DIMENSIONS AND POSSIBLE CHALLENGES TO SUSTAINABILITY IN POST COVID-19 PANDEMIC SITUATION ON "CAPTURE" STATE STOCK MARKETS: THE CASE OF BULGARIA

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Abstract:

The paper outlines the specifics of capture state frontier stock market of Bulgaria in the course of 14 years' full membership of Bulgaria in the European Union and the existing barriers and challenges to sustainability dimensions in pandemic Covid-19 financial situation. As a case in point of façade democracy the paper tests empirically the adjustment of the Bulgarian economy to the requirements of sustainable development based on various eco-efficiency, democracy and human development indicators at the macroeconomic and stock market level. As a result of the empirical analysis the report draws conclusions regarding opportunities and obstacles facing the frontier state stock market of Bulgaria in adjusting to sustainable development objectives in post-Covid -19 pandemic new realities.

Keywords: *sustainability, frontier stock markets, "capture"state, ecoefficiency*

JEL classification: *G20, P34, Q56*

Introduction

The aim of the report is to examine empirically the sustainability of the business environment in several dimensions (i.e. socio-economic, institutional and environmental) and the financial development of the capital market in a "capture" state with a "façade" democracy as Bulgaria, which in the course of 13 years' full membership in the EU and 30 years of democratic transition continues to be on the periphery of EU integration processes.

The main function of capital markets is to serve as a mechanism for transforming savings into investments and for financing the real sector (Baumol, 1959). The result is an increase in the efficiency of the financial system by increasing competition in the financial sector, reducing the cost of financing for companies, increasing transparency, reducing asymmetric information and establishing financial discipline in economic governance, guaranteeing investors' rights and supremacy of law and order. The development of capital markets is usually associated with measures such as market capitalization, liquidity, volatility (see Table 1 in Appendix for Bulgaria), concentration, integration with other regional and international capital markets etc.

The thesis of the study is that the deterioration of the institutional sustainability of the business environment in a country with "semi-structured democracy" (Freedomhouse, 2020) as Bulgaria with a peripheral stock market is a limit to economic growth, socio-economic and financial development, and is related to the erosion of democratic values (including so-called "façade" democracy) (Ritter, D, 2015) In this report, "sustainability" refers to a process of institutional, socio-economic, environmental and regulatory changes that ensures the adaptive capacity of the economic framework to ensure sustainable economic long-term growth, which is a condition for

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financial development in emerging and peripheral stock markets (Brinkerhoff and Goldsmith, 2005; Ludwig et al., 1997).

This points to the topicality of the issue of the dynamics of institutional factors for the financial development of peripheral capital markets such as the Bulgarian one. In this way, conclusions and recommendations can be formulated for the undertaking of certain actions in the of institutional setting to improve the socio-economic and institutional business environment for the development of the capital market in Bulgaria.

The process of sustainable development in its analyzed dimensions (socio-economic, institutional, eco-efficient) is associated with various challenges and opportunities in the current Covid-19 global realities specifically for frontier stock markets as the Bulgarian one and requires focusing on the current specific financial situation of this stock market in "capture" state with "facade"democratic regime.

The Covid -19 pandemic would definitely require comprehensive adaptation of Bulgarian stock market to overcome the significant negative effects in the social, economic and political system through rapid digital transformation of economic activities, finding effective resolution to rising income polarization through ever increasing role of government and the need of lifting the quality of public institutions that guarantee inclusive and sustainable social contract. These concomitant changes in the social, political, economic and financial spheres will pose challenges especially for developing country as Bulgaria with underdeveloped peripheral stock market (see Table 1 in Appendix) to tackle urgent public health and social needs with limited fiscal space, inadequate transparency, weaknesses in application of practices for effective crisis management, resolution and resilience build-up.

Post-pandemic "creative disruption" would also provide opportunities for productivity shifts through emergence of new business models based on technological and organizational innovations and digitalization of production processes. However, Bulgaria will have considerable difficulties in realizing the benefits from these changes in the short-to mid term perspective due to the backwardness in the innovative potential of its economy, deteriorating democratic process, ineffectiveness in the institutional setting relegating the country to "captured democracy" status[39] in post-Covid-19 situation amid numerous restrictions on civil liberties, faltering trust in public institutions, weak democracy and state capture (European Fund for the Balkans, 2020). The chief preconditions for restoring civil society trust in public institutions generally in the Western Balkans include accurate information (i.e. freedom of expression, media independence), immediate social protection though public policy measures to mitigate income inequality; control on corruption (see Table 1 below) etc.

