

ISSN 2789-3308

ECONOMIC REVIEW

National Bank of the Republic of Kazakhstan

No. 3, 2023



NATIONAL BANK OF KAZAKHSTAN

ECONOMIC REVIEW
National Bank of the Republic of Kazakhstan

Published by: National Bank of the Republic of Kazakhstan

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Concessional Car Loans in Kazakhstan: Review of Results

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The paper provides an overview of concessional car loan programs implemented in Kazakhstan. As part of the analysis, the authors tried to assess the effectiveness of these programs in the context of goals and objectives that they were intended to solve. The paper also presents the experience in providing government support for the purchase of cars in foreign countries.

Key Words: concessional car loans, government support program, subsidies, domestic car manufacturers, sale of cars.

JEL-Classification: G18, G 21, H42, L62.

1. Preamble

Government support programs are quite common in international practice and enable to solve problems that have high priority for governments in the context of stimulating economic growth through the development of certain sectors of the economy, as well as improving the well-being of the population and reducing social tension. Support can be expressed in the form of targeted grants, subsidies or loans on preferential terms. A widespread form of government support is subsidizing the purchase of motor vehicles. In this case, subsidies can be direct, through the provision of a cash subsidy for the purchase of a car, or can be expressed in subsidizing interest rates when buying a car on credit. In world practice, there are many examples of support for car sales on preferential terms. For the most part, such programs are targeted, aimed at supporting certain segments of the population that experience financial difficulties, or aimed at switching to environmentally friendly vehicles and minimizing pollutant emissions into the atmosphere.

In Kazakhstan, concessional car loan programs were designed in order to stimulate the domestic automotive industry, provide the population with new cars manufactured in Kazakhstan, modernize the country's car fleet, and also to improve the state of the environment. At the same time, the programs were not targeted in terms of providing concessional car loans only to a certain circle of people. Any citizen of Kazakhstan could purchase a car made in Kazakhstan on preferential terms on credit at a reduced rate, subject to the availability of financing in the operator bank at the time of application. The program established threshold criteria for the cost of a car: the price should not exceed 15 million tenge.

At the moment, the success of solving the tasks set within the programs is not clear, and this does not allow talking about the high efficiency of concessional car loan programs practiced in Kazakhstan.

It should be noted that government support should be targeted and temporary, providing an opportunity to overcome the financial difficulties that arise for the industry/enterprises/people at a certain stage of the life cycle, and become a kind of impetus at the formation stage in the case of new enterprises. Government support should not be transformed into a permanent window of access to cheap financing for both producers and consumers.

In this light, the decision to redirect allocated funds through the EDF¹ (100 billion tenge) to modernize the bus fleet in the regions of the country made by the Ministry of Industry and Infrastructure Development of Kazakhstan (MIID) is, in our opinion, a move in the right direction.

¹ "Enterprise Development Fund" JSC

2. International Review

Providing government benefits and subsidies for the purchase of vehicles is common in many countries around the world. Support programs can pursue different goals, which determine the final conditions and options for providing the government support. In some countries, the government support is aimed at stimulating the automotive industry, which involves providing car loans on preferential terms for the purchase of locally manufactured cars to everyone, regardless of their income or place of residence. Countries such as Kazakhstan, Brazil, India, and Russia have followed this path. Other countries have developed targeted programs aimed at supporting a specific group of people (low-income people living in disadvantaged areas with high levels of pollution) or encouraging the transition to electric cars in order to reduce carbon dioxide emissions into the atmosphere.

In the Russian Federation, in 2015, as part of the “Automotive Industry” sub-program of the “Development of the Industry and Increasing Its Competitiveness” government program², a program was launched to subsidize loans to individuals for the purchase of locally manufactured cars. Government support was aimed at stimulating the demand and supporting the Russian automotive industry. In its original form, the program implied the provision of subsidies to credit institutions to cover their shortfall in income when providing loans to individuals at a discount. Originated loans that were eligible for subsidies had to meet a number of conditions, including:

- disbursed in rubles, against the pledge of a car to be purchased;
- the price of a car to be purchased should not exceed 1 million rubles and its gross weight should not exceed 3.5 tons;
- a car to be purchased should be brand new³ and manufactured in 2015;
- a down payment of at least 20% of the cost of a car to be purchased should be made.

