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COVID-19 PANDEMIC AND CURRENCY RISK ANALYSIS IN GEORGIA

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Abstract

This article discusses the main problems, challenges and peculiarities of monetary policy in Georgia. Analyzes the currency crisis caused by the covid-19 pandemic and outlines ways to overcome it. Presents a comparison of the Georgian lari with the most stable currency in the world over the last 100 years (against the dollar). At the end of the publication, given the current reality, some predictions and recommendations are presented. The paper also argues that in order to properly assess and manage currency risks, first of all, it is necessary to properly understand the essence of money, which even today, in the conditions of accelerated economic processes, is not clearly defined. In particular, whether money should be a tool for conducting monetary policy.

Keywords: *Covid-19 Pandemic; Pandeconomy; Currency Risks; Georgian Lari; US Dollar; Crypto Currency*

JEL Codes: *F31, G01, H12*

1. Introduction

In any textbook of economics, money is defined as a measurement of value, means of circulation, payment, accumulation and international exchange. To perform these functions, it must have a number of properties, so it must be: recognizable, easily portable, durable, divisible, recognizable, difficult to forge, and limited in quantity. All these qualities are necessary for money to perform all five of its functions well. In one particular country it is possible to have money that represents value to the local population and meets most of the features listed above. In that case, it will be real money for the people of this country, so it will be possible to exchange various items in it (voluntarily).

However, today there is no such country locked in its head and, consequently, there is a need for the function of money to be performed by something that will have value for a country with all cultures and traditions. In this case, a serious problem

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arises - if for some reason one country has a decisive advantage over others, it has the opportunity to dictate its terms to others (for example, if resources are limited to everyone except one country).

Since there is a lot of political interest in the formation of world money as a barrier, it will take humanity a long time to get there. Until then, the task of each country, in the current situation, is to find the best solution for itself in the matter of money.

In this regard, we think it will be interesting to review the main challenges of monetary policy in more detail. In general, currency regimes can be divided into two groups:

1. The country does not have its own national currency;
2. And, the country has its own national currency.

In the case of owning national currency, the issue of its relationship with the currencies of another country arises, which then raises some problems. These problems are obstacles for business (and not only business) entities in their activities.

Due to the recent events in the world, it can be boldly said that today the main players are not the governments of the country, but the national banks and the action programs developed by them. From the beginning of this year, the currency crisis is obvious and in case of inaction, it can turn into a financial crisis and, especially, a currency collapse. Therefore, the monetary policy pursued by central banks serves two main purposes: on the one hand, to encourage weakened economic activity and, on the other hand, to curb inflationary processes caused by the depreciation of the local currency (Abuselidze, 2019).

Below we will talk in more detail about the currency crisis caused by the covid-19 pandemic, as well as compare the Georgian lari with the most stable currency in the world over the last 100 years (against the dollar). At the end of the article, given the current reality, we present some predictions and recommendations.

2. Literature review

The issue of foreign exchange risk management, especially in the context of the Covid-19 pandemic, is a topical issue for both foreign and Georgian scholars. It is as a result of the processing of many literatures and statistical data on this issue that our paper was prepared.

We can especially highlight the works of the following authors: R. Aggarwal and A. L. Demaskey (1997), S. Al-Thaqeb et al. (2020), U. Broll et al. (1999), J. Campbell et al. (2010), M. Choi (2010), K. Czech et al. (2020), C. Elgin et al. (2021), J. Glen and P. Jorion (1993), B. Hofmann et al. (2021), M. Jaworek et al. (2020), S. Lahmiri and S. Bekiros (2020), A. Salisu et al. (2021), A. Samadi et al. (2021), A. Syahri and R. Robiyanto (2020), X. Wei and L. Han (2021), Y. Zhao and B. Duncan (2018), ets. However, despite the multifaceted discussion of the problem of foreign exchange risk management (especially in the context of the Covid-19 pandemic), it has been insufficiently studied and discussed in the world literature and scholarly publications.

Due to the unpredictable nature of the Covid-19 pandemic and the crisis caused by this pandemic, there is a lack of scientific papers that would comprehensively take into account and thoroughly characterize the global picture, make effective recommendations for countries with different economic development individually.

