

FINANCIAL EDUCATION FOR STUDENTS: DEVELOPMENT OF MODERN APPROACHES TO EXCHANGE-TRADED FINANCIAL ASSET EVALUATION

EDUCAÇÃO FINANCEIRA PARA ESTUDANTES: DESENVOLVIMENTO DE ABORDAGENS MODERNAS PARA AVALIAÇÃO DE ATIVOS FINANCEIROS EM BOLSA

EDUCACIÓN FINANCIERA PARA ESTUDIANTES: DESARROLLO DE ENFOQUES MODERNOS PARA LA VALORACIÓN DE ACTIVOS FINANCIEROS COTIZADOS EN BOLSA

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ABSTRACT: Financial education is an essential life skill for participating in modern society. Creating it into curriculums from an early age permits children to develop the ability and skills to make responsible financial behavior within each stage of their education. Estimation of exchange-traded financial asset fair value is one of the most important tasks in modern financial science for students. The study provides a comparative analysis of fundamental and technical analysis methods, reveals their advantages and disadvantages. To meet the aim of the study, we used statistical data reflecting the dynamics of exchange-traded assets when companies entered IPOs. The conclusions are drawn about the increasingly narrow use of technical analysis during short-term and investment problem solution. A prediction is given for a further decrease of fundamental analysis importance as the main method of assessment.

KEYWORDS: Curriculums. Exchange-traded assets. Financial behavior. Financial education. Modern society.

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RESUMO: A educação financeira é uma habilidade de vida essencial para a participação na sociedade moderna. Colocando-a em currículos desde tenra idade, permite que as crianças desenvolvam a capacidade e as habilidades para ter um comportamento financeiro responsável em cada etapa de sua educação. A estimativa do valor justo dos ativos financeiros negociados em bolsa é uma das tarefas mais importantes da ciência financeira moderna para os estudantes. O estudo fornece uma análise comparativa dos métodos de análise fundamentalista e técnica, revela suas vantagens e desvantagens. Para atender ao objetivo do estudo, utilizamos dados estatísticos que refletem a dinâmica dos ativos negociados em bolsa quando as empresas entraram em IPOs. As conclusões são tiradas sobre o uso cada vez mais restrito da análise técnica durante as soluções de problemas de curto prazo e de investimento. Uma previsão é dada para uma diminuição adicional da importância da análise fundamental como o principal método de avaliação.

PALAVRAS-CHAVE: Currículos. Ativos negociados em bolsa. Comportamento financeiro. Educação financeira. Sociedade moderna.

RESUMEN: La educación financiera es una habilidad de vida esencial para participar en la sociedad moderna. Incluirlo en los planes de estudios desde una edad temprana permite que los niños desarrollen la capacidad y las habilidades para tener un comportamiento financiero responsable dentro de cada etapa de su educación. La estimación del valor razonable de los activos financieros negociados en bolsa es una de las tareas más importantes en la ciencia financiera moderna para los estudiantes. El estudio proporciona un análisis comparativo de los métodos de análisis fundamental y técnico, revela sus ventajas y desventajas. Para cumplir con el objetivo del estudio, utilizamos datos estadísticos que reflejan la dinámica de los activos negociados en bolsa cuando las empresas ingresaron a las OPI. Las conclusiones se extraen sobre el uso cada vez más limitado del análisis técnico durante las soluciones de problemas a corto plazo y de inversión. Se da una predicción de una mayor disminución de la importancia del análisis fundamental como principal método de evaluación.

PALABRAS CLAVE: Currículos. Activos cotizados. Comportamiento financeiro. Educação financeira. Sociedade moderna.

Introduction

In recent years, the accelerated development of the global financial market was the result of the entry of a large number of novice private investors into the market. This circumstance leads to a significant change of financial asset evaluation principles. Classical fundamental analysis began to lose its significance gradually, while the subjective predictions of individuals began to play an increasingly important role in the evaluation of stocks. The opinion of popular financial bloggers has become so significant that even some of their statements can significantly affect the change of large company and entire industry market value.

In modern economics, the attempts to determine the most accurate value of public companies have always been relevant. To obtain a short-term result, technical analysis data was

used, while the data of a fundamental approach had an undeniable advantage over long periods of time. For example, the companies receiving losses were previously extremely rarely considered as attractive for investment, while now the overwhelming majority of IPOs conduct unprofitable technological business services.

