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PRELIMINARY INDICATORS OF STOCK MARKET CRASHES

Abstract

This study focuses on stock market crashes in the United States. This paper analyses the stock market crashes and studies their causes and consequences.

We mostly investigate the stock market accidents happened in 1907, 1929, 2008 and 2021. The stock crash is an integral part of the financial crisis, as the processes taking place in the stock market, especially in a market economy, have an exceptionally strong impact on the state of the banking system. Because securities make up the majority of the banks real and financial assets, the stock exchange bankruptcy respectively, worsens the banks solvency.

In this research we provide theoretical knowledge and experience about US stock market crashes happened in different times, identify key differences between them; examine events has been leading to stock market crashes; find out, what regulatory work has been done to solve and eliminate the consequences of the stock market crashes.

Key words: Stock market, stock crashes, financial crisis, stock crisis

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Intradaction

Stock market crashes are an inevitable side effect of any market in which public relations play a dominant role.

Stock market crash usually occurs when speculation lasts longer than the true value of a stock. There have been many such accidents throughout US history: Black Thursday or Horrible Thursday of 1929, Black Monday and Black Tuesday of 1987. Every time the crash has been led to a deep economic crisis that destroyed billions of dollars in America and most of the world.

Along with various economic factors, panic is also the consequence of stock market crashes. Stock market crashes often end speculative economic bubbles.

Analiz

The first preliminary indicators of stock market crashes is gold. Since the beginning of summer, 2020, gold prices have been rising, mainly due to negative rhetoric over the US-China Brexit negotiations. Now, for a couple of months, gold has been gradually falling in price and the main reason is the weakening of the negative on the same Brexit, a rather high level of positive in trade negotiations, the Fed's rate cut and the redemption of bills.

What should be noted in general for gold. On the eve of the crisis and its initial stages, as a rule, but not in all historical cases, gold was increasing in price. A sign of an approaching recession is not the rise in gold prices per se, but the avoidance of risks. There is a periodically increasing outflow of capital from risky assets.

Gold is a good defensive asset that has a weak correlation with stocks and bonds, that is, with other types of assets. But it's important to realize that gold doesn't produce anything, as Warren Buffett said. And it is not worth counting, it will give a capital gain, just as a business generates added value. With the intensification of the crisis, the growth rate of gold quotes may increase, but after the implementation of the crisis events, for a slightly longer period of time, gold may well begin to become cheaper, as world central banks may start selling it to increase liquidity. The current decline in the price of gold is the result of a powerful positive and euphoria in the stock markets. When negative news enters the market, the situation may turn around sharply.

The next indicator is the famous Buffett indicator. Buffett made the statement above about a metric called the market capitalization-to-GDP ratio. The Buffett indicator is calculated

by dividing the total value of all stocks in the U.S. market and by the gross domestic product of the U.S. Traders typically use the Wilshire

5000 Total Market Index as a measure of total U.S. market cap.



Fig 13. Wilshire 5000 to GDP Ratio from 2000 till present

The value of this ratio today has seriously exceeded the level of 2008 and even the level of 2000, when quite serious crisis events also took place. Now this value is at a very high level, which indicates a clear revaluation of the US stock market.

The next indicator is one of the most accurate, according to most experts, it is the inversion of the yield curve of short-term and

long-term US government bonds. Investors buy longer bonds as if they are expecting to sit out in them, wait out the crisis time and prices for them grow, in normal times this is not observed and, accordingly, the yields on short and long bonds begin to converge.

US unemployment indicator. The unemployment rate is now very low, record low.

