Main Drivers of Economic Growth in Armenia: Analysis and Evaluation

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ABSTRACT

Macroeconomic policy in Armenia over the past 30 years has led to a slowdown in economic growth. This, in turn, entails the need to revise approaches to macroeconomic regulation, as well as to search for key drivers of economic growth, which the state should emphasize in the future macroeconomic policy. **The aim** of this research is to analyze and assess the main drivers of economic growth in Armenia. We have employed **the methods** of statistical and comparative analysis, deductive analysis, as well as the analysis of historical data and the current state of the problem. The paper examines the key drivers of economic growth in Armenia, as well as periods of both a stable macroeconomic environment and economic crises, from the point of view of the efficiency and optimality of macroeconomic regulation. The current study identifies the most important sectors of the economy, analyses macroeconomic policy regulation in Armenia, and assesses the impact of such policies on economic growth in the country. **The results** show that today's macroeconomic regulation can be considered ineffective, which certainly has a negative effect on the rate of economic growth. **The key conclusion** of the research is the thesis that it is urgent to develop new socio-economic policy approaches to ensure sustainable economic growth in the future and to emerge quickly from future economic growth crises without restricting or halting economic activity.

Keywords: economic growth; drivers of economic growth; developing economy; economic crises

Основные движущие силы экономического роста в Армении: анализ и оценка

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АННОТАЦИЯ

Макроэкономическая политика в Армении за последние 30 лет привела к замедлению экономического роста. Это, в свою очередь, влечет за собой необходимость пересмотра подходов к макроэкономическому регулированию, а также поиска ключевых драйверов экономического роста, на которые государство должно делать акцент в будущей макроэкономической политике. **Целью** данного исследования является анализ и оценка основных драйверов экономического роста в Армении. В работе использованы **методы** статистического и сравнительного анализа, дедуктивного анализа, а также анализа исторических данных и текущего состояния проблемы. Авторы рассматривают основные факторы экономического роста в Армении, а также периоды как стабильной макроэкономической среды, так и экономических кризисов с точки зрения эффективности и оптимальности макроэкономического регулирования. Определены наиболее важные сектора экономики, проведен анализ регулирования макроэкономической политики в Армении, оценено влияние такой политики на экономический рост в стране. **Результаты** показывают, что на сегодняшний день макроэкономическое регулирование можно считать неэффективным, что, безусловно, оказывает негативное влияние на темпы экономического роста. Основным **выводом** исследования является тезис о необходимости разработки новых подходов социально-экономической политики для обеспечения устойчивого экономического роста в будущем и быстрого выхода из будущих кризисов экономического роста без ограничения или остановки экономической активности.

Ключевые слова: экономический рост; факторы экономического роста; развивающаяся экономика; экономические кризисы

1. INTRODUCTION

Over the past two to three centuries, world history has seen many economic crises that affected both individual countries and were reflected in the global economic development dynamics. The fundamental basis for describing the nature and essence of economic crisis can be considered the work of J. Schumpeter [1], which puts forward the idea of economic fluctuations in the short, medium, and long term.

Currently, it is evident that the world economy as a whole, and therefore each economy individually, is facing the challenges of changes in the world order. The latter makes it urgent to review the approaches to macroeconomic regulation both in a crisis and stable macroeconomic environment. One of the most relevant papers devoted to this issue is the work of Alan Greenspan [2]. The author highlights that the origins of the "Great Depression" lie in the deep systemic problems of the world economy, the change in the world order caused by the rejection of the system of fixed rates, linked to the "gold standard", as well as the First World War. Greenspan points out the world's leading economies' inability to adapt to changes in the global economic system and adapt their own economies and mechanisms of its regulation to the emerging new world economic order. In this sense, we can draw parallels between the global financial crisis, and the current crisis caused by the COVID-19 pandemic. Many researches are devoted to finding new approaches during and after the pandemic[1] [3, 4]. Leading economies are currently experiencing severe structural and economic crises [5], particularly the US[2] [6] and EU [7–10]. The latter affects the economic development of other countries.

The most significant number of scientific works devoted to effective economic growth can be found in the years after the Second World War. The main challenge for analysts was finding answers to questions about why some countries are rich, and others are poor, why some countries are growing faster than others, and the key drivers of economic growth [11]. Economists have found many answers to these questions, including institutional development,

state policy, and regulation, and the efficiency of macroeconomic regulation. However, today, the world economy is clearly in need of new solutions.

Developing economies, including Armenia, need a profound revision of approaches to macroeconomic regulation. Analysis of the macroeconomic situation over the past 30 years shows that state policy has not used the drivers of economic growth effectively and primarily contributed to or aggravated the economic crises throughout the period under consideration [12]. At the same time, in the crisis periods in Armenia, the authorities mostly applied an inconsistent approach to anti-crisis policy. A striking example of this is the macroeconomic policy of Armenia in the context of the COVID 19 pandemic [13].

Modern anti-crisis measures are mainly aimed at expanding the money supply in the country by increasing the share of government spending in the economy. For example, the additional expenses of the budgets worldwide for emergency stimulation of the economy reached approximately 12% of world GDP in 2020.[3] Following the example of many countries, Armenia has also increased spending during the crisis, especially over the past year and a half, leading to an increase in public debt. However, if developed economies, having a sufficient reserve of capital and convertible currencies, can neutralize the negative consequences of an increase in public debt, then in the case of Armenia, as a developing economy, the growth of public borrowing can lead to default.

On the other hand, Armenia has been mostly pursuing a policy of maintaining macroeconomic stability, combined with a pro-cyclical economic policy [14], in particular, fiscal policy. At the same time, many studies [15] find the negative impact of pro-cyclical fiscal policy in terms of the higher vulnerability of the state budget during a crisis. In addition, it can be argued that pro-cyclical fiscal policy is accompanied by significant risks to economic growth in the long term. According to Blanchard and Summers [16], one of the factors contributing to the positive impact of fiscal policy on macroeconomic stability is low-interest rates. Thus, coordination of fiscal and monetary policies is required. However, our research proves that there is currently no such coordination in macroeconomic regulation in Armenia [17, 18].

It is known that often, in conditions of economic growth, the state increases budget expenditures in

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[1] United Nations. Shared responsibility, global solidarity: Responding to the socio-economic impacts of COVID-19. United Nations. March 2020. URL: https://unsdg.un.org/sites/default/files/2020–03/SG-Report-Socio-Economic-Impact-of-Covid19.pdf. (accessed on 26.09.2021).

[2] Feldstein M. The U.S. Underestimates Growth, The Wall Street Journal, 18 May, 2015. URL: https://www.wsj.com/articles/the-u-s-underestimates-growth-1431989720 (accessed on 01.10.2021).

[3] World Economic Outlook "A Long and Difficult Ascent", IMF, October 2020, P. 1. URL: https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020 (accessed on 01.10.2021).

