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CONSUMPTION, SAVINGS AND INVESTMENT IN THE LIGHT OF THE COVID-19 PANDEMIC

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ABSTRACT

The paper considers the issues of post-crisis economic recovery and the impact of the Covid-19 pandemic on consumption, savings and investments. The indicators of consumption, savings and investment are studied on the example of three groups of countries. In particular, the G 7 countries, the group of countries from G 20 and the three countries of the South Caucasus. A certain synchronicity has been established between the upheavals of the early 20th and 21st centuries, which is 11 years. It is concluded that for further sustainable economic development and rapid economic recovery, it is necessary to focus on new growth drivers.

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Introduction. The COVID-19 pandemic has had a negative impact on the global economy. UN Secretary-General António Guterres compared her to the "fifth horseman of the apocalypse". "The pandemic is a crisis unlike any we have ever seen. But it is also the kind of crisis that we will see in different forms again and again. COVID-19 is not only a wake-up call, it is a dress rehearsal for the world of challenges to come" he said, speaking at the 75th session of the UN General Assembly on September 22, 2020 [5].

We are at a turning point in human history. It has many interesting versions. The COVID-19 pandemic has had a huge impact on the economies of many countries around the world. This will continue over and over. The scale of this impact will depend on the possibility of its real assessment. It is necessary to clarify the behavior of such important indicators as consumption, savings and investment.

The purpose of this paper is to help decision makers avoided the negative case scenario developing economic in post-pandemic period.

Before developing and proposing new models of economic growth, it is necessary to analyze the role of consumption, savings and investment in growth models. The task of that paper is to present scientific point of view on the post-pandemic period in the light of consumption, savings and investment.

In this article analyzes the dynamics of the three most important indicators of economic development (savings, consumption and investment) during the pandemic and makes a some forecast for the post-pandemic period using the example of the G7 countries (USA, Japan, Germany, Great Britain, France, Canada, Italy), groups of countries from the G20 (The Group of Twenty, major advanced and emerging economies - China, India, Russia, Turkey) and three countries from the South Caucasus (Georgia, Armenia, Azerbaijan).

The global economic recovery is proceeding at different paces. There are many problems on that way. It can be assumed that the global economic downturn was not only due to the pandemic or the peculiarities of the economic cycle. In our opinion, the slowdown in investment activity in the leading economies of the world and the absence of significant drivers of economic growth also played a significant role.

The global economy is gradually recovering from the recession. The COVID-19 pandemic has had a negative impact on global trade and on the global supply chain of goods and services, as well as on the economy as a whole. In this situation, many countries have involved unprecedented measures to

support the population and businesses. Thus, the US Congress approved a massive \$1.9 trillion coronavirus relief package [12.] and in the countries of the euro area it reached a total of 2.018 trillion euros [13.]. Thus, it was supposed not only to stimulate consumer demand, but also to maintain an acceptable level of savings, which ultimately should have revived production. However, the expected and quick result did not happen. In particular:

Research results.

Saving. Before and after the COVID-19 pandemic, the share of household savings in relatively to Gross Domestic Product (GDP) remained practically at the same level, but declined in absolute terms, especially in developed economies. See Table 1.

Table 1. Gross savings 2018-2020 (current US \$)

№	COUNTRY		2018	2	2019	2020	
		GDP, %	Billion in US \$	GDP, %	Billion in US \$	GDP, %	Billion in US \$
1	USA	19.6	4,047.4	19.5	4,178.3	19.3	4,033.2
2	UK	14.1	409.6	15.2	437.4	14.0	387.5
3	France	23.1	646.0	23.6	645.6	21.5	564.8
4	Germany	29.8	1,186.4	29.6	1,152.4	28.1	1,081.6
5	Italy	21.0	440.2	21.4	429.7	21.3	403.0
6	Euro area	25.3	-	25.5	•	24.3	•
7	Japan	27.2	1,368.6	27.5	1,415.4	26.8	1,355.2
8	Canada	19.5	335.8	20.0	348.5	18.7	307.5
9	China	44.5	6,181.2	43.8	6,250.8	44.5	6,556.5
10	India	31.3	845.9	29.9	857.8	30.8	817.6
11	Russia	28.9	479.8	26.7	450.4	27.1	402.0
12	Turkey	27.7	215.6	26.0	198.3	26.9	193.4
13	Azerbaijan	32.1	15.1	28.6	13.8	24.2	10.3
14	Armenia	15.3	1.91	9.8	1.34	14.7	1.86
15	Georgia	21.3	3.76	19.7	3.45	11.3	1.79

