
MACEDONIAN STOCK MARKET EXCHANGE SUPPLY CHARACTERISTICS

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Abstract: Financial development is fundamental for the country's economic growth. An important question related to financial depth is the development of the stock market exchange and banking sector. A quick overview of the data and literature shows how the banking sector is dominant in the developing and Emerging market country's financial industry. Furthermore, the financial depth measured with credit to GDP and stock market exchange capitalization to GDP ratios differs significantly among countries. On average, the stock market exchange capitalization of listed companies in emerging markets is below 10% of GDP. In contrast, developed countries have a stock market exchange capitalization of more than twice their annual GDP.

A developed capital market's role in promoting economic growth is highly imperious to all countries, North Macedonia inclusive. Given the previous, this study examines the characteristics of the North Macedonia stock market exchange supply, using secondary data covering the period of 2012 to 2022. The methodological approach combines several research methods – analysis, induction, deduction, synthesis, selection, and comparison. Findings reveal the existence of low market supply due to the small number of securities in everyday trading. From the analysis, the Macedonian stock exchange supply consists of five company shares with more than 80% of the total annual turnover. In distinction, the top 3 traded companies contribute to the total market turnover by more than 60%. More so, the Macedonian stock market exchange is not recognized to provide long-term public financing for any company.

The results suggest little commitment from the Macedonian market participant, especially economic policies regarding national capital market development. Policies can start with empowering the national strategy for capital market development and the recent proactive approach of the Security regulatory agencies and Macedonian stock market exchange. The paper briefly reviews the main policy recommendations for boosting the securities supply. Those efforts have prospects of raising the market capitalization to GDP ratio of its today's around 20%.

With an analysis of the Macedonian stock market exchange and policy actions, the paper's conclusions are regarding policy recommendations for overcoming the challenges for stock market exchange supply development. The first step is to start with the implementation of the National Strategy for Capital Market Development. Second, market participants should do more activities regarding the company's management attitudes towards going in public and listing their companies. Third, there is more room for financial education in capital market principles. Finally, the paper gives a solid basis for further research.

Keywords: Security market, Macedonian stock market exchange, the national strategy for capital market development.

1. INTRODUCTION

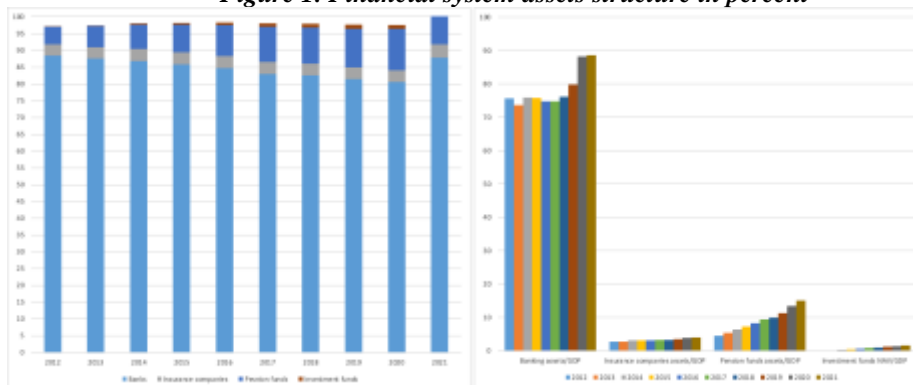
In this section, the paper gives a brief overview of the role of the Macedonian capital market in the national economy. Capital markets should play a crucial part as an instrument for transforming savings into finance for the real industry. The importance of capital market development in the economy must be addressed. Countries with viable capital markets have higher investments and high-return projects (Motswapo, 2019). The capital market offers the companies sources for mobilizing more flexible funds to finance their projects.

On the other hand, a developed capital market for the household sector means an additional opportunity to invest long-term funds in higher-return assets. Moreover, a developed capital market diversifies the investment portfolio overall. Finally, efficient asset allocation gives the capital market characteristics to improve economic welfare.

As in many developing countries' economies, and Macedonian financial sector is bank dominated. Data set for the Macedonian financial sector shows that total bank assets are over 80% of total financial sector assets over the period. The average annual growth of bank assets is 7%, in addition to an average credit-to-GDP ratio of 50% greater than three years ago.