Table 1

Volumes of external financing in Armenia, 1990–2020, at current prices, million USD

	1990–1993	1994–1997	1998–2003	2004–2008	2009	2010–2014	2015–2017	2018–2019	2020	1990–2020
External financing	–1092	–1838	–3219	–7497	–2366	–11206	–3430	–3531	–1180	–35359
GDP	6799	6020	12953	35730	8648	52753	32627	26070	12645	194245
% to GDP	–16.1	–30.5	–24.8	–21.0	–27.4	–21.2	–10.5	–15.9	–9.3	–18.2

Source: Balance of payment of Armenia, World Development Indicators, World Bank. URL: https://databank.worldbank.org/source/world-development-indicators (accessed on 15.09.2021).

favour of the poor population, which in theory is defined as "populism". Many studies point to the growth of populist movements in countries with large immigration populations, which, as a rule, are characterized by low incomes. In Armenia, elements of populist politics can be observed quite often, which undoubtedly had a negative impact on ensuring sustainable economic growth rates during the last two decades. In this regard, within the framework of this study, we present a detailed analysis and assessment of macroeconomic regulation over the past 30 years to identify the key drivers of economic growth in Armenia.

2. THE MAIN SECTORS AND FACTORS OF ECONOMIC GROWTH AND CRISES IN ARMENIA

We can distinguish the following periods in the history of the Armenian economy: 1990–1993 are the crisis years, 1994–1997 is the first stage of economic growth recovery, 1998–2003 is the second stage of recovery growth, 2004–2009 is the period of high economic growth after the recovery, including the crisis of 2009, 2010–2014 is the recovery period after the crisis of 2009, 2015–2017 and 2018–2019 are the periods of economic growth after the recovery, which differ from each other by the main factors of economic dynamics. 2020 was the global crisis conditioned by Covid-19. However, despite these differences, common factors were relevant throughout the whole period, which constitute the main economic features of the country.

For clarification, (1) the economic growth will be considered as the period during which there is a growth in real value-added, (2) the duration of the economic crisis will be considered as the period (measured in months or years) during which there is a reduction in the volume of output, (3) the post-crisis recovery period will be considered the period during which the pre-crisis volume of output will be restored.

2.1. The main features of the Armenian economy

The first feature is the external financing of the economy, which has been the main factor determining the resumption and continuation of economic growth. The Armenian economy remains highly dependent on external financing, although it has decreased during recent years, with the lowest level recorded in 2020 (*Table 1*).

Another feature of Armenia is the presence of a large Diaspora and permanent emigration, which determines the enormous role of private remittances as one of the main factors in ensuring external financing and economic growth (*Fig. 1*). Moreover, the leading donor countries regarding the inflow of remittances are Russia (45–60% of the total inflow) and the US (about 15% of the total inflow).[4] There are two crucial factors in the case of Russia: the growing number of Diaspora and the seasonal labour migration. Finally, the second Artsakh war conditioned the unprecedented growth of remittances in 2020.

The next feature is the system of financial intermediation. Despite the existence of necessary institutional infrastructure (stock exchange, regulatory legislation, and the regulator — Central Bank), during the last 30 years, the system of the market capitalization of companies — capital market, was not correctly formed. However, after the banking system, the stock market is the second-largest source of financing for the economy in the modern world. The primary indicator of the stock market is the market capitalization of companies. In 2018, the latter amounted to 34.8% of GDP in Russia, 147.7% in the United States, 45.5% in China, 44.1% in Germany, 47% in upper-middle income countries, and 118%

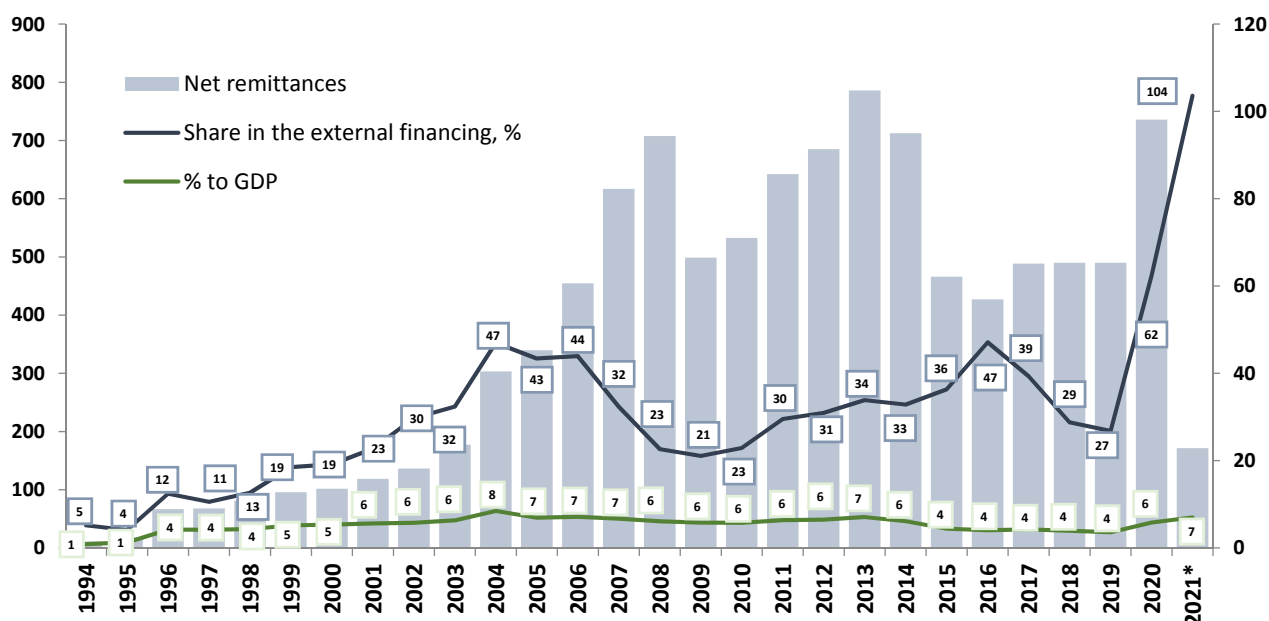[4] Central Bank of Armenia. URL: www.cba.am (accessed on 05.10.2021).

Fig. 1. **Remittances in Armenia in 1994–2021, million USD, at current prices**
Source: Balance of payment of Armenia, World Development Indicators, World Bank. URL: https://databank.worldbank.org/source/world-development-indicators (accessed on 15.09.2021).
Note: * 2021 first quarter.

in high-income countries.[5] While in Armenia, the market capitalization to GDP ratio is close to 0.

In the case of expansionary monetary policy, which has prevailed in developed countries since 2009, the stock market, absorbing excess monetary resources, contributes to the formation of anti-inflationary trends, which curb the inflation, at the same time becoming increasingly speculative, increasing the probability and intensity of economic crises.

There is no "shadow" system of financial intermediation in Armenia — investment banks, hedge funds, mutual funds, etc. Thus, the financial intermediation system in Armenia currently consists of four subsystems: banking institutions, credit organizations, insurance companies, and institutional investors, where banks have a dominant role: as of 2019, banks have provided 95.3% of domestic credit.

Fig. 2 shows the development of the financial intermediation system and consequently its role in the economy and economic growth in 1994–2020. We can divide this period into two parts: 1994–2003, the period of development, when the system development rates were significantly lower from both the economic growth and development of the international financial system; 2004–2020, when the system was developing faster than the economy and the global economic

system, hence gradually becoming the primary source of financing in the economy.

