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FINANCIAL LITERACY

Empowerment in the Stock Market

Ali Saeedi and Meysam Hamedi

Financial Literacy

Ali Saeedi • Meysam Hamedi

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Empowerment in the Stock Market

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Ali Saeedi
North Branch (Management and Social Sciences Faculty)
Islamic Azad University
Tehran, Iran

Meysam Hamedi
Securities and Exchange Organization of I.R. Iran
Tehran, Iran

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Introduction: Basics of Financial Literacy

Abstract What makes a good investor or trader in the stock market? 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 are difficult to quantify but vary from one person to the next. By looking at the market closely, two important conclusions can be drawn:

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

Keywords Financial Literacy • Financial Capability • OECD • The World Bank • Decision Making • Financial Market

What makes a good investor or trader in the stock market? There is no magic formula. Successful investors possess a mixture of knowledge, intelligence, skills, common sense, attention to detail, business savvy, wit,

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presence, energy, enthusiasm, interpersonal skills, self-confidence, as well as other attributes that are not only are difficult to quantify but vary from one person to the next. By looking at the market closely, two important conclusions can be drawn:

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By observing the trading floor, it can be seen that investing successfully and properly is a broad and complex business. It takes years to develop a clear understanding of the activities and interactions of all the different areas of 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. The ultimate decisions of investors are what mark them out as different. Some make decisions in a correct manner and others do not (even experienced ones). The way investors make decisions can shape their behavior. Individuals' decisions vary due to various factors; the nature and characteristics of financial markets are among the most important of these. Some have enough knowledge to decide correctly in the market but they do not have enough skill or confidence to make decisions. The bulk of this knowledge is not gained through formal training seminars or classes but through experience and informal explanations. Compare a university student in finance who has come to the floor recently, and an investor who has got more than ten years' experience in the stock market. It would be acknowledged that the experienced investor is more reliable than the university student since the best way to understand the stock market is practice, and it cannot be realized merely through books and training courses. This scenario is broadly similar in other financial markets. Practice can provide the best opportunities for learning. The initial focus of this book clarifies the relationship between education and practice.

Changing the decision-making process and subsequently behavior needs some prerequisites. Experts believe that financial literacy is an essential component of capacity building, ultimately resulting in sound financial behavior. In order to expand on this topic, this book aims to distinguish between similar concepts that are applied interchangeably, review different aspects of financial literacy, its effects on decision-making, factors affecting financial behavior, and what authorities and investors should initiate to improve financial literacy. Above all, two important and basic issues—the role of financial literacy, and what will be changed by its improvement—are discussed throughout. This book mainly reviews initiatives and concepts that both authorities and investors should consider apropos financial literacy improvement. In addition, the central theme of this book and the review of general practices make it applicable for anyone who would like to improve their own financial literacy level.

Prior to reviewing the main topics of the book, it would be helpful to consider the definition and aims of financial literacy. Therefore, the introductory part of this book is dedicated to the definition of financial literacy, its importance, and its goals, which are all essential to answer further questions.

What Is Financial Literacy?

Financial literacy means different things to different people, and this is reflected clearly in the many definitions used in the literature. For some it is a broad concept, including an understanding of economics and how household decisions are affected by economic conditions and circumstances. For others, it focuses quite narrowly on basic money management: budgeting, saving, investing, and insuring. Globally, there are some expressions that are applied interchangeably. Financial education, financial capability, and financial literacy are three important expressions that can be found in the language of international or national organizations. However, this book intends to clarify the definition and role of financial literacy and explain the differences between the various conceptions. In this regard, by reviewing many definitions, we have found specific ones for financial education, financial literacy, and financial capability.

Financial Education The Organisation for Economic Co-operation and Development (OECD) defines financial education as follows:

> "The process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to

> become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being". (OECD 2005)

Financial Capability The World Bank defines financial capability thus:

> "Financial Capability is the internal capacity to act in one's best financial interest, given socioeconomic environmental conditions. It therefore encompasses the knowledge, attitudes, skills, and behaviors of consumers with regard to managing their resources and understanding, selecting, and making use of financial services that fit their needs". (The World Bank 2013a)[1]

Financial Literacy By searching through different definitions to find an appropriate one, it has been found that many of them overlap or combine financial education and financial capability when creating definitions of financial literacy, which results in confusion. The best, clearest and most distinct definition, however, belongs to the OECD:

> "Knowledge and understanding of financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial well-being of individuals and society, and to enable participation in economic life". (OECD 2012)

In addition to the definition of the OECD, the International Organization of Securities Commission (IOSCO) has defined financial literacy as follows:

> Understanding ordinary investors have of market principles, instruments, organizations and regulations.

Obviously, distinction between Financial education, Financial Capability and Financial Literacy is difficult. However, it can be expressed that financial education can be considered as a prelude to financial literacy, and financial literacy as a preface for financial capability. Financial literacy is an intermediary concept which can be viewed as an internalizing process for financial education. Besides, financial education is an instrument for improving financial literacy (which can be viewed as programs, courses, seminars, and so on) and ultimately, financial capability is the result of financial literacy and focuses on the decision-making process. However, it seems that the definition of the OECD includes the IOSCO definition. Therefore, the main definition adopted in this respect is the one asserted by the OECD. As a conceptual model, the capability process is illustrated in Fig. 1.

This separation is a roadmap for all stakeholders (from investors/customers to authorities) to understand their positions regarding financial literacy improvement. In addition, it briefly shows the consequences of financial literacy. As is clear, the ultimate outcome of financial literacy might be changing financial behavior. However, this is not a certain result because investors' behavior is influenced by several factors. While most conventional economic theories are created and used under the assumption that all individuals taking part in an action/activity are behaving rationally, behavior observed in financial markets (particularly in stock markets) is different. People naturally tend to show a mixture of rational and irrational behavior since their decisions are affected by knowledge, attitudes, characteristics, emotions, intuition, economic status, political conditions, and many other factors. People show different responses under different conditions. Therefore, the ultimate result of financial literacy cannot be guaranteed. This might be facilitated by an example, as follows.

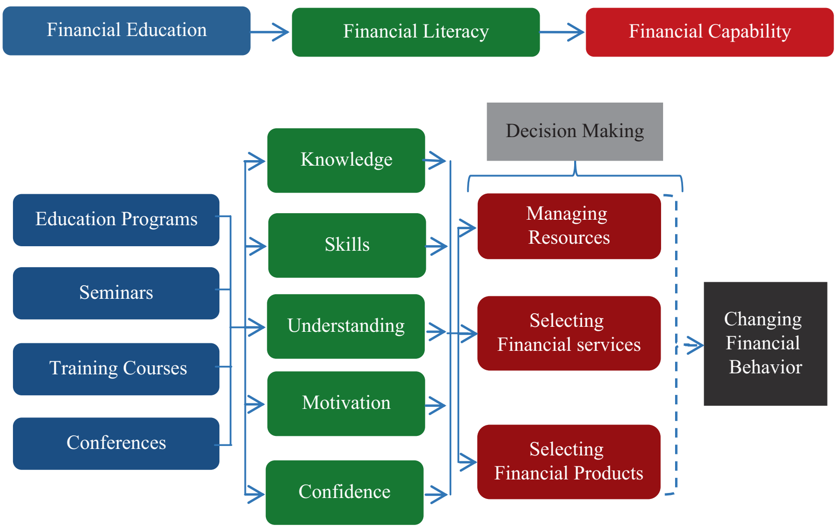

Fig. 1 A conceptual model for the capability process

A 'bank run' is a phenomenon that arises in banking system crises. It happens when customers overestimate the likelihood of a bank's failure and rush to the bank in order to withdraw their deposits. For example, consider a knowledgable customer who knows a bank fundumentaly is in an appropriate situation. However, as other customers run to the bank, the customer will do the same in fear of losing his\her assets and subsequently intensify the crisis at the bank. It can be concluded that while the customer is financially literate, he/she is not immune to irrational behavior (Chap. 1 covers behavioral finance issues and clarifies the specific role of financial literacy in financial markets). In the language of behavioral finance, is called *herding behavior*. It can be observed that the financial literacy of the customer did not prevent them from behaving irrationally.

Returning to the definition of financial literacy and the graph above, financial literacy can be considered to be a transition phase. As mentioned earlier, financial literacy is an intermediary process to transform investors' education into ability. However, there is a key point in the transition process: 'investors can only transform their education into ability within practice.' Based on this fact, the middle part of Fig. 1 can be changed as follows:

As Fig. 2 indicates, while the definition of financial literacy contains five components, the correct arrangement of financial literacy components must result in confident decision-making. Those who are not confident cannot decide, and even if they do, they would be unsure (skill leads to decision-making, but when it is not made confidently, the result is doubted and the decision-maker may flinch from his/her responsibilities). Therefore,

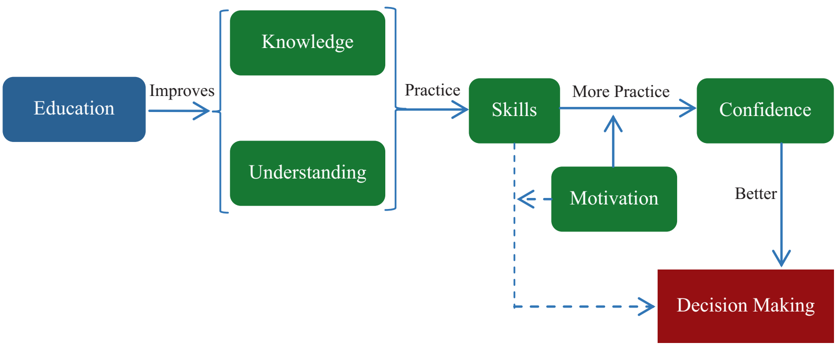

Fig. 2 Details of the financial literacy process

put simply, the initial role of financial literacy is creating confidence. In the capability process, education is the fundamental instrument, and capability is the result of initiatives.

By providing essential knowledge and understanding, as an old saying goes, those investors and customers who are equipped with a fishing rod and tackle can practice fishing. Through more practice, their learning will change into skill. When they catch a fish, they will be motivated to catch more. And ultimately, their struggle over a period will bring them confidence in fishing. Even on rainy or stormy days, they are confident and can rely on their abilities. At this stage, they make decisions smoothly; however, correct decision-making is not assured. As already mentioned, it depends on many factors (Chap. 1 covers situations and behavior in which investors do not accept responsibility for their own decisions). Participation in economic life and the improvement of investors' well-being is possible only when they are confident enough to make decisions. To summarize and emphasize the position of financial literacy, it should be noted again that financial literacy is the transition phase of education into capability.

Importance of Financial Literacy

"[Y]oung people are leaving school without the basic skills to manage their personal financial affairs, putting them at a high risk for not being able to plan responsibly for their financial future" (Howlett et al. 2008). As well as young people, families are also at high risk of not being able to plan for the future. Many families feel a high level of financial anxiety and are looking for answers. Their anxiety is rooted in the complexity and variety of financial products and their lack of financial literacy. In order to obtain competence in financial literacy, investors must understand the problems faced in the marketplace. They must be trained to discern the best way to protect them from becoming victims of financial ignorance. This ignorance can be relieved through financial education, and consequently, improving financial literacy.

The origin of financial literacy can be traced to the Smith–Lever Act in the USA. In 1914, the Smith–Lever Act created the Cooperative Extension Service in the USA to provide learning experiences that would develop the skills that people needed at home, on the farm, and in their community, including financial skills. Since that time, many initiatives aimed at helping personal finance have taken place around the world. However, the concept of financial literacy mainly evolved in the liberalization or deregulation of the financial markets in 1998.

The first international initiative targeted at financial literacy improvement was conducted by the OECD. It started an intergovernmental project in 2003 with the objective of providing ways to improve financial education and literacy standards through the development of common financial literacy principles. However, undoubtedly, the financial crisis of 2007–9 can be considered as a turning point for the need to pay more attention to the concept of financial literacy. Financial liberalization led to the eruption of many products, particularly derivatives. Diversification of products and investment opportunities for investors encouraged them to take positions on products that were unknown in nature. These products were too complex to understand and, because of their diversity, investors could not grasp them at all. They did not know what products they were investing in. For instance, according to the International Swaps and Derivatives Association, in 2007 there were $62.2 trillion Credit Default Swaps (CDSs) outstanding, issued on only $25 trillion underlying assets around the world. Experts blame CDSs as a reason for inflaming and intensifying the 2007 crisis. However, CDSs should not be blamed but rather investors. Why? They took positions on these kinds of products without sufficient knowledge. The crisis revealed their mistakes and their ignorance regarding the risks inherent in those products.

Financial literacy is increasingly taking precedence 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 2013b). As already mentioned, this priority has been highlighted and pursued since 2007 by officials and policymakers. It is now recognized that financial literacy is an important factor for financial stability and a way to avoid the occurrence of a probable future crises. Policymakers are increasingly using surveys as diagnostic tools to identify key problem areas and inform the design of national strategies. According to the OECD (Grifoni and Messy 2012), at least 36 countries have established, or are in the process of designing, a national strategy for financial education. Moreover, 80% of these countries have used a survey as a diagnostic method to identify the key priorities for their national strategies.

There are several main reasons for the importance of financial literacy:

- ***Complexity of products and markets***: As discussed, there are many complex products in the world of finance that are hard to understand, even for experts and professionals. Securitization of different assets and hybrid products, derivatives, and even stock market products are numerous, which makes it impossible for an individual to have complete understanding. Financial education and subsequently financial literacy could contribute to understanding the basics of these products and their inherent consequences.

- ***Different institutions providing financial services***: Nowadays, there are many institutions providing financial services. Not only are banks on the scene, but also private institutions and many other companies offer similar products and services, so identification of them and what they offer is really difficult. Financial literacy can help investors to understand services provided by institutions and help them to avoid fraud.
- ***Investor protection***: It is always cited that literacy is a kind of protection. Undoubtedly, a person who is equipped with literacy can protect himself/herself more appropriately than an illiterate person. This self-protection is even beneficial for authorities, whose most important goal is protecting retail investors.
- ***More responsibility taken by investors***: After the great recession and financial markets' liberalization, more responsibility has been put on the shoulders of investors. They were compelled to make decisions about financial life. Financial literacy can help them make decisions properly.
- ***Importance of risk and return***: If not the most, then one of the most important concepts in the financial market is the implication of risk and return. Its importance led the OECD to add 'risk' in particular, to the definition of financial literacy. Since financial literacy is associated with investors, understanding the implications of real and perceived risk takes importance. Generally, perceived risk is negative, and is the unexpected consequences a consumer or an investor fears may occur as a result of making the wrong decision. The greater the perceived risk, the more likely it is that the investor will seek information about the product and the recommendations and experiences of peers before making a decision. An educated and self-confident individual is less likely than others to perceive risk. Since the input of financial literacy is education and the result is confidence in decision-making, it can be concluded that financial literacy can approximate perceived risk and real risk. Moreover, by understanding the risk and

return concept, investors might accept responsibility for their own decisions.

- ***Changing the structure and architecture of regulatory and supervisory regimes***: After the 2008 crisis, the regulatory structure and architecture of financial systems has changed dramatically in some economies. For instance, the most well-known change took place in the United Kingdom where the Financial Services Authority was replaced by two separate organizations: the Prudential Regulatory Authority and Financial Conduct Authority. One of the main concerns regarding these authorities was people's understanding regarding the task separation between the two. Financial literacy can help investors and customers apropos changes through the dissemination of information.
- ***Stability of local markets***: Many experts blamed poor financial literacy as a reason for distress in local markets. By knowing fundamental concepts and improving knowledge practically, however, the likelihood of emotional reactions might be reduced and investors would behave more rationally. Therefore, rational behavior of investors in normal situations can be one of the main results of financial literacy improvement.
- ***Better planning for the future***: Financial literacy is not dedicated only to the stock market. It is a broad concept that includes all financial markets (banking, insurance, and capital markets). Decision-making in financial markets is intertwined with long-term planning. In the insurance market, for instance, policyholders face long-term planning for retirement. Therefore, improvement of knowledge and ultimately confidence resulting from the financial literacy process can contribute to better choices in planning ahead.
- ***Global trend toward financial literacy improvement***: These days, different international and national organizations are working to improve financial literacy. Authorities in different economies have recognized the importance of financial literacy and are cooperating to alleviate its restrictions and barriers.
- ***Financial literacy as a right***: While financial literacy is a protective measure, it also is a definite right of individuals. Alleviating illiteracy is thus an important responsibility on the shoulders of not only governments, but also institutions and educated people.
- ***Connection between markets***: The interconnection between banking, insurance, and capital markets cannot be ignored. Not only

these markets, but also international markets in the global scene are intertwined. Improving financial literacy can enhance investors' understanding in respect of interrelated and international markets and help them to improve decision-making among local and international products.

- ***Importance of capital market in views of households***: Many economies are essentially bank based. Some of these economies are transforming from bank-based to market-based, or financial services-based economies, or even giving more responsibility of financing to the capital market. This transition requires some important elements, one of which is financial literacy since it will enable retail and institutional investors to gain familiarity with the capital market.
- ***Cross-border investment***: This is a mutual relationship between corporations looking for financing opportunities out of borders and investors who seek investment opportunities. An important factor in this relationship is the necessity of acquiring enough knowledge about destination markets. This is the point at which financial literacy can play an effective role. Both corporations and individuals can enjoy a higher financial literacy level by making increasingly more stable and appropriate decisions.

There could be more reasons for the importance of financial literacy, but those mentioned are the most crucial. In the following chapters, the methods and ways of improving financial literacy and the appropriate initiatives authorities can carry out to improve financial literacy among investors are addressed. These will all be introduced through some prioritized questions, which must be answered before any actions can take place. These questions are dedicated to all financial markets. However, the authors' approach in writing this book is focused on the capital market. Each chapter reviews one dimension associated with financial literacy improvement and gives examples of practices from around the world.

Financial Literacy Around the World

It is really difficult to find a global-sized survey assessing the level of financial literacy that shows where the world stands. However, the Standard & Poor's 2015 Ratings Services Global Financial Literacy Survey can be considered as a global measurement of financial literacy. It probes knowledge of four basic financial concepts: risk diversification, inflation, numeracy, and interest compounding. The survey is based on interviews with more than 150,000 adults in over 140 countries. In 2014, McGraw-Hill Financial worked with Gallup, Inc., The World Bank Development Research Group, and Global Financial Literacy Excellence Center (GFLEC) on the S&P Global FinLit Survey.

A person is defined as financially literate when he or she correctly answers at least three out of the four financial concepts described above. The definition is chosen because the concepts are basic and this is what would correspond to a pass grade. Based on this definition, 33% of adults worldwide are financially literate. This means that around 3.5 billion adults globally, most of them in developing economies, lack an understanding of basic financial concepts. These global figures conceal deep disparities around the world (Fig. 3).

The countries with the highest financial literacy rates are Australia, Canada, Denmark, Finland, Germany, Israel, the Netherlands, Norway, Sweden, and the United Kingdom, where about 65% or more of adults are financially literate. Ats the other end of the spectrum, South Asia is home to countries with some of the lowest financial literacy scores, where only a quarter of adults—or fewer—are financially literate. Not surprisingly, financial literacy rates differ enormously between the major

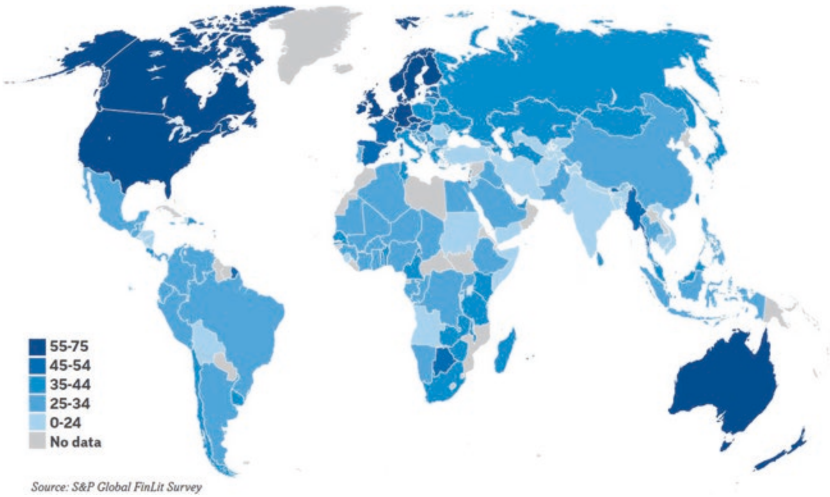

Fig. 3 Global variations in financial literacy (% of adults who are financially literate)

advanced and emerging economies in the world. On average, 55% of adults in the major advanced economies—Canada, France, Germany, Italy, Japan, the United Kingdom, and the USA—are financially literate. But even across these countries, financial literacy rates range widely, from 37% in Italy to 68% in Canada. In contrast, in the major emerging economies—the so-called BRICS (Brazil, the Russian Federation, India, China, and South Africa)—on average, 28% of adults are financially literate. Disparities exist among these countries, too, with rates ranging from 24% in India to 42% in South Africa.

Financial literacy rates differ in important ways when it comes to characteristics such as gender, education level, income, and age. Worldwide, 35% of men are financially literate, compared with 30% of women. While women are less likely to provide correct answers to the financial literacy questions, they are also more likely to indicate that they 'don't know' the answer, a finding consistently observed in other studies as well.

This gender gap is found in both advanced economies and emerging economies. Women have been found to have weaker financial skills than men even considering variations in age, country, education, and income. Wealthy adults have better financial skills than those who are poor. Of adults living in the wealthiest 60% of households in the major emerging economies, 31% are financially literate, against 23% of adults who live in the poorest 40% of households.

Worldwide, just one in three adults shows an understanding of basic financial concepts. Although financial literacy is higher among the wealthy, well educated, and those who use financial services, it is clear that billions of people are unprepared to deal with the rapid changes in the financial landscape. Credit products, many of which carry high interest rates and complex terms, are becoming more readily available. Governments are pushing to increase financial inclusion by boosting access to bank accounts and other financial services but, unless people have the necessary financial skills, these opportunities can easily lead to high debt, mortgage defaults, or insolvency. This is especially true for women, the poor, and the less educated—all of whom suffer from low financial literacy and are frequently the target of government programs to expand financial inclusion (Klapper et al. 2015).

Although the survey considers financial literacy as a broad concept, the situation in the capital market may be similar. There are country-wide surveys that show the level of financial literacy in the capital market. However, the majority of them reveal a lack of financial literacy even among active investors. A major objective of this book is to introduce financial literacy and what should be considered in the way of its progress.

Overview of Contents

This book provides an overview of the current issues associated with financial literacy improvement. In selecting and structuring the material for inclusion, the primary criterion has been the applicability of topics and recommendations and accuracy of trends toward a better level of financial literacy. Each chapter is dedicated to a particular component of financial literacy (from education to capability).

Throughout the book, there are many practices initiated around the world that, regardless of their superiority, are all useful initiatives and can serve as a guiding light in the road to improvement for both investors and authorities.

This book is not only applicable for authorities who aim to improve financial literacy (and subsequently financial capability) among individuals, but also for those investors who seek to enhance their own financial literacy. There are basic questions that must be answered in order to clarify the financial literacy improvement process. These are:

- Who should be educated?
- What is the current and desired level of financial literacy?
- What are the current and outstanding educational programs?
- Which topics and issues should be taught?
- What is the best method of education?
- What are the best delivery methods?
- When should training be started? And finally,
- What actions should be taken by national and international organizations and investors, in respect of financial literacy improvement?

The book is dedicated to answering these questions.

Layout

The ordering of the material across the whole book has been designed so that readers with different backgrounds can apply them for their improvement in financial literacy. The authors believe that by reading the book in sequence readers can achieve the best result since each chapter is dedicated to introducing one component of how financial literacy can be improved. However, the structure of each chapter is designed in such a manner that readers can go directly to chapters that interest them the most.

Chapter 1: Financial Literacy and Behavioral Finance
The book begins by considering the ultimate goal of financial literacy, which is linked to an important question: 'what is the relationship between financial literacy and financial behavior?' Indeed, before reflecting on how to improve financial literacy, there must be a clear view on how doing so would change investors' behavior. The most important points covered in this chapter are those introducing a discussion of behavioral biases of investors in financial markets, and the paradox between financial literacy and the main principals of financial markets. In light of these considerations, the chapter suggests some adjustments regarding the ultimate goal of financial literacy and the ways in which it can change the financial behavior of investors.

Chapter 2: Who Should Be Educated?
One important aspect of performing financial literacy improvement initiatives is to determine the individuals who should be educated. There is a variety of target groups that are the focus of authorities. Even if investors can obtain tailored educational materials by understanding which group they belong to. This chapter identifies the main target audiences that might be in the spotlight of financial education programs, clarifies the importance of variation among groups, and introduces practices aimed at different target groups.

Chapter 3: Which Delivery Method, Which Topic?
Determination of the delivery methods that favor investors' interests is of the utmost importance. Undoubtedly, learning styles in pedagogy are different from andragogy and each one requires different delivery methods. In addition, this chapter aims to review some basic financial concepts that are essential for investors. More sophisticated Financial concepts are also introduced.

Chapter 4: Financial Literacy Level
In the improvement of financial literacy, an important factor that should be considered in order understand the current state of affairs is the financial literacy level of investors. This would aid authorities and investors in the planning process ahead. Another important question in financial literacy

improvement is how to determine the optimum level. This chapter reviews all the possible steps that authorities and investors can make toward assessing financial literacy levels.

Chapter 5: The Stock Market Atmosphere and Financial Concepts
The most important pillar of financial literacy improvement is investors. Their willingness to understand what they should be aware of in the stock market is highlighted in this chapter. We review sophisticated factors that investors should consider initially in the stock market in order to shape their own decision-making framework. We also introduce macro and micro factors that are rooted in the real economy and specific situation of the market. In addition, this chapter focuses on the main characteristics and, generally, the atmosphere of the market. Overall, we identify the elements that can aid investors to be more intelligent when making decisions.

Chapter 6: Regulators Roles in Financial Literacy Improvement
Throughout this book, the responsibility of authorities is highlighted, but Chap. 6, in particular, addresses regulators as the core of financial literacy improvement initiatives. It starts by considering IOSCO recommendations regarding the responsibility of regulators in the stock market and what they should conduct in respect of financial education, and reviews concepts of strategic planning for financial literacy improvement. As well as regulators, investors can also use the recommendations in this chapter for their own planning.

Chapter 7: Methods of Education
This chapter emphasizes the importance of education methods, introduces different approaches in training, and mentions some points and methods that are applicable in financial education courses. It endeavors to harmonize the training methods and teaching techniques among instructors to improve the effectiveness of educational courses or programs. The main theme of this chapter will focus on andragogy training schemes.

Conclusion: It Is Never Too Late to Mend
The last chapter of the book summarizes the previous chapters and mentions the remaining considerations that authorities, and even individuals, should note. It starts with controlling functions for financial literacy

improvement and finishes with the pentagon of cooperation in financial literacy improvement.

This book propounds the view that financial literacy can be improved through the various initiatives it outlines for authorities and individuals.

Notes

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Chapter 1 Financial Literacy and Financial Behavior

Abstract The book begins by considering the ultimate goal of financial literacy, which is linked to an important question: 'what is the relationship between financial literacy and financial behavior?' Indeed, before reflecting on how to improve financial literacy, there must be a clear view on how doing so would change investors' behavior. The most important points covered in this chapter are those introducing a discussion of behavioral biases of investors in financial markets, and the paradox between financial literacy and the main principals of financial markets. In light of these considerations, the chapter suggests some adjustments regarding the ultimate goal of financial literacy and the ways in which it can change the financial behavior of investors.

Keywords Financial behavior • Bias • Financial well-being • Herding • Overconfidence • Decision-making behaviors

Introduction

Consider investors A and B who, respectively, have invested in stocks of XYZ (a manufacturing company) and ABC (an oil company). Both are knowledgeable and have enough information about investment. During the previous few years, both have been winners and the price of their stocks has increased on average. Investor A estimates that the XYZ stock

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will continue its improvement sharply in the near future due to the effectiveness of the corporation's performance and investor B estimates that the ABC stock will decline because of the poor performance of the company and the new environment of competition in the petrochemical industry. Consequently, investor A decides to hold his stock and investor B decides to withdraw. However, market movements ruin their estimations. The XYZ stock starts declining due to bad news about the company and in a few days its price decreases by more than 10%. While other participants estimate the prospect of the stock will be worse, investor A anchors to a specific price and believes that the stock will return. He always places great emphasis on his confidence and experience, which has led him to the best decisions and consequently he avoids consultations with advisors.

On the other hand, news of war in the Middle East increases the oil price and subsequently investors—without paying attention to the fundumentall information of petrochemical companies—run to buy their stock. Therefore, the excess of demand leads the stock prices to increase (in the petrochemical industry) and the price of the ABC stock will not be an exception. Although investor B, based on his fundamental analysis, knows that the ABC stock is not an appropriate investment to hold, he decides to ride the wave and starts buying more ABC shares of stock. He deliberately does so in order to maximize his profit. After a predetermined subjective period, he sells his position and gets out of the market. He enjoyed success from self-herding behavior (when investors deliberatly ride on waves) and transformed a loss into an achievement.

Loss and gain stories are a constant phenomenon in financial markets and two sides of the same coin in the stock market in particular. Sometimes, these stories are highly regarded as examples of different financial decision-making. However investors in the example above showed irrational behavior, which resulted in different outcomes. Anchoring (see below), overconfidence, loss aversion, and self-herding behaviors (or biases) are evident in their decisions. An important point is that both investors were financially literate but acted against their own knowledge and understanding. The main questions, meanwhile, are how financial literacy can justify their decisions and what is the role of financial literacy in investors' behavior?