Initially, the concessional lending program did not provide for requirements to final borrowers – individuals. As the program was extended, changes were made to it, including narrowing the circle of people to whom concessional car loans are available. Requirements were established for borrowers, whereby loans under the program were provided to families with two or more children who did not have a car before the date of application to the credit institution. Currently, when purchasing a car on credit, the program can be used by families with one or more children, first-time car buyers, electric car buyers, healthcare or educational workers, military personnel and their families, as well as retired military officers. As part of the program, the government provides a subsidy equal to 20% of the car price as a down payment for the purchase on credit of a new car worth up to 2 million rubles (25%, but not more than 625 thousand rubles when purchasing an electric car). For residents of the Far Eastern Federal District, a discount of 25% is provided.

A specific feature of Russian concessional lending program is not the subsidization of interest rates, but the provision of cash subsidies for the purchase of cars on credit, i.e. in fact, the government provides a discount on the purchase of a car. At the same time, the interest rate on a concessional car loan is determined at the level of the current rate on comparable loan products (tenor, amount and size of the down payment on a car loan for the purchase of a comparable type of car) and should not exceed the current key rate of the Bank of Russia by more than 10 percentage points. This program will be in effect until the end of 2023.

In Brazil, a program to incentivize the purchase of passenger cars (Programa de incentivo a compra de veículos leves) was launched in June 2023 as a temporary measure to stimulate the car industry. The Brazilian government program was aimed at stimulating sales of cars produced within the country, whereby discounts were provided to individuals for the purchase of new cars from 2 to 8 thousand reais for cars costing up to 120 thousand reais. The program was positioned as a temporary measure, for up to 30 days or until the allocated funds are exhausted. The size of

² The Government Program of the Russian Federation “Development of the Industry and Increasing Its Competitiveness” was approved by the Decree of the Government of the Russian Federation dated April 15, 2014 No. 328

³ No record registration at the time the loan was provided and was not owned by any individual

discount was determined depending on the characteristics of the car to be purchased. The maximum discount of 8 thousand reais will be received by the buyer of a car with a hybrid engine or running on ethanol, energy consumption less than 1.40 MJ/km, costing less than 70 thousand reais, in which the share of locally produced parts is more than 75%. Notable is the ban on resale of a car purchased under the program within 6 months from the date of purchase. In case of sale, the discount must be returned to the budget. At the moment, the program has been partially suspended (in terms of passenger cars), while discounts on the purchase of trucks, minibuses and buses continue to apply.

The Government of India has developed a program for the production of electric vehicles called “Government Subsidy on Electric Vehicles / the Faster Adoption and Manufacturing of Electric Vehicles (FAME)”, which aims to popularize the use of electric vehicles and also stimulate electric vehicles production in India. The implementation of the program is divided into two stages: FAME I and FAME II.

The first phase of FAME I was launched in 2015 and had four main goals – technological development, creating the demand for electric vehicles, launching pilot projects and developing charging unit/station infrastructure. The demand for electric and hybrid vehicles was created and stimulated by subsidizing the purchase of such vehicles. The Indian government planned to develop indigenous technologies and domestic production of hybrid and electric vehicles through fiscal and monetary incentives.

From 2019, the second phase of FAME II was launched; its goal was to develop the electric vehicle ecosystem in India, including the development of charging infrastructure, R&D and manufacturing of electrical components.

The program uses various incentives and bonuses for individuals: subsidies for the purchase of an electric vehicle, coupons for which a certain amount is returned later, subsidized interest rates, exemption from transport tax at the time of purchase, exemption from registration fees when purchasing a new electric vehicle, benefits on income tax, recycling benefits when deregistering obsolete gasoline and diesel vehicles. Thus, for example, when purchasing vehicles, the following discounts apply:

- up to 40% of the initial price when purchasing two-wheeled vehicles (electric scooters);
- about 50 thousand rupees (≈\$600) when purchasing three-wheeled electric vehicles;
- about 150 thousand rupees (≈\$1,800) when purchasing four-wheel electric vehicles;
- about 5 mln rupees (≈\$60 000) when purchasing electric buses.

It is worth mentioning that many countries are implementing programs aimed at reducing carbon dioxide emissions into the atmosphere through subsidizing the purchase of electric (hybrid) cars.