Thus, in 2003, the share of the financial intermediation system in GDP was 1.4%, lending to the private sector — 5.6% of GDP. In 2019, the percentage of the financial intermediation system in GDP was 6%, private sector lending — 57.1% of GDP.

In 2004, the volume of sectoral lending to the economy began to grow (*Fig. 3*). Until 2004, the system dealt exclusively with supply financing. Since 2004 the financial system started using consumer loans to finance the demand, and since 2005 it has also been using mortgage loans. The nominal volume of consumer loans increased by 23.6 times in 2004–2020 accounting for 20.1% of final household consumption, mortgage loans — by 43.3 times, and 111.5% of value-added in the construction sector.

The level of dollarization of the financial intermediation system and consequently the dollarization in the economy depends on the depth of internal value chains and the stability of the exchange rate. Thus, the degree of dollarization of the financial system is lower when the economic development mainly happens at the expense of non-tradable goods and services.[6] It is higher when the economic

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[5] World Bank Database. URL: https://data.worldbank.org/ (accessed on 05.10.2021).

[6] Non-tradables — construction and services consumed within the country, tradables — products of industry, agriculture, and services that can be exported.
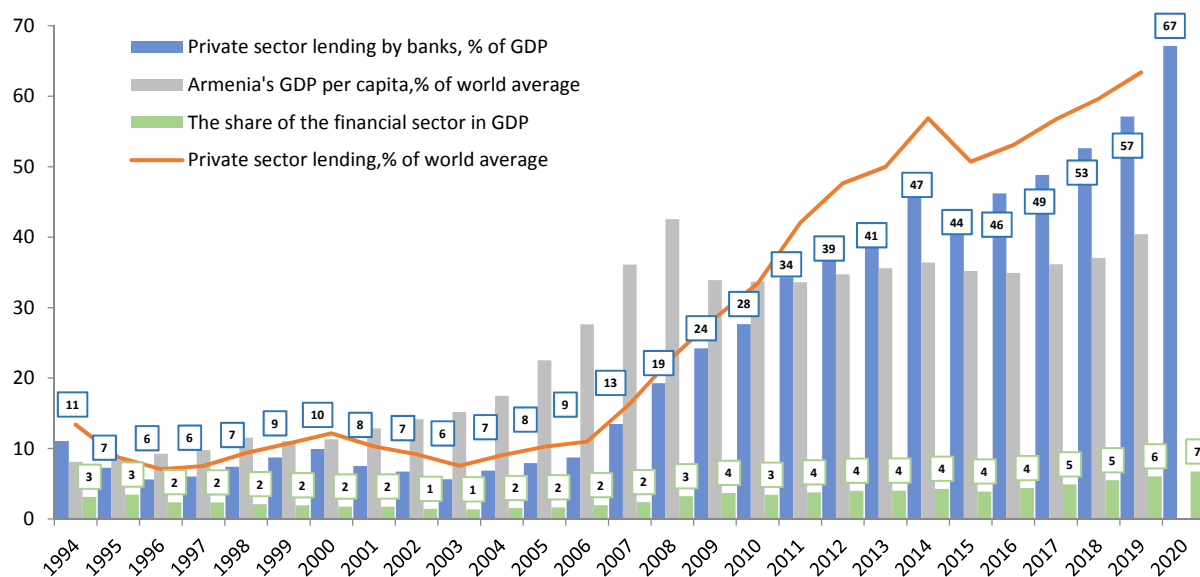
Fig. 2. **Armenia's financial system 1994–2020, main indicators**
Source: National accounts of Armenia, World Development Indicators, World Bank. URL: https://databank.worldbank.org/source/world-development-indicators (accessed on 28.09.2021)
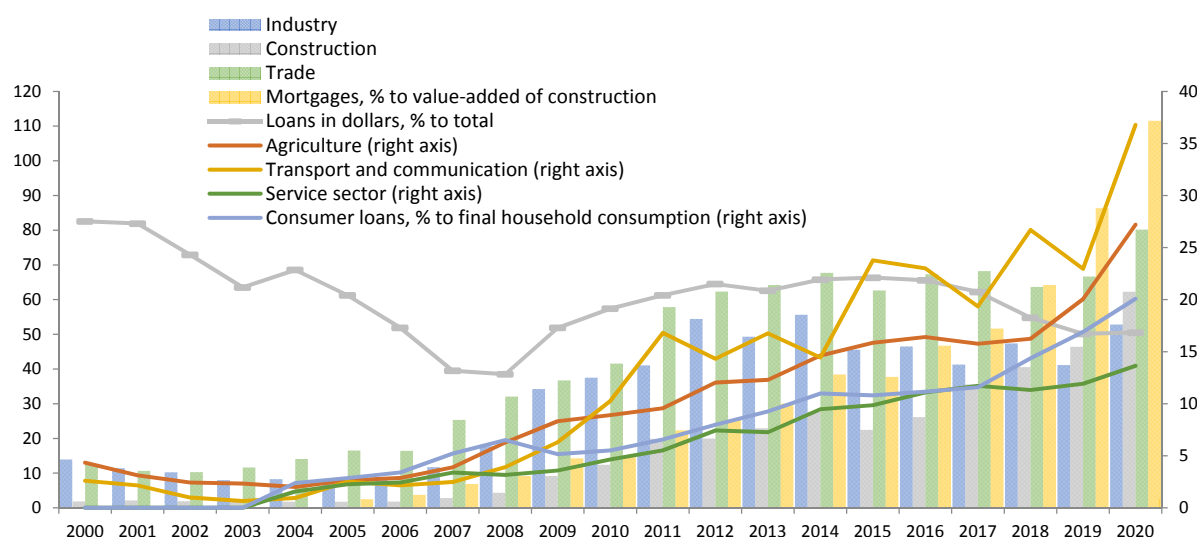

Fig. 3. **Loan structure of the Armenian economy, 2000–2020, current prices**
Source: National Accounts of RA, Database of the Central Bank of Armenia. URL: www.cba.am (accessed on 01.10.2021).

development of the economy takes place primarily at the expense of tradable goods and services.

The next feature of the financial intermediation system is "expensive" loans. The interest rates of loans in Armenia are higher than in Georgia since 2009, significantly higher than in Russia, the United States, and China (*Fig. 4*). Although lending rates in Armenia have decreased by about 20 percentage points during the last 20 years, the opportunities for economic development through the financial system are more limited, and the debt obligations are higher than in the benchmarking and many other countries.