Among them, the economic shocks caused by the pandemic were reflected in the exchange rate of the Georgian lari, which has been relatively volatile against the dollar since the beginning of 2021. The National Bank started direct interventions, which managed to strengthen the GEL exchange rate slightly. In recent times, foreign exchange inflows have decreased, which has raised negative expectations in the society and led to a significant devaluation of the Georgian lari.

3. Results and Discussion

Significant currency crises in Georgia

Since gaining independence, Georgia has gone through several major currency crisis periods:

1. 1998-1999. The crisis started in Indonesia, moved to Russia and affected the Georgian currency (the first currency crisis in Georgia);
2. 2008-2009. This crisis period is associated with two important facts: the war between Russia and Georgia and the global financial crisis. The first and second monetary crisis of the Georgian lari is observed on the basis of historical perceptions, and at present, it is an ongoing issue and special attention is paid to the study of its causes.
3. 2014-2016. The monetary policy of the US Federal Reserve has been tightened for the period. The stronger US dollar, its impact on the world monetary system and the Georgian case is the third and most serious financial (monetary and currency) crisis in Georgia.
4. From 2020 to the present. This period is associated with the global pandemic - Covid-19 and the crisis caused by this pandemic, which is not over yet.

Georgia's economy, as a small open economy, is sensitive to regional and global challenges. In particular, this emerged against the backdrop of a global pandemic as the country’s economic relations slowed and the negative impact of external shocks continued, leading to global factors such as the collapse of stock market indices, unfavorable economic conditions in trading partner countries and the devaluation of regional currencies (Abuselidze, 2020; 2021). At the present stage, the problems of economic development of Georgia are reflected in the devaluation of the Georgian lari, rising prices and slowing economic growth.

This time, we will focus on the crisis caused by the current pandemic. Against the background of the COVID-19 pandemic, as a result of the restrictions imposed by the states, necessary for human life, the economic activity of 2020 faced special difficulties both in Georgia and in the rest of the world. A sharp drop in demand, on other equal terms, would significantly reduce inflation. However, in a given short period of time, other conditions are not equal. Also, a significant challenge is the outflow of large amounts of capital from developing countries, which puts an upward pressure on the exchange rate and, consequently, on inflation.

In addition, delays in production processes (labor productivity) and supply chains significantly increase companies' costs, which also puts pressure on price growth. As a result, according to the current data of the National Bank (26.09.2021), inflation is much higher than the short-term target (3%), it is within 12.8%.

In the conditions of the pandemic, the Georgian lari reached its historical maximum. The GEL exchange rate against the US dollar exceeded 1 $ = 3.5 GEL. At present, the exchange rate is much lower (1 $ = 3.11 GEL, as of 26.09.2021), however, whether the Georgian economy will be able to return to the point at which it was before the advent of Covid-19, is still doubtful.

However, among the determinants of the unpredictable future can be named:

1. The psychological expectation of an undesirable change in the value of the national currency, which makes it difficult for economic entities to plan business and make decisions;
2. Expectations of a sharp change in the value of the national currency, making it impossible to determine the fair value of existing property, plant and equipment. Consequently, it is difficult to calculate the cost of production factors;
3. An increase in the number of output needed to reach the zero (or loss) point, which leads to relevant decisions from business entities to reduce activity in certain directions in order to maintain positions over the rest;
4. Reducing the motivation of investors to bring money into an already risky market;
5. The expectation of volatility of the national means of payment, which poses an increased risk to financial institutions, leading to higher prices for their products;
6. Continuous recalculation of existing commitments and cost of planned projects in the presence of international agreements.

In addition, for countries with small open economies, monetary policy has a significant impact on a country's economic activity and political decision-making. In turn, not only the economic situation of the country, but also the level of development of social and political institutions is reflected in the monetary policy of the country.

Since gaining independence, Georgia has repeatedly experienced a major economic crisis, in some cases due to poor monetary policy and exchange rate volatility. Exchange rate volatility continues to have a negative impact on the development of a country's economy and slows its growth.

Therefore, if not for the electronic currency (crypto currency) market, which would connect economic entities in Georgia with foreign markets, economic entities in Georgia would have little chance of engaging in international currency trading. It is through the electronic currency (crypto currency) market that corporations and Georgian citizens have the opportunity to acquire the necessary knowledge and experience, as well as to be constantly informed about the current processes in the world foreign exchange market.

Overall, the negative impact of the coronavirus on the Georgian economy is growing, however, a full review of the data will take some time, after which we can make a more complete assessment, forecasts and peculiarities.

