



НАЦИОНАЛЬНЫЙ БАНК КАЗАХСТАНА

ASSESSING THE INFLUENCE OF FINANCE ON ECONOMIC GROWTH THROUGH THE PRISM OF INVESTMENT, CREDITS AND MONEY SUPPLY

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Assessing the influence of finance on economic growth through the prism of investments, credits and money supply

Orazalin Rustem¹

Abstract

This study examines the dynamics of fixed capital investments, credits to the economy and money supply as well as foreign direct investments and their role in ensuring the economic growth. The results of the study show that before the global crisis of 2008-2009, the financial cycle was overheated due to an unlimited access to external capital markets and clear signs of the Dutch disease in the economy. Subsequently, the rebalancing of capital flows and the completion of the commodity "super cycle" affected the business activity and the demand for borrowed resources.

Based on the Solow model, it was found out that, despite a decrease in the rates of investments, loans and the money supply in general, the contribution of finance to the economic growth is increasing. However, a larger contribution by fixed capital investments does not lead to a proportional economic growth, which indicates a diminishing return on investment. Assessments show that the main reason for the decline in long-term economic growth is not a reduction in the volume of financing of the economy, but mainly a decrease in the factor productivity. It has been shown that an increase in investments, loans and money supply cannot maintain a high level of the economic growth and replace the productivity growth in the long-term perspective.

Key Words: economic growth, investments, credits to the economy, monetization.

JEL-classification: O11, O16, O41.

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*“To ensure the third modernization of the country, it is necessary to attract **fixed capital investments** of more than **30% of GDP per year**. Recently, this figure in our country has been less than **20%**. The share of loans to GDP also remains low – **25%**. We are talking about **a lack of investment in the real sector**. The National Bank needs to be proactive and promote the economic growth. I instruct the Government and the National Bank to develop **systemic solutions for financing of the real sector of the economy**”*
The instruction of N.A. Nazarbayev, given at an extended meeting of the Government of the Kazakhstan, January 30, 2019

1. Preamble

Kazakhstan's entry into the top thirty countries by 2050 requires a sustainable economic growth (annual) at the level of 5%, which requires maintaining a high level of the real sector financing. However, investments, loans and money supply, in general, tend to decline in the medium term. In this context, the purpose of this study is to assess the contribution of finance to the economic growth, as well as to identify systemic problems that hinder the growth of financing of the economy. To achieve this goal, the following objectives have been set:

1. Summarizing the results of theoretical and empirical studies in the sphere of financial support to the economic growth (the results are presented in the literature review section);
2. Analyzing investments, loans, money resources in the Kazakh economy;
3. Assessing the contribution of financing to the economic growth;
4. Identifying systemic problems that constrain the growth of financing of the economic growth;
5. Developing proposals on the systemic solution of problems related to financing of the economy and the long-term economic growth.

The results show that the role of investments (through which the money supply and loans form the gross domestic product) in ensuring the economic growth has decreased. The systemic problems that constrain the growth of financing of the economic growth associated with the distortion in the structure of loans and investments as a result of the upturn of non-tradable sectors of the economy, have been identified.

It was ascertained that with the development of the economy, investments give less and less return. The main source of decline in the long-term economic growth is the decreased factor productivity. The development of a productive, competitive private sector is essential for the productivity growth.

The first section provides a review of the literature, which presents the theoretical aspects of the correlation between finance and the economic growth. The methodological foundations of the study and the data used are described below. A discussion of the research results is presented in the next section. In the final part, conclusions and recommendations for further research are drawn.

2. Literature Review

The theory of economic growth has its origins in the work of Solow (1956), who presented the first and important neoclassical growth model. The neoclassical approach looks at the technological progress along with labor and capital as the main factors of production explaining the long-term economic growth. Solow (1956) showed that it is the technical progress that is the determining factor in the economic growth, and not capital, as was accepted before his findings.

The key assumption of the **neoclassical growth model**, which subsequently drew the main criticism, was that the technological progress is exogenous, thus it is determinable, as opposed to endogenous ones, outside the economic system or unrelated to processes within the modeled system itself.

The dependence of the technical process on human capital, and therefore, on the amount of scientific knowledge and practical experience accumulated in the learning process, predetermined the turn towards endogenous growth models that began with the works of Romer (1990). According to **the theory of endogenous growth**, the main source of long-term economic growth – technological progress – is the result of investments in human capital, research and development, which turn into innovations, new technologies and make a significant contribution to the economic growth. This was the main difference between the two growth models.

Beyond exogenous and endogenous theories of growth, researchers have looked to growth factors such as **geographic, cultural, and institutional settings**. For example, the availability of *natural resources* or *favorable natural and climatic factors* determine the tendency for rapid economic growth, all other things being equal. *Cultural and religious values* determine the preferences of individuals, influence their behavior, which ultimately shapes the economic activity. Weber (1930), for example, noted the Protestant origins of capitalism.

But *the institutional factor* of the economic growth has become the most popular. Acemoglu and Robinson (2005) have shown that the main condition for a long-term growth is **the quality of institutions** rather than geography, and even the quality of labor and technologies are secondary. Institutions can mean **the rules of the game in society** that form the interaction of economic agents, including *the rule of law, protection of property rights, market entry*, etc. A striking example is the Korean experiment: after the division of North and South Korea in 1948, the former chose the model of Soviet socialism without private rights to capital and land, the latter - private property and market development. By the late 1990s, the South Korea was one of the "economic miracles" among Asian countries with a per capita GDP at the PPP of 16 thousand US dollars. Today, the South Korea's GDP per capita at the purchasing power parity is more than \$ 40,000, while that of the North Korea is less than \$ 2,000.

In the theory of growth, **finance** is not considered a growth factor (Levine, 2004). In a collection of essays by Meier and Seers (1984), which contains an overview of theoretical and empirical developments on the economic growth, finance is not even discussed as a factor in the economic development. Lucas (1988) made a point that the importance of finance is exaggerated in professional discussions about the determinants of the economic growth.

Robinson (1952) asserted that the financial sector follows development in the real sector, and that finance does not cause the economic growth but responds to changes in the demand from the real sector.

In contrast, Gerschenkron (1962) argued that a developed financial system is an important condition for industrialization. Stiglitz (2010) was convinced that financial markets contribute significantly to the economic growth.

Despite many years of debate in the academic community about the relationship between finance and the economic growth, there is still no consensus on the relevance and direction of this relationship.

Summarizing different views and works, we can arbitrarily distinguish three main theories that differ from each other in respect of relations between finance and the economic growth:

1. The Theory of “Financial Supply”. Its supporters argue for a significant impact of the level of financial development on the economic growth. McKinnon (1973), Stiglitz (1993) assert that financial institutions and markets offering financial services create prerequisites for the economic growth. The economic growth cannot be achieved without finance.

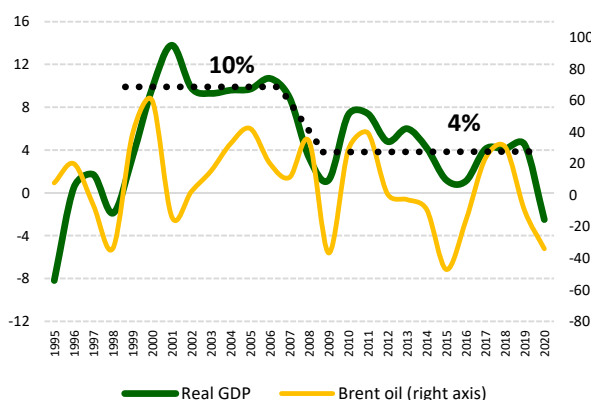
2. The Theory of “Financial Demand”, whereby financial development is a consequence of events in the real sector and follows the economic growth. This hypothesis was put forward by Robinson (1952). Subsequently, its empirical proof was reflected in the works of many researchers, including Arestis, Demetriades (1997), Guryay et al. (2007).