This chapter focuses on the role of financial literacy in changing financial behavior and aims to answer the following questions:

1. What does financial behavior mean?
2. What are the most significant biases in the capital market?

3. How does financial behavior affect financial well-being?
4. What are the effects of financial behavior on the graph definition of financial literacy?

What Is Financial Behavior?

Conventional and modern financial theories assume that people are, for the most part, rational decision makers and they are predictable. The rationality assumption is mainly applied in the Efficient Markets Hypothesis and the Capital Asset Pricing Model. In addition, however, there are different occasions and many instances where emotion and psychology influence investors' decisions, causing them to behave in unpredictable or irrational ways. The irrationality of investors showed that theories are subjective and a new concept of *financial behavior* emerged to explain how modern finance had failed.

In order to define financial behavior in the stock market, it would be useful to define the concept of *behavior* itself in this context. Behavior is the "actions or reactions of a person in response to external or internal stimuli." In addition, the field of investor behavior attempts to understand and explain investor decisions by combining the topics of psychology and investing on a micro level (i.e., the decision process of individuals and groups) and a macro perspective (i.e., the role of financial markets). The decision-making process of investors incorporates both a quantitative (objective) and qualitative (subjective) aspect that is based on the specific features of the investment product or financial service. Investor behavior examines the cognitive factors (mental processes) and affective (emotional) issues that individuals, financial experts, and traders reveal during the financial planning and investment management process. In practice, individuals make judgments and decisions that are based on past events, personal beliefs, and preferences (Ricciardi 2014). Therefore, financial behavior in the stock market can be defined simply as follows:

> *Financial Behavior describes the actions or reactions (decisions and judgments) of investors during financial planning and the investment management process in response to external or internal stimuli in the stock market.*

Behavioral finance seeks to combine psychological theories with conventional economics and finance to provide explanations for why people behave irrationally in financial matters. It is the study of why individuals do not always make the decisions they are expected to and why markets do not reliably behave as they are expected. However, does behavioral finance go beyond exposing the irrationality of investors and offer solutions? For instance, does it provide tools that professional investors can employ to overcome behavioral biases such as groupthink or conformity? Indeed, it is unlikely to find a 'cure' for bias, but if investors are aware of biases and their effects, they can possibly avoid major pitfalls. Behavioral finance holds the prospect of a better understanding of financial market behavior, and scope for investors to make better investment decisions based on an understanding of potential pitfalls.

Prior to explaining the role of financial literacy in financial behavior, it would be useful to review the most significant and well-known biases that investors show in the stock market.

Financial Behavior Biases

Research in psychology has found a range of decision-making behaviors called biases. These biases can affect all types of decision-making but have particular implications in relation to money and investing. The biases relate to how investors process information to reach the decisions and preferences they have (Shefrin 2000). Bias is defined as an unreasoned judgment. There can be many forms of biases that should be introduced. As a fundamental part of human nature, these biases affect all types of investors, both professional and naive. However, if they and their effects can be understood, investors may be able to reduce their influence and learn to work around them. This section introduces the most important biases which are shown by investors (not the market or market components). At the end of this section, all biases introduced by the International Organization of Securities Commission (IOSCO) are mentioned in Table 1.1.

Overoptimism

Optimism is defined as hopefulness and confidence about the future or the success of something. People generally tend to exaggerate their own abilities. For example, people tend to rate their driving as being better than others. This notion is found it to be more evident in men. Overoptimism is a cognitive bias, according to which people in certain situations believe that the outcomes of events are better for them than for others (Frey and Stutzer 2002). To clarify the bias in the stock market, assume a risk averse investor who always avoids putting his eggs in one basket. However, due to an error in instinct and overestimation, the investor sells off his/her positions and concentrates on only one basket/investment. The investor thinks that the market will behave in his/her interest.

Overconfidence

Overconfidence is overestimating or exaggerating one's ability to successfully perform a particular task. Psychologists believe that the brain is probably designed to make decisions with as much certainty as possible, after receiving little information. Investors make decisions based on information and analysis. Therefore, it is not surprising that overconfidence is a widespread phenomenon in the market. Overconfidence and optimism make a potent combination. They lead investors to overestimate their knowledge, understate risks, and exaggerate their ability to control situations (Montier 2002).

Another aspect of overconfidence is that people tend to make judgments in uncertain situations by looking for familiar patterns and assuming that future patterns will resemble past ones, often without sufficient consideration of the reasons for the pattern or the probability of the pattern repeating itself (Shiller 2005). Chartists, or technical analyzers, make little or no reference to the fundamental characteristics of a company but focus instead on the analysis of the historical movements of the stock price. The underlying concept of technical analysis is that certain patterns of price movements in financial assets repeat in predictable ways, and that these patterns can be identified by analyzing the graph of the evolution of the asset price over time (Tagliani 2009). Although many investors use these patterns and gain higher profits, it could be a reason for widespread overconfidence in the stock market. Good examples of overconfidence bias are when investors do not amend their information when there are signs of change in a situation or when investors do not tend to consult with financial advisors because they feel that have enough knowledge and information.

It is frequently asserted that overoptimism and overconfidence stem from the *illusion of control* and the *illusion of knowledge*. The illusion of knowledge is the tendency for people to believe that the accuracy of their forecasts increases with more information. Investors forget that it is not the amount of information but its applicability and accuracy which help them in their decisions. The illusion of control refers to people's belief that they have influence over the outcome of uncontrollable events. Information once again plays a role. The more information investors have, the more control they feel (Montier 2002).

Cognitive dissonance

Cognitive dissonance is used to describe the feelings of discomfort that result from holding two conflicting beliefs. In essence, it happens when people face something that contradicts their belief, attitude, or behavior. For instance, when people smoke (behavior) and they know that smoking causes cancer (cognition). The cognitive dissonance theory suggests that people have an inner drive to hold all their attitudes and beliefs in harmony and avoid disharmony or dissonance (Festinger 1962). A good example of cognitive dissonance in the stock market is when an investor aims to buy a stock at $50 since its current price is $55 (based on his/her analysis, the current stock price will decline). However, in contrast to the investor analysis, the stock price starts going up and reaches $60. The behavior of the stock price leads the investor to buy the stock at $60 in order to reconcile his/her cognitive dissonance.

Confirmation bias

Confirmation bias (or confirmatory bias) is a cognitive bias and is defined as a tendency to search for, or interpret, information in a way that confirms one's preconceptions. Confirmation bias impacts how people collect information. It also influences how people interpret and recall information. For example, people who support or oppose a particular issue will not only seek information that supports their beliefs, they will also interpret news stories in a way that amplifies their existing ideas and remember things in a way that also reinforces these attitudes. For instance, assume an investor who thinks that a company will be bankrupt in the near future (based on rumors) and ignores information about a new product of the company. He/she only pays attention to stories about the bankruptcy and ignores the rest, and finally sells off his/her position.

Conservatism bias

Conservative bias is cognitive, and known as *afraid of change*. It is a process in which investors cling to their prior views or forecasts despite new contradictory information, or they only partially adjust their view in light of new information. For instance, assume an investor receives bad news regarding a company's earnings and that this news contradicts another earnings estimate issued the previous month. It would cause the trader to underreact to any new information, maintaining impressions derived from the previous estimate rather than acting on updated information. Psychologically, it is really hard for many people to move away from their own views. When movement occurs, it is only very slow.

It should be emphasized that this bias creates an underreaction of investors to events or new information.

Self-attribution bias

Self-attribution bias or self-serving bias refers to the tendency of investors to attribute their successes to inherent aspects, such as talent, while more often blaming failures on outside influences, such as bad luck. When trade is profitable, investors tend to think that their method or analysis was weird, and that they are good traders. When trade ends with loss, people will blame anything but themselves.

Hindsight bias

This refers to the tendency people have to view events as being more predictable than they really are. After an event, investors often believe that they knew the outcome of the event before it actually happened. Therefore, people tend to overestimate the accuracy of their own predictions. This affects future forecasting, because a person subject to hindsight bias assumes that the outcome he or she ultimately observes is the only outcome that was ever possible. One detriment of hindsight bias is that it can prevent learning from mistakes. For example, an investor buys shares of stocks based on feeling. After a day, stock prices skyrocket and the investor announces that he/she knew it (or predicted it). It would lead the investor into overconfidence bias and to ignore different factors in similar situations in the future.

Representativeness

People tend to relate past experiences to present and future events. They classify characteristics of a past event in their mind and match them with what is occurring now or later. With no exception, investors believe that past returns or events are indicative or representative of future returns or events, ignoring the presumptive nature of future outcomes. Representativeness bias is a decision-making process based on stereotypes. In other words, people assess the occurrence probability of an event based on its similarity with observed past events (Barbazon 2000). For instance, assume a new offering in the banking sector results in a very large return. If there is new offering in the sector which resembles the previous one, investors would run to buy the company's shares of stock. Based on similarities between both stocks, representativeness bias leads investors to expect a similar return.

Recency bias

Psychologically, it is a recognized phenomenon that when people are asked to recall items on a list in any order, those that come at the end of the list are more likely to be recalled than the others. Indeed, when evaluating or judging something, people tend to focus on what happened recently. In the stock market, this occurs when participants evaluate their portfolio performance based on recent results or on their perspective of recent results and so come to wrong conclusions that ultimately lead to incorrect decisions about how the stock market behaves.

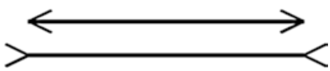
Anchoring bias

This term is used in psychology to describe a common human tendency to rely too heavily, or 'anchor,' on one trait or piece of information when making decisions. It occurs when investors make a decision or evaluation based on the first piece of information they receive. Their first impression acts as an anchor, or reference point, to which all subsequent and related information is compared. As an example, imagine an investor who bought stock at $200 one year ago and received new information about its performance recently. The investor is now assessing whether to buy, hold, or sell his stock. In recent months, due to the dissemination of positive information about the company's profitability, the price of the stock increased to $300. However, after a while, it was revealed that the profitability of the company was a delusion held by the company's managers. Consequently, the price of the stock declined to $210. Now, the investor sees $90 loss for each share of stock and decides to hold the stock until it returns to $300. The price is the anchor point on which the investor focuses.

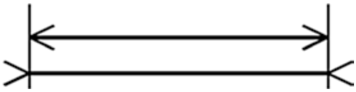
Framing effect (or bias)

People react differently when a choice is presented as a loss than when it's presented as a gain. People exhibit a general tendency to be risk seeking when confronted with negatively framed problems and risk averse when presented with positively framed problems (Gonzalez et al. 2005).

When information is presented, people are not very good at seeing through how it is presented. They tend to take things at face value rather than drilling down to the details. As a well-known example in psychology, consider the lines below, and ask yourself, which is longer?



At first glance, the majority of people would choose the second one. However, as the picture makes clear, both lines are exactly the same length. People fail to see through the way in which the lines are presented. This inability to see beyond how things are presented is called *narrow framing* (Montier 2002).



As a financial example, consider the research conducted by Tversky and Kahneman in 1979. They assumed an investor who faces two of the following options simultaneously:

First Option

A: $240 realized profit,

B: $1000 profit with 25% probability and no profit with 75% probability.

Second Option

A: $750 realized loss,

B: $1000 loss with 75% probability and no loss with 25% probability.

The result of their research revealed that 84% of respondents chose A in the first option and 87% of respondents chose B in the second option. Their observation that the decision frame depends on how a problem is formulated, and the individual characteristics of the decision maker has powerful implications for financial decision- making. An investor's perception of a choice may change by manipulating the presentation of information (Kahneman and Tversky 1979).

Availability bias

Availability bias judges the probability of events by how quickly and easily they can come to mind. People make decisions based on the knowledge that is readily available in their minds rather than examining all the alternatives. Recent memory makes a prospect more available and therefore it seems more likely. Researchers found that people were likely to overestimate the chances of being in a car crash if they had seen a car crash on a recent journey. To give a financial example, investors are more likely to be fearful of a stock market crash when one has occurred in the recent past.

Loss aversion

In the literature of financial behavior, the tendency to avoid loss (loss aversion) is replaced by the tendency to avoid risk (risk aversion). Investors are not always risk averse but generally loss averse. Classic financial theories focus on the trade-off between risk and return. "The greater the risk, the greater the return" is something that all investors have frequently heard. Therefore, when they take a risk, they expect a higher return. In classic finance, investors take positions based on their risk tolerance. However, behavioral finance suggests that investors are more sensitive to loss than to risk and return. Individuals have a strong aversion to losses (loss aversion) when holding constant risk parameters. People weigh losses about twice as much as gains, so that $100 gained does not neutralize $100 lost (Kahneman and Tversky 1979).

The idea of loss aversion also includes the finding that people try to avoid locking in a loss. Consider an investment bought for $1000, which rises quickly to $1500. The investor would be tempted to sell it to lock in the profit. In contrast, if the investment dropped to $500, the investor would tend to hold it to avoid locking in the loss. The idea of a loss is so painful that people tend to delay recognizing it (Barber and Odean 1999).

Endowment bias (effect)

People tend to value an asset more when they own it, as compared to when they do not. Psychologists assert that based on endowment bias, the minimum price an individual considers to sell an asset (such as stock) is more than the maximum price he/she considers to buy the same asset. In essence, this bias is a mental process in which a differential weight is placed on the value of an owned asset. This bias would lead the investor to an incorrect valuation of their stocks and scheduling a holding period.

Regret aversion bias

Regret is an emotional reaction, a pain felt when facing the negative effects (or the lack of positive effects) of one's own decision or move. Regret aversion is the fear of experiencing the pain of regret. When individuals are authorized to choose between two alternatives, they do not only consider the gain resulting from the chosen option but the loss resulting from not choosing the second option. When investors, under an emotional approach, try to avoid a situation of regret, they might take an even bigger risk.

Mental accounting bias

Accounting is "the system of recording and summarizing business and financial transactions in books, and analyzing, verifying, and reporting the results." Individuals and households also need to record, summarize, analyze, and report the results of transactions and other financial events. They do so for reasons similar to those that motivate organizations to use managerial accounting: to keep track of where their money is going, and to keep spending under control. Mental accounting is the set of cognitive operations used by individuals and households to organize, evaluate, and keep track of financial activities (Thaler 1999). It refers to the tendency for people to divide their money into separate accounts based on criteria such as the source and intent for the money. Accounts can vary in risk tolerance; investing some in risky assets for gain while treating others more conservatively. However, individuals do not have stability and compatibility in making investment decisions. Inconsistency in people's emotions results in changes in utility. In other words, there is no consistent utility model for individuals. This natural tendency to create mental accounts causes investors to focus on the individual account rather than thinking broadly, in terms of their entire wealth position.

Herding behavior

Herding means to move in a group. It is the tendency to imitate the actions of a larger group. It can be divided into two forms: *Rational* and *Irrational*. In rational herding behavior, individuals rationally follow others' decisions, as individuals' actions reveal private information to others. In irrational herding behavior, individuals follow the herd due to cognitive or emotional biases. In the stock market, investors observe other investors' buy-or-sell decisions and then decide whether to invest. They ignore their utility and other factors they have considered and only follow where the herd is moving. Herding behavior can be observed in ups and downs of the stock market.

These are the most important and well-known financial behavior biases that affect the decision-making of investors in the stock market. When decision-making is the issue, the simple truth is that people make mistakes when they come to decisions. People may not ultimately behave in ways that are consistent with their financial literacy level. In addition, all financially illiterate people may not necessarily experience negative financial outcomes since there are many factors involved in success (for instance, luck). Hirschleifer (2001) asserts that the majority of these mistakes can be traced to four common causes: (1) self-deception, (2) heuristic simplification, (3) emotion, and (4) social interaction. Moreover, one of the most basic assumptions that conventional economics makes is that people are rational 'wealth maximizers' who seek to increase their own well-being. However, as was shown previously, people are not always rational. They tend to increase their own well-being rationally or irrationally (the manner is not important). Therefore, it can be concluded that there is no direct linkage between financial literacy and financial well-being. Based on these new assumptions, the definition of financial literacy will change. In the next section, financial literacy is reviewed more closely and its role in financial well-being determined. To sum up, Table 1.1 shows financial behavior biases introduced by IOSCO.

Table 1.1 Key behavioral biases

Key behavioral responses in financial decision-making	
Anchoring and adjustment	An initial value or starting point influences the final decision. The anchoring effect decreases but does not vanish with higher cognitive ability
Choice preference	Too many options inhibit or overwhelm selection decision-making
Confirmation bias	People use data selectively to agree or confirm their existing views. Investors with a stronger confirmation bias also exhibit greater overconfidence
Conflict disclosure	Disclosing a conflict of interest may make it more likely that the conflict will actually occur as it increases levels of trust
Inertia	The default option becomes the de facto selection even if it is not the optimal choice
Loss aversion	People more strongly prefer to avoid small losses than acquire larger gains. Loss aversion is not invoked when spending money that is within an intended budget for purchases, but only when operating outside the intended budget. Loss aversion can actually be a motivation to invest to the extent that when people perceive a loss, they become risk seeking as opposed to risk averse. When assessing a situation from the perspective of a potential loss, 'loss framing' will occur. An investor on a losing streak, for example, may well decide that a greater risk is necessary to achieve their target. See also the 'framing effect' in other biases and effects related to financial decision-making
Myopic loss aversion	Combination of loss aversion and a tendency to evaluate outcomes frequently. This leads investors to be more willing to invest a greater proportion of their portfolio in risky assets if they evaluate their investments less frequently
Overconfidence	People tend to trade frequently and hurt their own investment performance. Investors are more likely to be overconfident when they are less experienced as they learn about their true ability through experience. Investors with biased information-processing behavior in virtual communities are likely to trade more actively and realize worse performance due to their overconfidence. Overconfident investors, who show a better than average bias, trade more frequently
Temporal framing	People too heavily discount future benefits in lieu of present consumption
Ambiguity aversion	The desire to avoid unclear circumstances, even when this will not increase the expected benefits
Availability heuristic	People judge the frequency or probability of some events on the basis of how easily examples or instances can be recalled or remembered

(*continued*)

Table 1.1 (continued)

Key behavioral responses in financial decision-making	
Disposition effect	The propensity of an investor to sell winners too early and hold losers too long
Endowment effect	People demand a higher price to sell something they own than they are willing to pay for acquiring it. This effect may occur for goods whose possession is merely desired. The effect is reduced if a negative mood is induced before the goods are acquired
Framing effect	A decision is influenced by the phrasing or frame in which the problem is presented
Fund-level inattention	The propensity to trade mutual funds around macroeconomic news events
Herding	A phenomenon where many people take the same action. Information concerning the number of previous transactions in the market is particularly relevant to explain the propensity for herding among investors
Illusion of control	The expectancy of personal success is inappropriately higher than the objective probability would warrant
Inattention to earnings news	Degree to which an investor does not trade a particular individual stock around earnings news
Inattention to macroeconomic news	Degree to which an investor does not trade any individual stocks around macroeconomic news events
January effect	The tendency for excess share returns in the first few days of January
Local bias	The propensity to select funds or stocks with headquarters close to the investor's geographical location
Lottery stock preference	The propensity to select stocks with lottery-like features (low price, volatile returns, and skewed returns)
Narrow framing	The propensity to select investments individually, instead of considering the broad impact on the portfolio
Present bias	The inordinate weight people place on costs and benefits that are immediate
Regret	A human emotion that can influence decisions
Representativeness	Evaluation of the degree of correspondence between a sample and a population, an instance and a category, or more generally, an outcome and a model
Risk aversion	The tendency for decision-makers to avoid undertaking risks and to choose less risky alternatives. When individuals have the same level of financial education, there is no gender difference in the level of risk aversion
Small-firm effect	The shares of smaller firms have outperformed those of larger firms over a period of several decades
Weekend effect	There appear to be abnormal returns on Fridays and relative falls on Mondays

Source: IOSCO consultation report, "Strategic Framework for Investor Education and Financial Literacy"

Financial Literacy, Financial Behavior, and Financial Well-Being

The last part of the definition of financial literacy describes it as the ability "to make effective decisions across a range of financial contexts, to improve the **financial well-being** of individuals and society." However, what is financial well-being? The Consumer Financial Protection Bureau (CFPB) of the United States has determined it where the role of financial literacy is explicit in financial well-being; it defines financial well-being as follows:

> Financial well-being can be defined as a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow enjoyment of life (CFPB 2015).

Based on this definition, financial well-being is divided into four elements. Table 1.2 illustrates an amended summary of these elements.

By clarifying the definition of financial well-being, the ultimate goal of investors and authorities to improve financial literacy is determined. In addition to the definition, the CFPB determines factors that influence financial well-being. Table 1.3 shows an amended summary of these factors.

Obviously, the CFPB defined financial literacy in a way in which distinct borders are specified to each component, and in normal situations financial well-being will be fulfilled. However, based on the OECD (Organisation for Economic Co-operation and Development) and CFPB definition of financial well-being, this section aims to determine factors that influence financial well-being extensively and comprehensively. Figure 1.1 illustrates the extensive factors at play.

By clarifying the components of financial well-being, one question might arise. If the ultimate result of financial literacy (that is changing

Table 1.2 Four elements of financial well-being

	Present	*Future*
Security	Control over day-to-day, month-to-month finances	Capacity to absorb a financial shock
Freedom of choice	Financial freedom to make choices to enjoy life	Track to meet financial goals

Table 1.3 Factors influencing financial well-being

Social and economic environment What surrounds investors in their family and community.	**Personality and attitudes** How investors tend to think, feel, and act.		**Financial well-being** How satisfied investors are with their financial situation.
	Decision context How a particular decision is presented. **Knowledge and skills** What investors know, and what they know how to do.	**Behavior** What investors actually do.	
	Available opportunities What options are open to investors.		

financial behavior and consequently the financial well-being of investors) is indefinite, what is the exact role of financial literacy?

Indeed, financial literacy provides an opportunity for cognition of not only different financial concepts but also financial biases. It is not a cure but a solution for awareness and avoidance of investors' major pitfalls. Through awareness and cognition, investors can take guidance from professionals to avoid mistakes and finally discover new opportunities for investment which requires their effective decision-making. Financial literacy can only be a prerequisite component of financial decision-making when the results are indefinite. Therefore, its role and effects must not be exaggerated and it should not be treated as a superficial phenomenon. Nevertheless, investors and authorities should consider improving financial literacy as the only way to improve awareness in financial markets. Chapter 6 introduces managerial functions that authorities should consider as ways to improve financial literacy.

Practices Around the World

There are many books and articles about financial behavior. In the 1990s, the terms behavioral finance and behavioral economics started to appear in academic journals. The foundation of behavioral finance and the subtopic of investor behavior, however, can be traced back throughout financial

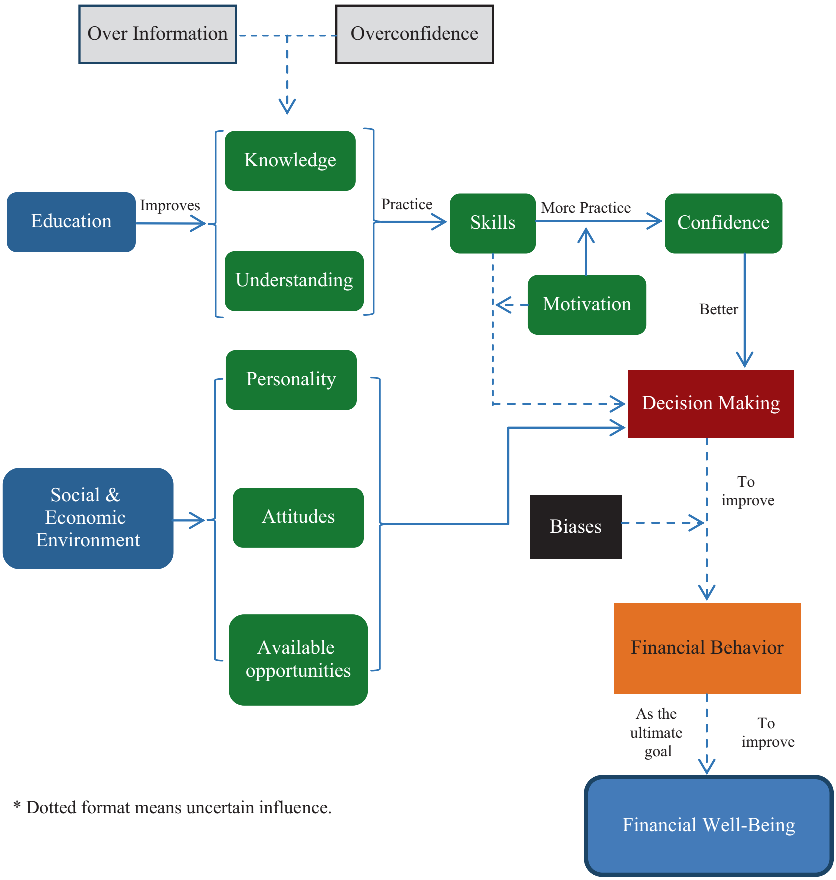


Fig. 1.1 Comprehensive and extensive definition of financial literacy. (Dotted format means uncertain influence)

history in events such as the speculative behavior during tulip mania in the 1600s. Books published in the 1800s and early 1900s about psychology and investing marked the beginning of the theoretical basis for today's theories and concepts about investor behavior (Ricciardi 2006). Since 1995, an increasing number of books on investor behavior have been published. Table 1.4 provides a list of major books about investor behavior published between 1995 and 2016.

Table 1.4 Major books about investor behavior

Date	*Author*	*Title*
1995	Robert Haugen	*The New Finance: The Case Against Efficient Markets*
1999	Lawrence Lifson and Richard Geist	*The Psychology of Investing*
2000	Hersh Shefrin	*Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing*
2000	Robert Shiller	*Irrational Exuberance*
2001	Karl-Erik Warneryd	*Stock Market Psychology: How People Value and Trade Stocks*
2003	Richard Geist	*Investor Therapy: A Psychologist and Investing Guru Tells You How to Out-Psych Wall Street*
2005	Mark Fenton-O'Creevy, Nigel Nicholson, Emma Soane, and Paul Willman	*Traders: Risks, Decisions, and Management in Financial Markets*
2006	Michael Pompian	*Behavioral Finance and Wealth Management: How to Build Optimal Portfolios that Account for Investor Biases*
2007	James Montier	*Behavioral Investing: A Practitioner's Guide to Applying Behavioral Finance*
2007	Richard Peterson	*Inside the Investor's Brain: The Power of Mind over Money*
2007	Mark Schindler	*Rumors in Financial Markets: Insights into Behavioral Finance*
2010	H. Kent Baker and John Nofsinger	*Behavioral Finance: Investors, Corporations, and Markets*
2010	Arnold Wood	*Behavioral Finance and Investment Management*
2011	Meir Statman	*What Investors Really Want: Know What Drives Investor Behavior and Make Smarter Financial Decisions*
2011	Leonard Zacks	*The Handbook of Equity Market Anomalies: Translating Market Inefficiencies into Effective Investment Strategies*
2012	Greg Davies and Arnaud de Servigny	*Behavioral Investment Management: An Efficient Alternative to Modern Portfolio Theory*
2012	Michael Pompian	*Behavioral Finance and Investor Types: Managing Behavior to Make Better Investment Decisions*
2012	Denise Shull	*Market Mind Games: A Radical Psychology of Investing, Trading and Risk*
2014	H. Kent Baker and Victor Ricciardi	*Investor Behavior: The Psychology of Financial Planning and Investing*
2016	John Nofsinger	*The Psychology of Investing*

While there is a wide range of resources available about financial behavior awareness, there are some books and articles that the authors have used in respect of introducing financial behavior, particularly biases. Thus, the following sections include a brief review of the two most important ones.

Investor Behavior: The Psychology of Financial Planning and Investing

The book explains that its main purpose is

> to provide readers with the emerging theoretical trends about investment behavior within the ever-changing and growing financial services and investment management industry. Readers of *Investor Behavior: The Psychology of Financial Planning and Investing* will gain an in-depth understanding of the major types and the latest trends within the field of investor behavior. The book features empirical evidence and current literature about each investment issue. Cited research studies are presented in a straightforward manner focusing on the comprehension of study findings, rather than on the details of mathematical frameworks.

The book consists of 30 chapters and each one is an article written by different academicians in various concepts such as personal finance, psychology of trading, real estate investment decision-making, neurofinance, risk perception and risk tolerance, and so on.

Behavioral Investing: A Practitioner's Guide to Applying Behavioral Finance

The book is written for professional audiences and represents the first six years of an ongoing research project. The aim of this project was to truly understand the psychology of finance and investing and explore its implications for practitioners. The book is a good source for understanding various behavioral biases and the practical implication of behavioral concepts. It not only pays attention to basic biases but also to professionals' biases and even those of fund managers. In the preface, the author shows an interesting statistic in a chart reflecting the increasing significance of financial behavior in recent years. This chart shows the number of times in a rolling 12-month period that the phrase 'behavioral finance' appeared in the press (Fig. 1.2).