Comparison of USD and Georgian GEL in dynamics with respect to own fixed year (1995)

It should be noted that the US dollar is the means of payment against which the value of almost all other currencies and not only currencies is considered. Among them, the GDP of countries is estimated in dollars. This is understandable, because despite the many problems that the dollar has under the existing system, it is still the most reliable currency in the world today. Therefore, it is clear that we will try to compare the US dollar with the value of the Georgian national currency (GEL). The exchange rate of the Georgian lari against the US dollar during the entire 26 years of the lari's existence is given in Table 1:

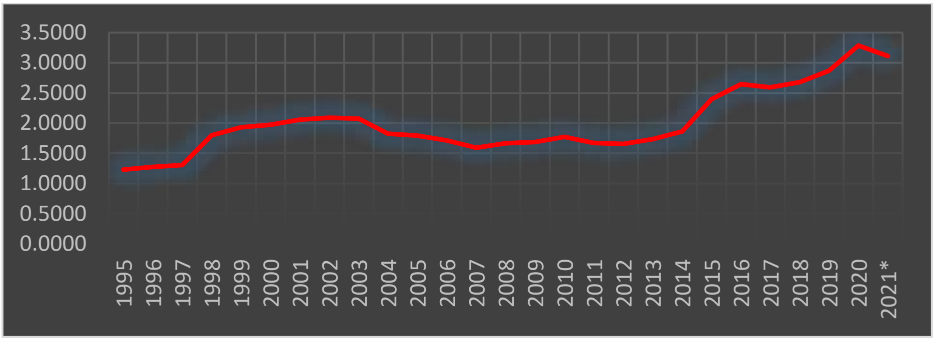
*Table 1. Value of Georgian Lari (GEL) against US Dollar (USD), 1995 – 2021**

Year	USD / GEL	Year	USD / GEL
1995	1.2300	2009	1.6858
1996	1.2760	2010	1.7728
1997	1.3040	2011	1.6703
1998	1.8000	2012	1.6567
1999	1.9300	2013	1.7363
2000	1.9750	2014	1.8636
2001	2.0600	2015	2.3949
2002	2.0900	2016	2.6468
2003	2.0750	2017	2.5922
2004	1.8250	2018	2.6766
2005	1.7925	2019	2.8677
2006	1.7135	2020	3.2854
2007	1.5916	2021*	3.1104
2008	1.6670	-	-

Source: National Bank of Georgia, 2021.
* *Note*: Currency data for 2021 are given as of 25.09.2021.

The relationship between the Georgian lari and the US dollar based on these data is shown in Figure 1 below:

*Figure 1. Relationship between GEL and USD in dynamics, 1995-2021**



Source: National Bank of Georgia, 2021.
* *Note*: Currency data for 2021 are given as of 25.09.2021.

The depreciation of the Georgian lari against the US dollar is obvious, but if we take into account that the depreciation of the US dollar was 66.81% during this period, it becomes clear that comparing the value of the lari with its fixed year value, below shows this depreciation. 1995 was chosen as the year of fixation and inflation rates were taken for each year (Table 2).

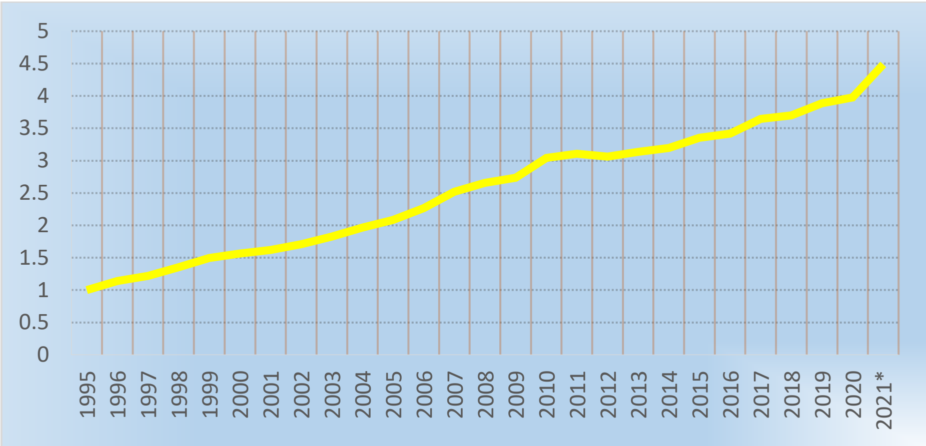
Table no. 2. Value of Georgian Lari (GEL) in relation to the value of a fixed year (1995), 1995 – 2021 (GEL1995 = 1)*