The table was compiled by the author based on the materials of the World Bank and The Global Economy.com

Thus, in the United States, the volume of gross savings in 2020 compared to 2018 decreased by \$14.2 billion (0.3%), in Japan by \$13.4 billion (0.2%), in Germany by \$104.8 billion (9.7%), in France by 81.2 billion dollars (14.4%), in the UK by 22.1 billion dollars (5.7%). The reduction is observed in India, Russia and Turkey, as well as in the countries of the South Caucasus. At the same time, China's gross savings over the same period increased by \$375.3 billion (5.7%) to \$6.6 trillion.

The situation is going to be interesting in 2021. Thus, the international rating agency Moody's notes in April 2021 that consumers around the world have accumulated additional savings in the amount of \$5.4 trillion since the start of the COVID-19 pandemic, which is equivalent to 6% of global GDP. Thus, we must declared the growth of savings.

Several factors contributed to this phenomenon. In particular, the increased caution of the population during the pandemic, the fear of infection, due to which households could not use certain services, the reduction in consumption opportunities caused by government restrictions, etc.

In our opinion, the additional savings of the population accumulated during the pandemic, will not be able to become a source of funds for a sharp increase in consumption and, consequently, economic growth. Due to the fact that people had to reduce consumption during the pandemic, many have developed so-called "excess savings" that would not have existed if pre-coronavirus trends had continued. It can be assumed that as soon as all restrictions related to the pandemic are canceled, these funds will be immediately spent, and the explosive growth in demand could become a destabilizing factor for the economy. But if it does, we believe it could be just another push for a quick economic recovery (but not growth), especially in countries with pent-up demand.

But these fears are not entirely justified. It can be say that additional savings of the population is an "additional" public debt of the same population. Public debt is, in a sense, money that the population has borrowed from itself. The authorities of developed countries has had sent trillions of dollars to fight the pandemic and support the population. And as a result, the volume of global debt to December 2021 reached a \$226 trillion US dollars [14.]. Most of these amounts were attracted through borrowings from the population. Therefore, it can be argued that the population voluntarily limited consumption. In theory, government spending that is financed by such kind of debt can't affect consumption. Households, in this

case, prefer to save, as they may later need additional money to pay taxes and other urgent spending. Based on the practice of previous crises, when governments helped the population with direct payments, these funds are likely to be distributed in three areas - consumption, savings and debt service itself.

It should be noted that an important factor is that savings were made by households who were disposed to this. They understood the dire economic consequences of the pandemic. In our opinion, these people will not quickly spend their savings. For this reason, in developed countries, there were few households that would be face difficulties in the event of a crisis. Finally, these additional trillions of dollars can't be considered a significant amount compared with the trillions of total savings of the population of developed countries (for example, in the United States their value exceeds \$100 trillion) that were collected before the pandemic. Based on the above mentioned it is possible to make some forecast - additional savings will not be able to become the main driver of rapid economic growth.

Analyzing the structure of savings, it should be noted that the so-called precautionary savings are growing. This is due to a higher risk regarding employment and fears of a continuation of the pandemic. In addition, it is assumed that precautionary savings can slow down the spending of savings when the pandemic completely dies down.

Thanks to vaccination and government measures, the economies of many countries are reviving and moving towards a normal state. But the pandemic provoked an unusual economic crisis. If we look at the history of previous crises, we will see that in the post-crisis period, economic activity declined significantly, unemployment remained high, interest rates were suppressed, etc.