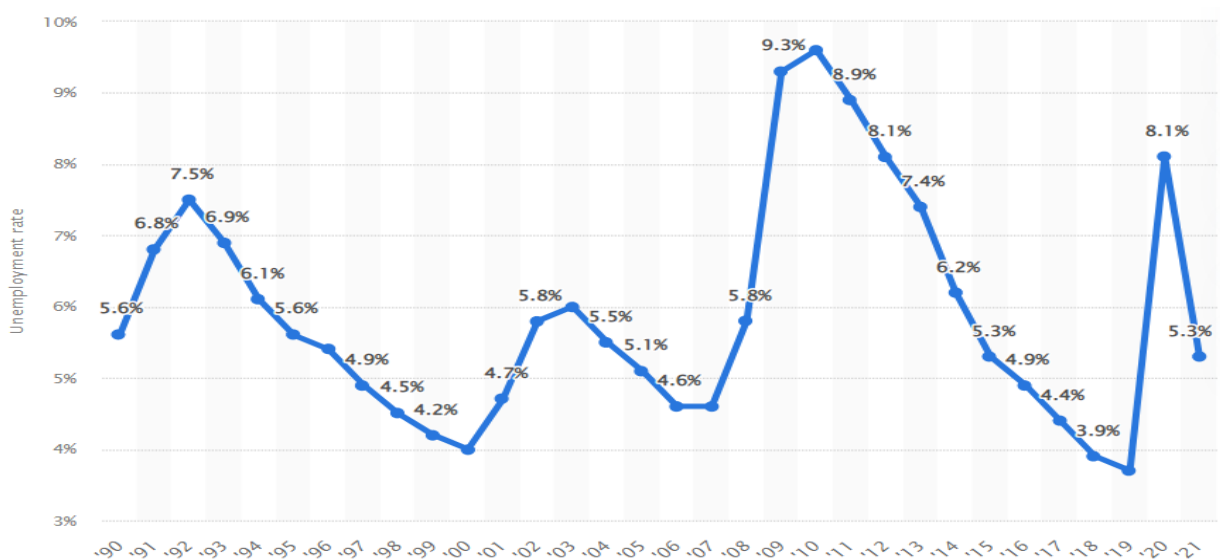


Fig 14. Unemployment rate in the US since 1990 till 2021 @statista.com 2022
<https://www.statista.com/statistics/193290/unemployment-rate-in-the-usa-since-1990/>

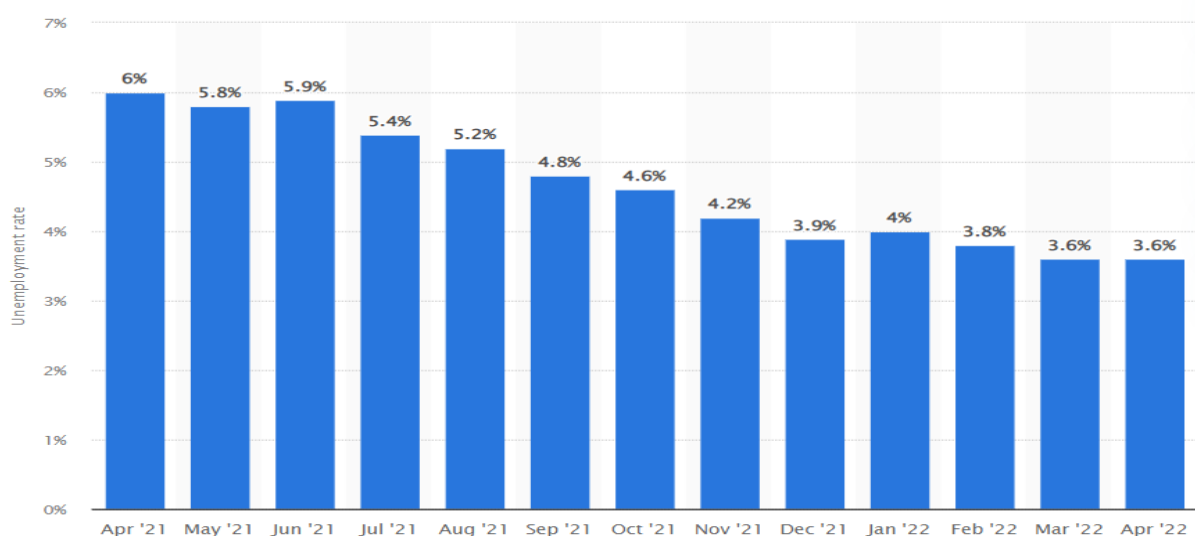


Fig 15. Monthly unemployment rate in the US from April 2021 to April 2022

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[\(https://www.statista.com/statistics/273909/seasonally-adjusted-monthly-unemployment-rate-in-the-us/\)](https://www.statista.com/statistics/273909/seasonally-adjusted-monthly-unemployment-rate-in-the-us/)

The present US unemployment rate in the lowest in US since 1990, which means it has been the lowest for a very long time. According to this indicator, the time of crisis has come. But we must understand that the financial crisis does not happen according to unemployment graphs, it is just an indicator indicating an increased likelihood of crisis events at one time or another.