Relatively "expensive" loans are mainly explained by the anti-inflationary monetary policy pursued by the Central Bank of Armenia, which was based on maintaining macroeconomic stability and didn't change except for the crisis years of 2009 and 2020. The fiscal policy in 2009 and 2020 was countercyclical, with increased spending amid tax cuts. The differences in these policies since 2009 have led to an increasing expansion of crediting in Armenia through the state encouragement of accelerated financial intermediation, mainly through subsidized interest rates on mortgages and agricultural loans, which can
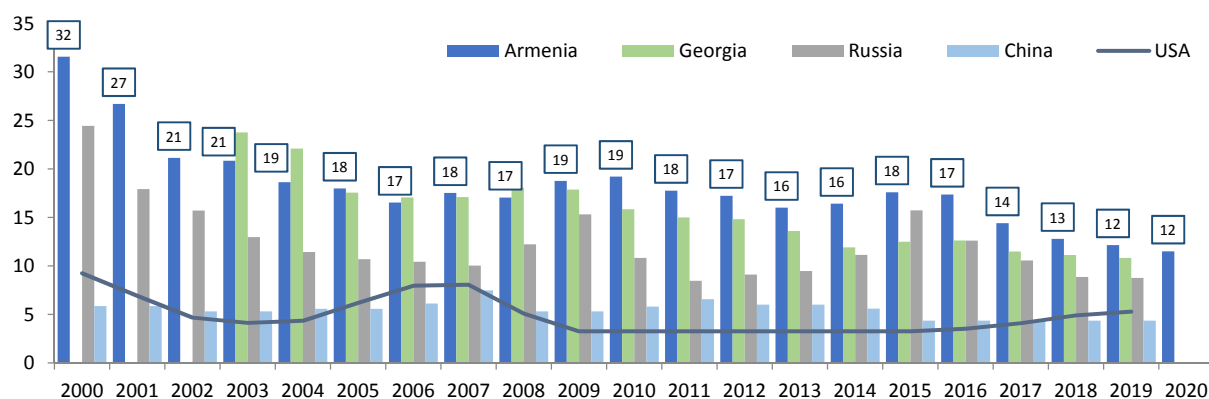
Fig. 4. **Nominal interest rates on loans, 2000–2020**
Source: World Development Indicators, World Bank Database. URL: https://databank.worldbank.org/source/world-development-indicators (accessed on 28.09.2021).

significantly increase lending without lower interest rates.

Such developments in the financial intermediation system, mainly the intensive subsidizing of the real estate market in the last few years, pose the risk of a "bubble" in that market and a further crisis. In 2018–2020, the average market prices of real estate in Yerevan increased by 32.2%, and in 2020 by 7.5%. According to some research [19, 20], the rise in the prices of assets acquired at the expense of credit indicates the formation of "bubbles" and a possible further crisis in the sector.

The situation in the field of consumer loans is also distressing. The debt burden of households to the financial system was 929 billion AMD (without interests) or 462.7 thousand AMD per citizen of working age in 2020, and in case of interests included — 555.3 thousand AMD or 2.92 monthly average salary. Including mortgage loans, in 2020, the debt burden amounts to 1410.2 billion drams or 30.5 percent of final household consumption, 22.8 percent of GDP, and in case of interests included — 35.5 percent, or 26.6 percent of GDP. What is worrying here is not the debt volumes but the growth rates and the high service cost.

2.2. The economic crisis of 1991–1993

The leading cause of the 1991–1993 economic crisis was the collapse of the USSR, which tore economic ties between the former Soviet republics, all of which experienced a deep economic crisis of various degrees (except China and Vietnam).

In all these countries, the crisis had a systemic nature due to the change in the economic model that presumed a transition to a market economy. In addition to the latter, the war for the liberation of Artsakh started in Armenia, accompanied by the

transport blockade and energy crisis. At the same time, the global economic growth continued at an average annual rate of about 2.5%. Thus, this crisis had a systemic-regional nature. In general, the crisis in the Europe and Central Asia countries began in 1992 and lasted two years, from 1992 to 1993. It took another two years to recover the GDP level of 1991.

The crisis in Armenia was shorter, but the economic consequences were heavier than in Russia. It lasted three years with a total economic decline of 53.1% in 1993 compared to 1990. The economic growth resumed in 1994 and continued for 14 years until the crisis of 2009.[7] The pre-crisis GDP level of 1990 was restored only in 2004. The economic crisis affected all economic sectors, completely changing the economic structure. The economic structure was not restored, leaving the country's economic development behind for about 15 years, turning it from industrial to agricultural. The industry was one of the most affected sectors. During the three years, the decline accounted for 57.3%. In general, the pre-crisis volumes of manufacturing output were restored only in 2012, and the volumes of the mining industry in 2001. The pre-crisis level of the industry share in GDP has not yet recovered.

The agricultural sector ensured the economy's survival during the deep crisis, rescuing it from imminent famine by deindustrializing the country and drastically reducing labour productivity. This stabilizing role of agriculture became possible due to the agrarian reform implemented in 1990–1991. As a result, the share of agriculture in GDP increased sharply from 15.8% in 1990 to 48.6% in 1993. Moreover, agriculture was the only sector of

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[7] The average annual economic growth accounted to about 9% in 1994–2008, including 5.35% in 1994–1997, 10.6% in 1998–2003, 11.6% in 2004–2008.

the Armenian economy where the economic decline was minimal — 10.9% in 1993, and the 1990 volumes were restored in 1998.

One of the main characteristics of this economic crisis is the sharp decrease in the volume of state financial resources and the need for no less sharp increase in expenditures. In 1990–1994, under the conditions of limited external financing sources, an expansionary fiscal policy was applied in the form of inflationary deficit financed by the Central Bank. As a result, the budget of 1992 had a deficit of 0.25%, the 1993 budget — 50.5%, and the 1994 budget — 38.4%. Since the expansion of preferential foreign financing by international organizations, the policy of macroeconomic stability based on the Washington Consensus has been implemented, as a result of which the 1992–1993 hyperinflation was eliminated, and the budget deficit began to decrease.

In 1990–1993, the country, being in the zone of the Russian ruble, was using the general inflationary monetary policy. Since the introduction of the national currency Dram in November 1993, Armenia started pursuing an independent monetary policy. In 1995, the Central Bank started conducting a restraining monetary policy.

Another key feature of the economic crisis is the disruption of the country's foreign economic relations: exports in 1994 amounted to 65.5% of the 1990 level, while the role of imports increased due to the need to ensure minimum domestic consumption. The volume of imports in 1994 amounted to 91.9% of the 1990 level, so the trade account and balance of payments also deteriorated.

The main external conditions for the Armenian economy to start economic recovery and growth were as follows: ensuring a long-term ceasefire in the first Artsakh War (1994), easing the transport blockade (since 1994), and ending the energy crisis (reopening the NPP 1996). It allowed to significantly reduce the negative economic pressure. The beginning of large-scale financing on external concessional terms (since 1995) allowed to reduce the budget deficit and stop inflationary financing of the economy (which has been legally prohibited since 1997).

2.3. Economic Growth of 1994–2008 and 2010–2019 and the Global Financial Crisis

In 1994–2008, Armenia had continuous economic growth of about 9% on average. The latter was significantly higher than the average global economic growth of about 3.3%. Such economic growth enabled the recovery of the GDP level of 1990 in 2004. However, in 2009 the global economic crisis had a significant negative impact on the Armenian economy: the GDP decreased by 14.1%, about 55% of which was due to the reduction of construction by 41.6%. Other reduced sectors due to the crisis were industry — about 6%, trade — 3.6%, and services — 21.8%.

Almost the entire reduction in services was mainly due to the decrease in the transport and real estate sectors. The former was due to a reduction of foreign trade and the general decline in economic activity. Secondly, it is specific to any economic crisis when people begin to save as financial resources dwindle. Hence, household spending priorities change in favour of food and essential services and to the detriment of long-term consumer and investment goods, including real estate.