But the COVID-19 pandemic is unique in that sense. Previous pandemics, say "Spanish flu" or Great Influenza epidemic (beginning in 1918, affected about 30% of the world's population), ended in high mortality and thus created a shortage of labor. To this we can add the factors of the economic crisis (for example, the beginning of the Great Depression in 1929), which were characterized by lower interest rates, higher wages, reduced investment, destruction of manufacturing base etc. All this slowed down economic growth. The peculiarity of everything is that an economic crisis was superimposed on a pandemic with an 11-year interval. The Great Depression of 1929, 11 years apart, was preceded by the Spanish flu pandemic.

The COVID-19 pandemic is a different kind of crisis and a different pandemic. The high level of medicine and social protection measures kept the low mortality and the responsible economic policies of many countries saved world trade and protected the manufacturing base of the economy. Interesting expectations are being formed regarding the investment activity. For example, in the United States, the PMI (Business Activity Index), compiled on the basis of surveys of purchasing managers, amounted to approximately 57 points at the end of 2021 (see Chart № 1).

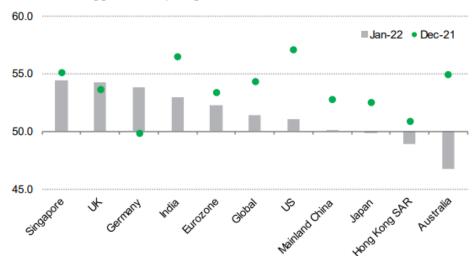


Chart 1. Purchasing Managers Index
Chart compiled by the author based on Monthly PMI bulletin: February 2022 https://ihsmarkit.com/research-analysis/monthly-pmi-bulletin-february-2022.html

Good performance is also available in other leading economies of the world. In our opinion, the restoration of economics should be based on large-scale monetary and fiscal incentives from the Government. These measures should be combined with targeted anti-crisis measures and the growth of household savings.

How long this growth can continue depends on many factors. For example, arise some questions - How will the savings be spent? How long will governments can support the population and economic activity going? How will the financial markets behave? The answers to these challenges are important because it is difficult to take into account large structural factors in the short term. These include the situation in the most financial markets, climate change, the state of public finances, relationship between the US and China, between the US and Russia, or the problem of inequality, etc.

A separate question is whether the current growth will be beneficial for most people? What benefits do they receive and how, etc.

In this context, it is very important to maintain an acceptable level of inflation, because if it accelerates, a quick economic recovery will become impossible.

Another way to analyze the events of the COVID-19 pandemic is to look at it from a personal point of view. Over the past 10-12 years (2008-2009 and 2019-2021), we have experienced two atypical and huge events: a big global financial crisis and a pandemic. Perhaps, these are not random coincidences, if we recall the cyclical nature of the reproduction process (Kondratiev waves, Nikolai Kondratiev's theory of cycles). However, the materialization of some events that were previously considered impossible prompts us to work out some actions. This is necessary in order to affect the prospects for economic recovery and the improvement of our lives. The peculiarity lies in the fact that the COVID-19 Pandemic is superimposed on the economic crisis with an 11-year interval. This means that the 2008 financial crisis was preceded by the COVID-19 Pandemic, an 11-year interval.

Possible and not coincidental coincidences between the upheavals of the early 20th and 21st centuries can take place. This is of particular interest and may be the subject of our further research. In our opinion, the cyclical upheavals of the early 20th and 21st centuries are obvious. This is of some interest, if only to avoid the development of events that followed the Great Depression, which was negative for the whole world.

Consumption. In our point of view, the COVID-19 pandemic has important consequence. For example, household savings were not affected and consumption declined in many developed countries. In particular, households reduced their consumption in both relative (as a percentage of gross domestic product) and absolute (in current international dollars) terms in all the world's leading economies except China and the United States. For example, in the United States it increased from \$13.9 billion in 2018 to \$14.0 billion in 2020. In China, over the same period, consumption increased from \$5.3 billion to \$5.6 billion. See Table 2.