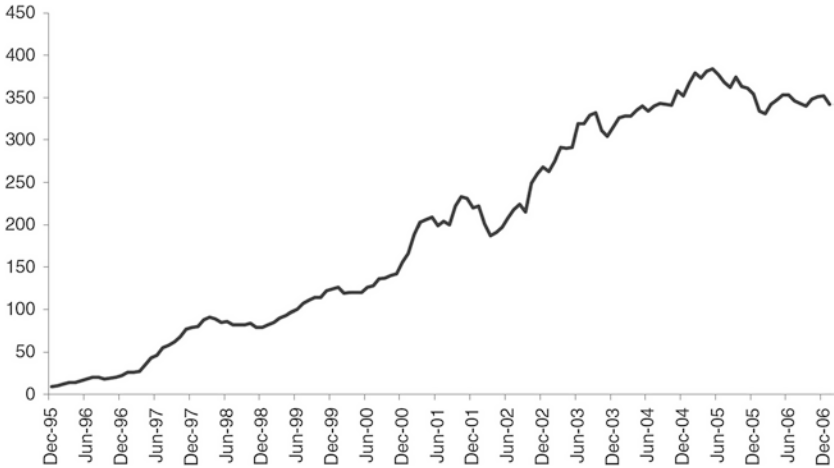


Fig. 1.2 Increasing significance of financial behavior in recent years

Summary

People tend to show a 'bias blind spot' whereby they are unaware of biasing influences on their own judgments. People acknowledge that biases affect other people's choices and actions, but they are less likely to acknowledge bias in themselves. People deny being influenced by bias in large part because biases often occur unconsciously. In order to determine whether they are biased, people generally look to their conscious motives (rather than to their actions). As a result, when bias occurs unconsciously, people tend to infer that they are unbiased (rather than that they are biased, but unaware of it). All of this suggests that people need to be educated about biases that affect their judgment. It implies that they need to be educated not only about the nature and consequences of these biases, but also about the fact that they operate unconsciously. Educating people about the importance of unconscious biases in influencing investment behavior allows people to recognize their susceptibility to those biases and the need to try to correct them. In order to raise awareness of the effects of bias at a mass level, the Financial Industry Regulatory Authority (FINRA) Investor Education Foundation in cooperation with Princeton University suggested that a press release be issued in order to encourage the press to report to the public about the role of unconscious bias in compromising investment behavior. They posited that such education would be an effective intervention for reducing the effects of these harmful biases. In this respect, a sample press release addressed by the FINRA can be seen in what follows.

Making Unwise Investment Choices Without Knowing It

Financial planning and investing are important parts of our lives. We do our best to make wise financial and investment choices in order to plan for retirement, prepare for our children's college expenses, buy a new home, and so forth. We research the various financial paths that are available to us and some of us even put our financial futures into the hands of professionals. We assume that we are adequately skilled at handling our own financial planning or that we are adept at choosing the right financial professional. But are we? Research shows that there are biases negatively influencing our investment choices without our knowledge. These biases prevent us from rationally processing information, and they tend to crop up in precisely the sorts of situations that are involved in investment-related decisions. That is, these biases tend to occur when four things are true: (1) when information is complex (e.g., there are lots of financial facts and figures to absorb), (2) when decisions involve risk and uncertainty (e.g., when there is no sure way of knowing whether an investment will be profitable), (3) when we want to view things positively (e.g., we hope that an investment will make us rich), and (4) when we experience a conflict between what seems best in the short- vs. long-term (e.g., we want to spend money now, but also save for later). When it comes to investing, biases are everywhere. Fortunately, the more you know, the more you can do to prevent them. Research conducted in the laboratory of Emily Pronin, Assistant Professor of Psychology and Public Affairs at Princeton University, has recently studied two biases that can compromise wise financial investing: the 'halo' effect, and 'optimistic overconfidence.' The halo effect involves the tendency for us to assume that others who rank highly on some centrally important quality, such as warmth or likeability, also possess other unrelated positive qualities, such as intelligence, trustworthiness, and competence. This bias can be problematic when it comes to making important investment decisions, such as choosing a professional financial advisor or stock broker. When we view a broker as 'nice,' we may be inclined to also view him or her as smart, honest, and competent. And, we are likely to make those assumptions without even realizing that we are doing it.

In one study, people read a profile of a broker who was pictured in a suit and tie and said to have a prestigious education. In a control condition, the same man was profiled, but this time he was pictured in a short-sleeved polo shirt and said to have a less prestigious education. The results were that people were more inclined to invest their money with the broker in the suit and tie and with the fancy education—without even conducting a background check. As a result of the 'halo' effect, people were willing to place unwarranted trust in a broker about whom they knew almost nothing. Unfortunately, people are usually unaware of their bias when they are committing biases such as the halo effect. In the real world, we do not get to choose between two identical brokers who differ only in their clothing choices or educations, so we are unlikely to recognize our commissions of biases like the halo effect. Indeed, such biases typically occur unconsciously, which means that even when we are sure we're not showing them we might be. Fortunately, learning about the unconscious nature of bias helps. Another common bias that can lead to unwise investing involves our tendency to be 'unrealistically optimistic' about our futures. Most of us believe that we will be healthy, wealthy, and wise in the future. Because we are overoptimistic about our future wealth, we inadequately prepare for retirement now. Due to our unrealistic optimism, we tend to make foolishly risky investments—both because we overestimate the odds that they will pay off in the end, and because we are not concerned enough about our need for a certain minimum level of future wealth. Because of the unconscious nature of optimistic overconfidence (or 'unrealistic optimism')—the vast majority of people are unrealistically optimistic but also strongly deny showing the bias—the bias is difficult to overcome. In particular, one way to overcome the hazards of unrealistic optimism is to itemize one's expected expenses for the future. This involves projecting how much money one will need, per month, when one retires for each of one's different categories of expenses (e.g., clothing, entertainment, healthcare, travel, insurance, etc.). When people take the time to itemize their future expenses, they come to feel significantly more concerned about saving and investing for their retirement. Something as simple as listing our future expenses can lead us to realize how much money we will actually need in order to cover our living expenses during retirement (and how much we need to put aside in order to have that money). People are affected by biases unconsciously. These biases include the halo effect and optimistic overconfidence, both of which can compromise wise investing behavior. As a first step in avoiding falling prey to these biases, people should learn more about them, dismiss the assumption that they personally are immune to them, and outline steps (such as getting background checks to avoid the halo effect, and itemizing retirement expenses to avoid optimistic overconfidence) for avoiding the impact of these biases on their financial decisions.

Note: The text is adapted with few changes from the web site of FINRA Investor Education Foundation (www.finrafoundation.org)

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Chapter 2 Who Should Be Educated in Financial Literacy?

Abstract One important aspect of performing financial literacy improvement initiatives is to determine the individuals who should be educated. There is a variety of target groups that are the focus of authorities. Investors can obtain tailored educational materials by understanding which group they belong to. This chapter identifies the main target audiences that might be in the spotlight of financial education programs, clarifies the importance of variation among groups, and introduces practices aimed at different target groups.

Keywords Financial fundamentals • Current investors • Potential investors • Target audience • Teach the teachers • Vulnerable

Introduction

As with any program, the target group in question determines the objectives and content of financial education. Financial knowledge, experience, and behaviors vary widely across individuals, households, and populations; therefore, programs will look very different depending on who the learners are. It is important to note that many financial education programs merely target individuals of legal age (18 years old) to access financial services. Others are open to younger individuals. They have recognized that many young people and society as a whole (and the economy over a large scope) will benefit from acquiring financial skills in their teens, if not

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sooner. They provide financial education for those people who are considered to be informed adults and can make decisions mainly based on their knowledge and skills. Wise financial education providers or authorities have segmented target markets or groups to ensure that their programs reflect variances in financial education needs and priorities. Programs should take into account the learner's stage in life, as well as demographic and cultural differences between groups. There are many elements for an effective financial literacy educational program. However, one important element that this chapter focuses on is *relevance*, which is defined as knowing the target group. An effective financial education program addresses issues of critical and immediate importance to the learners in a way that affirms and synthesizes their specific financial realities. This is the starting point of financial literacy improvement, which results in understanding the financial behavior of the target audience.

This chapter identifies the main target audiences who might be highlighted in financial education programs, clarifies the importance of variation among target groups, and introduces practices aimed at different target audiences.

Necessity of Variation

Financial literacy is a lifelong endeavor requiring both academic and practical components. It is a vital skill that everyone should work at throughout their life. In school and at home, it is important for children to learn skills that will help them become financially responsible adults. Adults who continue to educate themselves throughout their lifetime help to build a sound financial future for themselves and their families, and financially secure individuals and families help build a thriving economy. However, individuals pass through different stages of life—the needs of a teenager are different from those of an adult. Despite some similarities, the needs of an elderly person are different from those of a young adult. There is also variation between the needs of females and males. Some people accept risk and some avoid it. Some individuals earn high salaries and some people cannot even save at all. Some people are educated and some are not. By looking at these variations, the importance of differentiation can be revealed. This variation among individuals' situations and characteristics shows the necessity for different education programs to be available for different target audiences.

Indeed, effective financial programs focus on all people who access financial markets. Therefore, providers of financial education programs should furnish programs with comprehensive information and be inclusive for a variety of individuals at different stages of life.

In order to enter into any financial market, individuals should be informed about financial fundamentals: money management, saving, credit, planning, and other issues that are considered basic. These fundamentals are universal topics that all audiences should know about. However, when it comes to more sophisticated markets or products, the importance of education programs is underscored. Consider an inexperienced investor who has planned to invest in the derivatives market. In this case, knowing the basics will not help them. Academic texts or education programs and practice would make the investor familiar with the derivatives market. With this knowledge, the investor might avoid entering the market because of the inherent risks in it. Education programs in this case are assigned for adults who can understand and tolerate the market's risks. Overall, it should be asserted that the target audiences determine the topics of programs or courses, trainers, and even the education method. Meanwhile, the central question in this chapter is about the main target audiences.

Which Target Audience?

Different organizations target a variety of audiences for their financial education, and subsequent financial literacy initiatives (Lusardi and Mitchell 2011). They differentiate audiences based on demographic information, job, and other criteria. However, is there an alternative way to differentiate people in the context of the stock market? With respect to the ideas of experts about the variation of target groups, an alternative basic form of differentiation in the stock market is to separate investors into three main categories:

1. current investors (active and passive investors);
2. newcomers (actual investors);
3. potential investors (future investors).

Instead of considering different groups with different characteristics, a simple approach is to divide the variety of audiences into these three main categories (these categories also can be assigned for customers in other financial markets). Particular target groups can be considered as subcategories. These three groups are defined as follows:

Current investors: those investors who possess and trade securities for longer than one year. This group consists of both active and passive investors. Active investors are those who trade securities frequently for short-term profits. They monitor the volatility of prices many times a day and endeavor to utilize opportunities for making a profit. In contrast, passive investors are those whose views are long term and their strategy is to buy and hold. They do not use short-term fluctuations in the market and invest based on fundamental analysis. Indeed, this term can be defined as applying to experienced investors.

Newcomers: those investors who have recently started trading (buying and selling) in the market—further defined as those investors who have less than one year's experience. Indeed, newcomers are inexperienced investors or those who have little experience and seek new opportunities to enhance their knowledge and understand the market better. Many of them have not faced the ups and downs of the financial world. They will have invested directly by themselves or indirectly via investment products.

Potential investors: all people, generally, could be considered as possible investors. Some people are already in the market but those who have not invested (whether to buy or sell) in securities are potential investors. The doors are open and anybody can enter the market, but due to whatever reasons these people have not participated yet. Since the capital market is shot through with risk, many prefer not to jeopardize their capital. They would rather keep their money in cash, savings accounts, or at least invest in low-risk products. As well as risk, there are other barriers that cause people to stay away from the market; legal age, lack of knowledge, complexity of the market, and lack of budget are among these.

Although familiarity with categories and their subcategories is important, how authorities should prioritize education programs should be highlighted. The next section, prior to introducing subcategories, clarifies the issue.

Prioritization of Categories

Who is in urgent need of financial literacy improvement? Should authorities focus on short-term or long-term goals? Are authorities willing to invite more people into the market? These questions are answered by prioritization of categories. In essence, those investors who direct the market, shape supply and demand, or buy and sell sides of the market, make price fluctuations and ultimately, make decisions in the market are current investors. In this respect, this category has the utmost priority. Their training is a continuous task with the purpose of either short-term or long-term goals (changing behavior).

However, in the two other categories, prioritization depends on the objectives and goals of the authorities. Usually, in order to affect the atmosphere of the market in the long run, they plan to initiate programs for potential investors. Through this, potential investors, especially students, are made ready to behave appropriately (meaning that their behavior is based on their knowledge and understanding). An appropriate level of proficiency in the market might be feasible by investing in potential investors. But in the short run, authorities try to focus on naïve investors who trade for a short period. Nevertheless, since the results of training will be revealed in the long term, and because potential investors involve many different subcategories of a society, potential investors can be considered as the second priority. This categorization and prioritization will help authorities in their future initiatives regarding financial literacy improvement. Financial literacy levels, and the necessity for assessment, for instance, can be understood better via this separation (the following chapters will explain some important initiatives in this area).

It is obvious that since the needs and level of knowledge or understanding are different, organization of education programs for these categories must be distinguished. For instance, while potential investors may need basic information, professionals should be trained about complex investment strategies. After separation and understanding the importance of prioritization, subcategories of the main groups should be identified. Although there are many subcategories, the next section considers only the main ones that should be underlined.

Subcategories of Financial Education

Teach the Teachers

Obviously, teachers demonstrate the most effective and trustworthy characteristics in schools and universities. Therefore, their charismatic characteristics can be used as a stimulus for financial literacy improvement. There are networks of schools and universities in every country. Teachers are the nodes of these networks and can help to expand them through students. Accordingly, when they are trained in financial matters, not only will their own financial life change, but also the role they play as sources of education for students. Aggregation of their teaching and financial skills will generate good financial trainers who will direct young people to enhance their financial life more appropriately.

This group can be considered as a subcategory of the three main categories since there are some teachers who are already investors and some teachers who have not invested yet.

Teach the Parents

The importance of a parent's role in a family, and subsequently in society, is undeniable. They shape the future of their children and usually are their heroes and define patterns for their lives. When parents model and teach financial matters (particularly the basics of finance), their children have a better chance of becoming financially successful. The financial literacy of parents is important in two ways: (1) their decisions become rational and they decide knowingly; (2) if they act appropriately, their children will learn how to do things correctly. Although this is long-term planning, their training means investment in the next generation. This can be illustrated by the saying: "plant a seed today and harvest it tomorrow." Parents could be financial leaders of their children and direct them toward prosperity. Therefore, they are another main category that authorities should consider.

Educate Students Financially

Through the period of education in schools, students have the capability to enhance their financial literacy. In most countries, the education process is divided into different parts: elementary, junior, and senior school. Through these discrete periods, different financial matters can be taught through different delivery methods. When a student is in elementary school, fundamental issues will be taught through games. For instance, the implications of money, banks, the basics of numeracy, and so on, can be taught in schools. Gradually, by the promotion of education levels, financial matters can become more sophisticated. Educating students financially can be considered as a national strategy for financial literacy enhancement. Through cooperation and collaboration with different organizations, specifically the ministry of education and the ministry of finance, financial matters should be included in the school curriculum and taught by teachers who have already been educated themselves. By choosing students as a target group, they would then be prepared to make financial decisions in a complex society. Targeting students will enable them to participate in economic life. As well as school students, university students also have the potential to be a target group. These individuals are usually the progressive people within communities who are capable of learning complex issues and applying them to their financial lives. However, it should be noted that their learning styles and even education methods are different from other groups since many of them prefer learning by doing and accepting real-world challenges.

Financial In-Service Training for Staff

In-service training has always provided regular education in organizations. Although in-service training is related to a specific job, there could be some in-service programs that are dedicated to financial matters. Some companies or organizations would have some incentive plans for their staff. These incentives would include share grant plans for employees. These are the companies or organizations that are really in need of financial in-service training. By enhancing financial literacy among employees, these organizations would benefit from their rational decisions. However, employees can learn how to manage granted shares and understand the benefits of holding stocks. In many organizations, employees are not aware of how they should manage their shares and what the benefits of them are. By making them aware, they can increase efforts to improve their organization's performance, which has a direct impact on the performance of shares.

Another important aspect of in-service training could be financial matters for retirement. Employees are faced with different pension plans and must make decisions in this respect. While some would like to mobilize their pension schemes into the capital market, others prefer to keep them as savings or invest them into real sectors such as the housing market. However, financial literacy can help them to better plan their future and make decisions aligned with their prosperity. In this regard, retired people can participate in economic life. These financial programs as in-service training can be held only by simple collaboration in organizations.

An Opportunity for Entrepreneurs

Entrepreneurs are asked to make complex financial decisions in many areas, particularly in financing their business. However, they often lack the financial literacy required for the complex financial decisions they face. These small business owners are engaged in intraday management of their own companies. While they face a variety of challenges, the main one is financing their working capital. Practically, entrepreneurs (and even those who are financially illiterate) have understood that working capital can be financed through the banking system by taking short-term loans. However, they are not aware of other financial products or alternatives that exist in financial markets. Due to its complexity, many entrepreneurs have not yet considered the capital market as a source of funding. Many of them are not aware of how to list the contribution of venture capitals to their business, issuance of securities, and potential advantages of the market for their business. Financial literacy, which consists of improving knowledge and awareness, can contribute to understanding, and consequently real sectors of the economy and financial markets will blossom as well. Entrepreneurs are neglected mostly in the stock market since authorities focus mainly on education programs for investors.

Besides the above subcategories, there are two others that can be found in the financial literacy literature. However, these two subgroups are intentionally not considered. The next section deals with why.

Groups that Are Not Considered

The capital market is enmeshed by various risks. An individual who enters it could lose all his/her money. Indeed, capital market does not need short term investments which enter with a shock and exit with another one.

Therefore, entering into the capital market must be done cautiously. It is always recommended that investors initially invest just a surplus of their income. Thus, first of all, retail investors should have a surplus, or at least savings to invest. One main group that financial literacy literature focuses on is *poor and vulnerable people*. In the context of financial inclusion, authors insist that poor and vulnerable people must benefit from financial services. Albeit they are right theoretically, in the context of the capital market, however, these groups should be treated carefully. Poverty has been related to income, which remains at the core of the concept. A key issue for poor people is that their income is not only low but also extremely irregular and unreliable. They do not have enough money to save, there is no surplus income and their concerns are stuck in primary issues such as food and sanitation. Two billion people—or 38% of adults in the world—do not use formal financial services, and 73% poor people do not bank because of costs, travel distances, and the often difficult requirements involved in opening a financial account (The World Bank 2015). As a result, money management (not investment) is an absolutely central part of life for the poorest people.

While literacy (including financial literacy) is viewed as an important and highly valued matter, it is often notably irrelevant in the lives of poor people. Therefore, they cannot be considered as a main subcategory in the context of the capital market. However, since investment is a voluntary task and nobody can exclude others, the poor can invest in the capital market too. They can also benefit from education programs but they cannot be viewed as potential investors.

Another group that is the focus in financial literacy literature is women. Obviously, women shape part of the investment environment. As investors, entrepreneurs, and business owners, they play roles in different sectors of the economy. Hoverer, this book considers them as adults with no gender difference. They can be viewed as current, actual, or potential investors.

This chapter has focused on the importance of the variation between target groups and identified a new types of variation. It introduced different subcategories which are considered in the financial literacy literature in the context of the capital market. Although all people can benefit from the provided programs, the entrance of poor and vulnerable people in the capital market should be treated carefully since their risk tolerance is lower than other groups. In the next section, some practices are introduced as references for readers.

Practices Around the World

Many practices can be found in different languages. Nevertheless, some well-known and comprehensive practices that can be useful for readers are introduced in this section.

Rich Dad, Poor Dad

Although this book is not directly about financial literacy, its theme is completely related. The story starts with a dialogue between a child and his mother. It reaches this conclusion: "although she is an accountant, her family and even she suffers from lacking financial literacy." Meanwhile, one of their friends produces a game related to personal finance which engages them in thinking about financial matters. The rest of story is about fathers of the producer. He claims that he has two intellectual fathers; a poor father and a rich father. The rich father is the one who does right and even guides his son in correct way, and the poor father is the one who cannot do right and leads his son in an incorrect way. The writer is implicitly showing how financial literacy could affect an individual's life and their well-being. Reading the book is recommended since it shows how a family realizes its lack of financial literacy and how it deals with it.

Jump$tart Coalition for Personal Financial Literacy

This is a US non-profit coalition of national organizations seeking to advance financial literacy for students from pre-kindergarten to college age. The coalition tries to enable students to gain decision-making skills through their education period in order to apply them in their lives. The Jump$tart coalition comprises more than 150 corporate, academic, non-profit, and government organizations working together to enhance financial literacy. One of the most important tasks of the Jump$tart coalition is setting the standards for implementing financial education programs. These standards serve as a guide for policymakers and officials. The Jump$tart coalition set April as financial literacy month. It can be categorized as a program for students.

FamZoo

The FamZoo website is an interactive family-budgeting tool (a virtual bank) that allows parents to track their children's allowances online. Children can check their balance using computers or smartphones to practice sound money management skills when faced with spending, savings, or charitable-giving decisions. The FamZoo website is a customizable budgeting tool to reflect individual family values. For example, FamZoo has a feature that allows parents to contribute portions of their allowance to their children's virtual accounts for each chore completed. There are three account options to teach children money management skills: spending, saving, and charitable giving. The FamZoo software automates as much of the program as possible, that is, tracks weekly allowance allocation.

Financial Literacy 101

Financial Literacy 101 is a train-the-trainer workshop enabling agencies, organizations, and communities to train their own volunteers to deliver educational workshops on financial literacy for older people. The trainer binder includes material for two workshops, as well as handouts for teaching volunteers to lead workshops. Financial literacy 101 was developed by the Canadian Centre for Elder Law for the BC Centre for Elder Advocacy and Support.

There are two workshops. Workshop 1 focuses on powers of attorney and joint accounts, and workshop 2 discusses frauds and scams. The trainer binder includes PowerPoint presentations for each workshop, as well as participatory activities, handouts to highlight learning objectives, and evaluation forms. The workshops were focus-tested in the Vancouver lower mainland area and have since been delivered at many locations.

Kosmiks

Currently used by different organizations, the Kosmiks interactive website is an game built around the principles of budgeting, saving, and the basics of smart money management.

The Kosmiks teaches basic financial literacy through interactive games, challenges, and basic concepts. The goal of the Kosmiks game is to earn virtual dollars, called ——KUBITS™, by participating in online games and challenges. The user will save up to purchase a space station or rocket ship that allows them to visit a new world of games and challenges. Teachers and parents take on an active role in the program by registering their children or students to play the Kosmiks game, visiting the credit union to pick up access codes, called 'space codes,' and by helping children complete the online challenges.

Teaching Financial Literacy to Adults

The Financial Consumer Agency of Canada, in line with developing a national strategy for financial literacy, has launched educational programs in respect of educating adults. This agency indicates that

> While residents of Canada want to learn more about handling their personal finances, their own knowledge and skills are low. Most receive little, if any, formal education about finances, and have little confidence about their financial abilities. Nevertheless, they face challenging decisions that can significantly affect their financial health and security. While they recognize that they need more knowledge, several barriers limit their ability to gain more financial skills, including the lack of time, confidence and appropriate, accessible learning opportunities.

By recognizing these needs, the agency has launched different educational programs in different issues for the needs of adults such as "income, expenses and budget, banking, saving, credit and debt management, mortgages, insurance, investing, tax, retirement, financial planning, fraud protection etc."

TheMint

This website provides tools to help parents as well as educators teach children to manage money wisely and develop good financial habits. The site is divided into four sections for kids, teens, parents, and teachers. Although it is written in child-friendly language, two parts are developed exclusively for adults. It has many important and wise tips for parents and teachers. It leads parents toward not only guiding children but also enhancing their own financial literacy and IQ.

The website includes issues such as earning, saving, spending, owing, tracking, safeguarding, income and career, budgeting, managing money, and investing for kids, teens, and young adults. This site aims to enhance children's financial literacy through parents, teachers, and themselves.

Summary

This chapter has focused on an important issue that must be considered in initiating or attending financial education programs. Which target groups should be highlighted in a financial literacy improvement process? Different books and academic texts have paid attention to this issue, and there are many categories for consideration. However, this book divided investors into three categories consisting of potential, newcomer, and current investors.

By categorizing investors in these groups, authorities can find the best way of reaching a variety of investors, and investors themselves can refer to what is appropriate for them.

As well as identifying three main categories, there were some subcategories introduced and highlighted for further attention. These subcategories are significant groups that are identified by different academic and formal texts. Authorities should note that a comprehensive process toward financial literacy improvement must pay attention at least to the majority of these categories.

An important group that has been neglected in books and academic texts is *entrepreneurs.* This group can play a significant role in respect of financial literacy improvement. Indeed, financial literacy improvement is a multilateral task that has two sides: enhancing the financial literacy of investors, as well as the financial literacy of business owners. Harmonizing the financial literacy of both (particularly in developing markets) may result in the maturity of markets. This chapter has endeavored to identify different target groups comprehensively and paid attention to those groups which have most significant impact on the current and future condition of the stock market.

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Chapter 3 Which Delivery Method, Which Topic?

Abstract Determination of the delivery methods that favor investors' interests is of the utmost importance. Undoubtedly, learning styles in pedagogy are different from andragogy and each one requires different delivery methods. In addition, this chapter aims to review some basic financial concepts such as *market organization*, that are essential for investors. More sophisticated concepts like *risk and return* are also introduced.

Keywords Delivery methods • Self-directed approach • Instructor-directed approach • Investor protection • Market fundamentals

Introduction

Most people did not receive financial literacy education in school. Thus, the information they gained from family, friends, and institutions while growing up may have laid the foundation for financial management practices and habits. Some of these habits may not be beneficial. Many individuals reach adulthood with neither information about how to design and follow a budget, balance a checkbook, establish credit in a responsible or sustainable way, nor any experience about investment, portfolio management, risk, and many other financial concepts. If someone asks them which financial concepts would fulfill their needs, they would not know. Not only are financial concepts unknown to them, but also the resources required to reach information can be unclear for such people. While

A. Saeedi, M. Hamedi, *Financial Literacy*,
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financial literacy may have once been seen as merely an appropriate asset to contribute to financial planning optimization in personal finance, the extraordinary transformation of financial markets has made financial literacy nothing less than an essential survival tool. Since 2000, as the era of technology, computer and foreign language skills have been identified as the main components of literacy, but after 2007–2009 global financial crisis and due to the increasing complexity of financial markets, and more responsibility taken by individuals, financial literacy has been added to this list.

Through financial literacy education, people can gain the knowledge and skills to manage their capital effectively and reach their financial goals. Chapter 2 introduced a new concept of variation between groups and identified target audiences. However, the question here is: how targeted audiences are accessible? What are the methods of delivering educational programs? And finally, which topics should be covered in them?

Financial literacy improvement requires answers to two main questions: "What should be taught? And how education should be delivered?" Delivery methods encompass conceptual and operational issues. This chapter discusses different aspects of delivery methods and essential concepts regarding financial literacy improvement. It introduces essential financial concepts and determines a variety of delivery methods to reach target audiences.

Initial Aspects of Delivery Methods

Delivery methods consist of techniques, trends, materials, and processes used to structure learning experiences and information transference as well. These include, but are not restricted to, teaching methods. Therefore, apart from the methods of education presented in Chap. 2, this book reviews delivery methods separately as instruments used to provide education programs. They contribute to achieving various learning objectives properly.

Essentially, delivery methods can be divided into two main groups:

1. self-directed approach;
2. instructor-directed approach.

A self-directed approach allows learners to set their own pace for learning and often provides a variety of formats for obtaining materials. This approach allows individuals to access specific information that they might require. For planning education in a self-directed approach, curricula are set for different target audiences, a manual is designed for users and they are guided toward ultimate objective goals of training. The curricula would encompass different steps, and users from different financial literacy levels can benefit from each topic based on their literacy. The self-directed approach is favored by those who like to learn on their own without any time framework, those who are busy and cannot participate in instructor-directed programs, and those who seek immediate information about a particular topic. There are advantages and disadvantages of this approach. Ease of access, availability 24 hours a day, savings in time and cost, ability to expand, no restriction on the location or instructor, and many other things are advantages of this approach. However, there are some issues that should be noted. First, there is no evaluation of the trainee's progress in financial literacy levels. Therefore, individuals cannot be assured of the effectiveness of the programs. Second, since there is no interaction with instructors and other students, there could be misunderstanding or lack of complete understanding of specific issues. Third, and most importantly, is that in this approach, individuals must have at least a minimum level of certain abilities and facilities: a minimum level of literacy, accessibility to internet (in computer-based programs), ability to use a computer, obtaining resources in different locations, and so on. By considering these issues, it can be concluded that the self-directed approach cannot cover all target audiences, particularly those who have moderate to low living standards.

In contrast to the self-directed approach, experts generally believe that educational programs are effective when they give participants the opportunity to interact in groups, learn from one another and apply information to their own lives. While self-directed learning offers trainees the opportunity to learn at their own leisure, an instructor-directed approach is considered effective because it offers trainees the opportunity to receive feedback and interact not only with a facilitator, but also with other students. This is a key component of their own learning process; to hear the concerns of others, realize that they are not the only ones experiencing such issues, compare different approaches to problem solving, and make decisions based on experience, knowledge, and observation. Although one could question the cost-effectiveness of the instructor-directed approach, many organizations and institutions around the world base their educational programs mainly on this approach because it can target an individual learner's specific needs and work within their particular set of learning abilities to create more sustainable and realistic results. In the training process, nobody can underestimate the role of a strong and effective instructor. An effective instructor can not only answer the questions of a trainee but can also guide him/her toward financial literacy improvement by identifying the person's deficits and literacy gaps and plan to solve or fill them. Although many advantages for the instructor-directed approach can be found, there are some disadvantages. Therefore, the priority of one approach over another cannot be determined beyond doubt. The identification of one approach that is a good fit for everyone is impossible, but different delivery methods tailored for various target groups can be introduced. As subcategories of self-directed or instructor-directed approaches, this chapter considers the main delivery methods in the context of financial literacy (these methods vary from education methods. However, both complement each other in the financial literacy improvement process). The next section deals with this issue.

