equity markets". *Journal of Financial Economics*, 66, 3-27.
30. Wolfenzon, D., (1999),"A theory of pyramidal structures", Unpublished working paper, Harvard University, Cambridge, MA.
31. Wurgler J., (2000)," Financial markets and the allocation of capital", *Journal of Financial Economics*, 58, 187-214.
32. Zingales L., (1994),"The value of the voting right: a study of the Milan stock exchange", *The Review of Financial Studies*, 7, 125-148.
33. Zingales L., (1995)," Inside ownership and the decision to go public", *Review of Economic Studies*, 62, 425-448.