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Weaknesses of Chinese Stocks as a Factor Influencing Russian – Ukrainian War

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Abstract

The stock markets of developed countries, as a reflection of current social processes, can perform the function of testing the prerequisites and consequences of military conflicts, hypothetical alliances, and natural disasters. In the case of the Russian-Ukrainian war, Chinese business as a tangential component of Russian aggression due to the refusal to support sanctions, significantly increased investment, and trade flows may be the object of such an analysis. The state of Chinese shares on the stock markets of the USA, Europe, and inside domestic markets reveals the need to reorient the priorities of local businesses **from ‘Russian oriented’ to ‘European oriented’**. Such a reorientation will have a negative impact on the current state of the Russian economy and the course of the Russian-Ukrainian war. To confirm this hypothesis, the optimal stock portfolio tool and appropriate Python packages were applied.

Keywords: Chinese economy, Russian-Ukrainian war, optimal portfolio.

JEL: F23, F37, G15, M16

Introduction

A special feature of the Chinese economy can be considered its functioning in the conditions of a closed society. This is facilitated by a comprehensive system of social credit (with participation from more than 50 institutions), special powers of the government, only partly compatible with IFRS and GAAP (internationally recognized systems) accounting standards, etc. Such a unique indicator as lending to private businesses in relation to GDP in this country remained at the highest level in the world. Perhaps because of this, confidence in the shares of Chinese companies both in the USA and in Europe remained at the highest level for a very long time. Even now, in the context of the crisis in the Chinese real estate market, this trust remains quite high. Few of the small investors were seriously interested in the history of Evergrande and Country Garden (the coolest losers on the market lately). Everyone remembers the recent interviews with Chinese government officials about how special this economy is. It has been repeatedly argued that even the Mundell-Fleming trilemma, according to which the three goals of economic policy are practically impossible to achieve simultaneously, has

been called into question by China. This doubt has cost the government up to a trillion dollars in some years. Just as today, the rescue of the next generation costs new billions again and again. Can this situation somehow affect the course of the Russian-Ukrainian war? We believe that it can, and we will try to explain it using the tools of stock market analysis.

The next hypothesis is proposed for testing in this study:

The state of Chinese shares on the stock markets of the USA, Europe, and inland reveals the need to reorient the interests of local businesses from Russian and American to European markets. Such a reorientation will have a negative impact on the current state of the Russian economy and the course of the Russian-Ukrainian war.

Review

Lee Ch. and Lee Ch-H. (2023) prove the possibility of cooperation “even when it logically makes more sense to do otherwise at the time.” However, they use the mechanism of only one of the most famous games, namely the prisoner's dilemma. Today it is a well-known fact that according to the Nash equilibrium in such a game we will achieve a result when the best choice for one player is simultaneously the best choice for another. At the same time, this approach requires players to be rational, and in today's world saturated with autocratic societies, religious fanaticism and the pursuit of excess profits, such rationality is becoming a rare phenomenon in some places. Hybrid and traditional wars is the product of irrationality.

Shaker et al. studied the reactions of shareholders in the European financial markets to Russia's new invasion of Ukraine in 2022. They concentrated their research on a variation in average abnormal return (AAR) and cumulative abnormal return (CAR).

“While firms in the Netherlands had the most negative AAR, companies in the UK experienced a positive and significant AAR on the event day, and firms domiciled both in Denmark and in Switzerland had significant negative CAR during the days surrounding the event and the pre-event periods”.

They decided that war will have a serious impact on the global economy (Shaker & al, 2022).

The Mundell-Fleming model allows us to argue that the economy cannot simultaneously maintain a fixed exchange rate, free movement of capital and an independent monetary policy. The economy can only support two of the three at the same time. This principle is called the “impossible trilemma”.

Borzenko and Hlazova believe that this can be solved in the modern conditions of the digital environment (Borzenko and Hlazova, 2022).

At the same time, the Chinese government believed for quite a long period of time that a special political-economic system allowed them to forget about the Mundell -Fleming trilemma rule and achieve all the necessary goals of macroeconomic

policy at the same time. Such "uniqueness" gave rise to confidence about the possibility of special conditions for the functioning of the banking system and, for example, accounting standards (practically the rules of communication between businesses and also influencing B2C, B2G, etc.)

