COMCEC Standing Committee
For Economic and Commercial Cooperation
of the Organization of Islamic Cooperation

CAPITAL MARKET
REGULATORS FORUM
COMCEC

FINANCIAL LITERACY ORIENTATION

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FINANCIAL LITERACY TASKFORCE

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Chair of the Financial Literacy Task Force	**Vice-Chair of the Financial Literacy Task Force**	**Secretariat of the COMCEC Capital Market Regulators Forum**

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FINANCIAL LITERACY ORIENTATION

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Executive Summary

Resources

EXECUTIVE SUMMARY

We can trace the root of financial literacy as personal finance in the great recession in 1929. Since that time, nobody had talked about personal finance. However, the exact phenomenon of financial literacy rooted in deregulation of financial markets since 1998 to 2002. Deregulation led to eruption of many products particularly derivatives. Diversification of products and investment opportunity in front of investors encouraged them to take position in products in which their nature was quite unknown for investors. These products were too complex to understand and even because of their diversity, investors could not understand them all. Financial literacy is increasingly becoming a priority for policymakers in different economies, as it is recognized as contributing to financial stability, financial inclusion, and to the effective functioning of financial markets (The World Bank, 2012). As we mentioned above, this priority has highlighted and pursued severely since 2008 by officials and policymakers. They recognized financial literacy as an important factor for financial stability and understood that by focusing on its improvement they can reduce the probability of crisis occurrence. Policymakers are increasingly using surveys as diagnostic tools to identify key problem areas and inform the design of national strategies.

The main work for assessing financial literacy level might be what is implemented by the Securities & Exchange Commission (SEC) of the US. The SEC was charged to identify "the existing level of financial literacy of retail investors, including subgroups of investors identified by the Commission" by requirement of Section 917 of the Dodd- Frank Wall Street Reform and Consumer Protection Act of 2010. The study indicates that U.S. retail investors lack basic financial literacy. The study demonstrated that investors have a weak grasp of elementary financial concepts and lack critical knowledge of ways to avoid investment fraud.

Similarly, we aimed to assess financial literacy among retail active investors. We think assessment of current financial literacy level would be the starting point for further structured actions regarding financial literacy improvement. This report contains the result and findings of a survey conducted in three countries (Iran, Kuwait and Turkey). The report reviews main behaviors of investors in the capital market and hints authorities regarding financial literacy related issues.

The result of the survey indicates low level of financial literacy in basic concepts of finance and the necessity of taking appropriate action regarding financial literacy improvement.

OVERVIEW OF THE REPORT

In the case of stock market, what makes a good investor or trader? There is no magic formula. Successful investors possess a mixture of knowledge, intelligence, skills, common sense, attention to detail, business savvy, wit, presence, energy, enthusiasm, interpersonal skills, self-confidence, as well as other attributes that are not only difficult to quantify, but that vary from one person to the next. If we look at the market closely, you could conclude two important points:

1. Success sparks in the hands of those investors who react (or make decision) quickly and effectively to the ever changing market conditions;
2. Success is not the result of a specific academic training. Investors come from varied backgrounds. Although many would think that stock market is a location for graduated investors from finance, economics, and business administration majors, there are many other investors possess degrees in engineering, literature, art, history and even investors with no university education.

By looking at trading floor, you acknowledge that investing successfully and properly is a broad and complex business and it takes years to develop a clear understanding of the activities and interactions of all different groups around the trading floor, as well as the structure of markets, the dynamics of trading, the relationship with officials and other investors,

and finally making decisions. Indeed, an appropriate level of financial literacy is what investors need in a well-designed capital market to obtain opportunities for success. Education and experience are two components in the capital market which cannot be omitted from financial literacy. Both concepts are interrelated. An educated investor without enough experience may not decide properly and an experienced investor without enough education can be a complete investor. Regulators and exchanges have main roles in conducting financial literacy related programs. However, there could be a question regarding where they should start.

This report is the first step of a structured approach toward financial literacy improvement. The report considers financial literacy level assessment as the first step and discloses the result of a survey regarding financial literacy level of retail active investors. We started by assessing financial literacy level of retail current investors not newcomers or potential investors because the necessity of assessing their financial literacy level is urgent and their ineffective decisions would affect the capital market as a whole. In addition, by assessing their financial literacy level, we can determine current status of financial literacy and plan ahead for more desirable situation. Moreover, through this survey we determined many other useful issues such as the main concepts that investors need to be educated on in which authorities can apply for the improvement of financial literacy. The

result of the survey indicates that financial literacy level is low among participated countries and there should be urgent and appropriate initiatives regarding its improvement in the capital market.

IMPORTANCE OF FINANCIAL LITERACY ASSESSMENT

Why should we assess financial literacy level? Through our researches and studies, we have understood that almost all regulatory bodies around the world have done some initiatives in regard of financial literacy and have some available educational programs. Not only developed countries but also non-developed countries have done something in respect of financial literacy. There are only few poor countries that have not done any specific initiatives in this respect because of lack of resources and enough capacity. However, if we are going to lunch educational programs fundamentally and in a correct way, we need to determine our starting point. In the planning process of financial markets, goals evince where we are going or our destination. However, before determining our destination, we must determine where we are and which route we should choose. We call it Financial Literacy Orientation. For accurate navigation, you need a compass and a map to determine your current location. In orienteering, without determining your current location, experts recommend not to move in any direction. Even if you know your goal and its position but you do not know your current position, you would be lost. After determining your current location, you would start mapping. It means applying map and compass to find the best path (with minimal barriers ahead) toward your destination or goals. In orienteering matches, there are many flags as goals which orienteer must pass them. As it is clear, what we need to do is similar to orienteering in wilderness or an orienteering event. When you are in wilderness, in order to pace from point A to point B, we need to determine our current position. The current position is considered as current assessment of financial literacy level. By using a compass and a map we can determine our current position. We call them orienteering tools. Similarly, by a questionnaire and analyzing it we can determine our current position. Whenever our current position will be determined, we will call it point A. Our goal will be point B and we should determine some other signs as objectives which lead us toward the goal. The story is similar in an orienteering event. As an organizer of an orienteering event, you would pace a course and determine your start line. Then, you should set the course by determine position of flags which are your objectives and lead orienteers toward the finish line.

We should consider ourselves as organizers of an orienteering event. We set the course and let investors to pace it themselves. We also provide necessary tools for an orienteering event such as compass, map, punch and etc. that depends on

orienteers to finish the course or not. Orienteers are investors who should attend in the course we have set for them. The necessary tools are provided for them and participants should pace the course by themselves. However, all events need two lines: 1- start line and 2- finish line.

Determining our current position is the most basic initiative in respect of financial literacy enhancement. By doing so, our starting line is determined. Therefore, assessing the current level of financial literacy among investors is in the utmost importance. Not only regulators and authorities can enjoy the result of this assessment, but also investors can enjoy from assessing themselves and recognizing their current level. Therefore, they can plan for their enhancement.

QUESTIONNAIRE PREPARATION

We based the questionnaire preparation on the definition of financial literacy and conclusions of our last survey which was conducted in 2013. The prepared questionnaire consists of five sections:

1- General information;
2- Knowledge and Understanding;
3- Skills;
4- Education, Information and Confidence;
5- Attitudes

The questionnaire starts by asking some general questions. Each question has a specific code that must be written in a roster provided for each section. Most questions are designed to acquire a specific score as 1 or zero for correct or wrong answers. We have focused on different concepts such as general information about stock market, risk, compound interest rate, inflation, rate of exchange and bankruptcy. In addition to financial concepts, we focused on the sources of information, confidence and education provided by authorities and market players for investors. And ultimately, we asked some questions in order to acquire investors' attitude toward the capital market and Islamic considerations.

POPULATION OF THE SURVEY

We aimed to assess financial literacy level of retail active investors. According to the international definitions, active investors are those who typically look at the price movements of their portfolio many times a day and are seeking short-term profits. Therefore, we define active investors as "those whose trading volume is more than trading days in a year (for instance, if trading days in a country is 250 days, then the minimum trading volume of active investors must be 250 times in a year)".

SAMPLE OF THE SURVEY

By acquiring the list of active investors as the population of the survey, each country applied Simple Random Sampling as sampling method. Cochran test is used to reach an appropriate size

of sample. The Cochran test equation and its components are:

$$n = \frac{\frac{pqz^2}{d^2}}{1 + \frac{1}{N}\left[\frac{pqz^2}{d^2} - 1\right]}$$

Where:

N: Population size

n: Sample size

Z: Z statistic for a level of confidence= 1.96

d: Precision (in proportion of one)= 0.05

p: Expected proportion (in proportion of one)= .5

q: p-1= 0.5

If the population is lower than 100, as this is a small sample, the population and the sample are the same. Therefore, N=n=100. By gathering related information and a simple calculation, the sample size for each country was obtained.

INTERVIEW PROCESS

The questionnaire was provided for domestic adult investors above 18 years old who were accessible and their contact information was available. According to the specific Law of each country, investors must had right to trade.

We asked member countries to conduct the questionnaire face to face. Since the survey needs correct interaction between interviewees and interviewers. Member countries were charged to implement interviews. Although it was recommended to implement the survey through face to face method, for those countries that do not have enough resources or capacity, we recommended telephone interview method.

The results of interviews were sent to the secretariat or the chair of financial literacy task force in a roster with a format prescribed by the chair. Among all member countries, we only received conducted interviews from three countries: Iran, Kuwait and Turkey.

LIMITATIONS OF THE SURVEY

Conducting a survey internationally and among different countries consumes much time and cost. It needs enough human resources, enough budget and enough cooperation. We started our work by hundreds of hours studying financial literacy related texts and similar surveys conducted around the world. The first barrier in this respect is that there was no enough human resource to be allocated for such a great task by one or two organization (s). Therefore, we were forced to allocate our staffs to the work and being away from their other duties for a long time. Another barrier we faced was cooperation of other member states. Although many efforts have been done to encourage participation of more countries in an international scaled survey, we couldn't attract participation of more than 3 countries. So, the second barrier was cooperation of other countries.

The last barrier of the survey was the implementation of the survey since we had not direct contact with implementers and only

received a roster. Therefore, we merely hope that all of them are the result of face to face interviews with those active investors.

In order to remove these barriers for further actions regarding financial literacy improvement, we have some recommendations which are mentioned in recommendation section. In addition, we provided them on a form to be rate by member countries.

ORGANIZATION OF THE REPORT

The next section highlights the main findings of the survey cumulatively and reports financial literacy level of all respondents.

section 3, 4 and 5 analysis received responses from Iran, Kuwait and Turkey deeply and in detail. They determined current position of financial literacy level for each country. In addition, these chapters provide information about related issues to the financial literacy and analysis current situation of investors in this respect. Moreover, there are recommendations regarding financial literacy improvement for capital market regulatory bodies.

Section 6 is dedicated to our suggestions for further actions should be taken by the financial literacy task force and suggests some items that facilitate the task force initiatives.

The questionnaire of the survey is provided in Annex1 and its answers are provided in Annex2.

TOTAL FINANCIAL LITERACY

INTRODUCTION

Prior to review the result of the survey based on each countries' responses, we present the cumulative result and main findings of the survey for all respondents. We start with demographic information and will end this section by assessing the financial literacy level. In next three sections, we will review the result of the financial literacy assessment for Iran, Kuwait and Turkey.

DEMOGRAPHIC INFORMATION

Based on the methodology of the survey, each country interviewed with a specific number of active investors. Cumulatively, 568 retail active investors were interviewed in three countries. Among these investors, 69 investors were female and 393 investors were male. Figure 1 illustrates frequency of gender in the survey.

Figure 1- Frequency of Gender
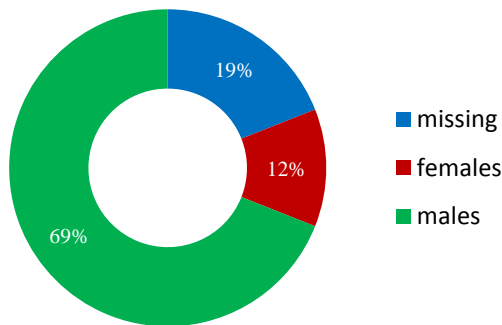
Investors are among different age ranges. We categorized them into 5 different groups. Figure 2 depicts age range of investors. As it is obvious, majority of investors (51%) are adults below 40 years. Therefore, we can conclude that our capital markets are shaped by young investors.

Figure 2- Age Ranges
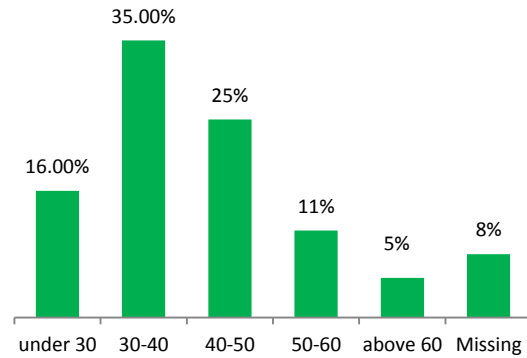
In addition to age ranges, we assessed education level of investors in our capital markets. Figure 3 illustrates frequency of education levels.

Figure 3-Education Level
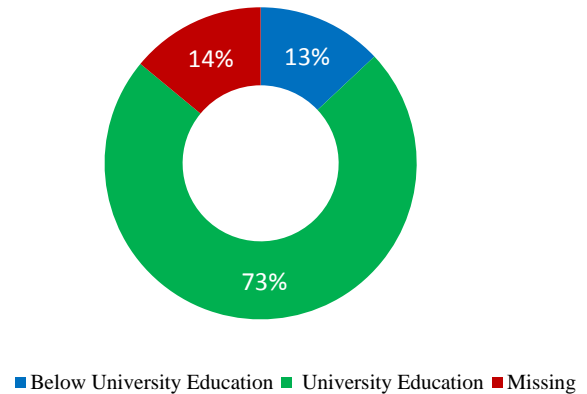
As it is clear, the figure shows high rate of education level among investors. It shows a great potential for financial literacy improvement.

In addition to gender and education, we assessed income level of investors in two main groups: 1- below 2000$ and 2- above 2000$. Figure 4 depicts frequency of each group.
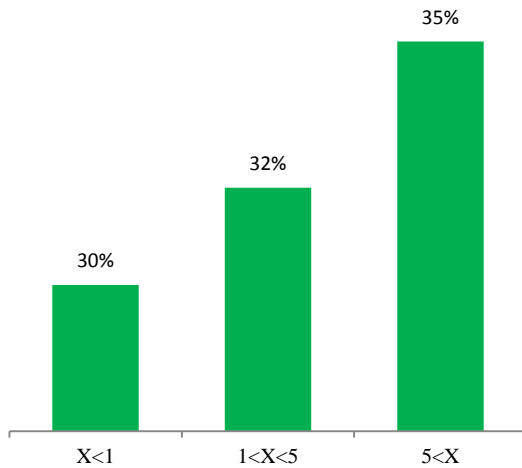
Figure 4- Monthly Income Level
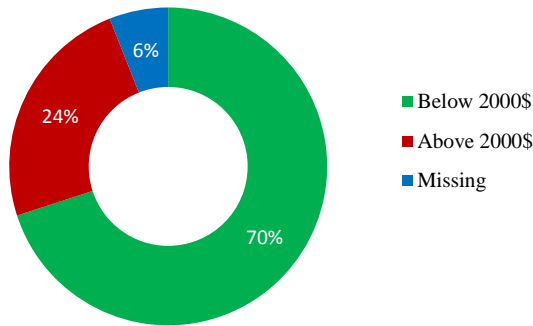
As it is obvious 70% of retail active investors earn below 2000$ monthly.

In our demographic questions, we asked investors how long they have invested in the capital market. Figure 5 illustrates the frequency of investment years. Majority of investors have invested more than 5 years.

Figure 5- Investment Length

Moreover, we asked investors to disclose their job status in order to determine finance related and non-finance related jobs. Figure 6 depicts number of finance related and non-finance related jobs of retail active investors. As it is obvious, 60% of investors do not possess finance related jobs.

Figure 6- Job Status
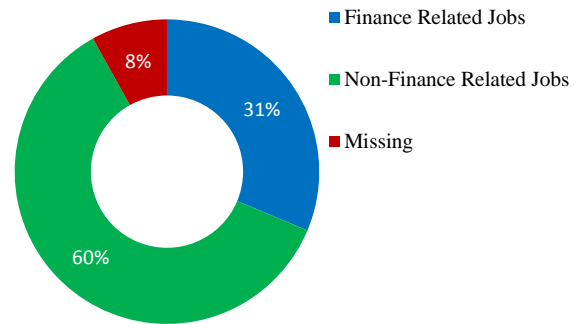
FINANCIAL LITERACY SELF-ASSESSMENT

Prior to assess financial literacy level, we intentionally asked investors to rate their own financial literacy. Figure 7 illustrates investors' assessment regarding their financial literacy level. As the figure indicates, majority of investors assessed their financial literacy at least enough (76%).

Figure 7- Financial Literacy Self Assessment
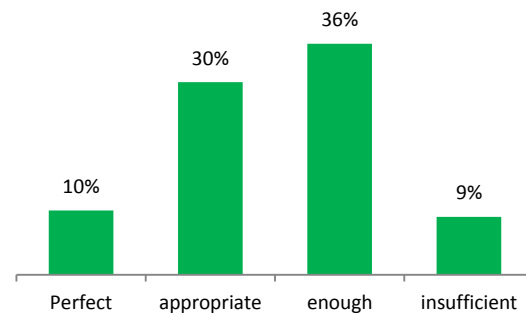
It shows investors are confident about their financial literacy level.

FINANCIAL LITERACY BENCHMARK

In order to make a comparison between expected financial literacy level and current financial literacy, we created a benchmark for financial literacy level. It consists of 4 items: 1- Finance Related Jobs, 2- University Education Level, 3-

Above 1 Year Investment in the Capital Market and 4- Financial Literacy Self-assessment above Enough. These items are as follow:

1- 31%
2- 73%
3- 67%
4- 76%

Therefore we expect the minimum level of financial literacy stands in 58% (Geometric Mean of 4 above items).

TOTAL FINANCIAL LITERACY LEVEL

Financial literacy level is obtained from 16 questions in 10 main financial concepts related to the capital market. Since correct and wrong answers are presented in percentage, we used Geometric Mean in order to obtain one exact score for financial literacy. Figure 8 illustrates correct and wrong answers in each question. By conducting related calculation, the score of financial literacy will be 48% which is far away from its minimum expected literacy among investors. Therefore, we can conclude that financial literacy is low in our countries. This low level of financial literacy indicates necessity of implementing urgent initiatives regarding financial literacy improvement.

FINANCIAL LITERACY IN FINANCIAL CONCEPTS

As it was mentioned, these 16 questions were about 10 financial concepts. These concepts are: 1- Basics of the Capital Market; 2- Structure of the Capital Market; 3- Risk; 4- Products of the Capital Market; 5- Inflation; 6- Interest Rate; 7- Conflict of Interest; 8- Bankruptcy; 9- Currency rate; 10- Derivatives. In order to assess financial literacy in each financial concept, we reassessed responses to find level of financial literacy in each one. Figure 9 depicts financial literacy level in each financial concept.

As it is obvious, the lowest levels of financial literacy in financial concepts are related to bankruptcy, products and basics of the capital market. The highest are related to inflation, risk and structure.

It shows that although we expected active investors to be completely aware about basics and products of the capital market, majority of them are not aware and it indicate the necessity of these issues promotion in education programs.

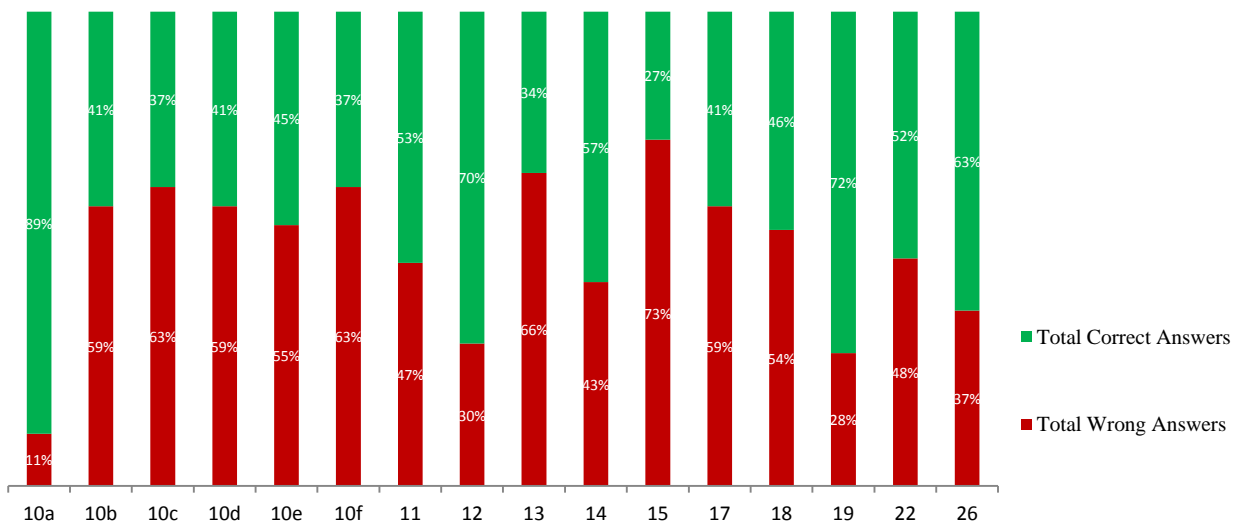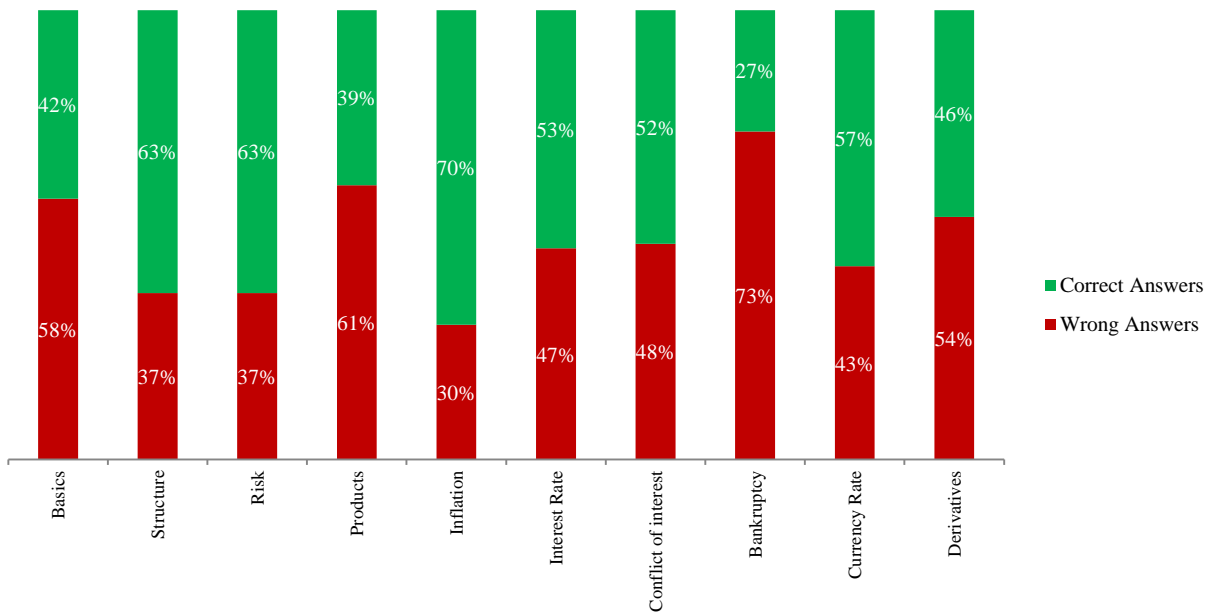**Figure 8- Total Financial Literacy Level**

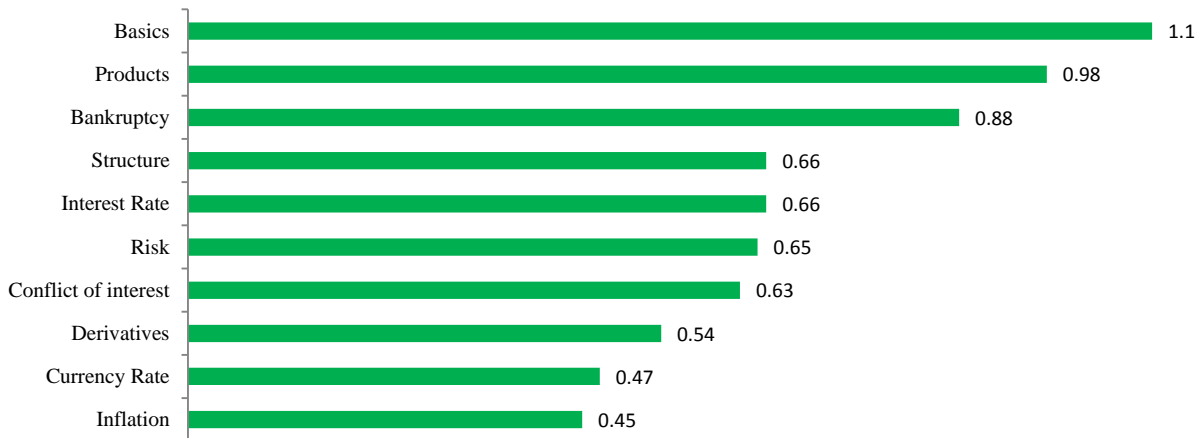**Figure 9- Financial Literacy Level in Each Financial Concept**

Legend: ■ Correct Answers ■ Wrong Answers

Concept	Correct	Wrong
Basics	42%	58%
Structure	63%	37%
Risk	63%	37%
Products	39%	61%
Inflation	70%	30%
Interest Rate	53%	47%
Conflict of interest	52%	48%
Bankruptcy	27%	73%
Currency Rate	57%	43%
Derivatives	46%	54%

In order to determine the importance of each concept, we allocated a predetermined number from 1 to 2 for each concept we thought is more important. Derivatives took 1 and basics took 1.9. Figure 10 illustrates the importance of each financial topic.

As it is appear, the most important issues are basics, products and bankruptcy which must be highlighted by authorities. However, we assessed it for each country since it is related to the attributes of each country.