Previously, when predicting the value of shares in absolute terms, traditional benchmarks were traditionally used such as company revenues, profits, the level of debt burden and capitalization. At the same time, EBITDA, profit and cash flow margins were mainly considered as relative indicators of efficiency and investment attractiveness.

A modern private investor has become more selective, he is interested in the company business profile, concern for the environment and usefulness to society. At the same time, investors are ready to pay a significantly higher price for participation in the capital of such companies, which, consequently, leads to their securities value increase.

The purpose of this study is to determine the most significant criteria for exchange-traded financial asset evaluation based on current trends in the world.

Methods

The problem of changing the principles of security fair evaluation is extremely important. The evolution of approaches to forecasting has become a separate area of scientific research. The solution to this problem is being successfully addressed by domestic and foreign scientists, whose main task is to monitor modern trends affecting stock market quotes.

The study of the fundamental analysis principles was carried out in the works by Zavodovskaya (2020), Tailak (2018), Edilbaeva (2015), Seroshtan (2015), and Imamzazina (2019).

The issues of intellectual capital and social responsibility of business influence on the fundamental financial characteristics of organizations are reflected in the works by Nedoluzhko and Varkulevich (2018), Smitskikh *et al.* (2019; 2018), and Koikova (2019). The authors assessed the factors that have a significant impact on the activities of sectoral business structures.

Such scholars as Azieva and Sadulaeva (2020), Shuklina (2019), Gorelova (2019) studied the issues of exchange-traded financial asset assessing and forecasting. Modern and classical approaches to the evaluation of securities are considered in the works of scholars.

The need for research of the relationship between the movement of exchange prices and the change in approaches to their forecasting determined the choice of the article topic, the logic of disclosing conclusions, as well as the format for statistical data analysis.

The methodological basis of the study was the analysis of exchange data covering the main parameters of the global financial markets, including the main characteristics of the most relevant IPOs. They performed a retrospective analysis of domestic and foreign security quotations, sectoral and national indices, as well as exchange-traded funds. The data used in the analysis made it possible to obtain many conclusions, estimates and forecasts necessary for deeper research in the future.

Results

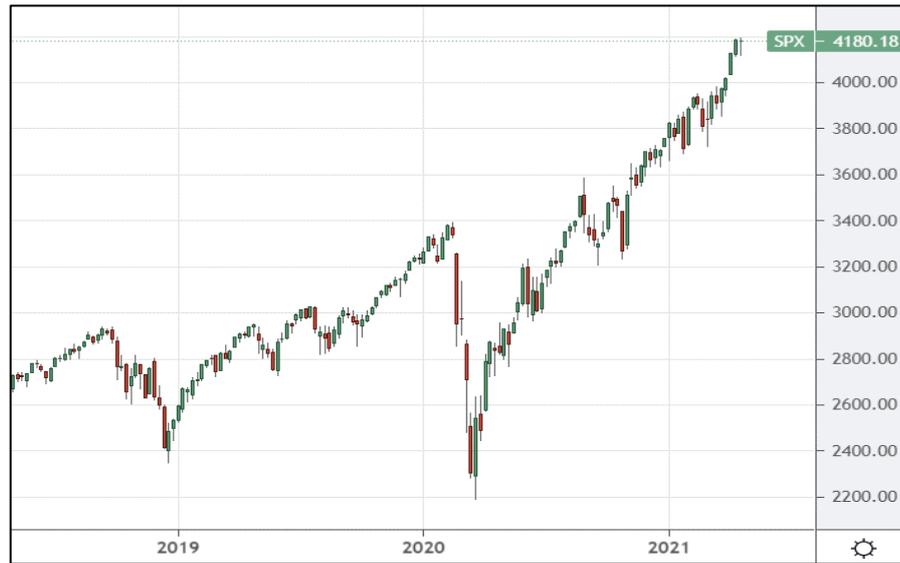
As the result of the pandemic 2020, the prices of global financial assets have declined around the world. The decline of prices looked quite natural given the fact that the future profits of many companies have tended to decline. A number of analysts talked about the beginning of the global recession and the downgrading of forecasts for the prices of global financial assets. Such conclusions, at first glance, looked very logical, since the profits and incomes of most of the world companies have actually declined.

Indeed, the financial performance of companies has always been the basis of fundamental analysis. World rating agencies lowered forecasts of future incomes of the most important sectors of the economy everywhere, and also began to point to a significant increase of investment risks. A number of indicators of technical analysis, as a rule, indicate the emergence of a profitable acquisition of financial asset possibility when their prices fall (MIROSHNIKOVA *et al.*, 2019).