Year	GEL 1995/ GEL current value	Year	GEL 1995/ GEL current value
1995	1.0000	2009	2.7367
1996	1.1381	2010	3.0443
1997	1.2207	2011	3.1064
1998	1.3509	2012	3.0638
1999	1.4980	2013	3.1365
2000	1.5674	2014	3.1977
2001	1.6208	2015	3.3537
2002	1.7087	2016	3.4151
2003	1.8275	2017	3.6445
2004	1.9642	2018	3.6997
2005	2.0856	2019	3.8848
2006	2.2687	2020	3.9780
2007	2.5176	2021*	4.4871
2008	2.6573	-	-

Source: National Bank of Georgia, 2021
* *Note:* Currency data for 2021 are given as of 25.09.2021.

Based on these data, the relationship between the value of the Georgian lari (GEL) and the value of the fixed year (1995) (according to 1995-2021 *) is constructed, which is shown in Figure 2 below.

Figure 2. Value of Georgian Lari (GEL) in relation to the value of a Fixed year (1995) in dynamics, 1995 – 2021 (GEL1995 = 1)*



Source: National Bank of Georgia, 2021
* *Note:* Currency data for 2021 are given as of 25.09.2021.

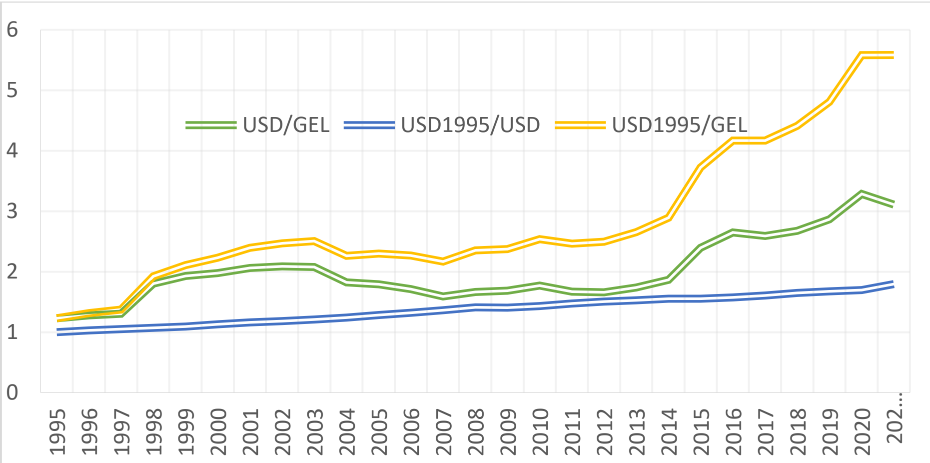
The decline in these 26 years is quite visible. The situation becomes even clearer if we compare the data in USD and GEL in one table (Table 3) and then build a diagram based on these data (Figure 3).

*Table 3. The value of the Georgian lari (GEL) and the dollar in relation to the value of the fixed year (1995), 1995 - 2021 * (GEL1995 = 1, USD1995 = 1)*

Year	USD / GEL (1)	USD1995 / USD (2)	USD1995 / GEL (1)*(2)	Year	USD / GEL (1)	USD1995 / USD (2)	USD1995 / GEL (1)*(2)
1995	1.2300	1.0000	1.2300	2009	1.6858	1.4077	2.3731
1996	1.2760	1.0295	1.3136	2010	1.7728	1.4308	2.5365
1997	1.3040	1.0531	1.3732	2011	1.6703	1.4760	2.4654
1998	1.8000	1.0696	1.9253	2012	1.6567	1.5065	2.4958
1999	1.9300	1.0932	2.1099	2013	1.7363	1.5286	2.6541
2000	1.9750	1.1299	2.2316	2014	1.8636	1.5534	2.8949
2001	2.0600	1.1614	2.3925	2015	2.3949	1.5552	3.7245
2002	2.0900	1.1804	2.4670	2016	2.6468	1.5748	4.1682
2003	2.0750	1.2073	2.5051	2017	2.5922	1.6084	4.1693
2004	1.8250	1.2395	2.2621	2018	2.6766	1.6477	4.4102
2005	1.7925	1.2815	2.2971	2019	2.8677	1.6775	4.8106
2006	1.7135	1.3228	2.2666	2020	3.2854	1.6982	5.5793
2007	1.5916	1.3605	2.1654	2021*	3.1104	1.7951	5.5835
2008	1.6670	1.4127	2.3550	-	-	-	-

Source: National Bank of Georgia, 2021; US Inflation Calculator, 2021
* *Note:* Currency data for 2021 are given as of 25.09.2021.

