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GOVERNMENT INTERVENTION AND STOCK PRICE CRASH RISK IN A MODERN MARKET ECONOMY

INTERVENÇÃO GOVERNAMENTAL E RISCO DE QUEDA DE PREÇOS DAS AÇÕES EM UMA ECONOMIA DE MERCADO MODERNA

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ABSTRACT

Objective: This article aims to study the stages of development of stock price crash risk in modern market economies, emphasizing the role of government intervention and regulatory policies.

Methods: The study adopts a theoretical approach, dwelling on the principles of formal and dialectical logic, analysis and synthesis, induction and deduction, analogy and similarity. It delves into the economic stages of capital reproduction within joint-stock companies, examining the risks associated with each stage, including emission risk, fluctuation risk, and crisis risk. The research also considers the concept of military risk and its consequences for stock prices.

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Results: The analysis reveals that the risk associated with stock prices is not limited to short-term fluctuations but involves distinct stages of development connected to the reproduction of capital. While the short-term risks of changes in the price of a stock fall entirely on traders due to their relevant insignificance, crisis risk is mostly compensated for by market participants. However, government intervention in the crisis process leads to the fact that the total national capital no longer recovers to the proper extent, and crisis risk accumulates from one crisis to another in contrast to the risk of profitability.

Conclusions: In modern market economies, stock price crash risk is a multifaceted concept, evolving through various stages linked to capital reproduction. While government intervention and market regulation can mitigate short-term risks, they may also contribute to the accumulation of crisis risk. Understanding the relationship between state policies, market dynamics, and potential war risk is essential for assessing the implications of stock price crash risk in modern financial markets.

Keywords: stock price, income, profitability, risk, short-term fluctuations, long-term trend, stock market and economic crisis, war.

Objetivo: Este artigo tem como objetivo estudar as etapas de desenvolvimento do risco de queda nos preços das ações em economias de mercado modernas, enfatizando o papel da intervenção governamental e das políticas regulatórias.

Métodos: O estudo adota uma abordagem teórica, baseada nos princípios da lógica formal e dialética, análise e síntese, indução e dedução, analogia e similaridade. Ele explora as etapas econômicas da reprodução de capital dentro de empresas de sociedades por ações, examinando os riscos associados a cada etapa, incluindo o risco de emissão, risco de flutuação e risco de crise. A pesquisa também considera o conceito de risco militar e suas consequências para os preços das ações.

Resultados: A análise revela que o risco associado aos preços das ações não se limita a flutuações de curto prazo, mas envolve estágios distintos de desenvolvimento ligados à reprodução de capital. Enquanto os riscos de curto prazo das mudanças no preço de uma ação recaem inteiramente sobre os negociadores devido à sua relevância insignificante, o risco de crise é em grande parte compensado pelos participantes do mercado. No entanto, a intervenção governamental no processo de crise leva ao fato de que o capital nacional total não se recupera mais na extensão adequada, e o risco de crise se acumula de uma crise para outra, em contraste com o risco de lucratividade.

Conclusões: Nas economias de mercado modernas, o risco de queda nos preços das ações é um conceito multifacetado, evoluindo por meio de várias etapas ligadas à reprodução de capital. Enquanto a intervenção governamental e a regulação do mercado podem mitigar os riscos de curto prazo, também podem contribuir para a acumulação do risco de crise. Compreender a relação entre as políticas estatais, a dinâmica do mercado e o risco potencial de guerra é essencial para avaliar as implicações do risco de queda nos preços das ações nos mercados financeiros modernos.

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Palavras Chaves: Preço das ações; renda; lucratividade; risco; flutuações de curto prazo; tendência de longo prazo; mercado de ações e crise econômica; guerra.

INTRODUCTION

A share is not a true commodity with objective grounds for its price due to the labor (material) process of its production. The price of a stock does not directly have a labor basis; therefore, it is characterized by chaotic (unpredictable) fluctuations, a tendency to increase over time, or rapid falls during stock crises, especially in the short term. This conditions a financial crisis, i.e., a general decline in the production of goods and services. This process is often described in the Russian literature on the stock market (Berzon, 2013; Galanov, 2021; Mirkin, 1995).

If there is a quantitative (predictive) assessment, market risk becomes a predictable risk. However, an unpredictable risk is no less important. It can be divided into a quantitatively unpredictable risk, which does not have a sufficiently justified quantitative assessment, and a completely unpredictable risk, for which there is no quantitative assessment since the event itself causing such a risk is unknown and is usually described using N. Taleb's term "black swan" (Taleb, 2018, 2020).

In practice, the concept of unexpected risk is often used to denote any investor's risk that goes beyond the quantitative assessment when making an investment decision. This discrepancy between the predicted risk assessment and subsequent profit or loss is typical of the market, therefore any predicted risk, like risk in general, secretly contains an unpredicted risk. Thus, the investor should not be strictly focused on the calculated risk but consider the possibility of significant deviations from its forecasts. This practical approach confirms the fact that any quantitative risk forecast is incomplete and insufficient (Galanov et al., 2017).