3. The Theory of “Bi-Directional Causal Relationship between Finance and the Economic Growth”. It sits between the theories of financial supply and demand. Proponents of this theory admit mutual influence of the financial sector and the economic growth. Greenwood, Smith (1997), and Demetriades (1996) show that the financial system can contribute to the economic growth, in turn, the economic growth predetermines the demand for financial services.

3. Analysis of Investments, Credits, and Money in the Kazakh Economy

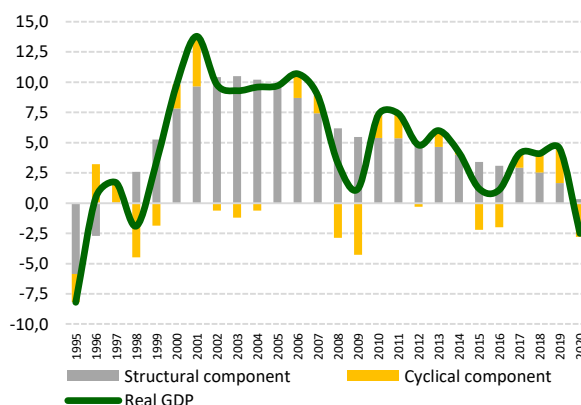
The rates of economic growth in Kazakhstan slowed down significantly after the global financial crisis due to a nearly two-fold drop in prices of oil, which remains the driver for economic growth. The long-term economic growth declined from 10% (average growth rates in 2000-2007) to 4% (average growth rates in 2008-2020) (Figure-1).

Fig-1. Dynamics of Real GDP and Brent Oil as % YoY



Source: Bureau of National Statistics of the ASPR RK, Federal Reserve Bank of Saint Louis (USA)

Fig-2. Structural and Cyclical Components of the Economic Growth



Source: Bureau of National Statistics of the ASPR RK, author's computations

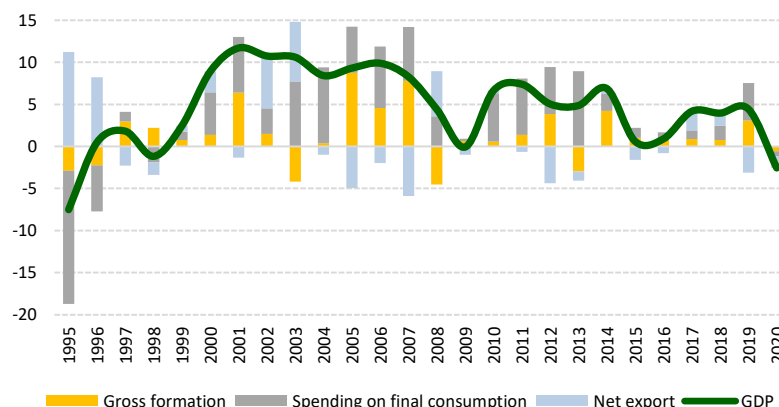
After the "super cycle" of commodity prices in the 2000s, accompanied by a cyclical overheating and commodity boom, the economic growth rates are slowing down both due to long-term structural and cyclical components of growth.

The "shale revolution" caused a structural excess of the global oil supply over its demand and a drop in oil prices in world markets, which led to a structural shift in the Kazakh economy against a persistently low diversification and declining productivity. The assessment shows that the structural component of GDP has decreased by more than 5 times since the beginning of 2000s (Figure-2).

Reduction of the growth potential in the economy was accompanied by a decline in the contribution of investments to the economic growth. In the period before the global financial crisis (in 1997-2007), the contribution of investments to the economic growth averaged 3 percentage points, however, in some years it reached nearly 9 percentage points (Figure-3).

After the global financial crisis, in 2010-2020 the contribution of investments to the economic growth went down to 1.2 percentage points or by 2.5 times compared to the pre-crisis period (except for the 2020 crisis, the decline accounted for 2.2 times).

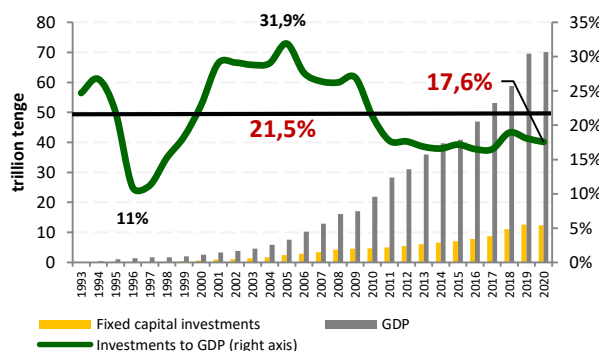
Fig-3. GDP by the End-Use Method



Source: Bureau of National Statistics of the ASPR RK

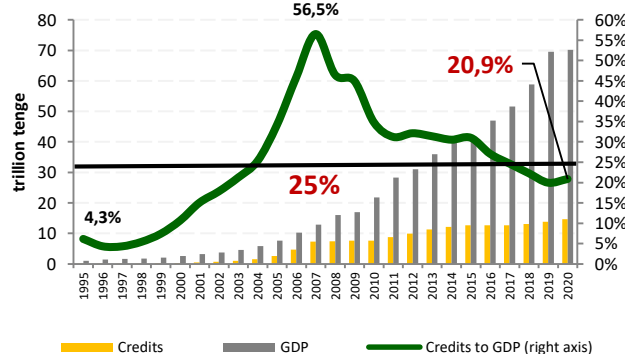
The growth of fixed capital investments in the period before the 2008-2009 crisis occurred due to a significant inflow of foreign direct investments, an increase in domestic savings and expansion of lending (Figures-4, 5, 6, 7). This was promoted by positive changes in external factors, in particular, a long period of high prices for raw materials. The situation in the global financial and commodity markets was stable. The pricing environment for the main items of domestic exports was developing favorably. The investment and lending activity of domestic enterprises and banks was supported by foreign capital. Owing to high liquidity of the global capital markets, foreign investments grew rapidly (Figure-7). As a result, capital formation was financed at a higher rate in 2000-2007.

Fig-4. Fixed Capital Investments



Source: Bureau of National Statistics of the ASPR RK, author's computations

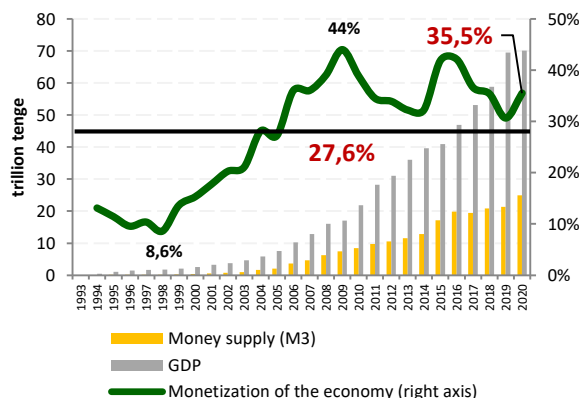
Fig-5. Credits to the Economy



Source: National Bank of Kazakhstan, Bureau of National Statistics of the ASPR RK, author's computations

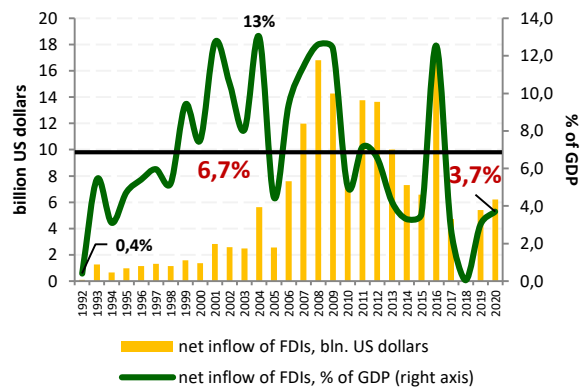
By 2005, the level of fixed capital investments reached the maximum of 31.9% of GDP, almost tripling from a minimum of 11% in 1996 (Figure-4). Loans to GDP peaked at 56.5% in 2007, having increased by more than 13 times from 4.3% when the banking system was established in 1997 (Figure-5). The growth in business activity has led to an increase in the demand for money. Deposits went up in the structure of domestic savings. As a result, monetization of the economy grew rapidly and peaked at 44% in 2009 (Figure-6).