*Figure 3. The value of the Georgian lari (GEL) and the dollar in relation to the value of the fixed year (1995), 1995 - 2021 * (GEL1995 = 1, USD1995 = 1)*



Source: National Bank of Georgia, 2021; US Inflation Calculator, 2021
* *Note:* Currency data for 2021 are given as of 25.09.2021.

Comparing the USD and the GEL with respect to their own fixed year (1995) will allow us to draw more interesting conclusions (Table 4).

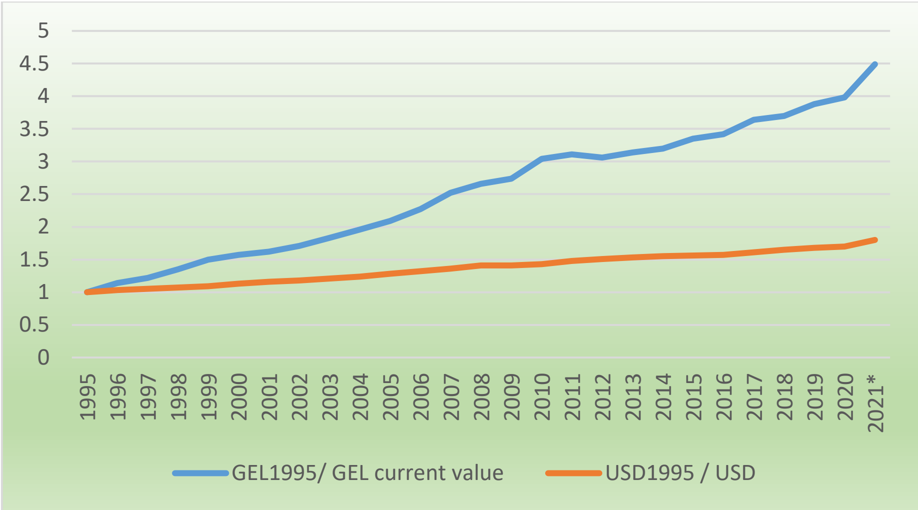
*Table no. 4. Comparison of GEL and USD with 1995 situation, 1995-2021**

Year	GEL1995/ GEL current value	USD1995 / USD	Year	GEL1995/ GEL current value	USD1995 / USD
1995	1.00	1.00	2009	2.74	1.41
1996	1.14	1.03	2010	3.04	1.43
1997	1.22	1.05	2011	3.11	1.48
1998	1.35	1.07	2012	3.06	1.51
1999	1.50	1.09	2013	3.14	1.53
2000	1.57	1.13	2014	3.20	1.55
2001	1.62	1.16	2015	3.35	1.56
2002	1.71	1.18	2016	3.42	1.57
2003	1.83	1.21	2017	3.64	1.61
2004	1.96	1.24	2018	3.70	1.65
2005	2.09	1.28	2019	3.88	1.68
2006	2.27	1.32	2020	3.98	1.70
2007	2.52	1.36	2021*	4.49	1.80
2008	2.66	1.41	-	-	-

Source: National Bank of Georgia, 2021; US Inflation Calculator, 2021
* *Note:* Currency data for 2021 are given as of 25.09.2021.

The graph based on Table 4 will be as follows (Figure 4):

*Figure 4. Comparison of GEL and USD with 1995 situation, 1995-2021**



Source: National Bank of Georgia, 2021; US Inflation Calculator, 2021
* *Note:* Currency data for 2021 are given as of 25.09.2021.

Based on the above statistical data, we can conclude that during the 26 years of the Georgian lari's circulation (1995), it has depreciated almost 4.5 times. (More precisely, 26 years after its existence, 1 GEL1995 = 4.4871 GEL). In addition, it should be borne in mind that each change was completely unexpected for each business entity. All of this, in turn, created and still creates expectations for an unpredictable future.