Besides the expert assessment of risk, there is no other way to quantify risk than the methodology developed by market participants for summarizing stock price fluctuations over the previous period. Therefore, risk is a category related to the future but based on experience. The main problems of its application in the stock market are rooted in this contradictory nature of risk. The past endows risk indicators with stability, but the future is uncertain and holds something that did not happen in the past. In other words, the future is a source of unknown events or unexpected risks.

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The relevance of issues related to stock price crash risk has two aspects. On the one hand, investors consider the risks of changes in the share price. Consequently, such risks have been studied by many generations of practitioners and theorists, namely H. Markowitz (1952), W.F. Sharpe (1964), and E.F. Fama (1970, 1991). From these renowned scholars, we need to emphasize a group of authors (Mandelbrot, 1997; Peters, 2000) who approach the problem of stock risk from the non-linear perspective. On the other hand, the modern stock market cannot limit stock risks to the interests of an individual investor. Political and military confrontation in the world indicates that market risks are not only volatile but also tend to accumulate and transform into risks that are dangerous for the economy. The significant risk of a stock crisis is conditioned by the fact that it carries the possibility of losses for many investors at once because this risk is inherent in all stocks. However, the risk of a stock crisis is no less dangerous as it affects the general process of investing in shares. The worst thing is that this process can become only a belated manifestation of the crisis in the reproduction of capital operating in one or several countries of the world. The last way to resolve such a crisis of the total social capital is war as an instrument for the destruction of the old capital and as a condition for the reproduction of the new capital. The current stock market, its participants, and tools (mostly, shares) are not threatened by a stock crisis and a possible war.

The article aims to summarize the stages of development of stock risk in relation to the stages of capital reproduction by joint-stock companies. To achieve this objective, it is necessary to fulfill the following tasks:

- To determine the known risks of the stock price in relation not only to the interests of the private investor but also to the total share capital;
- To predict a type of risks reflecting the stages of development of stock price crash risk as the capital they represent is forming and functioning;
- To justify the possibility of the crisis risk inherent in the stock turning into a military risk capable of destroying part of social capital.

METHODS

The research object is the stock market, on which shares of leading joint-stock companies are traded.

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The research subject is the risks inherent in the share price and rooted in the reproduction of profitable capital reflected in the circulation of shares.

The research conducted is theoretical and is based on the laws of formal and dialectical logic, analysis and synthesis, induction and deduction, analogy and similarity. The science of stock risks is developed using quantitative (mathematical) research methods, i.e., regardless of qualitative analysis built over logical reasoning. Quantitative analysis and quantitative methods widely used by investors in the stock market create the necessary appearance that objects of cognition are becoming more known and more applicable to market participants in the outside world, including in financial markets. The acquired knowledge extends to studying future events and deepening into the phenomenon. However, analyzing and forecasting the price of shares, as well as other financial instruments traded on the stock market, using only quantitative methods does not exhaust the process of understanding their own cosmos and microcosm. This is clearly visible when renowned scholars begin describing quantitative methods with references to the foundations of economic theory (Watshonand & Parromore, 1999). Qualitative analysis in the stock market usually takes the form of fundamental analysis (Fisher, 1960, 1975; Graham, 1949; Graham & Dodd, 1934), in which an emphasis is laid on determining and justifying the price level of a stock, regardless of its inherent risks. The content of the risks inherent in the price of a stock is also studied through qualitative analysis that is not limited to fundamental analysis.

The scientific novelty is that the study substantiates the phased nature of different types of share price crash risk caused by the stages of reproduction of share capital. We also explain the transformation of crisis risk into military risk if the prior accumulates.

RESULTS

Risk is a concept that contains some negative effects on the subject. For a market participant, risk can mean both a possible negative (unfavorable) event and a possible loss caused by such an event that is not regarded as negative by other market participants and is not harmful in its essence. In the current conditions, a stockholder can increase the profitability of their shares, but this process is unprofitable for the owner of money as a potential buyer. From the future perspective, a possible increase