So far, we have talked about financial literacy level among all respondents. In next chapters, we will review the result of the survey based on received responses from each country. At the end of the report, we will present some recommendations regarding financial literacy improvement and further actions of the Financial Literacy Taskforce.

Figure 10- Importance of Each Topic

Topic	Value
Basics	1.1
Products	0.98
Bankruptcy	0.88
Structure	0.66
Interest Rate	0.66
Risk	0.65
Conflict of interest	0.63
Derivatives	0.54
Currency Rate	0.47
Inflation	0.45

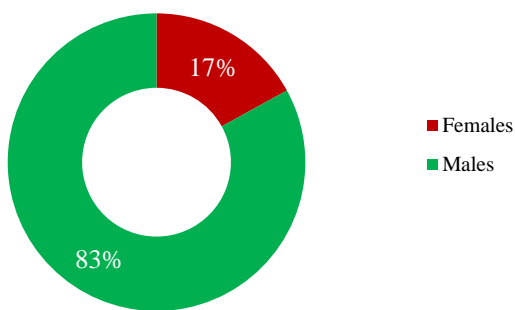# FINANCIAL LITERACY ORIENTATION

IN IRAN

INTRODUCTION

According to the methodology of the survey, Securities and Exchange Organization (SEO) of Islamic Republic of Iran surveyed 319 retail active investors who traded more than 250 times in 2013. Investors' information gathered from the Central Securities Depository (CSD) and contribution of brokerage firms for the identification of active investors. The result indicates the low level of financial literacy among active investors. Moreover, in contrast to our expectations, Iranian investors are not even aware about basics and structure of the capital market. In this section, we aim to analyze responses deeply and in detail.

DEMOGRAPHIC INFORMATION

Demographic information is gathered based on section A of the survey. As it was mentioned, 319 investors as the sample size were surveyed. From total respondents, there were 55 females and 264 males. Figure 1 illustrates the frequency of gender. It shows that majority of active investors in the capital market is shaped by males.
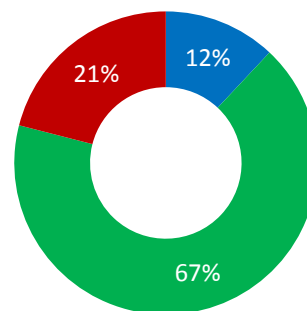
60. As it is obvious, the majority of investors exist in the second group which is 30 to 40. Figure 2 illustrates frequency of each age range.
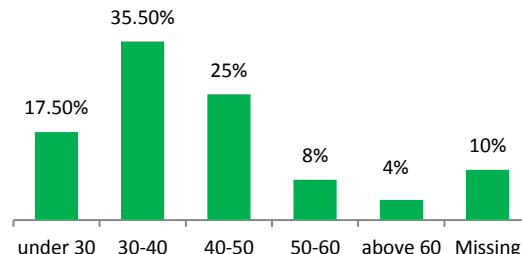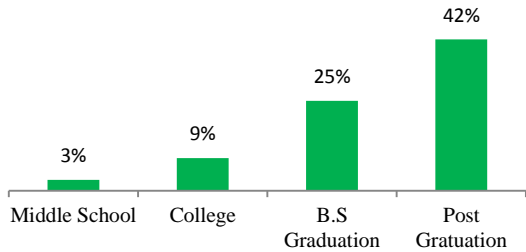

Figure 2- Age Ranges

In order to assess the possible correlation between financial literacy and education level, we asked investors to disclose their education level. From 319 respondents, 37 people were collage or middle school graduated and 213 people were university graduated. Among all respondents, 69 people did not answer to our question. Figure 3 and 4 depict frequency of total education level and in each category. Investors showed high rate of university graduated.
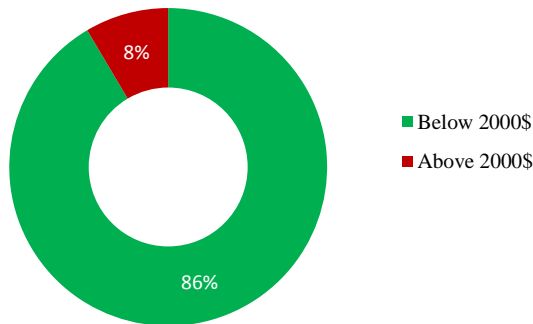

Figure 1- Frequency of Gender

We asked investors to disclose their age range. We divided investors into five different age ranges from below 30 to over 60. According to the received responses, there are 56 investors below 30, 113 investors between 30 to 40, 78 investors between 40 to 50, 24 investors between 50 to 60 and finally 12 investors over

Figure 3-Education Level
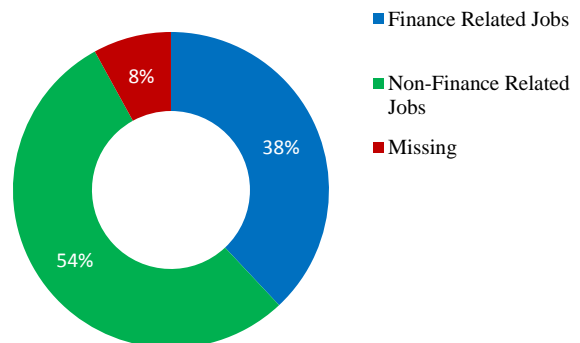
Figure 4- Seperated Education Level

the capital market more than 5 years. Figure 6 depicts frequency of investment length by active investors. It shows that majority of active retail investors in 2013 were arrived into the capital market less than 1 year. It would be explained by the bull market Iran's capital market faced in 2013. It encouraged people to invest more in the capital market.

Figure 6- Investment Length
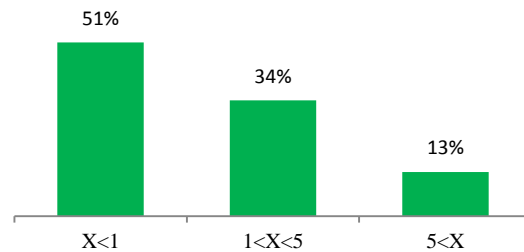
Another question which we expected low rate of participation was about income level of respondents. However, majority of interviewees answered it with no resistance. Although some respondents would mislead us or give wrong answers, we assume that everyone responded correctly based on the feedback received by our interviewers' interaction with interviewees. Figure 5 illustrates income level among retail active investors. It shows that the majority of investors earn below 2000 USD.

Figure 5- Monthly Income Level

Prior asking the income level, we asked investors to disclose their jobs. We aimed to assess correlation between financial related jobs and financial literacy. Therefore, we divided received answers into two groups: 1- financial related jobs and 2- Non-financial related jobs. The results shows that 122 respondents have financial related jobs and 171 respondents do not have financial related jobs. As it is clear, majority of investors do not have finance related job. Figure 7 illustrates frequency of jobs.

Figure 7- Job Status

In addition to the income level, we asked investors how long they have invested in the capital market. Their answers are categorized into three groups: 1- less than 1 year; 2- between 1 to 5 years; 3- more than 5 years. The result shows that 161 of 319 respondents arrived less than 1 year, 110 people used to invest between 1 to 5 years, and finally 42 investors arrived into

In addition to main demographic information, we analyzed received responses in different ways in order to make comparison possible between males and females. First of all, age ranges of females and males are divided and their frequency is assessed. The result shows that around 60 percent of female active investors and 52 percent of male active investors are fewer than 40 years old. Figure 8 and 9 depict frequency of age range among females and males separately.
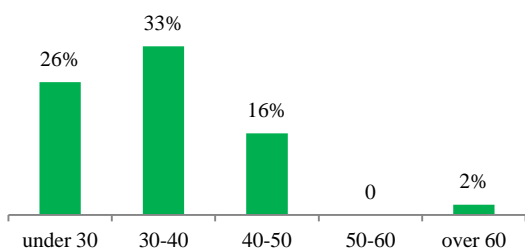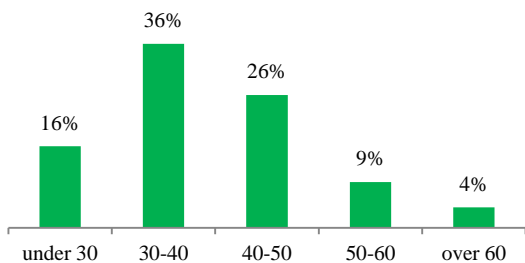
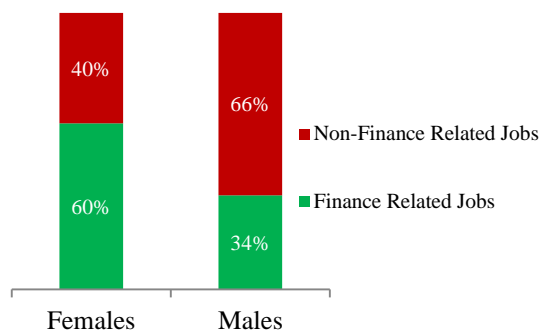**Figure 8- Frequency of Females Age range**

Figure 9- Frequency of Males Age range

Moreover, we divided females and males based on their job status. The result shows that female respondents have more finance related jobs than males. Figure 10 illustrates job status among males and females.

**Figure 10- Job Status by Gender**

As it is obvious, 60 percent of female active investors have finance related jobs and 34 percent of male active investors have finance related jobs. Therefore, we expect higher financial literacy level among females since they must have more financial knowledge due to their finance related jobs.

FINANCIAL   LITERACY   SELF ASSESSMENT

Prior to assessing financial literacy, we asked investors to evaluate their own financial literacy. It helped us to assess overconfidence in each capital market. According to the received responses, 49 investors ranked their financial literacy perfect, 103 respondents ranked it appropriate, 125 respondents ranked it enough and 30 investors ranked it insufficient. Figure 11 shows the frequency of investors' financial literacy self-assessment.

Figure 11- Financial Literacy Self Assessment
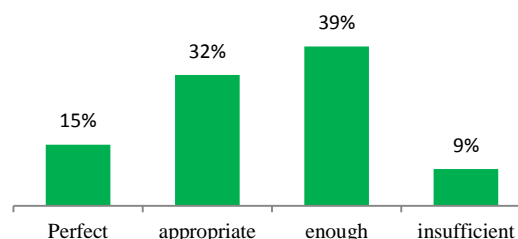
According to the investors' self-assessment, more than 47% of investors must be financially literate, 39% of investors must have enough literacy and only 9% must be in need of

financial literacy improvement. The self-assessment of Iranian investors shows they are really confident about their financial literacy level and around 86% of them think that they have at least enough financial knowledge to apply in their own decisions. However, the result of the survey has shown something else.

TOTAL FINANCIAL LITERACY LEVEL

The total financial literacy level is assessed by sixteen questions (10a to 26) which consist of ten financial concepts. Each question has an exact answer which respondents must mention to attain score 1. Those respondents who did not answer any questions are considered as don't know or wrong answers. Since wrong answered are presented as percentage, we used the Geometric Mean in order to attain one specific percent for financial literacy or illiteracy. Figure 12 illustrates total wrong and correct answers for each question. The Geometric Mean of wrong answers shows financial literacy and mean of correct answers shows financial literacy.

The Geometric Mean of wrong answers is 56.6 percent and the Geometric Mean of correct answers is 43.4 percent. We can say that the

financial literacy of Iranian active retail investors stands at 43.4%.

FINANCIAL LITERACY BENCHMARK

By looking at the percent of wrong answers (56.6%), it is merely too high. However, in order to predict an expected level of financial literacy, we used 4 items to make a benchmark for financial literacy. These four items are: 1- Finance Related Jobs, 2- University Education Level, 3- Above 1 Year Investment in the Capital Market and 4- Financial Literacy Self-assessment above Enough. Since these items are in percent, we applied Geometric Mean in order to obtain one exact percent as a benchmark for financial literacy. According to the responses received, the percent of each above item is:

1- 38%
2- 67%
3- 47%
4- 86%

Their Geometric Mean is: 56.6%. Therefore, we think the financial literacy of Iranian active investors must be at least 56.6% which is too far from 43.4% (13.2%).

**Figure 12- Total Financial Literacy Level**
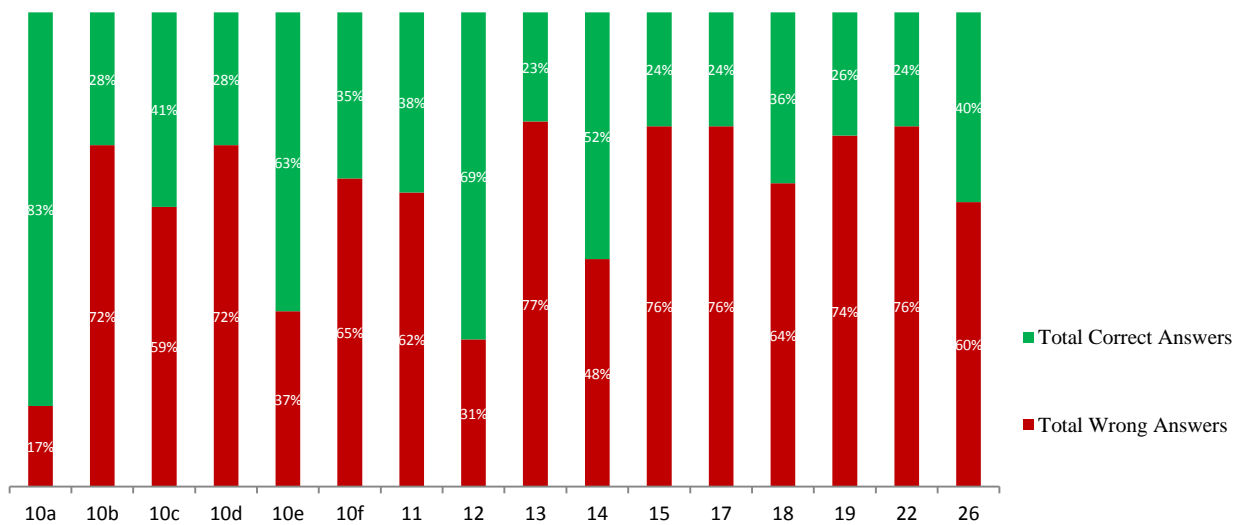
FINANCIAL LITERACY CATEGORIES

In addition to total financial literacy, according to the purpose of the survey, we determined different categories for financial literacy and illustrated them on different figures for further information and providing recommendations for policy makers or authorities.

The first categorization was related to gender. We assessed financial literacy among females and males. According to responses received, financial literacy level of females is higher than males. The result was expected since females had more finance related jobs and subsequently more financial knowledge. Figure 13 illustrates financial literacy level for males and females and facilitates comparison between both groups.

Figure 13- Financial Literacy Level by Gender
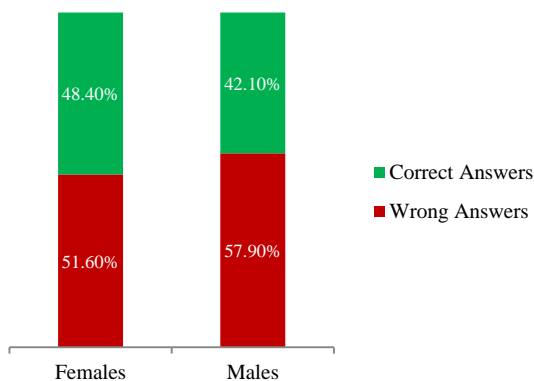
Although financial literacy of females is higher than males, they are far away from their own financial literacy benchmark. By doing related calculation, the benchmark will be around 75%. If we consider females merely, we can conclude that their financial literacy is really low. In contrast, males' benchmark stands at 55% which although it is low too, the gap between their benchmark and their financial literacy level (13%) is lower than the gap of females' benchmark and financial literacy level (26.6%).

In addition to gender, we assessed financial literacy level based on age ranges. The result shows that financial literacy level will decrease

by age range increase. It can be good news for policy makers and authorities since 53% of investors' age is lower than 40. Figure 14 illustrates financial literacy level of each age range. As it is obvious, the most correct answers were from under 30 and most wrong answers are from above 60.

Figure 14- Financial Literacy level by Age Ranges
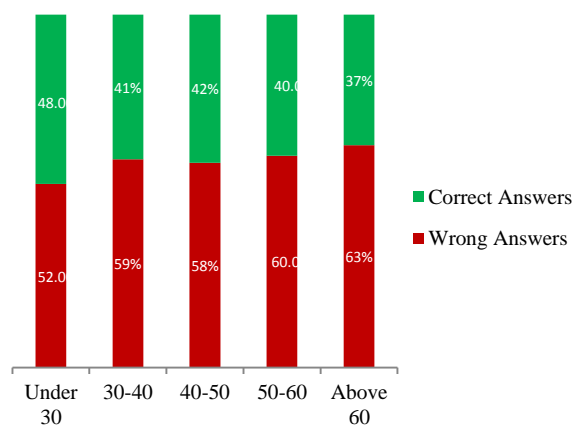
What we did next was assessing financial literacy level based on education level. According to the responses received, although financial literacy level is higher among those who have university education, the difference is not significant. Figure 15 depicts financial literacy level of university graduated and non-university graduated respondents.

Figure 15- Financial Literacy Level and Education Level
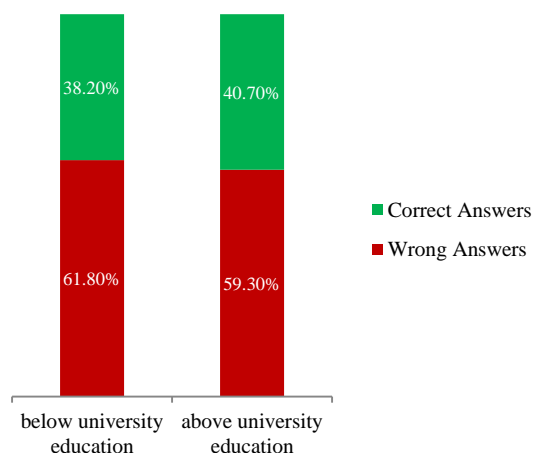
In respect of financial literacy and education level, we expected higher financial literacy level among university graduated investors since many of them studied finance. However, it shows that there could be no or insufficient relation between what students studied in universities and the real atmosphere of the capital market. In addition, the result of the survey shows that those who graduated from non-finance fields of study have not improved their own financial literacy knowledge.

Based on the demographic information's sequence, we next assessed financial literacy level of those who have and do not have finance related jobs. As we expected, financial literacy level of those who have finance related jobs is higher than those who do not. Although financial literacy of finance related jobs investors is also low and is not based on our expectations, the gap between both groups is significant (11%). Figure 16 depicts financial literacy level of each group.
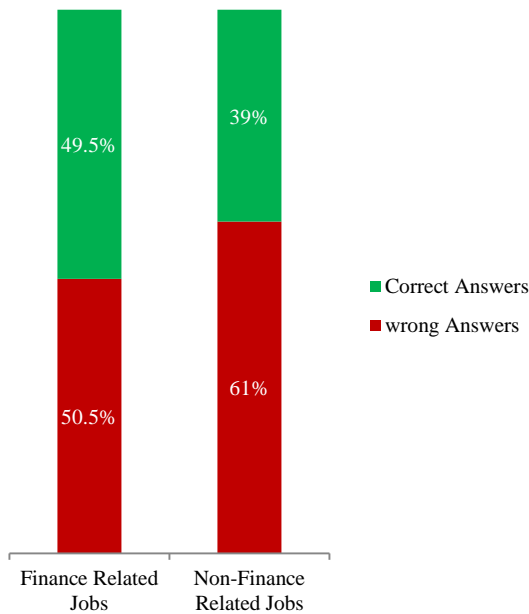
The next assessment is related to the income level of respondents. As it was mentioned earlier, majority of Iranian investors earn below 1000$ monthly. According to the survey responses, the financial literacy level of retail active investors decreases when their income increases. Figure 17 illustrates financial literacy level of investors in each income level.
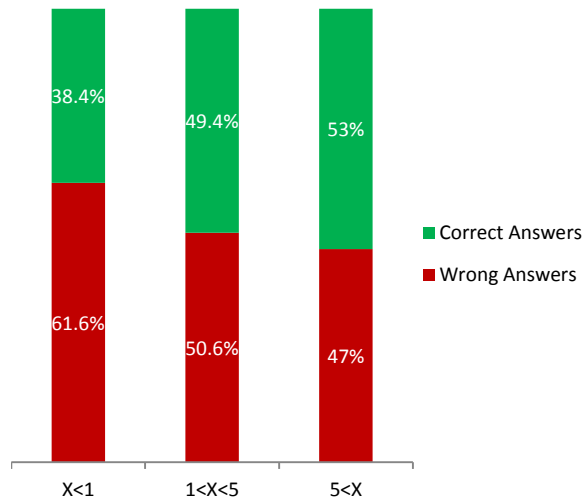
Figure 17- Financial Literacy Level and Income Level
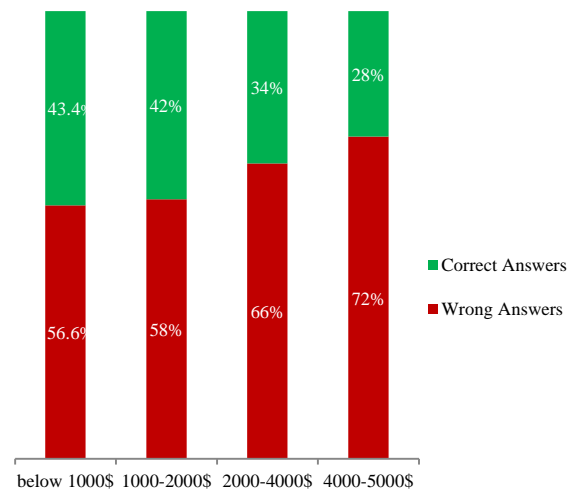
The same as what we found in relation between financial literacy level and education level, we expected that financial literacy will increase by the increase in income level. However, in contrast to our expectations and even international studies, we couldn't find this trend in Iran.

Finally, in the sequence of demographic information, we assessed financial literacy level based on investment years. According to the result of the survey, financial literacy increases by the increase in investment experience. Figure 18 illustrates financial literacy level based on investment years.

Figure 16- Financial Literacy Level and Job Status

Figure 18- Financial literacy and Investment Years

The figure show the important role of experience in the capital market since the gap between financial literacy level and those investors who invested lower than 1 year is really significant. Therefore, we think those educations are useful for the capital market which bring knowledge into the practice. That is what we can trace in the definition of financial literacy which emphasize on skill of applying knowledge and understanding into the financial life. That skill would be achieved through experience in the capital market.
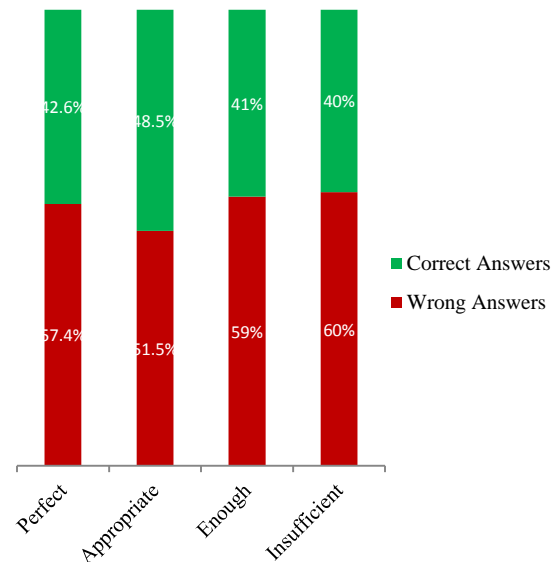
OVERCONFIDENCE IN THE CAPITAL MARKET

As it was mentioned earlier, majority of Iranian investors (86%) assessed their own financial literacy at least enough. However, the result of the survey says something else. It shows that majority of Iranian investors are not aware about their financial illiteracy and those who are aware that their financial literacy is insufficient, do not pay attention to their lack of illiteracy. Figure 19 depicts financial literacy level of investors who rated themselves in 4 categories.

The first thing should be done regarding investors financial literacy is informing them about their lack of financial literacy. As a

famous old saying goes "the first step of knowledge is understanding lack of knowledge". Therefore, if authorities aim to do something for financial literacy improvement, they should let investors to realize their lack of knowledge.

Figure 19- Over Confidence in the Capital Market

By comparing both figures (19 and 11), it could be concluded that Iranian investors are overconfident in the capital market. They think that their financial literacy is enough but are not aware about their lack of knowledge and understanding.

FINANCIAL LITERACY IN FINANCIAL CONCEPTS

As it was mentioned earlier, we asked sixteen questions about ten financial concepts. These concepts are: 1- Basics of the Capital Market; 2- Structure of the Capital Market; 3- Risk; 4- Products of the Capital Market; 5- Inflation; 6- Interest Rate; 7- Conflict of Interest; 8- Bankruptcy; 9- Currency rate; 10- Derivatives. We think these concepts all the most important ones in the capital market. According to the survey result, Iranian investors are not aware even about basics and the structure of the capital market. Figure 20 illustrates wrong and correct answers in each financial concept.

**Figure 20- Financial literacy in Financial Concepts**
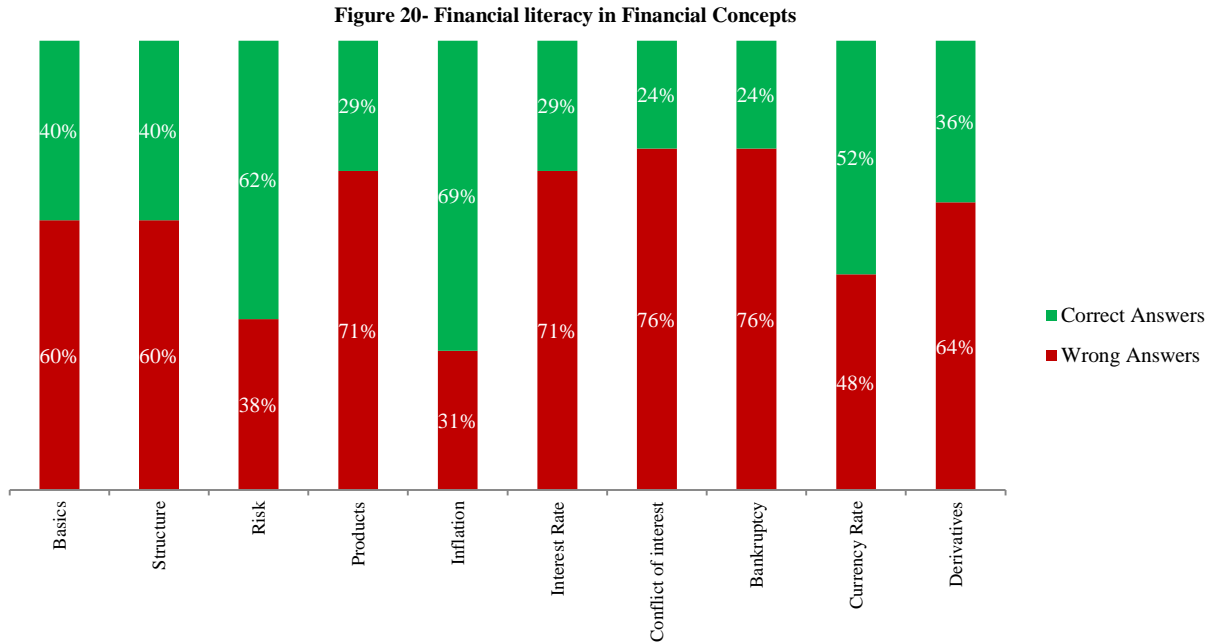
As it is obvious, financial literacy in Risk and Inflation is the highest. We think this is related to the economic situation of Iran that investors realized risk and inflation practically in 2013. However, conflict of interest and bankruptcy are concepts that investors are not aware about.