It is noteworthy that even though in the US and some other countries the crisis began in the real estate financing market and then spread to the financial intermediation system and later to the real sector of the economy, there was no financial crisis in Armenia for the simple reason that there was no mass mortgage lending. Mortgage lending in 2008 covered 9.2% of the value-added of construction, in 2019–86.4%, in 2020–111.5%.

During the 2009 crisis, there was no financial crisis in Armenia, and hence there was no risk of bankruptcy of system-building businesses. So, the government did not use quantitative easing or bail out policies. Instead, it used actions to increase the budget deficit due to the inevitable decrease in government revenues and the need for increased expenditures and targeted measures to support individual affected economic sectors.

Economic growth in Armenia, as in the rest of the world, was restored in 2010, and it took 4 years to reach the pre-crisis level of 2008. In 2009, the fastest growing sectors suffered from the economic crisis. Overcoming the crisis lead to a new economic structure with new drivers of economic development.

The recovery growth in 1994–1997 (*Table 2*) was mainly due to the return to normal living conditions. However, it was not primarily related to the increase in investment. It was based on restarting existing capacities, and investments were mainly directed to renewing the production infrastructure (e.g., reopening the ANPP in 1996). On the other hand, the high share of net taxes in economic growth was due to the imposition of VAT on imports in 1997.

In the second phase of the recovery growth (1998–2003), we can already notice the significant growing investment component, as construction begins to become the main driving force of the economic

Table 2

Sectoral sources of economic growth in Armenia in 1994–2019, at comparable prices of 2019, million USD

	1994–1997	1998–2003	2004–2008	2009	2010–2013	2014–2017	2018–2019	1994–2019
Cumulative economic growth	**674.6**	**2360.1**	**4342.5**	**−1449.1**	**1632.6**	**1586.3**	**1589.7**	**10736.6**
including								
Industry	109.4	382.8	135.3	−87.0	462.1	447.5	363.7	1813.7
Extractive	3.6	56.6	22.1	6.75	81.25	186.0	15.5	371.9
Manufacturing	56.6	300.1	60.0	−39.6	314.9	260.5	324.2	1276.8
Energy	49.2	26.0	53.2	−54.2	65.9	0.95	24.1	165.2
Agriculture	29.8	257.7	436.0	82.2	189.3	137.9	−219.3	913.6
Construction	49.4	500.7	1200.8	−798	−134.2	−180.3	40.6	679.0
Trade	203.6	306.0	386.6	−52.3	144.8	216.7	255.0	1460.5
Services	114.9	626.2	1541.9	−327.9	636.5	930.7	948.1	4470.3
Value added, total	507.1	2073.4	3700.5	−1182.9	1298.4	1552.5	1388.3	9337.3
Net taxes, total	167.5	286.7	642.0	−266.2	334.2	33.8	201.4	1399.3

Source: National Accounts of Armenia, Statistical Committee of RA. URL: www.armstat.am (accessed on 10.10.2021).
Note: the table doesn't include data on "Financial Intermediate Services Indirectly Measured".

Table 3

Sectoral sources of economic growth in Armenia in 1994–2019, in %

	1994–1997	1998–2003	2004–2008	2009	2010–2013	2014–2017	2018–2019	1994–2019
Cumulative economic growth	**100.0**	**100.0**	**100.0**	**−100.0**	**100.0**	**100.0**	**100.0**	**100.0**
including								
Industry	16.2	16.2	3.1	−6.0	28.3	28.2	22.9	16.9
Extractive	0.5	2.4	0.5	0.5	5.0	11.7	1.0	3.5
Manufacturing	8.4	12.7	1.4	−2.7	19.3	16.4	20.4	11.9
Energy	7.3	1.1	1.2	−3.7	4.0	0.2	1.5	1.5
Agriculture	4.4	10.9	10.0	5.7	11.6	8.7	−13.8	8.5
Construction	7.3	21.2	27.7	−55.1	−8.2	−11.4	2.6	6.3
Trade	30.2	13.0	8.9	−3.6	8.9	13.7	16.0	13.6
Services	17.0	26.5	35.5	−22.6	39.0	58.7	59.6	41.6
Value added	75.2	87.9	85.2	−81.6	79.5	97.9	87.3	87.0
Net taxes	24.8	12.1	14.8	−18.4	20.5	2.1	12.7	13.0

Source: National Accounts of Armenia, Statistical Committee of RA. URL: www.armstat.am (accessed on 10.10.2021).
Note: the table doesn't include data on "Financial Intermediate Services Indirectly Measured".

Table 4

Sources of economic growth in Armenia in 1990–2019, at comparable prices of 2019 — million USD

	1991–1993	1994–1997	1998–2003	2004–2008	2009	2010–2013	2014–2017	2018–2019	1994–2019
Change in GDP	–3288	674,5	2360	4342,5	–1449	1633	1586	1590	10737
Total domestic consumption	–1797	1186	2470	5484	–1482	1169	347	2755	12035
Final Consumption, Households	–1817	791	1622	2765,1	–359	1295	313	2202	8630
Final Consumption, Government	62	6,5	183	479,9	–14,2	195	12,6	112	1118
Gross capital formation	–42	388	665,5	2240	–1109	–322	21	441	2288
Export of goods and services	–1129	–324	1400	–242	–195	1187	1655	610	4092
External financing	–362	–187,5	–1510	–900	228	–723	–416	–1775	–5391

Source: National Accounts of Armenia, Statistical Committee of RA. URL: www.armstat.am (accessed on 10.10.2021).

Note: Table includes only the essential sources of economic growth.

growth, surpassing industry, agriculture, and trade, yielding only to the service sector (*Table 3* shows the contribution of each sector to cumulative economic growth).

In 2004–2008, the structure of the economy and the primary sources of economic growth changed dramatically: construction and services together provided 63.2% of total economic growth, compared to 47.7% in the previous period, and the total contribution of industry and agriculture was only 13.1% compared to 27.1% in the previous period.

This model of economic development, where the non-tradeable sectors dominated over the sectors with the potential for import substitution or export, based on positive expectations of rising real estate prices, fell victim to the 2008–2009 financial crisis, during which, as is usually the case during the global crises, investment in emerging markets, including Armenia, declines sharply due to increased risk (capital flight).

Such a development led to an increase in the volume of investments due to the positive expectations and contributed to the development of the primary developing sector (in this case, construction) and the sectors serving it, such as construction materials, woodworking, metal production, and the growth of related imports. However, when the expectations change, it starts working in the opposite direction, which was the reason for the sectoral reductions in 2009, mainly due to the unprecedented decline in construction. And the stronger the connection of

those areas with the leading developing sector, the higher the reduction.

2010–2013 was the period of economic recovery from the crisis, during which growth rates slowed down due to capital flight, and a new economic structure was formed, where services remained the main development driver, and along with it the industry and agriculture started becoming the other driving forces, increasing the export potential of the economy. Thus, the economy got some export direction, and construction continued to decline.

In 2014–2017, the role of services as the primary source of economic growth increased, and its contribution became more significant than the cumulative contribution of other sectors. The role of services as the main driving force of economic growth deepened in 2018–2019, while the decline of agriculture continued since 2016 and was due to the constant reduction of the relative profitability of agriculture and the lack of an effective system to support it.