For example, since 2009, China has had a centralized program to subsidize the purchase and leasing of electric vehicles, aimed at supporting both manufacturers and buyers of such vehicles. The amount of subsidies varies and depends on the type of vehicle. The maximum subsidy for the purchase/leasing of hybrid passenger cars is 50,000 Yuan, for electric passenger cars – 60,000 Yuan⁴.

Developed countries in Europe also offer soft car loans for electric vehicles. For example, the UK has a Low Emission Vehicle Grant Scheme⁵, where the government subsidizes the purchase of a car costing up to £35,000, with a maximum subsidy of £2,500. For vehicles equipped for wheelchairs, the subsidy can be up to 35% of its cost. The purchase of vehicles that meet certain requirements is subsidized, for example, vehicles with zero CO₂ emissions from the tailpipe.

Germany currently has an electric mobility financing program (Förderprogramm Elektromobilität), under which you can count on a government bonus of 6,000 euros when purchasing/leasing an electric car worth up to 40 thousand euros. When purchasing/leasing an

⁴ https://www.ndrc.gov.cn/fggz/hjzy/jnhnx/201006/t20100603_1134366.html?code=&state=123,
<https://www.ndrc.gov.cn/fggz/hjzy/jnhnx/201006/W020190910596757681410.doc>

⁵ <https://www.gov.uk/plug-in-vehicle-grants/print>

electric car costing more than 40 thousand euros, the subsidy amount will be 5,000 euros⁶. It is worth noting that the amount of subsidy has decreased compared to 2022. Together with the environmental bonus (Umweltbonus), the size of the government subsidy was 9,000 euros (for cars costing up to 40 thousand euros) and 7,500 euros (for cars costing over 40 thousand euros). From 2023, the environmental bonus has been abolished, and the amount of subsidies will be gradually reduced in the future.

It is also necessary to mention a number of countries in which support programs are focused on providing targeted assistance to certain segments of the population.

Australia has a targeted subsidized lending program, the Financial Resilience program, whereby financially disadvantaged people can obtain an interest-free loan, including for the purchase of a motor vehicle. The NILS for Vehicles scheme allows the purchase of a vehicle, including cars, scooters, stand-on scooters, motorcycles and boats, for between \$2,000 and \$5,000 for up to 48 months. Access to this financial product is available to low-income Australian citizens over the age of 17 (pensioners, people with disabilities, people whose income is less than \$70,000 for singles and \$100,000 for a couple per year or people with dependents (pre-tax)). That being said, organizations that provide interest-free car loans (the operators through which the financing flows) may impose additional requirements on their recipients. For example, the Mary McQuillop Foundation, in addition to general program requirements, establishes additional criteria for individuals seeking a NILS loan through them, including:

- residence in New South Wales or ACT (Australian Capital Territory);
- no more than 3 existing loans or debts (including rent) and no late payments on own obligations (more than 90 days without missed payments on debts);
- absence of debts on utility services or less than 500 dollars in arrears⁷.

In the United States, various targeted support programs are practiced both at the federal and state levels. These programs can be implemented through concessional car loans, as well as through the provision of free vehicles to low-income families, the disabled, and the elderly⁸. For example, under the Ways to Work car loan program, low- and middle-income individuals, as well as those with poor credit histories, can obtain a car loan with a low interest rate or other terms that increase the availability of auto loans. This program is designed to help families in financial distress, with the vehicle purchased to be used as transportation to work. The amount of the loan is about \$5,000, but the amount may vary depending on different conditions.

Minnesota has a Car Ownership Program⁹, which allows low-income individuals and families to purchase a car for up to \$6,000 at a low interest rate. The Minnesota Car Ownership Program is a program that allows low-income individuals and families to purchase a vehicle up to \$6,000 on a low-interest loan. Only residents of the City of Ramsey or Washington County with six months of continuous employment, a valid Minnesota driver's license, and insurance coverage until the loan is paid in full are eligible for a loan under this program. The household income must be less than 200% of the federal poverty level¹⁰.