In order to determine the importance of each concept, we allocated a predetermined number from 1 to 2 for each concept we thought is more important. Derivatives took 1 and basics took 1.9. Figure 21 shows the result for the importance of each financial concept.

As it is appear, the most important topics which authorities must spotlight are basics and the structure of the capital market. The least important one is inflation. Three other important concepts which stand above risk concept are interest rate, conflict of interest and bankruptcy. These are financial concepts tangled into the structure of the capital market and indeed they are important in two dimensions: 1- understanding the effects of parallel markets and 2- investors' protection.

Figure 21- Importance of Each Topic
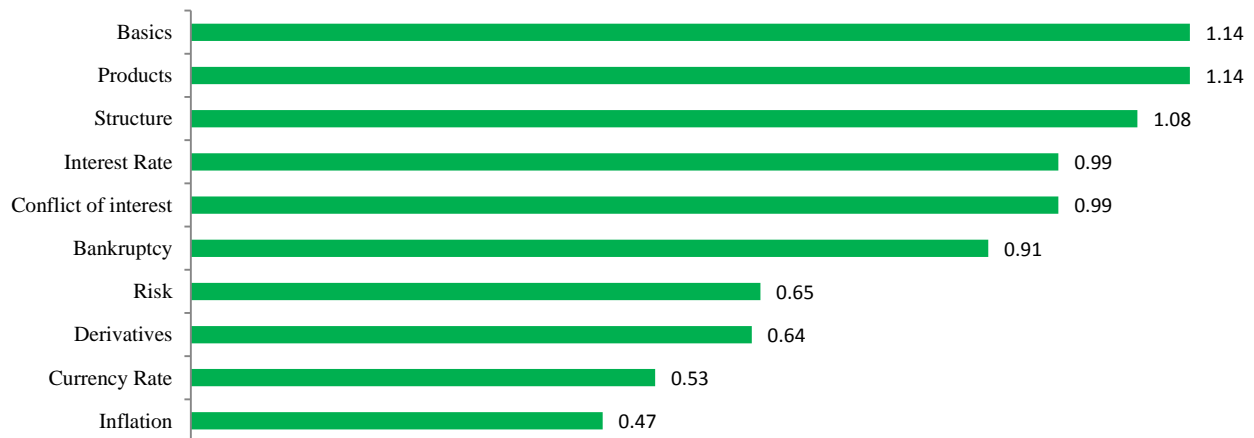
FAMILIARITY WITH EDUCATION RESOURCES

In the survey, we asked investors to rate their familiarity with education resources. The result of the survey shows that around 50% of active investors are not aware about education resources. It was in contrast to our expectations that we expected high level of familiarity with education resources since respondents are among active investors and they should know resources for their further education. Anyway, through this question we can conclude overconfidence among investors again. They would think that because of their expected high level of financial literacy do not need more education and subsequently knowing education resources could be wasting time. Figure 22 illustrates familiarity of investors with education resources.

Figure 22- Education Resources Familiarity
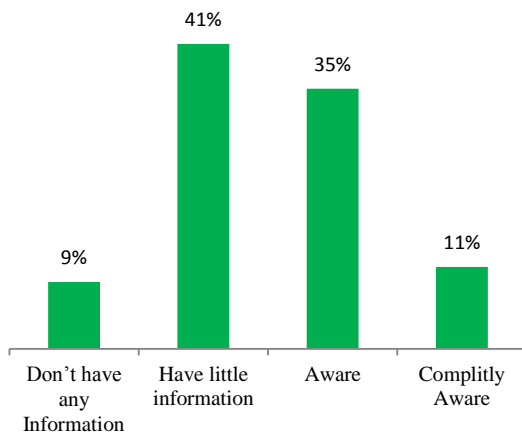
In addition to the familiarity of investors, we assessed financial literacy of investors based on their familiarity of education resources. The result shows that financial literacy level increase by the increase of familiarity with education resources. We can conclude that those who have more familiarity with education resources, they have higher financial literacy level. Therefore, one important policy for authorities can be promoting education resources among public, particularly active investors. Figure 23 illustrates
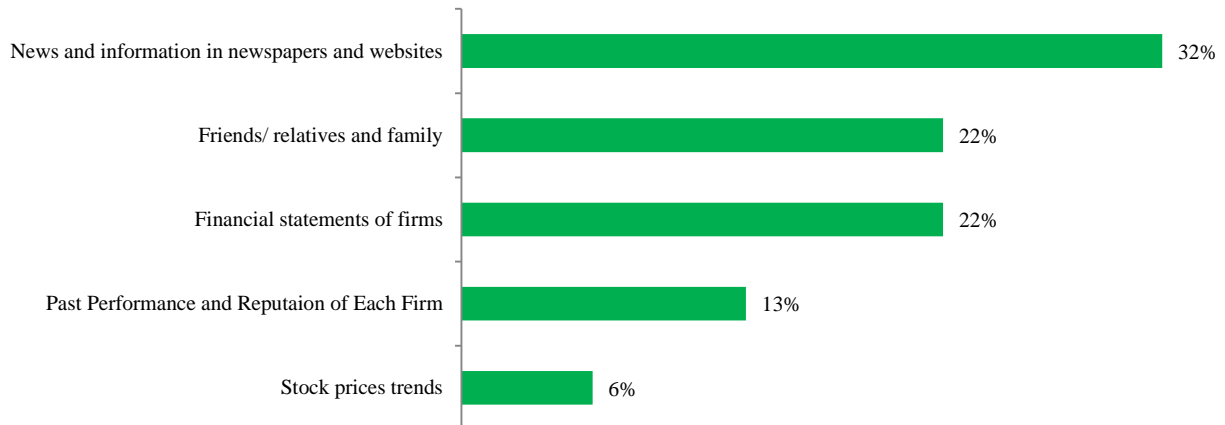
the level of financial literacy and its relation to the familiarity of education resources.

Figure 23- Financial Literacy and Familiarity with Education Resources
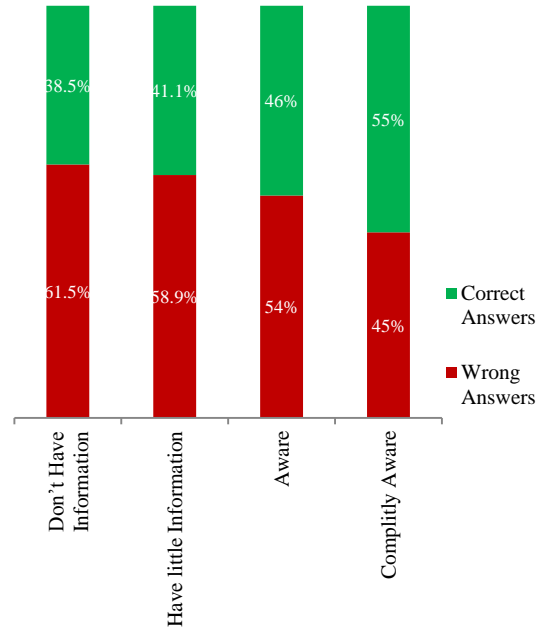

DECISION MAKING RESOURCES

According to the definition of financial literacy, financial knowledge, understanding and skills are in service for better decision making. The question is that what different resources investors apply for their decision making. It is really important since we can identify different approaches of investors in their decision making. According to the survey result, majority of Iranian active investors gather information from newspapers and websites. Figure 24 illustrates resources that investors use for their decision making. According to the figure, we can conclude that Iranian investors mostly apply Technical Approaches for their analysis. In contrast, minority of them apply Fundamental approaches for their decision making. In addition, we can predict high rate of herding behavior in Iran's capital market by retail active investors since majority of them use unreliable resources of information.

Figure 24- Most Important Resources for Decision Making

News and information in newspapers and websites — 32%
Friends/ relatives and family — 22%
Financial statements of firms — 22%
Past Performance and Reputaion of Each Firm — 13%
Stock prices trends — 6%

PARTICIPATION IN EDUCATION PROGRAMS

How many percent of Iranian active investors have participated in education programs? That is a question we asked and found its answer. We expected high rate of participation but in contrast we found that only 41% of retail active investors participated in education programs. Majority of investors (57%) haven't participated and 2% did not answer us. Figure 25 depicts frequency of education programs participation.

Figure 25- Rate of Programs' Participation

Participated 41% / Not Participated 57% / Misisng 2%
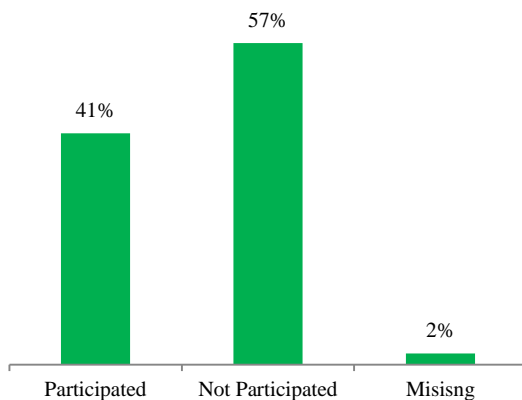
Again, we can conclude overconfidence of Iranian investors since they think that they do not need to promote their knowledge. Another reason can be their unfamiliarity with educational resources.
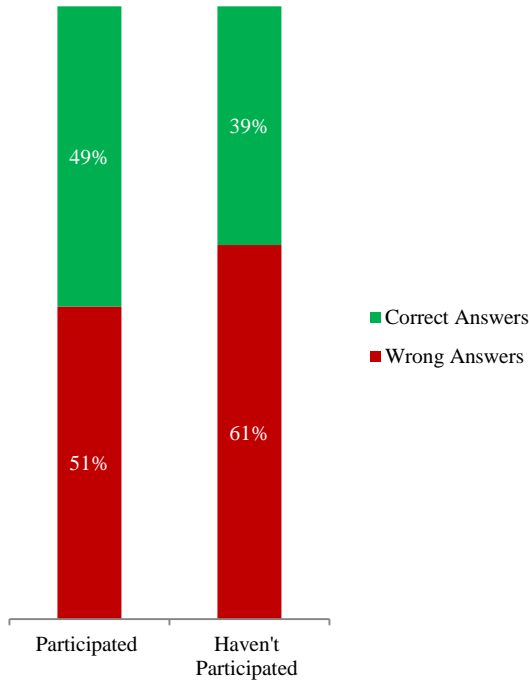
Among those who participated in education programs, we asked to rate the effectiveness of education programs. Respondents allocated a notable score for the effectiveness of education programs. Figure 26 illustrate percent allocated by investors.

Figure 26- Effectivness of Education Programs

Extremly Effective 11% / Effective 29% / Average 38% / Few Effects 15% / No Effect 0.20% / Missing 6.80%
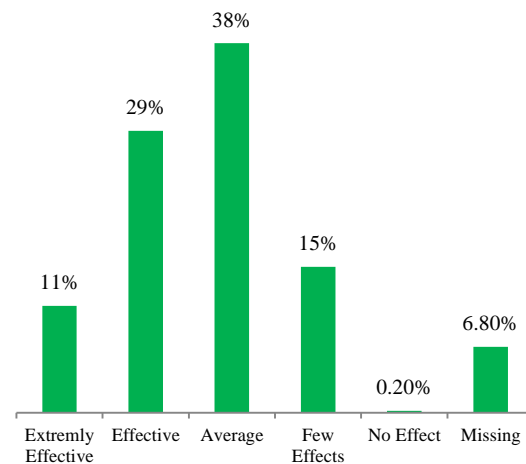
As it is obvious, around 78% of those who attended in educational programs rated them effective. These programs would be held by the Securities & Exchange Organization (SEO) or other market players. After self-assessment of education programs' effectiveness, we assessed the financial literacy of those who participated and haven't participated in education programs in order to evaluate the real effectiveness of programs. The result of the survey confirmed the

effectiveness of education programs. Figure 27 depicts financial literacy of those investors who have participated and haven't participated in education programs.

Figure 27- Education Programs Participation and Financial Literacy

As it is clear, financial literacy of those who have participated in education programs is higher than those who haven't participated. The gap between both groups is significant (10%) and shows that by attending in education programs, financial literacy can be promoted.

In our assessment, when we evaluated the rate of participation based on gender, we found that males have participated in education programs more than females overall. However, when we compared it by the total numbers of each group (males and females) we found than 60 percent of females have participated and only 38% of males have participated in education programs. It would show that although financial literacy of males is lower than females, they are more confident about their financial literacy. Another

reason for this can be higher rate of finance related jobs of females and their enforcement in participating in education programs. Anyway, figure 28 and 29 illustrates rate of participation in total population of respondents and in total population of each gender group.

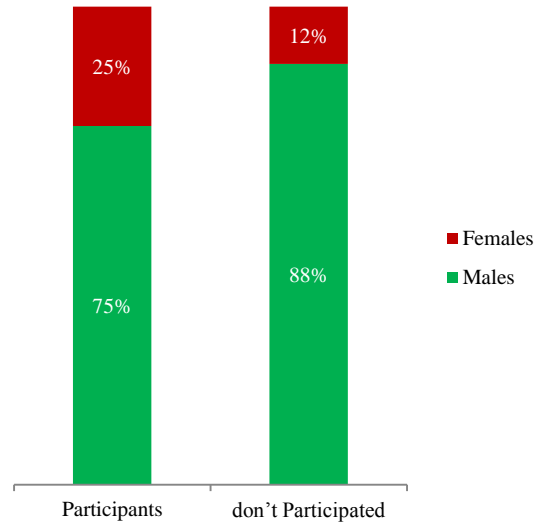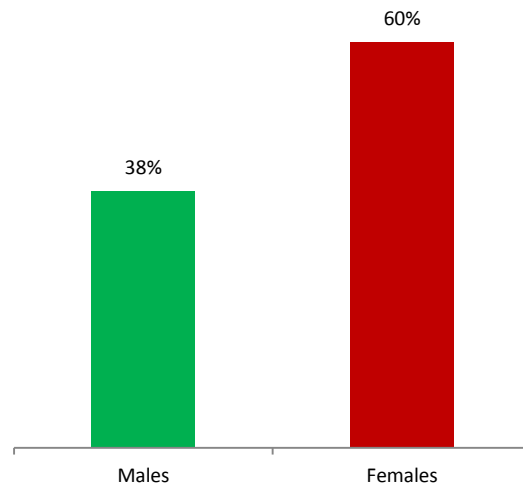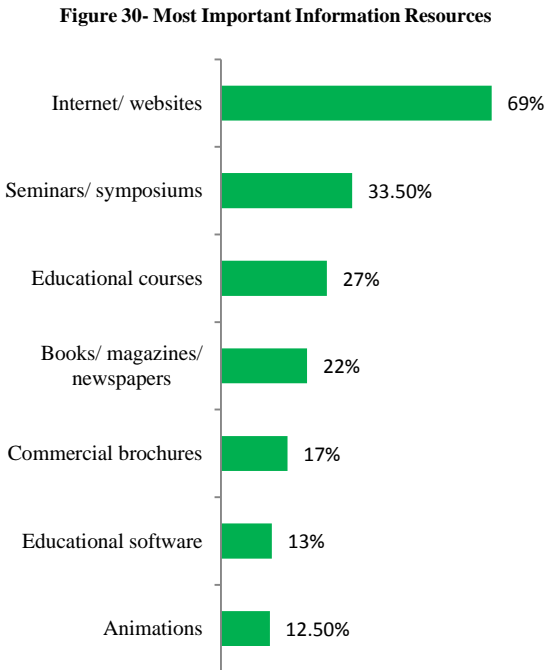**Figure 28- Total Participation by Each Gender**

Figure 29- Participation Rate in Each Gender Group

Another question which we asked investors was about their main information resources. We asked it to identify main important resources which they would refer most. The survey result shows that internet/websites, Seminars/ Symposiums and educational course are three main resources which investors refer most. Figure 30 depicts most important resources.

Figure 30- Most Important Information Resources

Since majority of investors prefer these three resources to attain information and education, it is recommended to authorities to disseminate information and education mostly through them. However, if they aim to promote another delivery method, they have to work and invest on the other methods and try to spotlight them.

RISK APPETITE OF INVESTORS

We have assessed financial literacy of investors regarding 10 financial concepts. One of them was risk. According to the survey result, the financial literacy of Iranian active investors is quite well about risk. However, we asked another question to evaluate their attitude toward risk. We introduced two assets which one of

them requires acceptance of more risk. We aimed to assess risk appetite of retail active investors. The result of the survey shows that majority of Iranian retail active investors are risk averse. Figure 31 illustrates risk appetite of Iranian investors.

**Figure 31- Risk Appetite of Investors**
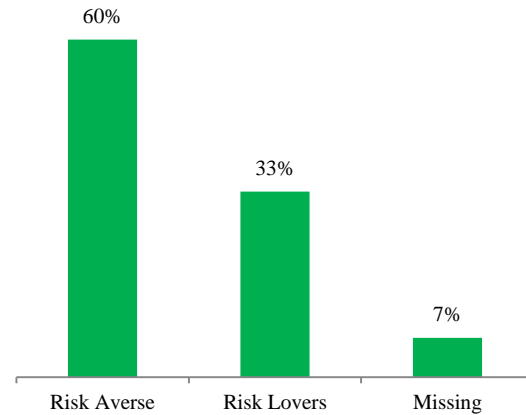
In order to better understanding of risk taking approaches, we assessed risk appetite in 2 categories: 1- risk appetite based on age range and 2- risk appetite based on income level. Figure 32 and 33 depict these two categories.

Figure 32- Risk Appetite by Age Ranges
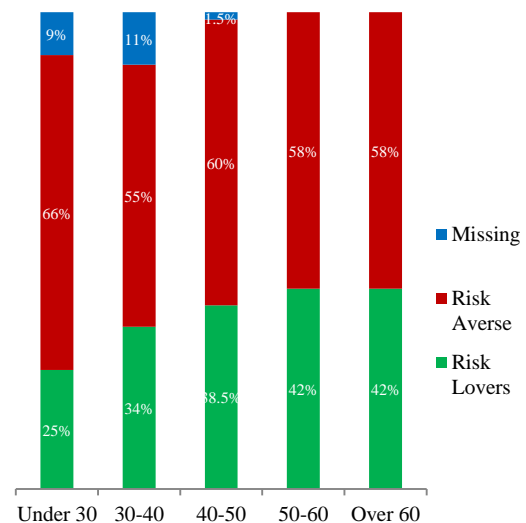
As it is obvious, risk taking increases by the increase in age range. The gap between those investors who are below 30 years old and those who are above 60 is really significant (around 60%). Our finding is in contrast to our expectation since we expected more risk taking by younger adults. Even we think, Iranian investors are not compliant to the international models in which young people usually accept more risk. It can be the consequences of social and economic factors on young adults that they do not like to accept more risk. We can conclude that older investor would like to trade more risky assets or they are ready to accept more risk.

**Figure 33- Risk Appetite by Income Level**
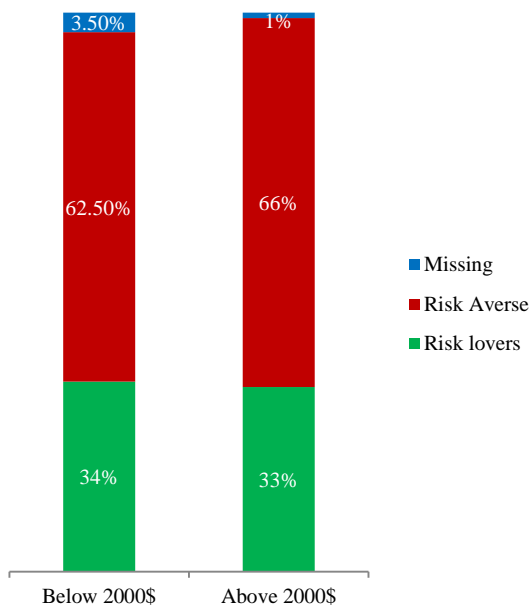
In contrast to age range which there was egregious differences between each group, we cannot observe any difference between income levels. Therefore, we can conclude that by income level promotion, attitudes of investors will not change.

DEVALUATION OF PORTFOLIO

In respect of investors' attitudes toward the capital market and their loyalty, we asked them

what they would do in case of devaluation of their portfolio. Unfortunately, majority of respondents answered that they would sell their stocks immediately. It means that the loyalty of retail active investors is low in Iran's capital market. Figure 34 illustrates the loyalty of investors in Iran's capital market.

Figure 34- Lotalty of Investors
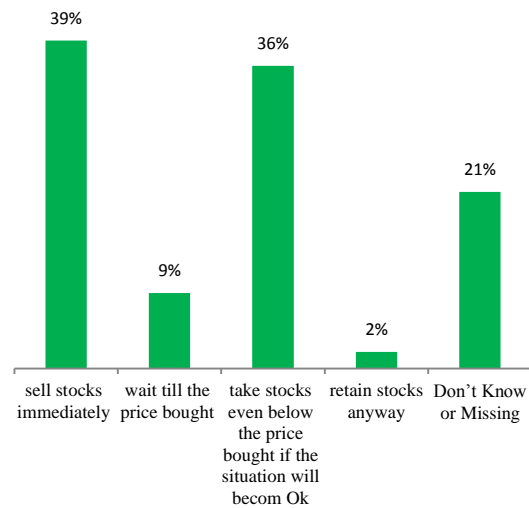
One reason for this is that majority of Iranian investors have arrived into the capital market lower than 1 year. It would be because of bull market in 2013. Therefore, low rate of loyalty is expected since in bull markets you can observe many people try to arrive with hope of more return. But when the bull market will change into bear market, you can observe deflation of investors' number in the capital market.

Another thing which authorities should notice is that 21% of investors did not answer or answered they do not know what will they do. It shows that investors are not aware or confident about their investment strategies. Therefore, one important issue which should be in spotlight is promoting different ways and strategies of investment. When they should arrive and when they should exit. Figure 35 can prove our claim

on the relationship between years of investment and portfolio retention.

Figure 35- Loyalty of Investors Based on Investment Years
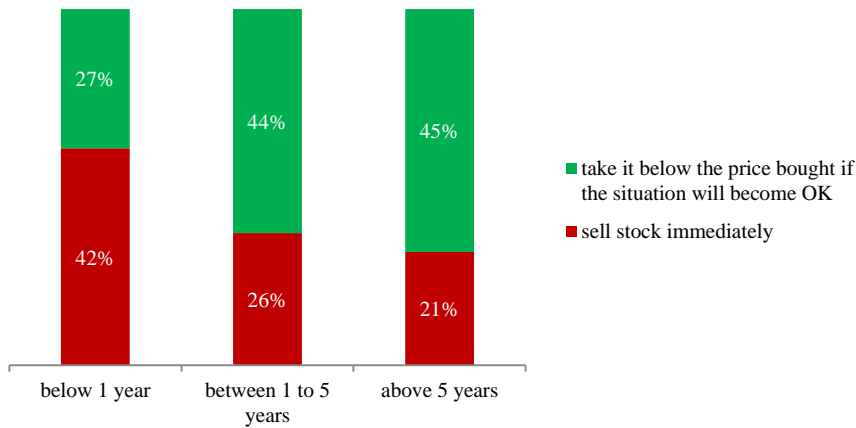
As it is obvious, majority of those who arrived less than 1 year, sell their stocks immediately. The gap between each category is really significant. The figure shows that how financial literacy can be important for those who arrive as newcomers.

We found another reason for low level of loyalty among investors. It is related to the resources of funding which is introduced in the next part.

INVESTMENT RESOURCES OF FUNDING

Investors use different sources of funding for their investment. However, it is always mentioned that they must not use their properties to invest instead use their surplus. It is due to the risk inherent in the capital market. We asked investors to disclose investment resources of funding in order to understand how they arrived into the capital market. The survey result shows that great number of Iranian investors sold their properties completely to invest in the capital market. Figure 36 depicts sources of funding investors used to arrive into the capital market.

Only 28% of active investors use surplus of their income in order to invest in the capital market. Indeed, this figure shows the possibility of

disloyalty to the capital market. In order to evaluate disloyalty of investors based on each funding method, we assessed answers of each group and compared them in figure 36. The result shows that those who sold their properties completely to invest have the highest rate of disloyalty among other groups. Figure 37 illustrates rate of disloyalty for each group of investment funding.