Main Delivery: Methods for Financial Concepts

While it is broadly accepted that financial literacy is key to building assets, attaining long-term financial goals, and enjoying stable economic well-being, the best methods of putting financial education programs into practice are far less clear. There is no easy answer regarding how best to deliver financial education information; a one-size-fits-all approach may suit certain segments of the population but is likely to be inadequate for many others with widely disparate needs and preferences. Therefore, delivery should be more tailored. Prior to running a specific kind of delivery method, some preliminary issues should be considered.

1. Target audiences and ultimate goals of the program should be determined.
2. The financial literacy level of audiences should be assessed in order to launch different programs for different literacy levels.
3. The number of internet users, hours allocated to reading publications, and the number of academically illiterate people should be determined for better prioritization of delivery methods and more investment in the most reliable and applicable ones.

Considering these questions will help one to select and launch the most effective methods for a given audience. In the next section, before specifying the main delivery methods, an important point regarding the most applicable method is mentioned.

Delivery Method Consideration

If asking what is currently the most applicable and reliable delivery method in the capital market, different viewpoints would be expressed from different sides. However, the most useful method is likely to be that mentioned by investors, since they use and apply it. The delivery method for an academician might vary from the delivery method for a practitioner. It may differ from the perspective of a young person to an elderly one. Therefore, authorities cannot sit behind their desks and decide which method should be invested in. They must conduct field research to understand what investors would choose or refer to the most. An interesting point that is worth mentioning here is the survey conducted by the Australia and New Zealand Banking Group (ANZ). Before implementing the survey, organizers assumed that the most important source of information for investors with the highest financial literacy is the internet. But after the survey, they found that the most important and reliable sources of information for them are newspapers and magazines (ANZ 2008). Thus, an important factor for choosing and stressing the most reliable sources is to conduct a survey to specify delivery methods with the particular characteristics of individuals in mind.

Now it is time to introduce the main delivery methods in the context of financial literacy improvement. These sources of information and advice are expected to influence investment choice decisions. Thus, they may play a basic role in financial literacy improvement.

Main Delivery Methods: Self-directed Approach

In this section, delivery methods are identified that follow the self-directed approach. It means those methods which an individual can apply to his/her education or literacy improvement. The priority of these methods (based on the views of investors or authorities) depends on the characteristics of individuals and the goals of authorities. These are mentioned in the financial literacy literature and can be applied for improvement.

Publications

One of the most applicable methods of delivering educational concepts is through publications. Books, magazines, booklets, brochures, e-publications, newspapers, and anything else that individuals can read on their own are among this group. These are examples that can be referred to as publications:

The Wall Street Journal (WSJ)

This is a New York-based English-language international daily newspaper which, based on the disclosed number of circulation, can be considered as the most-viewed financial newspaper in the USA. As its name suggests, the journal mainly covers financial and economic news from the heart of the US financial district. However, its website divides news into different sections in which economy, business, markets, and real estate can be considered financial. It has been printed continuously since its inception on July 8, 1889, by Charles Dow, Edward Jones, and Charles Bergstresser.[1]

Financial Times (FT)

An English-language international daily newspaper, the main rival of WSJ in the business newspaper sector. The FT covers different issues, mainly with financial and economic topics. It provides appropriate information about financial markets, trading floors, and companies in different sectors, and offers economics that might be utilized in practitioners' decision-making processes.[2]

Global Islamic Finance Magazine (GIF)

An English-language monthly publication on Islamic finance and Islamic banking owned by Business Media Group Ltd and edited in London. The GIF was established in 2007 as the leading Islamic finance title for bankers, business professionals, brokers, insurers, advisors, and providers of financial services. Its focus is to rapidly grow Islamic banking, finance, economy, risk management, capital market, trade finance, and business.[3]

Islamic Finance News

REDmoney is a publishing and events company focusing purely on the global Islamic finance market. The company was established in mid-2004 in Kuala Lumpur and initially rolled out two products: Islamic Finance training, and *Islamic Finance News*. Islamic Finance news provides insightful and intelligent editorial coverage from around the world, helping readers to stay ahead. Industry professionals and leading academics contribute via non-biased, educational, and up-to-date country and sector reports, giving first-hand knowledge and understanding of the Islamic finance markets and instruments from the specialist's point of view.[4]

Financial Guide Booklets

This series of booklets, called "Take Control," are based on the internet to help with all aspects of personal finance from buying a house to protecting against identity theft and fraud. This series is simply downloadable in PDF format. The booklets cover topics such as buying property, getting and managing credit, budgeting and saving, wealth creation, and so on.[5]

Videos/Clips/Movies/Animations

These items are mostly applicable for children or young adults. By a search within the internet, individuals can find different clips, animations, and movies related to finance, specifically on websites such as YouTube. Even instructors can apply them in their lesson plans to diversify their education methods. Moreover, authorities can offer them in related websites as educational resources. These resources are really effective since they use motion, color, and dialogue (particularly for visual learners). Here are some examples of this category.

Money: Bucks, Banks, and Business

This video series discusses money, the role banks play, trade, and how to make money. Activities are included for each segment. The companion classroom guide provides study questions and answers, discussion topics, vocabulary words, and information about various community resources. It also includes suggested reading and additional information for the teen market.[6]

Islamic Finance Animations

The Islamic Bank of Britain has produced different videos to explain its products and services, what makes them Sharia compliant and how they can help customers carry out their day-to-day banking requirements without compromising their faith. It provides an attractive and effective tool for its customers to understand Islamic Finance in brief.[7]

Podcasts

The progress of technology allows us to access different resources or deliver information or educational concepts through them. There are many websites that present financial podcasts that users can enjoy using their cellphone, tablet, notebook, or PC. One of the best and most effective delivery methods is using a podcast to teach different financial concepts. Even universities can be asked to contribute via this method by allowing access to related financial classes or seminars by uploading them as financial podcasts. In addition, authorities can make a podcast center on their organization's website(s). Here are different practices for podcast centers.

Bloomberg podcasts

This company is widely known and many are familiar with its features. On its website, customers/investors can find two related items: (1) video, and (2) radio, that both can be used as educational instruments. However, in the radio section, users can find the podcast center that contains several podcasts on different issues. One of them is titled Bloomberg EDU, which is a weekly look at education in the USA. It includes interviews with leading educators, administrators, and policymakers that users can apply and enjoy.[8]

Learn Out Loud

The website offers a large directory of audio and video learning resources. As well as finance, many other categories exist. In its business category, users can find issues such as investment, economics, wealth, entrepreneurship, and so on. The website is a good example of making a podcast central to financial literacy. Those who learn best by listening can benefit by applying this feature.[9]

Games

Games have taught us many things. They can teach us how to behave, and in many cases, how to decide between different options in a practical way. Many of us remember nostalgic games such as Monopoly that resulted in a better understanding of financial concepts such as saving, investment, and even mortgage loans in a practical way. Games can attract not only young adults and teenagers but also adults and elderly people. Games are considered to be appropriate methods for kinesthetic learners. Some financial games are introduced in the following.

Monopoly

This is a popular board game that starts by allocating players a specified amount of money from the bank. Players move around the board buying or trading properties, developing their properties with houses and hotels, and collecting rent from their opponents, with the goal being to drive them into bankruptcy. There are particular aspects that include answering questions and earning more cash. Although some believe that the game supports capitalism, it can be applied as a good educational instrument for those who learn best by actively participating.[10]

FIFA 2014 World Cup Financial Soccer

This game simulates a football match where the player faces multiple choice challenges in order to complete the game. Since these games are free, authorities can link to the website on their organization's education website(s).[11]

Individuals can find many other financial games by surfing the net. These two are only mentioned as good examples.

These items are the main delivery methods in the self-directed approach. The next section will introduce the main delivery methods in the instructor-directed approach.

Main Delivery Methods: Instructor-directed Approach

Unlike the delivery methods in the self-directed approach, delivery methods in the instructor-directed approach are based on the role of the educator not the trainee. The interaction between the educator and student in these methods is really important. In the instructor-directed approach, students (or trainees) are led by a professional expert toward specific goals. When an educational program is delivered by an instructor, it is called an instructor-directed approach. The following divides this approach based on location and procedure.

Delivery Methods Based on Location

School programs

School programs are meant to be preventative in nature, arming students with the knowledge they will need to avoid financial problems once they reach adulthood and take responsibility for their own finances. What organizers should do regarding financial education in schools is collaborate and coordinate. Organizers should note that financial literacy can be improved constantly if it is included in a school curriculum. Schools should include financial education in language, computer, and math curricula, and collaborate regarding its improvement. There is a primary action necessary for improving financial literacy in schools by teaching the teachers (as explained in previous chapters). By improving the financial literacy level of teachers, the existence of enough human resources in schools that are in line with the financial literacy improvement strategy is assured.

Campus-based programs

One method of addressing financial literacy among students of higher education is through college- and university-based financial programs. A college or university offers the opportunity to educate students about important decision-making points during their life to help them "avoid mistakes and missed opportunities" (Lerman and Bell 2006). Students in college or university are also in a particular period of life. Appropriate financial education could be a turning point for them since they are in the early years of adulthood and at this stage they could accept more responsibility and make their own decisions. Moreover, students in campuses are really interested in understanding financial concepts due to the challenges ahead. Financial education programs can assist students in making informed decisions. Therefore, a campus can be considered as a good place in order to deliver educational programs to those who are in need of financial literacy. However, the key point for the success of education programs in a campus is making connections with universities and colleges, and the intervention in their curricula.

Community-based programs

When an education program is to be launched for the public, it should be started with small groups of people; but where can appropriate groups of people be found, and how they can be accessed? A possible answer is through community centers. These are places where people gather to do joint tasks. Consumer associations, NGOs, and even religious centers such as churches and mosques are locations with access to people and could subsequently aid financial literacy improvement. Indeed, these programs would need collaboration and coordination. It should always be remembered that collaboration and coordination are important to the success of any educational effort.

Organization-based programs

In the previous chapter, the training of employees in the workplace was emphasized. They can be educated financially on in-service courses. There could be mandatory or voluntary in-service courses in organizations that are held by the coordination and collaboration of financial institutions and authorities. As an example, as mentioned earlier, the

Financial Literacy and Education Commission of the United States based its work on the collaboration and coordination of 22 agencies. Workplaces should be considered as corridors for delivering financial matters and contributing to organizations, at least in providing skilled and knowledgeable instructors.

Delivery Methods Based on Procedure

The division between location and procedure is merely for clarification. However, delivery methods based on procedure can be applied to the heart of location-based delivery methods. Indeed, conducting a financial education program needs a location. It could be at school, university, or at work, but emphasizing different options for consideration in improving financial literacy would be useful. In the following, the main delivery methods based on procedure (not location) are introduced.

Seminar/course/conference/workshop

Among the different delivery methods, some are group methods encompassing the participation of groups of individuals in a session with a presentation by an instructor (or instructors) about a particular financial issue. The topics can be presented in a seminar, conference, workshop, or conference. There could be many national and international financial courses/seminars/conferences or workshops, in which many are held by universities and international organizations. The teaching method of these delivery methods would be instructor-based (solo presentation of the instructor) or interaction-based (interaction between the instructor and students), which would be chosen based on different factors such as the duration of each course, number of participants, and so on.

Financial coaching/mentoring

Another delivery method that has been highlighted recently is financial coaching or mentoring. This concept can be applied everywhere to foster financial matters; from universities to community centers, homes, and workplaces. Based on experiences in microfinance and poverty alleviation, financial mentoring can be considered as an appropriate method in the microfinance category. In order to alleviate poverty and educate those who are poor (or vulnerable) the best method is one-to-one education since many people do not have access to facilities such as the internet and also may be illiterate. A mentor interacts with individuals, helps them with their financial challenges, shares their experiences, and ultimately leads them toward well-being.

It should be mentioned that students and other people who are in need of help can also benefit from this delivery method. Selecting people as mentors and giving them the responsibility of educating others is a task which should be cherished in financial literacy improvement initiatives.

Social media

Technology can be used to reach different target groups. Since establishment of a site can be costly, opening a page on a social media network is really easy and free. The number of users of social media networks on cellphones or personal computers is increasing. These networks provide the opportunity to foster financial literacy. The possible interaction between users and instructor(s) can direct a topic toward predetermined goals. Although social media networks are introduced as a delivery method in an instructor-directed approach, it could be considered, nevertheless, to be self-directed too.

So far, the main delivery methods that different national and international organizations adopt for delivering their financial education programs have been introduced. There could be more delivery methods, but according to the authors' point of view, those mentioned are more important and more applicable than others that are accessible in the financial literacy literature. Henceforward, important issues that should be considered in educational programs will be expressed. It should be noted that these issues are financial topics that authorities consider, but issues that investors should pay attention to in their decision-making processes will be introduced in Chap. 7.

Topics in the Spotlight

In the world of finance there are many financial topics that can be highlighted. However, in order to reduce the range of topics, the main stock market-related concepts are introduced. This section introduces essential concepts that should be taught not only to investors but also to some market practitioners, such as entrepreneurs, or owners of small- and medium-sized enterprises.

Risk and Return: A Fundamental Issue

The first question individuals may ask is how they can enter the market. As novices, they do not consider in depth anything and only ask which stock they should buy to gain more money. Profitability is what they seek and their questions are driven to this end. They consider that information, given by experts, should be discharged immediately. The only point of view they consider is the gain of investment. They have not faced those who have invested all their property and lost completely. They are not aware of the challenges ahead and the important points about which they have to make critical decisions. Even if they are warned to be cautious about entering into the market without enough knowledge and awareness, they would neglect this and think that experts are misleading them.

Since most investors enter the market hoping to earn more money and do not consider the negative side of investment, the primary responsibility of organizers is warning investors of risk and then its relationship with return. The message must become a red flashing light that everyone notices: "the stock market is woven by risk concepts." Investors should realize the difference between systematic and unsystematic risk and understand how to hedge it. Retail investors who prefer to invest directly in the market should be aware of diversification and its role in minimizing unsystematic risk.

In addition, investors should understand that they are in charge of their own decisions. If they decide to invest in risky assets and do not reach their expected return or lose parts of their capital, they must be able to tolerate losses. Therefore, it is always recommended to investors (particularly retail investors) to determine the level of loss that they can tolerate. Thus, prior to entering the market, the most important concept that investors must internalize is that of risk and return. Some may suggest that by warning investors about inherent risks, they will avoid investing in the market, and the real economy would incur losses. The response is simple. First, knowing the facts is a right for investors. Nobody can hide the stock market realities in order to help the real economy. As the saying goes "the end does not justify the means." Second, those who enter with understanding are more likely to stay for the long term in the market. They know that the market is tangled with risk and it would be more likely that they accept the responsibility of their own decisions. By informing investors about diversifiable and non-diversifiable risks, they will understand that investment does not take place without accepting a rational portion of risk.

Organization of the Market

For those entering the stock market, the main question would be: how does one invest? The start and finish time of the market, companies' symbols, situations in which symbols could be halted and suspended, existence of online trading, different types of orders, execution process, the role of brokers in the market, and many other things are topics in spotlight. Thus, familiarity with procedures is of importance in this context. As well as procedures, the structure of the market is also important. Who regulates the market, who settles transactions, and who provides financial services are the next questions regarding the organization of the market. By knowing the answers, when an investor faces a problem in a specific situation they know where to refer. Even when an investor needs help or advice for his/her financial decisions, familiarity with financial institutions in the market would be helpful. In some cases, investors prefer to invest indirectly via mutual funds or instruct an agency that makes a broker responsible for the best price execution. Even in these cases, however, the investor should have the ability to perform analysis, which is not possible without his/her familiarity with the market structure.

Main Financial Institutions

Regardless of the market structure, there are many institutions that investors must be aware of, including knowledge of their activities, and what they provide in the capital market. Where should an investor go to open a trading account? What information should he refer to in order obtain analysis and research about companies? Which companies provide consultation and advisory services? Is there a place where investors can take a loan? Is it possible to invest through a pool? How can a company find out about different kinds of security issues? These sorts of questions are inherently familiar to financial institutions. Among many institutions in the market, brokerages, investment banks, collective investment schemes, financial advisory companies, data processing companies, market makers, asset manage companies, rating agencies, and many others can be introduced.

Main Indicators of the Market

Equity indices are the best way for indicating a summary of stock market performance. An index is nothing more than a number calculated by applying a mathematical formula to the prices of a group of stocks. An index is a weighted average of a selected group of stock prices, which is designed to summarize the performance of all, or part of, the equity market. Equity indices are useful because they synthesize massive amounts of stock price data in the marketplace into more readily understandable aggregates. Although the production and interpretation is clear for experts, many investors are not aware of what it means, and do not know the differences between the variety of indices. Indeed, many of them do not know what the differences are between an equal weighted index with a price weighted index, or market capitalization index. They do not know how to replicate them and only consider it as the market pulse. Thus, when a broad index is positive they start buying, and when it is negative they start selling off. This is what should be underscored in financial literacy improvement in the market.

There are some other micro and macro indicators that can be introduced to investors. These are indicators that summarize the stock market and relate it to the economy. Although these indicators would be only informative for some, production of them may contribute to other people's decisions. Indicators such as trading volume, trading velocity, number of trades, trading value, market capitalization, market return to inflation, market return to interest rate, and so on are indicators that their introduction would be useful to aid investors' decision-making.

Products of the Equity Market

The most important and primary product of the capital market is stock. However, there are many other products that investors should know about. Familiarity with different products helps investors to make better investment decisions and subsequently diversify their portfolio appropriately. Although introduction of conventional products could be helpful, understanding Islamic products and their differences to conventional ones is crucial. The features of each product, the inherent risk, its impact on the real economy, and its similarity and differences with other products should be introduced. Ordinary stock, preferred stocks, preemptive rights (subscription privilege), bonds, sukuk (Islamic Securities), derivatives, ETFs, funds, and so on, are different products that can be identified in educational programs.

In addition to products, there are different markets (or platforms) that investors need to be familiar with in order to trade different products. These markets may vary country by country. For instance, the New York Stock Exchange (NYSE) includes five distinguished markets: NYSE, NYSE ARCA (Archipelago Exchange), NYSE MKT, NYSE options and NYSE bonds are its platforms. The equity market generally can be divided into three main categories: (1) stock market, (2) bond and Sukuk market (or debt market), and finally (3) derivatives market. Distinction between the primary and secondary market, and different kinds of issuance (Initial Public Offering, private placement, and capital raise) should be identified too. Introduction to these platforms can be useful.

Fundamental Analysis

The process by which an analyst or investor endeavors to determine the fair price for a stock based on its financial data is called fundamental analysis. The central assumption of fundamental analysis is that it is possible to incorporate all the available information about a company's current state and future prospects into a valuation model to produce an objective price for the company. This helps investors conducting primary analysis to decide which company is worth investing in. The most basic instrument for doing so is financial statements (balance sheets, income statements, and cash flow statements). Financial statement analysis, known as quantitative analysis, involves looking at revenue, expenses, assets, liabilities, and all the other financial aspects of a company. In this form, the performance of a company is in the spotlight. The auditor's report, valuation ratios such as the price to earnings ratio, price to book value ratio, price to earnings growth, financial ratios (such as current ratio and liability ratio), intrinsic value of shares, analysis of the whole economy and its comparison to the industry and the corporation, and so on, are all related issues to fundamental analysis. Introduction of these issues, however, will impact the financial literacy of investors and their decisions. Chapter 7 reviews the selection criteria in which fundamental analysis factors are discussed. (An alternative approach to determining the likely future direction of stock prices is technical analysis, which makes little or no reference to the fundamental characteristics of the company but focuses instead on the analysis of the historical movements of the stock price. This alternative can also be underscored by authorities, but since fundamental analysis is basic, this section only emphasized it.)

Related Issues

Beside the aforementioned categories, there are some other important topics that organizers should consider as investor protection concepts in their educational programs. The next section identifies the main issues as follows:

Financial information resources

Although this is not a financial topic, organizers should consider it as a matter that needs to be fostered. Different resources are provided by regulators and financial institutions that are applicable for investors. The type of information available and where investors can find it must be clarified. Indeed, information is a source of protection.

Fraud

In order to allow investors to protect themselves in the equity market, they must be informed and warned about cases of fraud and spam. Unfortunately, in the world of finance, there are greedy people who trap unsuspecting individuals to exploit them. Therefore, one issue that should be the focus of organizers is fraud and spam in order to increase self-protection among investors.

Conflict of interest

Many investors do not know what conflict of interest is, when it would occur, and what they can do in this respect. Since one of the main responsibilities of regulatory and supervisory bodies is investors' protection, conflict of interest is an issue that officials should consider in educational programs. Not only would investors benefit from their knowledge regarding managers' violations, but regulatory bodies can count on investors as corporate watchdogs.

There could be many other topics which are essential for investors. However, how can authorities determine which topic is of the utmost need? Indeed, there is no way other than asking investors and customers. As mentioned earlier with regard to delivery methods, the most important financial issues can be ascertained through conducting a survey. Organizers can attain information through an independent survey or include related questions in a survey in order to assess current financial literacy levels. Not only can surveys help, but experts who are in close contact with investors can monitor their behavior, which could contribute to choosing the best and most essential financial concepts to be applied in education programs.

Practices Around the World

This chapter introduces different practices in each related section. The following, however, introduces a practice conducted by the Federal Deposit Insurance Corporation, which is a good example of delivering financial education.

Money Smart

A comprehensive financial education curriculum designed to help individuals with low and moderate income outside the financial mainstream. Financial institutions in the USA are encouraged to meet the needs of their entire community, including individuals with low and moderate income as outlined in the Community Reinvestment Act of 1977. The Money Smart program helps banks and credit unions to reach this particular demographic, while helping to enhance participants' financial skills and create positive banking relationships. The Money Smart program is organized in modules and is offered both online for independent study, and in a workshop format. The curriculum is based on both the self-directed and instructor-directed approach, and is presented via the internet and CD/DVD. It considers different target groups from young people to adults. As well as people, small businesses are also targeted by this program. There are a variety of modules from which everyone could benefit in the financial literacy improvement process. The eleven modules included in the Money Smart program are:

1. Bank On It: An introduction to bank services
2. Borrowing Basics: An introduction to credit
3. Check It Out: How to choose and keep a checking account?
4. Money Matters: How to keep track of your money?
5. Pay Yourself First: Why you should save, save, save?
6. Keep It Safe: Your rights as a consumer.
7. To Your Credit: How your credit history will affect your credit future?
8. Charge It Right: How to make a credit card work for you?
9. Loan To Own: Know what you're borrowing before you buy.
10. Your Own Home: What homeownership is all about?
11. Financial Recovery: How to recover from a financial setback?[12]

Summary

In order to improve financial literacy, some questions must be answered: who should be educated? What should be taught? How should education be delivered? Which method should be applied for education? Where education should take place?

Chapter 2 reviewed the target audiences who must be considered in the financial literacy improvement process. However, this chapter clarified two main questions in this regard: what should be taught, and how should education be delivered?

There are many ways in which topics can be delivered to investors. Nevertheless, this chapter identified the most significant ones applicable in the stock market. Understanding these methods and topics can help investors and officials to improve planning of financial literacy improvement.

Notes

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Chapter 4 Financial Literacy Level

Abstract In the improvement of financial literacy, an important factor that should be considered in order to understand the current state of affairs is the financial literacy level of investors. This would aid authorities and investors in the planning process ahead. Another important question in financial literacy improvement is how to determine the optimum level. This chapter reviews all the possible steps that authorities and investors can make toward assessing financial literacy levels.

Keywords Financial literacy level • Financial literacy orientation • Financial literacy assessment • Self-assessment • Decision-making • Confidence • Awareness

Introduction

Financial literacy is rapidly becoming recognized as a core skill, essential for investors operating in an increasingly complex financial landscape. Therefore, it is not surprising that governments, authorities, and particularly investors around the world are interested in finding effective approaches to improve the level of financial literacy and that many are in the process of creating or leading a national strategy for financial education to provide learning opportunities throughout a person's life. However, measurement or assessment of financial literacy levels (among populations) is a preliminary step to determine the most effective approaches.

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The measurement of financial literacy levels is widely recognized as a priority for organizations seeking to deliver financial education in an efficient manner and evaluate its impact at a national level. Such an exercise allows policymakers to identify potential needs and gaps in relation to specific aspects of financial literacy and provides information about which groups of people need the most support. As well as policymakers, investors as end users of financial education programs also benefit from assessing their financial literacy levels through understanding their needs and lack of knowledge in specific concepts.

Academic researchers, financial-industry associations, and other interested organizations have conducted various surveys of financial literacy among investors in different countries. These studies have consistently found that investors do not understand the most basic financial concepts, such as the time value of money, compound interest rate, and inflation. Investors also lack essential knowledge about more sophisticated financial concepts, such as the meaning of stocks and bonds; the role of interest rates in the pricing of securities; the function of the stock market; the value of portfolio diversification (spreading investments across asset classes to reduce risk); risk and return and their trade-off. The surveys also demonstrate that investors lack essential knowledge about investment fraud and the importance of investment costs and expenses. These findings indicate the importance of assessing financial literacy levels.

This chapter focuses on assessing financial literacy levels and determining the surrounding issues regarding the desired level of financial literacy among investors.

Financial Literacy Assessment

Why should financial literacy level be assessed? By surfing the web, it could be concluded that there are many organizations (international and local) around the world that have conducted initiatives and surveys regarding financial literacy and available educational programs. There is a common belief that launching an educational program fundamentally needs the correct determination of starting points. In the planning process of financial literacy improvement, goals evince destinations. However, prior to determining destinations, the current position and routes leading toward destinations should be determined. Because of the similarity between the process and orienteering, it could be called "Financial Literacy Orientation."

Indeed, a financial literacy improvement process is similar to an orienteering field in which an investor should pass determined routes. Knowledge and understanding of financial concepts act as essential tools (say map and compass) in the hands of an investor. In order to navigate correctly, the investor needs to have enough knowledge to read and apply the map and compass (or GPS) to find his/her current position and find routes leading to destinations and, finally, choose the best route for his/her specified goals. In the real world of orienteering, before determining the current location, experts recommend not moving in any direction. After determining one's current location, mapping can be the next step. In orienteering matches, there are many flags as goals that orienteers must pass. Orienteers, based on their knowledge, can locate the position of flags in the map and then choose which direction to go. They distinguish the finish line and then go ahead. Similarly, investors should have knowledge of financial concepts, skills stemmed from practice, and confidence to make decisions. As the most elementary initiative, authorities and investors measure financial literacy levels to determine its current position (needs and knowledge gaps are specified). Then, some objectives as flags are determined and investors start moving by making decisions from one objective to the next one. As previously indicated, the process of making effective financial decisions based on financial knowledge is financial literacy.

Through this analogy, the importance of assessing the current level of financial literacy among investors is revealed. It helps planning and the pace of progress in the same way as the financial literacy improvement process (this process may be considered by authorities and investors). In this comparison, the improvement process can be illustrated as follows (Fig. 4.1).

Main Criteria in Financial Literacy Assessment

Financial literacy surveys can be used by policymakers to identify the financial skills and knowledge most lacking among investors and to establish a

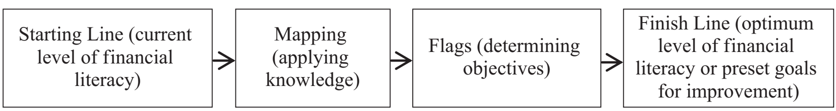

Fig. 4.1 Financial literacy improvement process

baseline measurement of financial literacy with which to assess the effectiveness of financial literacy programs. In order to measure financial literacy levels appropriately, there are some factors that should be considered by policymakers or authorities.

It is important, at the outset, to decide who the survey will cover and, just as importantly, who will be excluded, as this will determine the survey design and content. This will need to be included in the brief given to the organization undertaking the survey. Searching via a variety of surveys reveals that the majority of them are conducted considering adults as target groups. However, there are some exceptions too (e.g., PISA considers young adults or students and some others consider households in this respect). Therefore, the first step is target group specification. In some surveys, upper and lower age limits are also set. The most common approach is to cover all adults aged 18 and over, with no upper age limit. In most economies, 18 is the age when most individuals begin to adopt some autonomy with regard to their finances and become legally permitted to open a banking account and invest in the stock market.

The aim of the survey is the second important consideration. Policymakers should identify which factors they want to assess. Independent and dependent variables should be determined and the information required should be asked in the survey. Since this book is written about financial literacy in the securities market, the aim of the survey would be "assessing financial literacy level among investors" with financial concepts regarding the securities market included in the survey. However, the aim of the survey would change by changing target groups; for instance, the aim of assessing the financial literacy levels of students (who are considered as potential investors) is different from the aim of assessing the financial literacy level of active investors (who are considered as current investors). Moreover, the content of the survey would be changed by altering the survey's target groups. Investors also should note differences in surveys in which they might participate individually. If an investor is experienced and participates in a survey prepared for novices and finds him/herself literate, the result of the survey can mislead the investor about his/her needs (and even may lead to overconfidence in the investor).