Fig-6. Monetization of the Economy



Source: National Bank of Kazakhstan, Bureau of National Statistics of the ASPR RK, author's computations

Fig-7. Foreign Direct Investments

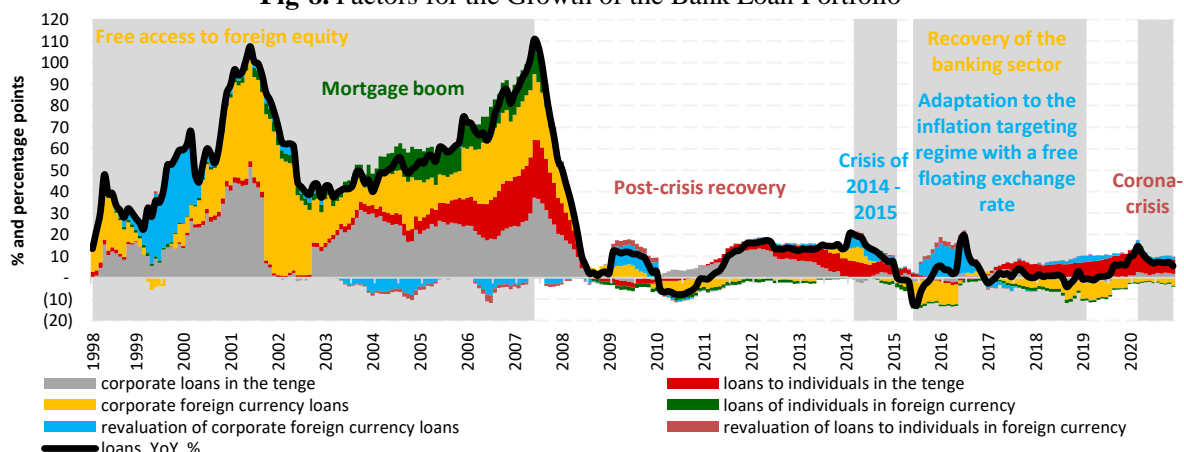


Source: National Bank of Kazakhstan, Bureau of National Statistics of the ASPR RK, author's computations

Banks' access to loans abroad in the context of high liquidity of external capital markets contributed to the growth of consumer activity in the 2000s. Consumer and mortgage lending, especially foreign currency lending, developed at a rapid pace. The latter contributed to a boom in the housing market, which was heating up in the face of limited existence of financial instruments. Available funds of economic entities were channeled into real estate investments. During these years, there were clear signs of overheating of the economy, bank lending to GDP increased to a record of 56.5%.

With the onset of the global financial crisis and the contraction of the world capital market, inflows of foreign direct investments sharply decreased (Figure-7). Corporate lending, mainly in foreign currency, which made a significant contribution to the increase in bank loans in the early 2000s, significantly reduced its role in the growth of bank lending, mainly due to a reduction in the foreign currency portion (Figure-8).

Fig-8. Factors for the Growth of the Bank Loan Portfolio



Source: National Bank of Kazakhstan, author's computations

In fact, the banking sector was overheated in the 2000s. The growth of loans, which reached 110%, indicated the presence of an obvious “bubble” that was fueled by a similar “bubble” in the real estate market.

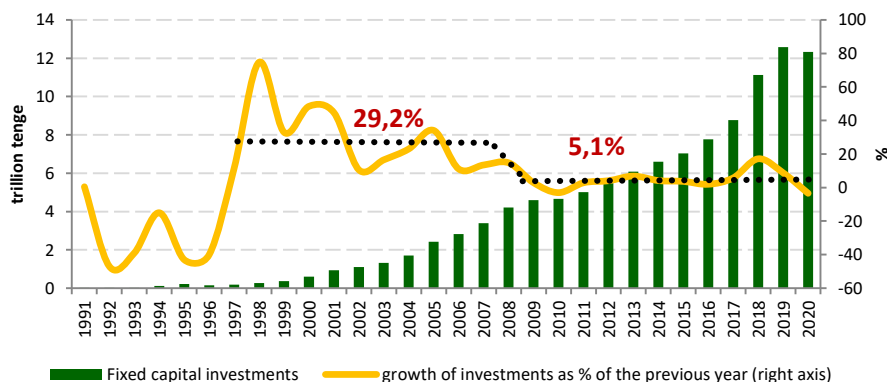
The global financial crisis has inflated the mortgage bubble. The construction and retail sectors have ceased to support an explosive growth of lending. Later, the growth of loans slowed down, returning to the equilibrium level. However, a significant problem of non-performing loans accumulated, taking several years to resolve it (from 2015 to 2019).

The overflow of bank liquidity to non-tradable sectors took place in the context of appreciation of the tenge exchange rate due to the receipts of significant oil revenues and the inflow of foreign currency in the 2000s. The domestic demand in the non-tradable sector was increasing, especially in trade, construction, real estate, transportation, and wages and jobs in these sectors grew. The prosperity of the oil sector and the flow of resources into non-tradable sectors with a significant weakening of non-oil tradable sectors, especially agriculture and manufacturing with their export potential, pointed to the symptoms of the Dutch disease.

Stronger distortions in the structure of the economy towards non-tradable sectors with low productivity, along with heightened volatility of macroeconomic parameters, increased uncertainties and risks in the economy, which negatively affected the assessment of risks by the financial sector and the buoyancy of its financing of the economy.

As a consequence, the growth rate of fixed capital investments slowed down against the reduction in the structural component of the economic growth after the global financial crisis. The decline in the inflow of foreign direct investments and lending only exacerbated the contraction in gross investments in fixed assets. The double-digit growth rate of fixed capital investments (on average, 29.2% in 1997-2007) changed to a single-digit growth, having decreased almost by 6 times after the global financial crisis (to 5.1% in 2008-2020s) (Figure-9).

Fig-9. Dynamics of Fixed Capital Investments



Source: Bureau of National Statistics of the ASPR RK, author's computations

Fixed capital investments to GDP went down from the peak of 31.9% in 2005 to 17.6% in 2020 (Figure-4).

The next section presents an outcome of the assessment of contribution made by finance to the economic growth based on the economic growth model including factors of production.

4. Assessment of Contribution by Finance to the Economic Growth

4.1. Assessment Methodology

In general, in the process of research, general scientific methods of analysis and synthesis were applied, and their combination provides a systematic, integrated approach to research. The dynamics of real GDP and the role of fixed capital investments, credits to the economy, and money resources in the economy in its growth are analyzed. The emphasis is on fixed capital investments and gross fixed capital formation, as they represent the key link between all financial resources in the economy and gross output.

The total amount of money in the economy is characterized by broad money, part of which is directed to finance the economy in the form of bank loans. In turn, loans to the real sector are channeled to finance working or fixed capital. A part of loans used for fixed capital is recorded in fixed capital investments. In addition to loans, fixed capital investments include a part of foreign direct investments embodied in fixed assets. In this regard, the focus of study is on the dynamics of fixed capital investments. Bank loans, foreign investments and the money supply in general are considered as a prerequisite for financing fixed capital investments.