Table 4 and *Table 5* present the sources of economic growth/recession and the financial connections of the economy with the world during the growth/recession. Since 1994, Armenia has been deeply dependent on foreign financing. On average, half of the economic growth was financed by the capital inflow. Dependence on external financing was the highest in 2018–2019 when external financing growth exceeded GDP growth by 11.7%. In 2004–2008, it was the lowest, as external financing provided about 20% of economic growth. In

Sources of economic growth in Armenia in 1990–2019, in %

	1991–1993	1994–1997	1998–2003	2004–2008	2009	2010–2013	2014–2017	2018–2019	1994–2019
Change in GDP	– 100.0	100.0	100.0	100.0	–100.0	100.0	100.0	100.0	100.0
Total domestic consumption	–54.7	175.8	104.7	126.3	–102.3	71.6	21.9	173.3	112.1
Final Consumption, Households	– 55.3	117.3	68.7	63.7	–24.8	79.3	19.8	138.5	80.4
Final Consumption, Government	1.9	1.0	7.7	11.1	–1.0	12.0	0.8	7.1	10.4
Gross capital formation	– 1.3	57.6	28.2	51.6	–76.6	–19.7	1.3	27.7	21.3
Export of goods and services	–34.3	–48.0	59.3	–5.6	–13.4	72.7	104.3	38.4	38.1
External financing	– 11.0	–27.8	–64.0	–20.7	15.7	–44.3	–26.2	–111.7	–50.2

Source: National Accounts of Armenia, Statistical Committee of RA. URL: www.armstat.am (accessed on 10.10.2021).

Note: Table includes only the essential sources of economic growth.

2014–2017, 26.6% of economic growth was ensured due to external financing.

Exports were a significant source of economic growth in 1998–2003. In 2014–2017, almost all the economic growth was ensured at the expense of exports. During 2004–2008 the gross capital formation had the highest contribution to economic growth, providing double-digit growth rates.

2.4. The economic crisis of 2020

The global economic crisis of 2020 was of an artificial origin. It was mainly due to lockdowns, particularly in the service sectors involving trade operations and human contacts, such as transportation, hospitality, and restaurants. In the second half of 2020, when these restrictions were eased, the depth of the crisis diminished. In 2021, after their elimination, the economy around the world and Armenia began to recover.

The depth of the 2020 crisis was significantly lower than in 2009 (*Table 6*), as, in 2020, there was no primary driver of the economic growth as construction. On the other hand, the changes in the future structural and economic growth drivers of the economy due to the 2020 crisis will also be less pronounced than they were in 2010–2019.

There were 4 economic sectors with the fastest growth before the crisis of 2020: mining industry (average annual growth in 2010–2019–14.5%, share in GDP in 2010–1.69%, in 2019–3.25%), financial intermediation (average annual growth in 2010–2019–13.9%, share in GDP in 2010–2.75%, in 2019–6%), Accommodation and food service activities (average annual growth in 2010–2019–15.4%, share in GDP in

2010–0.8%, in 2019–1.89%), and Arts, entertainment and recreation (average annual growth 2010–2019–27%, share in GDP in 2010–0.92%, in 2019–5.55%). The total contribution of these sectors to the 2010–2019 economic growth was 37.6%.

Two of these sectors suffered the most: Accommodation and food service activities, Arts, entertainment and recreation. The decline in these two sectors accounted for a 26.2% of GDP decrease in 2020. According to the results of the first half of 2021, the first one has the potential for recovery depending on the growth of gross household consumption (food services) and on the increase in outbound and inbound tourism (accommodation services). Also, the results of the first half of 2021 show that the second sector will most likely cease being a driving force of the economy.

Based on the results of the first half of 2020 and 2021, the information and communication, healthcare, and manufacturing sectors can be added to the above-mentioned growing sectors. As for agriculture, its further development requires further enlargement of farms and a sharp increase in their productivity, which should mainly occur through a significant modernization and expansion of the current system of state subsidies.

Our further research, which will focus on relatively high productivity and, consequently, sectors that create a higher value-added, will provide a more accurate identification of potential areas for future growth and the development of an economic policy toolkit to encourage the development of those sectors.

A comparison of GDP consumption trends during the 2009 and 2020 crises shows that gross consumption in 2020 decreased by about 2.5 times

Table 6

Economic recession and characteristics of 2009 and 2020 crises: sectoral structure

	2009	2020	2021*		2009	2020	2021*
GDP	−14.1	−7.4	5.0**	Accommodation and food service activities	23.5	−43.3	62.5***
Agriculture	5.9	−4.1	6.8***	Arts, entertainment and recreation	3.4	−21.3	−36.1***
Industry	−6.4	−1.7	2.1***	Education	2.2	1.3	6.9(1)
Extractive	6.3	8.4	7.2***	Healthcare	−5.4	6.9	42.6(1)
Manufacturing	−5	−3.6	−1.1***	Real estate activities	−20.7	−14.5	18.9(1)
Energy	−12	−1.2		Information and Communication	10.9	8.4	12.7***
Construction	−41.6	−6.7	10.8***	Transport	−28.3	−34.4	7.3***
Trade	−5.3	−13.2	8.0****	Financial and insurance activities	−1.6	5.4	3.1***

Source: National Accounts of Armenia, Statistical Committee of RA. URL: www.armstat.am (accessed on 10.10.2021).
Note: * 2021 January — June, ** Economic activity indicator, *** Gross output, **** Turnover (1) Paid services.

more than in 2009, despite the reduction in GDP being almost twice less. Moreover, the drop was due to the decrease in household consumption by — 13.8%, or −789.8 billion AMD at current prices, while the total GDP decline amounted to only 361.6 billion drams. It indicates that the policy of stimulating household demand was ineffective in 2020 compared to 2009 when household consumption fell by only 4.3% compared to a 14.1% drop in GDP.

The state policy for stimulating demand in 2020 had three components: (1) a 5.3 per cent increase in state-funded wages to meet the additional household demand of about 200,000 workers at 21.6 billion drams, and (2) an 8.9 per cent increase in pensions, which was to meet the additional household demand of about 464,000 pensioners at 19.4 billion drams and (3) the partial compensation of those who lost their job due to the lockdown.

Given the disproportionate decline in household consumption in 2020 and the increase in the income of state-paid employees and retirees, it becomes clear that private sector incentive programs were insufficient in terms of both coverage and volume.

As for the growth of consumption of state institutions, it was mainly conditioned by two particular circumstances in 2020: the Covid-19 pandemic, the cost of which can be estimated at least

57.3 billion drams, and the second Artsakh war, the value of which we estimate at least 111.8 billion drams without destroyed military equipment and the value of the accumulated ammunition until 2020.

The reduction in gross capital formation was higher than the reduction in GDP (in %) in 2020 but about three times less than in 2009 due to an unprecedented decline in construction, which did not occur in 2020. It reflects the reduction in capital formation during the crisis due to future uncertainty and negative expectations.