Table 2. Households and NPISHs Final consumption expenditure. (current international \$)

N₂	COUNTRY		018	2019		2020	
	000111111	GDP, %	\$ billion	GDP, %	\$ billion	GDP, %	\$ billion
1	USA	67.5	13,914.0	67.3	14,429.0	67.2	14,048.0
2	UK	64.9	1,884.0	64.2	1,850.0	60.9	1,684.0
3	France	53.9	1,503.0	53.6	1,463.0	53.1	1,398.0
4	Germany	52.0	2,068.0	51.9	2,018.0	50.7	1,951.0
5	Italy	60.2	1,258.0	59.9	1,203.0	57.8	1,092.0
6	Euro area	53.9	7,345.0	53.6	7,140.0	52.4	6,741.0
7	Japan	54.8	2,762.0	54.4	2,804.0	53.4	2,701.0
8	Canada	57.9	997.7	57.8	1,006.0	57.4	943.6
9	China	38.5	5,353.0	39.2	5,605.0	38.1	5,611.0
10	India	59.4	1,605	60.5	1,736.0	58.6	1,559.0
11	Russia	50.4	834.7	51.2	863.4	49.5	733.8
12	Turkey	56.2	437.4	56.9	432.9	56.7	408.5
13	Azerbaijan	54.1	25.5	57.5	27.7	60.6	25.8
14	Armenia	79.8	9.9	83.4	11.4	75.4	9.5
15	Georgia	69.3	12.2	70.5	12.3	80.7	12.8
16.	World	56.5	48,472.0	56.6	49,315.0	55.9	46,886.0

Compiled by the author based on materials. https://data.worldbank.org/indicator/NE.CON.PRVT.CD, https://data.worldbank.org/indicator/NE.CON.PRVT.ZS?locations=TR

Thus, we can see that in 2020 compared to 2018, the final consumption of households and non-profit organizations decreased by \$61.0 billion (1.4%) in Japan, by \$117.0 billion (1.3%) in Germany, by \$105.0 billion (0.8%) in France, by \$200.0 billion (4.0%) in the UK, by \$604.0 billion (1.5%) in the Eurozone, and globally the decline reached \$1.5860 billion (0.6%). At the same time, it should be

especially noted China and the United States, where this indicator increased by 258.0 and 134.0 billion US dollars. Consumption has also declined in some G20 countries (it is India and Russia). In this issue, some diversity is observed in the countries of the South Caucasus. For example, in Georgia, consumption in 2020 compared to 2018 increased by \$0.6 billion and reached \$12.8 billion dollars, while in Azerbaijan it increased by \$0.3 billion and reached \$25.8 billion dollars. In Armenia, a different picture is emerging, consumption over the same period has decreased from \$9.9 billion to \$9.5 billion dollars.

Thus, Real personal consumption spending was \$13.307 billion in the United States before the pandemic (January 2020), fell to \$10.910 billion in April, but exceeded the pre-pandemic level in December 2021 and reached \$13.737 billion [15]. At the same time, the personal savings rate was moving in the opposite direction. So, it was 7.8% in January 2020, increased to 33.8% in April, and almost returned to its previous place of 7.9% in December last year [16]. It is noteworthy that the income of the US population did not decrease during the pandemic, due to the large amount of government support. Thus, monthly personal income was equal to \$18.873 billion dollars at the beginning of 2020, then grew to 20.971 billion dollars in April and amounted to \$20.987 billion dollars in December 2021. Here, it should be noted that it reached the maximum figure of 24.142 billion dollars in March 2021 [17]. Chart № 2 shows the movement of these indicators.

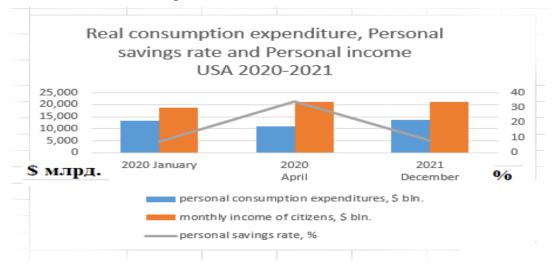


Chart 2. The chart was compiled by the author based on the materials https://fred.stlouisfed.org

Based on the above, we can say that during the pandemic there was the largest positive spread between income and expenses of the US population. So, it was \$5.6 trillion dollars before the pandemic (January 2020), then it increased to \$10.0 trillion dollars during the pandemic (April 2020) and amounted to \$6.3 trillion dollars in December 2021. The peculiarity is that the maximum value of the spread (the difference between income and expenses) corresponds to the maximum value of the personal savings rate (33.8%). We can say that the growth of net income does not lead to an increase in consumption, but it leads to an increase in savings. There is a certain synchronicity.