An IPO indicator is an offer to sell a company's securities to an unlimited number of people. Insiders and organizers make money on IPOs. These people are just making money off of us.

One of the most obvious indicators of an approaching crisis is the beginning of a cycle of rate cuts by the US Federal Reserve. As a rule, most often in America, a recession began soon after the start of the cycle of rate cuts. From recession to a full-fledged financial crisis, the path is quite short. A recession does not necessarily turn into a crisis, but the beginning of a cycle of rate cuts has occurred.

And so, what happens, conclusions, expectations. Almost all indicators are close to the so-called crisis equations, while a number of the considered indicators show improvement, interest rates fall, money becomes cheaper and, as a result, additional liquidity appears. This is how bubbles are blown. Artificial support for

markets with the help of, for example, all the same rates and quantitative easing will not last very long. For example, the Fed's rate-cutting margin is not unlimited.

So the US is the largest economy in the world, but far from the only one. In addition, too many different economic and political processes are now in motion, and in many cases the outcome is not obvious.

There is no point in being afraid of a crisis. A crisis is first and foremost an opportunity, especially for a long-term investor. A crisis is an opportunity to buy assets that have fallen in price and thus significantly improve your future investment result.

A macroeconomic indicator is a numerical indicator that characterizes the state of the economy of a country in terms of its certain aspect (gross domestic product, inflation, employment, production volumes, the state of the trade sector, etc.).

Data on macroeconomic indicators enter the market regularly, at a strictly defined time, and much more often than changes in interest rates, changes in governments, natural disasters, etc. Most indicators are published monthly.

The timing of the release of data on macroeconomic indicators is known in advance. For example, in the USA they are usually voiced

at 16-30 and 18-00 Moscow time (MSK). Macroeconomic indicators usually have three meanings:

Expected value (Forecast, FRC, Seen) - the forecast is obtained as a result of the aggregate opinion of analysts. This value, as it approaches the release date of the real value, may be adjusted as new additional data appear. The expected value is a benchmark for the market.

Real or actual value (Real, Actual ACT) is the value that is published as official.

Revision or corrected value (Previous, PRV, Last) - often, together with the next publication of the same indicator, an updated value of this indicator for the previous period is given. Usually, revisions do not have a noticeable impact on the market, because if real indicators characterize the state of the economy of the last month or quarter, then the data revision characterizes an even more distant period in the past.

The traditional assumption is that stock markets behave according to a random log-normal distribution. Among others, mathematician Benoit Mandelbrot suggested as early as 1963 that statistics showed this assumption wrong. Mandelbrot observed that large movements in prices (i.e. crashes) are much more common than would be predicted from the log-normal distribution. Mandelbrot and others have suggested that the nature of market movements is often much better explained using the concepts of nonlinear analysis and chaos theory. This was expressed in non-mathematical terms by George Soros in his discussion of what he called the reflection and nonlinear movements of markets. Robert Prechter's reversal was the spark that started the avalanche.

Research at the Massachusetts Institute of Technology shows that there is evidence that the frequency of stock market crashes is inversely proportional to the law of inverse cubic power. This and other studies, such as the work of Didier Sornette, show that the collapse of stock exchanges is a sign of a critical self-organization in financial markets.

In 1963, Mandelbrot suggested that a change in stock prices, rather than a random attack, would create a Levy flight. Levy's flight is a random attack, sometimes interrupted by large movements. In 1995, Rosario Mantegna and Gene Stanley analyzed one million entries in the S&P 500 Index to calculate revenue over a five-year period. Researchers continue to explore this theory, especially using computer simulations of crowd behavior and the application of models to replicate collision-like events.