Similar programs are available in many states. The State of California has a Department of Employment and Human Services (EHSD) auto loan program, The KEYS Auto Loan Program, which provides low rate loans of up to \$6,000 for vehicle purchases to CalWORKs participants¹¹ in Contra Costa County to help them keep their jobs. In addition, the State of California has several programs (The Clean Vehicle Rebate Project (CVRP), the Clean Vehicle Assistance Program

⁶https://www.bafa.de/DE/Energie/Energieeffizienz/Elektromobilitaet/Neuen_Antrag_stellen/neuen_antrag_stellen.html

⁷ <https://www.loansmarymackilloptoday.org.au/nils-for-vehicles>, <https://www.dss.gov.au/communities-and-vulnerable-people/programmes-services/financial-wellbeing-and-capability-overview-of-changes/financial-resilience>

⁸ <https://www.needhelppayingbills.com>

⁹ <https://caprw.org/services/money-jobs-transportation/cop.html>

¹⁰ <https://caprw.org/services/federal-poverty-guidelines.html>

¹¹ California's welfare program that provides temporary financial assistance and employment-focused services to families with minor children whose income and assets are below California's maximum family size limits.

(CVA))¹² that are aimed at promoting cleaner vehicles in California. These programs provide subsidies of up to \$7,500 for the purchase or lease of new zero-emission vehicles¹³ and up to \$2,000 for the installation of a Level 2 home charger. There is also a loan option available at a reduced interest rate (no more than 8%). Potential buyers must live in California in one of the counties with polluted environment, and have an annual income that does not exceed specified thresholds (\$135,000 for singles, \$200,000 for couples. World experience shows that government support programs in the automotive industry can pursue different goals: development of the automotive industry, support for the financially unstable part of the population or stimulation of the population's transition to zero-carbon vehicles (Annex 1).

3. Kazakhstan's Practice of Concessional Car Loans

In Kazakhstan, the first program of government support in the form of concessional car loans was launched in 2015 and was a part of the Joint Action Plan of the Government and the National Bank of Kazakhstan to support domestic automakers via second-tier banks¹⁴. Under this program, 26 billion tenge (in two tranches: in April 2015 – 15 billion tenge, in January 2016 – 11 billion tenge) was allocated from the National Fund of the RK in the form of contingent financing of banks (Table 1 of Annex 2). The loan under the program was available to individuals purchasing a domestically manufactured car costing up to KZT 5.6 million for a term not exceeding 5 years with a nominal interest rate not exceeding 4% (HESA not exceeding 7.5% per annum). At the same time, anyone could take advantage of this program, it was only necessary to have an initial payment of 20% of the cost of the car.

A continuation of this initiative was the Program for financing domestic automakers from the national budget also by means of contingent financing of banks for lending to individuals – buyers of locally manufactured vehicles¹⁵, under which 16 billion tenge was allocated (in two tranches: in 2018 and 2019, 8 billion tenge each; Table 2 of Annex 2). Lending terms and conditions for the end borrower remained the same, but the marginal cost of the purchased car was raised to KZT15.0 million, and the maximum loan term was increased to 7 years. As in the previous program, lending was available to any citizen of Kazakhstan, while the requirement for a down payment of 20% of the value of the car was excluded from the lending terms and conditions and became optional.

In 2019-2020, an additional KZT40 billion was allocated within the framework of the Program for lending to buyers of domestically manufactured passenger cars¹⁶ at the expense of the National Bank of the RK with preservation of the terms and conditions of providing credit resources to end borrowers (in two tranches: in 2019 and 2020, KZT20 billion each; Table 3 of Appendix 2).

In total, during the period from 2015 to 2020, 82 billion tenge was allocated for concessional lending, the implementation of which at the moment, according to the Development Bank of Kazakhstan, continues on the basis of revolving financing. During the implementation of these concessional car loan programs, more than 33.9 thousand car loans were originated for a total amount of 193.7 billion tenge¹⁷, including revolving financing.

¹² <https://cleanvehiclegrants.org>, <https://cleanvehiclerebate.org/en/cvrp-info>

¹³ Hybrid electric vehicles (HEV), plug-in hybrid electric vehicles (PHEV), battery electric vehicles (BEV), or fuel cell electric vehicles (FCEV).

¹⁴ Government Decree of the Republic of Kazakhstan dated April 23, 2015 No. 271.

¹⁵ Government Decree of the Republic of Kazakhstan dated November 29, 2017 No.792, Government Decree of the Republic of Kazakhstan dated February 21, 2019 No. 79.

¹⁶ Resolution of the Board of the National Bank RK dated May 31, 2019 No.79.

¹⁷ According to the DBK (<https://www.kdb.kz/reporting-on-implementation-of-programmes/>).