Exports of goods and services in 2020 fell by almost three times more than in 2009, mainly due to an unprecedented 62.1% (1 321 million USD) decline in exports of services, 94% of which was due to the reduction in the volume of travel. The volume of exports of goods decreased by only 3.9%. Imports of goods fell by 17.7% in 2020, and imports of services by 61.5% (1 490 million USD), 79% of which was due to reduced travel. The recovery of their pre-crisis levels of export and import largely depends on outbound and inbound tourism dynamics.

2.5. Socio-economic policy of Armenia in 2020
In Armenia, as in many other countries with limited convertibility of national currency, the primary tool of the anti-crisis and countercyclical
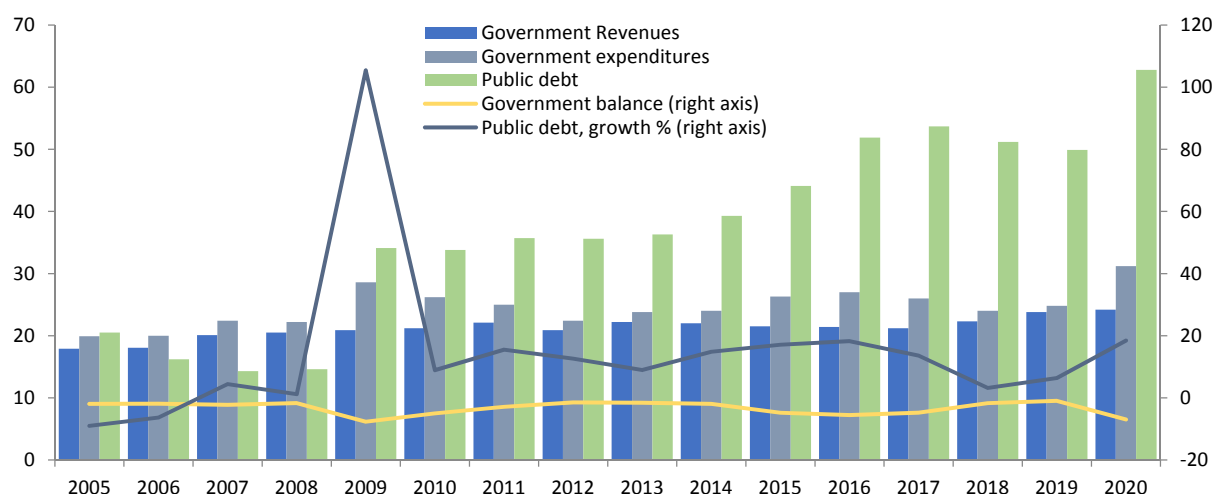
Fig. 5. **The budgeting system of Armenia and the main indicators of the public debt in 2000–2020,% to GDP**
Source: IMF World Economic Outlook, April 2021. URL: https://www.imf.org/en/Publications/WEO/Issues/2021/03/23/world-economic-outlook-april-2021 (accessed on 14.10.2021).
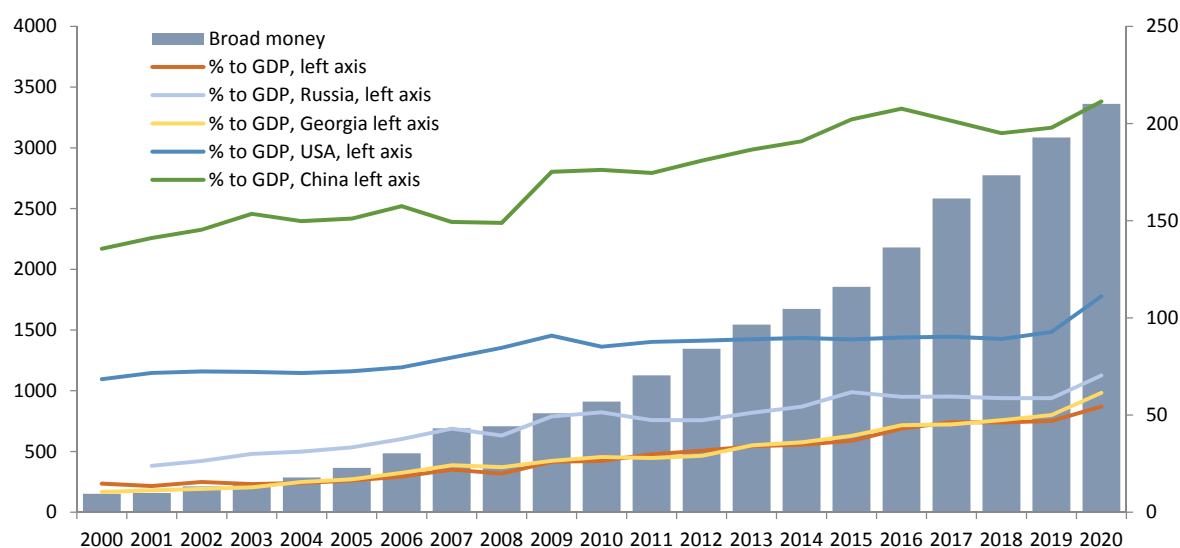

Fig. 6. **Broad money dynamics in absolute terms (billion AMD) and% to GDP, 2000–2020**
Source: Databases of the Central Bank of Armenia, Central Banks of Russia, Georgia, USA and China. URL: www.cba.am, www.cbr.ru, www.nbg.gov.ge, www.federalreserve.gov, http://www.pbc.gov.cn/ (accessed on 18.10.2021).

policy is the expansionary fiscal policy, used during the 2009 and 2020 crises (*Fig. 5*). It assumes a sharp increase in budget expenditures amid declining revenues, significantly increasing the budget deficit, which in turn is financed by increasing the external and domestic public debt. Additional revenues are typically used in three ways: (1) to offset the loss of revenue due to the crisis, which allows not to cut already announced state expenditures and incur additional expenses to stimulate the economic activity by (2) increasing the demand and (3) supply.

During the crisis of 2009, state revenues decreased by 75.1 billion AMD or 2.39% of GDP, and expenditures

increased by 103.6 billion AMD or 3.3% of GDP. Considering the decrease in revenues, the absolute growth of expenses amounted to 178.8 billion AMD or 5.7% of GDP. During the 2020 crisis, state revenues decreased by 68.8 billion AMD or 1.1% of GDP, and expenditures increased by 187.4 billion AMD or 3% of GDP. Considering the decrease in revenues, the absolute growth of expenses amounted to 256.2 billion AMD or 4.14% of GDP.