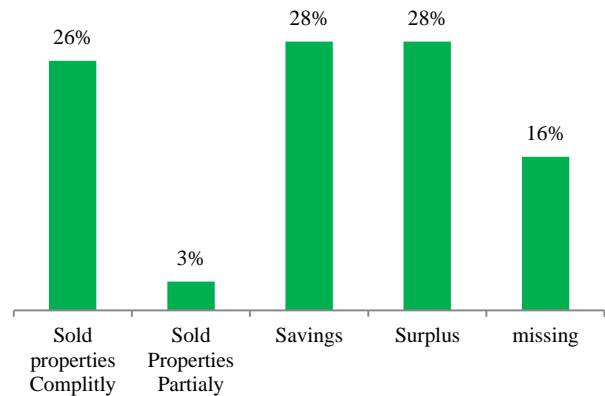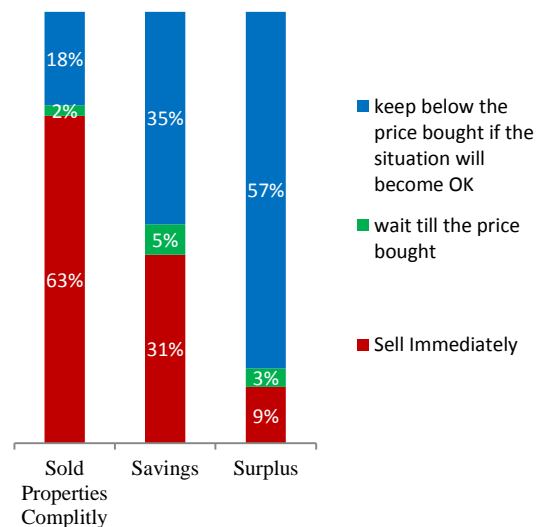**Figure 36- Investment Resources of Funding**

Figure 37- Loyalty of Investors Based on Method of Funding

As it is clear, those who used their surplus are more loyal than those who sold their properties. Indeed, it was expected since they would fear to lose all their properties.

CONFIDENCE AMONG INVESTORS

Do investors use advice and recommendations of financial advisors? How much are they confident about their decisions? That is what we found through the survey result. Majority of active investors do not consult with financial advisors (50%) and 8% of respondent do whatever advisors advice. The second group includes investors who are not confident about their financial decision and the first group includes those who are completely confident about their decisions. However, what is the financial literacy level of those confident and unconfident investors? Is financial literacy compliant with confidence level of investors? Figure 38 illustrates confidence level among retail active investors and figure 39 depicts their financial literacy level.
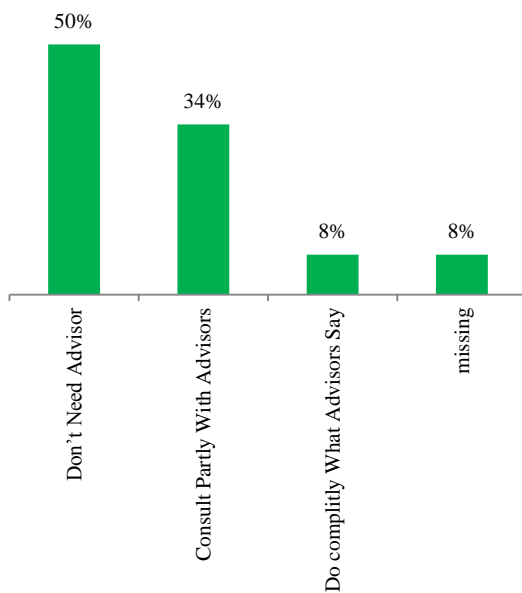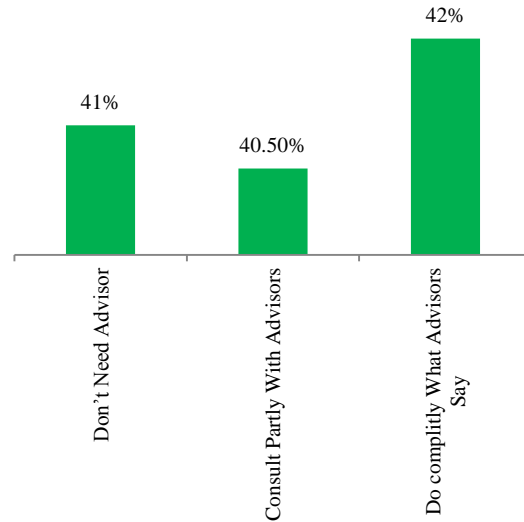
Figure 38- Self-Confidence mong Investors

Figure 39- Financial Literacy Level Based on Investors Confidence

Comparison between both figures shows overconfidence among retail active investors. In addition, the existing overconfidence caused investors not to refer to financial advisors and therefore, the possibility of wrong decisions would be high in Iran's capital market. It is recommended to the authorities to promote the role of financial advisors for better rational decisions in the atmosphere of the capital market. Authorities should notice that informing investors about their lack of financial literacy and overconfidence could be really hard.

INVESTORS' ISLAMIC CONSIDERATION

One dimension of investors' attitude is their view to Islamic issues which is important for us since COMCE CMR Forum member countries are among OIC members that are Islamic countries. We asked the importance of Islamic issues in the capital market. According to the survey result, we found that Islamic issues are not considered as important issues. Figure 40 depicts Islamic consideration by retail Active Investors.

Figure 40- Importance of Islamic Issues
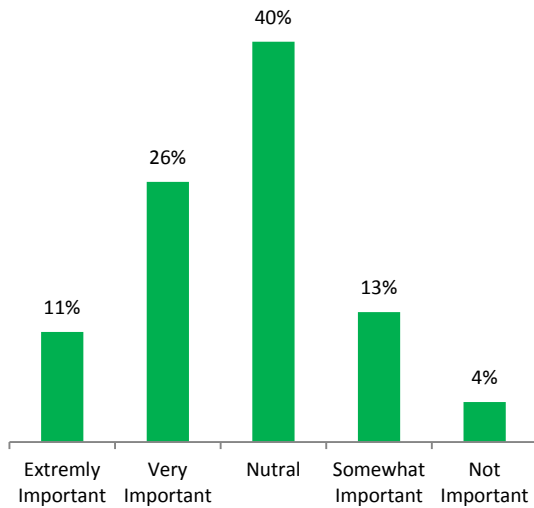
As it is obvious, Islamic considerations are important for 37% of respondents. However, 57% of respondents do not care Islamic considerations. Authorities should notify that Islamic considerations are essential for Islamic market promotion. In addition, it would show that investors would leave Islamic market whenever they find opportunity to invest in conventional market.

CONCLUSION

Our assessment shows that the situation of financial literacy is not appropriate among retail active investors. We can conclude that there is a long way to reach minimum level of appropriateness of financial literacy and in this way different organizations should contribute to achieve financial literacy improvement as a goal. Although we are aware that many initiatives have been conducted in Iran's capital market, there are not enough endeavors regarding financial literacy. We think it is good to flash back, review the paced course and then look forward in a structured manner.

# FINANCIAL LITERACY ORIENTATION

IN KUWAIT

INTRODUCTION

According to the methodology of the survey, Kuwait Capital Market Authority (CMA) surveyed 104 retail active investors who traded more than 250 times in 2013. The result indicates the low level of financial literacy among Kuwaiti active investors. Moreover, in contrast to our expectations, investors are not even aware about basics and Products of the capital market. In this section, we aim to analyze Kuwait's responses deeply and in detail.

DEMOGRAPHIC INFORMATION

Demographic information is gathered based on section A of the survey. As it was mentioned, 104 investors as the sample size were surveyed. From total respondents, there were 12 females and 92 males. Figure 1 illustrates the frequency of gender. It shows that majority of active investors in the capital market is shaped by males.

Figure 1- Frequency of Gender
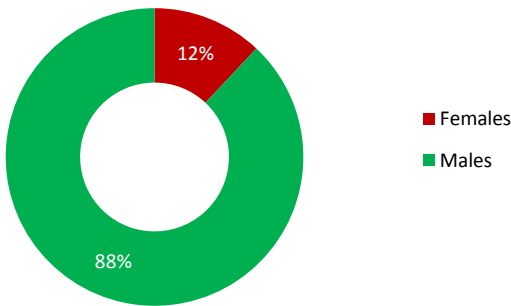
We asked investors to disclose their age range. We divided investors into five different age ranges from below 30 to over 60. According to the received responses, there are 24 investors below 30, 28 investors between 30 to 40, 12 investors between 40 to 50, 20 investors between 50 to 60 and finally 10 investors over 60. As it is obvious, majority of investors are below 40 years old (52%). We can conclude that

young adults shaped the majority of Kuwait capital market. Figure 2 illustrates frequency of each age range.
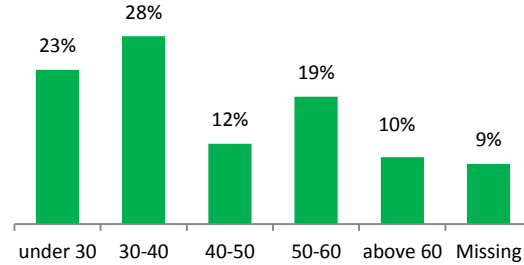
Figure 2- Age Ranges

In order to assess the possible correlation between financial literacy and education level, we asked investors to disclose their education level. From 104 respondents, 22 people were collage or middle school graduated and 76 people were university graduated. Among all respondents, 6 people did not answer to our question. Figure 3 and 4 depict frequency of total education level and in each category. Investors showed high rate of university graduation. The result shows that 76% of investors are university graduated.
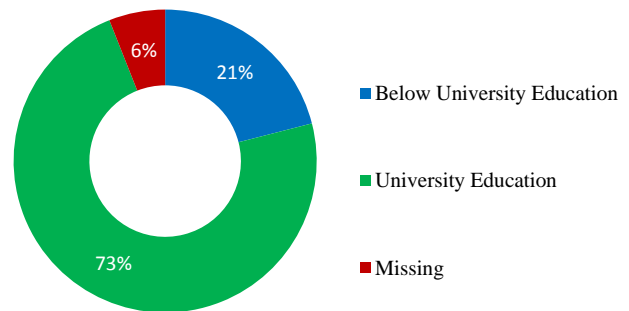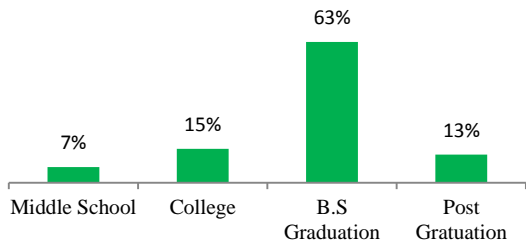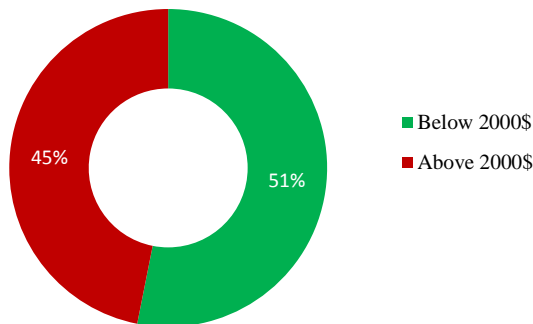
Figure 3-Education Level

Figure 4- Seperated Education Level

Another question which we asked was about income level of investors. We aimed to assess correlation between income level and financial literacy. At first, we depict the frequency of income level and further each level will be assessed by given responses. Figure 5 illustrates income level among retail active investors. It shows that around half of investors earn below 2000 USD.

Figure 5- Monthly Income Level

In addition to the income level, we asked investors how long they have invested in the capital market. Their answers are categorized into three groups: 1- less than 1 year; 2- between 1 to 5 years; 3- more than 5 years. The result shows that majority of investors have invested more than 5 years. This factor can be considered as good news for authorities since majority of investors are experienced ones. Therefore we expect higher financial literacy level of Kuwait's investors and subsequently more rational

decision making. Figure 6 illustrates frequency of investment length by active investors.

Figure 6- Investment Length
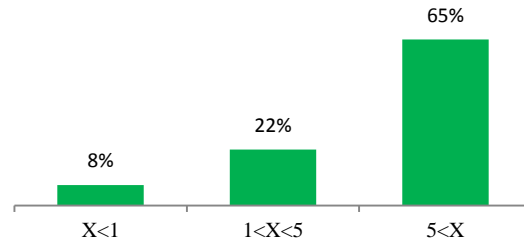
Prior asking the income level, we asked investors to disclose their jobs. We aimed to assess correlation between financial related jobs and financial literacy. Therefore, we divided received answers into two groups: 1- financial related jobs and 2- Non-financial related jobs. The results shows that 37 respondents have financial related jobs and 44 respondents do not have financial related jobs. 23 investors did not disclose their job. Figure 7 illustrates frequency of job status.
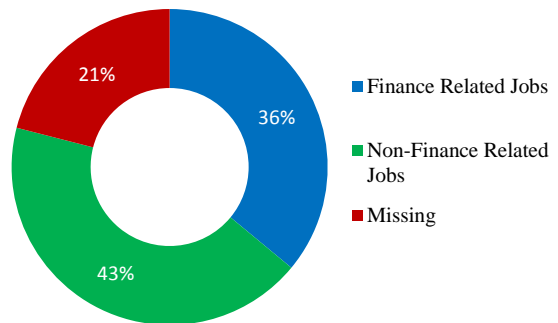
Figure 7- Job Status

In addition to main demographic information, we analyzed received responses in different ways in order to make comparison possible between males and females. First of all, age ranges of females and males are divided and their frequency is assessed. The result shows that Majority (73%) of females are below 40 and

majority (49%) of males are above 40 years old. It shows that the population of active retail investors in Kuwait is in the middle age. Therefore, we are facing experienced investors who are in the age of rationality. Figure 8 and 9 depict frequency of age ranges among females and males separately.
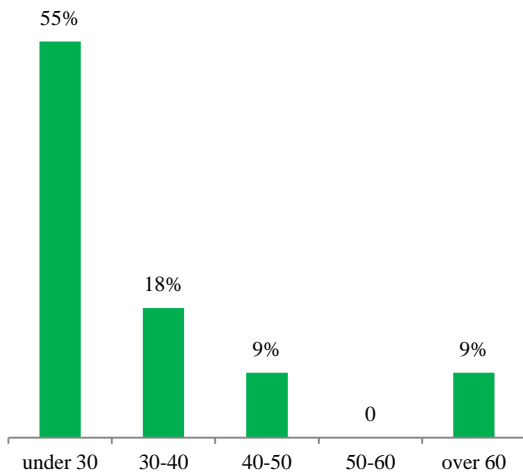
Figure 8- Frequency of Females Age range

Figure 9- Frequency of Males Age range
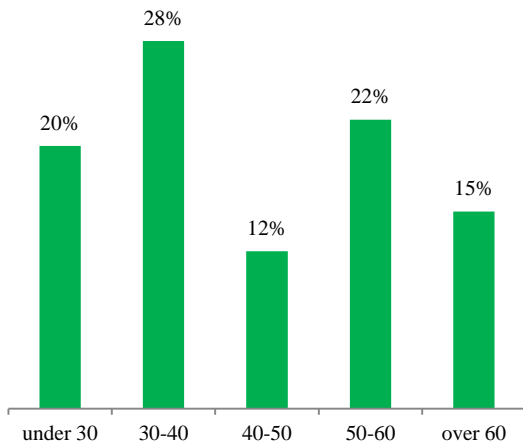
Moreover, we divided females and males based on their job status. The result shows that females have more finance related jobs than males. Figure 10 illustrates job status among males and females.

Figure 10- Job Status by Gender
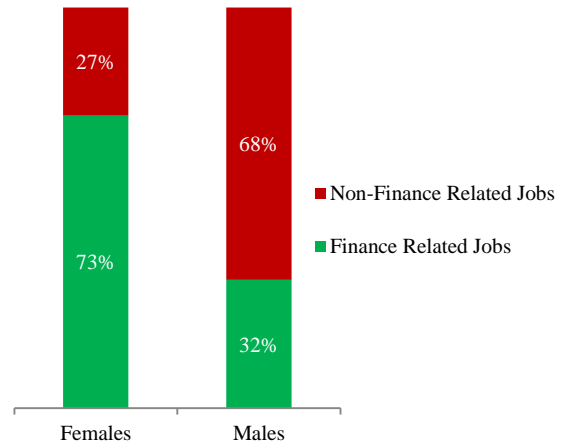
As it is obvious, 73 percent of female active investors and 32 percent of male active investors have finance related jobs. Therefore, we expect higher financial literacy level among females since they must have more financial knowledge due to their finance related jobs.

FINANCIAL LITERACY SELF ASSESSMENT

Prior to assessing financial literacy, we asked investors to evaluate their own financial literacy. It helped us to assess overconfidence in the capital market. According to the received responses, 28 investors ranked their financial literacy perfect, 36 respondents ranked it appropriate, 31 respondents ranked it enough and 8 investors ranked it insufficient. Figure 11 shows the frequency of investors' financial literacy self-assessment.

Figure 11- Financial Literacy Self Assessment
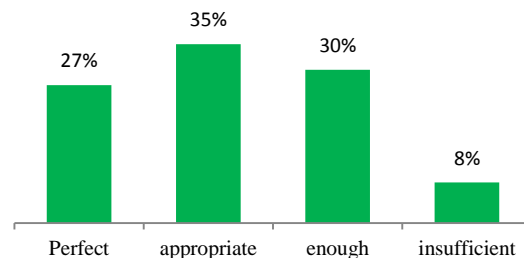
According to the investors' self-assessment, more than 60% of investors must be financially literate, 32% of investors must have enough literacy and only 8% must be in need of financial literacy improvement. The self-assessment of Kuwaiti investors shows they are really confident about their financial literacy. Their rate of confidence is even higher than Iranians and 92% of them think that they have at least enough financial knowledge to apply in their own decisions. However, the reality does not confirm investors' self-assessment.

TOTAL FINANCIAL LITERACY LEVEL

The total financial literacy level is assessed by sixteen questions (10a to 26) which consist of ten financial concepts. Each question has an exact answer which respondents must mention to attain score 1. Those respondents who did not answer any questions are considered as don't know or wrong answers. Since wrong answers are presented as percentage, we used the Geometric Mean in order to attain one specific percent for financial literacy or illiteracy. Figure 12 illustrates total wrong and correct answers for each question. The Geometric Mean of wrong answers shows financial illiteracy and mean of

correct answers shows financial literacy.

The Geometric Mean of wrong answers for Kuwaiti active investors is 49 percent and the Geometric Mean of correct answers is 51 percent. Therefore, we can conclude that financial literacy of Kuwait's active investors is 51 percent.

FINANCIAL LITERACY BENCHMARK

By looking at the percent of correct answers (51%) we would conclude that since it stands above half, the situation is OK. However, in order to predict an expected level of financial literacy, we used 4 items to make a benchmark for financial literacy. These four items are: 1- Finance Related Jobs, 2- University Education Level, 3- Above 1 Year Investment in the Capital Market and 4- Financial Literacy Self-assessment above Enough.

Since these items are in percent, we applied Geometric Mean in order to obtain one exact percent as a benchmark for financial literacy. According to the responses received, the percent of each above item is:

Figure 12- Total Financial Literacy Level
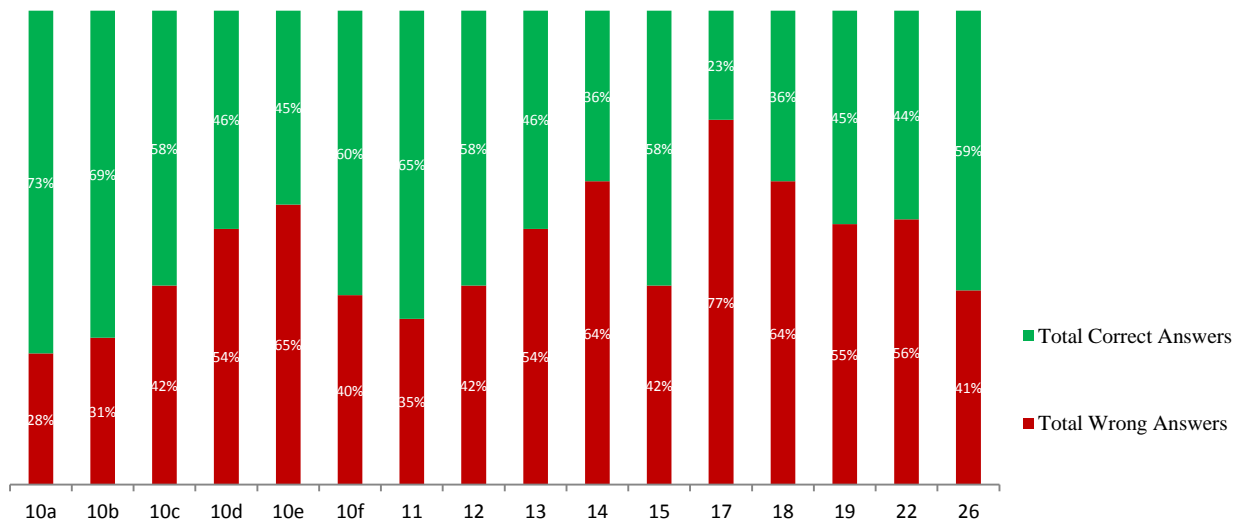
1- 36%
2- 75%
3- 87%
4- 87%

Their Geometric Mean is: 67%. Therefore, we think the financial literacy Level of Kuwaiti active investors which disclosed situation must be at least 67% which is too far from 51% (16%).

FINANCIAL LITERACY CATEGORIES

In addition to total financial literacy, according to the purpose of the survey, we determined different categories for financial literacy and illustrated them on different figures for further information and providing recommendations for policy makers or authorities.

The first category is related to gender. We assessed financial literacy among females and males. According to responses received, financial literacy level of males is higher than females. The result was expected since males have more finance related jobs and subsequently financial knowledge would be higher. Figure 13 illustrates financial literacy level for males and females and facilitates comparison between both groups.

Figure 13- Financial Literacy Level by Gender

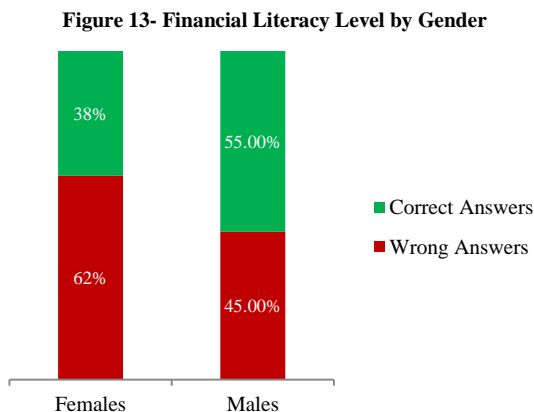Although financial literacy of males is higher than females, they are far away from their own financial literacy benchmark. By doing related calculation, the benchmark for males is around

65%. Similarly, females' benchmark stands at 75% which the gap to their current financial literacy level (38%) is huge. Therefore, we can conclude that females in Kuwait have urgent need for financial literacy improvement. In addition, although many Kuwaiti males and females are working in finance related jobs, their literacy regarding the capital market is really low. Therefore, we think authorities should spotlight vast number of active investors in their education programs.

In addition to gender, we assessed financial literacy level based on age ranges. The result shows that financial literacy level is low in ages 40 to 50. However, by removing this group, we can conclude that financial literacy level is constant through different age groups. Figure 14 illustrates financial literacy level of each age range. As it is obvious, financial literacy level of young adults is higher than the rest. Good news for authorities is that only 12% of active investors are in 40 to 50 and majority of respondents are among groups that their financial literacy level are higher.
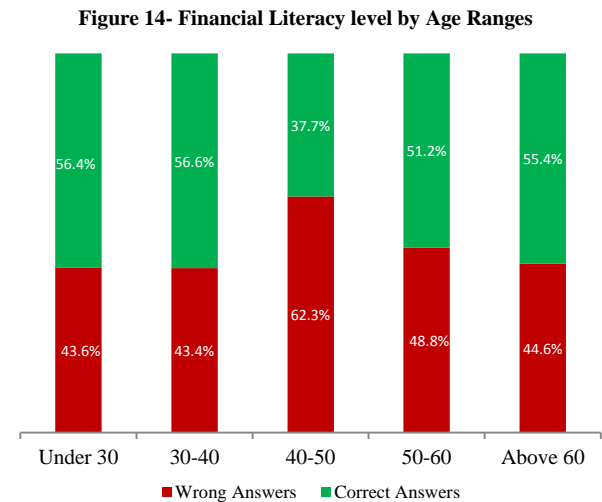
Figure 14- Financial Literacy level by Age Ranges

What we did next was assessing relationship between financial literacy level and education level. According to the responses received, financial literacy level is higher among those who have university education. The gap between both groups is significant and we can conclude

that in Kuwait capital market, financial literacy level will increase by increase in education level. That is what we expected from international studies. Figure 15 depicts financial literacy level of university graduated and non-university graduated respondents.

Figure 15- Financial Literacy Level and Education Level
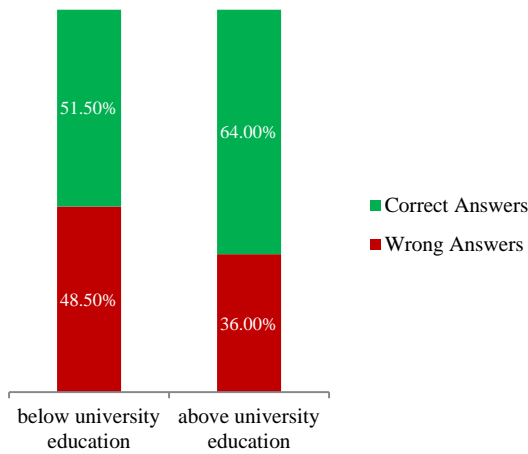
Based on the demographic information's sequence, we next assessed financial literacy level of those who have and do not have finance related jobs. As we expected, financial literacy level of those who have finance related jobs is higher than those who do not. However, the gap between both groups is not significant. We

Figure 16- Financial Literacy Level and Job Status
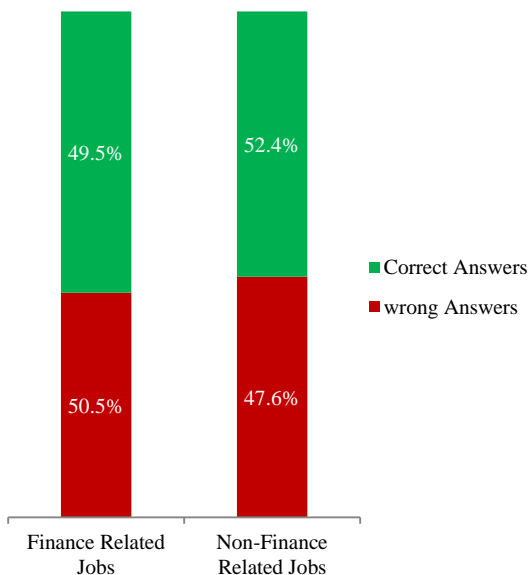
cannot assert definitely that those who have finance related jobs, have higher financial literacy too. Therefore, we think job status does not have strong effect on the financial literacy level of Kuwait retail active investors. Figure 16 depicts financial literacy level of each group.