The Covid-19 pandemic is an unusual crisis, and its effects may keep household consumption out of normal activity. This will have an impact on the economy. It has gone through a deep shock and some financial markets are not seeing a quick recovery.

Unlike other crises, the current behavior of the population and households is associated with both precautionary measures and the impossibility of consumption itself due to government restrictions. In the future, people may want to spend more time with their families. Therefore, the shortage of workers in some companies may reflect this trend. This means that household preferences are changing. It will have important implications for consumption in the future. As the statistics show (Table 1, Chart 2, etc.), the increase in savings was relatively long-term, and the accumulated volumes are significant. Perhaps we are waiting for consumption for the sake of consumption. Although, in our opinion, it would be reasonable to consume for production, for a quick economic recovery and sustainable economic growth.

In addition to the above-mentioned factors, individual circumstances is also influenced on the consumption. It could be such factors as the deterioration of the financial situation of individual households, the uncertain situation with employment, difficulties in making periodic financial payments, etc.

The unusual nature of the crisis also manifests itself in the evolution of three different types of consumption. These are consumption of durable goods, consumption of non-durable goods and consumption in the service sector. Let's analyze these data on the example of the US economy. See Table 3.

Table 3. The structure of the monthly expenses of US citizens on goods and services

Years	2020 January	2020 April	2021 December	Change in % (January 2020 to January 2021)
Durable goods, billion in US \$	1,550.8	1,195.4	1,988.2	28.2
Non-Durable goods, billion in US \$	3,014.6	2,691.9	3,559.5	18.1
Service sector, billion in US \$	13,307.3	10,910.6	13,737.5	3.2

The table was compiled by the author based on the materials of the US Federal Reserve System.

https://fred.stlouisfed.org/series/PCEC96, https://fred.stlouisfed.org/series/PCEDG,

https://fred.stlouisfed.org/series/PCEND

From the above-mentioned table, we can see that all types of consumption are growing. But they grow differently and that is the peculiarity of this situation. Thus, the consumption of durable goods increased by 28.2% (January 2020 compared to December 2021), the consumption of non-durable goods grew up by 18.1%, and the consumption of services by only 3.2%. The covid-19 pandemic has put pressure on the service industry. It suffered more than others. However, consumption of both durable and non-durable goods has increased significantly. Now it exceeds the pre-crisis level. These spheres are not affected by uncertainty. This, in our view, is another indication of the unique economic nature of the COVID-19 pandemic.

Investments. It seems very interesting to extrapolate the experience of past economic crises on now day realities. But the unusual nature of the COVID-19 pandemic raises many questions, including the validity of past experience. Some judgments about the consequences of the current economic crisis are unavoidable. At the same time, it is necessary to have some idea not only about the reactions of consumers and savers, but also about the plans of investors.

In this regard, the dynamics of foreign direct investment (FDI) is very interesting. And so, foreign direct investment in 2020 compared to 2018 decreased in most of the world's leading economies. See Table 4. At first glance, in the big seven (G7) countries is observed significant growth. So, if in 2018 the total amount of foreign direct investment in the G7 countries had a negative value (-102.6 billion US dollars), then by 2020 it reached a positive value and amounted to 190.5 billion US dollars.