The mechanism of reporting standards is very interesting in view of its use to protect its own stock market ('the money of the national investor should remain inside the country' as a slogan), stimulation of certain industries and even the spread of environmental standards (the latest trend in IFRS). Practically speaking about the stock market without reference to reporting standards and audit supervision today would be categorically wrong.

Biondi, Zhang examined the recent evolution of Chinese accounting standards. They focused their attention on accounting for business combinations. Researchers concentrated on the comparative analysis of Chinese standards and IFRS "by treating the two sets of accounting standards from the static and the dynamic perspectives of accounting", other words fair value approach and historical cost approach. The comparison found out "a doubt on the ultimate convergence of Chinese and international accounting standards". They noticed that static vision relates to the ambition of grasping the whole economic system by means of price system economics, as if the economic world were entirely dominated by complete and perfect markets.

According to these authors from the standpoint of a dynamic perspective there is a need "to delve into the special economics of institutions and organizations". Beyond the dreamed world of the price system, every business activity is confronted with real dynamics and complexity. An accounting "cannot be considered as a neutral technique, since it shapes and frames the actual working of the entity itself, as other institutions do". They think "the scholars have to be aware that accounting is "a special institutional, organizational and cognitive instrument embedded in the structure of the socio-economic system'.

They guess the current Chinese context does not fit the market view presented by IFRS 3 "Business combinations". "The pooling appears to be the more appropriate method, since it focuses on the continuity of the underlying socio-economic activities that is the main feature of a business combination under common control. In sum, many actual combinations, both in China and abroad, occur under common control and can then be qualified as a pooling rather than a purchase" (Biondi and Zhang, 2007).

Sutthisit, Wu and Yu have shown that the "market segmentation and government regulations have a significant impact on stock returns and volatility" in Chinese stock markets. They stated that China's mainly inexperienced individual investors drastically simplifying the game rules to buy stocks when prices increase and to sell stocks when prices decrease (Sutthisit et al. 2012).

García-Herrero and Santabárbara made some assessment of Chinese banking reform. They noticed that it "has now become an important part of the country's success story". And they also identify the Chinese banking reform as far to complete. The researchers emphasized "the continuation of excessive public intervention and weak corporate governance", low competition in the market (García-Herrero and Santabárbara 2013).

Jennifer Carpenter, Fangzhou Lu and Robert Whitelaw recognize China's stock market as a "crucial counterpart to its extraordinary, relationship-driven, but opaque banking sector". They identify China's stock market as a world's "most important crystal ball" (Carpenter et al. 2015).

Chen and Vinson guess that banking in China is now "beginning to be driven by market fundamentals and some foreign competition has begun to take market share". Simultaneously they are persuaded studied system is still strongly controlled by the government. That is why it's difficult to predict how affective such banks will be in promoting development and supporting the investment needed by such large economy (Chen and Vinson 2016).

In 2020, American Congress passed the Holding Foreign Companies Accountable Act (HFCAA), which says companies can't trade on US exchanges if American inspectors can't review their audits. In 2022, SEC began listing the names of companies that could be removed from American exchanges. Critics say Chinese companies enjoy the trading privileges of a market economy while receiving government support and operating in an opaque system. The HFCAA requires traditionally foreign companies to disclose if they're controlled by a government. The 2022 agreement between Beijing and Washington cleared the way for US inspections of the Chinese parent companies audits (Bloomberg, 2023).

This brief overview shows the importance of the cycle: stock market - accounting standards - audit - business. The actual analysis of the stock market allows us to predict the dynamics, interruptions, discrete nature and directionality of this cyclical movement.

Methodology and data

We get all the data for calculations from the web site yahoo.finance based on the tickers of the respective companies and the corresponding Python packages. In most cases, the appropriate period for analysis is chosen, based on the concrete external factors set.

It is applied as portfolio analysis instruments the next Python packages: EfficientFrontier, pypfopt, numpy, pandas_datareader, matplotlib.pyplot, yahoo_fin.

The portfolio optimization is realized based on Sharp Ratio maximization.