The emphasis on fixed capital rather than working capital is explained by the fact that fixed capital is more important for the long-term economic growth, which is involved in the production process multiple times (buildings and structures, machinery and equipment, etc.), whereas working capital is used only once and is completely consumed during each production cycle in a short period of time (raw materials, supplies, inventories, money resources of an enterprise, etc.).

The assessment of the contribution of investments in fixed assets to the economic growth was also carried out within the framework of the system of national accounts. GDP by the end-use method contains gross fixed capital formation, which enables to estimate directly the contribution of capital to the economic growth. In addition, there are widespread alternative analysis tools that allow decomposing the economic growth in terms of production factors (capital, labor, factor productivity).

Decomposition of the economic growth in terms of production factors was carried out by constructing the Solow growth model based on the Cobb-Douglas production function including technological progress, capital and labor:

$$Y_t = A_t K_t^\alpha L_t^{1-\alpha} \quad (1)$$

where Y – gross domestic product, A – total factor productivity (technological progress defined as the Solow residual), K – capital, L – labor, α – capital elasticity coefficient (a share of capital in the total output, K/Y), $(1-\alpha)$ – labor elasticity coefficient (a share of labor in the total output, L/Y), and t means the point of time. The production function has the property of constant returns to scale, therefore $\alpha + (1-\alpha) = 1$, $0 < \alpha < 1$.

Capital is estimated in a standard way by using the perpetual inventory method:

$$K_t = (1 - \delta)K_{t-1} + I_t \quad (2)$$

where K – capital stock, I – fixed capital investments, δ – depreciation rate.

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$$K_0 = Y_0 \times k \quad (3)$$

To highlight the role of labor factor in the decomposition of economic growth, the following formula is used:

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$$L = E \times hc = E \times e^{\phi(s)} \quad (4)$$

where E – is the number of working-age population (15-64 years), hc – is the average level of human capital, which is calculated as a function of the average duration of education s^2 .

The depreciation rate of fixed capital broken down by asset class, the share of labor in the total output were calculated taking into account the assumptions laid down in Inklaar and Timmer (2013), Barro and Lee (2010).

Taking the logarithm of equation (1) enabled to obtain a linear form of the production function:

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$$\log Y_t = \log A_t + \alpha \cdot \log K_t + (1 - \alpha) \cdot \log L_t \quad (5)$$

By differentiating equation (5), the growth of factors of production and output is obtained, thereby the economic growth is decomposed by production factors. ΔY_0 is defined as the function of gross domestic product in the initial year (1970 in

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$$d \log Y_t = d \log A_t + \alpha \cdot d \log K_t + (1 - \alpha) \cdot d \log L_t \quad (6)$$

To isolate long-term trends and cycles from economic time series, statistical methods of smoothing the time series were used. To estimate the required investment growth rate at a given level of GDP, a multiple regression model based on the least squares method was applied.

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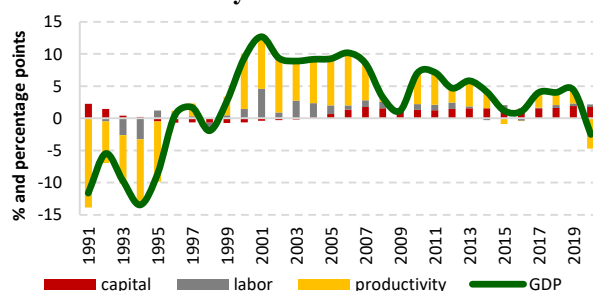
4.2. Discussion of Results

Decomposition of the economic growth by production factors on the basis of the Solow growth model shows that the contribution by investments to the economic growth, while having recovered at the beginning of the 2000s after a collapse in the 1990s, is growing rather feebly (Figures 10 and 11). However, despite the recovering growth of the contribution by capital, the economic growth has been at a lower level. Deceleration of the economic growth against the increasing contribution by capital indicates that the return on investments is diminishing.

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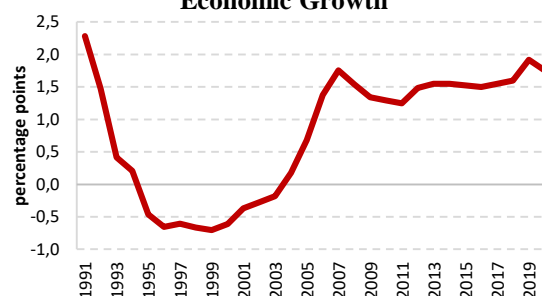
²Is determined as a function of the portion of population above 15 years old and the duration of education.

Fig-10. Decomposition of the Economic Growth by Production Factors



Source: National Bank of Kazakhstan, Bureau of National Statistics of the ASPR RK, IMF, WB, OECD, UN, author's computations

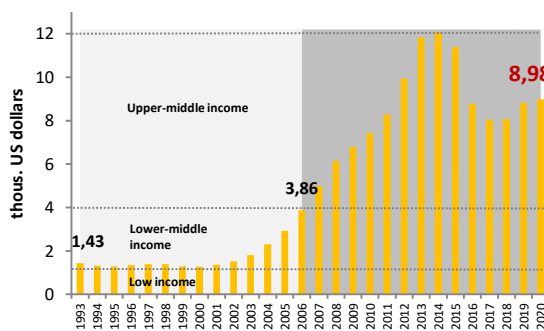
Fig-11. Dynamics of the Contribution by Gross Capital Formation to the Economic Growth



Source: National Bank of Kazakhstan, Bureau of National Statistics of the ASPR RK, IMF, WB, OECD, UN, author's computations

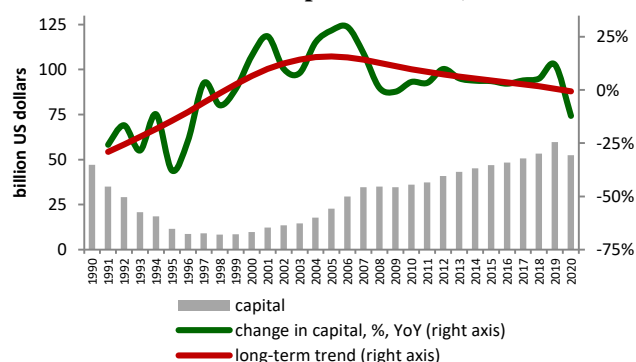
In the 1990s, large-scale reforms affecting almost all areas of life, as well as the transition to a market economy took place, which laid the foundation for a further growth. In the early 2000s, support was provided by high prices for exported raw materials and inflows of investments, which contributed to the economic recovery and the country's entry into the group of countries with an upper-middle income from 2006 (Figure-12).

Fig-12. Gross National Income per Capita



Source: World Bank

Fig-13. Gross Fixed Capital Formation (in constant prices of 2010)



Source: BNS ASPR RK, author's computations

The turbulent period of the economic growth was accompanied by fixed capital formation, which reached a record growth of 29.7% in 2006. Despite the excessive absolute values of accumulated capital of 17 trillion tenge in 2020, the dynamics of gross fixed capital formation after 2006 has slowed down, its long-term trend decays to zero (Figure-13).

The weakening of the capital formation dynamics when Kazakhstan reaches the level of a group of countries with the upper-middle income also indicates a decrease in the marginal return on capital. With the development of the economy and the capital formation, each tenge used for investment into the infrastructure and capital goods brings less and less return.