In 2022, another 100 billion tenge was allocated through the Industrial Development Fund with funds borrowed from¹⁸ the Extended Producer Responsibility (EPR) operator¹⁹, for a further financing of projects “aimed at improving the environment by stimulating consumer demand and vehicle renewal in the Republic of Kazakhstan within the framework of contingent financing of second-tier banks to finance individuals – buyers of domestically manufactured passenger cars²⁰”.

A significant difference between the terms of this program and the previous ones was the definition of the target group to which financing was provided on preferential terms. The target group included individuals – buyers of domestically manufactured passenger cars of the ecological class according to the technical regulations. At the same time, the program did not specify what ecological class a car should have in order to participate in the program of concessional lending. It should be noted that, according to the technical regulations²¹, there are 6 ecological classes²² (from 0 to 6). At the same time, environmental improvement is supposed to be achieved through the renewal of the car fleet.

Under this program, more than 13 thousand soft loans were originated, including those provided in February 2023 through revolving financing (Annex 2, Table 4).

During the period from 2015 to May 2023, 47,297 cars were purchased by the population within the framework of government programs for 299.3 billion tenge²³.

Thus, all these programs are aimed at (1) stimulating domestic car manufacturers, (2) increasing the availability of domestically manufactured passenger cars, and (3) renewing the country's car fleet.

3.1. Incentivizing Domestic Car Manufacturers

In the 7 years since the launch of the first Soft Loan Program, the volume of industrial production of cars has grown significantly. Thus, in 2015, the volume of industrial production of passenger cars²⁴ in value terms amounted to 84.2 billion tenge²⁵, or 12,184 passenger cars per year. In 2022, 103,345 cars were manufactured, which amounted to 1,195.6 billion tenge in value terms. Thus, the volume of industrial production of passenger cars increased by 14 times in value terms and by 8.5 times in physical volume (Figure 1). At the same time, in 2015-2016, passenger cars purchased under the soft loan program accounted for a significant part of the number of cars manufactured during these years in the country. Thus, in 2015, 36% of the cars manufactured in the same year were sold under the soft loan program, in 2016 – 79%. However, in subsequent years, the share of cars sold under concessional lending from the total number of passenger cars manufactured decreased significantly and did not exceed 15%. Based on the above figures, a significant contribution to the development of the domestic passenger car industry was made by the first program of 2015-2016, while other programs did not have a significant effect on the volume of car production.

¹⁸ At the interest rate of 0.1% by a lump-sum payment for the entire loan tenor, with the loan tenor of 30 years.

¹⁹ The “Extended Producer (importer) Responsibility (EPR) Operator” LLP is currently not functioning, the legal successor is “Zhasyl Damu” JSC, a subordinate organization of the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan.

²⁰ Government Decree of the Republic of Kazakhstan dated September 2, 2021 No. 604.

²¹ Customs Union Technical Regulations TP TC 018/2011 “On the Safety of Wheeled Vehicles”.