The US dollar, even the world's most recognizable currency, in the presence of the central bank (The Federal Reserve) fails to meet the condition of stable prices (while stable prices make the economy healthier). What to say about the currency that shows itself so many times worse… Given the existence of such means of payment as the Georgian national currency, it is inconceivable to talk about stable prices, long-term calculations and, in general, a healthy economy.

This economic situation is further aggravated by managed inflation. The absolute majority of economic entities suffer as a result of managed inflation, the overall efficiency of the business decreases, while the government and the entities close to it benefit. The only way out of this situation is to limit the area of monetary policy implementation by the government as much as possible, one of the means of which is to create a Monetary Council and bind the national currency to a fixed foreign currency, and then strictly adhere to fiscal discipline.

Currency risk assessment of companies in Georgia

In Georgia, the most widely used foreign currency is the US dollar (hereinafter, the euro). This is not surprising, since it is known that all large value objects or items are valued in US dollars (car, apartment, or something commercial building, land area). Consequently, it is easier for people to evaluate in US dollars than in any other means of payment (it is easier for people to evaluate in US dollars than even in the Georgian national currency - GEL). If you ask how much he bought his car for, it will be difficult for most of them to even name the exact numbers. This circumstance clearly shows that, in fact, the US dollar is the means of payment in Georgia.

Especially noteworthy is the fact that there are many companies in Georgia that, on the one hand, say that they do not use foreign currency in their activities, but, on the other hand, they say that their activities are affected by the variability of foreign exchange rates. Of course, this impact is secondary (or indirect), but due to its systematic, unpredictable and dramatically changing nature, this secondary impact is also very painful for each business entity. It is clear that companies that directly use foreign currency in their operations are even more affected by exchange rate volatility.

Of course, there are a small number of companies in Georgia that believe that such volatile exchange rate fluctuations have a more positive than negative impact on their operations (some of them manage to reap some benefits from such a situation). There are several possible versions of this:

- First, the company is somehow directly involved in foreign exchange operations and sees more profit when the buying and selling margin of the currency is large. This margin is even greater the more frequently this course changes.
- Second, the company has liabilities in GEL and income in foreign currency; therefore it has to convert less foreign currency to cover current liabilities. In this case, it is assumed that the situation will be beneficial for the company when the exchange rate of the national currency falls against foreign currencies. However, since this is mostly the case, this process is, for the most part, more beneficial for similar companies.
- Third, in the face of exchange rate volatility, it is easier to catch more price differences in your own products. This, of course, is justified to cover the increased risk. Even if the risk does not arise (i.e., when the exchange rate does not change in the expected unfavorable direction), the company will have more profit left.

In addition to the above, an important issue is the method used by this or that company, how to solve the currency problem. The low percentage of use of so-called hedges indicates that:

- on the one hand, not many companies have the opportunity to enter into contracts of a similar nature;
- And, on the other hand, there is little relevant knowledge about this tool.

Nevertheless, many companies invent their own methods to protect themselves, which in some ways replace hedging. For example, reflecting the value of your own goods or fixed assets in a foreign currency (or any contingent unit) and its periodic revaluation in GEL. This method is essentially what was mentioned above - the recognition of foreign currency (in this case, the US dollar) as the main means of payment, while the Georgian lari is perceived only as an additional means.

It is due to these factual circumstances that every appraisal company or commercial bank, whenever it evaluates any real estate, uses US dollars, and not - Georgian lari. It should be emphasized that no matter how strictly the state requires the use of only GEL, all these entities still make assessments in dollars and only then convert them to GEL (when legal documents are drawn up).

Another proof that the dollar is, in fact, the main means of payment, is how contracts are made. Most companies sign an agreement not in Georgian Lari, but in US Dollars, and since payment in US Dollars is not allowed under Georgian law (no bank will make a foreign currency transaction if it is written between Georgian companies), a note is made: at the current exchange rate of the National Bank.

In some ways, it is a futures transaction that incorporates elements of hedging. In other words, this means concluding a transaction in foreign currency, provided that the payment is made according to the exchange rate at the time of payment, which is one of the most common methods of self-insurance in Georgia.

From the given analysis it is easy to see that the Georgian national currency is understood by companies in Georgia, on the one hand, as a necessary national attribute of the Georgian state, but, on the other hand, it is clearly perceived as an additional problem for the business, which constantly needs attention from the company, so that the possible rapid decline of the national currency does not lead to loss of their company or even bankruptcy.