In these circumstances, the key economic development driver is the banking activity, leaving the riskier and more innovative projects with no chance to be founded as banks have a conservative approach to financial projects. However, the structure of the financial sector, as with a not developed capital market, implies that long-term investments have few opportunities.

Figure 1. Financial system assets structure in percent



Source: NBRNM, (2022), Annual report on financial stability, 2022.

The significance of banking in economic development is recognized in all countries. For example, the average for Bank assets in EU countries, percent of GDP in 2021 based on 27 countries was 83.47 percent. The standard for G20 nations in 2021 based on 15 countries was 113.83 percent. The case in Emerging markets for 2021 based on 22 countries was 95.94 percent. In Eurozone countries, the average for 2021 based on 19 countries was 82.27 percent. The same is the case in North Macedonia, where bank assets to GDP are almost 90%, while other financial sector segments are below 5% each, except for pension funds. Namely, pension funds are rising due to pension system characteristics of required monthly payments.

The purpose of the paper is to analyze the characteristics of the Macedonian stock exchange supply and identify possible measures to increase the diversity and quantity of the supply. The intention is to provoke debate on the possibilities of raising the importance of the Macedonian capital market in the national economy. This paper relates in the context of the four factors that shape market trends: (1) government, (2) international transactions, (3) expectation, and (3) supply and (4) demand. All mentioned the focus is on the stock exchange supply. Following the first part, the second part schemes the trends in Macedonian stock supply. The third part discusses possible measures to increase the stock market exchange supply. Finally, the paper ends with a conclusion and recommendations for further research.

2. MATERIALS: STOCK MARKET EXCHANGE SUPPLY IN NORTH MACEDONIA

A high-level concentration of trading with several stocks, an undeveloped primary market, and the absence of foreign investors characterize the stock market exchange in North Macedonia. Additionally, analysis shows that several liquid securities represent the national stock market exchange. The turnover of the top three stocks is more than 70% of the total annual turnover, with negligible foreign investors' participation. However, there is a positive trend in foreign stock market exchanges investments of domestic investors, referring to the existence of interest to invest in stocks. Thus, the question is whether an adequate supply meets that demand.

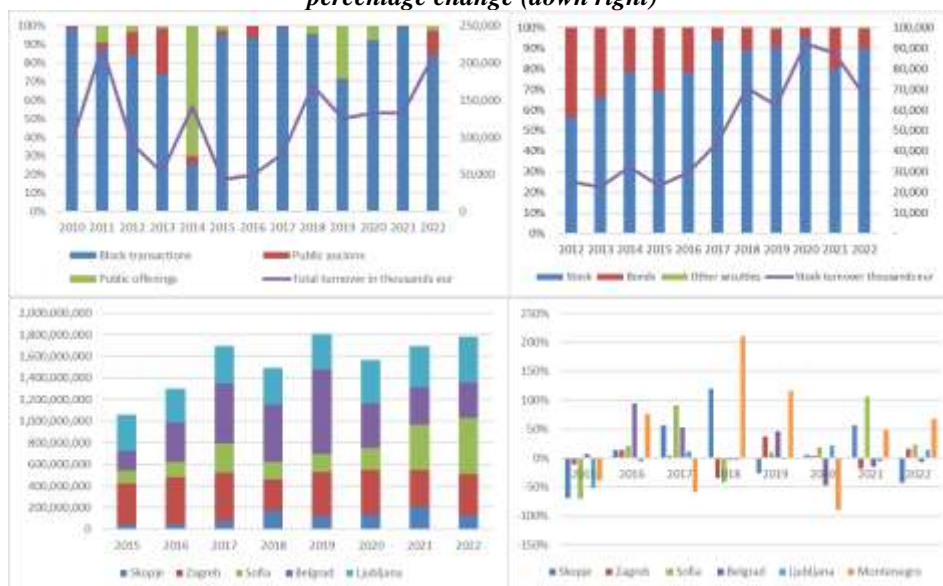
Firstly, on the Macedonian stock exchange companies listed are from the period of the privatization of state own companies. Second, until that period, since the beginning of the Macedonian stock exchange, there has been no new real IPO. Third, the implementation of mandatory listing on the stock market exchange act, besides the expectations, did not contribute to increasing trading. However, its adoption increased the number of listed companies and the transparency and corporate governance of that companies. Hence, today on the Macedonian stock exchange are listed 95 companies, out of which 66 are with a mandatory listing.