Having decided who to include in the survey and its aim, the next area for careful consideration is the preferred survey method. Existing surveys have used a range of methods including: personal interviews which are either face-to-face, or by telephone, and self-completion surveys which are either paper based or use the web. Each method has its advantages and disadvantages and the cost varies quite considerably (OECD 2011). In the following paragraphs, these methods are briefly explained:

- *Face-to-face interviews*: The advantage of this approach is, first, that the interviews can be longer—up to an hour is generally considered acceptable. Second, the response rates tend to be a good deal higher than for other methods. Face-to-face interviews do, however, have disadvantages as well. There is no doubt that face-to-face surveys are the most expensive of all survey methods. The quality of data collected by personal interviews depends on the skill of the interviewer. Poor interviewers deliver low response rates, incomplete interviews (with sensitive questions unanswered), and can influence the responses given by respondents. For this reason, it is important that the interviews are undertaken by an organization or institution that has interviewers who are skilled and experienced in social surveys.
- *Telephone surveys*: In general, telephone interviews tend to be preferred in countries with a low population density in order to cover the whole country, rather than just the cities and other densely populated areas. They do, however, place limitations both on the length of interview that can be conducted—half an hour is often considered the maximum length—and on the types of question that can be asked. By telephone surveys, questions have to be read out which both increases the length of time a question takes and limits the list of possible replies. It also limits the use of questions where respondents are asked to react to or use written information. Furthermore, it is not possible for interviewers to verify information by checking paperwork or help respondents with written prompts.
- *Paper-based surveys*: In this kind of survey, questionnaires generally need to be very short, contain simple questions and be very simple in their design. This is in contrast to personal interview or web-based questionnaires which can include more complex questions and be tailored to the circumstances of individuals by skipping irrelevant questions.
- *Web-based surveys*: The suitability of a web-based survey depends on the proportion of the population that has access to the Internet and the risk of having a biased sample. It is for this reason that it cannot be recommended as a general approach to collecting data.

Another criterion that should be highlighted is the comparability of the survey. Explicitly, surveys should allow investors to compare themselves with others. Even some surveys allow participants to compare their financial literacy levels in the global landscape. Investors can participate individually in international surveys or answer questionnaires available on websites of those organizations that have conducted such surveys (Annex I introduces web links to survey reports and questionnaires conducted by different organizations in distinct countries).

The final criterion that policymakers or authorities should contemplate in conducting a survey is sampling. Sampling is a complex area and one where the help of a statistician will be needed. Based on OECD perspective, there are various ways of selecting a sample for a survey but these come down to two main methods: (1) a random sample and (2) a quota sample. However, random sampling is the most commonly used method in a variety of surveys. Random (sometimes known as probability or preselected) samples are ones where each individual has an equal chance of being selected for the survey and pre-identified individuals are identified for interviewers to contact. Random samples produce the most representative samples and are generally recommended. But they do require an accurate, comprehensive and up-to-date list (or sampling frame) of the population to be surveyed. In order to assess financial literacy levels, the population of the survey should be defined at the outset. As an example, assume the assessment of financial literacy levels among retail active investors in the stock market. The population consists of retail investors who are active. According to international definitions, active investors are those who typically look at the price movements of their stocks many times a day and are seeking short-term profits. Therefore, active investors are defined as "those whose trading volume is more than the trading days in a year (for instance, if the number of trading days is 250, then the minimum trading volume of an active investor must be 250 times in a year)." After determining the population, the second step is sampling. Sampling is a process used in statistical analysis in which a predetermined number of observations will be taken from a larger population. It must be a representation of the general population. The sample size in random samples can be acquired in different ways and consultation with a statistician is strictly recommended in this regard.

So far, the main criteria that policymakers and organizers of a survey should notice have been introduced and advice for investors participating in a survey has also been given. In the following sections, other points that are important in the process of financial literacy level assessment and some issues regarding the desired levels of financial literacy are mentioned.

Self-assessment of Financial Literacy Level

Besides the different factors that organizers should underscore in the process of financial literacy level assessment, one interesting aspect of shaping such surveys is allowing investors to assess their own financial literacy levels. In this way, organizers can kill two birds with one stone. The self-assessment consequences will be: (1) *behavioral*; (2) *persuasive*. In the behavioral aspect, organizers can compare the results of a survey with the results of investors' financial literacy level self-assessment. Accordingly, overconfidence or lack of confidence in the market might be recognized (as mentioned in previous chapters, behavioral finance plays an important role in the ultimate goal of financial literacy, which is changing the financial behavior of investors). For instance, when the results of a survey show that the financial literacy level is low among investors but they ranked it high individually, it might be that investors take more risk confidently, or in the case of failure, they complain more since the majority of them think what they have done is correct. Therefore, analyzing individuals psychologically through their own assessment could be interesting and fruitful.

As well as considering their behavior, the survey may convince rigid investors to endeavor to improve their financial literacy. Many investors, particularly experienced ones, are adhering to their own knowledge and understanding. If they are advised directly that their financial literacy level is low, undoubtedly, they might resist or reject it. However, allowing them to assess their own financial literacy could be the best way to convince them. They would accept it if they see that their financial literacy is low. Therefore, many surveys recommend the inclusion of a question regarding self-assessment of financial literacy level. For instance, investors can be asked to assess themselves by the Likert scale: "would you please rank your financial literacy level from 1 to 5 (1 means very low and 5 means perfect)." The final comparison reveals many things to investors as well as policymakers.

Desired Level of Financial Literacy

No one can restrict learning to a specific level. As an old famous saying goes "seek knowledge from the cradle to the grave." Therefore, a "finish line" for improving financial education cannot be determined. Innovation of new products, flexibility of trading processes, the changing atmosphere of the market, lifting of borders in the global landscape, and many other reasons show that there is no end to education and literacy improvement. However, is it possible to determine a desired level for financial literacy in the securities market? As mentioned in the decomposition of the financial literacy definition, the last component pertains to *decision-making*. Accordingly, the desirability of the financial literacy level is related to the effectiveness of decision-making. Since effectiveness is defined simply as "doing the right thing," effective decision-making can be defined as "making the right decision." However, the quality of decisions in the securities market depends on some factors; mainly the characteristics of the market. Indeed, risk and uncertainty are the main factors that affect the decision-making of investors in the market. Based on the degree of uncertainty, decisions can be divided into three categories:

1. *Decision-making under full certainty*: the results of all alternatives are explicit and the future of each way is predictable. In this situation, investors do not diversify and only concentrate on what they are sure about.
2. *Decision-making under risk*: the probabilities of occurrence of various alternatives are known or can be estimated. In this situation, predictability is low and information is uncompleted. Investors diversify to minimize effects in this situation.
3. *Decision-making under uncertainty*: the probability of different options are not explicit and investment alternatives are not completely determined. Access to accurate and relevant information is really difficult or impossible.

These three categories are illustrated in Fig. 4.2 for clarification.

As clearly seen in the figure, the best situation is district "**A**," when the degree of uncertainty is low and confidence in decisions is high. Essentially, financial literacy helps investors to increase their awareness and make decisions confidently. It shifts decision-making from risky situations toward more certainty. What should be mentioned about decision-making in the securities market is that investors' decisions are affected by which area they are in. When awareness is low and ambiguity is high, the probability of making wrong or inappropriate decisions is high. In addition, as depicted, even when awareness is on the threshold, ambiguity is not removed.

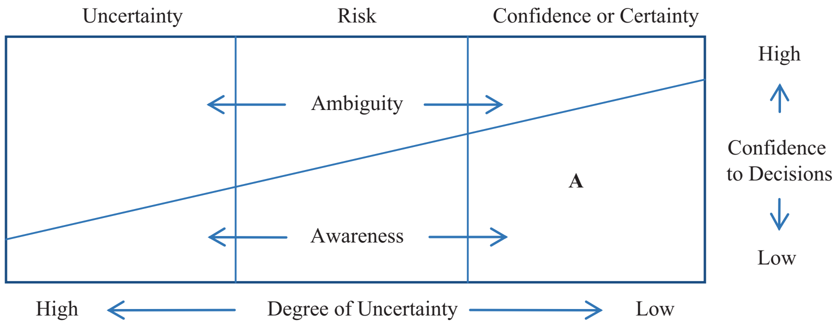

Fig. 4.2 Relationship between the uncertainty degree and decision-making

Therefore, even an informed investor might make the wrong decisions. The figure shows that ambiguity remains in all situations when investors are financially literate but make the wrong decisions. Nevertheless, when uncertainty is low and awareness is high, decisions might be effective. Thus, when the financial literacy level of an investor is in district A, it is in the desired level. It should be noted that no research or survey aims to measure the desired level of financial literacy because nobody can define this level.

The purpose of this section was merely to show the importance of decision-making and its affecting factors which make a financial literacy level desirable. The next section specifies some practices in respect of assessing financial literacy levels among customers and investors.

Practices Around the World

There are many international and national organizations or institutions that have assessed financial literacy levels (a list of them is introduced in Annex I). Here are some important ones.

The Organisation for Economic Co-operation and Development

OECD asserts:

> Assessing the levels of financial literacy in the population is a key component of a successful national strategy for financial education, enabling policy makers to identify gaps and design appropriate responses. International comparisons increase the value of such an assessment by enabling countries to benchmark

> themselves with other countries. Where similar patterns are identified across countries, national authorities can work together to find common methods for improving financial literacy within their respective populations.'

OECD's Financial Education Project set out in 2003 to assess how much financial literacy individuals need and to develop principles for improving financial education and literacy standards. The project was to proceed in two phases. Phase one surveyed member countries to collect the information needed to describe the types of financial education programs that exist, analyze their effectiveness, and develop a methodology to compare strategies and programs for improving financial literacy. Phase one resulted in the first major study of financial education at the international level: "Improving Financial Literacy: Analysis of Issues and Policies." The survey conducted by circulating a questionnaire asking respondents to provide information on how they view the level of financial education in their respective countries, what they see as the most important issues in financial education, what they consider the main obstacles to financial education, what major initiatives they have underway in the area of financial education, and whether they have attempted to measure the effectiveness of their financial education programs.

The second phase of the project focused on assessing the level of financial literacy among some pilot countries (14 countries). Through a questionnaire, research has focused on three main issues: (1) financial knowledge, (2) financial behavior, and (3) financial attitude. The results highlight a lack of financial knowledge amongst a sizeable proportion of the population in each of the countries surveyed. In addition to the relationship between these three components, research has reviewed a correlation between financial literacy and socio-demographics. You can find the questionnaire and its analysis on the OECD website.[1]

Securities and Exchange Commission (SEC) of the United States

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 SEC's Office of Investor Education and Advocacy was the sponsor of this research and conducted it in cooperation with the Federal Research Division of Library of Congress and Siegel & Gale LLC. The goal was not only to assess general financial knowledge, but also to determine specific knowledge of investment fraud, fees, and risk. Beside assessing the financial literacy of retail investors in general, the research evaluated the knowledge of subgroups defined by age, gender, and race. Researchers derived data for this analysis from a series of quantitative studies conducted since 2006 to determine the financial literacy of US retail investors. The results of the study were published in 2012 as “Financial Literacy among Retail Investors in the United States.” The study indicates that US 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. The survey also demonstrated that certain subgroups, including women, African-Americans, Hispanics, the oldest segment of the elderly population, and those who are poorly educated, have an even greater lack of investment knowledge than the average general population.[2]

Financial Industry Regulatory Authority (FINRA)

The FINRA Investor Education Foundation was established in 2003. It supports innovative research and educational projects aimed at segments of the investing public that could benefit from additional resources. The foundation allows researchers to explore investor behavior and develop practical ways to avoid costly mistakes and prepare for the future. In consultation with the US Department of the Treasury and President Bush’s Advisory Council on Financial Literacy, the FINRA Investor Education Foundation commissioned the first national study of the financial capability of American adults in 2009. The second study was conducted in 2012. The survey contains four general issues in respect of financial literacy: (1) making ends meet, (2) planning ahead, (3) managing financial products, and (4) financial knowledge and decision-making. The result of the survey is published cumulatively and state by state. The state-by-state survey was conducted online from July to October 2012 among a nationally representative sample of 25,509 American adults, reaching approximately 500 individuals per state. The survey in 2012 concludes “Most Americans continue to show low levels of financial literacy. A majority of American adults (61%) are unable to answer more than three of five fundamental financial literacy questions correctly—compared to 58% in 2009.”[3]

Financial Services Authority (FSA)

The FSA was an organization in the UK (replaced by the Financial Conduct Authority in 2013), that launched a survey to assess the financial capability of consumers in 2005. Its initiatives started in 2003 for developing and implementing a national strategy for financial capability. The Financial Capability Steering Group was established and identified seven priorities for providing the national strategy. One of these priorities was measuring the current state of financial capability in the UK. Subsequently the FSA commissioned the Personal Finance Research Center (PFRC) of the University of Bristol to carry out an exploratory study, to design a baseline survey to measure financial capability in the UK.

The findings of this survey were published in 2006 and reported in "Measuring financial capability: an exploratory study." The survey was designed to capture information about customers' attitudes and behavior in four main categories: (1) managing money, (2) planning ahead, (3) making choices (choosing products), and (4) getting help (staying informed). However, the survey identified the three main elements of financial capability as (1) knowledge and understanding, (2) skills, and (3) confidence and attitudes. The survey comprised face-to-face interviews with a total of 5328 people across the UK. The survey concludes: "We have found clear indications that individuals may be particularly capable in one or more areas, but lack skills or experience in others. We have also been able to identify those characteristics most strongly associated with low levels of financial capability."[4]

Standing Committee for Economic and Commercial Cooperation of the organization of Islamic Cooperation (COMCEC)

In order to enhance cooperation among capital market regulators, COMCEC members established the Capital Market Regulators Forum in 2011. The financial literacy task force is one of main task forces in the forum that is mandated to perform research in respect of financial literacy. In 2013, the task force launched a survey to assess the current financial literacy level among retail active investors in the stock market of member countries. The survey comprises four main elements of financial literacy: (1) knowledge and understanding, (2) skills, (3) education, information, and confidence, and (4) attitudes. The population and sample size were differentiated for each country due to the number of active investors. For instance, the number of active retail investors in 2013 for the Islamic Republic of Iran was 19000. Therefore, the sample size for this country was 377. The minimum sample size was 100 investors.

The questionnaire of this study was designed by an extensive study of the literature and by experts brainstorming. It contains different topics of finance from the basics to sophisticated concepts and aims to review the correlation between financial literacy and some demographic elements, in addition of making a single score for financial literacy for each member state.[5]

Surfing the net reveals that there is a lot of research being conducted by different organizations. Those mentioned are among the most well-known research in the global landscape and the rest are identified in Annex I.

Summary

In this chapter, we discussed an important issue in the way that financial literacy improvement is introduced: "the first step or starting point of financial literacy improvement." Financial literacy was likened to financial orientation, which needs mapping, and then directions toward preset goals must be found using the available instruments, and undoubtedly, skills and confidence for finding courses. Indeed, financial literacy level assessment reveals where an investor is standing and illustrates the investor's current status. When his/her current situation is determined, planning takes meaning.

This chapter focused on the ways and criteria for assessing the financial literacy levels of different investors, and finally, the desired level of financial literacy was mentioned. It was highlighted that although improvement of financial literacy is important and possible, ambiguity in the market cannot be eliminated. Since investors are not in full certainty, their decisions are affected by different factors, and therefore nobody can claim to be doing the right thing, and it cannot be claimed that financial literacy has an optimal level. The next chapter highlights the essential issues that investors must consider when trading in the market and focuses on the atmosphere of the securities market.

Notes

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Chapter 5 The Stock Market Atmosphere and Financial Concepts

Abstract The most important pillar of financial literacy improvement is investors. Their willingness to understand what they should be aware of in the stock market is highlighted in this chapter. This chapter reviews sophisticated factors that investors should consider initially in the stock market in order to shape their own decision-making framework. It also introduces macro and micro factors that are rooted in the real economy and specific situation of the market. In addition, this chapter focuses on the main characteristics and, generally, the atmosphere of the market. Overall, it identifies elements that can aid investors to be more intelligent when making decisions.

Keywords Investment • Risk • Diversification • Speculation • Stock selection • Financial ratios

Introduction

To invest successfully over a lifetime does not require a high IQ, extraordinary business insight, or inside information. Experts believe that a high IQ and higher education are not enough to make an investor intelligent. As an example, in the spring of 1720, Sir Isaac Newton owned shares in the South Sea Company, the hottest stock in England. Sensing that the market was getting out of hand, the great physicist confessed

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that he "could calculate the motions of the heavenly bodies, but not the madness of the people." Newton dumped his South Sea shares, pocketing a 100% profit totaling £7000. But just months later, swept up in the wild enthusiasm of the market, Newton jumped back in at a much higher price and lost £20,000 (or more than three million dollars in today's money). For the rest of his life, he forbade anyone to speak the words "South Sea" in his presence (Carswell 1960). If Sir Isaac Newton failed at investing, it's not because he was stupid. It's because, like many others, he did not develop a sound intellectual framework for making decisions and was not able to keep his emotions from destroying that framework (Graham 1949). As another instance, in a research study conducted in the USA in the 1970s, it was revealed that men in the medical profession have been notoriously unsuccessful in their security dealings. The reasons behind this were that they usually had ample confidence in their own intelligence and a strong desire to make a good return on their money, without the realization that to do so successfully requires both considerable attention to the matter and something of a professional approach to security values. This was rooted in the fact that they had less time available to give to their investment education and to the administration of their funds (Graham 1949).

Indeed, what makes investors intelligent is simply being patient, disciplined, and eager to learn; investors should also be able to harness their emotions and think for themselves. This decision-making framework might be shaped through financial literacy improvement. Financial literacy enables investors to better understand financial matters on both a personal and large scale. It enables them to apply that knowledge and assume responsibility for financial decisions now and in the future.

This chapter aims to review the most basic and important factors that investors should consider initially in the securities market in order to shape their own decision-making framework. It introduces macro and micro factors that are rooted in the real economy and the specific situation of the market. In addition, this chapter focuses on the main characteristics of the market. Overall, this chapter identifies elements that make investors intelligent. It should be mentioned that although this chapter would be useful for potential investors and newcomers, current investors can also review their knowledge and improve their understanding (and consequently their financial literacy) as well.

Graham's Principles

Since this chapter is inspired by Graham's core principles, this part is dedicated to introduce his old, but still valid, principles in his investment decisions. These principles are those which investors should keep in mind:

- A stock is not just a ticker symbol or an electronic blip; it is an ownership interest in an actual business, with an underlying value that does not depend on its share price.
- The market is a pendulum that forever swings between unsustainable optimism (which makes stocks too expensive) and unjustified pessimism (which makes them too cheap). The intelligent investor is a realist who sells to optimists and buys from pessimists.
- The future value of every investment is a function of its present price. The higher the price you pay, the lower your return will be.
- No matter how careful you are, the one risk no investor can ever eliminate is the risk of being wrong. Only by insisting on what is called the "margin of safety"—never overpaying, no matter how exciting an investment seems to be—can you minimize your odds of error.
- The secret to your financial success is inside yourself. If you become a critical thinker who takes no Wall Street "fact" in faith, and you invest with patient confidence, you can take steady advantage of even the worst bear markets. By developing your discipline and courage, you can refuse to let other people's mood swings govern your financial destiny. In the end, how your investments behave is much less important than how you behave (Kahneman and Zweig 2003).

Fundamental Issues for Investment

Chapter 3 highlighted some important financial concepts, of which understanding is essential for each investor. This section aims to introduce issues which contribute to the decision-making of investors in the market.

Selection: A Fundamental Issue in the Stock Market

In the previous chapter, it was mentioned that a decision-making atmosphere can be divided into three parts: (1) certainty, (2) uncertainty, and

(3) risk. It was schematically shown that risk is in the middle of certainty and uncertainty. Investors have never liked uncertainty—and yet it is the most fundamental and enduring condition of the investing world. It always has been, and it always will be. It was emphasized that financial literacy helps investors' decisions to shift toward the area of certainty. However, the main decision investors make in the stock market is to buy, sell, or hold securities or mutual fund units. Other issues surround this and affect this decision. Selection, which is stock picking in the stock market, is an initial step in the decision-making process. Investors in their decision-making process should know which factors determine how much they should be willing to pay for a stock. What makes one company worth more than another? How they can be reasonably sure that they are not overpaying for an apparently rosy future that turns out to be a murky nightmare? In the real world, no one has ever been given the ability to see that any particular time is the best time to buy stocks. Investing is an adventure and the financial future is always an uncharted world. Therefore, whoever is willing to enter into this world should be prepared. The basic elements investors should consider (prior to other things that are introduced in this chapter) in the selection process are introduced as follows:

1. ***General long-term prospects***: No one really knows anything about what will happen in the distant future, but analysts and investors have strong views on the subject just the same. This criterion depends on the standpoint of investors toward a particular company or industry. It covers all kinds of companies, from small and medium-sized enterprises, to conglomerates. Investors, based on research, knowledge, and information, should invest in a company that they think will have a bright future.
2. ***Management***: It is fair to assume that an outstandingly successful company has unusually good management. This will have shown itself already in the past records; it will show up again in the estimates for the next five years, and in long-term prospects of a company. However, the management factor is most useful in those cases in which a recent change has taken place that has not yet had the time to show its significance in the actual figures. Indeed, the importance of this factor must not be exaggerated since there is no objective, quantitative, and reasonably reliable test of managerial competence. As an example, in 1921, Walter Chrysler took command of the almost moribund Maxwell Motors, but in a few years made it a large and highly profitable enterprise, while numerous

other automobile companies were forced out of business. But in 1962, Chrysler had fallen far from its once high state and the stock was selling at its lowest price in many years.

3. ***Financial strength and capital structure***: Stock of a company with a lot of surplus cash and nothing ahead of the common is clearly a better purchase (at the same price) than another with the same per share earnings but large bank loans and senior securities. Such factors are properly and carefully taken into account by security analysts. The capital structure of a company, its working capital, its current liabilities to current assets, its long-term debt, and some other ratios introduced in all financial books should be underscored by investors.
4. ***Dividend record***: One of the most persuasive tests of high quality is an uninterrupted record of dividend payments going back over many years. Analysts believe that a record of continuous dividend payments for the last 20 years or more is an important plus factor in the company's quality rating. Those who wish to enjoy capital gain plus dividends and who plan on living off dividends in retirement should generally focus on companies paying regular, stable, and rising distributions over time. Although dividend policy and its rate are important, investors should notice the effect of reinvestment of dividends in the company. According to the research conducted at the London Business School in the 2000s, if an investor had invested \$1 in US stocks in 1900 and spent all his dividends, his stock portfolio would have grown to \$198 by 2000. But if he had reinvested all his dividends, his stock portfolio would have been worth \$16,797. Far from being an afterthought, dividends are the greatest force in stock investing. Therefore, both dividend payout ratio and retention ration or plowback ration, which is 1 minus dividend payout ratio (both are introduced at the end of this chapter), are important in the decision-making of investors.
5. ***Safety***: This criterion refers to the financial safety of the principal and the risk involved in investing. Risk is the likelihood of a loss or an expected return. It is an old and sound principle that those who cannot afford to take risks should be content with a relatively low return on their invested funds. In respect of risk, the investors' chief problem—and even their worst enemy—is likely to be themselves. They are not aware of their risk characteristics (risk averse or risk lovers) and invest in a way that is not a match to their traits. Investment is a step-by-step process in which subsequent steps are rooted in more

knowledge and skill (based on practice). Risk averse investors—instead of keeping cash in banking accounts—should move from low free risk to low risk investments. They could invest in treasury bills, bonds, or sukuk, and then get into stock, and then derivatives. What should be emphasized is that safety is an implied result of financial literacy.

Rule of 75–25%

One basic decision investors generally make is how much to put in stocks and how much to put in bonds (or sukuk) and cash. A traditional rule of thumb was to subtract investor's age from 100 and invest that percentage of his assets in stocks, with the rest in bonds or cash. (A 28-year-old would put 72% of his money in stocks; an 81-year-old would put only 19%.) This rule became overheated in the late 1990s. In 1999, a popular book argued that if an investor was younger than 30 he should put 95% of his money in stocks—even if he had only a 'moderate' tolerance for risk (Glassman and Hassett 1999). Critics, however, say why should age determine how much risk investors can take? An 89-year-old with $3 million and an ample pension would be foolish to move most of his/her money into bonds. On the other hand, a 25-year-old who is saving for his/her wedding and a house down payment would be out of their mind to put all their money in stocks. The unexpected can strike anyone, at any age. Everyone must keep some assets in the riskless haven of cash. Investors often fall into the trap of the bull and bear market. When stocks are going up 15% or 20% a year, it is easy to imagine that investors utilize all their assets in stocks. But when they watch every dollar they invested getting bashed down to a dime, it is hard to resist bailing out into the 'safety' of bonds and cash. Instead of buying and holding their stocks, many people end up buying high, selling low, and holding nothing. The rule of 25–75% one that most experts recommend. It asserts that investors must not allocate less than 25% and more than 75% of their assets into cash or bonds. It indicates that investors must not put all their properties in risk free assets and they should accept a portion of risk. In addition, it shows diversification rule that is mentioned in the next section. By meeting this rule, investors can ensure that at least they will not lose their shirt.

Diversification: Do Not Put all of Your Eggs in One Basket

When the market is bullish, one of the most common criticisms of diversification is that it lowers the potential for high returns. The question is "if an investor could identify an exceptional stock, wouldn't it make sense for him to put all his eggs into that one basket?" It is often said, that if an investor is sure about such a stock (like Microsoft in the 1990s), it is better for him to take all his savings and buy some good stock and hold it until it goes up, and then sell it. However, that is not a situation that most investors encounter. No matter how confident investors feel, there's no way to find out whether a stock will go up until after it is has been purchased. Therefore, the stock you think is 'the next Microsoft' may well turn out to be the next Micro-Strategy instead. (That former market star went from \$3130 per share in March 2000 to \$15.10 at year-end of 2002, an apocalyptic loss of 99.5%). Keeping money spread across many stocks and industries is the only reliable insurance against the risk of being wrong. Consider diversification this way:

> In the huge market haystack, only a few needles ever go on to generate truly gigantic gains. The more of the haystack an investor owns, the higher the odds go that he will end up finding at least one of those needles. By owning the entire haystack (ideally through an index fund that tracks the total US stock market) he can be sure to find every needle, thus capturing the returns of all the superstocks (Graham 1973).

Collective Investment Schemes: Why Bother with Selection?

Stock picking, or the selection process, has always been a troublesome task for investors (mainly retail investors). Although there are some factors that make a private portfolio, lack of expertise, and shortage of funds cause many investors to be unable to create a good diversified portfolio. However, the capital market facilitates the selection process for less experienced investors by pooling investors' money in specific kinds of vehicles known as *Collective Investment Schemes* (CISs). Collective Investment Schemes are a popular form of investment, and they are accessible to all. Each investor has a proportional stake in the CIS portfolio based on how much money he or she contributed. Investors invest in CISs by purchasing units of CIS. The word 'unit' refers to the portion or part of the CIS portfolio that is owned by the investor. Collective Investment Schemes provide a relatively secure means of investing on the Stock Exchange, and other financial instruments. There are different kinds of CISs, which include equity funds, balanced funds, pension funds, growth funds, fixed income funds, index funds, and so on. Investors can earn money from their investment in three ways:

1. A fund may receive income in the form of dividends and interest on the securities it owns. A fund will pay its unit holders nearly all the income it has earned in the form of dividends. Usually, these funds are called 'Distribution Funds.'
2. The price of the securities a fund owns may increase. When a fund sells a security that has increased in price, the fund has a capital gain. At the end of the year, most funds may choose to distribute these capital gains (minus capital losses) to investors.
3. If a fund does not sell but holds on to securities that have increased in price, the fund's value (which is known as *Net Asset Value*) increases. A higher net asset value reflects the higher value of the investment. If investors sell their units, they make a profit (this also is a capital gain).

Meanwhile, though investors (particularly newcomers and potential investors) should notice the potential of CISs, they should choose to invest in a fund which matches their requirements, and select the best one by doing research.

Formula Investing: Junk in the Stock Market

The stock market is a place for innovation. Some innovations result in the generation of a new instrument or a product. However, some are illusive and put investors into investment traps. Formula investing is an innovation which might work in a specific period or, as a general private rule that stops working right after being made public. For decades, these formulas were promoted, popularized, and then thrown aside. All of them shared a few traits: This is quick! This is easy! And it won't hurt a bit! But in reality, they have not worked appropriately. There are many instances, but one well known example is James O'Shaughnessy's funds' performance in 2000.

In 1996, an obscure money manager named James O'Shaughnessy published a book called *What Works on Wall Street*. In it, he argued that "investors can do much better than the market." O'Shaughnessy made a stunning claim: From 1954 to 1994, investors could have turned $10,000 into $8,074,504, beating the market more than tenfold—a towering 18.2% average annual return. How? By buying a basket of 50 stocks with the highest one-year returns, five straight years of rising earnings, and share prices less than 1.5 times their corporate revenues. As if he were the Edison of Wall Street, O'Shaughnessy obtained US Patent No. 5,978,778 for his "automated strategies" and launched a group of four mutual funds based on his findings. By late 1999 the funds had sucked in more than $175 million from the public, and in his annual letter to shareholders, O'Shaughnessy stated grandly: "As always, I hope that together, we can reach our long-term goals by staying the course and sticking with our time-tested investment strategies."

But *What Works on Wall Street* stopped working right after O'Shaughnessy publicized it. However, two of his funds stank so badly that they shut down in early 2000, and the overall stock market (as measured by the S & P 500 index) walloped every O'Shaughnessy fund almost nonstop for nearly four years running. In June 2000, O'Shaughnessy moved closer to his own "long-term goals" by turning the funds over to a new manager, leaving his customers to fend for themselves with those "time-tested investment strategies" (Kahneman and Zweig 2003). What investors should bear in mind is that the only way they can obtain the best stocks is through doing research and improving their skill by practice and more practice. They should not pay attention to that which might lead them toward investment traps.