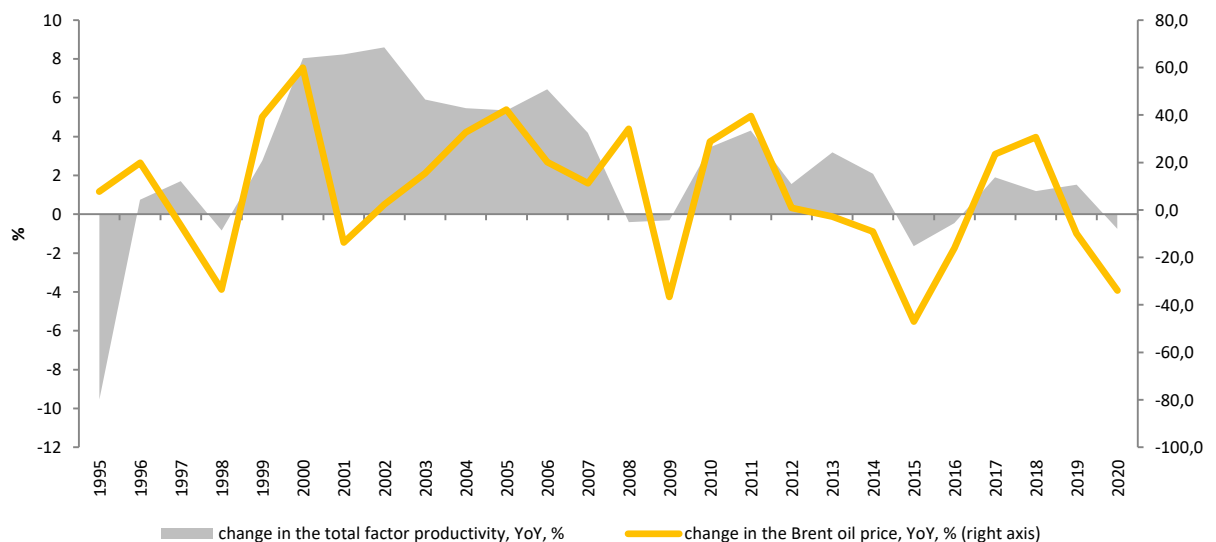
The main reason for the decline in long-term economic growth is the decreased factor productivity. In the early 1990s, productivity growth occurred due to large-scale market reforms, widespread privatization, liberalization of the

economy and attraction of foreign investments, and the establishment of a financial market.

It was at the beginning of the country's formation that the productivity made a significant effect on the growth due to structural reforms and the increased efficiency of resource redistribution.

In part, the quality of productivity growth was imaginary and was related to the oil cycle. The commodity "super cycle" in the early 2000s, in the context of the aggravation of the "Dutch disease", caused an increase in the total aggregate demand via the non-tradable sector. As a result, the total volume of production increased, which, in terms of unit of labor, led to the improved productivity. Subsequently, with the end of the period of high commodity prices, productivity declines. Therefore, in the phase of rise in oil prices, productivity increases, in the phase of decline, it decreases. (Figure-14).

Fig-14. Total Factor Productivity and Brent Oil Price



Source: National Bank of Kazakhstan, Bureau of National Statistics of the ASPR RK, IMF, World Bank, OECD, UN, Federal Reserve Bank of Saint Louis (USA), author's computations

The attempts to diversify the structure of the economy and get rid of the commodity cycle do not give the desired result, despite efforts made since the early 2000s and the implementation of government programs with an impressive volume of their budget, starting with the Strategy for Industrial and Innovation Development of the Republic of Kazakhstan for 2003-2015.

Given the possibility of getting a return on an investment project in 5 years on average, the transformation to a high-income country has slowed down, which is associated with the weakness of institutions and the lack of transition to a new model of the economic growth.

It is exactly coming to standstill at the stage of reaching the level of middle-income countries and the inability to step over further that is considered as a sign of a "middle income trap". After eliminating the primary causes of inefficiency in the redistribution of production factors through the transition from a planned to a market economy, reaching the basic level of education, urbanization and industrial

development, Kazakhstan is also experiencing problems of the “middle income trap”.

World experience shows that factor productivity is more important in the transition of a country not from low to middle-income levels, but particularly at the stage of transition from the middle level to the high (Kim, Park, 2017). Industrialization owing to the cheap labor, import of existing technologies, the formation of basic education at the initial stages of catching-up development or in the transition from low to medium levels of development should be strengthened at the next stage by increasing the value added and building up human capital to boost the level of complexity of the economy, increasing R&D, innovation and skills for their growth.

In the context of Kazakhstan, given an ambitious goal of entering the top thirty countries by 2050, increasing productivity is especially important, without which the achievement of the goal will require huge financial investments. Least squares estimates on the basis of multiple regression model³ show that, other things being equal, investments should grow at a rate (at the level of 11%) almost 2 times higher than the historical average values (about 6% on average in 1995-2020). According to the World Bank, in order to enter the top thirty developed countries, all other things being equal, investments in Kazakhstan need to increase to more than 60% of GDP (Revilla, Keller, 2018). Given the historically average value of fixed capital investments at 22% of GDP and a peak of 32% of GDP during the boom period in 2005, reaching the 60% level of investment to GDP will require colossal efforts.

In this regard, it is deemed important to focus on improving the qualitative growth of the economy's productivity. For a qualitative increase in the factor productivity in Kazakhstan, the automation of operational processes and their digitalization, as well as the introduction of new technologies, are not enough. It is necessary to address the fundamental problems that curb the private sector development and hinder the productivity growth by strengthening institutions, making the commodity market more efficient, intensifying competition and reducing market concentration. Weakness and inefficiency of commodity markets are confirmed by international ratings.

Large state-owned enterprises continue to make a significant contribution to the economic growth. The government involvement in the economy has expanded with the development of the quasi-public sector, which led to a slowdown in further transition to a market economy. The private sector has not reached full-fledged development.

The OECD's review of the Kazakh commodity market shows that the quasi-public sector is more represented in the Kazakh economy than in any of the OECD countries. In the markets, especially in the network-based sectors (information and communication technologies, transport, including transportation of petroleum

³ The index of the physical volume of gross domestic product at constant prices, as%, on a year-over-year basis, was used as a dependent variable; the independent variables included the index of the physical volume of the gross domestic product components by the end-use method (spending on final consumption, gross capital formation, exports and imports of goods and services) as %, on a year-over-year basis. The target level of economic growth is about 5% per year according to the Concept for Kazakhstan's Entry into the Top 30 Developed Countries in the World.

products and gas, energy supply, water supply, waste water disposal, etc.) large enterprises are dominating, quasi-public ones in particular, where the enterprise management is weak. According to the World Bank, old enterprises, which dominate in the market, are significantly inferior in terms of productivity growth to newly established small enterprises.

With the increasing influence of the government on the economy, market mechanisms are distorted. The monopoly in network-based sectors, which have a significant impact on the development of other sectors of the economy and subsistence of the population, as well as imperfect tariff policy lead to uncompetitive prices and production quotas that negatively affect the overall competitiveness of the economy.

The significant presence of state-owned enterprises and the quasi-public sector in the economy, which is measured by a disproportionately high output and contribution to the economy compared to private enterprises, generates inefficient pricing and production based on subsidies and other distortions, which, in turn, suppress the private sector.

The quasi-public sector has become a powerful instrument of the government policy of economic development, capable of influencing the development policy and competition both in individual sectors and throughout the economy. Enterprises with a dominant market position receive an additional advantage of access to concessional financing from the budget and protection from bankruptcy through financial assistance. In turn, this has a detrimental effect on competition in the domestic market.

Distortion of market mechanisms impedes an efficient and fair distribution of resources, their redirection to productive enterprises. Efforts to diversify the economy and improve the factor productivity are undermined.

The OECD and the World Bank also point to high barriers to entry for new players, especially in the network-based sectors. It is easier for Kazakhstani enterprises to enter the market in sectors with low value added. This explains the reason for the growth of the non-tradable sector with low productivity in the environment of distortions in the economy's structure. In high value added sectors, barriers to doing business are higher.