Political instability encourages alternative forms of savings and directly affects investor confidence and indirectly economic performance. The outflow of human resources from the country is detrimental to economic growth, reduces the level of savings and results in negative effects to sustainability in the long run to preserve educational potential (Rangelova, 2017), but also on the innovative development of a country (Zareva, 2015). An important challenge remains the issue of transforming the creative potential of a country in the direction of generating innovation

[39] Some of the characteristics of "capture state" that are given in a report of The Corporate Europe Observatory (2019) relate to the following:

- primarily the state that is operating mechanisms for realization of corporate interests thus disadvantaging the legitimate interest of the citizens enshrined in the social contract, undermining democratic process and the public interests;
- significant asymmetry of influence on the public authorities and lobbying activity by the corporate sector ("corporate capture") and development of a specific symbiosis of shared ideology;
- incorporation of corporate interests into public policy agendas and their realization through economic governance tools (i.e. fiscal policy etc.) and providing material benefits to particular industrial sectors through loopholes in the legislative acts.

(Naydenova, 2015). The problems of the institutional structure of higher education, its efficiency and adequacy should also be taken into account (Zareva, 2015).

Table 1

Specific sustainability dimensions in "capture state": the case of Bulgaria

Specific sustainability indicator	Commentary
1. Income inequality (S80/S20)	The income share of the richest 20 % (S80/S20) of the population in Bulgaria is currently 8 times that of the poorest 20 % (the highest in the EU for 2018 while EU average stands at 5.17 according to European Commission Country Report 2020)
2. Fiscal policies impact on income inequality	The capacity of the tax and benefits system to reduce income inequalities in Bulgaria is one of the weakest across EU. Measured by S80/S20 ratio above, taxes reduce income inequality by only 4 % (compared with 13 % for the EU) and benefits mitigate income inequalities by only 28 % (compared with 35 % in the EU)(European Commission Country Report 2020)
3. Freedom of expression	112th ranking (World Press freedom index)
4. Human development index (UN Development Program)	56th raking out of 140 countries
5. Corruption (Transparency International, average score for 2013-2020)	48th ranking (average score)

Source: based on data from the sources cited in the Table

The existing deficiencies in the welfare system in Bulgaria (see point 2 in Table 1 above) would drive economic shifts toward progressive taxation, higher public debt levels, tax free income allowances and systemic social transformations aiming at sustainable economic development in a digitalized industrial era.

Lack of sufficient productive investments resulted in widening inequality gap (see point 1 of Table 1 above) and underinvestments in the public services sector. According to estimations by London School of Economics (2020) if national recovery plans could restore economic growth to around 4 % given interest rate at around 2 %, primary deficit of about 2 %, and unchanged debt-to GDP ratio, this would guarantee public investment spending directed to green infrastructure, RD&I thus increasing economic efficiency (Bruke at al., 2020).

Due to persistent pressure on media (see point 3 in Table 1 above) from government influence in Bulgaria civil society has lost trust in the accuracy of provided information exposing the systemic failures of the institutional framework. Restoring civil society trust requires clear, regular and objective communication by state authorities.

Amid unfolding health, social, economic Covid-19 crises the emergency situation has been used for civil society restrictions and outright violations of of various freedoms and human rights enshrined in the Constitution (i.e. of physical movement, work, expression, discrimination of vulnerable groups etc.) further undermining the democratic legitimacy of public institutions and the democratic mechanism of checks and balances.

The aftermath of Covid-19 pandemic in "capture state" is associated with pending economic recession (i.e. equivalent to 3-5 % GDP fall, European Fund for the Balkans, 2020) with above-the-board economic, social, financial and political consequences, requiring rapid adoption of post-

pandemic national recovery plans with additional financing from EU in the adjustment by strictly observing the principles of freedom, democracy, human rights and rule of law .