That leaves 29 company shares for trading. The further analysis represents the trend of stock market exchange movements with two indicators: stock market exchange value of the turnover and stock market exchange capitalization to GDP ratio. The *first* variable shows the intensity, significance, and diversity of stock trading, and the *second* variable shows the market contribution to the national economy.

Total turnover on the securities market in 2010 – 2022 is within a positive trend, reaching 208 mil euros in 2021. However, investors trading out of block transactions are less than 45% of total turnover, reaching its maximum of 92 million euros in 2020. The average trading increase is 10% annually, with its high value of a 60% increase in 2018 and the highest decrease of 27% in 2011. Specifics of the Macedonian stock exchange market is the high participation of the block transactions, with an average of 35% of total transactions and a maximum of 65% in 2011. The structure of stock turnover vis-a-vis bonds indicates that stocks have been traded dominantly since 2012, with a continuous increase in participation, reaching over 90% in 2017 and 2020.

Among regional stock exchange markets, the highest turnover has been evident in Sofia, with more than 500 million euros, Ljubljana, with more than 430 million euros; and Zagreb, with more than 390 million euros for 2022. As far as the annual percentage change in different regional countries is analyzed, one can conclude that every stock exchange market has its characteristics and that there is a relatively weak relationship between each other turnover movements.

Figure 2. Total stock market exchange turnover - North Macedonia (upper - left) and turnover of different securities (upper - right), total turnover in regional stock market exchanges in euro (down left) and annual percentage change (down right)

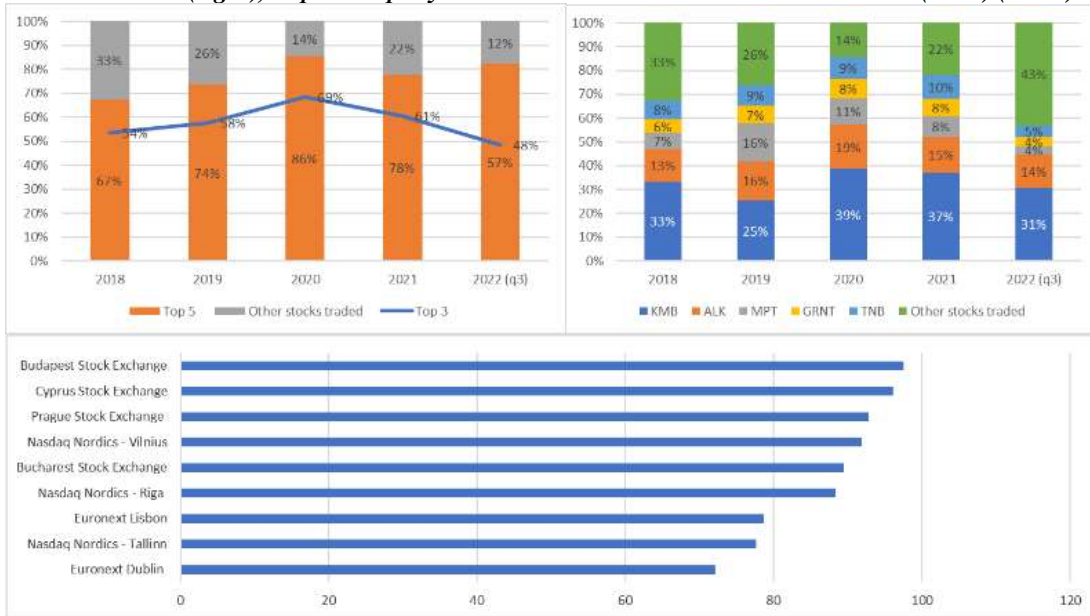


Source: Macedonian stock exchange ad Skopje- Skopje, Annual reports.

The second stock exchange market supply characteristic is the concentration of trading with five company shares over the analyzed period. This is the core supply analysis. These characteristics also show the depth of stock market supply and bring some elements of market development. In the last five years, half of the total turnover is for trading with only three company shares. Namely, in 2020 the level of the top 3 most traded shares was around 70% of total turnover, 61% in 2021, and little less than 50% for the first three quarters of the 2022 year. Together with the next two most traded shares, these three shares make up more than 80% of the total stock market exchange turnover. The level of the top 5 most traded company shares of 85% of total turnover was made in 2020, and since then, is around 80%.