Addressing these fundamentals of competition, which are important components of the growth in innovation and productivity as well as improving the quality of human capital and institutions, are necessary conditions for structural changes that will lead to a high-quality sustainable long-term economic growth.

A qualitative improvement in the private sector standing and its better competitiveness will lay the foundation for increasing its attractiveness for the financial sector and the growth of market financing of the economy.

5. Systemic Factors Constraining the Financing of the Economy

Structural factors play a key role in the financing of the economy. A poor performance of the economy's diversification result in a persisting inefficiency of the private sector and, accordingly, high credit risks in the economy.

In recent years, the banking sector has significantly improved its financial stability. The quality of the loan portfolio of banks has improved, banks have been recapitalized by shareholders and within the framework of the Program to increase the stability of the financial sector.

Despite the improvement in the quality of the STB loan portfolio, the level of credit risk of borrowers in the real sector remains high, which is an important source of vulnerability for the banking sector.

On the part of banks, credit risk was reduced by reducing the volume of loans with a high risk of non-repayment and improving the quality of credit decisions. In the process of rehabilitation of banks from 2016 to 2020, non-performing loans in the amount of more than 6 trillion tenge were written off.

However, the problem loans of previous years still remain in the corporate portfolio. The credit risk of the corporate portfolio continues to be high, despite a decrease in the share of problem loans to 21.2% in 2020, taking into account doubtful loans (a decrease from 17.8% to 12.6%). The reasons may be insufficient capital to recognize losses on these loans and/or the existence of legal restrictions on the collection of collateral.

Non-performing loans do not pose a risk if there is full coverage of losses due to provisions. However, the level of provisioning of the STB loan portfolio (11.6%) remains insufficient to fully cover the expected credit losses. In conditions of low responsibility for reporting and lack of sufficient capital for full recognition of losses, banks very often create provisions that are actually insufficient to cover the risks of such loans.

The deterioration of the quality of loans in previous periods was a reflection of problems both on the borrowers' side due to a decrease in solvency, and on the banks' side – in terms of the low efficiency of risk management and internal control systems.

Weakness in the banking sector often required support from the state and restrains a significant increase in credit ratings from international agencies.

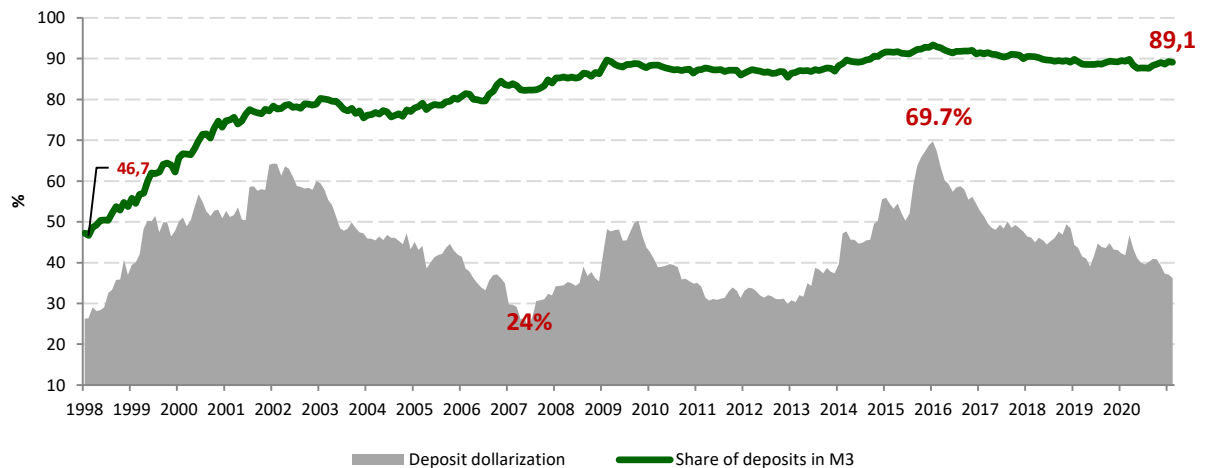
For the growth of lending, it is important to remove the barrier in the form of creditworthiness of real sector enterprises, which exacerbates the problem of credit risks for STBs. In 2020, 42% of the bank debt of large and medium-sized enterprises falls on under-capitalized enterprises. 27% of small enterprises are insolvent and 56% of the bank debt of small enterprises is concentrated on their balance sheet.

Most enterprises in the real sector are in dire need of increasing their own capital, have a high debt burden, low liquidity and return on investment. A sustainable solution to this systemic problem requires the creation of conditions for the effective recovery of real sector enterprises. It is necessary to eliminate the shortcomings of the business environment in the field of corporate bankruptcy and the development of corporate insolvency institutions, creating conditions for its effective settlement.

After solving the issues of credit risks, both from the financial and real sectors, it is important to solve the problem of strengthening the funding of banks.

Despite sufficiency in the money supply and its adequate growth that corresponds to the economy's growth rates, the major component of the money supply (89.1% at the end of 2020) – deposits, which are the main funding base for banks after the global financial crisis – are characterized by a relatively high degree of dollarization (Figure-15).

Fig-15. Deposits and the Money Supply



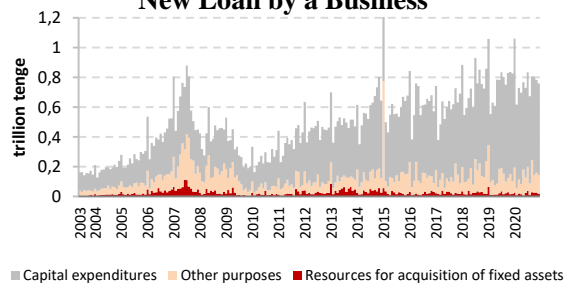
Source: National Bank of Kazakhstan, author's computations

During 1998-2020, the level of deposit dollarization accounted for 44.1%. The openness, liberality, export orientation and import dependence of the economy generates a demand for currency; therefore, it is natural to have a certain level of dollarization. Despite the reduction of deposit dollarization to 37.3% in 2020, there is a potential for its further reduction through increasing confidence in tenge assets by stabilizing inflation and increasing the stability of the exchange rate to external shocks by diversifying the structure of the economy. Stabilizing inflation, reducing credit risks along with eliminating imbalances in the economy will help to ease monetary conditions, which will have a positive effect on economic growth.

The overwhelming majority of economic entities receive income in the national currency, and foreign currency borrowing is limited for them. In this regard, a significant part of the money supply is not channeled to financing of the economy in the tenge. In addition to high dollarization, the deposit funding base is inherently volatile compared to the external borrowing and bonds that banks relied on before the global financial crisis. In Kazakhstan, deposit funding is still unstable due to the specifics of the market associated with the dominance of deposits without penalties for early withdrawal. This has a constraining effect on the transformation of deposits into long-term loans. An unstable and dollarized funding base has a strong impact on lending.

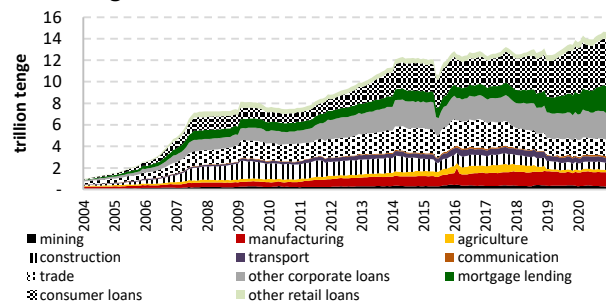
Loans formed from an unstable funding base are directed mainly to short-term financing and working capital rather than fixed capital (Figure-16), in the industry-based context – trade and the consumer sector (Figure-17).