The development of technology for distance trading in financial assets has led to a significant increase of private investors around the world, this is especially noticeable in such countries as the United States, China, and Russia. Private investors have the greatest propensity to purchase securities when their price decreases (KOREN; PUSTOVAROV, 2018).

In a number of cases, this has led to the unjustified growth of fundamentally weak companies operating in the air transportation, tourism and entertainment sectors. Moreover, contrary to expectations, all major stock indices in the world began to grow in April (Figure 1)

Figure 1 – Dynamics of the S&P500 index before and after the pandemic



Source: Devised by the authors

However, at present, the importance of technical analysis is not so great. In most cases, technical analysis is used for short-term planning horizons, so large investors attach decisive importance to fundamental analysis, which examines the main financial indicators of a company over a given period of time. In fact, when assessing the value of a business, the indicators of revenue and earnings per share (EPS) dynamics are taken as a basis. At the same time, the fair value of a financial asset can be significantly adjusted based on the relative indicators of fundamental analysis. First of all, these include indicators of profitability, the level of debt burden and dividend yield of a corporation.

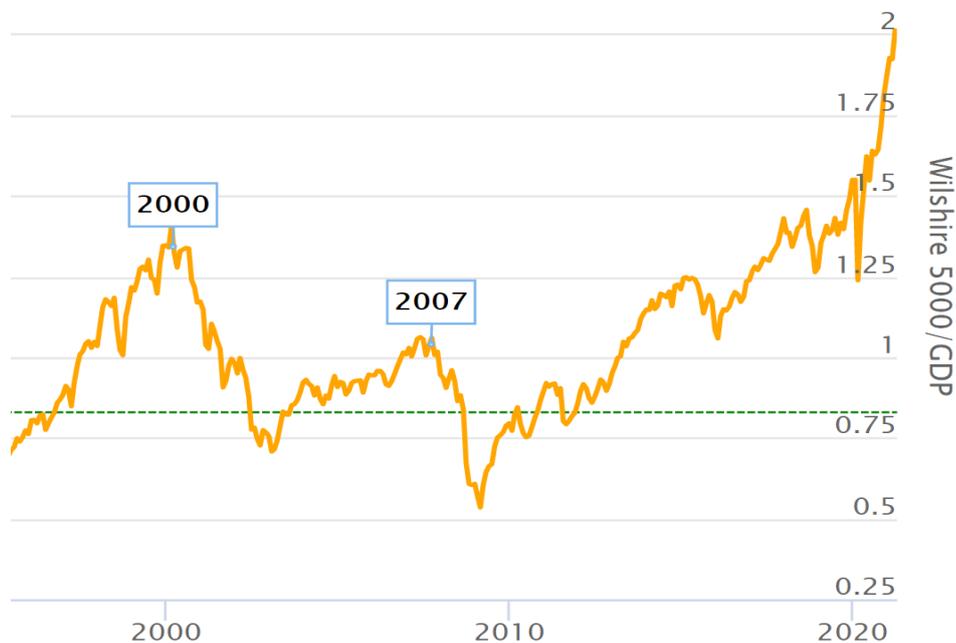
In a pandemic, the main problem of fundamental analysis is the difficulty of business financial indicator dynamics prediction. Thus, most analysts were convinced that the closure of amusement parks and hotels will inevitably lead to significant losses for Disney. In reality, the company losses turned out to be extremely small due to the rapid development of video services and the number of their subscribers increase. On the contrary, the sector of utilities, traditionally considered as defensive, showed significant stagnation in key indicators. In fact, we are forced to admit that it is not the fundamental analysis itself that is becoming important, but rather accurate forecasting of its indicator changes in the future.

It should be noted that the governments of most countries have succeeded in adopting important programs of the economy quantitative easing. Such actions are essential for the global stock market. Excess liquidity increases demand even for financial assets that have become less attractive from the point of view of fundamental analysis, and a lower price leads to automatic

purchases from long-term investors. Indeed, the share of investors focused on long-term capital investment is constantly growing on the stock market. At the same time, they are not interested in the fundamental attractiveness of security decrease, while the moment of price decline is viewed as an advantageous time for making investments or building up positions in risky assets (SPIRIDONOVA; SAYFUTDINOV, 2019).