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in the price of a stock is unprofitable for the future buyer of this stock, which will bring additional income to the future seller of the stock. In this regard, it is obvious that such a market event as a change in the price of a stock is not negative, but its results may be negative for certain groups of market participants. For many groups of financial intermediaries servicing the circulation of shares, a change in the price of a stock is mostly a positive event because it is associated with purchase and sale transactions, i.e., it brings them the desired commission income. On the contrary, no changes (fluctuations) in the share price mean the cessation of purchase and sale transactions on the stock market. Therefore, this is a possible negative event for all market participants, i.e., a type of risk for everyone, or a common risk. A truly negative event for the stock market (all stock traders) is not a change in the price of a stock as a result of trading but the lack of it. The real risk of a stock as an objective market phenomenon lies not in the random variability of its price but in the possible absence of variability, i.e., if these shares are no longer traded at all. The purpose of a share as a necessary market instrument is that its purchase and sale ensure a change in the ultimate holders of share capital to where this share belongs. No circulation of shares undermines the very existence of joint stock companies which are the basis of modern capitalist production of goods and services. As for possible losses from a future negative event for all market participants, the problem is not only that they are much more difficult to assess than possible losses from a predictable event but also that these losses are not compensated, i.e., they become permanent capital losses for the market. Under the current anti-Russian sanctions, the impossibility of selling a share or equity-based financial instrument is equal to the loss of invested capital.

Let us consider the known risks inherent in the price of a share, but only from the viewpoint of capital reproduction expressed in the form of a share.

Emission risk. This risk is associated with the formation of share capital. For the issuer, this risk means the possibility of not placing shares or placing them on worse terms than the issuer needs. From the perspective of total capital, this risk has a slightly different content. Emission risk in relation to the national capital is that new emissions are possible only to the extent necessary to transform non-capital resources of society into capital. This is evidenced by the number of new annual emissions, which is small in terms of costs and completely uneven (spontaneous) over the years. There can be a lot of free monetary resources on the market that are not used for consumption

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purposes, but they cannot contribute to the growth of working capital because the latter cannot obtain sufficient profitability from its expansion. Therefore, these are directed into the circulation of previously issued shares and guarantee the growth of their prices over time.

Risk of short-term stock price fluctuations. The working capital available in the economy in the form of shares (and securities derived from them) is circulated on the stock market. The systematic trading of shares is ensured by free cash capital that cannot turn into production capital but is aimed at generating net income. Fluctuations in the amount of free money capital cause random fluctuations in stock prices at each period. However, the same fluctuations create the opportunity to receive cash income in the form of a price differential for some capital owners and carry the risk in the form of a loss of money capital for other money owners. In general, the process of investing free cash capital in the stock market, if it is not associated with the issue of new shares, turns into a profitable-unprofitable redistribution of funds.

On the one hand, the owners of free cash capital can profitably invest it in the absence of actual growth of their working capital. On the other hand, the excess of free cash capital on the market does not decrease through its redistribution but tends to further increase, which inevitably leads to the emergence and accumulation of stock price crash risk.

Stock price crash risk. Over long time horizons, the price of a stock not only fluctuates but shows a clear upward trend interrupted from time to time by financial crises. As the price of a stock rises, its risk does not disappear and turns into a stock price crash risk, which is much greater than its short-term fluctuations. In other words, the risk of normal stock price fluctuations is complemented by a more significant crisis risk common to financial crises. Quantitatively, crisis risk exceeds the investor's possible losses compared to the risk of daily stock price fluctuations. In the event of a stock crisis, the price of a stock may fall several times, while its short-term (e.g., daily) fluctuations are within a few percent.

A stock crisis can have two causes:

The first possible reason is the overvaluation of the prices of many traded shares, which is commonly called a stock market bubble. The concept of a stock market bubble is mentioned even in the third volume of "Capital" by K. Marx (Marx & Engels, 1962), i.e., has been known for 150 years.

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In the case of such a bubble, a stock crisis only adjusts the level of stock prices with the capital operating profitably in the economy. One of the latest examples of this crisis is the dot-com bubble burst in 2000. This type of stock crisis is internal because it does not have a significant negative impact on the country's economy. This kind of crisis helps the economy get rid of excess cash flows in favor of certain sectors of the economy that threaten the profitable functioning of other sectors. The essence of a stock crisis associated with the liquidation of a bubble is that this crisis results in an intersectoral redistribution of free cash capital in the stock market, but it does not significantly affect working capital in general terms.

Economically, this type of stock crisis aims at bringing the size of fictitious capital into conformity with the size of real capital. Analysts strive to predict this kind of crisis by relying on the cyclical occurrence of stock crises (Burenin, 2017, 2019). However, when the causes of this crisis are outside the stock market, forecasting crisis risk becomes a challenge.

The second possible reason is the high loan debt burden of many market participants or the growth of over-lending. Failure to fulfill loan obligations leads to a drop in production in important sectors of the economy, which causes an inevitable fall in share prices of companies in these industries. Due to the interconnection of all sectors of the economy, a decrease in capital in some industries leads to a drop in production in the related sectors. As a result, there is a sharp drop in the prices of stocks of most companies over a short period of time.

In the case of the second type of stock crisis, the crisis risk of a stock is expressed in such phenomena as numerous bankruptcies and the liquation of some joint-stock companies, i.e., this type of risk has such a possible consequence as the abolishment of the functioning capital of society. This crisis does not restore the proportions of capital distribution on the stock market but changes the proportions in the reproduction of the total capital of society. This kind of recovery ensures a new cycle of growth of real capital and the entire economy.