Raising the human development status ((see point 4 in Table 1 above) in Bulgaria would require rapid adjustment to UN 2030 Agenda for Sustainable Development by adopting major macroeconomic policy package and implementation of different scenarios modeling the business cycle with increased public policy investments to raise eco-innovative competitiveness of the economy, combatting corruptive practices (see point 5 in Table 1 above), restoring public trust and narrowing the inequality gap. Strengthening adaptive capacities and sustainability dimensions of the economy of Bulgaria requires ever increasing focus on economic, institutional, environmental and social objectives through implementation of credible industrial strategy with established standards and best practices based on 5P (i.e. “profit-people-planet-peace-prosperity”) sustainability matrix (UN Development Programme, 2015) at national, regional and EU levels ensuring all public and private sector investments are compatible with resource efficient “green” low carbon economy (Carbon Pricing Leadership Coalition, 2017). This will be a definitive challenge for Bulgaria and generally for the Western Balkan countries with chronic underinvestments (i.e. less than 0.4 % of GDP) in people (including welfare and social safety net underprovision), education, science, R&D. The new industrial policy measures need to focus on knowledge capital (i.e. innovation, enhanced human capital, increased RD&I investments), natural capital preservation (i.e. “the green economy”, net zero emissions trajectory), and expanding social capital for long-term sustainable and inclusive economic rescue, restoration and recovery.

Methodology and Data

According to Pagano (1993), institutional and regulatory factors can affect the functioning of capital markets. For LaPorta, Lopes-de-Silanes, Scleifer & Vishny (1996), institutional variables are important prerequisites for financial development in general, and for the development of capital markets in particular. Countries with low quality of legal rights and law enforcement have less developed capital markets, and listed companies on their stock exchanges are characterized by more concentrated ownership. In particular, customary law countries (Anglo-Saxon countries) are characterized by a more developed stock market due to greater flexibility and higher protection of minority shareholders. Demirguc-Kunt & Levine (1996) found that countries with a developed regulatory and institutional system have a large and liquid capital market. Perotti & Van Ojien (2001) found that equity investments become more attractive with resolution or mitigation of political risk over time. The development of good quality institutions can affect the country's attractiveness for investment by institutional investors and contribute to financial development. Strengthening the framework of property rights, guaranteeing deposits, investor protection, high transparency in the activities of companies and the proper application of accounting rules are important for the development of corporate securities markets.

The expected return on securities is associated with political risk, and the lower its level, the lower the required rate of return. In emerging financial markets, there is a higher contingent probability of large price changes in financial assets than in developed stock markets. One explanation for this is the role of political risk. Political risk and institutional quality show a strong association with the growth of market capitalization, which also has consequences in the analysis of financial market integration. Political risk is considered to be one of the main obstacles to this process. For Durham (2002), stock market developments have a stronger positive impact on economic growth at higher levels of GDP per capita, lower levels of country risk and higher levels of judicial development.

The objective of the paper is to analyze and empirically test adaptation of a “capture state” macroeconomic level and frontier stock market (i.e. mesoeconomic) level indicators of Bulgaria to sustainability requirements (i.e. 2030 Agenda for Sustainable Development) for the period 2013 - 2020.

More specifically, both at **macroeconomic and meso-economic levels** the focus is on analyzing challenges and obstacles to economic, social and environmental sustainability of Bulgaria by testing the association among market capitalization to GDP (as a measure of financial development) of Bulgaria for the period 2013 - 2020 and the following institutional factor variables:

a)eco-sustainability index (Cornell, INSEAD & WIPO, 2020). This index is part of sub-pillar 3.3. of the Global innovation index and is used as a synthetic measure of environmental sustainability (X_1);

b)human development index (UN database Human development reports) as a summary measure of long-term sustainable human development beyond GDP measure (X_2);

c)total democracy score (Freedomhouse database) as a measure of political freedoms and civil liberties in a given country (X_3).

The hypotheses that the paper tests empirically for "capture state" frontier stock market of Bulgaria for the period 2013-2020 are as follows:

1) eco-sustainability performance in Bulgaria measured by the ecological sustainability index (Cornell, INSEAD & WIPO) is positively associated with financial development;

2) sustainable human development (measured by UN human development index) is positively associated with financial development;

3) sustainable democratic performance (measured by Freedomhouse total democracy score) is positively associated with financial development.