Table 4. Foreign direct investment, net (BOP, current US \$)

No	COUNTRY		2018		2019	2020	
		GDP, %	\$ billion	GDP, %	\$ billion	GDP, %	\$ billion
1	USA	1.0	- 344.3	1.4	- 180.0	1.0	100.4
2	UK	- 0.9	- 3.6	0.1	- 50.5	1.1	- 84.3
3	France	2.8	67.7	2.1	5.5	0.5	40.3
4	Germany	4.0	28.1	1.7	85.5	2.9	- 1.1
5	Italy	2.1	- 5.6	1.5	1.7	- 1.2	22.0
6	Euro area	- 0.1	150.3	0.2	102.2	0.5	- 199.4
7	Japan	0.5	134. 9	0.8	217.9	1.2	89.6
8	Canada	2.5	20.2	2.8	29.3	1.6	23.6
9	China	1.7	- 92.3	1.3	- 50.3	1.4	- 102.5
10	India	1.6	- 30.7	1.8	- 37.5	2.4	- 53.2
11	Russia	0.5	22.6	1.9	- 10.0	0.6	- 3.6
12	Turkey	1.6	- 9.2	1.2	- 6.3	1.1	- 4.7
13	Azerbaijan	3.0	0.357	3.1	0.927	1.2	0.318
14	Armenia	2.1	- 0.259	0.7	- 0.233	0.4	- 0.074
15	Georgia	7.2	- 0.976	7.8	- 1.054	3.4	- 0.549

Compiled by the author based on materials. https://data.worldbank.org/indicator/BN.KLT.DINV.CD, https://data.worldbank.org/indicator/BX.KLT.DINV.WD.GD.ZS accessed 02.17.2022

This effect was due to jump growth in the US (from - \$344.3 to + \$100.4 billion) and more modest growth in Canada (from \$20.2 to \$23.6 billion) and Italy (from - \$5.6 to \$22.0 billion). But in most countries, FDI has declined, including in G20 countries. So, in China by \$10.2 billion dollars and in India by \$15.7 billion dollars. Negative trends are also observed in the countries of the South Caucasus.

If we assume that foreign direct investment is one of the drivers of economic growth, then we can assume that the recovery of the world economy is being delayed. Therefore, in further studies, it seems

possible to consider the investment process as part of the cyclical process of reproduction (development) of the economy. To clarify the place and nature of investments, it is important to determine the stage of the economic cycle. This requires a special analysis, which will probably be the subject of future studies.

The slowdown in the growth of foreign direct investment, in our opinion, is associated not only with a slowdown in the growth of savings, but also with the unwillingness or impossibility of their rapid transformation into investment instruments. It is known that it is national savings that are the main source not only for foreign investment, but also for domestic investment in the country. Consequently, decline of the savings rate into of the national income or other restrictions (impossibility of rapid transformation) discourage both domestic and foreign investment. This delays the economic recovery and prolongs the depression.

It should be noted that, despite the low growth rates of investment in the global, the leading economy of the world shows good growth. It should be a good signal for the global economy. The global economy is coming out of recession. Therefore, significant investments are required. These resources can be accumulated through additional distribution of securities (shares, bonds of state and private organizations, other financial market instruments). However, the uncontrolled issue of financial instruments can be dangerous. It must correspond to the possibilities of demand.

The flow of funds to financial markets depends on economic cycles. It reaches a maximum at the peak of economic recovery and declines to a minimum during a crisis. However, as we can see, the amount of savings allocated for investment is not large.

Conclusions. Our analysis shows that the volume and size of such indicators as investment, savings and consumption depend not only on economic, but also on other factors outside the economic cycle. The COVID-19 pandemic has increased global development imbalances. The effects of the pandemic are slowing down the global economic recovery.

In our opinion, it is possible that recent events will change, our view of development is greater than the financial crises of recent years. In particular, we may become more sensitive to risk, and perhaps to risk aversion in general. This is likely to lead to more savings, lower demand, lower interest rates and ultimately slower economic growth. History shows that economic crises have long-term consequences as a countries and as a consumers.

In order to achieve long-term economic growth, it is not enough to focus only on investment. New growth points are needed. This is true both for a single country and for the global economy as a whole. In the US, the EU and some other countries, technologies are being developed that could become new drivers of growth. Therefore, it is also important for economic science to develop and propose new models of economic growth, which may be based on new theoretical postulates.

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