The emission of liquidity, occurring on an especially large scale, significantly reduces the possibility of using the indicators of fundamental analysis during investment decision making. In the case low discount rate application, the opportunities for earning income are significantly limited, while obtaining a loan to buy shares becomes profitable. Thus, a global indicator such as the Buffett Indicator, which is the ratio of US market capitalization to US GDP, shows extremely high evaluations of US stocks. However, many US-based multinational companies continue to grow due to economic expansion outside the country (Figure 2).

Figure 2 – Buffett indicator (the ratio of US market capitalization to US GDP)



Source: Devised by the authors

It is important to note that fundamental analysis poorly enough considers the innovation component of the business. Its main drawback is that it evaluates the current state of the company instead of the future. The trends of recent years clearly indicate a shift in interest to unprofitable companies with high development potential in the future (TASTULEKOVA *et al.*, 2018).

This approach to high valuing of innovative company shares has practically become the norm when they conduct an initial public offering (IPO). In recent years, the acquisition of such securities is extremely weakly correlated with the objectivity of their assessment within the framework of the fundamental approach, and on the first day of trading they almost always grow even with an initially overestimated value (Table 1)

Table 1 – Dynamics of innovative company shares that have entered the IPO

Company	IPO date	Price of placement	Opening price	First day growth, %
TalisQBF	12/02/2021	16	33	106
DecibelQBF	12/02/2021	18	22	22
ApriaQBF	11/02/2021	20	28	40
Signify Health	10/02/2021	24	32	33
Bumble	10/02/2021	43	76	77
Immunocore	04/02/2021	26	41	58
Sana Biotechnology	03/02/2021	25	35	40
Vinci Partners Investments	27/01/2021	18	17	-6
Qualtrics	27/01/2021	30	43	43
Affirm	12/01/2021	49	91	86
Cullinan Oncology	07/01/2021	21	42	100
Wish	15/12/2020	24	20	-17
Upstart Holdings	15/12/2020	20	26	30
BioAtla	15/12/2020	18	30	67
AbCellera Biologics	10/12/2020	20	61	205
Airbnb	09/12/2020	68	145	113
DoorDash	08/12/2020	102	194	90
Ozon	23/11/2020	30	42	40
Telos	19/11/2020	17	22	29
Maravai LifeSciences	19/11/2020	27	32	19

Source: Devised by the authors

These statistics indicate a clear shift in investor interest from a fundamentally sound evaluation of shares in favor of their popularity, the uniqueness of the product and the opinion of financial advisers. Even unprofitable companies can be so popular among investors that it becomes almost impossible to buy their shares within an initial public offering. Moreover, the analyzed data point to the profitability of such security purchase within the IPO, even at biased inflated prices (DORONINA, 2020).

Discussion

The research carried out allows us to draw a number of important conclusions. The use of standard methods of fundamental and technical analysis continues to lose its relevance. Technical analysis as one of the types of short-term forecasting of financial asset prices is becoming even more highly specialized tool. Fundamental analysis continues to be widely used by actively managed ETFs and professional investors. At the same time, an increasing number of novice investors are guided in trading not by the principles of analysis, but by the popularity of individual issuers (BOGATYREV, 2020; TERYTYEVA *et al.*, 2018; KONVISAROVA *et al.*, 2020).

The considered model of investment behavior may turn out to be very effective during a period of up to 3 years, but it has a number of serious risks in the future. A large number of novice investors do not have sufficient experience in prolonged price declines for a wide range of financial assets. In fact, the behavior of novice investors in this context should be viewed as purely speculative. Such portfolios may be overly volatile and require additional hedging instruments. As a further application of this study results, a broader use of a number of principles of behavioral economics should be proposed.

Conclusion

Modern approaches to the analysis of exchange prices for world financial assets are in constant development. Behavioral economics methods play an increasingly important role in making decisions about a security purchase. At the same time, the companies that are not of investment interest from a fundamental point of view can significantly outperform classical types of business. Novice investors are willing to overestimate the shares of innovative companies, even when the risk is too high.

The stability of profit, profitability and debt burden indicators is becoming less and less important in the environment where business prospects are not innovative enough from the point of view of the mass investor. The distortion of fundamental business evaluation principles became especially noticeable during the IPO. Unprofitable companies entering the stock exchange for the first time quite often receive higher ratings for a relatively stable growing and profitable business. In this case, it should be noted that the modern investor is forced to expand significantly the range of analytical tools used for exchange price prediction.

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