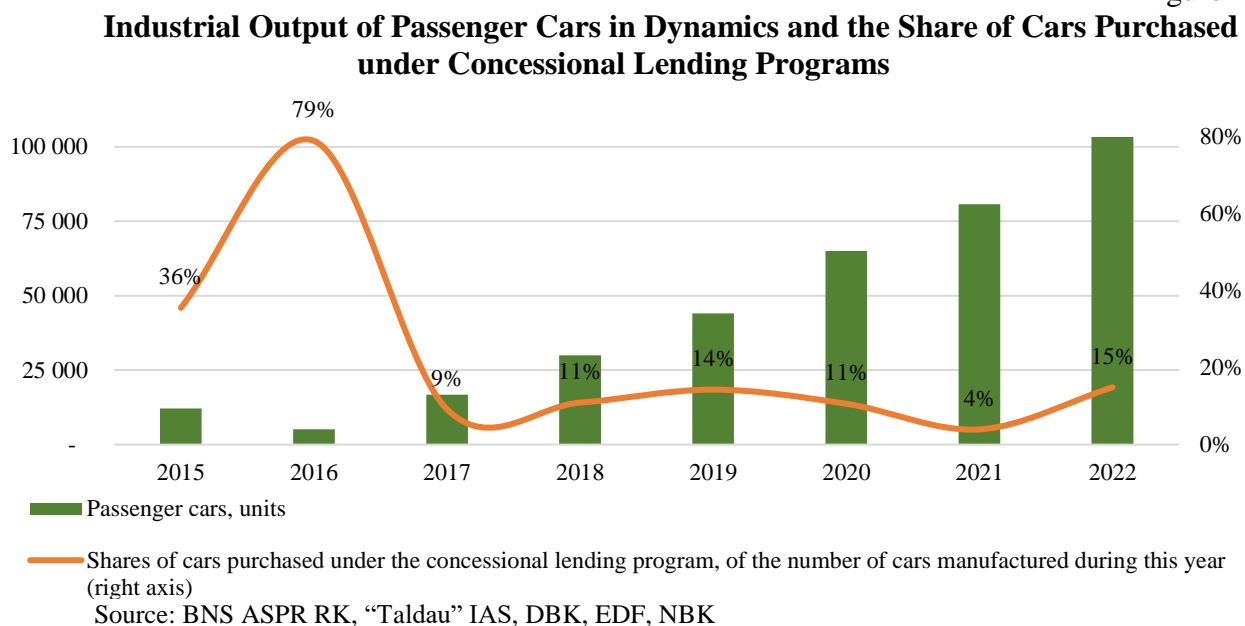
²² A classification code that characterizes the design of a vehicle or internal combustion engine depending on the level of emissions, as well as the level of requirements for on-board diagnostic systems.

²³ As of end-May 2023.

²⁴ Except for car engines.

²⁵ According to the “Taldau” IAS (<https://taldau.stat.gov.kz/ru/NewIndex/GetIndex/701592?keyword=>).

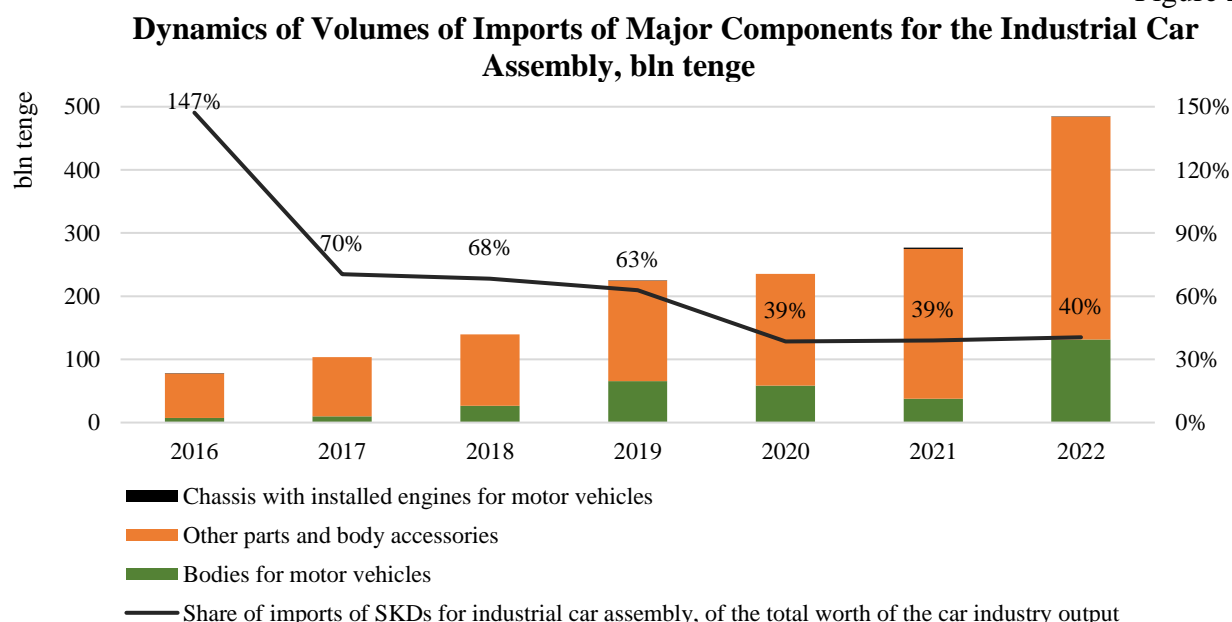
Figure 1



The positive dynamics of the passenger car output is an indicator of the industry's development; nevertheless, the share of large-scale assembly in the production of passenger cars remains significant. Thus, the volume of imported spare parts for industrial assembly of passenger cars (chassis, bodies and other body accessories) in 2022 amounted to 40% in value terms of the volume of manufactured products²⁶.