Results

It is unlikely that the crisis in China (so far within the framework of a single state) has become an unforeseen phenomenon. Many studies have pointed to negative trends regarding economic expectations in this country (Fig. 1). The pandemic has only reinforced what has been predicted since 2019. The crisis hit the real estate market because it was mainly based on long-term personal investment, government support and long-term stability. As soon as one of these elements is gone, the example of the two most powerful players clearly shows that the market simply collapsed. Evergrande or Country Garden Holdings can be considered a kind of Chinese analogue of the American company Enron

in 2001 (Fig. 2). At the same time, the collapse of Enron entailed significant changes in auditing practices and even greater state oversight. In such a case, changes in accounting standards and auditing procedures should be expected in China. However, for now, the government is trying traditionally to support the market through buybacks of discounted shares. In our opinion, this is the same as putting out fire by throwing wood. Knowing about the possibility of such a buyout, weakened enterprises will only stimulate it.

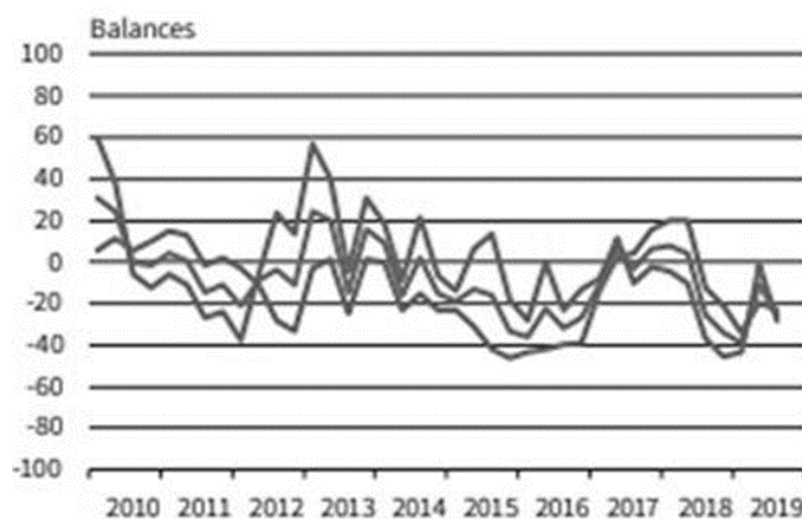


Figure 1. Economic expectations in China

Source: ifo World Economic Survey, 2019

Notes: presented as separated curves 'economic climate' (middle), 'assessment of economic situation' (upper) and 'economic expectations' (lower) in China

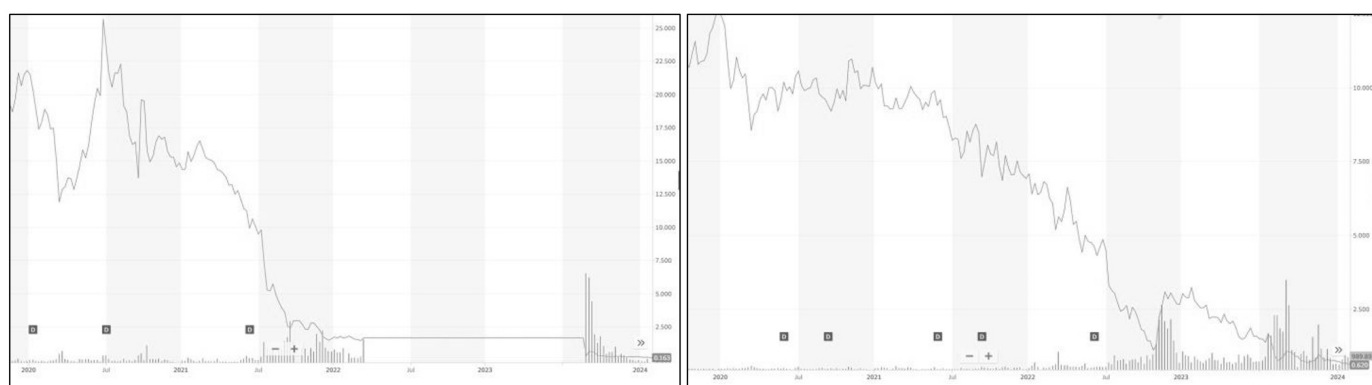


Figure 2. Situation in Real Estate – Development market

Notes: Evergrande and Country Garden Holdings (left and right). Source: yahoo.finance

Maybe situation is not so clear? Let's analyze possible market for Chinese stocks.