The next assessment is related to the income level of respondents. As it was mentioned earlier, majority of Kuwaiti investors earn below 2000$ monthly. According to the survey responses, the financial literacy level of retail active investors increases when their income increases. Figure 17 illustrates financial literacy level of investors in each income level.

Figure 17- Financial Literacy Level and Income Level
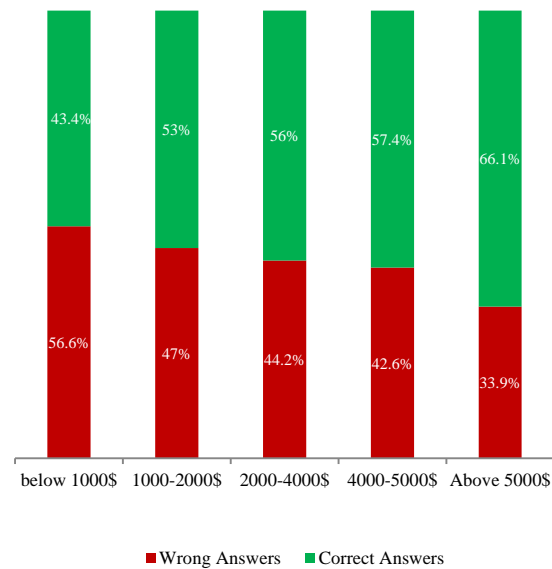
The gap between financial literacy level of those who earn below 1000$ and those who earn above 5000$ is really significant (22.7%). We can conclude that financial literacy improvement will lead to higher income level. bad news for authorities is that majority of Kuwaiti active investors earn below 2000$ and their financial literacy level is low.

Finally, in the sequence of demographic information, we assessed financial literacy level based on investment years. According to the result of the survey, financial literacy stays almost constant by the increase in investment experience. Figure 18 illustrates financial literacy level based on investment years.

Figure 18- Financial literacy and Investment Years
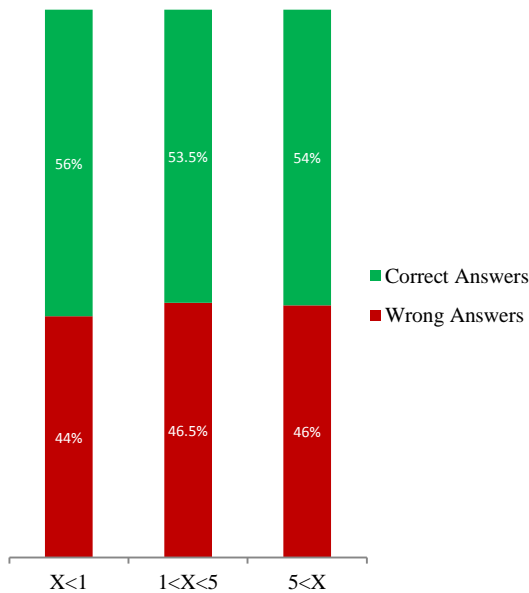
Although we expected higher level of financial literacy among experienced investors, unfortunately not only their level is not promoted, but also declined. It might show that experienced investors do not pay attention to their literacy promotion or even education matters. Subsequently, we think experienced active investors are overconfident. Although it considered as an advantage that majority of active investors are experienced investors, we should notice the risk of irrationality or wrong doing among investors. Therefore, it could be an urgent initiative for authorities to inform investors on their lack of knowledge regarding the capital market. We must not forget the interaction between education and experience. An experienced investor without enough knowledge cannot decide properly and an educated investor who does not apply his/ her

knowledge into practice skillfully cannot make proper experience.

SELF-ASSESSMENT CONFIRMATION

As it was mentioned earlier, majority of Kuwaiti investors (92%) assessed their own financial literacy at least enough. the result of the survey confirms their self-assessment and shows that there is no overconfidence regarding financial literacy. However, without any doubt there must be more endeavors regarding financial literacy improvement. Figure 19 depicts financial literacy level of investors who rated themselves in 4 categories.

Figure 19- Financial literacy and Self-Assessment
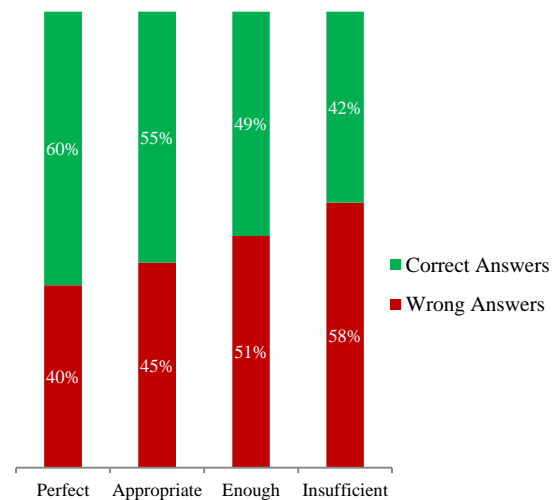
What authorities should notice is that 8% of investors know that their financial literacy is insufficient and the result of survey confirms that their financial literacy is low but they haven't cared their illiteracy. It could be because they are not aware about education resources or do not know how they can improve it. Therefore, we recommend authorities to promote information regarding financial education resources till all investors inform where they should refer.
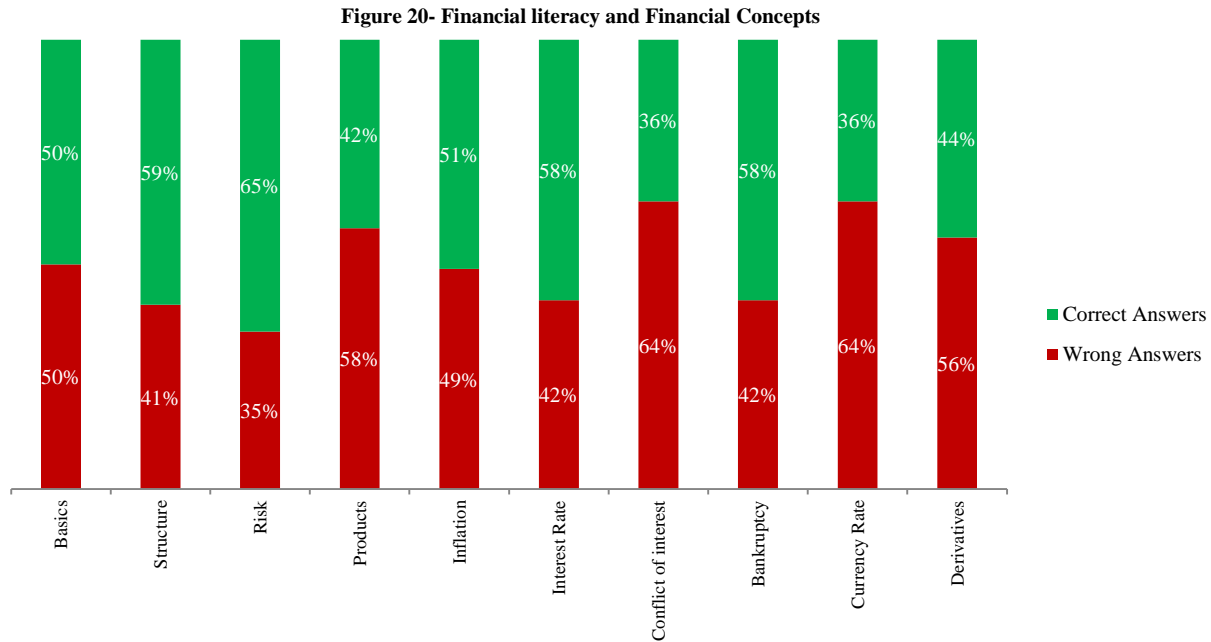
Figure 20- Financial literacy and Financial Concepts

Legend: ■ Correct Answers ■ Wrong Answers

Bars (Correct % top, Wrong % bottom):
- Basics: 50% / 50%
- Structure: 59% / 41%
- Risk: 65% / 35%
- Products: 42% / 58%
- Inflation: 51% / 49%
- Interest Rate: 58% / 42%
- Conflict of interest: 36% / 64%
- Bankruptcy: 58% / 42%
- Currency Rate: 36% / 64%
- Derivatives: 44% / 56%

FINANCIAL LITERACY IN FINANCIAL CONCEPTS

As it was mentioned earlier, we asked sixteen questions about ten financial concepts. These concepts are: 1- Basics of the Capital Market; 2- Structure of the Capital Market; 3- Risk; 4- Products of the Capital Market; 5- Inflation; 6- Interest Rate; 7- Conflict of Interest; 8- Bankruptcy; 9- Currency rate; 10- Derivatives. We think these concepts are the most important ones in the capital market. According to the survey result, the financial literacy of Kuwait's active investors is low in main concepts such as basics and products of the capital market. Figure 20 illustrates wrong and correct answers in each financial concept.

As it is obvious, financial literacy in Risk, Interest Rate and Bankruptcy is the highest. However, conflict of interest, Currency Rate and Products are concepts that investors are not aware most.

In order to determine the importance of each concept, we allocated a predetermined number from 1 to 2 for each concept we thought is more important. Derivatives took 1 as the least

important concept and basics took 1.9 as the most important. Figure 21 shows the result for the importance of each financial concept.

As it is appear, the most important topics which authorities must spotlight are basics and the products of the capital market. The least important one is bankruptcy. Currency rate, interest rate and derivatives are other important concept which should be emphasized. By looking at these topics we can conclude that active investors are not aware about main components of parallel markets which would affect the capital market and subsequently, their investment. We recommend authorities to include parallel market concepts in their education programs in addition to the main concepts of the capital market.

FAMILIARITY WITH EDUCATION RESOURCES

In the survey, we asked investors to rate their familiarity with education resources. The result of the survey shows that around 70% of active investors are not aware about education resources. It was in contrast to our expectations that we expected high level of familiarity with

Figure 21- Importance of Each Topic
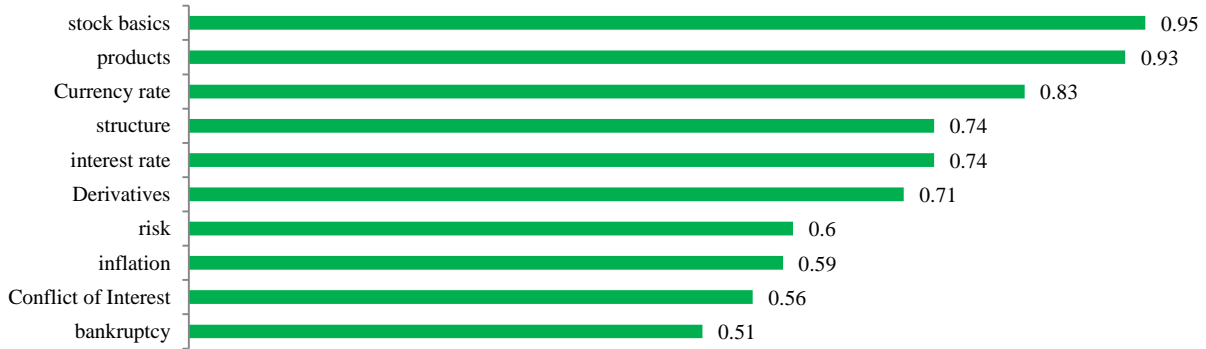
Topic	Value
stock basics	0.95
products	0.93
Currency rate	0.83
structure	0.74
interest rate	0.74
Derivatives	0.71
risk	0.6
inflation	0.59
Conflict of Interest	0.56
bankruptcy	0.51

education resources since respondents are among active investors and they should know resources for their further education. However, it could be alarming for authorities that majority of active investors are not aware about education resources. That is what we mentioned earlier about experience of investors and the level of financial literacy. Through this question we can conclude overconfidence among investors or lack of information dissemination about education resources by authorities. Investors would think that because of their expected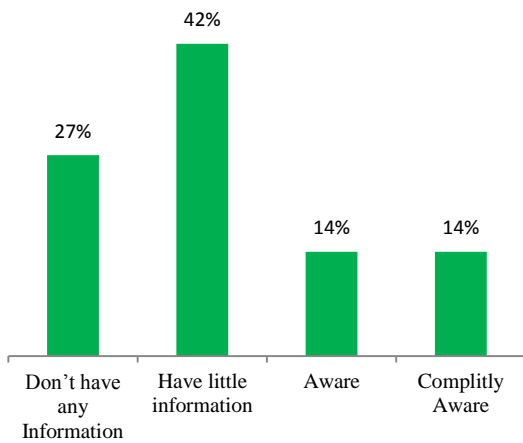 high level of financial literacy and their experience, do not need more education and subsequently knowing education resources could be wasting time. Figure 22 illustrates familiarity of investors with education resources.

In addition to the familiarity of investors, we assessed financial literacy of investors based on their familiarity with education resources. The result shows that financial literacy level is almost constant for those who are aware and those who are not aware about education resources. We can conclude that current education programs in Kuwait's capital market are ineffective and are not provided based on the needs of active investors. Overconfidence might be the second reason for this in which although investors are aware about education resources, they do not refer to. Therefore, revision of education programs and their promotion among public is recommended.

Figure 23- Financial Literacy & Familiarity with Education Resources
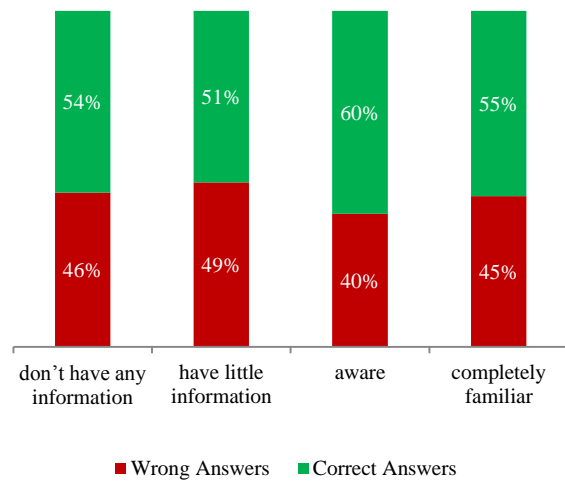
Figure 22- Education Resources Familiarity

Category	Percentage
Don't have any Information	27%
Have little information	42%
Aware	14%
Complitly Aware	14%

Category	Wrong Answers	Correct Answers
don't have any information	46%	54%
have little information	49%	51%
aware	40%	60%
completely familiar	45%	55%

■ Wrong Answers   ■ Correct Answers

Figure 24- Most Important Resources for Decision Making

|	
Financial statements of firms	59%
News and information in newspapers and websites	14%
Past Performance and Reputaion of Each Firm	13%
Friends/ relatives and family	10%
Stock prices trends	4%

DECISION MAKING RESOURCES

According to the definition of financial literacy, financial knowledge, understanding and skills are in service for better decision making. The question is that what different resources investors apply for their decision making. It is really important since we can identify different approaches of investors in their decision making. According to the survey result, majority of Kuwaiti active investors use financial statement as their decisions resources. Figure 24 illustrates resources that investors use for their decision making. According to the figure, we can conclude that Kuwaiti investors mostly apply Fundamental Approaches for their analysis. In contrast, minority of them apply Technical approaches for their decision making. Since majority of active investors prefer financial statements and fundamental approaches, authorities should promote education programs regarding fundamental analysis.

PARTICIPATION IN EDUCATION PROGRAMS

How many percent of Kuwaiti active investors have participated in education programs? That is a question we asked and found its answer. We found that 60% of Kuwait's active investors have participated in education programs. Figure

25 depicts frequency of education programs participation by active investors.

Figure 25- Rate of Programs' Participation
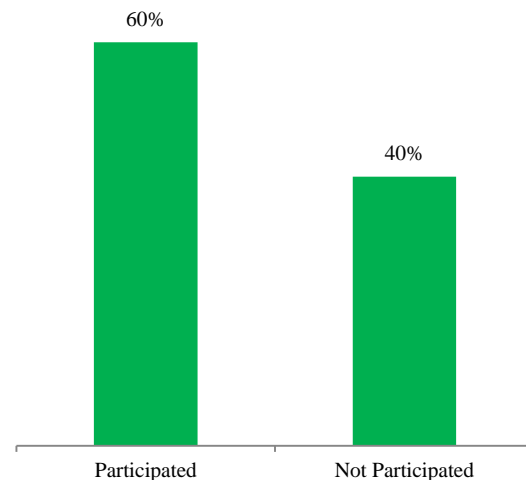
Participated	Not Participated
60%	40%

We asked among those who participated in education programs to rate the effectiveness of them. Majority of respondents assessed educational programs ineffective. That confirms what we expected from previous questions. Figure 26 illustrate percent allocated by investors.

Figure 26- Effectivness of Education Programs
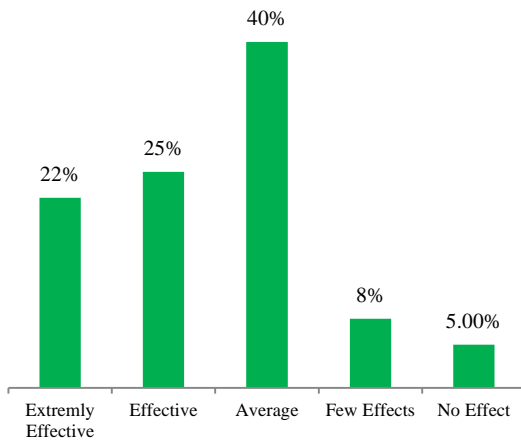
As it is obvious, around 53% of those who attended in educational programs rated them ineffective. We earlier mentioned that since financial literacy of those who are aware and those who are not aware about education resources are similar, the education resources or programs are ineffective. Therefore, we recommend again on the revision of existing programs with needs of investors.

After self-assessment of education programs' effectiveness, we assessed the financial literacy of those who participated and haven't participated in education programs in order to evaluate the real effectiveness of programs. The result of the survey confirmed ineffectiveness of education programs. Figure 27 depicts financial literacy of those investors who have participated and haven't participated in education programs.

As it is clear, financial literacy of those who haven't participated in education programs is higher than those who have participated. The gap between both groups is significant and surprising (9%).

In our assessment, when we evaluated the rate of participation based on gender, we found that males have participated in education programs more than females overall. However, when we

Figure 27- Education Programs Participation and Financial Literacy
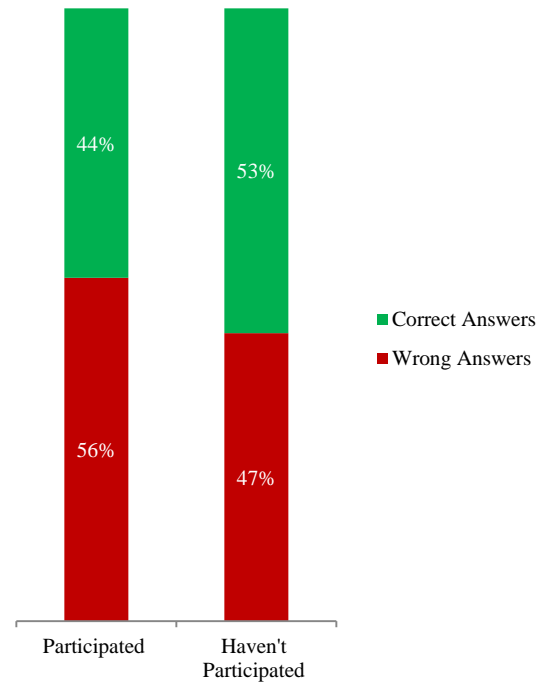
compared it by the total numbers of each group (males and females) we found that 75% of females have participated and 55% of males have participated in education programs. Despite more participation of females in education programs, their financial literacy is lower than males. It shows ineffectiveness of education programs. Anyway, figure 28 and 29 illustrates rate of participation in total population of respondents and in total population of each gender group.

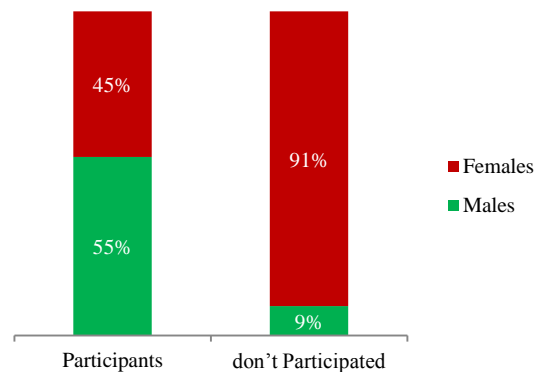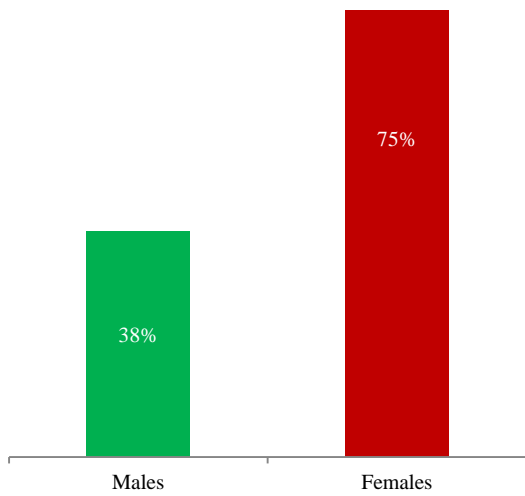**Figure 28- Total Participation by Each Gender**

Figure 29- Total Participation in Each Gender Group

Another question which we asked investors was about their main information resources. We asked them to identify main important resources which they would refer most. The survey result shows that internet/websites, books/ magazines and newspapers, and seminars or symposiums are three main resources which investors refer most. Figure 30 depicts most important resources investors refer most.

Figure 30- Most Important Information Resources
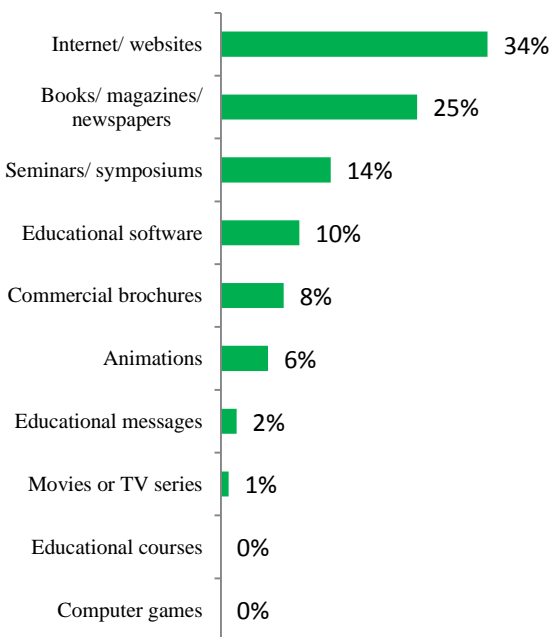
Since majority of investors prefer these three resources to attain information and education, it is recommended to authorities to disseminate information and education mostly through them. However, if they aim to promote another delivery method, they have to work and invest on the other methods and try to spotlight them.

RISK APPETITE OF INVESTORS

We have assessed financial literacy of investors regarding 10 financial concepts. One of them was risk. According to the survey result, the financial literacy of Kuwaiti active investors is quite well about risk. However, we asked another question to evaluate their attitude toward risk. We introduced two assets which one of them requires acceptance of more risk. We aimed to assess risk appetite of retail active investors. The result of the survey shows that majority of Kuwait retail active investors are risk averse. Figure 31 illustrates risk appetite of Kuwaiti investors.

Figure 31- Risk Appetite of Investors
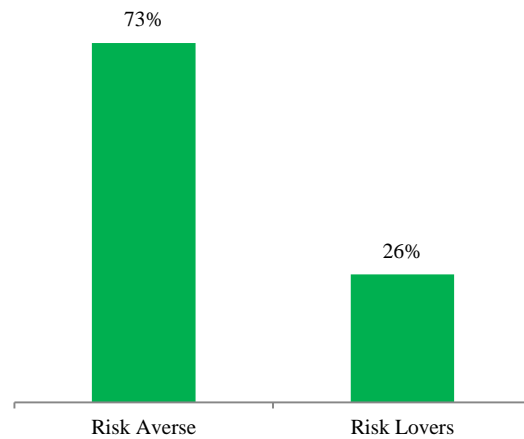
In order to better understanding of risk taking approaches, we assessed risk appetite in 2 categories: 1- risk appetite based on age range and 2- risk appetite based on income level. Figure 32 and 33 depict these two categories.

Figure 32- Risk Appetite by Age Ranges

■ Risk Lovers ■ Risk Averse
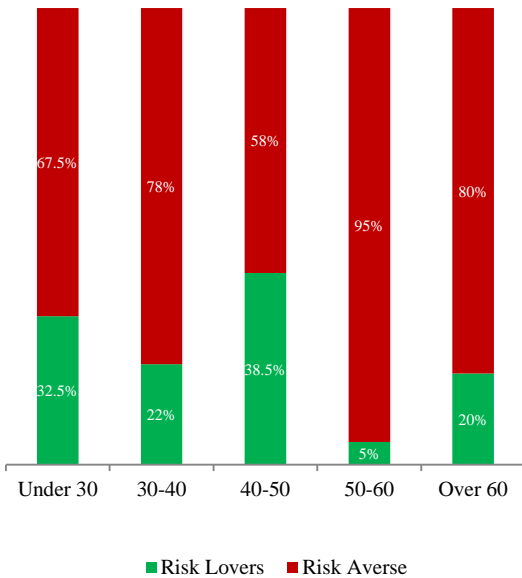
As it is obvious, those investors who are in 40 to 50 would accept more risk. Moreover, as it was expected, young adults accept risk too. Therefore, authorities should emphasize on risk concept more in these two age groups. Generally, we can tell that risk taking will decrease after 50.