An overview of the individual contribution of specific common stocks shows that the shares of company Komercijalna banka ad Skopje are most frequently traded with over 30% (39% in 2020) of total turnover. The second most traded are Alkaloid ad Skopje shares, with more than 14% of total stock market turnover, while the rest change the rankings depending on the year analyzed. This leads to a simple conclusion that these top 5 company shares, or more precisely, these two most traded shares, are the central part of the liquid stock market supply on the Macedonian stock market exchange. A key determinant for this characteristic is the shareholder structure, where most companies are owned by several significant shareholders, leaving little space for frequent trading shares. Only Komercijalna ad Skopje and Alkaloid ad Skopje, has respectable free float rate that enables trading in a frequent manner. Here, it is worth noting that this case for concentration in everyday trading is similar worldwide. Data shows that the stock exchange market in Budapest, Cyprus, Prague, Vilnius, or Bucharest is also characterized by the dominance of the top 5 stocks in everyday trading.

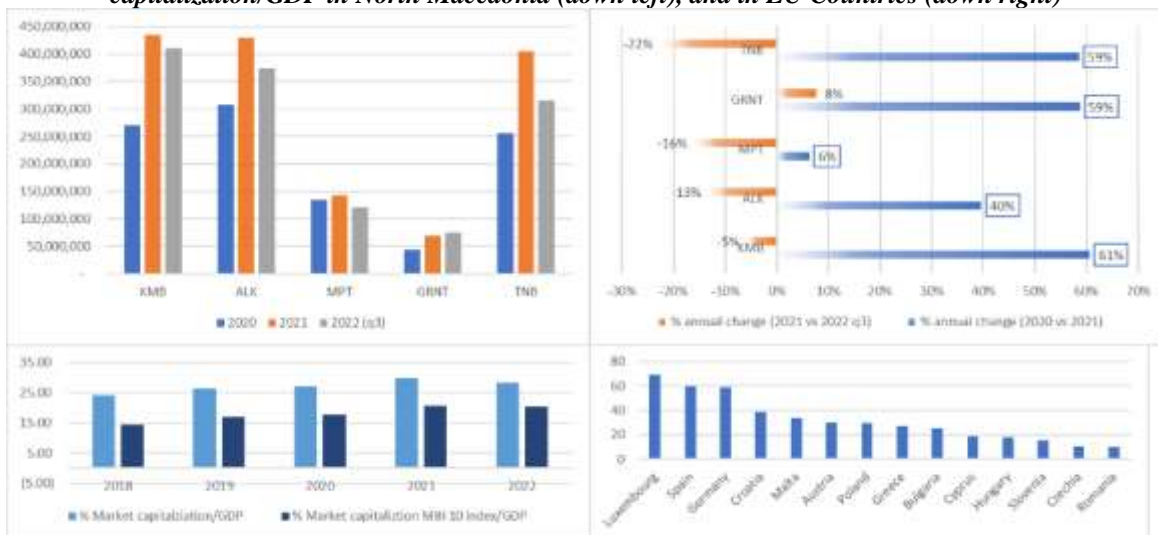
Figure 4. Top 3 and top 5 traded company shares in total turnover (left), company shares participation in total turnover (right), Top 5 company shares to total turnover in countries in EU (2022) (down)



Source: Stock market exchange commission different Reports and FESE database.

Many studies have used market capitalization to GDP to calculate capital market development since it is considered a better proxy and less subjective than other appraisals of capital market development (Yartey, 2018). The market capitalization of the top 5 companies reached 1,4 billion euros in 2020. The highest market capitalization has the shares issued by Komeracijana Banka ad Skopje. The capitalization of the top 5 company shares is around 40% of the total market capitalization. The increase of the stock prices in 2021 was more than 60% for the Komercijana banka ad Skopje, NLB Tutunska banka ad Skopje and Granit ad Skopje shares. However, the crises in Ukraine and inflation rate variability led to the correction of the prices in 2021. The top 5 market capitalization is around 40% of total stock market exchange capitalization. An overview of the market cap/GDP ratio shows that it moves between 20-30%, depending on the period analyzed. Compared to the EU countries, the highest market capitalization to GDP is in Luxembourg, with around 70%, and the lowest is in Romania, with little above 10%.