Table 1. Chinese stocks on the European markets

<p>Stock Start Date = '2014-01-01'</p> <p>Stock Current Date = '2020-01-01'</p> <p>[('CIM.F', 0.0), ('206H.F', 0.0), ('OCM.F', 0.01277), ('EK7.VI', 0.1346), ('C6T.F', 0.17224), ('CTM.F', 0.26955), ('4FF.F', 0.0), ('CYY.F', 0.0), ('18V.F', 0.30107), ('D1Y.F', 0.07258), ('NCL.F', 0.0), ('CMW.F', 0.0372)]</p> <p>Expected annual return: 73.4%</p> <p>Annual volatility: 35.4%</p> <p>Sharpe Ratio: 2.02</p>	<p>In that period we saw the biggest interest to the supported by government real estate market (the leader was China Vanke with weight coefficient 0.30107).</p> <p>The Chinese construction boom has obviously aroused the interest of European investors. It is appropriate to refer to the successful practice in Spain, where this market, together with communal services, has long been unjustifiably considered the cause of inevitable problems. But such problems never happened.</p>
<p>Stock Start Date = '2020-01-01'</p> <p>Stock Current Date = '2024-02-06'</p> <p>[('CIM.F', 0.0), ('206H.F', 0.11179), ('OCM.F', 0.03025), ('EK7.VI', 0.12051), ('C6T.F', 0.07724), ('CTM.F', 0.46092), ('4FF.F', 0.07286), ('CYY.F', 0.08169), ('18V.F', 0.005), ('D1Y.F', 0.03973), ('NCL.F', 0.0), ('CMW.F', 0.0)]</p> <p>Expected annual return: 158.0%</p> <p>Annual volatility: 53.8%</p> <p>Sharpe Ratio: 2.90</p>	<p>We wonder if the pandemic and the war in Europe have had a negative impact on investment expectations for Chinese stocks in Europe. We see that a comprehensive valuation based on return and risk convinces us otherwise (Sharp Ratio has become bigger). We are witnessing a decline in interest in the real estate market and at the same time a greater interest in technology (telecom services: China Mobile Limited (CTM.F)) and banking (Agricultural Bank of China Limited (EK7.VI))</p>
<p>Stock Start Date = '2022-02-26'</p> <p>Stock Current Date = '2024-02-06'</p> <p>[('CIM.F', 0.0), ('206H.F', 0.09516), ('OCM.F', 0.03354), ('EK7.VI', 0.14289), ('C6T.F', 0.06712), ('CTM.F', 0.48645), ('4FF.F', 0.08133), ('CYY.F', 0.07726), ('18V.F', 0.00062), ('D1Y.F', 0.01562), ('NCL.F', 0.0), ('CMW.F', 0.0)]</p> <p>Expected annual return: 311.0%</p> <p>Annual volatility: 67.2%</p> <p>Sharpe Ratio: 4.60</p>	<p>It is interesting to separately analyze the impact of Russian aggression and greater opportunities for China under sanctions for those wishing to cooperate with Russian business. Here we observe only the strengthening of the above-described trend. It is important that for a European investor, the presence and active support as a tax payer by these companies of Russian aggression against Ukraine in no way affects his investment priorities, at least visually.</p>