Speculation Versus Investment

Since there is no single definition of investment in general acceptance, authorities have the right to define it pretty much as they please. Many of them deny that there is any useful or dependable difference between the concepts of investment and speculation. It should be noted that this skepticism is unnecessary and harmful. It is injurious because it lends encouragement to the innate leaning of many people toward the excitement and hazards of stock-market speculation. Distinction between the two concepts can be useful for the categorization in this book. Investors should differentiate between speculation and investment. They should know that speculation can easily harm their assets allocated to the stock market. Accepting the common jargon that applies the term 'investor' to everybody in the stock market must be prevented. By definition, an investment operation is one which, upon thorough analysis, promises safety of principal and an adequate return. Operations not meeting these requirements are speculative. "Thorough analysis" means "the study of the facts in the light of established standards of safety and value" while "safety of principal" signifies "protection against loss under all normal or reasonably likely conditions or variations" and "adequate" (or "satisfactory") return refers to "any rate or amount of return, however low, which the investor is willing to accept, provided investors act with reasonable intelligence" (Graham 1934). Investing consists of at least three elements (speculation is excluded):

- an investor must thoroughly analyze a company, and the soundness of its underlying businesses, before buying its stock;
- an investor must deliberately protect himself against serious losses;
- an investor must aspire to 'adequate,' not extraordinary, performance.

Investors should note that like betting on horses, speculating in the market can be exciting or even rewarding. To see why temporarily high returns don't prove anything, imagine that two places are 130 miles apart. If a driver observes the 65 mph speed limit, he can drive that distance in two hours. But if he drives 130 mph, he can get there in one hour. If the driver tries this and survives, is his act 'right'? Should others be encouraged to try it too, because others hear him boasting that it 'worked'?

Indeed, it is easy to tell investors not to speculate; the hard thing will be for them to follow this advice. It should be repeated and emphasized that if an investor wants to speculate, he or she must do so with their eyes open, knowing that they will probably lose money in the end; and be sure to limit the amount at risk and to separate it completely from the investment program.

Risk: What Should be Highlighted in the Stock Selection Process

What is risk? There would be different answers depending on whom, and when, this is asked. In the bull market, risk does not mean losing money; it means making less money than someone else. But in the bear market it means the stock market may keep dropping until it has wiped out whatever traces of wealth investors still possess. Losing some money is an inevitable part of investing, and there is nothing one can do to prevent it. But, an intelligent investor must take responsibility for ensuring that they never lose most or all of their money.

There are different elements that shape financial risk in the stock market. However, there is a source of risk which is not underscored enough; that is investors themselves and their decisions (the ultimate goal of financial literacy). The Nobel-prize winning psychologist, Daniel Kahneman, explains two factors that characterize good decisions:

- 'Well-calibrated confidence' (do I understand this investment as well as I think I do?)
- 'Correctly-anticipated regret' (how will I react if my analysis turns out to be wrong?)

To find out whether investors' confidence is well calibrated, investors should ask themselves: 'What is the likelihood that my analysis is right?' It can be obtained carefully through these questions:

- How much experience do I have?
- What is my track record with similar decisions in the past?
- What is the typical track record of other people who have tried this in the past?
- If I am buying, someone else is selling. How likely is it that I know something that this other person (or company) does not know?
- Have I calculated how much this investment needs to go up for me to break even after my taxes and costs of trading?

In addition, investors should find out whether they are the kind of person who correctly anticipates their regret. They should start by asking: 'Do I fully understand the consequences if my analysis turns out to be wrong?' These points should be considered in answering this question:

- If I'm right, I could make a lot of money. But what if I'm wrong? Based on the historical performance of similar investments, how much could I lose?
- Do I have other investments that will tide me over if this decision turns out to be wrong? Do I already hold stocks, bonds, or funds with a proven record of going up when the kind of investment I'm considering goes down? Am I putting too much of my capital at risk with this new investment?
- When I tell myself, 'You have a high tolerance for risk,' how do I know? Have I ever lost a lot of money on an investment? How did it feel? Did I buy more, or did I bail out?
- Am I relying on my willpower alone to prevent me from panicking at the wrong time? Or have I controlled my own behavior in advance by diversifying and signing an investment contract? (Kahneman and Zweig 2003).

Investors should always remember that risk is brewed from an equal dose of two ingredients: probabilities and consequences. Before they invest, they should ensure that they have realistically assessed their probability of being right and how they will react to the consequences of being wrong (Slovic 1986). As the final word, investors should notice that successful investing is about managing risk, not avoiding it. Financial literacy provides a toolkit for risk management in the hands of investors.

Essential Financial Concepts in Investment

Chapter 4 introduced the main financial concepts that are useful in the stock market. However, this section aims to broaden these concepts with a different approach. The following section briefly reviews some macro- and microeconomic and financial concepts that are applicable in the stock market and affect the decision-making of investors.

1. ***Inflation***

   While a well-run company offering an attractive product can be expected to produce superior returns to a poorly-run company selling a low-quality product, neither company will do well if the economy as a whole goes into a downturn. Inflation negatively impacts all companies. It is an economic term that describes the tendency of prices to rise over time. Alternatively, it can be viewed as the decrease in the purchasing power of a currency over time. Inflation is an element for discounting future cash flows of a company to the present and consequently affects valuation of a stock. The rate of inflation directly erodes the value of the fixed interest payments made in the future by fixed income securities. Changes in inflation may cause changes in values of stocks and fixed income securities. Therefore, investors should track related information.
2. ***Interest rate***

   The effects of monetary policies on different markets (particularly the stock market) have always been emphasized in academic texts. Determining interest rates is the main tool in the hands of central banks to arrange monetary policies. Interest rate directly affects valuation of stocks in case of discounting future cash flows to the present. Increase of the interest rate can decrease the value of a stock. For many investors, a declining market or stock price is not a desirable outcome. Investors wish to see their invested money increase in value. Such gains come from stock price appreciation, the payment of dividends (or both). With a lowered expectation in the growth and future cash flows of a company, investors will not get as much growth from stock price appreciation, making stock ownership less desirable. Furthermore, investing in stocks can be viewed as too risky compared to other investments. When the interest rate rises, newly offered government securities, such Treasury bills and bonds, are often viewed as the safest investments and will usually experience a corresponding increase in interest rates. In other words, the 'risk-free' rate of return goes up, making these investments more favorable. When people invest in stocks, they need to be compensated for taking on the additional risk involved in such an investment, or a premium above the risk-free rate. The desired return for investing in stocks is the sum of the risk-free rate and the risk premium. Therefore, investors should always look at changes in interest rate and compare it with their risk premium.

3. ***Disciplined investment***

   According to Ibbotson Associates, the leading financial research firm, if an investor had invested $12,000 in the Standard & Poor's 500-stock index at the beginning of September 1929, 10 years later he would have had only $7223 left. But if he had started with a paltry $100 and simply invested another $100 every single month, then by August 1939, his money would have grown to $15,571. That is the power of disciplined buying, even in the face of the Great Depression and the worst bear market of all time.[1] Many investors think that they should invest a large amount of money and then stand aside looking at their portfolio movements. However, the stock market is the place for those who have a close eye on their portfolio performance in a particular period of time and those who invest in a disciplined manner.

4. ***Corporate actions***

   Investors should have a general sense of how the most common corporate actions impact their investment and some of the important factors to consider in determining how the affected stocks' share prices will react. Among most important corporate actions are: *Stock Split, Spin-Offs, Rights Offering, Mergers, Acquisitions, and Tender Offers.* Academic texts pay attention to these concepts, but the most important one that in most cases has a dilution effect on holding stocks is 'Rights Offering.' It is defined as an issue of rights to a company's existing shareholders that entitles them to buy additional shares directly from the company in proportion to their existing holdings, within a fixed period. It allows investors to maintain their proportionate stake in the company. Since corporate actions have fundamental consequences, investors should trace companies' decisions in this respect.

5. ***Accounting principles***

   Although investors are not required to have complete knowledge about accounting, they should have sufficient understanding of it. Investors should have an understanding of the basics of financial accounting and the content and structure of the standard financial disclosures made by companies. Initial disclosure structure comes in the way of *Balance Sheets*, *Income Statements*, and *Statement of Cash Flows*. These documents show the financial status of a company and investors can utilize them for further analysis. When it comes to investing, analyzing financial statement information (also known as quantitative analysis), is one of the most important elements in the fundamental analysis process. Financial statements are the cornerstone of financial ratio analysis. The main applicable financial ratios and their formulas are shown in Table 5.1.

Investor Alerts: Market Abuse

Confidence in fairness and neutrality can increase the liquidity and efficiency of financial markets. Manipulation and trading by inside information are examples of abuse which damage the integrity and public confidence of the market. Examples of these abusive actions are mentioned in the rules and regulations of many jurisdictions. What is important is that investors are informed about the methods and techniques that these abusive actions may impose in the market. This section aims to identify the pitfalls that investors should avoid. In general, these techniques can be categorized in fraud and manipulative actions.

The Securities and Exchange Commission of the United States defines manipulation as an intentional conduct designed to deceive investors by controlling or artificially affecting the market for a security. However, the Market Abuse Regulation (MAR) of the EU specifies manipulative activities or behaviors in Article 12. These include:

Table 5.1 Main financial ratios

Liquidity measurement ratios	Current ratio	$\dfrac{\textbf{Current assets}}{\textbf{Current liabilities}}$
	Quick ratio	$\dfrac{\text{Cash} + \text{Marketable securities} + \text{Accounts receivable}}{\text{Current liabilities}}$
	Cash ratio	$\dfrac{\textbf{Cash} + \textbf{Marketable securitites}}{\textbf{Current liabilities}}$
Profitability indicator ratios	Net profit margin analysis	$\dfrac{\text{Net income}}{\text{Net sell (Revenue)}}$
	Return on assets (ROA)	$\dfrac{\textbf{Operating income}}{\textbf{Total assets}}$
	Return on equity (ROE)	$\dfrac{\textbf{Net income}}{\textbf{Total equity}}$
	Return on capital employed	$\dfrac{\textbf{EBIT}}{\textbf{Average debt liabilities} + \textbf{Average shareholders'equity}}$
	Dividend payout ratio	$\dfrac{\textbf{Cash dividend}}{\textbf{Net income}}$
	Retention or plowback ratio	1- Dividend Payout Ratio
Growth ratios	Internal growth rate	$\dfrac{\boldsymbol{ROA \times b}}{\mathbf{1 - ROA} \times \boldsymbol{b}}$
	Sustainable growth rate	$\dfrac{\boldsymbol{ROE \times b}}{\mathbf{1 - ROE} \times \boldsymbol{b}}$

(continued)

Table 5.1 (continued)

Debt ratios or risk/leverage ratios	Debt ratio	$\frac{\textbf{Total liabilities}}{\textbf{Total assets}}$
	Debt-equity ratio	$\frac{\textbf{Long term debt}}{\textbf{Total equity}}$
	Capitalization ratio	$\frac{\textbf{Long term debt}}{\textbf{Long term debt + Shareholders' equity}}$
	Interest coverage ratio	$\frac{\textbf{EBITDA}}{\textbf{Interest expenses}}$
	Cash flow to debt ratio	$\frac{\textbf{Operating cash flow}}{\textbf{Total debt}}$
Cash flow indicator ratios	Operating cash Flow/sales ratio	$\frac{\textbf{Operating cash flow}}{\textbf{Net sale (Revenue)}}$
	Free cash Flow/operating cash ratio	$\frac{\textbf{Operating cash flow – Capital expenditure}}{\textbf{Operating cash flow}}$
	Cash flow coverage ratio	$\frac{\textbf{Operating cash flow}}{\textbf{Short term debt}}$
	Dividend payout ratio	$\frac{\textbf{Dividend per common share}}{\textbf{Earning per share}}$
Investment valuation ratios	Price/book value ratio	$\frac{\textbf{Stock price per share}}{\textbf{Shareholders' equity per share}}$
	Cash flow coverage ratio	$\frac{\textbf{Stock price per share}}{\textbf{Operating cash flow per share}}$
	Price/earnings ratio	$\frac{\textbf{Stock price per share}}{\textbf{EPS}}$
	Price/earnings to growth ratio	$\frac{\textbf{PE ratio}}{\textbf{EPS growth}}$
	Price/sales ratio	$\frac{\textbf{Stock price per share}}{\textbf{Net sale (Revenue) per share}}$
	Dividend yield	$\frac{\textbf{Annual dividend per share}}{\textbf{Stock price per share}}$

- ***Giving false or misleading signals***: a transaction, an order to trade or any other behavior which gives, or is likely to give, false or misleading signals about the supply of, demand for or price of a financial instrument; or secures, or is likely to secure, the price of one or several financial instruments, at an abnormal or artificial level;
- ***Using fictitious devices or other deception or contrivance***: a transaction, placing an order to trade or any other behavior or activity affecting, or that is likely to affect, the price of one or several financial instruments; using a fictitious device or any other form of deception or contrivance;
- ***Disseminating information through the media, internet or using any other means***: which gives, or is likely to give, false or misleading signals as to supply, demand or price of financial instruments; or secures, or is likely to secure, their price at an abnormal or artificial level, including circulating rumors knowing or when the person ought to have known the information was false or misleading;
- ***Certain behaviors***: in addition to the activities mentioned above, also constitute market manipulation. They include collaborating to secure a dominant position over the supply or demand for a financial instrument or creating other unfair trading conditions (including by algorithmic and high-frequency trading).

Based on the MAR, some techniques for manipulation can be specified. These are as follows:

- **Wash trade:** Also called Round Trip Trading, or Wash Sales. The Commodity Futures Trading Commission defines it as entering into, or purporting to enter into, transactions to give the appearance that purchases and sales have been made, without incurring market risk or changing the trader's market position. Wash trading occurs when a trader buys and sells the same securities simultaneously. This involves selling a security at a loss, then repurchasing the same or similar securities before or after the sale. Committing multiple wash sales can manipulate the market by increasing a security's activity and inflating the price. Investors used to carry out wash sales so they could claim a capital loss as a tax deduction.
- **Painting the tape:** NASDAQ defines it as an illegal practice by traders who manipulate the market by buying and selling a security to

create the illusion of high trading activity and to attract other traders who may push up the price. It occurs where a group of traders buy and sell a specific stock amongst themselves to create the appearance of high trading volume and significant investor interest, which skews the stock's price. This lures unsuspecting investors to buy the stock, resulting in a higher closing price for the stock, so the traders make a profit.

- **Order spoofing:** It is where traders submit orders without the intention of carrying them out. It is defined as bidding or offering with the intent to cancel the bid or offer before execution, submitting or cancelling bids and offers to overload the quotation system of a marketplace; or to submit multiple bids or offers to create the appearance of false market depth.
- **Marking the close, or portfolio pumping**: It is simply an attempt to influence the closing price of a security by executing purchase or sale orders just prior to the close of trading. Such orders can artificially inflate or depress the closing price for the security and impacts orders that are to be executed at the closing price. Fund managers, in particular, use this technique in order to show higher performance of their portfolio in quarterly reports.
- **Pump and dump**: the US Securities and Exchange Commission defines it as schemes that have two parts. In the first, promoters try to boost the price of a stock with false or misleading statements about the company. Once the stock price has been pumped up, fraudsters move on to the second part, where they seek to profit by selling their own holdings of the stock, dumping shares into the market.

  These schemes often occur on the Internet where it is common to see messages urging readers to buy a stock quickly. Often, the promoters will claim to have 'inside' information about a development that will be positive for the stock. After these fraudsters dump their shares and stop hyping the stock, the price typically falls, and investors lose their money.
- **Affinity fraud**: Affinity fraud is not a particular type of fraud but refers to all fraud targeted towards members of an identifiable group of individuals such as those with a common religion, ethnic heritage, background, or interests. The fraudsters involved in affinity scams often are—or pretend to be—members of the group. They may

enlist respected leaders from the group to spread the word about the scheme, convincing them it is legitimate and worthwhile. Often, those leaders become unwitting victims of the fraud they helped to promote.

- **Ponzi scheme**: It is defined as an investment fraud that pays existing investors with funds collected from new investors. Ponzi scheme organizers often promise to invest investors' money and generate high returns with little or no risk. But in many Ponzi schemes, the fraudsters do not invest the money. Instead, they use it to pay those who invested earlier and may keep some for themselves.
- **High-yield investment programs (HYIP)**: They are unregistered investments typically run by unlicensed individuals. The hallmark of an HYIP scam is the promise of incredible returns at little or no risk to the investor. A HYIP website might promise annual (or even monthly, weekly, or daily) returns of 30 or 40%—or more. Some of these scams may use the term 'prime bank' program (the US SEC).
- **Social media fraud**: within the most recent decade, social media has become crucial in the life of many people. Many investors use social media and the Internet to find a hint or a signal to make their investment decisions. Social media also has facilitated fraudsters reaching people anonymously with advertisements of their illegal purposes. It's easy for fraudsters to make their messages look real and credible and sometimes hard for investors to tell the difference between fact and fiction. The key to avoiding investment fraud on social media sites or elsewhere on the Internet is to be an educated investor.

What is really important is that investors are informed about different ways fraud and manipulation may exist in the market. There are two key factors that can help investors to avoid fraud and manipulation: (1) enhancement of financial literacy, (2) paying attention to regulators' alerts or warnings about new fraudulent or manipulative techniques. What was mentioned in this section was not a complete list of abusive actions. It only aimed to introduce the main techniques that are mentioned in different articles and books (we strictly recommend readers to review other methods and techniques of abusive actions).

Practice, Practice, and Practice

When it comes to a decision-making process in uncertain or risky situations, everything lies in practice. The stock market is a multi-dimensional market where investors cannot dominate by only knowing financial concepts. They have to practice in order to obtain the necessary skills and understand the ups and downs of the market. Investors should find different sources in which they can practice their knowledge and understanding, invest cautiously in the market, and never consider themselves impervious to practice. They should note that in the history of trading, many have lost their shirt and many have become rich. Crashes have made investors experienced but at the cost of flogging in the market and loss of properties. Therefore, the general recommendation for investors (particularly retail investors) is to practice, practice, and practice.

Practices Around the World

The Intelligent Investor by Benjamin Graham

This chapter has borrowed a good deal from Benjamin Graham's book *The Intelligent Investor*. Many people have commented on this book; among them Warren Buffet says "I read the first edition of this book early in 1950, when I was nineteen. I thought then that it was by far the best book about investing ever written. I still think it is." Indeed, it could be one of the best books in the field of investment. His teachings were critical to the successes of many investors that are now household names (like Buffet). Graham is known as "the father of value investing." He excelled at making money in the stock market for himself and his clients without taking big risks. Graham created and taught many principles of investing safely and successfully that modern investors continue to use today. *The Intelligent Investor* is an impressively comprehensive guide to investment. It's old, and some of the examples are no longer relevant, but the principles upon which it is based remain fundamental. Each chapter contains a reassuring chunk of wisdom which has stood the test of time. Rest assured that the book is not just full of inspiring quotes and sage advice about "being in control of your emotions." There are details, benchmarks, and highly specific steps on how to execute an investment strategy. His recommendations for retail investors who he named as defensive investors are completely applicable for different target groups of financial literacy.

Summary

The stock market has faced investors who were educated and have a high IQ. However, many of them were not successful in the field. Although there are many reasons for their failure, one main reason is lack of attention to the fundamental issues or principles of investing in the market. Based on Graham's principles and recommendations in his book *The Intelligent Investor*, this chapter focused on fundamental issues that each investor must consider. Issues such as diversification, speculation, inflation, capital allocation, corporate actions, interest rate, risk and return, collective investment schemes, and financial ratios were included in the chapter. So far, the book has highlighted factors of financial literacy improvement and what should be underscored. However, the next two chapters focus on the role of two important players in the field: regulators and trainers. Chapter 6 considers the role of regulators (as organizers of this field) and identifies the importance of planning in the financial literacy process. Chapter 7 highlights the importance of teaching methods and what should be considered by trainers in educational programs.

Notes

1. Spreadsheet data provided courtesy of Ibbotson Associates.

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Chapter 6 Regulator Roles in Financial Literacy Improvement

Abstract Throughout this book, the responsibility of authorities is highlighted, but Chap. 6, in particular, addresses regulators as the core of financial literacy improvement initiatives. It starts by considering IOSCO recommendations regarding the responsibility of regulators in the stock market and what they should conduct in respect of financial education, and reviews concepts of strategic planning for financial literacy improvement. As well as regulators, investors can also use the recommendations in this chapter for their own planning.

Keywords Stock market regulation • IOSCO • Financial literacy improvement • Financial literacy goals • Financial education

Introduction

The need for investor education and financial literacy has never been greater. As the financial marketplace continues to evolve and innovate, investment products are becoming increasingly complex and financial services increasingly diverse. Greater understanding of key financial concepts is required on the part of retail investors to understand and evaluate the choices available to them and avoid fraud. Underscoring the importance of investor education and financial literacy is a critical (and increasing) need for retirement planning, as responsibility for saving and investing in

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many jurisdictions shifts from the employer to the individual. Investor education and financial literacy programs have the potential to help improve financial outcomes for retail investors. Some key benefits include more informed saving and investment decision-making, better financial and retirement planning, greater confidence and higher participation in the securities markets, greater wealth accumulation, and increased awareness of investor rights and responsibilities.

Ideally, investor education and financial literacy programs, as a complement to securities market regulation and supervision, can help address any misalignment of investor and industry interests, particularly with respect to information asymmetry. In addition, investor education can also help investors better assess the appropriateness and suitability of investment advice, investment products and services. It can also help investors detect and avoid suspected fraudulent activity, and distinguish between regulated and non-regulated activity, all of which could reduce investor losses. Investor education is a key strategy for enhancing investor protection, promoting investor confidence and fostering investor engagement in financial planning and decision-making. It is complementary to the traditional tools of regulation, supervision, and enforcement. The intertwined aims of investor protection and the promotion of investor confidence in the integrity of the securities markets are at the heart of a regulatory organization. This chapter reviews the role of regulators and specifies their main tasks regarding financial literacy improvement.

Regulators at the Core of the Action

Providing investor education and financial literacy programs is mandatory, particularly when viewed as an additional tool available to securities regulators in supporting regulation and supervision. For example, investor education programs can complement regulations that enforce conduct standards, require financial institutions to provide clients with appropriate information, strengthen legal protections for investors, or provide redress. Through rule-making, supervision, and enforcement powers, regulators have the unique ability and expertise to look inside the securities industry to identify and understand factors that shape market outcomes and business models, including structural and other competition issues, information problems, and misaligned incentives. Securities regulators can leverage this experience and insight to develop targeted investor education programs. However, the most important reason that puts regulators at the core of financial literacy related actions is based on principle 4, key issue 5 of the International Organization of Securities Commissions' (IOSCO) principles, which asserts: "Regulators should play an active role in the education of investors and other market participants."

Overall, IOSCO has determined the main reasons that regulators are central in financial literacy related actions:

- ***Independent and unbiased***: Securities regulators are uniquely positioned to provide unbiased investor education, including, for example, information and tools to help retail investors understand investment products, work more effectively with intermediaries and take steps to avoid falling victim to fraud.
- ***Access to expertise and data***: Regulators have extensive expertise and experience in securities, market structure, and investment product regulation. They also have access to data on potential market risks and misconduct, and are well placed to leverage existing data gathering methodologies to identify and address investor concerns.
- ***Unique insights into workings of the markets***: Through rule-making, supervision, and enforcement powers, regulators have the unique ability and expertise to look inside the securities industry to identify and understand factors that shape market outcomes and business models, including structural and other competition issues, information problems, and misaligned incentives. Securities regulators can leverage this experience and insight to develop targeted investor education programs.
- ***Direct impact through regulatory action***: A wide range of tools give securities regulators the flexibility to determine the most appropriate approach to address investor protection, whether it is through investor education and financial literacy programs, and/or regulatory action.
- ***Well positioned to take on a leadership role***: As part of national and local strategies, securities regulators may have opportunities to take on key leadership roles in specific areas of investor education and work in partnership with other organizations. This can help to ensure that initiatives are integrated in national strategies, which may contribute to greater efficiencies, a more consistent quality of education, and less duplication of effort.

Since regulators play a core role in financial literacy, they should put in place some initiatives regarding its improvement. It has been mentioned that the current position (or level) of financial literacy is an initial step for policymakers or authorities in this case. Here are some other initiatives that would be performed by regulators for improvement of financial literacy.

The Map of Improvement

As mentioned, based on the IOSCO principle, regulators are in charge of financial literacy improvement. There should be a map showing the routes toward some predetermined goals. By returning to the example mentioned in Chap. 5 regarding financial orienteering, it should be asserted that regulators are like organizers of an orienteering field. They should locate everything in a prepared map and give signs to participants in order to help them move from point to point.

By setting the starting point (current level of investors) and knowing who will attend the orienteering event (the market), organizers can map an improvement process in the field. As an initial step, prior to setting the course and leading investors from point A to point B, it could be helpful for regulators to make a checklist containing the questions they should ask themselves at the head of the trail. There follow some questions that should be asked before starting initiatives in respect of financial literacy improvement.

A Checklist at the Beginning

Prior to launching a new program, regulators should be aware of their available current properties and what they can invest in. Moreover, this checklist shows regulators what steps should be taken to prepare them on the path to financial literacy improvement. The checklist's questions can be categorized into five groups: (1) organization position, (2) plan or strategy, (3) budget allocation, (4) human resources, and (5) available programs. The questions specified in each category might be as follows.

First, questions should be asked related to the organization of financial literacy in a country or jurisdiction. Who is responsible for performing financial literacy initiatives in the country? Is there a dedicated organization to perform financial literacy measures? What is the securities market regulatory organization's responsibility in respect of financial literacy? Is there any dedicated department to financial literacy in the regulatory organization? Are there any rules and regulations in respect of the department's establishment or financial education initiatives? Obviously, the initial questions are related to determining the responsibility and position of the regulatory organization in respect of financial literacy. Second, questions should be related to the plan in hand. Is there any plan in respect of financial literacy? Does the organization have a strategy in order to improve financial literacy? Are there any predetermined goals and objectives in this regard? These questions determine the plan of the organization in improving financial literacy. Third, there should be questions in the checklist about sources of funding. Is there any allocated budget to financial education or financial literacy? Are initiatives self-funded or are they funded by the government or public? Is the allocated budget sufficient for the organization's initiatives? Funds are the same as food and water for different actions. Therefore, the organization should determine the sources of funding for financial literacy improvement. Fourth, there should be questions about human resources. How many staff are working in respect of financial literacy or in the dedicated department of the organization? Is there harmony between the initiatives and number of staff? Fifth, questions should be related to the current available programs in the jurisdiction (securities market). Are there any educational programs or courses? Has the organization ever performed needs assessment in the jurisdiction? Has it ever evaluated the effectiveness of programs? Figure 6.1 shows a flowchart of financial literacy equipment and Table 6.1 summarizes the checklist.

Strategic Planning for Financial Literacy Improvement

Some may think that performing financial literacy related initiatives does not require a plan or map, but only emergency action. However, by looking at the trends that some developing countries have adopted, paying attention to this concept (i.e., strategic planning) will be advantageous. In a previous section, the necessary equipment was identified. Now the regulator is going to move from point A to point B on the map of financial literacy improvement; but in which direction? Indeed, strategic planning acts as a GPS in the field, which leads and lines up stakeholders toward predetermined goals. Having a strategy may consolidate actions and avoid wasting time and effort. It would make coherent initiatives and play the role of a guiding light for the organization. The following sections review

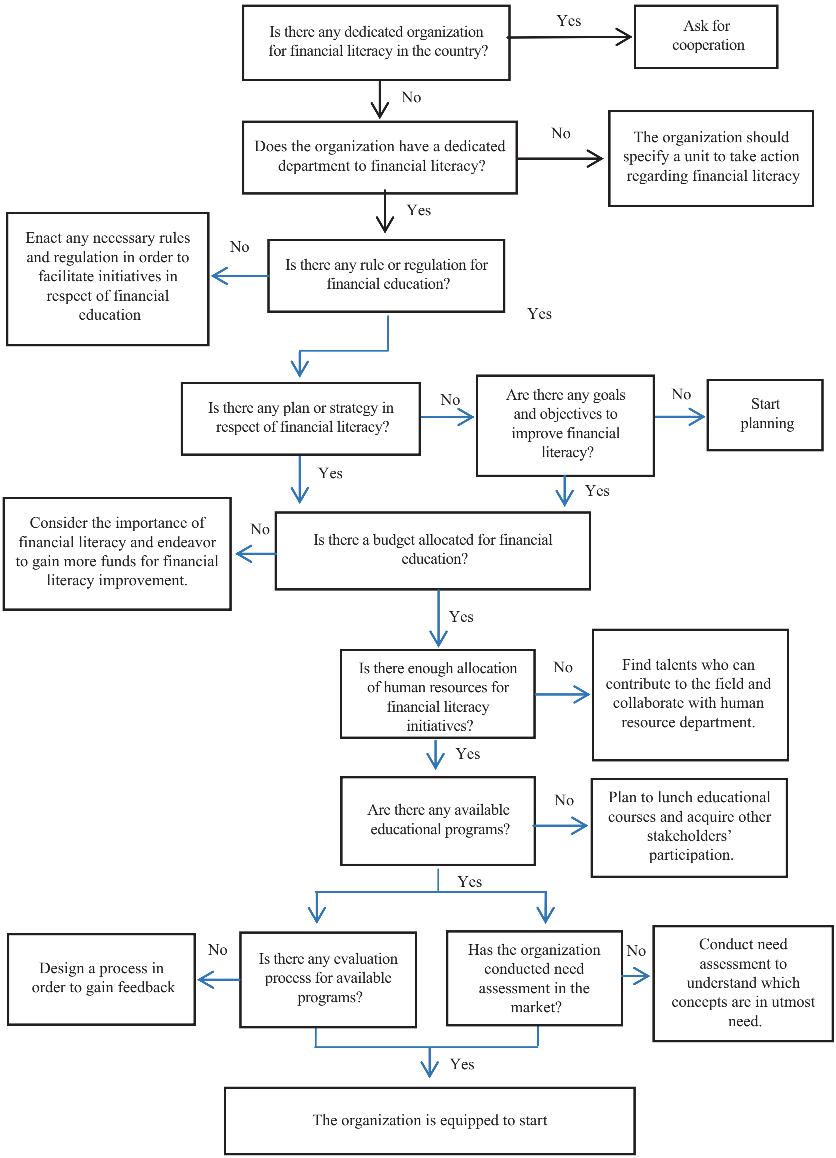

Fig. 6.1 Flowchart of questions to start enhancing financial literacy

Table 6.1 A basic checklist to start enhancing financial literacy

General items	*Details*	*Check*
Organization position	Is there a dedicated organization in your country?	☐
	Does your organization have a dedicated department in respect of financial education?	☐
	Are there any rules or regulations in respect of financial literacy?	☐
Plan or strategy	Is there any written plan or strategy for financial literacy enhancement?	☐
	Are there any goals or objectives in regard of financial literacy?	☐
Budget allocation	Is there a budget allocated for financial literacy?	☐
	The allocation is enough for initiatives	☐
Human resource	Enough human resource is allocated to financial literacy/ education	☐
Available programs	Needs assessment has been performed in your jurisdiction	☐
	Is there any method for evaluating the effectiveness of programs	☐

strategic planning essentials, identify goal characteristics, note two concepts regulators should consider, and finally introduce some typical strategies adopted by different countries.