Figure 3. The market capitalization of top 5 stocks, annual % change of stock prices, and Market capitalization/GDP in North Macedonia (down left), and in EU Countries (down right)



Source: Macedonian stock exchange ad Skopje - Skopje, Annual reports.

Despite the concentration and the level of market capitalization, another relevant variable to describe the spectra of supply is the turnover ratio. The ratio shows the value of all stock market exchange trades. Thus, the ratio measures how active the stock market exchange is. One country may have a large market capitalization but relatively few active trades and low supply. Conversely, there may be relatively low market capitalization but many trades. The figure 4 shows that despite the high market capitalization of the Luxembourg stock exchange, the activity is deficient, leading to the conclusion that there is little to no trading.

Figure 4. Stock market exchange capitalization to GDP and turnover ratio in 2020, different groups of countries

	Stock market capitalization as percent of GDP, 2020 *	Stock market turnover ratio, 2020*
EU	31.86 High: 69.69 Luxembourg Low: 10.15 Romania	25.4 High: 79.42 Germany Low: 0.09 Luxembourg
G7	136.48 High: 193.35 USA Low: 58.72 Germany	70.67 High: 94.33 Japan Low: 38.26 Canada
G20	125.1 High: 354.35 Saudi Arabia Low: 32.97 Turkey	104.3 High: 365.77 Turkey Low: 19.98 Saudi Arabia
Emerging markets	86.06 High: 345.35 Low: 10.82	64.23 High: 356.77 Turkey Low: 2.43 Peru
Euro zone	39.22 High: 69.69 Luxembourg Low: 15.73 Slovenia	26.77 High: 79.42 Germany Low: 0.09 Luxembourg

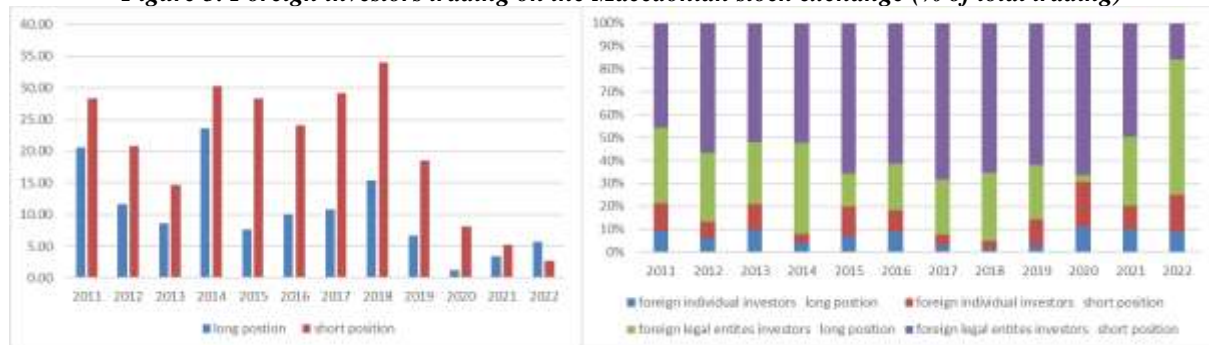
Source: Author presentation,

* The World Bank Database

**Turnover ratio is the value of domestic shares traded divided by their market capitalization. The value is annualized by multiplying the monthly average by 12.

The lack of quality supply leads to no interest for foreign investors. Foreign investors participated little in trading Macedonian company shares in the analyzed period. Along with their low interest in investing in North Macedonia, their dominant behavior is towards the short position (sales of stocks), with low interest of the foreign legal entity investors. The existence of foreign investors can be explained by several factors, such as little interest in investing in the country generally and stock market exchange-wise. But one must conclude that even if foreign investors want to invest in the stock market exchange, they will seek a liquid and high quantity of securities due to the diversification effect. Thus, insufficient supply can be seen as one key factor for international investor insufficiency.