At the same time, the volume of imported large parts for passenger cars used in the industrial assembly is increasing annually in absolute values (Figure 2).

Figure 2



Note: For comparability with the volume of manufactured products of the passenger car industry, data on imports is converted into the tenge at the average KZT/USD exchange rate setting in the corresponding year.

Source: BNS ASPR RK, SRC MF RK

²⁶ The volume of produced products (goods, services) means the cost of all finished products produced by the enterprise, semi-finished products of its production intended for sale, as well as industrial works and services performed according to orders.

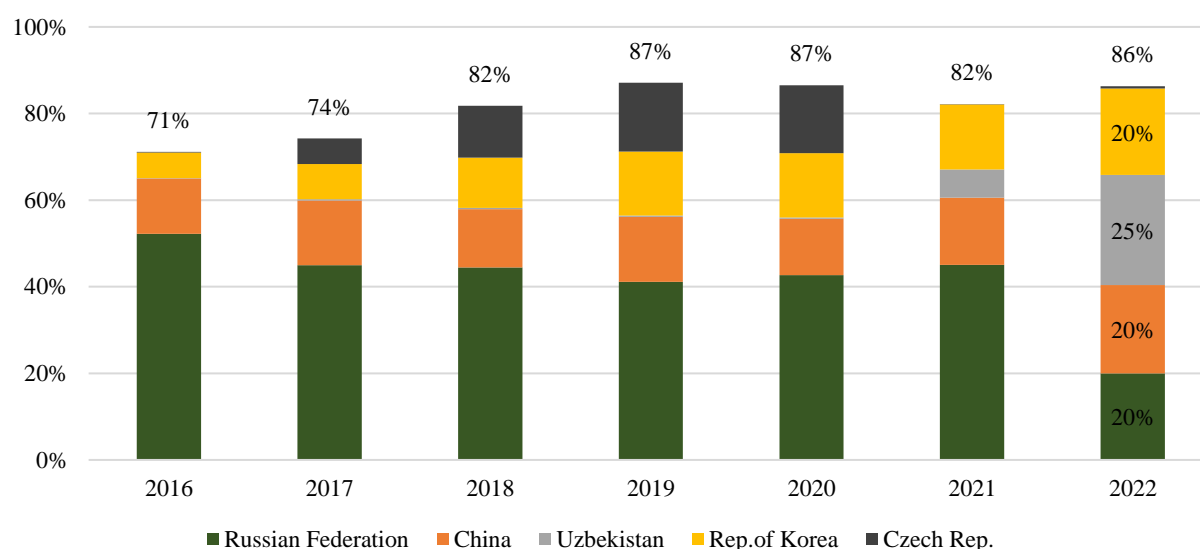
The share of SKD imports is falling in relation to the volume of manufactured products (Figure 2), which, nevertheless, does not allow asserting unequivocally that the SKD production is declining and automakers are switching to CKD production.

There was a significant increase in supplies of large assemblies of passenger cars from three countries: China, Uzbekistan, and South Korea. At the same time, the volume of imports from the Russian Federation decreased significantly (Figure 3). Despite such reduction, Russia remains among the major suppliers of parts and accessories for car bodies. In 2022, 86% of imports of large assemblies for passenger cars came from 4 countries: China, Uzbekistan, South Korea, Russia.

In addition, shipments of large-unit parts from the Czech Republic virtually ceased in 2021-2022. The share of imports from the Czech Republic declined to less than 1% in 2022 from 16% in 2019-2020.

Figure 3

The Share of Main Supplying Countries in the Overall Volume of Imports of SKD Auto Parts



Source: BNS ASPR RK, SRC MF RK

The domestic automotive industry, in addition to creating the demand through concessional lending programs, was also stimulated by other measures of government support.

These include the entering into agreements on industrial assembly of vehicles, payment of investment subsidies under investment contracts, whereby motor vehicle manufacturers were granted preferences in the form of exemption from customs duties on imports of technological equipment, components and its spare parts²⁷.

Since 2015, the Government of Kazakhstan reimbursed part of the costs of promoting domestic processed goods, works and services in the domestic market²⁸, including transportation

²⁷ Commercial Code of the RK.