Essentials of Strategic Planning

In order to have an effective strategy, there are some essentials that should be considered. These essentials can be divided into two parts: (1) factors making a strategic planning effective; and (2) items included in strategic planning. Researchers in the field of strategic planning recommend observation of three points in making a strategy:

1. *Strategic planning results from the varied input of a diverse group of stakeholders*: When making a strategy, other thinkers or stakeholders in the process of planning should be consulted and engaged. By doing so, implementation of the strategy would be more probable and stakeholders would be more committed to the strategy they were engaged to.
2. *Strategic planning should be flexible*: Flexibility is the ability to do something other than that which had been originally intended. Flexibility in strategic planning suggests the ability to take some action in response

to external environment changes. The regulator should have the ability to change what is necessary in the period that has been considered for the strategy implementation. Indeed, flexibility is the ability of the organization to adapt to different circumstances.

3. *Strategic planning document should not be too lengthy:* By looking at different financial literacy strategic planning in the world, it can be observed that, for the purpose of understanding and readability, the length is not too long (5–10 pages). Strategic planning merely includes the information that all stakeholders should note.

Strategic planning looks at every possible influencing factor, both seen and unforeseen, and comes to terms with the whole situation, not just one end result. Strategic planning is the overarching wisdom that coordinates all of the plans in order to effectively reach goals. However, strategic planning contains different parts as follows:

1. *Introduction*: This is a brief description of what is going to be performed, introducing different stakeholders and the outcomes of the strategic planning implementation. In the case of financial literacy, for clarification and giving more information, it can even include a definition of financial literacy and its importance. Moreover, the regulator can note its position in respect of financial literacy, the level of financial literacy among investors, and even a comparison with the rest of the world.
2. *Vision statement*: It shows where the organization is trying to go. In the case of financial literacy, vision is a realistic, credible, attractive future for financial literacy improvement in the market. The vision gives shape and direction to the financial literacy's future in the market.
3. *Mission statement*: The mission statement explains what the organization is trying to achieve and clarifies the purpose and primary, measurable objectives of the organization. The mission statement guides stakeholders, employees, and investors to make the right decisions that will help the organization achieve the mission. The regulator's mission in respect of financial literacy can inspire internal and external stakeholders to take the actions it desires.
4. *Goals*: Setting and achieving goals is the hallmark of a successful organization and is a critical element of strategic planning. Goals are set for the long term and are general aims that the organization attempts to achieve. However, goal setting should be based on some important factors that will be introduced in this chapter.

5. *Objectives*: Short-term goals. Achievement of these targets is faster than general goals. Achieving objectives is preliminary to put the organization on the right trajectory to achieving long-term goals.
6. *Period of implementation*: The strategy must have a period of implementation. For instance, 2014–17 (four years). Based on objectives and goals, the organization can set a period of implementation.
7. *Projections and results*: At the end of strategic planning, the regulator should identify expected returns or results of strategies. The regulator can base this part on its projections for correct implementation of strategies or its actual results.
8. *Executive summary*: Although this comes at the first part of strategic planning, it should be completed last, and this section merely summarizes each of the other sections. The executive summary is important since it will help other key constituents, such as different stakeholders, quickly understand and support strategies.

These eight items shape the main parts of strategic planning. However, regulators can add anything else that they consider to be important. Meanwhile, an important aspect that regulators should consider is the factors related to goal setting. The next section identifies them.

Goal Setting in the Strategic Planning Process

Setting goals is a fundamental component to long-term success. Goals help one to focus and allocate time and resources efficiently, and they can also keep regulators (and their staff) motivated. Goals and objectives illuminate what regulators want to achieve in the future. They can be treated like signs in the path of improvement, not only for regulators, but also for all practitioners in the field. Regulators' goals help employees, practitioners, and investors to be aware of what is expected from them and the purposes of regulators regarding financial literacy improvement. However, there are some factors that should be considered in setting goals successfully. Listed below are the main considerations that regulators should pay attention to in this respect:

1. ***Goals should be feasible and specific:*** Regulators should be able to visualize and understand the results of the goals want to reach.
2. ***Goals should be measurable:*** Success should be measurable. Undoubtedly, there should be some accomplishments that are a measure of success.

Regulators, when possible, should try to quantify the results they plan to achieve with percentages, money, or time. This allows them to measure what they will achieve and readjust accordingly.

3. ***Goals should be accessible:*** This means that regulators should be able to achieve goals as a result of their own hard work and determination. If they have no control over the outcome, it is not a realistic goal. Unrealistic goals can ultimately lead to depression and feelings of frustration.
4. ***Goals should be tied in together:*** Regulators should pay attention to how each goal relates to the others and make sure they are not mutually exclusive.
5. ***Goals should not be too numerous:*** Setting too many goals can overwhelm regulators and make their staff, practitioners, and investors give up altogether. Regulators should recognize their own strengths and weaknesses and plan honestly.
6. ***Goals should be flexible:*** Regulators should assess their progress periodically, provide honest feedback and adjust as they go along. Whenever they encounter barriers to achieving their goals, they should try to alter them to meet their new requirements. They should not be rigid in accomplishing something that is no longer relevant to them.
7. ***Goals should be set for the long term and short term:*** Ideally, regulators should set long-term goals, and then short-term objectives that ultimately tie in with the bigger picture. Long-term goals can take approximately three to five years to achieve, while short-term goals could take anywhere from a couple months to a year or two.
8. ***Goals should be written:*** A written goal represents a real commitment. Commitment is what separates dreams from goals. Regulators should keep a copy of their goals in sight and refer to it often. In order to emphasize the importance of written goals, it would be useful to mention an example. There was a fascinating study conducted on the 1979 Harvard MBA program where graduate students were asked "have you set clear, written goals for your future and made plans to accomplish them?" The result was that only 3% had written goals and plans, 13% had goals but they were not in writing, and 84% had no goals at all. Ten years later, the same group was interviewed again and the result was absolutely mind-blowing. The 13% of the class who had goals, but did not write them down, was earning twice the amount of the 84% who had no goals. The 3% who had written goals were earning, on average, ten times as much as the other 97% of the class combined (Feinstei 2014).

9. ***Goals should be set together as a team:*** In order to increase motivation, employees, practitioners, and investors need to be allowed to participate in the goal setting process. Thus, regulators should show interest and support in this respect. The trick is to achieve a balance between giving all stakeholders total freedom and directing them every step of the way. Most importantly, when approaching completion of a goal, regulators should set a new one.

Through strategic planning, goals and objectives of financial literacy improvement are set and ways toward achieving them are determined. By determining goals within these factors, lining up stakeholders might be facilitated. Another thing that regulators should pay attention to is the role of education. The next section identifies continuity of the education process.

Education as a Continuous Task

Education, and subsequently the learning process, is not a one-shot occurrence that begins and ends quickly. Regulators should notice that investors might encounter new problems and be challenged by the advent of new instruments. In addition, the market always faces some investors entering and some existing that, respectively, need education and motivation. They should be creative in running education programs to maintain the atmosphere of learning in the market. Continuous education can ensure continuous improvement. Therefore, regulators and stakeholders should plan financial literacy improvement as a continuous task. The continuity of education is depicted in Fig. 6.2:

The regulator plans education programs (sets goals and objectives and determines ways of achieving them), runs education programs and gathers related feedback, studies and analyzes them for correction and enhancement, and finally implements corrections in the education process for the next wave of education initiatives. This cycle exists in the lifetime of education initiatives.

Practices Around the World

High-Level Principles on National Strategies for Financial Education

The High-level Principles on National Strategies for Financial Education were developed by the OECD International Network on Financial

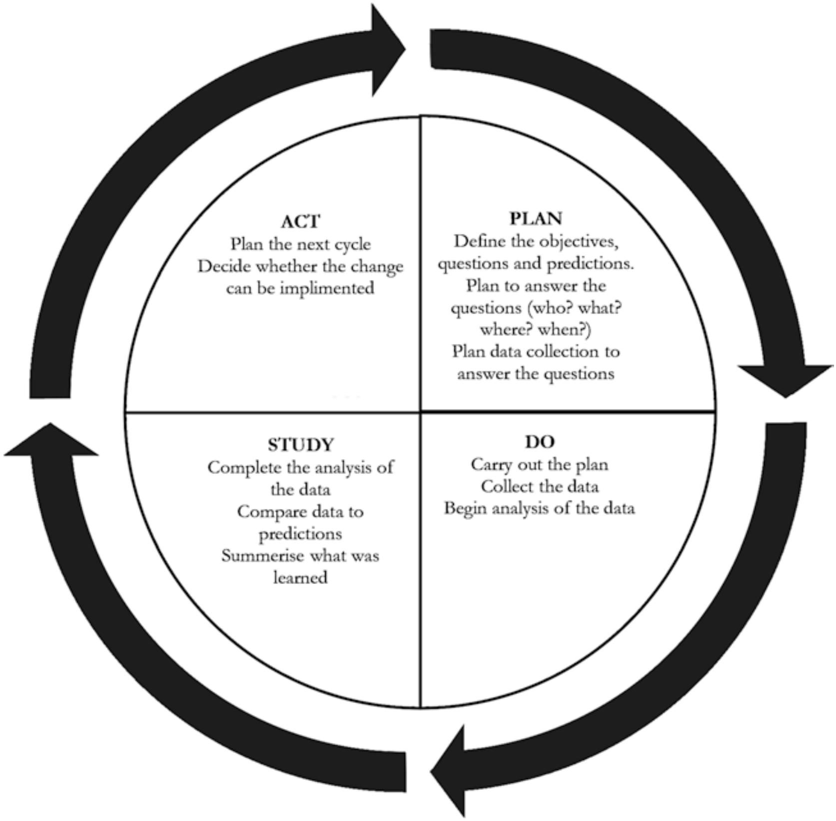

Fig. 6.2 Continuity model of the education process

Education (OECD/INFE). The OECD/INFE started working on this issue through a dedicated expert subgroup on national strategies for financial education in June 2010. The document includes different recommendations for making a national strategy for financial education.[1]

Advancing National Strategies for Financial Education

A Joint Publication by Russia's G20 Presidency and the OECD in 2013. It has some significant findings and more importantly, introduces the situations of many countries in respect of financial education strategy. This publication includes contributions by 21 G20 members and invited countries (Argentina, Australia, Brazil, Canada, People's Republic of

China, France, India, Indonesia, Italy, Japan, Korea, Mexico, the Netherlands, the Russian Federation, Saudi Arabia, Singapore, South Africa, Spain, Turkey, the United Kingdom, and USA) as well as the European Union. Reviewing this publication can be beneficial since you can understand global trends and even how the other countries have performed in different levels of strategy making.[2]

Everyone Getting Ahead Financially (New Zealand National Strategy)

New Zealand launched its first national strategy in 2008. The National Strategy was a collective effort of many individuals and organizations who worked together with a common vision, mission and focus. The national strategy of 2008 contains vision, mission and focus. The 2008 vision was “Personal financial wellbeing for New Zealanders.” Its mission was to ensure that “New Zealanders are financially well-educated and can make informed financial decisions throughout their lives” and its focuses were “[d]elivering quality, extending delivery, sharing what works, working together.” The document made clear recommendations to all interested sectors about how officials can achieve the greatest impact on personal financial decision-making for all New Zealanders over the long term.

In the 2014 strategy, everything has changed. We can summarize New Zealand’s strategy as follows:

Vision: Everyone getting ahead financially.

Activity Streams: Talk, Learn, Plan, Debt-Smart, Save/Invest.

Objectives:

1. A cultural shift where it is easy to talk about money;
2. Effective financial learning throughout life;
3. Everyone has a current financial plan and is prepared for the unexpected;
4. People make smart use of debt;
5. Everyone saving and investing.

Outcomes:

1. Money becomes a comfortable topic of conversation; people can talk with their partner, family and friends about money; people confidently talk with providers, ask questions, and understand the choices before them.

2. All learners achieve financial literacy outcomes as part of their educational pathway; financial literacy is part of lifelong learning for everyone.
3. People make financial plans to support their life goals; all New Zealanders have a current financial plan; people protect their assets with insurance and emergency funds.
4. People manage debt to their advantage; people get out of high-interest debt faster.
5. More people save and invest in the short, medium, and long term; more people actively engage with and contribute to KiwiSaver;[3] more people save and invest in a range of financial assets.

In each outcome, the benefits and challenges, actions and goals are identified for up to 2025. New Zealand's national strategy is a good pattern for what has been explained in the previous sections of this book.[4]

There are many other strategies can be found on the internet. However, the best reference for national strategies is the G20/OECD work, which was introduced previously. In this chapter, the authors referred to the role of regulators in respect of financial literacy improvement. However, the next chapter introduces characteristics of the securities market and what should be considered by investors.

Financial Literacy and Education Commission (USA)

The USA is a pioneer in conducting financial literacy initiatives. The Financial Literacy and Education Commission was established under the Fair and Accurate Credit Transactions Act of 2003. The act asserts: "The Commission shall serve to improve the financial literacy and education of persons in the United States through development of a national strategy to promote financial literacy and education." In addition, the commission was tasked to develop a national financial education website to serve as a clearinghouse of information about Federal financial literacy and education programs; provide a coordinated entry point for accessing information about all Federal publications, grants, and materials promoting enhanced financial literacy and education; offer information on all Federal grants to promote financial literacy and education, and on how to target, apply for, and receive a grant that is most appropriate under the circumstances. As the Commission deems appropriate, the website features links to efforts that have no commercial content and features information about financial literacy and education programs, materials, or campaigns; and offers such other information as the Commission finds appropriate to share with the public in the fulfillment of its purpose.

It might be interesting and surprising to mention members of the commission. It includes:

1. Board of Governors of the Federal Reserve System
2. Bureau of Consumer Financial Protection
3. Commodity Futures Trading Commission
4. Department of Agriculture
5. Department of Defense
6. Department of Education
7. Department of Health and Human Services
8. Department of Housing and Urban Development
9. Department of Labor
10. Department of the Treasury
11. Department of Veterans Affairs
12. Federal Deposit Insurance Corporation
13. Federal Trade Commission
14. General Services Administration
15. National Credit Union Administration
16. Office of the Comptroller of the Currency
17. Office of Personnel Management
18. Securities and Exchange Commission
19. Small Business Administration
20. Social Security Administration
21. The White House Domestic Policy Council
22. The Federal Emergency Management Agency.

According to the Act, members should hold one meeting every four months. The most important outcome of the commission's initiatives was development of the first national strategy in 2006. It was titled "Taking Ownership of the Future: National Strategy for Financial Literacy" which reviewed the progress toward financial literacy at that time and proposed calls to action in four areas deemed crucial to the promotion of financial education:

1. building public awareness of available resources;
2. developing tailored, targeted materials and dissemination strategies;
3. tapping into effective partnerships; and
4. supporting research and evaluation of financial education programs.

However, the last work of the commission is the national strategy of 2011. The commission identified a vision, mission, four goals, and many objectives for the national strategy:

Mission: Sustained financial well-being for US individuals and families;

Vision: Set strategic direction for policy, education, practice, research, and coordination so that American individuals and families make informed financial decisions; and

Goals:

1. increase awareness of and access to effective financial education;
2. determine and integrate core financial competencies;
3. improve financial education infrastructure;
4. identify, enhance, and share effective practices.

As is clear, there is a dedicated unit for financial literacy in the USA. The existence of 22 organizations means that it is a task with shared responsibility. The treasury is responsible for organizing the structure of the economy with respect to financial literacy, leading other stakeholders in regard of conducting financial literacy initiatives and collaborating with other stakeholders. Controlling the process is also on the shoulders of the treasury, so whenever the treasury recognizes that holding a meeting is necessary, it can call members. All meetings should be open to the public. We think that the USA is a good example in respect to improving financial literacy.

Task Force on Financial Literacy (Canada)

The Task Force on Financial Literacy comprises 13 members, drawn from the business and education sectors, community organizations, and academia. The Task Force was mandated to make recommendations to the Minister of Finance on a national strategy to improve financial literacy in Canada. The taskforce published its recommendations in 2010 and in 2014, the first phase of Canadian national strategy is on the table. It is called "Toward a National Strategy for Financial Literacy." Canada started out by improving the financial literacy of its senior citizens. It seems that the Ministry of Finance recognized that the enhancement of financial literacy among this group (those who have retired) was more important than in other target groups.

In addition to the national strategy, there is a leader of financial literacy whose mandate is coordinating and collaborating activities with stakeholders to strengthen the financial literacy of Canadians. In order to provide advice to the Financial Literacy Leader on the development and implementation of a national strategy for financial literacy, a National Steering Committee on Financial Literacy has been established. The members of this Committee champion the national strategy for financial literacy, provide leadership within their sectors, and engage broad stakeholder communities in working to advance the strategy's goals and priorities. They also report to the Financial Literacy Leader on progress being made in their sectors. The Steering Committee consists of 15 members selected from more than 100 applicants.

There is a vision, mission, goals, and objectives in respect of Canada's financial literacy nation strategy:

Vision: The financial well-being of Canadians will be enhanced;

Mission: To strengthen the financial literacy of current and future seniors by increasing their knowledge, skills, and confidence to make responsible financial decisions; and

Goals:

1. engage more Canadians in preparing financially for their older years;
2. empower seniors to plan and manage their financial affairs;
3. improve understanding of public benefits for seniors;
4. increase tools to combat financial abuse of seniors.

Similar to in the USA, a dedicated department or unit can be observed regarding financial literacy with a leader for cooperating and collaborating with other stakeholders. A steering committee exists comprising people from a variety of backgrounds, which shows that financial literacy improvement is not a solo task but a group effort with multiple stakeholders. The ministry of finance is responsible for organizing the structure of financial literacy in Canada and finally the control process is on the shoulders of the Steering Committee, which must report on the progress being made to the leader. Canada is a good example for organized initiatives in respect of financial literacy.

The Australian Securities and Investments Commission (ASIC)

The ASIC conducts financial literacy initiatives in all the financial markets. It is supported by the Australian Government Financial Literacy Board which is a non-statutory body that provides advice to the government and the ASIC on financial literacy issues. The Board comprises 13 members who discuss financial literacy initiatives. The ASIC has national responsibility for coordinating financial literacy and works closely with the Australian Government Financial Literacy Board.

The first national strategy of ASIC was published in 2011 and the new version is published for 2014–17. They have a vision and five strategic priorities as goals and different action plans as objectives:

Vision: Improve the financial well-being of Australians by advancing their financial literacy;

Goals:

1. educate the next generation, particularly through the formal education system
2. increase the use of free, impartial information, tools and resources
3. provide quality targeted guidance and support
4. strengthen coordination and effective partnerships
5. improve research, measurement, and evaluation.

Again, what is related to managerial functions can be seen. As discussed, there is a dedicated organization for financial literacy that also has a leader. The responsibility for coordination and collaboration is on the shoulders of the organization that is supported by a dedicated board for financial literacy. Enhancement of financial literacy and conducting financial literacy initiatives is a shared responsibility because members of the board are from different backgrounds and will discuss matters in light of this. Controlling the process is a shared responsibility between ASIC and the board.

Discussion of these three sets of practices is enough to demonstrate the practical approaches toward managerial functions regarding financial literacy improvement. These are developed countries and they all recognize the importance of financial literacy. Authorities should consider managerial functions if they wish to enhance financial literacy in financial markets.

Summary

The success and failure of each program lies in correct and accurate planning and control. As the improvement process for financial literacy was likened to orienteering in previous chapters, in its field there must be preset goals that an 'orienteer' must pass one by one. The organizer of an orienteering field must set courses toward a finish line or ultimate goal. Therefore, this chapter has reflected on the methods and issues that regulators (as organizers of financial orienteering fields) should consider in setting the field in the form of strategic planning. It was highlighted that many countries have strategic plans for financial literacy improvement and drew attention to different stakeholders in the field.

Notes

1. www.oecd.org/daf/fin/financialeducation/OECD_INFE_High_Level_Principles_National_ Strategies_Financial_ Education_APEC.pdf.
2. www.oecd.org/finance/financial-education/advancing-national-strategies-for-financial-education.htm.
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Chapter 7 Methods of Education

Abstract This chapter emphasizes the importance of education methods, introduces different approaches in training, and mentions some points and methods that are applicable in financial education courses. It endeavors to harmonize the training methods and teaching techniques among instructors to improve the effectiveness of educational courses or programs. The main theme of this chapter will focus on andragogy training schemes.

Keywords Pedagogy • Andragogy • Train the trainers • Dynamic financial education • kinesthetic learners • Scenario-based learning

Introduction

The true success of any educational program or course rests in the capability of its educators or trainers. Without competent trainers, education will not succeed in its most basic function. Indeed, the quality of an education program is in direct correlation with the engagement, enthusiasm, and professional development of trainers. Positive, energetic trainers create dynamic training opportunities by their very nature, and it is these opportunities that produce strong results in a student's performance. Consequently, results cannot be achieved without a substantial investment in individual trainers to maximize their full potential. Nevertheless, the fact is that the vast majority of trainers have not internalized the principles

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of education methods. Specifically, the requirements for preparation, development, and understanding of the methodology of pedagogy and andragogy (which is more important in financial matters since adults are de facto investors) have been ignored. The primary approach of training courses consists of reading (or have the students read aloud) material from a book or slide presentation and asking if everyone understands. This approach results in boring courses or programs where students only hear the essential points, and meanwhile their perception of the content and its applicability is neglected.

This chapter aims to emphasize the importance of education methods, introduce different approaches in training, and mention some points and methods that are applicable in financial education courses. Consideration of these topics in trainers' lesson plans and their education methods may enhance the effectiveness of educational programs or courses.

The Importance of Understanding Education Methods

What trainers seek in educational programs is effectiveness. The goal of a class is realized when a trainer looks in the eyes of trainees and feels their satisfaction from understanding what he/she has taught. Their satisfaction might be recognized from their participation in the class and their tendency to ask related questions actively during the course. Indeed, the effectiveness of a class can be understood from the trainees' enthusiasm in joining discussions or communicating about the topics the trainer is teaching. And finally, feedback forms will illustrate a program's effectiveness.

However, the main question here is 'why are some courses boring and sleep-inducing for the participants, while others lead to fresh thought and motivate students to actively participate?' one possible answer might be the 'distinction between education or training methods.'

Let us look at the importance of education methods closely by applying a particular example. Although this book is about financial matters, a tangible example can contribute to the perception of the issue. Assume the police force is going to recruit and one important course is weaponology. The trainer merely shows some slides of a rifle and starts lecturing about how to shoot it. The approach adopted by the trainer is lecture based. While the trainer is lecturing, recruits may feel bored and the optimum level of understanding falls. The performance objective of this course is memorizing application of the introduced rifle in tactical operations without working with it. What will be the course's result in the real world? When participants arrive at a crime scene where using deadly force is necessary, they are not prepared to use the rifle for shooting. Why? Because they have only seen the rifle in pictures and heard how it works, but they have not used it. Recruits do not know how they should hold the rifle steady, how they should change the rifle's magazine, how they can align rear sight with front sight, and even how they should breathe while shooting. Therefore, without enough knowledge and experience, which is the result of an incomplete education method, the recruits' lives could be endangered. However, consider a trainer who acquires trainees' attention by giving some real examples and asks them to work with the rifle in field training. The result of the training course is better preparation for field work and applying the rifle in real operation without technical problems. This is a simple but realistic example to recognize the importance of education methods.

The world of investment could face comparable issues. When an investor is not prepared and equipped appropriately, he/she could lose all his/her possessions. Therefore, trainers should pay attention to the fact that choosing an appropriate method of education will increase the probability of rational decision-making and consequently financial well-being (the result of financial literacy).

There are different methods of education. As the old saying goes 'there is more than one way to skin a cat.' This means that trainers have many options as to how they will achieve any mission. Trainers are in charge of finding the best way to 'skin a cat' in their classes. They can use traditional tools and methods or formulate a new approach. This phrase indicates that trainers need to be empowered to be creative in the ways and means of achieving training goals. However, before putting this responsibility on their shoulders, some issues should be clarified, and some principles of pedagogy and andragogy should be identified (more importantly andragogy, which pertains to the teaching of adults). In the next section, education principles and what trainers in financial scenes should consider for their classes in order to achieve maximum effectiveness are introduced.

Train the Trainers

Abraham Lincoln once said if he were given eight hours to cut down a tree, he would spend six hours sharpening his axe.[1] Indeed, the 'axe' of education is the trainer. Therefore, in order to reach the optimum level of effectiveness, trainers' skills should be sharpened. In this respect, and before identifying some important principles of education, it is fruitful to mention some essential points. Without finely sharpened skills, even the most engaging trainers will fail to achieve the results they want.

The first point is the importance of creating a shared sense of the goals of a training course between trainers and authorities. Authorities must clarify what goals they are pursuing and endeavor to align trainers with these predetermined goals. When there is joint understanding, the results of a training course will be satisfactory. Trainers set their lesson plans and the method of education based on the goals of the courses. For instance, after the financial crisis 2007–9, *saving* was underscored by authorities and it has become one of the main issues emphasized in many educational courses by trainers.

The second point, which this section is dedicated to, is the concept of training the trainers. Surely, financial trainers are knowledgeable people who update themselves with rapid changes in the financial world. Thus, when a trainer is assigned to a course, there may be no concerns about the materials of education. However, the main concern rests in the method or model of education that the trainer chooses for training. It is evident that many trainers have not received any formal instruction or training as educators and consequently they are not familiar with training models. The majority are not aware of the cognitive skills needed for understanding different learning styles, and training techniques. Obviously, educating a huge number of trainers in these issues would be time consuming and costly. However, it could be possible through a 'train the trainer' model of education. A train the trainer model enables experienced trainers to show less experienced educators how to deliver courses, workshops, and seminars. A train the trainer workshop can build a pool of competent instructors who can then teach the material to other people. Instructors learn to lead discussions, listen effectively, make accurate observations, and help participants to link training to their jobs. They learn to maintain eye contact, maintain a positive attitude, speak in a clear voice, gesture appropriately, and maintain interest and dispel confusion. A new instructor typically gets to watch an experienced instructor teach, complete the exercises himself, and then practice teaching segments to other participants. High-quality train the trainer programs equip trainers with the skills they need to become true educators or instructors, and not simply lecturers.

There are many things that trainers should be familiar with. Among them, application of some techniques and perception of some concepts are really important. The following sections are those issues which trainers can apply in different courses in order to improve their effectiveness.

Andragogy Styles

Andragogy, in contrast to pedagogy, is the method and practice of teaching adult learners, which consists of three main styles. The first style is the *lecture-oriented approach*, which is considered a traditional well-known style. In this method, the trainer talks about the importance of a particular topic such as risk, its consequences, how to monitor and control it, and tells different 'stories' about experiences of facing different kinds of phenomenon. In this style, trainers need very little preparation to teach the topic, no materials, and a minimal (or no) lesson plan. However, in this option, there is little or no opportunity for student participation and, thus, the trainer faces a passive (and potentially bored) audience.

Some trainers proclaim that lecturing is the only way a topic can be taught. These representatives of the old guard attempt to defend their way of teaching. Indeed, they are not familiar with the principles and advantages of other adult education methods (andragogy). Lecturing is an ineffective technique because the vast majority of adults do not want to be lectured, not even by a subject matter expert. The small minority of people who do enjoy a good lecture are very rare indeed. Since the majority of educational programs in the financial markets are not obligatory, it should be stated that lecturing is an obsolete style for financial education.

The second option is known as the *middle of the road approach*. Students would be asked to explain the differences between risk and uncertainty. Meanwhile, the trainer draws out important points from their statements. Then, he or she asks volunteer students to demonstrate the right and wrong statements. In this approach, students have the opportunity to control the learning process and some students (volunteers) have the opportunity to practice, whereas others do not. It is a major improvement over the traditional model but still lacks a key element.