Results

The results of applied empirical analysis by using heteroscedasticity model of ordinary least squares regression, for the period 2013-2020 using the following equation indicates:

Y (financial development measured by stock market capitalization rate) =

β X_1 (eco-sustainability index) + X_2 (human development index) + X_3 (total democracy score) (1)

Table 2

Correlation matrix between tested variables for Bulgaria

Eco-sustainability Index	Annual GDP growth rate	Market Capitalization as % of GDP	Human development index	Freedom house democracy total score	
1.000	0.5812	-0.4606	-0.1652	-0.4100	**Eco-sustainability index**
	1.000	-0.2859	0.0575	-0.1861	**Annual GDP growth rate**
		1.000	0.6970	0.9883	**Market capitalization as % of GDP**
			1.000	0.7770	**Human development index**
				1.000	**Freedomhouse democracy total score**

Source: own calculations of the author

According to Table 1 above, the eco-sustainability index of Bulgaria is moderately and positively correlated with annual GDP growth rate, proving stylized fact (see Hall and Lerner, 2009 etc.) that good environmental performance relates to long-term economic growth. This established fact is firmly grounded in endogenous growth models (Romer, 1986) and is explained with increased total factor productivity levels in the course of technological spillovers of the production processes. The market capitalization rate shows moderate correlation (0,6970) with Human development index and strong (0,9883) correlation with Freedomhouse democracy total score proving the importance of institutional and social development for stock market performance in achieving synergistic

impact on sustainability performance in its triple dimensions (i.e. socio-economic, institutional and eco-efficient).

Table 4

Simple linear regression model with heteroscedasticity correction

Dependent variable: market capitalization rate for the period 2013-2020 (T= 8 observations)

	Coefficient	**Standard error**	**t-value**	**p-value**	**Sig. level**
const	−319.516	101.685	−3.142	0.0348	**
Eco sustainability index BG	−0.313817	0.191563	−1.638	0.1767	
Annual GDP growth rate BG	−0.182659	0.201284	−0.9075	0.4155	
Human development index BG	437.440	116.026	3.770	0.0196	**
Freedom house democracy score	9.92000	0.669674	14.81	5.92e-06	***
Sum of squares of residuals	4.742310	Standard error of regression		1.088842	
Simple coefficient of determination	0.978971	Adjusted R-squared		0.963200	
F(3, 4)	62.07206	P-value(F)		0.000823	
Log-likelihood	−9.259839	Akaike criterion		26.51968	
Scwarz criterion	26.83745	Hannan-Quinn		24.37647	
rho	0.199788	Durbin-Watson		1.591174	

Source: calculations of the author

The results of the empirical analysis (Table 2 above) show there exists positive and statistically significant association between market capitalization rate on the frontier stock exchange of Bulgaria and Human development index (p-value of 0,0196), indicating 1 unit increase in the score of the index is related with a rise in the market capitalization by 437.440 units. This is indicative of the increasing importance of long-term sustainable human development (beyond GDP) and its components (i.e. population's average longevity, education, income etc.) in stimulating financial development and financial sustainability in developing countries in particular. On the other side, the model proved existence of strong positive association (p-value of $5.92e^{-06}$) between stock market capitalization rate and the Freedomhouse democracy total score, indicating that 1 p.p. increase in the score is associated with a boost in market capitalization rate by 9.92 p.p.The model is valid (with a p-value (F) of 0.000823) and leads to acceptance of hypotheses 2 and 3 above. The Durbin-Watson statistics (1,59) is within the acceptability range of relative normality in the distribution of residuals. An interesting result particular for a "capture"state is the negative albeit statistically insignificant association between stock market capitalization rate and the eco-sustainability index. This can be explained with the following:

- Bulgaria still occupies last place in 2020 EU eco-innovation scoreboard and its transition to low carbon economy is still distant as compared to leading eco-innovating countries in the EU (see: https://ec.europa.eu/environment/ecoap/indicators/index_en);

- The eco-innovation environment is extremely sensitive to presence of established legal framework for protection of intellectual property rights, the range of various tax-based incentives

for ecoinnovations, competition policies, market structure regulations, depth of financial markets and access to alternative forms of financing (i.e. venture capital), efficiency of trade and investment etc. The transition of Bulgaria to low carbon economic growth would require significant improvements in the institutional setting, establishment of efficient public policies in environmental protection, control of corruption and protection of property rights.

In another study by the author (Stefanova, 2020) it has been established that statistically significant institutional variables for financial development and institutional sustainability in Bulgaria include: 1) democratic accountability assessment (+); 2) the increased assessment of the political stability in the country is associated with a rise in the market capitalization; 2) the reduced assessment for control over corruption in Bulgaria is associated with a decrease in the market capitalization 3) the reduced assessment for the regulatory quality in Bulgaria is associated with a decrease in the market capitalization of the stock exchange. A correlation matrix of the six institutional variables included in the empirical model in Bulgaria establishes significant correlations between: 1) democratic accountability and market capitalization (positive correlation of 0.76). 2) efficiency of government policies and democratic accountability (positive correlation of 0.49).