In the modern era, the state actively intervenes in the market economy, which, in relation to stock and economic crises, smoothes the economic consequences of any possible crisis for many market participants. A stock crisis ceases to fully fulfill its health-improving functions for capital markets. If the short-term risks of changes in the price of a stock, due to their relative insignificance, fall entirely on the shoulders of

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traders, then the crisis risk associated with the relationship between stock and economic crises is compensated in one way or another by major market participants. The systematic incompleteness of healing processes in the sphere of fictitious and real capital means the accumulation of crisis risk which takes on a more powerful form (war risk).

War risk of stock prices. The war risk of a stock is the accumulated credit risk. Government intervention in the crisis process through one or another means of compensating for possible losses (risks) does not mean the elimination of these losses, but only their accumulation in other economic forms. Currently, in the period of common crisis, the total national capital is no longer recovering to its full extent. The result of the crisis risk accumulated is war risk. The latter is manifested in a drop in profits from curtailing trade between countries, stopping the payment of dividends, imposing sanctions against some countries, ceasing the production of some goods and services, etc. actions that mean, to varying degrees, the cessation of working capital and the transformation of shares into meaningless pieces of paper. War risk is the main type of economic risk that can reduce (destroy) social capital and total property to such an extent that unlimited incentives are recreated for the growth of profits, capital, and private wealth. The outbreak of wars between countries becomes the embodiment of war risk.

DISCUSSION

The insufficient use of the common concept of stock price crash risk is evident if the analyst moves from a short-term to a long-term investment horizon. The specifics of the existing conceptual relationship between risk and return for a stock is that it relates to individual stock and cannot be used for analyzing the totality of stocks on the stock market. As a rule, a set of stocks is called a market portfolio, whose return and risk value are derived from the combination of indicators of each stock. Fundamentally, the total stock market is derived from the profitable total stock capital. It is the actual capital of joint-stock companies that determines the profitability and risk of traded shares, each of which receives its own combination of indicators due to the volatility of its price. Proceeding from the connection between the totality of shares and the functioning share capital, the risk of a share acts as a derivative of capital risk. The latter goes through three mandatory stages: the stage of its emergence as capital; the

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stage of its profitable functioning; the stage of cessation of existence as capital. In relation to equity risk, these stages of capital reproduction are expressed in three types of risks: emission, fluctuation, and crisis. These types of stock risk reflect its economic stages of development which are rooted in the existence of profitable capital.

The common approach to studying stock price crash risk in relation to the interests of individual investors serves the private interests of stock market participants. However, the intervention of the state in market relations shows that even in the market more attention should be paid to the general (collective) interests. Therefore, the private risks of a share price should be analyzed in connection with the risks rooted in the reproduction of the total capital of society.

CONCLUSIONS

The qualitative aspect of quantitative risk assessment is that its calculated assessment is not recognized as true. Then the investor seeks to strengthen the existing forecast with due regard to the possibility of its existence and a different assessment. At the third stage, the investor considers the possibility of an event (black swan) that could completely cross out their forecast, for example, a war or a natural disaster. Since such events are extremely rare, investors usually do not take them into account because these have a general market rather than a private nature. The investor does not care to learn the reason for the loss of their capital. The market is also indifferent if private risks do not entail a loss of the country's production capital. However, society is not indifferent to the risk that threatens social capital. In this case, private losses are grouped into losses for the country, and their presence may call into question the very existence of a given state in the modern world. Consequently, it can be argued that the public risks of a share price are more unacceptable than its traditional risks that affect only the private interests of stock market participants.

Public (social) negative phenomena have certain pre-conditions in the sphere of politics and economics, for example, a worsening international climate, crises in diplomatic relations, sanctions policy, etc. A foreshadowing of some negative social event does not necessarily mean that such an event will occur. The problem with such a pre-condition is that it can be both short-term and long-term. There are more chances to prevent a negative phenomenon if it has a long-term pre-condition (or a set of them).

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The shorter the pre-condition, the fewer opportunities there are to avoid a black swan event because it is much more difficult to understand what events it will cause.

On the one hand, the economic essence of the war lies in the destruction of a significant part of the national property, primarily the national capital due to the demolition and shutdown of enterprises. On the other hand, an indirect reduction of the national capital is the forced growth of weapons and other military products. In this case, society creates material goods to destroy other goods and human resources instead of creating consumer goods that people need, which is the basis of dividends.

After the end of the war, capital receives the economic incentives needed for its growth, therefore war is an essential aspect of capital relations, and war risk is a natural stage in the development (accumulation) of stock price crash risk. Contemporary history demonstrates a clear trend toward an increase in the most dangerous type of stock price risk.

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