Notes: own accommodation based on Efficient Frontier Method

Table 2. Chinese stocks on the American markets

<p>Stock Start Date = '2022-02-26'</p> <p>Stock Current Date = '2024-02-06'</p> <p>[('BABA', 0.0), ('PDD', 0.0), ('NTES', 0.0), ('BIDU', 0.0), ('JD', 0.0),</p> <p>#('LI', 0.0), ('TCOM', 0.0), ('BEKE', 0.0), ('TME', 0.0), ('YUMC', 0.0), ('EDU', 0.43374),</p> <p>#('ZTO', 0.0), ('NIO', 0.0), ('VIPS', 0.0), ('XPEV', 0.0), ('TAL', 0.01704), ('YMM', 0.0),</p> <p>#('FUTU', 0.0), ('BZ', 0.0), ('MNSO', 0.0), ('BILI', 0.0), ('MLCO', 0.0), ('AMTD', 0.0),</p> <p>#('ATHM', 0.0), ('IQ', 0.0), ('ZKH', 0.52271), ('QFIN', 0.0), ('HCM', 0.0), ('RLX', 0.0), ('ATAT', 0.02652)]</p> <p>Expected annual return: 146.8%</p> <p>Annual volatility: 58.4%</p> <p>Sharpe Ratio: 2.48</p>	<p>American priorities among Chinese stocks in the period after the start of the active phase of Russia's war against Ukraine are very interesting:</p> <p>New Oriental Education & Technology Group Inc. (EDU),</p> <p>TAL Education Group (TAL) – education and ZKH Group Limited (ZKH) – internet retail.</p> <p>We do not see among the leaders of technology companies, and this is probably explained not only by the new stricter rules on auditing (it is not a question of who conducted it, but whether there is government financial support for such a business) and on-going inspections.</p> <p>Restrictions on technology exchanges with China mean that, in the long term, investments in Chinese technology companies do not appear to be a suitable capital investment for an American investor.</p>
<p>Stock Start Date = '2023-02-06'</p> <p>Stock Current Date = '2024-02-06'</p> <p>[('BABA', 0.0), ('PDD', 0.0), ('NTES', 0.0), ('BIDU', 0.0), ('JD', 0.0), ('LI', 0.0), ('TCOM', 0.0), ('BEKE', 0.0), ('TME', 0.0), ('YUMC', 0.0), ('EDU', 0.54329), ('ZTO', 0.0), ('NIO', 0.0), ('VIPS', 0.0), ('XPEV', 0.0), ('TAL', 0.06215), ('YMM', 0.0), ('FUTU', 0.0), ('BZ', 0.0), ('MNSO', 0.0), ('BILI', 0.0), ('MLCO', 0.0), ('AMTD', 0.0), ('ATHM', 0.0), ('IQ', 0.0), ('ZKH', 0.39456), ('QFIN', 0.0), ('HCM', 0.0), ('RLX', 0.0), ('ATAT', 0.0)]</p> <p>Expected annual return: 121.4%</p> <p>Annual volatility: 47.8%</p> <p>Sharpe Ratio: 2.50</p>	<p>The last year is characterized by an even greater flow of investment into the educational business and a decrease even in such a guaranteed from shocks sphere as online trade. We remind you that educational services here are mainly concentrated in the field of parallel education, preparation for school, learning foreign languages.</p>
<p>Stock Start Date = '2020-02-06'</p> <p>Stock Current Date = '2024-02-06'</p> <p>[('BABA', 0.0), ('PDD', 0.0348), ('NTES', 0.0),</p> <p>#('BIDU', 0.0), ('JD', 0.0), ('LI', 0.0), ('TCOM', 0.0), ('BEKE', 0.0), ('TME', 0.0),</p> <p>#('YUMC', 0.0), ('EDU', 0.0), ('ZTO', 0.0), ('NIO', 0.0), ('VIPS', 0.0), ('XPEV', 0.0), ('TAL', 0.0),</p> <p>#('YMM', 0.0), ('FUTU', 0.07882), ('BZ', 0.0), ('MNSO', 0.0), ('BILI', 0.0), ('MLCO', 0.0), ('AMTD', 0.0),</p> <p>#('ATHM', 0.0), ('IQ', 0.0), ('ZKH', 0.74023), ('QFIN', 0.0), ('HCM', 0.0), ('RLX', 0.0), ('ATAT', 0.14616)]</p> <p>Expected annual return: 129.6%</p> <p>Annual volatility: 61.7%</p> <p>Sharpe Ratio: 2.07</p>	<p>If we also include the period of the pandemic, one interesting component will appear</p> <p>Atour Lifestyle Holdings Limited (ATAT)</p> <p>This can be explained by spending a lot of time at home under pandemic restrictions.</p>