Conclusions

The empirical analysis in the report finds that in a “capture” state with a façade democracy, sustainability in its various dimensions (socio-economic, institutional, environmental) correlates with financial development, measured by market capitalization/ GDP for the period 2013-2020. As established in a number of Freedomhouse reports for the period 2009-2018, assessments of corruption in Bulgaria have deteriorated and this corresponds to a decrease in total democracy score. Such institutional instabilities are associated with deteriorating quality of the democratic environment, and thus this report proves the thesis that institutional instability is a limit to growth and a challenge to financial development and sustainability and its dimensions (socio-economic, democratic, environmental) in “capture”states with façade democracy. According to the European Council on Foreign Relations (2018), the EU's supranational institutions are not in a position to prevent this process due to "..destructive liberal division of power to pursue national policies to promote democracy".

The analysis of factors in the business environment of stock market in Bulgaria shows that ensuring sustainability in its various aspects (socio-economic, institutional, environmental) requires significant institutional changes in administrative, legal, tax and others. aspects, as well as further adaptation of market participants, which may lead to higher costs to comply with the new regulatory requirements for digital transition and green economy. For SMEs, for which access to credit from financial institutions is generally difficult and which do not have the necessary reserves to absorb adverse changes in their financial performance in post Covid-19 situation, it will be difficult for a long time to use bank lending or other alternative forms of financing to overcome declining sales during the crisis (Taseva, G. ., 2012). Against the background of high intercompany indebtedness in CEE countries and liquidity retained in banks, overcoming the challenges facing countries with peripheral financial markets such as Bulgaria is providing alternative sources of financing and improving access to bank lending (Taseva, G., 2014).

Future Directions

In order to fully encompass the factors influencing financial development and sustainability in developing countries with façade democracies in the new global realities in the future it is necessary to use an interdisciplinary complex and systematic approach due to the nonlinear nature of financial market processes, by enriching the theoretical framework and including technological and digital factors, climate, etc. . exogenous variables and assessing their impact in general on economic development and achieving sustainability (socio-economic, institutional, environmental)

by overcoming constraints and challenges to financial development and that of peripheral stock markets such as Bulgaria, in particular.

In addition to the empirically established constraints on the financial development and sustainability of Bulgaria's development in its various aspects (socio-economic, institutional, environmental), the peripheral stock market in Bulgaria has structural constraints that relate to the small size and structure of the economy. The stock market is not able to provide economies of scale for the companies listed on it in conditions of low liquidity, high price volatility and insufficient depth of the stock market (see Table 1 of the Appendix). Overcoming these restrictions requires further deepening of the regional integration of the Bulgarian capital market in Southeast Europe (SEE) and is an optimal solution for increasing the liquidity and visibility of the shares of listed companies on a single technology platform in the process of harmonizing the legislation of SEE countries with The EU and the potential for implementing single market practices, trading systems, quotation rules, clearing and settlement.

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APPENDIX

Table 1

Macroeconomic and stock market (i.e. meso-economic) level indicators of sustainability

Specific indicator	Commentary
1.GNI per capita PPP (2019) in current international $	$ 24.900 (World Bank database)
2.GDP growth rate	3.69 % (average for the period 2012 - 2020, World bank database) -4.9 % (European Commission economic forecast, 2021)
3. Fiscal stability	22.82 % (averaged 2013 - 2020, IMF)
4.Political environment	60.69 averaged score (i.e. semi-consolidated democracy for the entire period 2015 - 2020, Freedomhouse)
5. Asset returns	10.59 % (average for the period 2013 - 2019); max. 97.82 % in 2013; min. -35.32 % in 2015)(MSCI) **Note:** Annualized returns MSCI Frontier Markets for 2013-2019 stood at average 7.77%, max. 31.86 % in 2017, min. -14.46% in 2015.
6.Private equity flows as % of GDP	-3.08 % (averaged for the period 2013 - 2019, World bank database)
7.Stock market capitalization as % of GDP	16.94 % (averaged for the period 2013 - 2017, World bank database)
8. Stock index volatility	12.89 (averaged for the period 2013 - 2017, Fred Economic Data)
9. Liquidity	1.065 % (2019, World bank database)

Source: complied by the author according to the sources cited in the table