Fig-16. A Purpose of Obtaining a New Loan by a Business



Source: National Bank of Kazakhstan

Fig-17. Structure of the Loan Portfolio



Source: National Bank of Kazakhstan

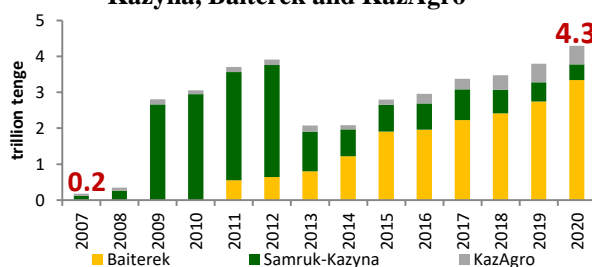
The real sector, the non-oil tradable sector (manufacturing, agriculture) in particular, received 13% of all credits to the economy on average for 2004-2020 (19% of corporate loans) (Figure-17). Banks mainly finance industries that give a quick return in a short period and have high margins – non-tradable sectors (trade, construction, real estate, transport, communication, non-production sphere), which account for 49% on average in 2004-2020 (the share in corporate loan portfolio - 73%), and in the retail segment mainly the consumer sector with a share of 18% (the share in retail loans – 54%).

Historically, the structure of newly issued loans to businesses is dominated by loans for the acquisition of working capital, which accounted for 74% on average in 2003-2020, versus 5% of loans for the acquisition of fixed assets. This shows that historically, the contribution of banks to the long-term economic growth has been low. In fact, the overheating of the credit cycle during the boom in the early 2000s only exacerbated cyclical fluctuations in the economic growth.

Financing of fixed capital is important for the long-term economic growth but it is a capital-intensive long-term investment, the cost of which is higher. In addition, often the business model of enterprises does not allow providing a sufficient cash flow to service the debt, there is no collateral to cover the cost of the loan. Due to these factors, the demand for loans from the non-tradable industries of the enterprise that are mainly credited in banks to replenish working capital, dominates.

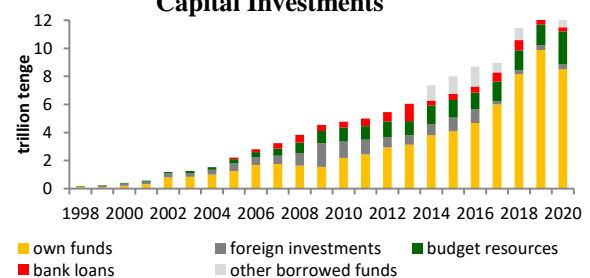
In turn, industrial enterprises are less dependent on bank loans, which is explained by the dominance of the government in their capital that supports them by financing them directly or through the quasi-public sector (Figure-18). The most profitable large industrial enterprises are financed abroad owing to ratings that are close to sovereign ones.

Fig-18. Loans Provided by Samruk-Kazyna, Baiterek and KazAgro



Source: Consolidated financial statements of NWF "Samruk Kazyna", NMHC "Baiterek", NMHC "KazAgro"

Fig-19. Funding Sources for Fixed Capital Investments



Source: Bureau of National Statistics of the ASPR RK

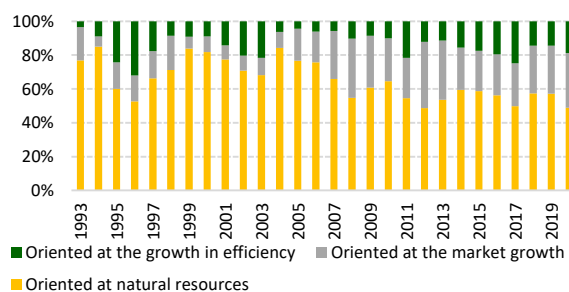
The economic growth remains dependent on large industrial enterprises, predominantly operating in extractive sectors (oil and gas sector and mining and metallurgical sector), which are capital-intensive industries. A significant share of fixed capital investments is made in these sectors at the expense of enterprises' own funds, which often include funds from parent quasi-public entities (Figure-19).

The quasi-public sector, which has evolved over the recent decades, replaces the market financing. Loans to clients of the NWF “Samruk-Kazyna”, NMHC “Baiterek” and NMHC “KazAgro” at the end of 2020 amounted to 4.3 trillion tenge, having increased by 22 times from 174 billion tenge in 2007 (Figure-18). The loan portfolio of the quasi-public sector reached the level equal to 29% of the total bank loan portfolio or 60% of corporate loans.

In these conditions, taking into account, on the one hand, the allocation of loans for the current needs of the real sector (working capital), and on the other hand, the existing structure of the economy with a dominant extractive sector, independent of bank loans, as well as quasi-public organizations competing with the market, the bank lending is limited in ensuring a long-term high-quality economic growth.

The quasi-public sector and large enterprises attract significant volumes of foreign direct investments. However, their structure is dominated by investments oriented at natural resources (65% on average during the period from 1993 to 2020), specifically, oriented at the sector of mining and quarry operations as well as the associated geological prospecting services (Figure-20).

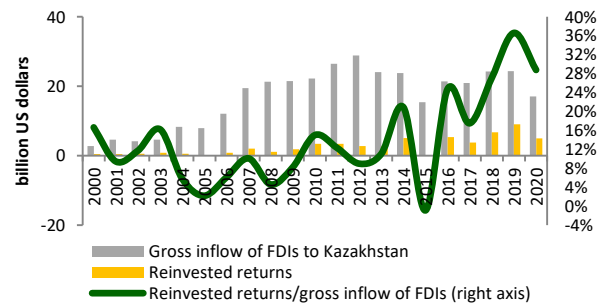
Fig-20. Structure of Foreign Direct Investments*



Source: National Bank of Kazakhstan, author's computations

* WB's approach to FDI classification by the investors' rationale on the basis of Dunning (1993)

Fig-21. Investors' Reinvested Returns**



Source: National Bank of Kazakhstan, author's computations

** The share of foreign direct investors in retained profit (loss) of Kazakhstani direct investment enterprises

Investments in non-tradable sectors, mainly in the service sector (trade, transport, finance, communications), are attracted in order to increase a market share, accounting for about 1/5 of all investments.

Investments in tradable non-oil sectors (the manufacturing industry and agriculture, in the first place) refer to investments aimed at increasing efficiency of the economy. On average, such sectors receive only 14% (for the period of 1993-2020 on average). The metal working industry is the main recipient of such investments.

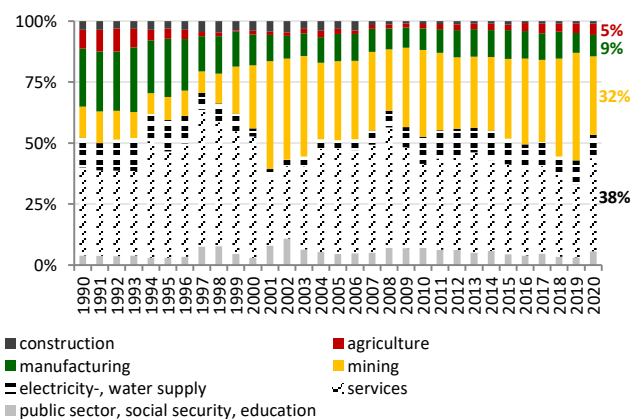
The historical prevalence of resource-oriented foreign direct investments in extractive industries does not contribute to the economic diversification. Moreover,

attracted foreign direct investments are not held for the purpose of productive expansion in Kazakhstan, thus showing a low level of reinvested income. (Figure-21). The share of reinvested income from the total inflow of foreign direct investments during 2000-2020 on average accounted for 14.4%, while in other economies in transition it ranges from 1/4 to 1/3 of the inflow of foreign direct investments. High repatriation of profits indicates a condition of the investment climate and its lack of attractiveness that discourages investors from continuing their operation and expanding their presence in the country.