In 2011, a study at the New England Institute for Complex Systems, using statistical analysis tools for complex systems, found that panic attacks were always associated with a dramatic increase in imitation among investors, which always occurred in the year before each market crash. When traders follow each other's instructions closely, it becomes easier for panic to subside and affect the market. This study is a mathematical indicator of an important early warning sign of impending market crashes.

Significant changes in the broader market indicator have been the introduction of a strategy to reduce trade restrictions, known as 'circuit keys', affected by trade breaks from the cash market and derivative instruments markets. Since the advent of Black Monday (1987), trade restrictions have been changed to prevent both speculative gains and dramatic losses over a short period of time.

The S&P 500 Index has three limits representing different levels of decline: 7% (Level 1), 13% (Level 2) and 20% (Level 3).

If the 2nd Threshold level (13% decrease) is violated before 13:00, the market will be closed for two hours. If such a drop occurs between 13:00 and 14:00, an hour break is given. If the shares fall to this level after 14:00, it will close on Sunday.

If the threshold level exceeds 3 (20% decrease), it will close on Sunday, regardless of the time.

Давид Мамедов

ПРЕДВАРИТЕЛЬНЫЕ ИНДИКАТОРЫ ОБВАЛОВ ФОНДОВОГО РЫНКА

Резюме

Это исследование посвящено краху фондового рынка в Соединенных Штатах. В статье анализируются обвалы фондового рынка, исследуются их причины и последствия.

В основном мы исследуем биржевые аварии, произошедшие в 1907, 1929, 2008 и 2021 годах. Биржевой крах является неотъемлемой частью финансового кризиса, так как процессы, происходящие на фондовом рынке, особенно в условиях рыночной экономики, имеют исключительно сильное влияние. о состоянии банковской системы. Так как ценные бумаги составляют большую часть реальных и финансовых активов банков, соответственно биржевое банкротство ухудшает платежеспособность банков.

В этом исследовании мы предоставляем теоретические знания и опыт о крахах фондового рынка США, произошедших в разное время, определяем ключевые различия между ними; изучить события, приводившие к краху фондового рынка; узнать, какая нормативная работа была проделана для решения и устранения последствий обвалов фондового рынка.

Ключевые слова: фондовый рынок, биржевые крахи, финансовый кризис, фондовый кризис.

David Məmmədov

SƏHMƏT BAZARINDA BAZARLARIN İLKİN GÖSTƏRİŞLƏRİ

Xülasə

Bu araşdırma ABŞ-da birjanın çöküşünə yönəlib. Məqalədə birjaların çökmələri təhlil edilir, onların səbəbləri və nəticələri araşdırılır.

Biz əsasən 1907, 1929, 2008 və 2021-ci illərdə baş vermiş birja qəzalarını araşdırırıq. Fond bazarının çökməsi maliyyə böhranının tərkib hissəsidir, çünki fond bazarında, xüsusən də bazar iqtisadiyyatında baş verən proseslər müstəsna dərəcədə güclü təsirə malikdir. bank sisteminin vəziyyəti haqqında. Qiymətli kağızlar bankların real və maliyyə aktivlərinin əsas hissəsini təşkil etdiyinə görə, müvafiq olaraq birjanın müflisləşməsi bankların ödəmə qabiliyyətini pisləşdirir.

Bu araşdırmada biz ABŞ fond bazarının müxtəlif dövrlərdə baş vermiş çöküşləri haqqında nəzəri bilik və təcrübə təqdim edir, onlar arasındakı əsas fərqləri müəyyənləşdiririk; birjanın çökməsinə səbəb olan hadisələri öyrənmək; fond bazarı çöküşlərinin nəticələrini aradan qaldırmaq və aradan qaldırmaq üçün hansı tənzimləyici işlərin görüldüyünü öyrənin.

Açar sözlər: birja, birja çökmələri, maliyyə böhranı, birja böhranı.

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