Notes: own accommodation based on Efficient Frontier Method

Table 3. Chinese companies significantly presented in Russian market

<p>Stock Start Date = '2020-01-01'</p> <p>Stock Current Date = '2022-02-26'</p> <p>[('000617.SZ', 0.0), ('1288.HK', 0.0), ('9618.HK', 0.0), ('9988.HK', 0.0), ('0939.HK', 0.0), ('2628.HK', 0.0), ('0941.HK', 0.0), ('1186.HK', 0.0), ('0700.HK', 0.0), ('1800.HK', 0.0), ('2202.HK', 0.0), ('000800.SZ', 0.0), ('600050.SS', 0.0), ('0763.HK', 0.0), ('600309.SS', 0.41992), ('600519.SS', 0.58008), ('300870.SZ', 0.0)]</p> <p>Expected annual return: 28.7%</p> <p>Annual volatility: 30.5%</p> <p>Sharpe Ratio: 0.88</p>	<p>During the pandemic, we observe a fairly diversified selection (perhaps due to the preferences and information of specific companies) with a relatively low Sharpe ratio:</p> <p>Kweichow Moutai Co., Ltd. (600519.SS) - Beverages - Wineries & Distilleries, Wanhua Chemical Group Co., Ltd. (600309.SS) - Specialty Chemicals</p>
<p>Stock Start Date = '2022-02-26'</p> <p>Stock Current Date = '2024-02-06'</p> <p>[('000617.SZ', 0.0), ('1288.HK', 0.0), ('9618.HK', 0.0), ('9988.HK', 0.0), ('0939.HK', 0.0), ('2628.HK', 0.0), ('0941.HK', 1.0), ('1186.HK', 0.0), ('0700.HK', 0.0), ('1800.HK', 0.0), ('2202.HK', 0.0), ('000800.SZ', 0.0), ('600050.SS', 0.0), ('0763.HK', 0.0), ('600309.SS', 0.0), ('600519.SS', 0.0), ('300870.SZ', 0.0)]</p> <p>Expected annual return: 25.2%</p> <p>Annual volatility: 18.4%</p> <p>Sharpe Ratio: 1.26</p>	<p>If we take the entire period of the active phase of aggression, then there is only one leader -</p> <p>China Mobile Limited (0941.HK) - telecom services.</p> <p>Its businesses primarily consist of voice, data, broadband, dedicated lines, internet data center, cloud computing, IoT, and other services. In the conditions of the vacuum of technological cooperation of Russia in the world, the expected presence of this company in the Russian business (in particular, the military industry) can be considered as the most promising infusion of funds.</p>
<p>Stock Start Date = '2023-01-01'</p> <p>Stock Current Date = '2024-02-08'</p> <p>[('000617.SZ', 0.0), ('1288.HK', 0.13867), ('9618.HK', 0.0), ('9988.HK', 0.0), ('0939.HK', 0.0), ('2628.HK', 0.0), ('0941.HK', 0.86133), ('1186.HK', 0.0), ('0700.HK', 0.0), ('1800.HK', 0.0), ('2202.HK', 0.0), ('000800.SZ', 0.0), ('600050.SS', 0.0), ('0763.HK', 0.0), ('600309.SS', 0.0), ('600519.SS', 0.0), ('300870.SZ', 0.0)]</p> <p>Expected annual return: 36.8%</p> <p>Annual volatility: 18.4%</p> <p>Sharpe Ratio: 1.89</p>	<p>But last year we see already less interest in</p> <p>China Mobile Limited</p> <p>and the appearance of interest in</p> <p>Agricultural Bank of China Limited (1288.HK).</p> <p>Here, of course, it is possible to emphasize the lesser threat of sanctions to the agro-bank, and on the other hand, it is possible to have some confidence in agro-crediting and the prospects of agrarian markets. It is the possibility of a wide range of payments, not directly related to agrarian business.</p>

Notes: own accommodation based on Efficient Frontier Method

Tables 1, 2, 3, 4 demonstrate the reaction of optimal portfolios of Chinese shares to such significant external factors as the pandemic or the repeated invasion of Russia into the territory of Ukraine in 2022. What does this analysis show? The inability to quickly adapt to the new audit conditions, the incompatibility of the Chinese business environment with the

American one leads to a decrease in its prospects in the American markets. It is logical that worrying about the state of the parent company in the crisis home market, the American investor will gain an even greater desire to get rid of problematic assets in view of on-going investigations. Why is there growth in Europe? It can be explained either by inertial demand or by the presence of hidden Chinese capital, which imitates the growth of interest in the market and thus seems to convince the European investor of the appropriateness of investing.