Figure 33- Risk Appetite by Income Level
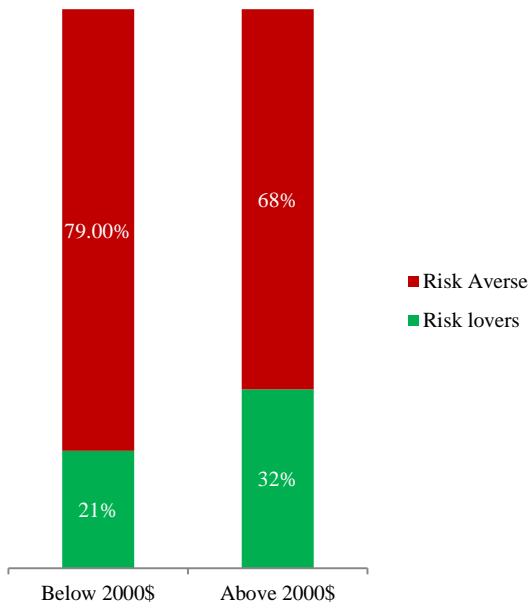
■ Risk Averse
■ Risk lovers

As it is clear, by increase in income level, risk taking will increase. The gap between both groups is significant (11%). However, majority of active investors in Kuwait earn below 2000$ and they make a risk averse atmosphere for Kuwait capital market.

DEVALUATION OF PORTFOLIO

In respect of investors' attitudes toward the capital market and their loyalty, we asked them what they would do in case of devaluation of their portfolio. Majority of investors answered that they would take stock even below the price they bought if the situation of them will become OK. That could be because majority of respondents are experienced investors and we can conclude that loyalty rate in Kuwait's capital market is quite high. Figure 34 illustrates the loyalty of investors in Kuwait's capital market.

Figure 34- Loyalty of Investors
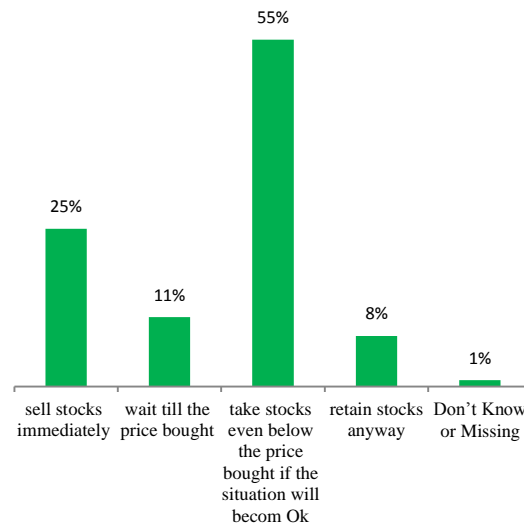
As it is clear we can conclude that at least 63% of investors are loyal to the capital market. There are 25% of investors which authorities should spotlight regarding their stay in the capital market.

We assessed loyalty of active investors based on investment years. The result was interesting

since loyalty of investors reduces when their experience increases. There might be two reasons for this: 1- risk tolerance of investors decreases when investment years increases; 2- situation of Kuwait capital market has showed that when a stock price declines, it will hardly returns to its previous price. Figure 34 illustrates loyalty of investors based on their experience.

The figure shows that financial literacy improvement for experienced investors is really important and its increase would lead to their loyalty improvement.

Figure 35- Loyalty & Experience

INVESTMENT RESOURCES OF FUNDING

Investors use different sources of funding for their investment. However, it is always mentioned that they must not use their properties to invest instead use their surplus. It is due to the risk inherent in the 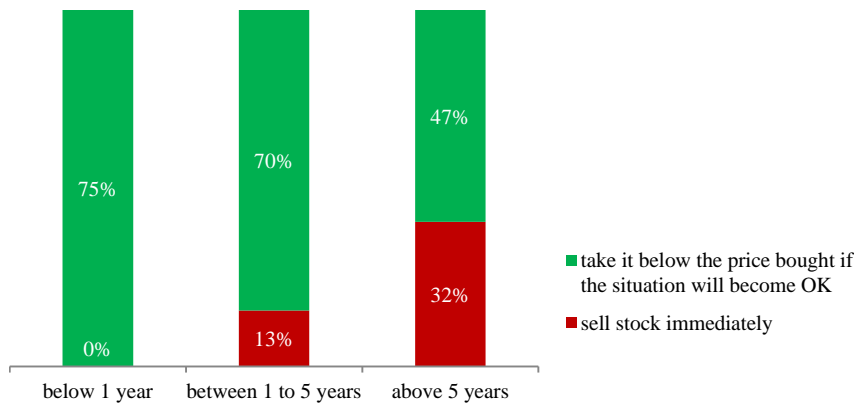capital market. We asked investors to disclose investment resources of funding in order to understand how they arrived into the capital market. The survey result shows that majority of Kuwait investors use their surplus to invest in the capital market. Figure 36 depicts sources of funding investors used to arrive into the capital market.

Good news for authorities is that 55% of investors used their surplus and only 3% of active investors use their properties completely.

Figure 36- Investment Resources of Funding
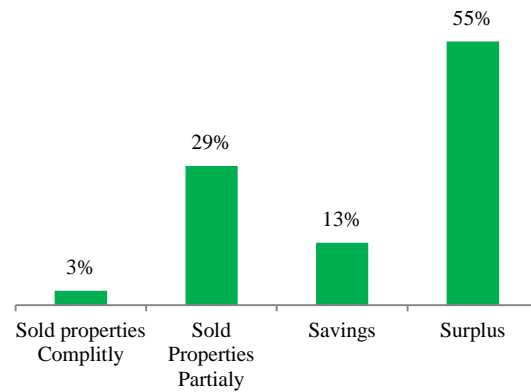
In order to evaluate loyalty of investors based on each funding method, we assessed answers of each group and compared them in figure 37. The result shows that those who used their savings for investment, they have the lowest rate of loyalty and those who used their surplus, they have the highest rate.

although those who used their properties completely to invest in the capital market have the highest loyalty rate, we ommited them from our analysis since their group was consisted of 3 investors.

Figure 37- Loyalty of Investors Based on Methods of Funding
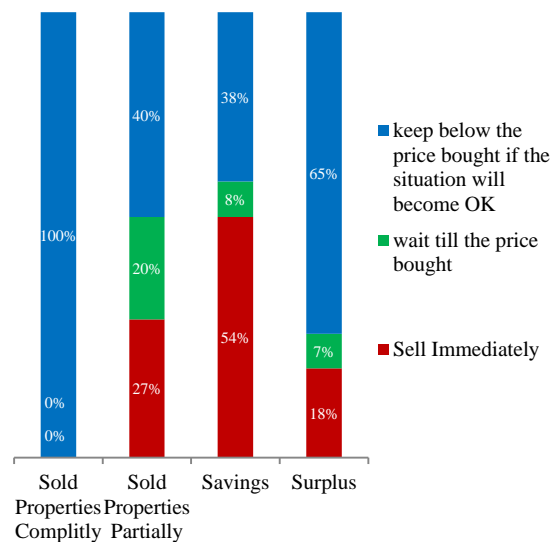
CONFIDENCE AMONG INVESTORS

Do investors use advice and recommendations of financial advisors? How much are they confident about their decisions? That is what we found through the survey result. Majority of active investors consult with financial advisors partially (60%) and only 9% of respondent do whatever advisors advice. Among all respondents, 30 of 104 are completely confident about their decision making. However, what is the financial literacy level of those confident and unconfident investors? Is financial literacy compliant with confidence level of investors? Figure 38 illustrates confidence level among retail active investors and figure 39 depicts their financial literacy level.

Figure 38- Self-Confidence among Investors
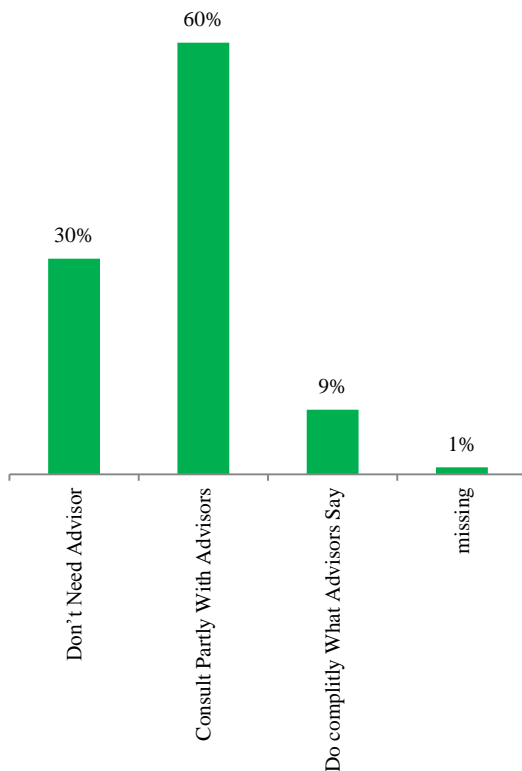
Figure 39- Financial Literacy Level Based on Investors Confidence
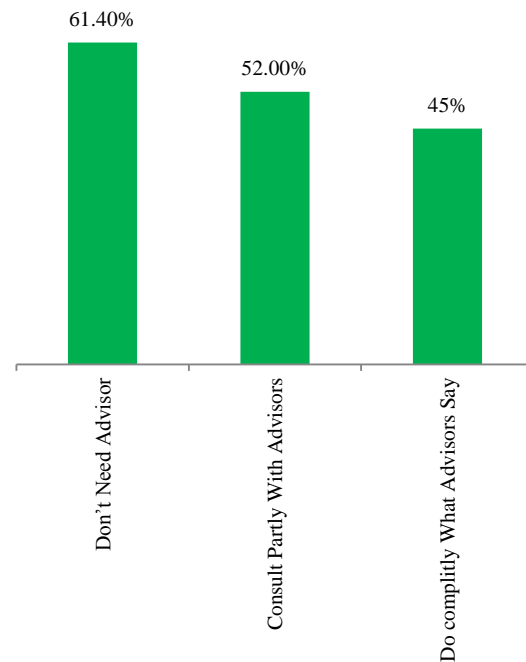
As it is obvious, financial literacy is compliant to what respondents expressed. According to figure 39, financial literacy of those who are more confident is higher than those who are unconfident. Therefore, since unconfident investors do whatever advisors say, we can conclude that possibility of making rational decisions by Kuwaiti investors is high. In addition, Kuwait capital market is not facing overconfidence phenomenon since financial literacy of confident investors is almost high.

INVESTORS' ISLAMIC CONSIDERATION

One dimension of investors' attitude is their view to Islamic issues which is important for us since COMCE CMR Forum member countries are among OIC members that are Islamic countries. We asked the importance of Islamic issues in the capital market. According to the survey result, many retail active investors in Kuwait capital market do not care about Islamic considerations. Figure 40 depicts importance of

Islamic considerations by retail Active Investors in Kuwait capital market.

Figure 40- Importance of Islamic Issues
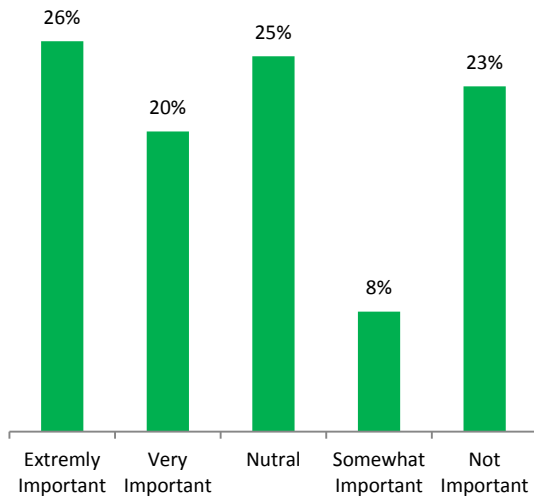
As it is clear, Islamic considerations are important for 46% of respondents. However, 56% of respondents do not care Islamic considerations. The number of those investors who answered Islamic considerations are not important at all is too high (23%). Authorities should notify that Islamic considerations are essential for Islamic market promotion. In addition, it would show that investors would leave Islamic market whenever they find opportunity to invest in conventional market. If Kuwait's capital market has dual system (conventional and Islamic), we can conclude that majority of Kuwait's active investors prefer to trade in conventional market not Islamic.

CONCLUSION

There are many advantages authorities can enjoy regarding retail active investors. They are experienced, educated and the possibility of overconfidence in the market is low. Among these advantages, you can also find some

weaknesses. The main weakness among Kuwaiti retail active investors is lack of enough financial literacy. Since majority of active investors are well educated, informing them about their lack of financial literacy would lead to their endeavors for its improvement.

In addition to investors' endeavors, authorities should notice that their education programs might be ineffective as we showed in the survey result. Therefore, revision and restructuring of education programs or courses is recommended.

FINANCIAL LITERACY ORIENTATION

IN TURKEY

INTRODUCTION

According to the methodology of the survey, Capital Market Board of Turkey (CMB) surveyed 145 retail active investors who traded more than 250 times in 2013. The result indicates that although financial literacy of Turkish investors stands in a good situation, they have illiteracy in specific financial concepts. In this section, we aim to analyze Turkey's responses deeply and in detail.

DEMOGRAPHIC INFORMATION

Demographic information is gathered based on section A of the survey. As it was mentioned, 145 investors as the sample size were surveyed. From total respondents, there were 3 females and 142 males. Figure 1 illustrates the frequency of gender. It shows that Turkey's active investors are dominated by males and it will be hard to compare both groups.

Figure 1- Frequency of Gender
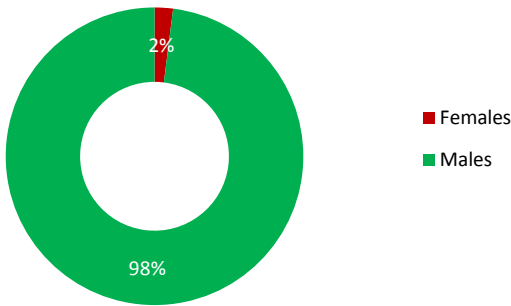
We asked investors to disclose their age range. We divided investors into five different age ranges from below 30 to over 60. According to the received responses, there are 12 investors below 30, 56 investors between 30 to 40, 53 investors between 40 to 50, 17 investors between 50 to 60 and finally 3 investors over 60. As it is obvious, majority of investors are between 30 to 50 years old (76%). We can conclude that our prediction is rationality among

active investors and moderate risk appetite. Figure 2 illustrates frequency of each age range.
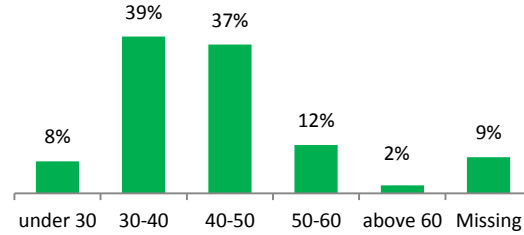
Figure 2- Age Ranges

In order to assess the possible correlation between financial literacy and education level, we asked investors to disclose their education level. From 145 respondents, 16 people were collage or middle school graduated and 129 people were university graduated. Figure 3 and 4 depict frequency of total education level and in each category. Investors showed high rate of university graduation. The result shows that 89% of investors are university graduated. Since majority of active investors have high level education, we expect high level of financial literacy too.

Figure 3-Education Level
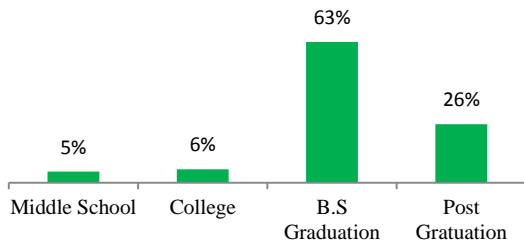
Figure 4- Seperated Education Level

Another question which we asked was about income level of investors. We aimed to assess correlation between income level and financial literacy. At first, we depict the frequency of income level and further each level will be assessed by given responses. Figure 5 illustrates income level among retail active investors. It shows that around half of investors earn below 2000 USD.

Figure 5- Monthly Income Level

In addition to the income level, we asked investors how long they have invested in the capital market. Their answers are categorized into three groups: 1- less than 1 year; 2- between 1 to 5 years; 3- more than 5 years. The result shows that majority of investors (61%) have invested more than 5 years. This factor can be considered as good news for authorities since majority of investors are experienced ones. Therefore we expect higher financial literacy level of Turkey's investors and subsequently more rational decision making. Figure 6

illustrates frequency of investment length by active investors.

Figure 6- Investment Length
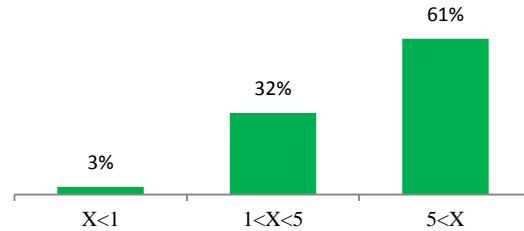
Prior asking the income level, we asked investors to disclose their jobs. We aimed to assess correlation between financial related jobs and financial literacy. Therefore, we divided received answers into two groups: 1- financial related jobs and 2- Non-financial related jobs. The results shows that 39 respondents have financial related jobs and 106 respondents do not have financial related jobs. It might be good news that Turkey's capital market have succeed to acquire people with different job status. However, the probability of low financial literacy would be higher. Figure 7 illustrates frequency of job status.
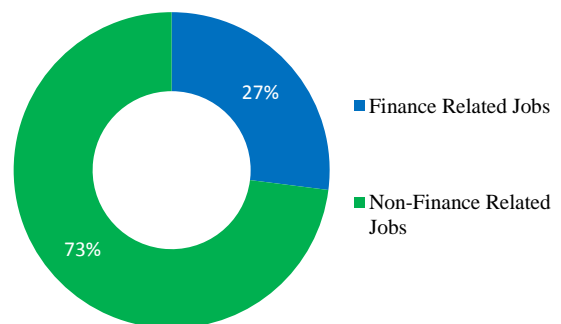
Figure 7- Job Status

In addition to main demographic information, we analyzed received responses in different ways in order to make comparison possible between males and females. However, since

females' respondents are too few for further analysis, we merely give some facts in this regard. Female respondents are in 30 to 50 years old. They are all university graduated and have finance related jobs. We can categorize them among those investors with high level of income (more than 2000$) and experienced investors since all of them have been invested more than 5 years. All these facts make us to expect high level of financial literacy among female investors.

FINANCIAL LITERACY SELF ASSESSMENT

Prior to assessing financial literacy, we asked investors to evaluate their own financial literacy. It helped us to assess overconfidence in the capital market. According to the received responses, 10 investors ranked their financial literacy perfect, 30 respondents ranked it appropriate, 51 respondents ranked it enough and 19 investors ranked it insufficient and 35 investors did not answer this question. Figure 8 shows the frequency of investors' financial literacy self-assessment.

According to the investors' self-assessment, more than 28% of investors must be financially literate, 35% of investors must have enough literacy and only 13% must be in need of financial literacy improvement. The interesting point is number of investors who did not answer our question which is so high. It seems that many investors are not aware about their level of financial literacy or even they are not aware about financial literacy itself. Therefore, we should consider financial literacy level of these people as insufficient. We can conclude that at least 63% of investors think their financial literacy level is in a good situation.

Figure 8- Financial Literacy Self Assessment

TOTAL FINANCIAL LITERACY LEVEL

The total financial literacy level is assessed by sixteen questions (10a to 26) which consist of ten financial concepts. Each question has an exact answer which respondents must mention to attain score 1. Those respondents who did n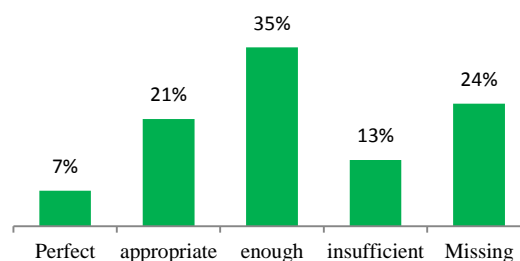ot answer any questions are considered as don't know or wrong answers. Since wrong answers are presented as percentage, we used the Geometric Mean in order to attain one specific percent for financial literacy or illiteracy. Figure 9 illustrates total wrong and correct answers for each question. The Geometric Mean of wrong answers shows financial illiteracy and mean of correct answers shows financial literacy. The Geometric Mean of wrong answers for Turkish active investors is 43 percent and the Geometric Mean of correct answers is 57 percent. Therefore, we can conclude that financial literacy of Turkey's active investors is 57%.

FINANCIAL LITERACY BENCHMARK

By looking at the percent of correct answers (57%) we can conclude that since it stands above half, the situation is good. However, since each country should be assessed based on its own active investors and in order to predict an expected level of financial literacy, we used 4 items to make a benchmark for financial literacy. These four items are: 1- Finance Related Jobs, 2- University Education Level, 3- Above 1 Year Investment in the Capital Market and 4- Financial Literacy Self-assessment above Enough.

Figure 9- Total Financial Literacy Level
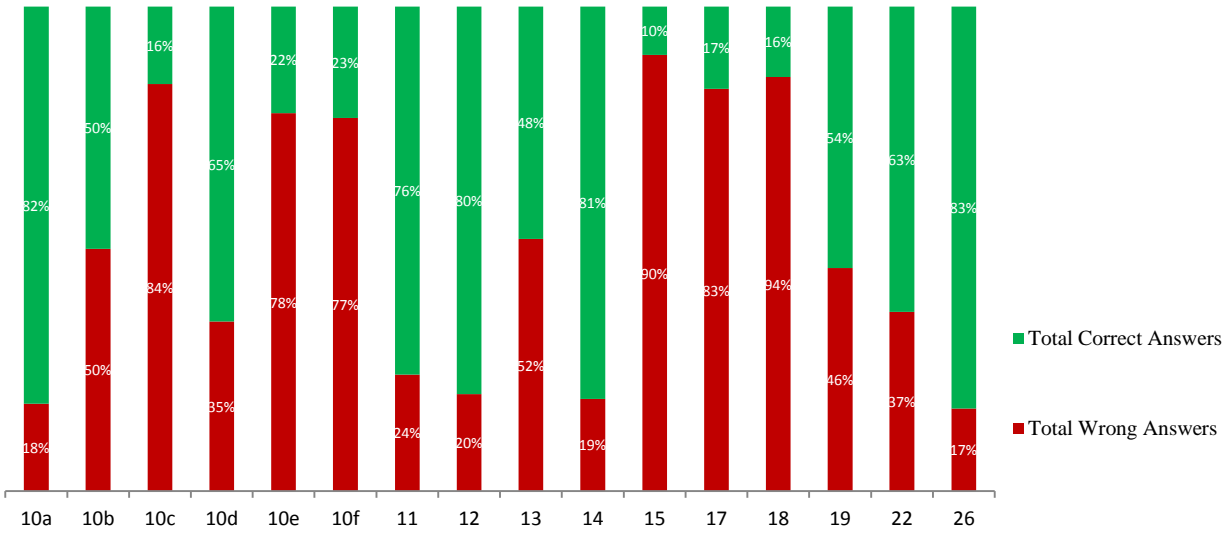
Since these items are in percent, we applied Geometric Mean in order to obtain one exact percent as a benchmark for financial literacy. According to the responses received, the percent of each above item is:

1- 27%
2- 89%
3- 93%
4- 48%

Their Geometric Mean is: 57.2%. Therefore, we think the financial literacy Level of Turkish active investors stands in its correct position. Fortunately, we can conclude that retail active investors in Turkey are financially literate. However, is that mean the literacy of investors in all financial concepts is good? Indeed, NO. In the next section, we will show in what concepts Turkish active investors are in the best and in the worst situation.

FINANCIAL LITERACY IN FINANCIAL CONCEPTS

As it was mentioned earlier, we asked sixteen questions about ten financial concepts. These concepts are: 1- Basics of the Capital Market; 2- Structure of the Capital Market; 3- Risk; 4-

Products of the Capital Market; 5- Inflation; 6- Interest Rate; 7- Conflict of Interest; 8- Bankruptcy; 9- Currency rate; 10- Derivatives. We think these concepts are the most important ones in the capital market. Although we concluded enough level of financial literacy for active investors in Turkey's capital market, in this section, we found low level of financial literacy in specific concepts such as risk and products of the capital market. Figure 10 illustrates wrong and correct answers in each financial concept.

As it is obvious, financial literacy level in Currency Rate, Inflation and Structure of the market is the highest. However, Derivatives, Bankruptcy and Products of the market formed three main concepts which financial literacy level is worst. The important point is that basics and risk are among those concepts which obtain most wrong answers. We should notice that high level of financial literacy of Turkish investors is obtained because of their almost complete awareness about inflation, currency rate and structure.

In order to determine the importance of each concept, we allocated a predetermined number from 1 to 2 for each concept we thought is more

Figure 10- Financial Literacy in Financial Concepts
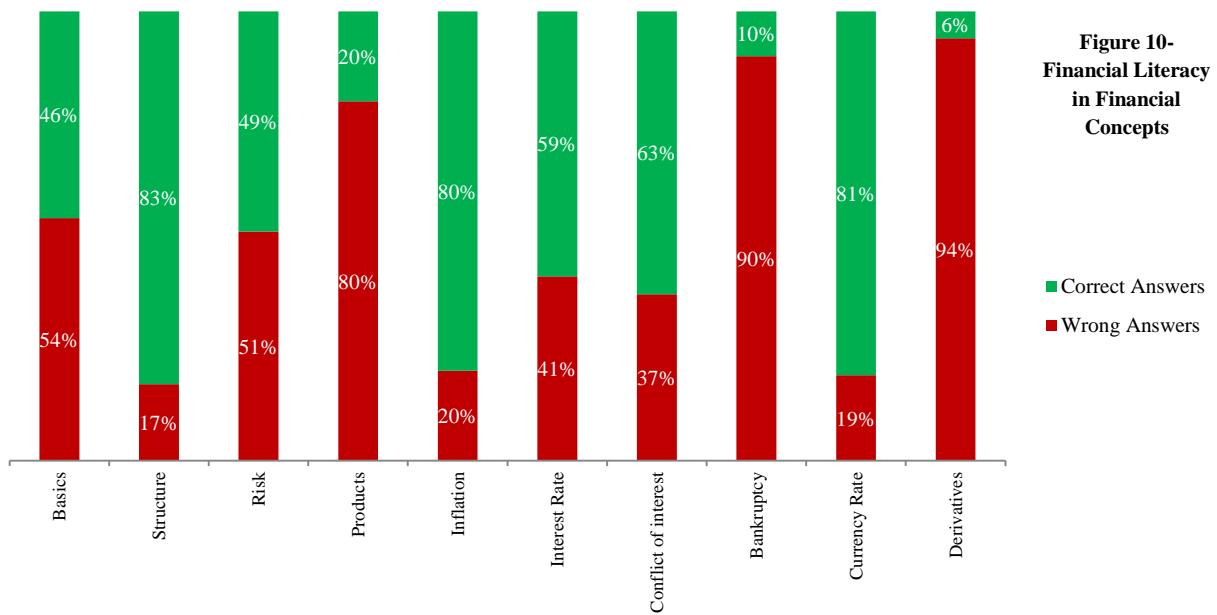
important. Derivatives took 1 as the least important concept and basics took 1.9 as the most important. Figure 11 shows the result for the importance of each financial concept.