In terms of investment areas, equity participation instruments prevail in the structure of foreign direct investments. In this regard, attracted foreign direct investments are recorded as own funds of enterprises in the sources of financing of fixed capital investments. This explains the growth of fixed capital investments made with own funds. At the same time, the share of borrowed funds of non-residents in the sources of fixed capital financing decreases from a maximum of 37% in 2009 to 2.8% in 2020 (Figure-19).

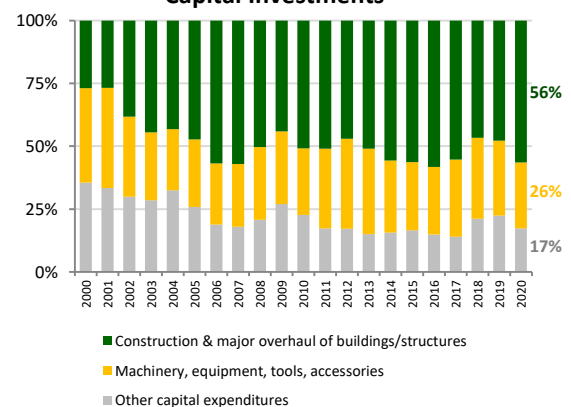
In the structure of domestic fixed capital investments, the primary and non-tradable sectors are dominating, with the share of 86.6% at end-2020 (where the mining industry accounts for 32.2%, and services – for 38.2%). Only 13.4% of fixed capital investments are channeled to the manufacturing industry and agriculture (8.8% – the manufacturing industry, and 4.6% – agriculture) (Figure-22).

Fig-22. Fixed Capital Investments by Uses



Source: Bureau of National Statistics of the ASPR RK

Fig-23. Technological Structure of Fixed Capital Investments



Source: Bureau of National Statistics of the ASPR RK

A low share of fixed capital investments into the non-oil tradable sector hinders diversification of the economy. The technological structure of fixed capital investments shows that investments are mainly directed to the construction and overhaul of buildings and structures (56% at the end of 2020). The share of investments into machinery, tools and equipment was 26% (Figure-23). This particular class of investments is important for diversification of the economy and development of processing industries.

Based on the identified systemic factors affecting the financing of the economy, a conclusion and proposals for addressing the problems of funding and the economic growth are presented in the next section.

6. Conclusions and Recommendations

The analysis of the dynamics of fixed capital investments, credits to the economy and the money supply in general, as well as foreign investments, shows that the role of finance in the economy before the 2008-2009 crisis was overestimated in the context of borrowing from foreign capital markets, overheating of the economy and exacerbation of the "Dutch disease".

The completion of the commodity "super cycle" with an incomplete structural transformation of the economy had a strong impact on the balance sheet and the willingness of the financial sector to provide funding to the real sector. This was aggravated by the expansion of government involvement in the economy by increasing the scale of the quasi-public sector, the number of programs for the development of industries and entrepreneurship and their budget, thus slowing the full transition to a market-based model of growth.

The persisting distortions in the economy and systemic problems are holding back the growth in financing of the economy. The structure of loans as well as foreign and domestic investments reflect the predominant development of the extractive and non-tradable sectors, which suppress the growth of non-tradable industries, manufacturing and agriculture in particular, signaling the continued presence of the Dutch disease in the economy.

A feeble progress in diversifying the structure of the economy predetermines the resource-based nature of the exchange rate, making it volatile, holding back the de-dollarization of the funding base. This, coupled with distortions in the structure of the economy that make macroeconomic parameters volatile, restrains long-term investments, which leads to the dominance of short-term loans.

Loans are used primarily to finance the current operations of enterprises in non-tradable sectors, and little investment is directed to tradable sectors to finance machinery and equipment that are important for increasing levels of product conversion.

In both external and internal investments, the dominating role of large enterprises and the quasi-public sector does not lead to a transformation of the economic growth model, restraining the market financial intermediation.

For the qualitative growth of the financial sector's contribution to long-term economic growth, it is important to ensure macroeconomic stability by weakening the link between the business and commodity cycles through the introduction of effective countercyclical fiscal rules, improving the investment climate by ensuring the rule of law, predictability of tax and investment legislation, protection of investors' rights for the effective implementation of diversification programs, which will provide a solid foundation for long-term growth.

Attracting investment requires stable inflation and keep it at a low level in accordance with the monetary policy strategy until 2030. In order to solve the problem of attracting efficiency-oriented foreign direct investment and retaining foreign investors, it is important to improve the institutional environment, increase transparency and predictability of tax administration for investors, increase the level of protection of investors' rights, improve the dispute resolution mechanism and legislation in the field of entrepreneurship. Strengthening institutions on the part of

the state will accelerate the diversification of the economy, balancing its structure, reduce credit risks and attract financing.

An important result of this study is the conclusions based on the Solow model, which showed a diminishing return on investments through which money and credits are channeled to the economy. As the economy develops, investments increase the contribution to the economy, but give an increasingly lower return, every year convincing more and more of the capital's inability to ensure a stable high economic growth. The decline in the long-term economic growth was mainly due to a decrease in the factor productivity.

Therefore, it is crucial to increase the productivity growth in order to ensure an accelerated and sustainable economic growth. This requires the development of the private sector, improving productivity by increasing the efficiency of the goods market, intensifying competition and reducing market concentration. It is important to create a competitive environment in the economy by reducing public funding and participation in the economy, and revising the role of the quasi-public sector in the economy. It is proposed to introduce OECD standards in the field of competition in commodity markets to ensure the free flow of resources, technologies and market entry, and to improve rehabilitation/bankruptcy procedures. This will allow accelerating the productivity growth, the introduction of technological innovations, as a consequence of economic diversification.

The existing institutional framework for implementation of the economic policy by the government through the quasi-public sector and instruments that distort the market, give rise to the dominance of large, old and poorly progressing enterprises in terms of productivity, on the one hand, and an ineffective and government-dependent SME sector, on the other hand. In both cases, there is a side effect on the financial sector. In the first case, a large business in the extractive industries is financed by an alternative funding, including foreign exchange funding, and becomes less dependent on bank lending. At the same time, in the segment of large corporate lending, the quasi-public sector is pushing out private financing. SMEs, in turn, without a qualitative transformation are concentrated on the unproductive sector and enhance their dependence on budget funds, in the absence of which the risk profile to the financial sector sharply increases.

In this regard, it is important to revise the commercial and industrial policy, as well as the policy in respect of large enterprises and SMEs. The role of the government should be to ensure that the rules of the game are clear and constant. Market players themselves must determine the competitive areas for development. This bottom-up approach will allow selecting viable goods and services. The government must be involved in market relations in critical cases of market failure and on a temporary basis until the gaps are filled. In the absence of alternatives, businesses will seek a competitive advantage and will increase efficiency in order to maximize profits; this will increase their creditworthiness, leading to the advancement of funding from the financial sector on market conditions.

In this case, the government, having completely vacated the niche to the market, can redirect the released resources to strengthen institutions and develop the human capital. Priority should be given to the fundamental strengthening of

institutional reforms and ensuring the rule of law, as well as making an emphasis on increasing the human capital with a view to move from the existing growth model, which is focused on resources and where the public sector plays a leading role, to a model that promotes the development of an active, modern and innovative tradable non-oil sector by reducing the role of the government in the economy.

To address the problem with attraction of efficiency-oriented foreign direct investments and retention of foreign investors, it is important to fine-tune the institutional environment, increase transparency and predictability of tax administration for investors and investment policy in general, enhance the level of protection of investors' rights, improve the dispute resolution mechanism and legislation in the field of entrepreneurial activities.

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