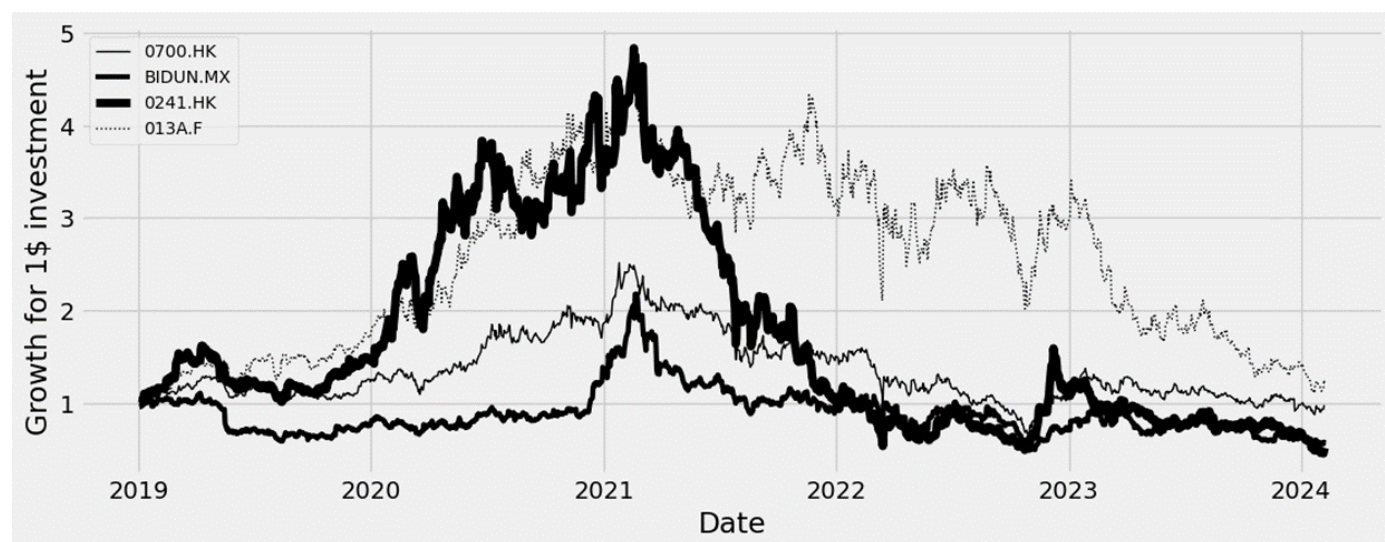


Figure 3. Chinese tech companies current dynamics

Source: own accommodation

On the other hand, we see a sharp decrease in the diversification of interest in companies present on Russian markets. Such worsening be explained by the expectation of sanctions.

Even a simple graphical presentation of the four most famous Chinese tech-companies gives a lot of answers. We mean 0700.HK (Tencent Holdings Limited), BIDUN.MX (Baidu, Inc.), 0241.HK (Alibaba Health Information Technology Limited), and 013A.F. (JD.com, Inc.). The negative dynamics of cumulative income, even with a stable, acceptable risk, indicate the inappropriateness of long-term investing.

Discussion

Of course, such analysis has deep sense only if we are talking about countries where the stock market is a certain reflection of the state of the economy and society as a whole. For developed countries, this is actually a proven fact. If we are talking about Chinese companies in American markets, armed with the Sarbanes-Oxley Act and the corresponding acts of 2022, we can say that the opportunities for manipulation using the institutions of another state have become significantly less. As for the European markets, there is no such certainty. At the same time, a different model of corporate business in Europe compared to the American approach (significantly greater consideration of the interests of the small investor) suggests that the Chinese model of penetration may be successful here. And this happens despite the fact that

Chinese accounting standards have excessively large discrepancies with IFRS. But this simultaneously means that the Chinese businesses present in Russia must make a choice: sanctions and losses or manipulation and agreements in Europe. In the conditions of the reorientation of the USA to exclusively domestic interests (all are expecting next election results) such an interest in the European-Chinese rapprochement does not appear to be such a fantastic phenomenon.

Conclusions

On the assumption that world political players will make their choices rationally, based on the analysis of the dynamics of the optimal portfolios of Chinese business representatives on the world stock markets, we can expect a reorientation of Chinese interests towards of the European Union and the forced refusal of a significant business presence in Russia. Such reorientation will prevent the reduction of Russia's ability to continue the war in Europe. Such changes can be expected not in the short term but in the long term because of necessity to realize them first of all institutionally.

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