As it is appear, the most important topics which authorities must spotlight are products of the capital market and bankruptcy. The least important one is currency rate and inflation. An important point which authorities should notice is low level of financial literacy in basics and risk. By looking at these topics we can conclude that active investors are aware about main components of parallel markets but neglected main components of the capital market. We recommend authorities to emphasize more on the capital market related education programs; particularly products, basics and risk.

FINANCIAL LITERACY CATEGORIES

In addition to total financial literacy, according to the purpose of the survey, we determined different categories for financial literacy and illustrated them on different figures for further information and providing recommendations for policy makers or authorities.

Since the number of Turkish female investors was too low, unlike Iran and Kuwait, we did not divide them based on gender since gender distinction is not significant in Turkey.

Figure 11- Importance of Each Topic
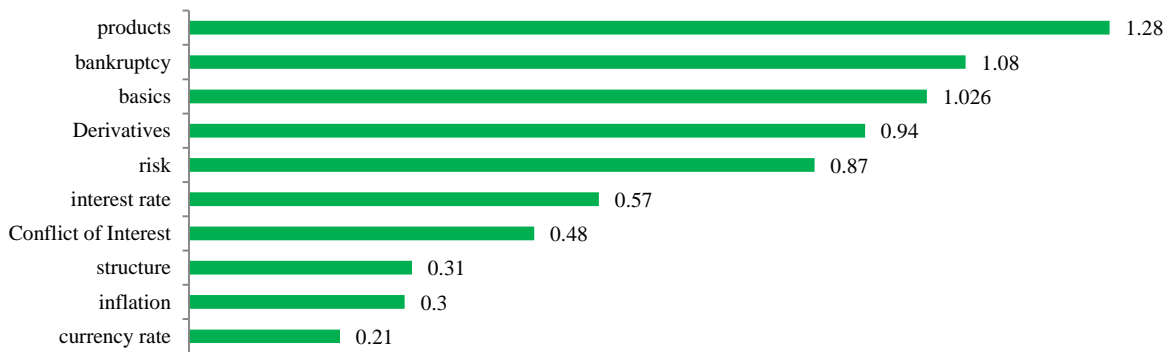
In addition to gender, we assessed financial literacy level based on age ranges. The result indicates that financial literacy level is almost constant from below 30 to 40 years old. However, financial literacy increases by increase in age range. Figure 12 illustrates financial literacy level of each age range. As it is obvious, financial literacy level of adults above 50 years old is higher. The gap between this age range and the rest is significant. This trend is what we expected. Good news for authorities is that 51% of active investors are in 40 to 50. However, 49% of investors' financial literacy who are among young adults is low that authorities must not forget.

Figure 12- Financial Literacy level by Age Ranges
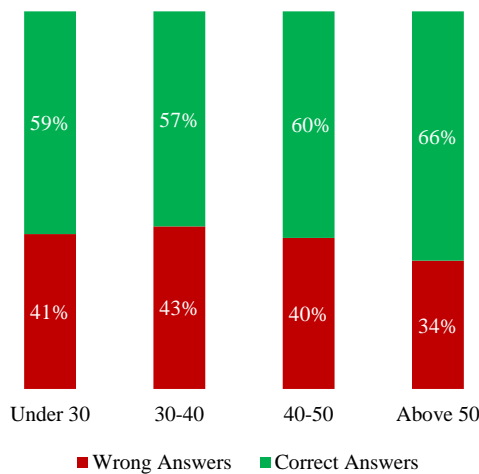
As it is obvious, investors in 30-40 have the least financial literacy and those above 50 have the most. Since the number of investors above 60 was too low, we considered them among above 50 years old. It should be noted that 95% of investors above 50 years old have invested more than 1 year and 80% of these investors have invested more than 5 years. Therefore, we can expect it that financial literacy will increase by experience.

What we did next was assessing relationship between financial literacy level and education level. According to the responses received, we found that university education does not affect financial literacy. We can conclude that financial literacy is constant between those who possess university education and those who do not possess. It is in contrast to our expectations since we assumed education affect financial literacy. Figure 13 depicts financial literacy level of university graduated and non-university graduated respondents.

Figure 13- Financial Literacy Level and Education Level
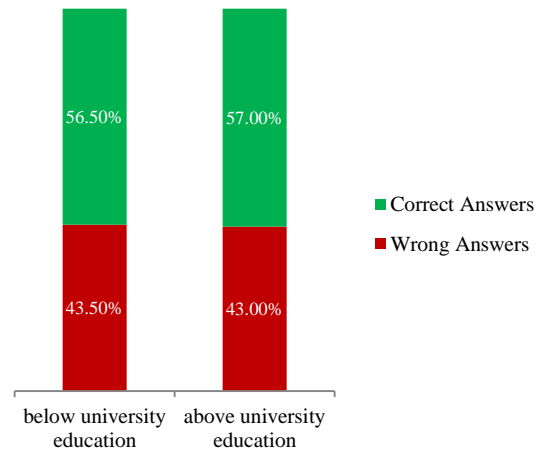
Moreover, the figure shows there is no relation between what students' studied in universities and the atmosphere of the capital market. It shows the importance of conducting education programs in universities.

Based on the demographic information's sequence, we next assessed financial literacy level of those who have and do not have finance related jobs. As we expected, financial literacy level of those who have finance related jobs is higher than those who do not. The gap between both groups is significant. Figure 14 illustrates relationship between financial literacy job status.

We can conclude that those investors who have finance related jobs, possess higher level of financial literacy. However, we think the percent of their wrong answer is still high.

Figure 14- Financial Literacy Level and Job Status
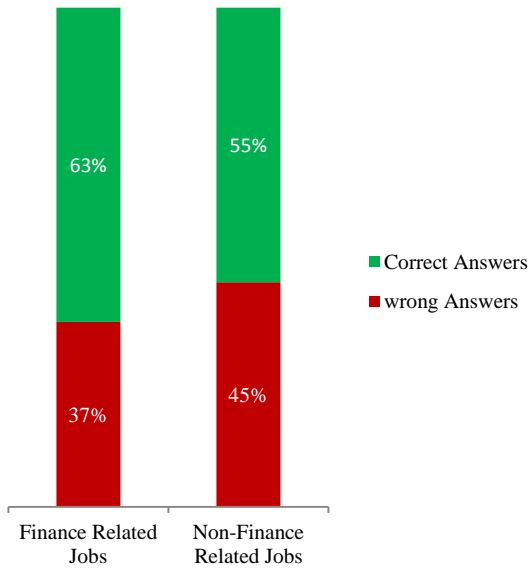
The next assessment is related to the income level of respondents. As it was mentioned earlier, majority of investors earn above 2000$ monthly. According to the survey responses, financial literacy does not follow a specific trend. We cannot conclude that financial literacy level increases by increase in income level. Figure 15 illustrates financial literacy level of investors in each income level.

Figure 15- Financial Literacy Level and Income Level
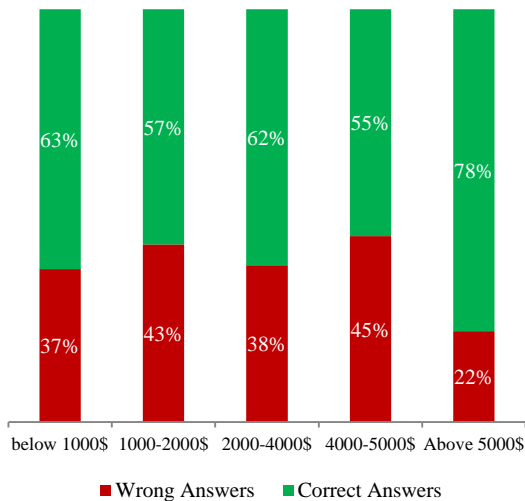
Finally, in the sequence of demographic information, we assessed financial literacy level based on investment years. According to the result of the survey, financial literacy increases when investment experience increases. Figure 16 illustrates financial literacy level based on investment years.

Figure 16- Financial literacy and Investment Years
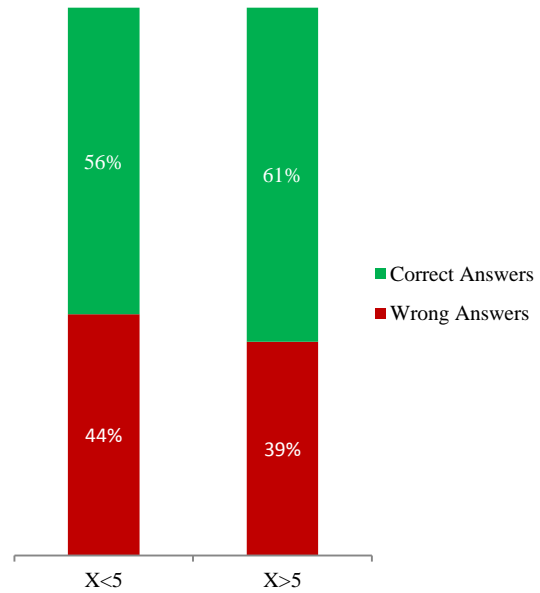
Since few investors had invested less that 1 year, we included this group in below 5 years investment and conducted the assessment. As it is obvious, the gap between both groups is 5%. Since the majority of Turkish active investors invested more than 5 years, we expect more rational behavior in their side and even we can expect low possibility of herding behavior in the capital market.

UNUSUAL FINANCIAL LITERACY

As it was mentioned earlier, majority of Turkish investors (63%) assessed their own financial literacy at least enough. Among them, 35% of investors assessed their financial literacy enough which obtained the lowest financial literacy level among other groups. The result of the survey might show that investors are not aware about their current position of financial literacy

level. The surprising point is that those who rated their financial literacy as insufficient obtained a constant score like those who assessed themselves as perfect and sufficient. Therefore, we can conclude that in our questions there were topics which everyone had knowledge about; Topics such as inflation. We think that could be because of a specific circumstance of Turkey's capital market. Figure 17 depicts financial literacy level of investors who rated themselves in 4 categories.

Figure 17- Financial Literacy & Self-assessment
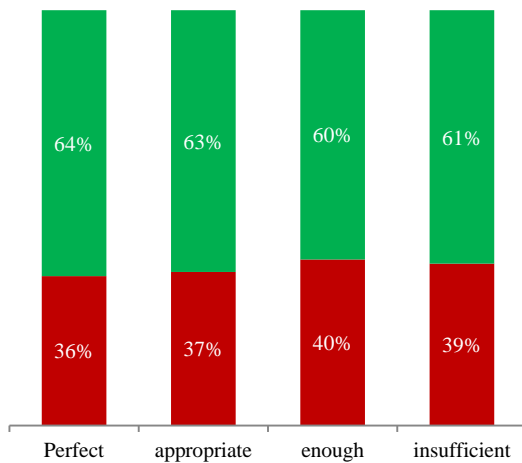
As it is obvious, we can conclude a constant level of financial literacy even for those who assessed their financial literacy as insufficient. What authorities should notice is that, there would be topics which all people are aware about and would mislead them regarding financial literacy level. Indeed, it is not usual to have similar financial literacy level for everyone. We recommend authorities to conduct the survey for more investors to obtain more accurate level of financial literacy.

FAMILIARITY WITH EDUCATION RESOURCES

In the survey, we asked investors to rate their familiarity with education resources. The result of the survey shows that around 56% of active

investors are not aware about education resources. It was in contrast to our expectations that we expected high level of familiarity with education resources since respondents are among active investors and their financial literacy is in a good situation. This strengthen our assumption which indicates level of financial literacy in Turkey comes from a nationwide factor. The result of the survey indicates that only 36% of active investors are aware about financial literacy resources. Another reason for low amount of awareness regarding education resources might be overconfidence of experienced investors who shape the majority of active investors in Turkey's capital market or lack of enough information dissemination about education resources by authorities. Investors would think that because of their expected high level of financial literacy and their experience, they do not need more education and subsequently knowing education resources could be wasting time. Figure 18 illustrates familiarity of investors with education resources.

Figure 18- Education Resources Familiarity
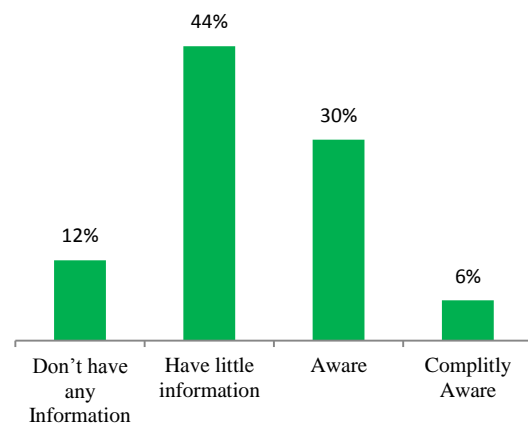
In addition to the familiarity of investors with education resources, we assessed financial literacy of investors based on their familiarity with education resources. The result shows that financial literacy level increases when familiarity with education resources increases.

The gap between financial literacy level of those who are completely aware and those who do not have any information about education resources is significant (20%). We can conclude that current education programs in Turkey's capital market are effective. Bad news for authorities is that majority of active investors are not aware about education resources. Therefore, a main policy should be promotion of awareness regarding education resources. Figure 19 illustrates financial literacy level based on investors' familiarity with education resources.

DECISION MAKING RESOURCES

According to the definition of financial literacy, financial knowledge, understanding and skills are in service for better decision making. The question is that what different resources investors apply for their decision making. It is really important since we can identify different approaches of investors in their decision making. According to the survey result, majority of Turkish active investors use financial statement as their decisions resources. Figure 20 illustrates resources that investors use for their decision making. According to the figure, we can conclude that Turkish investors mostly apply

Figure 19- Financial Literacy Level and Familiarity with Education Resources
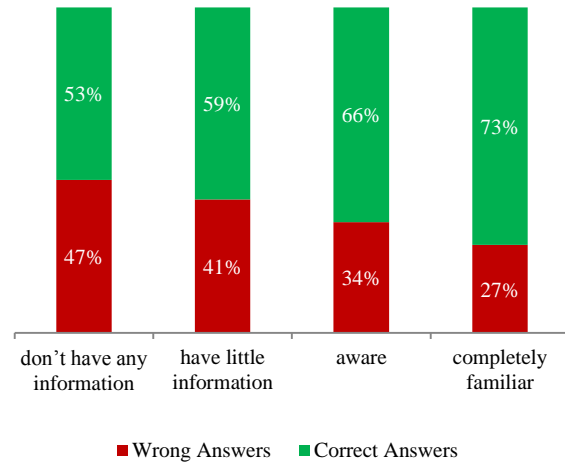
Fundamental Approaches for their analysis. However, number of those who apply technical analysis is significant. We recommend authorities to consider both technical and fundamental approaches in their education programs since investors prefer both. in addition to analyze approaches, we can conclude again that the possibility of herding behavior might be low since retail actives investors apply rational approaches in their decision making process (that is not a certain conclusion).

Figure 20- Most Important Resources for Decision Making
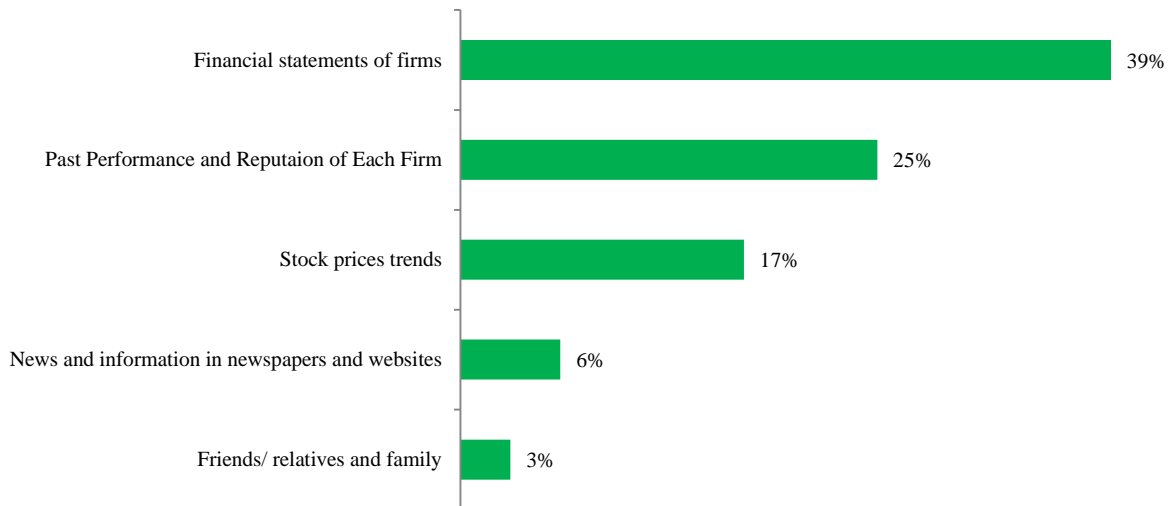
PARTICIPATION IN EDUCATION PROGRAMS

How many percent of Turkish active investors have participated in education programs? That is a question we asked and found its answer. We found that 59% of Turkey's active investors have participated in education programs. Figure 21 depicts frequency of education programs participation by active investors.

Figure 21- Rate of Programs' Participation
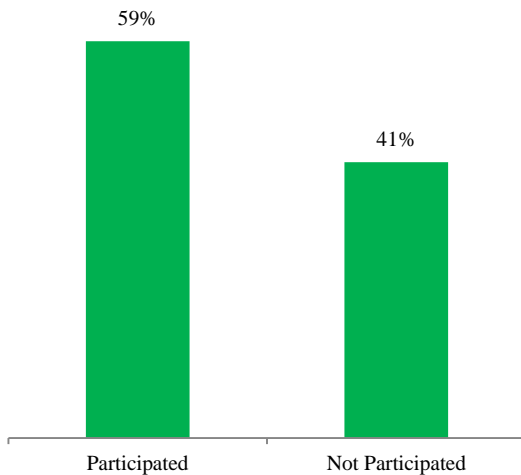
We asked among those who participated in education programs to rate the effectiveness of them. Majority of respondents assessed educational programs ineffective. That is in contrast to what we expected from previous questions. Figure 22 illustrate percent allocated by investors.

As it is obvious, around 47% of those who attended in educational programs rated them ineffective. In order to assess ineffectiveness of programs, we assessed financial literacy of those who have participated in education programs and those who have not participated.

In contrast to what investors asserted, the result of the survey shows effectiveness of education programs. Although the gap between both groups is significant (7%), authorities should consider views of investors and search the reasons of their dissatisfaction. Figure 22 depicts financial literacy of those investors who have participated and haven't participated in education programs.

Figure 22- Financial Literacy & Participation Rate
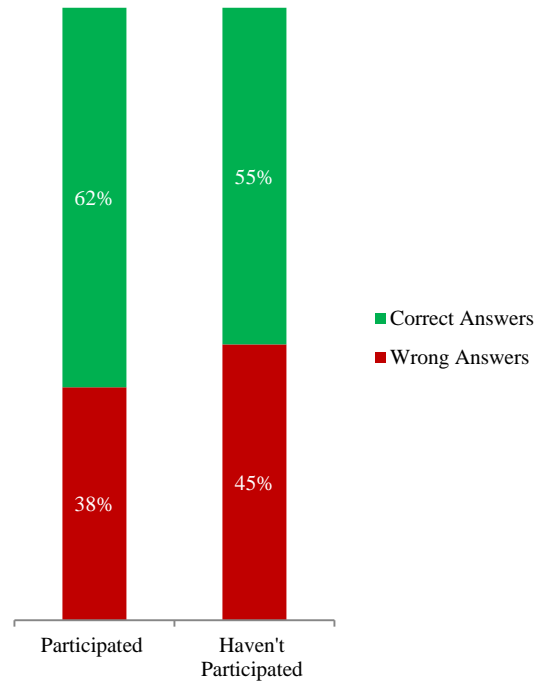
As it is clear, financial literacy of those who have participated in education programs is higher than those who have not participated.

Another question which we asked investors was about their main information resources. We asked them to identify main important resources which they would refer most. The survey result shows that internet/websites, books/ magazines and newspapers, and seminars or symposiums are three main resources which investors refer most. Figure 23 depicts most important resources investors refer most.

Figure 23- Most Important Information Resources
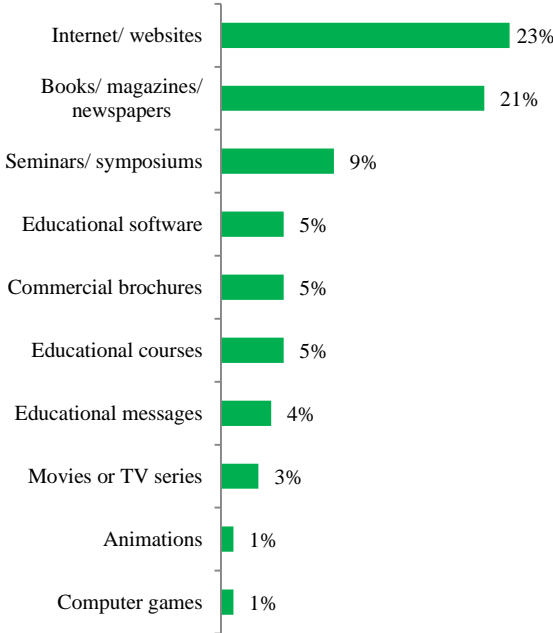
Resource	%
Internet/ websites	23%
Books/ magazines/ newspapers	21%
Seminars/ symposiums	9%
Educational software	5%
Commercial brochures	5%
Educational courses	5%
Educational messages	4%
Movies or TV series	3%
Animations	1%
Computer games	1%

Since majority of investors prefer these three resources to attain information and education, it is recommended to authorities to disseminate information and education mostly through them. However, if they aim to promote another delivery method, they have to work and invest on the other methods and try to highlight them.

RISK APPETITE OF INVESTORS

We have assessed financial literacy of investors regarding 10 financial concepts. One of them was risk. According to the survey result, the financial literacy of Turkish active investors about risk is average. In addition to financial literacy regarding risk concept, we asked another question to evaluate investors' attitude toward risk. We introduced two assets which one of them requires acceptance of more risk. We aimed to assess risk appetite of retail active investors. The result of the survey shows that majority of Turkey's retail active investors are risk averse. Figure 24 illustrates risk appetite of Turkish active investors.

Figure 24- Risk Appetite of Investors
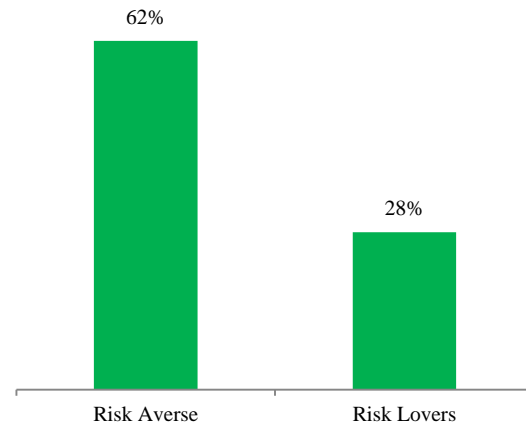
In order to better understanding of risk taking approaches, we assessed risk appetite in 2 categories: 1- risk appetite based on age range and 2- risk appetite based on income level. Figure 25 and 26 depict these two categories.

Figure 25- Risk Appetite by Age Ranges
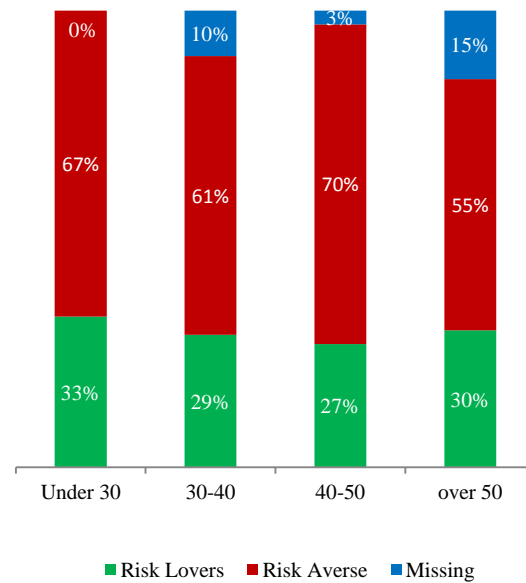
As it is obvious, those investors who are in 30 to 50 accept less risk. In addition, two sides of the spectrum accept more risk: young adults and those who are above 50 years old. Therefore, authorities should emphasize on risk concept more in these two age groups.

Figure 26- Risk Appetite by Income Level
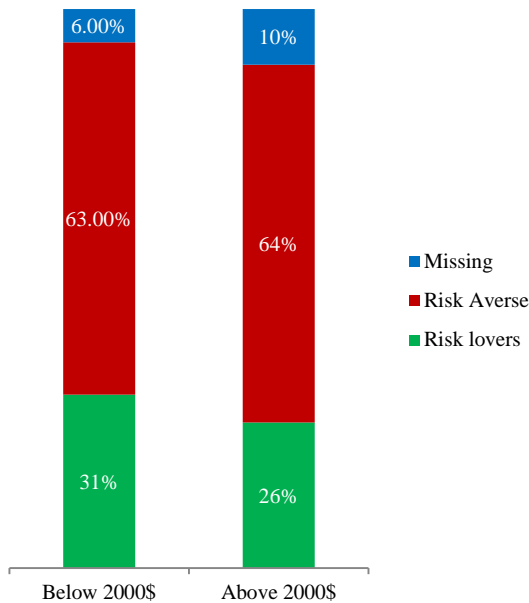
As it is clear, by increase in income level, risk taking will increase. The gap between both groups is not significant (5%). However, majority of active investors in Turkey earn above 2000$ and they might take more risk. Therefore, since knowledge of investors is not appropriate regarding risk concept and majority of them accept more risk based on income level, we recommend authorities to consider risk as one important topic in their education programs.