The peculiarity of the countercyclical fiscal policy is that regardless of the post-crisis dynamics of revenues, for various, mainly political reasons, it is impossible to reduce the absolute amount of public spending. The latter leads to a steady increase in public debt
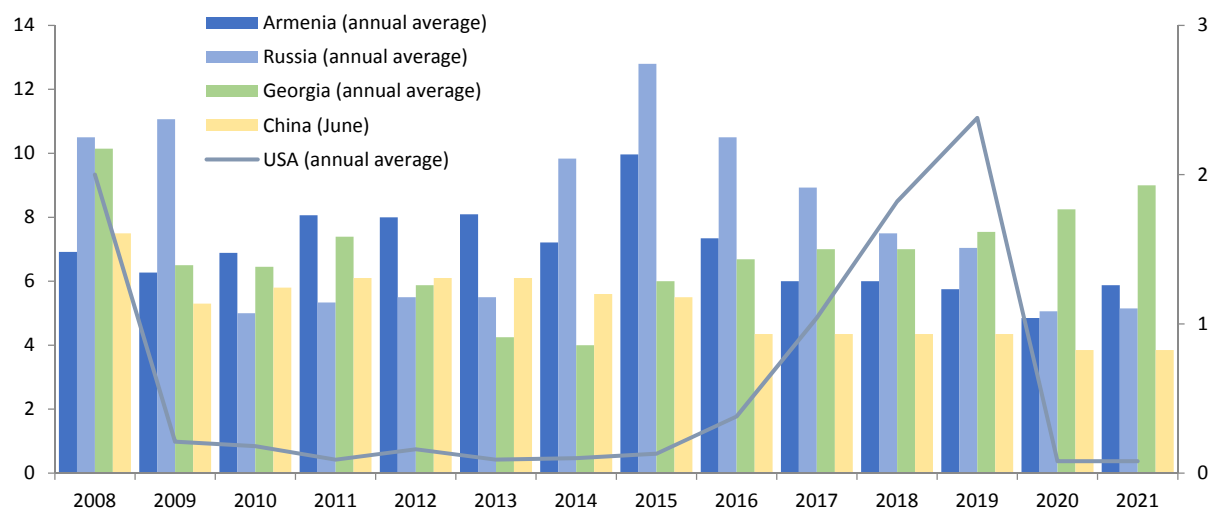
Fig. 7. **Central Bank interest rates, 2008–2020**
Source: Databases of the Central Bank of Armenia, Central Banks of Russia, Georgia, USA and China. URL: www.cba.am, www.cbr.ru, www.nbg.gov.ge, www.federalreserve.gov, http://www.pbc.gov.cn/ (accessed on 18.10.2021).

in countries with chronic budget deficits. Since 2009, the nominal public debt of Armenia increased by an average of 11.8% per year, compared to the average economic growth of 7.7% in 2010–2019.

The monetary policy, the primary purpose of which is to ensure price stability in Armenia by applying the inflation targeting tools, is usually neutral to economic growth. However, during economic crises, it also acquires the features of an expansionary countercyclical policy and has the edges of agreement with the fiscal policy.

During the 2009 and 2020 crises, the money supply grew at an accelerated rate (*Fig. 6*), including China, where during both the 2009 and 2020 global crises, the country recorded economic growth of 9.4% and 2.3%, respectively. The growth of the money supply in Armenia was 15.1% in 2009 and 8.9% in 2020. Thus, the money supply behaviour in the reviewed countries was countercyclical and expansionary during the crises.

As for the pre-crisis period, according to the experts of the US Federal Reserve System, "The Federal Reserve System… have long monitored the growth of the money supply because of the effects that money supply growth is believed to have on real economic activity and the price level. Over time, the Fed has tried to achieve its macroeconomic goals of price stability, sustainable economic growth, and high employment in part by influencing the size of the money supply. In the past few decades, however, the relationship between growth in the money supply and the performance of the US economy has become much weaker, and emphasis on the money supply as

a guide to monetary policy has waned".[8] *Fig. 6* proves this thesis quite clearly.

The central banks' interest rate policy, which, along with mandatory reserves and capital adequacy ratios, is the primary tool for regulating the credit market, has also been countercyclical. During crises, the central banks reduce interest rates and consequently increase lending and reduce their service cost in 2009 (except Russia) and 2020 (except Georgia) (*Fig. 7*).

Notably, no inflationary pressures were registered because of the countercyclical fiscal and monetary policy of 2009 and 2020. We should highlight that the US Fed's expansionary monetary policy with interest rates close to zero in 2009–2015 continued for five years after the end of the crisis, and the situation is the same in 2021. Moreover, as of March 2020, the reserve requirement became zero. The Central Bank of China did not increase the interest rate after 2020.

Thus, developments in countries that have recently maintained near-zero or negative interest rates, show that the inflationary financing of their economies does not generate inflation either in their countries or countries with highly positive central bank interest rates. In addition, the capabilities of traditional monetary policy tools, including money supply and central bank interest rates, have been exhausted, and new tools are emerging, such as quantitative easing, acquisition of troubled assets by central banks. It is unclear how these changes will affect other countries'

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[8] The Money Supply, Federal Reserve Bank of New York. URL: https://www.newyorkfed.org/aboutthefed/fedpoint/fed49.html (accessed on 17.10.2021).

monetary policy tools. However, there are specific signals, including in the case of Armenia, that the expansionary monetary policy does not lead to an increase in inflationary pressure.

Armenia implemented additional targeted budget-assisted assistance programs in 2020, the total amount of which, as of September 10, 2020, amounted to 163.4 billion AMD (340 million USD, or 2.5% of GDP). The number of approved programs was 25.[9] It was impossible to determine the actual funding volumes for these programs by the end of 2020. According to a statement made by the Prime Minister of Armenia at the August 12 sitting of the Armenian government, the state has spent 64 billion AMD within the framework of those programs, of which 26.6 billion AMD was spent on social programs, 17.5 billion on economic programs and 19.9 billion on subsidy programs of bank interests.

Many former USSR countries have adopted similar programs to stimulate supply and demand. According to IMF,[10] the package of these programs in Azerbaijan amounted to 4.8% of GDP in 2020, in Georgia — 3.8%, in Russia — 3.5%, in Kazakhstan — about 9%, in Kyrgyzstan — about 7%, in Uzbekistan — about 2%. Thus, the volumes of these programs in Armenia were lower than in most of the mentioned countries. As for the developed countries, due to their wider opportunities to pursue an expansionary fiscal policy, the volumes of these packages were larger and more diverse in coverage. We should also note that the directions for spending these packages were almost

the same in all countries, including Armenia, differing in the number of sectors involved and the volume of assistance.

3. CONCLUSION

The consequences of the 1991–1993 crisis were heavy in Armenia, affecting all economic sectors and completely changing the economic structure from industrial to agricultural. On the other hand, in our opinion, the 1991–1993 crisis, being unprecedented in its depth and accompanying external factors, is unlikely to repeat in the future.

The economic growth factors changed during different periods in Armenia. After the first economic crisis, construction became the main driver of economic development until the global financial crisis, forming new economic drivers. In the current economic structure, services remained the main development driver, along with industry and agriculture becoming the other driving forces, increasing the export potential of the economy. In our opinion, after the crisis of 2020, the economic structure will not change significantly but will get a more balanced nature, with some development pillars, none of which will play a dominant role, as was the case in 2004–2008 for the construction.

We can say that Armenia's fiscal and monetary policy in general in 2009 and 2020 corresponded to the approaches of the anti-crisis policy pursued in the world. Both monetary and fiscal policies were countercyclical and sufficiently effective.

Considering the resumption of economic growth in 2021 and the probability of recurrence of further lockdowns, it is urgent to develop new socio-economic policy approaches to ensure sustainable economic growth in the future and to emerge quickly from future economic growth crises without restricting or halting economic activity.

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M. A. Voskanyan — critical analysis of literature, interpretation of research results.

A. G. Galstyan — collection of statistical data, results presentation in the form of tables and graphs, work on the English version of the article.

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