The third option is known as the *learner-centered approach*. In this approach, the trainer leads a discussion about an issue (say risk) and its context. Then, he/she invites or requires the participation of all students by designing a practice (an exercise) in which they should apply their own knowledge, experience, and mental abilities in order to advance the learning process. This is the basic tenet of scenario-based training (which will be explained further). Students then participate in evaluating the success or failure of their peers (the trainer's role then becomes merely a facilitator). Following this exercise, the trainer sums up the key points.

The third option allows trainers to be leaders of a class and students to drive the learning process. In this alternative, all students can participate to the degree that they wish to contribute. Although this option is the best choice among the three, and an optimized method of education, it requires the maximum level of preparation and careful execution. This approach is worthwhile since it acquires the highest percentage of participation, and learning takes place within multiple domains: mental, physical, and emotional. Students who feel a connection with the material through hearing it, seeing it, working with it, and developing a personal opinion about their experience will retain and use the information that has been delivered.

The best result in educating financial matters may be obtained through the third approach. Although the number of trainees in the third option is an important component for its optimum effectiveness, the core belief is that even in a busy class with a variety of audiences, capable trainers can elicit the maximum participation of students. Again, in order to emphasize the importance of the third option, it could be useful to set the teaching scene by the risk example mentioned previously. In the first option, the trainer opens his/her laptop and starts reading from slides and lectures on different aspects of risk in the stock market. Students are obliged to sit and listen (which is tedious). In the second alternative, the trainer provides some questions regarding the risk concept in advance. Then he starts talking about the risk. Some other questions would have arisen during the class but only some students would participate in the discussion. However, in the third option, the story is different. The trainer must have a plan with identified objectives and some challenging questions or examples that are predetermined in order to encourage maximum participation of trainees. The following example indicates a learner-centered approach in practice (Table 7.1):

This approach is known as *Dynamic Financial Education*, which results in the effectiveness of educational courses. Although education style is an important component of effectiveness, there are some other factors that trainers should consider. The following sections introduce these essential factors.

Table 7.1 A learner centered approach example

Topic: Difference between risk and uncertainty
Objectives: at the end of this course, students will…

1. Define risk
2. Define uncertainty
3. Count the differences between risk and uncertainty
4. And finally determine what situation is risky and what situation is uncertain

Developing tools: the concept can be advanced through…

1. Giving examples of different situations for identifying the difference between risk and uncertainty
2. Making teams of students in order to point out differences between risk and uncertainty
3. Writing down students' ideas and making a list
4. Discussing written ideas among students
5. Designing situations and allowing students to guess which one is risky and which one is uncertain.

Learning Methods

Several thousand years ago, the philosopher Confucius identified a simple truth in regard of the attainment of understanding. He says "I hear and I forget. I see, I remember. I do, I understand." As he stated so simply, in order to shape understanding, individuals must participate practically. However, he neglected an important factor: *people learn differently*. Prior to selecting an education method, trainers should be aware that there are a variety of learners whose learning methods are different. Essentially, there are three categories of learners: *visual*, *auditory*, and *kinesthetic* learners. No one type is inherently better, smarter, or more competent than the others. The three types are simply categories meant to describe the learning preferences of individuals, according to their skills and abilities. However, understanding students' abilities based on these categories is really important to improve the effectiveness of a class or a course, and trainers can diversify their lesson plans accordingly.

Traditional models of education heavily favor visual learners. The use of overhead projectors, slide presentations, chalkboard/whiteboard, books, and written materials reinforces the success of visually oriented trainees. However, this section introduces different learners and the best way for approaching their learning method.

Visual Learners Visual learners learn best by watching. They prefer pictures, videos, chalkboard/whiteboard, handouts, and diagrams in their learning process. The use of visually appealing slide presentations, analysis of photographs and videos, and written assignments and instructions are effective techniques for visual learners. In contrast, trainees who are weak in visual skills may be poor readers, miss crucial details in photographs or video presentations, or have difficulty understanding written materials that are not actually discussed.

Auditory Learners Auditory learners gain understanding best through listening (aural) activities. Thus, engaging in discussions, hearing about topics in detail, and associated oral methods are critical to auditory learners. Auditory learners may need to actually interact with the trainer to get the most meaning out of a topic because an auditory learner must connect with a topic through the use of language, whereas the visual learner connects with the topic through the use of symbols (pictures or writing). Auditory learners respond to a program that incorporates music, debate, and interaction with the trainer through question and answer sessions. Videos with sound will be especially vibrant for aural learners, but a discussion about the video before or after viewing will be crucial to reveal the teaching points. In comparison, students who are weak in auditory processing may be overwhelmed by extraneous or noisy classroom activities and need reinforcement to hear the salient points if not immediately apparent. Indeed, there are trainers who do not encourage discussion or debate in the class. It should be stated that some of them are not capable of class management or control. As well as lacking the ability to control, they avoid being challenged by questions. However, if trainers are going to apply the third style of education introduced in the previous section, they must be prepared for anything in the class.

Kinesthetic Learners Kinesthetic learners learn by doing. They prefer working with ideas, activities, games, and worksheets. Some students simply must physically interact with a topic to grasp it well. Kinesthetic learners enjoy the opportunity to work with some aspect of a topic as part of their learning experience. The trainer can provide these kinesthetic opportunities through giving students something to physically 'do' or create during a class. Games and drawing activities, worksheets, and more creative means can make a critical difference for the kinesthetic learner. In finance, there are many sites that present financial games and other activities that are accomplished by doing.

By understanding learning methods, trainers should consider all these types of learners in the class. Therefore, they should design their program and lesson plans which cover different students' learning abilities. In this regard, the first few minutes of the class, and the interaction the trainer makes with students, is really important since he/she can understand the students' initial abilities. If he/she is going to show slides in the class, he/she must not make too many slides that are full of complex sentences. Short words, and the addition of pictures, graphs, and videos with sound would be more appropriate. Moreover, trainers should design assignments and activities to satisfy kinesthetic learners. Trainers can maximize the effectiveness of their classes by paying attention to all these categories. In addition of trainers, officials should also note these learning methods as well. Since authorities in financial markets are responsible for designing educational programs for the public, they should note that people have different learning styles. Therefore, initiatives must be diversified in order to cover visual, auditory, and kinesthetic learners. Indeed, due to the diversification of learning, it is impossible to maximize effectiveness by one tailored program for everyone.

So far, education styles and learning methods have been introduced and we conclude that maximizing the effectiveness of an education program lies in choosing the third option of education style (the learner-centered approach) and considering diversification for the different learning abilities of students. However, there are some other elements which trainers should consider in the learning process. They are called psychomotor skills.[2] The following section introduces these skills.

Psychomotor Skills for Trainers

As a trainer, there are many factors that can increase the effectiveness of a class. The trainer's specific skills are called psychomotor skills since they are influenced from the trainer's motion and related to psychological aspects. The first initial minutes of the class are important for the trainer to attract the students' attention. The personality of a trainer is important too. In this respect, there are some factors or techniques that trainers can follow that affect their personality and subsequently their effectiveness in class. In the following these factors are introduced.

Smiling A very effective factor for education is smiling. When smiling, the trainer sends a signal that students can feel free to ask questions and they can talk without fear. If a trainer aligns his/her mood with the students, they feel comfortable. Therefore, smiling is considered as one of the main psychomotor skills.

Appearance Although it is not a skill, it does influence audiences. In any position, the trainer should know that his/her appearance can attract students. Appearance means the trainer's hair, face, clothes, and shoes. The trainer should be presentable.

Eye Contact Communication in the class is another important skill that trainers should consider. They can divide communication into different categories. However, eye contact indicates that the trainer is addressing trainees directly (direct communication). When trainers are talking in a class they should try to communicate with everyone equally using their eyes. This makes students feel that they have the attention of their educator. Therefore, they will stay alert.

Body Language Although smiling and eye contact can be considered a type of body language, they are intentionally separated due to their importance. A successful educator combines both verbal and non-verbal communication skills in establishing a good rapport with students, and this has a direct correlation to the students' achievement. The way a trainer stands, walks, moves his/her hands, facial expressions, voice tones, and so on, are all examples of body language that can affect the effectiveness of a class. At least, working on body language skills avoids negative messages in the education process.

All Answers Are Accepted There are many educators who do not accept wrong answers in their classes. This behavior will block the participation of some shy or faint-hearted students. In order to maximize the rate of participation in a class, trainers should incentivize trainees to participate by accepting all answers (wrong and right). For example, in a discussion about the concept of risk, a student's answer is wrong but the trainer accepts his/her participation by responding "that view is novel; however, we should discuss it more in depth." In this situation, students will understand that they can participate without fear of reproach.

Incentives In order to encourage students to participate in class topics, trainers should design some incentives. Students are incentivized in different ways, but the simplest way is the use of positive language such as 'very well, excellent' in respect of correct answers. Trainers should remember that these phrases may allow the potential abilities of students to blossom. By applying these words, trainers show that they care about and encourage students' participation in class.

Dynamic Not Static Education In dynamic training, the trainers' body must not be in a static position (similar to that explained in the body language section). He/she should move. The frequent and general recommendation to trainers is not to sit behind your desk and present. Instead, walk around the students and communicate with them dynamically. Trainers should note that when they walk among students, they may feel that the class is more 'alive.'

The items introduced are the most important psychomotor skills that trainers should consider in their education process. Considering these items can contribute to the effectiveness of educational programs. As a final matter in the education process, there are some techniques that trainers can apply in order to maximize the participation of students. The following introduces these techniques.

Training Techniques

As well as psychomotor skills, trainers need some techniques to maximize the students' participation. In order to complete the chain of education, which starts from choosing the best education method, setting a lesson plan based on different learning styles, and acquiring psychomotor skills, there are some other techniques to help trainers run their classes successfully.

Ice-Breaking/Warm Up

The use of ice-breakers is not a new concept. The purpose of this kind of exercise is to promote an atmosphere of comfort, connection with others, and perhaps, humor. Ice-breakers allow the participants to get involved. Once students get involved, they are invested in the outcome. They begin to take responsibility for the results because they are now actively involved in what is happening. In addition, ice-breakers bring humor to the entire training process. Many icebreaker activities are focused on helping educators get to know their students and helping students to get to know one another. However, in respect of financial education, it does not mean using different games or doing any special things as ice-breakers. It means educators should start their class by asking some friendly questions and allowing students to talk as a warm up. “How’s everything?” “any financial news?” “what did happen on the last trading day for XYZ stock?” and so on. These questions, which will only take a short time in class, can be good warm up exercises to encourage students’ participation. Moreover, in order to change or refresh the atmosphere of the class, based on the educator’s recognition, he/she can use fun discussions or activities.

Brainstorming

The concept of brainstorming is another simple instructional design concept. Brainstorming is an especially good way to begin a class. It demonstrates that the educator will be inviting students’ interaction and creating a positive environment for active learning. If educators want students to learn in their classes, they must support, even reward, their responses. Positive reinforcement gives students an affirmation of themselves as important, useful members of a team. How is it done? Through an educator’s commitment to positive communication with all of the students who participate, even if he/she disagrees with their answers. Brainstorming can be fulfilled through making groups and leading them toward possible answers. It could also be called learning through groups.

Case Study

In learning financial concepts, what would be really effective is designing or reviewing case studies in the class, particularly for those who learn by discussion and doing. Educators can find many case studies in different matters that are really interesting for students. Cases of success and failure, different situations that managers, companies, and individuals would have faced are interesting to review. Not only can these cases enhance the quality of a class, but they can also diversify the education materials.

Scenario-Based Learning (SBL)

SBL could be counted as one example of a case study with some differences. However, SBL is different from a case study, or at least it is a specific kind of case study. In this way, an educator designs a case study or a scenario where the result is not apparent. Students will accomplish the task and draw conclusions from its results. SBL is effective for public training in financial matters. For instance, an educator designs a scenario for opening a bank account and allows the students to do it and become familiar with it in a real-world situation. Everything is simulated from the real world and students can experience the consequences of their (right and wrong) actions.

E-learning and Computer-Based Training

The application of this technique requires sufficient facilities and equipment. Educators can use computer equipment in order to facilitate training. If they are active trainers, they can communicate with their students through social media and present different topics there. They can even lead them toward e-learning resources. There are many sites that can help educators in respect of financial literacy. Different games, videos, slides, and so on, exist on the internet and everyone can enjoy using them.

Virtual Reality Programs

This is a specific source of e-learning. There are many programs that simulate the real world in computerized programs. For instance, if an individual is going to invest in the stock exchange, there are virtual reality stock exchanges that allow him/her to invest virtually. Through this method, he/she practices the investment process in a virtual world in order to understand the different risks inherent in the stock market, and therefore will be equipped avoid them in the real world.

The techniques discussed are considered to be the main ones. However, everyone can find different techniques based on their innovation and creativeness and apply them due to the availability of resources at their disposal.

So far, this chapter has mentioned different styles, methods, and techniques of education. For its purpose, introducing these items are enough. Educators should be aware of them and make an effort to apply them in their lesson plans. Indeed, financial literacy enhancement has different dimensions. Authorities stand on one side, educators stand on another, and trainees or students shape the third side of this triangle. Paying attention to all these sides is equally important for financial literacy enhancement. This chapter is dedicated to the side of trainers. In conclusion, the following section introduces some educational resources that readers can refer to for better perception regarding education methods and their surroundings.

Practices Around the World

Although there are many resources, this section only introduces books that can help readers to increase their knowledge regarding education methods and virtual reality stock exchanges. Everyone can practice one of the introduced methods of learning.

Understanding learning styles: Making a difference for diverse learners

Students have different learning styles! Understanding learning styles helps teachers determine the learning style of each student and the appropriate delivery methods to target and address the needs of as many as possible. Different learning styles are presented in this professional book that helps teachers determine how best to teach their students. Surveys, practical ideas, and suggestions for designing lessons that incorporate multiple learning styles are provided to show teachers how to differentiate instructions.

The gamification of learning and instruction: Game-based methods and strategies for training and education

The book argues that gamification is not just about adding points, levels, and badges to an e-learning program, but about fundamentally rethinking learning design. It has put together a brilliant primer for learning professionals on how to gamify learning, packed with useful advice and examples.

Investopedia stock simulator

Investing in the stock market can be an intimidating and complex task for many investors. Investing brings a considerable amount of rewards, as well as risks. So, virtual stock exchanges give investors an opportunity to practice without fear of losing their capital. Simulators are used for a variety of reasons: educators use it as a tool to introduce students to the stock market, some employ it to test new investing strategies, and others use it to experience what it 'feels like' to place a trade. Whatever the reason for use, the ultimate result is to feel like one is investing in the real world. Investors will perceive the ups and downs of the market.

The Investopedia stock simulator uses real data from the stock markets (USA and Canada) in order to reproduce the experience of using a real online brokerage account. Users are provided with a virtual cash balance and can place virtual trades using real market data. Each game grants a specific amount of cash (minimum 10,000 USD and maximum 1,000,000 USD or CAD) and investors are able to invest in different tickers (specific symbols for each company allocated by stock exchanges; for instance, Microsoft Corporation ticker is MSFT), choose an order type (market, limit and stop) and select the duration of the order (day order and good till cancelled). Short selling, margin trading and options trading are facilities provided in the simulator.[3]

Iran virtual stock exchange

The virtual stock exchange of Iran was launched by the Information Dissemination and Services Company affiliated with the Securities and Exchange Organization for the purpose of training interested investors in the stock exchange. The main goal of the system is practical training of investment in the exchange. Prices, indices, and other information in the virtual exchange are real and coincident with actual market conditions.

Similar to the Investopedia simulator, the virtual exchange provides a platform for investors to invest in stocks and mutual funds virtually. It uses real time data and replicates market trends. Through this way, investors can gain familiarity with the real world of investment without losing their capital. In addition, the system provides different education resources in which investors can improve their theoretical knowledge as well.[4]

Summary

Financial literacy improvement in the stock market essentially needs three interrelated components to play a role: regulators, investors, and trainers. Without organizing a route for financial literacy improvement, investors may do something haphazardly and not achieve their ultimate goal. Without investors, even if regulators have set a perfect route, all actions in this respect will be meaningless. And finally, without a good, educated, and properly trained trainer, educational programs may be a waste of time. Everyone should know that people learn in different ways and that there are many techniques to teach them. Trainers should aware of these techniques and learning styles. It can be called *Literacy of Training*. This chapter has endeavored to promote different learning styles and teaching techniques for trainers to harmonize their understanding and allow readers to correct or update themselves with the themes introduced.

Notes

1. Abraham Lincoln was the 16th president of the USA, serving from March 1861 until his assassination in April 1865.
2. The base of this word comes from Bloom's Taxonomy. It refers to a classification of the different objectives that educators set for students (learning objectives). It divides educational objectives into three domains: Cognitive, Affective, and Psychomotor (sometimes loosely described as 'knowing/

head,' 'feeling/heart,' and 'doing/hands' respectively). Studying in this regard would be beneficial and improve trainers' knowledge in respect of students' skills in the training process. For further information trainers can refer to *Taxonomy of Educational Objectives: The Classification of Educational Goals*. However, this book does not aim to introduce the psychomotor skills that are introduced by Bloom. This book means those actions which are related to an instructor's motions and are basically psychological.

3. www.investopedia.com/simulator.
4. www.irvex.ir.

Conclusion: It Is Never Too Late to Learn

Abstract The last chapter of the book summarizes the previous chapters and mentions the remaining considerations that authorities, and even individuals, should note. It starts with controlling functions for financial literacy improvement and finishes with the pentagon of cooperation in financial literacy improvement.

This book propounds the view that financial literacy can be improved through the various initiatives it outlines for authorities and individuals.

Keywords Financial planning • Web-based financial education • Program evaluation • Company owners

Introduction

For many years, experts and authorities have recognized the importance of financial literacy. National and international organizations started initiatives with the hope of improving financial literacy levels among individuals, and subsequently enhancing their well-being through better decision-making. However, a turning point can be specified for the concept of financial literacy: the 2008 financial crisis. It showed that these initiatives had not been appropriate or effective enough to avoid such a crisis. Section 917 of the Dodd–Frank Wall Street Reform and Consumer Protection Act is evidence for the necessity of a new trend toward financial

A. Saeedi, M. Hamedi, *Financial Literacy*,
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literacy improvement in the USA. After its enactment, the Securities and Exchange Commission was mandated to identify the existing level of financial literacy among retail investors, as well as methods and initiatives to increase their financial literacy. Reviewing the findings of the study, which was published in August 2012, reveals some interesting results. The study indicated that the US retail investors lacked basic financial literacy. It showed that investors had a weak grasp of elementary financial concepts and lacked critical knowledge of the ways to avoid investment fraud. The survey also demonstrated that certain subgroups, including women, African-Americans, Hispanics, the oldest segment of the elderly population, and those who were poorly educated, had an even greater lack of investment knowledge than the average general population.[1] Indeed, the study showed the necessity of financial literacy improvement and alerted the authorities to pay more attention to financial literacy improvement. The results indicated that urgent action is needed to conduct different initiatives to improve financial literacy among all investors.

In previous chapters, different aspects of financial literacy and its surrounding issues were discussed. The book started with a definition of financial literacy and its importance. It then identified those who should be educated in the process of financial literacy improvement. Moreover, it identified issues related to the current and desirable levels of financial literacy. Methods and techniques of teaching and training were identified for more harmonization among instructors and stakeholders, and ways that investors may access financial resources were addressed. Moreover, as an important issue, roles of regulators and investors in respect of financial literacy improvement were identified. The topics they should highlight were introduced in Chaps. 6 and 7. The authors believe that taking action and considering these steps can lead both authorities and investors toward better financial literacy.

Control: A Key Element for Success

It is always emphasized that planning is incomplited without controlling. Thus, wherever one sees planning, control must accompany it. The story is similar in financial literacy initiatives. Nobody can plan a program, conduct it, and assure its effectiveness and success without continuous evaluation or control. It is frustrating to put a lot of time and energy into a project, only to realize that one has failed to meet one's goals. Program monitoring and evaluation is essential in order to be certain that a program is effective, to identify areas for improvement and to check that the initiative makes good use of resources. Evaluation of the evidence can also inform national financial education strategies by identifying the most efficient program and influencing future funding decisions. Furthermore, when robust evaluation findings are generalized to a wider population it becomes possible to predict the overall impact of a program on a much larger scale and set well-defined policy targets. Evaluation data can be complemented by financial literacy measurement at a national or international level. A national survey of financial literacy can help program designers to identify those topics that should be covered by financial education programs and to set appropriate targets when writing their aims and objectives. With repeat surveys, it may also be possible to identify changes in the levels of financial literacy over time and attribute such changes to the implementation of large-scale financial education programs. However, a national survey should not be seen as an alternative to program evaluation, as it does not allow for detailed analysis of the benefits of a particular program and is not designed with reference to the aims and objectives of a particular program (Atkinson and Messy, 2012).

Controlling can be divided into two main categories: (1) monitoring of the financial literacy level, (2) monitoring of educational programs.

1. **Monitoring of financial literacy level**

   In Chap. 5, the importance of assessing the current level of financial literacy was indicated. Assume a national strategy for financial literacy improvement in a three-year period. When the plan is fulfilled, it is necessary to reassess the financial literacy level in order to assure the effectiveness of the initiatives. Thus, since the strategy is set for a specific period of time, part of the plan should be to assess the financial literacy level at two intervals: (1) at the beginning of the strategic planning implementation; (2) at the end of strategic planning implementation. This will enable a comparison between the two periods and allow authorities to control progress of the financial literacy level. In addition to authorities, investors can also reassess their own financial literacy in a shorter time period and control their own pace toward personal goals and objectives.
2. **Monitoring of educational programs**

   Financial literacy programs must be evaluated properly so that their outcomes can be captured, shared, and integrated into future activities. Evaluation results will help practitioners build on successful initiatives. Authorities conduct different educational programs in their jurisdictions. The quality of these programs can be evaluated through pre- and post-tests or feedback questionnaires.

Moreover, participants can be interviewed in order to obtain their ideas. These ideas might be used to improve the quality of programs. In addition, there are some other simple but not reliable methods to assess the success of financial literacy programs. Some may rely on the number of people referring to their web-based educational programs and others may rely on the number of investors participating in their programs at different intervals and the growth rate of participation. However, as mentioned earlier, these are not reliable methods to evaluate the success of a program. Thus, there must be an evaluation process to assess the effectiveness and success of each educational program, whether it is web based or class based.

OECD/INFE Works for Financial Education Programs Evaluation

There are four important tasks initiated by the OECD/INFE regarding the evaluation of financial education programs. These four tasks guide countries and authorities toward appropriate evaluation of educational programs. "Guide to Evaluating Financial Education Programs" was the first task completed, in 2010. The second task was "Detailed Guide to Evaluating Financial Education Programs," which is a comprehensive document for financial education programs' evaluation. It starts from planning an evaluation to reporting the evaluation finding. "INFE High-Level Principles for the Evaluation of Financial Education Programs" was published in June 2012 and discusses the principles of evaluation from the OECD/INFE viewpoint. It is a short document with recommendations for authorities in different aspects of the evaluation process. The fourth, "Evaluating financial education programs," was published in June 2013 and is the last work of the OECD/INFE regarding the evaluation of financial education programs. It introduces a framework for evaluation. Studying these four tasks may give authorities an appropriate perspective for implementing evaluation and will be enough as a guide for its implementation.

The Pentagon of Cooperation

In the stock market, company owners must be educated in line with investors. The stock market is a place for interaction between investors and companies. Companies sell stock or financial instruments in order to finance their companies. As investors should know how to invest, companies should know how to finance. When companies are familiar with financing methods, they are more interested in entering the stock market too. Therefore, financial literacy is not merely related to individuals but companies. In many countries, companies do not have enough awareness of the capacities of the stock market for financing. Thus, one dimension that authorities should consider is financial literacy improvement among owners of companies.

Considering the above issues, and what was discussed in previous chapters regarding the financial literacy of stakeholders, it is evident that financial literacy improvement cannot be achieved by only one organization (and even by the struggle of investors alone). In order to accomplish this important goal, there are at least five general stakeholders that need to cooperate, which can be considered the pentagon of cooperation. The government, regulators or authorities, market participants (like brokers and dealers), companies, and investors, are those whose cooperation will lead to financial literacy improvement. Figure 1 illustrates their cooperation process.

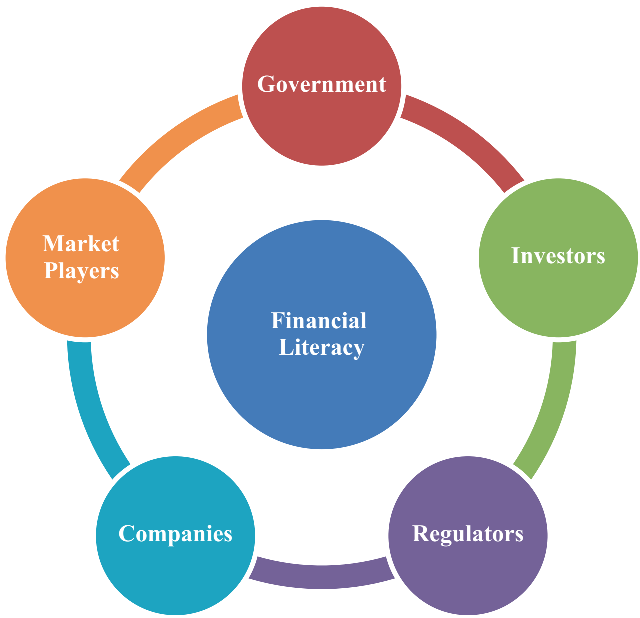

Fig. 1 The pentagon of cooperation for financial literacy improvement

Indeed, by correct and comprehensive cooperation and collaboration between all these entities, a synergy for financial literacy improvement will be shaped and all stakeholders might be lined up. Through this cooperation, the final outcome of financial literacy improvement, which is changing behavior (through decision-making), might be fulfilled.

Final Words

This book has endeavored to cover different topics related to financial literacy and counted different principles that should be considered to achieve the goals of financial literacy improvement. When improving financial literacy for specific groups of people or for targeting the public, everyone should follow a structured and predetermined plan. This book indicates the structure that authorities, particularly regulatory bodies and investors, should set for financial literacy improvement. From planning to controlling, we identified different aspects of financial literacy and the factors that affect its improvement.

Furthermore, the book discussed the topics applicable for instructors as well as investors. The core principles that stand at the heart of financial literacy are acquiring knowledge and understanding of financial concepts continuously, using that knowledge to improve decision-making through practice, and finally being cautious about the pitfalls of the stock market.

Notes

1. Securities & Exchange Commission Report published in August 2012.

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Annex I: Financial Literacy Assessment Around the World

Country	*Organization*	*Web links*
Australia	ANZ Bank	*http://www.anz.com/Documents/AU/Aboutanz/AN_5654_Adult_Fin_Lit_Report_08_Web_Report_full.pdf*
Austria	Oesterreichishe Nationalbank	*http://oenb.at/en/presse_pub/period_pub/volkswirtschaft/geldpolitik/monetary_policy_and_the_economy_07q3.jsp*
Canada	Statistics Canada and Human Resources and Skills Development Canada	*http://www.statcan.gc.ca/cgibin/imdb/p2SV.pl?Function=getSurvey&SDDS=5159&lang=en&db=imdb&adm=8&dis=2*
Iceland	Ministry of Business Affairs & Icelandic Investor/Shareholder Association	*http://www.fe.is/index_files/Page524.htm*
Ireland	Financial Regulator	*http://www.financialregulator.ie/publications/Pages/statisticsresearch.aspx*
Italy	PattiChiari Consortium and The European House Ambrosetti	*http://www.ambrosetti.eu/_modules/download/download/it/documenti/ricerca/112008_ExSum_PattiChiari_ITA.pdf*
Netherlands	CentiQ	*http://www.wijzeringeldzaken.nl/centiq_sites/objects/8ff2caf24ddbe4037044eaf6008bb788/summary_financial_insight_amoung_the_dutch.pdf* *http://www.wijzeringeldzaken.nl/centiq_nl/publicaties.php*

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Country	*Organization*	*Web links*
Singapore	Money Sense Financial Education Steering Committee	*http://www.mas.gov.sg/resource/news_room/press_releases/2005/Financial%20Literacy%20Levels%20in%20Singapore,%20Full%20Report.pdf*
UK	Financial Services Authority (Halted)	*http://www.pfrc.bris.ac.uk/publications/Reports/Fincap_baseline_questionnaire_06.pdf* *http://www.pfrc.bris.ac.uk/publications/Reports/Fincap_baseline_results_06.pdf* *http://www.pfrc.bris.ac.uk/publications/Reports/Fincap_baseline_BMRB_06.pdf* *http://www.pfrc.bris.ac.uk/publications/completed_research/Reports/Fincap_June05.pdf*
USA	FINRA	*http://www.finrafoundation.org/resources/research/p120478*
Italy	Banca d'Italia	*http://www.bancaditalia.it/statistiche/indcamp/bilfait/boll_stat/suppl_07_08.pdf*
Japan	Bank of Japan and CCFSI	*http://www.shiruporuto.jp/e/consumer/pdf/sisin02.pdf*
Netherlands	De Nederlandsche Bank	*http://www.nber.org/papers/w13565*
New Zealand	Retirement Commission	*http://www.consumeraffairs.govt.nz/policylawresearch/Research/financialknowledge/report/report.pdf*
USA	National Council on Economic Education	*http://207.124.141.218/WhatAmericansKnowAboutEconomics_042605-3.pdf*

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