In addition, it is important to give a brief overview of the classification of exchange rate regimes developed by the International Monetary Fund. Therefore, we will rank the given classification as the following 5 main currency regimes:

1. When a country uses foreign currency;
2. When the national currency is fixedly tied to any foreign currency;
3. When the national currency is conditionally pegged to any foreign currency;
4. When the national currency is quoted on a free market basis in relation to other currencies;
5. And, when the national currency of the country is not the only means of payment, but is in free competition with any other currency.

Here, it should be noted that some small countries, by not creating their own national currency, avoid many of the problems that inevitably follow the existence of a national currency. In this regard, the example of Montenegro (the euro is recognized as its own currency) is important, because Montenegro does not have the problem of pursuing the right monetary policy.

In case the country chooses the regime of pegging the national currency to any foreign currency, there is also no need to pursue a monetary policy. The governing body of this regime, called the Monetary Council, only needs to ensure that it always has a sufficient amount of money to ensure a smooth exchange in the event of any request. This is shown by the examples of Estonia, Lithuania, Bosnia and Herzegovina, Bulgaria and other countries; if a country adheres to fiscal discipline and it contributes to its success in managing foreign exchange risks.

Notwithstanding the above, most countries choose the path that implies the possibility of conducting monetary policy, as this path is one of the levers of governance for them (the authorities). This is why very important circumstances are not taken into account, according to which the existence of monetary policy presupposes the satisfaction of the interests of certain entities at the expense of other entities. This is bad not only for the specific entity whose interest has been damaged as a result of this or that decision, but also for the overall economic climate.

As a result, the direct economic loss of one, caused by this or that decision of the government, creates distrust of other entities towards the future. There is an expectation in business entities that the future decision may be against their interests.

It is also essential to understand that for a developing country like Georgia, there is no foreign currency that can be fully trusted; The situation in the world today, especially in the conditions of the Covid-19 pandemic, is that there is no real money at all and any means of payment used in cash is fully controlled by any state and, at the same time, prevents the appearance of real money on the market. The US dollar itself, as money, was the most reliable before the creation of the Federal Reserve, and the most unreliable after the link between the dollar and the gold standard finally disappeared.

4. Conclusion and Recommendations

Although foreign currencies are also facing serious problems, Georgian national currency users are facing a much bigger problem, especially in the context of the COVID-19 pandemic.

Therefore, it is easy to imagine the situation of the decision makers who run the business. Data from the National Bank's website, which show that the Georgian lari against the dollar has repeatedly come as a complete surprise to business entities (and not only to business entities), in some cases even falling by 20-30 percent during the day, naturally creates a corresponding inflation expectation. .

In total, since the launch of the Georgian lari (1995), the Georgian lari has depreciated almost 4.5 times in its 26 years of existence. (More precisely, 26 years after its existence, 1 GEL1995/1 GEL2021 * = 4.4871 GEL). In addition, it should be borne in mind that each change was completely unexpected for each business entity. All of this, in turn, created and still creates expectations for an unpredictable future. Such an expectation naturally reduces the motivation of each manager of the business entity to make a decision to increase or expand the activity.

Based on the analysis of the above statistical data and the current reality, we can make the following recommendations:

1. For businesses whose large share of the business involves relationships with foreign partners, it is best to have the ability to conduct financial accounting in one of the solid foreign currencies (or the national currency firmly pegged to that currency);

2. For business companies operating only in the local market, it would be better if they make their accounting in any fixed year GEL and evaluate their business growth history and future prospects accordingly;

3. It will be better for the economy if the government changes the current monetary policy, converts the national currency into a reliable currency or the country moves to one of the stable currencies.

Overall, the relationship between national and international currencies is highly dependent on the state monetary policy. Without this, it is impossible to analyse trade policy and international monetary policy. We must also take into account the fact that monetary policy is determined by many factors, including domestic and international macroeconomic conditions, as well as the level of development of political institutions.

REFERENCES

Abuselidze, G. (2019). Modern challenges of monetary policy strategies: inflation and devaluation influence on economic development of the country. *Academy of Strategic Management Journal*, 18(4), 1-10.