Figure 5. Foreign investors trading on the Macedonian stock exchange (% of total trading)



Source: Macedonian stock exchange - Skopje, Annual reports.

3. DISCUSSION: FACTORS THAT DETERMINE AND MEASURES THAT CAN IMPROVE THE STOCK SUPPLY

Capital market development is an essential aspect of financial development that is linked to economic expansion. The number of publicly traded corporations determines it, number of liquid company shares, market capitalization to GDP ratio, value traded to GDP, and turnover ratio. The capital market is a widespread impression (Cherif & Gazdar, 2018). All three determinants need appropriate supply to meet the demand.

As for the demand, three key indicators show that it does exist satisfactorily in North Macedonia. (1) The institutional investors have rising assets, leaving additional room for allocating a part of those assets to the national capital market. Namely, pension funds are almost 20% of GDP, and investment and life insurance assets have been

in two digits rise the last several years. (2) individual investors are on the trend of investing in foreign markets. The figures show that beginning of 2019, the trading on foreign markets in total domestic investors trading was only 7.5%. The trend tends to rise, and in the following years trading on foreign markets reached 29.92% in 2020, and at the end of q3 2022, domestic investors' foreign markets trading is 37,77% of total domestic investors traded value. (3) Banking sector, as it is structured, possesses a high level of liquid reserves, assets that, when there is appropriate supply, would be invested on the stock market exchanges.

The second determinant of supply characteristics is the privatization model of public companies. Furthermore, since the companies listed on the stock market exchange are with mature shareholders' structures, the supply should be increased with a new IPO. The question here is what motivates a successful company would find so. Managers often have reserves about the transparency needed for listed companies, which, together with additional costs related to listings, don't see overcome with the benefits of going public.

The measures needed for increasing the number of publicly traded companies are in detail laid in the National Strategy for Capital market Development adopted by the government of R. N. Macedonia beginning of 2022. More than 55 measures are proposed to contribute to capital market development on both the demand and supply sides. As for the supply in question, the Strategy focuses on 20 measures, four essentials for stock market exchange supply. (1) continuing the mandatory listing; (2) reducing the costs for IPOs; (3) Selection of target group countries to work within the process of going in public; and (4) IPO by the public state-owned companies. All measures are designed to fill the gaps identified during the factor for supply development analysis.

The critical aspect of supply development, and not directly connected to the companies and their motivation to go out on the capital market, is the level of financial education and literacy. The strategy refers to a set of financial education projects that would also help the supply increase.

4. CONCLUSION

Developed capital markets are crucial in transforming savings into finance for companies. Countries with viable capital markets have higher investments and high-return projects (Motswapo, 2019). The analysis shows that in many developing countries economies and the Macedonian financial sector, the banks dominate. Macedonian financial sector total bank assets are over 80% of total financial sector assets over a long period.

The stock market exchange in North Macedonia trading is concentrated in several company shares, and it has an undeveloped primary market and an absence of foreign investors. The turnover of the top three most traded stocks is more than 70% of the total annual turnover. Namely, in 2020 the participation of the top 3 most traded shares was around 70% of total turnover, 61% in 2021, and little less than 50% for the first three quarters of the 2022 year. Foreign investors represent less than 5% of the total turnover value, and there is a positive trend in investment in foreign stock market exchanges of domestic investors. The market capitalization to GDP ratio in North Macedonia is between 20-30% in the period analyzed. The highest market capitalization to GDP is around 70% in the EU countries.

The demand for Macedonian company shares is still at a high level. Notably, (1) institutional investors have a considerable amount of funds that, when there is appropriate supply, would be invested in the stock market, and (2) individual investors are on the trend of investing in foreign markets. In fact, at the end of q3 2022, domestic investors' foreign markets trading is more than 1/3 of total domestic investors traded value.

Having all in mind, several measures can lead to the development of capital market supply. Although increasing the supply is in the manager's interest, an active approach could lead to positive examples. First, the national authorities should start by actively implementing the National Strategy for Capital Market Development. Second, market participants should do more activities regarding the company's management attitudes towards going in public and listing their companies. Third, there is more room for financial education in capital market principles. Further research proposals may include the factors for no IPO, the relationship between foreign direct investment and capital market development, the correlation of financial literacy and capital market demand, or regulatory incentives for increasing supply and demand.

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