DEVALUATION OF PORTFOLIO

In respect of investors' attitudes toward the capital market and their loyalty, we asked them what they would do in case of devaluation of their portfolio. Majority of investors answered that they would take stock even below the price they bought if the situation of them will be promising. That could be because majority of respondents are experienced investors and we can conclude that loyalty rate in Turkey's capital market is high. An interesting point which we did not trace in two other countries is that investors do not prefer to retain their portfolio even below the price they bought in any

conditions. It shows more rationality in Turkey's capital market. Figure 27 illustrates the loyalty of investors in Kuwait's capital market.

Figure 27- Lotalty of Investors
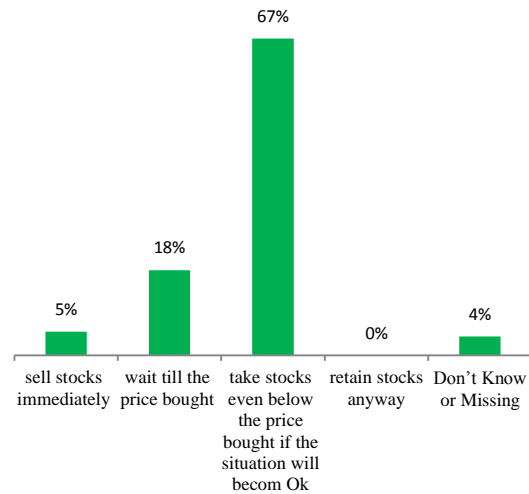
As it is clear we can conclude that at least 67% of investors are loyal to the capital market. Even we can consider those who will wait till the price they bought stock as loyal investors since they do not quit the market by a shock immediately.

INVESTMENT RESOURCES OF FUNDING

Investors use different sources of funding for their investment. However, it is always mentioned that they must not use their properties to invest instead use their surplus. It is due to the risk inherent in the capital market. We asked investors to disclose their investment resources of funding in order to understand how they arrived into the capital market. The survey result shows that majority of Turkey's investors use their surplus to invest in the capital market. Figure 28 depicts sources of funding investors used to arrive into the capital market.

Figure 28- Investment Resources of Funding
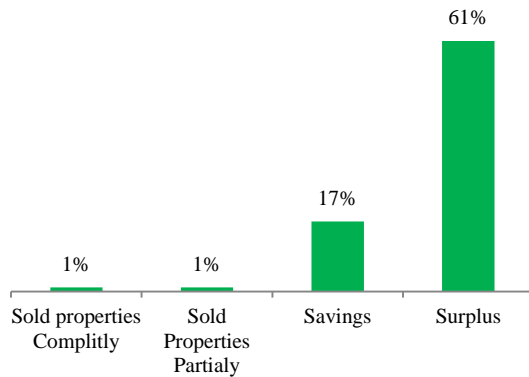
Good news for authorities is that 61% of investors used their surplus and only 2% of active investors use their properties (completely or partially) to invest in the market. We can conclude that among other countries, retail active investors are rational ones and show performance due to our expectations regarding financial literacy of active investors. We can again say that since investors used their surplus of their income and saving for investment, the possibility of herding behavior might be low and the loyalty would be high.

CONFIDENCE AMONG INVESTORS

Do investors use advice and recommendations of financial advisors? How much are they confident about their decisions? That is what we found through the survey result. Majority of active investors consult with financial advisors partially (59%) and only 2% of respondent do whatever advisors advice. Among all respondents, 17% are completely confident about their decision making. Therefore, we can conclude that the possibility of overconfidence in Turkey's capital market is low since they are experienced ones and their financial literacy is in a good situation. However, what is the financial literacy level of those confident and unconfident investors? Is financial literacy compliant with confidence level of investors? Figure 29 illustrates confidence level among retail active

investors and figure 30 depicts their financial literacy level.

Figure 29- Self-Confidence among Investors
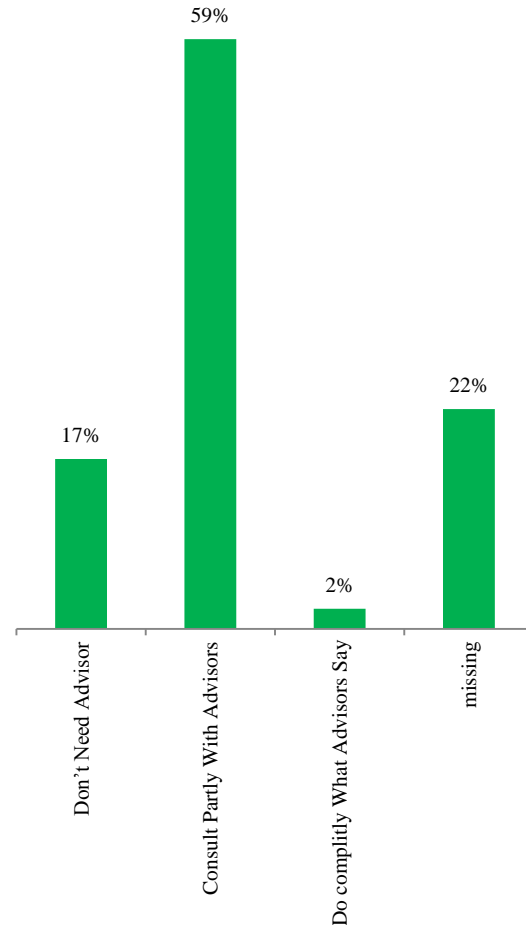
When we consider financial literacy level of respondents, we can conclude that the financial literacy level of confident investors is higher than the rest. However, due to the low number of respondents we did not consider those who do completely what advisors say. An important point authorities should notice is the low level of financial literacy of those who missed the question. Their financial literacy is really low and we must find who they are and what they do for their decisions. Their low level of financial literacy would affect the market.

Figure 30- Financial Literacy Level Based on Investors Confidence
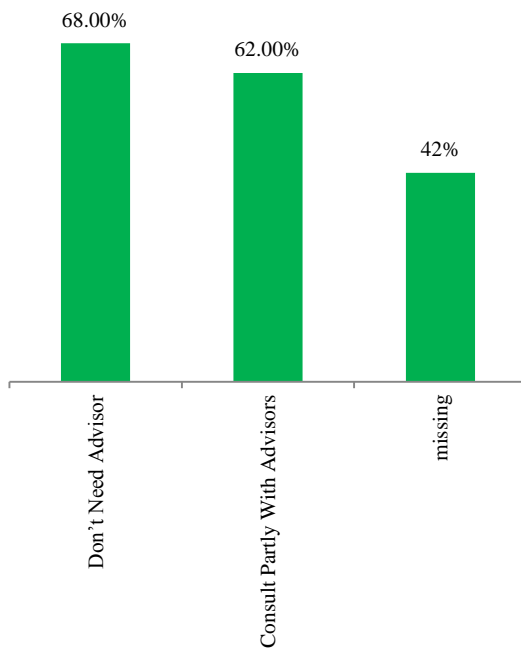
As it is obvious, financial literacy of those who missed the question is alarming.

INVESTORS' ISLAMIC CONSIDERATION

One dimension of investors' attitude is their view to Islamic issues which is important for us since COMCE CMR Forum member countries are among OIC members that are Islamic countries. We asked the importance of Islamic issues in the capital market. According to the survey result, majority of retail active investors in Turkey's capital market do not care Islamic considerations. Figure 31 depicts importance of Islamic considerations by retail Active Investors in Turkey's capital market.

As it is clear, Islamic considerations are important for 30% of respondents. However, 63% of respondents do not care Islamic considerations. The number of those investors who answered Islamic considerations are not important at all is too high (28%). Authorities should notify that Islamic considerations are

essential for Islamic market promotion. In addition, it would show that investors would leave Islamic market whenever they find opportunity to invest in conventional markets. If Turkey's capital market has dual system (conventional and Islamic), we can conclude that majority of Turkey's active investors prefer to trade in conventional markets not Islamic.

Figure 31- Importance of Islamic Issues
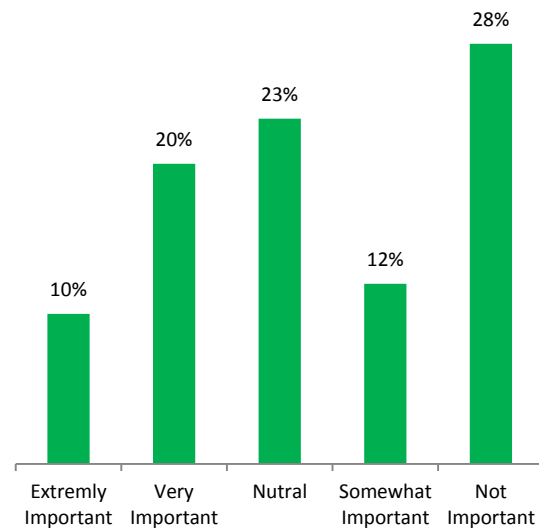
CONCLUSION

The situation of financial literacy in Turkey is more appropriate than what we expected. There is no gap between the benchmark we created and the level of financial literacy. Moreover, the possibility of irrational behaviors in Turkey's capital market is low and that is what authorities would enjoy most. Although investors evaluated education programs ineffective, we proved that they are effective since financial literacy level of those who participated in education programs is higher than who have not participated.

However, there are some issues authorities should consider: 1- when we assessed financial literacy based on financial concepts, we found financial literacy level in specific financial concepts is really low; therefore, if we remove some topics with high rate of literacy, the

financial literacy level of Turkish investors declines sharply. 2- Authorities should review why investors consider education programs ineffective and try to correct the view of investors in this regard.

And finally, there were some unusual information that we think they will be clarified if the survey will be conducted by more number of active investors.

CONCLUSION

So far, we have talked about financial literacy level and assessed it for each responded member state. We can conclude that financial literacy is low even in initial issues related to the capital market. A disappointing matter is that our survey conducted among retail active investors whose financial literacy should be higher than ordinary people or even non active investors. we should emphasize again on the importance of financial literacy. Globally, many international and national organizations have recognized the importance of this phenomenon. However, most of initiatives have been conducted generally not in a professional market. Although we are good in some financial concepts, we are awful in some others which are fundamental in the capital market. Therefore, authorities must consider financial literacy improvement their main duty. In order to improve financial literacy, there are many steps authorities should take. Whenever they will be ready they have to search for the next step toward financial literacy improvement.

As chair of the financial literacy taskforce, we have suggestions in order to facilitate future initiatives and conduct more practical tasks. Sections of this chapter are dedicated to our suggestions for COMCEC CMR Forum.

FINANCIAL LITERACY STEERING COMMITTEE

As it was mentioned earlier, conducting such a research in an international scale consumes hundreds of hours, cost and human resource. There are only two countries decide what should be initiated as the taskforce mandate. However, if there will be a steering committee regarding financial literacy there would be some advantages: 1- it would guarantee participation of more countries in the taskforce mandates; 2- views and ideas of countries with different characteristics would be obtained; 3- in case of practical initiatives, the steering committee can

harmonize member authorities to conduct a similar ting. Therefore, our first

FINANCIAL EDUCATION & LITERACY IMPROVEMENT CENTER

In addition to the steering committee, the establishment of a center to conduct financial literacy related initiatives seems necessary. We do not recommend the establishment a new organization but we think related organizations to the capital markets or OIC related organizations can role play as a center for financial literacy improvement. For instance, SESRIC which is Statistical, Economics and Social Research and Training Center for Islamic Countries can role play as a center to improve financial literacy. However, it should be considered in SESRIC policies.

PARTICIPATION OF INTERNATIONAL ORGANIZATIONS AND COMCEC COMMITTEES

As you know, financial literacy is a broad concept which can involve many organizations in national or international scale. Not only capital market regulators, but also banking systems regulators, stock exchanges and many other practitioners can involve into the topic. We recommend invitation of related committees and organizations in a joint meeting for their further participation. Since financial literacy is related to poverty alleviation and financial inclusion and many other general concepts, we recommend invitation of following committees and organizations: 1- central banks and monetary authorities; 2- financial cooperation working group; 3- stock exchanges forum; 4- poverty alleviation working group; 5- private sector working group cooperation; 6- IFSB; 7- IDB; 8- INCEIF and other organizations that can contribute to the improvement of financial literacy in OIC members.

CONFRENCE ON FINANCIAL LITERACY

Although we have heard many things about financial literacy, we cannot see harmonized initiatives regarding its improvement. Not only harmonized initiatives but also we have not heard a unified word from authorities in all financial and non-financial markets.

We are informed about holding of High-level conference on global and European trends in financial education in Istanbul. However, we need similar conference regarding financial literacy in OIC members. Indeed, we must shout importance of financial literacy in all financial markets and the necessity of its improvement. Such a conference can inform role players and influential individuals to consider financial literacy as an important policy.

SETTING A SPECIFIC TIME FOR FINANCIAL LITERACY

We should confess that developed countries have initiated many things regarding financial literacy. In order to highlight importance of financial literacy for everyone, particularly for public, it is recommended to set a day or a week for financial literacy as financial literacy day or week. It can be decided in the annual meeting. At this day or week, different programs can be implemented by authorities and even media can be in service of financial literacy. Indeed, if we are going to publicize the importance of financial literacy, setting a specific time for financial literacy can be beneficial.

FINANCIAL LITERACY QUIZ

In order to allow investors to realize their lack of financial literacy, it is recommended to each member country to create a link as financial literacy quiz. There could be some questions with exact answers. The final score shows financial literacy level.

FURTHER ACTIONS OF THE TASKFORCE

There are many things to do. In 2013-2014 we found assessment of retail active investors necessary and implemented our decision. However, the next mandate of the taskforce can be assessment of non-active investors' financial literacy. Moreover, ways of practical cooperation for financial improvement can be assessed too. In addition to further initiatives, we recommend member authorities to choose chairs of taskforces as co-chairs of each taskforce. New taskforce's chairs can apply co-chairs experience regarding each particular topic.

ANNEX I

QUESTIONNAIRE

SECTION A-GENERAL INFORMATION

Q1) **Gender**: 1- Male☐ 2- Female☐

Q2) **Age**:

Q3) **Marital Status**: 1- single☐ 2- Married☐

Q4) **Education Level and Field of Study:**

1-High School Graduate☐ 2- Collage Graduate☐ 3- University Graduate☐ 4- Post Graduate Education☐ 5- Prefer not to Say☐

Field of Study: ……

Q5) what's your job? ……………………………………………………………………………………………..

Q6) How much is your monthly income? ……………………………………………. (In the case of receiving no answer, read below ranges)

1- Lower than 1000$☐ 2- between 1000 and 2000$☐ 3- between 2000 and 4000$☐ 4- between 4000 and 5000$☐ 5- more than 5000$☐

Q7) what is the expected long term and short term return of your investment in stock exchange?

1- Lower than 20%, Lower than 10%☐ 2- More than 20%, Lower than 10%☐ 3- Lower than 20%, More than 10%☐ 4- More than 20%, More than 10%☐ 5-Don't Know☐

Q8) how long have you been Investing in the Stock Exchange?

1- Lower than 1 year☐ 2- Between 1 and 5 years☐ 3- More than 5 years☐ 4- Don't Know☐

SECTION B- KNOWLEDGE AND UNDERSTANDING

Q9) before starting main questions of the research, let me ask you how you assess your financial literacy level?

1- Perfect☐ 2- Appropriate☐ 3- Enough☐ 4- Insufficient☐

Q10) which one of below statements are true or false?

	statement	true	false
a	Risk of buying common stocks of a company is usually more than buying a mutual fund units		
b	Buying stocks is similar to lending money to a company		
c	An investor, who invests money in the stocks of more than 20 firms in different industries, accepts more risk.		
d	Equity is an asset for its holder and a liability for its issuer		
e	Common stock price of a firm which pays dividend is usually more than a firm which doesn't pay dividend.		
f	Mutual funds offer investors a guaranteed rate of return.		

Q11) which of the following securities would you choose?

a) A security with 8 percent return which pays 2 percent at 3 months intervals and expires in a year.

b) A security with 8 percent return which pays 8 percent at the end of the year.

1- a☐   2-b☐ 3- no difference☐ 4- don't know☐

Q12) imagine that you have a one year security with the yield of 20 percent and inflation rate is 22 percent. By selling the security at the end of the year, what you can purchase by your money is:

1- more than today☐ 2- lower than today☐ 3- the same as today☐ 4- don't know☐

Q13) Imagine that you hold a 5 year bond which its return is not guaranteed. If central bank decides to increase interest rate, the price of bond you hold:

1- Will increase ☐ 2- Will decrease ☐ 3- Won't change ☐ 4- Don't know☐

Q14) Imagine that you have bought a common stock of a pharmaceutical firm which imports drugs from abroad. By assuming that the price of pharmaceutical products is fixed by the government, if the rate of exchange increases, the price of shares you hold:

1- Will increase☐ 2- Will decrease☐ 3- won't change☐ 4- there is no relation☐ 5- don't know☐

Q15) If a firm which has issued different securities such as preferred stocks, common stocks, bonds and Sukuk announces bankruptcy, which of the following securities have the least priority to get liability:

1- Ijarah Sukuk□ 2- preferred Stock □ 3- common stock □ 4- bonds□ 5- don't know□

SECTION C- Skill

Q16) which one of the following items have you ever invested in during last 5 years? What are your experiences in investing in each item? What are your reasons to invest in each item?

	Title of Investment	a) I have gained	b) I have lost	c) Re-investment	Reasons of investing
1	stock & subscription right				
2	Sukuk				
3	Bond				
4	Mutual Funds				
5	Stock Futures				
6	Option				
7	ETFs				
8	Convertible Bonds				
9	Currency				
10	Gold				
11	Housing				
12	If you have any other investment products, please list them in the table				

Q17) which one explains difference between ETFs and Mutual funds?

1- ETFs trade in stock exchange□   2- ETFs expenditures are lower than mutual funds□   3- ETFs are tradable during a day□ 4- All of them□ 5- Don't know□

Q18) which of the followings can reduce the risk of stock devaluation?

1- Stock Futures□ 2- Embedded Options□ 3- Mutual Funds□ 4- None of Them□ 5- Don't know□

Q19) in normal situation, which one do you prefer?

1- One million dollar cash today□ 2- One dollar for a month which doubles every day□

Why do you choose this option? …………………………………………………………………………………

Q20) In the case of having the following money, how many percent you would invest in each item in order to maximize your profit?

	Items	a) Do Nothing	b) Currency and Gold	c) Bond or Sukuk	d) Bank Investing Account	e) Stock and Subscription Right	f) Land and House
1	Below 2000$						
2	Between 2000 and 10000 $						
3	10000 to 50000$						
4	More than 50000$						

SECTION D: EDUCATION, INFORMATION & CONFIDENCE

Q21) Which of the following items would lead to stock symbols suspension?

1- When audit or statuary inspector rejects or does not provide any comment regarding the financial statements of listed companies□

2- When company announces adjustment of EPS□

3- When shareholders sue directors due to conflict of interest□

4- When classification of securities of a firm changes from a specific market or board□

Q22) Imagine that a board member of a firm you hold its shares is the director of a company with produce raw materials of the firm. Which one of the following items can be considered as conflict of interest?

1- Buying and selling of stocks by the board member□   2- Voting of the board member in general assembly□
3- Buying raw materials from the company in higher price than market price□   4- Selling the firm products by approval of directors in higher price than market price□ 5- don't know□

Q23) Please specify the importance level of the following items (from 1 to 5 which 1 is the least important and 5 is the most important) on your decisions in regard of buying and selling stocks:

Don't know	Level	title
		a) Transparency of cost of services provided by financial intermediaries
		b) Disclosure of directors and shareholders' conflict of interest
		c) Disclosure of illegal actions of the firm and manipulation of stock prices
		d) Submission of periodic and annual financial statements to shareholders
		e) Disclosure of firms' information which are in expose of bankruptcy

Q24) which one of the following statements is correct about you?

1- I don't have any information about educational resources□

2- I have little information about educational resources□

3- I am aware of educational resources□

4- I have much information about educational resources□

Q25) which of the following resources is the most important one for your decisions?

1- News and information in newspapers and websites□2- Friends/ relatives and family□ 3- Stock prices trends□ 4- Financial statements of firms□ 5- Past performance and reputation of each firm□

Q26) which organization or entity is in charge of settlement in stock market?

1- Market regulator□ 2- Stock exchange□ 3- Central depository company□ 4- Insurance companies□ 5- Don't know□

Q27) Have you ever participated in an educational course? yes□ no□

If yes, would you please specify how this/these course(s) affected on your decisions:

1- Strong effects□ 2- Effected□ 3- Average□ 4- Few effects□ 5- No effect

Q28) Please prioritize 3 items which you apply to acquire information and awareness in regard of capital market...

1- Books/ magazines/ newspapers□ 2- Commercial brochures□ 3- Internet/ websites□ 4- Movies or TV series□ 5- Educational messages□ 6- Educational software□ 7- Animations□ 8- Seminars/ symposiums□ 9- Educational courses□ 10- Computer games□ 11- Others:……………………………………

SECTION E- ATTITUDES

Q29) Imagine that firms A and B which both are active in C industry have issued one year bonds or Sukuk with 20 and 30 percent rate of return respectively. Probability of failure in paying bonds' interest of firm A is 5 percent and firm B is 15 percent. Which one would you choose to invest in?

1- Firm A□ 2- Firm B□ 3- None of them□

Q30) what would you do in case of devaluation of stocks you hold?

1- I will sell stocks immediately after devaluation□ 2- I will wait till the price I bought each stock□ 3- If the future condition of the firm is promising, I will take stocks even below the price I bought □ 4- I will retain stocks anyway□ 5- don't know□

Q31) which of the following statements are correct about you?

1- I have sold all my properties to invest in stock exchange, □ 2- I have sold my properties partially to invest in stock exchange, □ 3- I have used all my savings to invest in stock exchange □ 4- I have used my surplus of income and savings to invest in stock exchange □

Q32) which of the following sentences is correct about you?

	Title
1	I am aware and informed about all financial products and do not need investment advisors.
2	Besides applying the advice of investment advisors, I myself monitor financial statements and price trends of firms.
3	I completely apply whatever investment advisors say.

Q33) please specify to what extent Shariah based atmosphere of capital market and investment instruments is important for you?

1- Extremely important□ 2- Very important □ 3- Neutral□ 4- Somewhat important □ 5- Not important □

ANNEX II

ANSWERS

10a: true

10b: false

10c: false

10d: false

10e: true

10f: false

11:a

12:2

13: 2

14: 2

15: 3

17: 4

18: 2

19: 2

22: 3

26:3

SELECTED SOURCES WE USED TO WRITE THIS REPORT

1- Australia National financial literacy strategy, 2011.

2- Bloom B. S. 1956, Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain. New York: David McKay Co., Inc.

3- Bhushan, Puneet; Medury, Yajulu; 2013, Financial Literacy and its Determinants, International Journal of Engineering, Business and Enterprise Applications 4 (2), pp. 150-160.

4- Cole, S., and G. K. Shastry. 2008. If You Are So Smart, Why Aren't You Rich? The Effects of Financial Education, Financial Literacy and Cognitive Ability on Financial Market Participation. Harvard Business School Working Paper.

5- Crossan, Diana. 2010. "How to Improve Financial Literacy: Some Successful Strategies", Pension Research Council, University of Pennsylvania

6- Dorothy B. Durband, Sonya L. Britt, 2012. Student Financial Literacy: Campus-Based Program Development, Springer New York Heidelberg Dordrecht London

7- Financial literacy & education commission, 2011, "Promoting financial success in the United States: national strategy for financial literacy".

8- FINRA Investor Education Foundation, 2012, Financial Capability in the United States.

9- Friedman, Pamela, 2005, "Providing and Funding Financial Literacy Programs for Low-Income Adults and Youth", Economic Success for Families & Communities.

10- Gallery, Natalie. Newton, Cameron. Palm, Chrisann. 2011. "Framework for Assessing Financial Literacy and Superannuation Investment Choice Decisions", Australasian Accounting Business and Finance Journal, Volume 5.

11- Grifoni, Andrea and Messy, Flore Anne. 2012. "Current Status of National Strategies for Financial Education: A Comparative Analysis and Relevant Practices." OECD Working Papers on Finance, Insurance and Private Pensions, No. 16, OECD Publishing.

12- IOSCO, 2013, "Report on Investor Education Initiative Relating to Investment Services".

13- Kuar, Mandeep; Vohra, Tina; 2012, Understanding Individual Investor's Behavior: A Review of Empirical Evidences, Pacific Business Review International Volume 5 Issue 6.

14- Lerman, R. I., & Bell, E. 2006. Financial literacy strategies: Where do we go from here ? The Urban Institute Opportunity and Ownership Project Report No. 1.

15- Lusardi, A., and O. S. Mitchell. 2006. "Baby Boomer Retirement Security: The Roles of Planning, Financial Literacy, and Housing Wealth". NBER Working Paper No. 12585.

16- Lusardi, Annamaria. Mitchell, Olivia. 2011. " FINANCIAL LITERACY AROUND THE WORLD: AN OVERVIEW", NATIONAL BUREAU OF ECONOMIC RESEARCH, Cambridge.

17- NEW ZELAND National Strategy on Financial Literacy, 2012.

18- OECD, 2005, Improving Financial Literacy: Analysis of Issues and Policies.

19- OECD-Bank of Italy Symposium, 2011, Improving Financial Education Efficiency.

20- OECD, 2013, Advancing National Strategies for Financial Education.

21- OECD/ INFE, 2011, Measuring Financial Literacy: Questionnaire and Guidance Notes for Conducting an Internationally Comparable Survey of Financial Literacy.

22- OECD/ PISA, 2013, PISA 2012 Assessment and Analytical Framework Mathematics, Reading, Science, Problem Solving and Financial Literacy.

23- Pennsylvania Task Force on Economic Education and Personal Financial Literacy Education, 2012, "Report and Recommendations".

24- Rex, Jim, 2009, "Standards, Guidelines and Classroom Resources for the Instruction of Financial Literacy", Office of Standards and Support Division of Standards and Learning.

25- Spataro, Luca. Corsini, Lorenzo. 2013. "Endogenous financial literacy, saving and stock market participation", the Dipartimento di Economia e Management in Pisa.

26- Task Force on financial literacy, 2010, "Canadians and Their Money: Building a brighter financial future".

27- Van Rooij, M., A. Lusardi, and R. Alessie. 2007. Financial Literacy and Stock Market Participation. NBER Working Paper No. 13565.

28- Widdowson, Doug. Hailwood, Kim. 2007, "Financial literacy and its role in promoting a sound financial system", Reserve Bank of New Zealand: Bulletin, Vol. 70, No. 2.