Abuselidze, G. & Mamaladze, L. (2020). The Impact of the COVID-19 Outbreak on the Socio-Economic Issues of the Black Sea Region Countries. *Lecture Notes in Computer Science*, 12253, 453-467. doi:10.1007/978-3-030-58814-4_32

Abuselidze, G. & Slobodianyk, A. (2021). Pandeconomic Crisis and Its Impact on Small Open Economies: A Case Study of COVID-19. *Advances in Intelligent Systems and Computing*, 1258, 718-728. doi:10.1007/978-3-030-57450-5_61.

Abuselidze, G. (2021). The Influence of Covid-19 on the public debt growth and default risk: a fiscal sustainability analysis. In Proceedings of the International Scientific and Practical Conference on Sustainable Development of Regional Infrastructure-ISSDRI (pp. 151-159).

Aggarwal, R. & Demaskey, A. L. (1997). Using derivatives in major currencies for cross-hedging currency risks in Asian emergency markets. *Journal of Futures Markets: Futures, Options, and Other Derivative Products*, 17(7), 781-796.

Al‐Thaqeb, S. A., Algharabali, B. G. & Alabdulghafour, K. T. (2020). The pandemic and economic policy uncertainty. *International Journal of Finance & Economics*.

Broll, U., Wong, K. P., & Zilcha, I. (1999). Multiple currencies and hedging. *Economica*, 66(264), 421-432.

Campbell, J. Y., Serfaty‐De Medeiros, K. & Viceira, L. M. (2010). Global currency hedging. *The Journal of Finance*, 65(1), 87-121.

Choi, M. S. (2010). Currency risks hedging for major and minor currencies: constant hedging versus speculative hedging. *Applied Economics Letters*, 17(3), 305-311.

Czech, K., Wielechowski, M., Kotyza, P., Benešová, I. & Laputková, A. (2020). Shaking stability: COVID-19 impact on the Visegrad Group countries' financial markets. *Sustainability*, 12(15), 6282.

Elgin, C., Yalaman, A., Yasar, S. & Basbug, G. (2021). Economic policy responses to the COVID-19 pandemic: The role of central bank independence. *Economics Letters*, 204, 109874.

Glen, J. & Jorion, P. (1993). Currency hedging for international portfolios. *The Journal of Finance*, 48(5), 1865-1886.

Hofmann, B., Shim, I. & Shin, H. S. (2021). Emerging market economy exchange rates and local currency bond markets amid the Covid-19 pandemic. Available at SSRN 3761875.

Jaworek, M., Karaszewski, W. & Kuczmarska, M. (2020). Pandemic risk: doesn't it really matter? Foreign direct investment after COVID-19. *Economics and Law*, 19(2), 275-290.

Lahmiri, S. & Bekiros, S. (2020). The impact of COVID-19 pandemic upon stability and sequential irregularity of equity and cryptocurrency markets. Chaos, Solitons & Fractals, 138, 109936.

Lie, S. A., Wong, S. W., Wong, L. T., Wong, T. G. L. & Chong, S. Y. (2020). Practical considerations for performing regional anesthesia: lessons learned from the COVID-19 pandemic. *Canadian Journal of Anesthesia / Journal canadien d'anesthésie*, 67(7), 885-892.

Salisu, A. A., Lasisi, L. & Olaniran, A. (2021). Do Epidemics and Pandemics Have Predictive Content for Exchange Rate Movements? Evidence for Asian Economies. *Asian Economics Letters*, 2(3), 23423.

Samadi, A. H., Owjimehr, S. & Halafi, Z. N. (2021). The cross-impact between financial markets, Covid-19 pandemic and economic sanctions: The case of Iran. *Journal of policy modeling*, 43(1), 34-55.

Syahri, A. & Robiyanto, R. (2020). The correlation of gold, exchange rate, and stock market on Covid-19 pandemic period. *Journal Keuangan dan Perbankan*, 24(3), 350-362.

Wei, X. & Han, L. (2021). The impact of COVID-19 pandemic on transmission of monetary policy to financial markets. *International Review of Financial Analysis*, 74, 101705.

Zhao, Y. & Duncan, B. (2018, July). The impact of crypto-currency risks on the use of blockchain for cloud security and privacy. In 2018 International Conference on High Performance Computing & Simulation (HPCS) (pp. 677-684). IEEE.

National Bank of Georgia, (2021). Retrieved September 9, 2021, from www.nbg.gov.ge

US Inflation Calculator, (2021). Retrieved September 9, 2021, from www.usinflationcalculator.com