²⁸ The Order of the Minister of Investment and Development of the Republic of Kazakhstan dated November 30, 2015 No. 1128 "On approval of the Rules for reimbursement of a part of the costs incurred by entities engaged in industrial and innovative activities to promote domestic processed goods, as well as information and communication services, a list of domestic processed goods, as well as information and communication services for which the costs of their promotion are partially reimbursed"; Acting order Minister of Investment and Development of the Republic of Kazakhstan dated December 4, 2015 No. 1164 "On approval of the Rules for reimbursement of a part of the costs of entities engaged in industrial and innovative activities to promote domestic processed goods, works, services in the domestic market"; The Acting Order is currently in effect. The Minister of Trade and Integration of the Republic of Kazakhstan dated August 1, 2022 No. 314-HK "On approval of the Rules for reimbursement of a part of the costs of entities engaged in industrial and innovative activities to promote domestic goods and services of the manufacturing industry, as well as information and communication services to foreign markets within the framework of undertaken

costs associated with the delivery of finished goods and payment for transportation services, as well as the costs of product certification in export markets (passing foreign certification, accreditation, inspection).

The Tax Code of the Republic of Kazakhstan, adopted in 2017, provides for targeted benefits and concessions for enterprises implementing investment projects in top-priority sectors of the economy, including the manufacturing of motor vehicles. Automobile manufacturers working under a special investment contract receive benefits on value added tax and corporate income tax²⁹. Thus, an enterprise that implements a priority investment project for the creation of new production facilities or the expansion and renovation of existing production facilities is allowed to reduce corporate income tax by 100% on income received as part of the implementation of the priority activity.

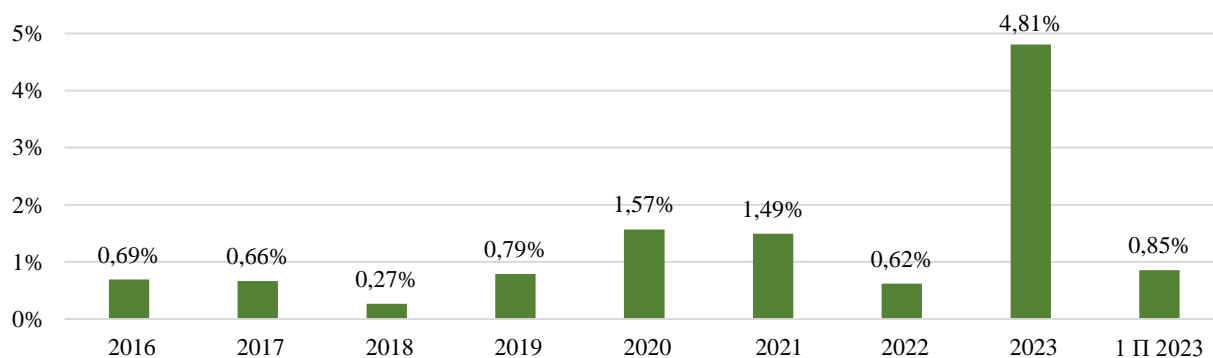
Thus, a visible contribution to stimulating domestic passenger car manufacturers was made by the first concessional lending program of 2015-2016, which created a significant demand from the population for their products. In subsequent years, the share of cars purchased under the concessional lending program decreased significantly. The growth of car production was stimulated by other government support measures, such as tax incentives and tax breaks, support for product exports, industrial cooperation projects, etc. The growth of car production was also stimulated by other government support measures.

3.2. Increasing the Availability of Domestically Manufactured Passenger Cars for the Population

Annually, the number of cars purchased under soft loans did not exceed 1-2% of the number of cars registered in the corresponding year with the year of manufacture not more than 3 years old (Figure 4), except for 2022, when an additional 100 billion tenge was allocated.

Figure 4

Share of Cars Purchased in the Corresponding Year as Part of Concessional Lending, of the Total Number of Registered Cars with the Year of Manufacture Not More than 3 Years Old



Source: BNS ASPR RK, EDF, DBK

As of July 1, 2023, the share of cars purchased under concessional lending is about 7% of the number of cars with a year of manufacture up to 7 years old. The share of cars purchased on credit from the total number of passenger cars registered in Kazakhstan at this date amounted to only 1%³⁰.

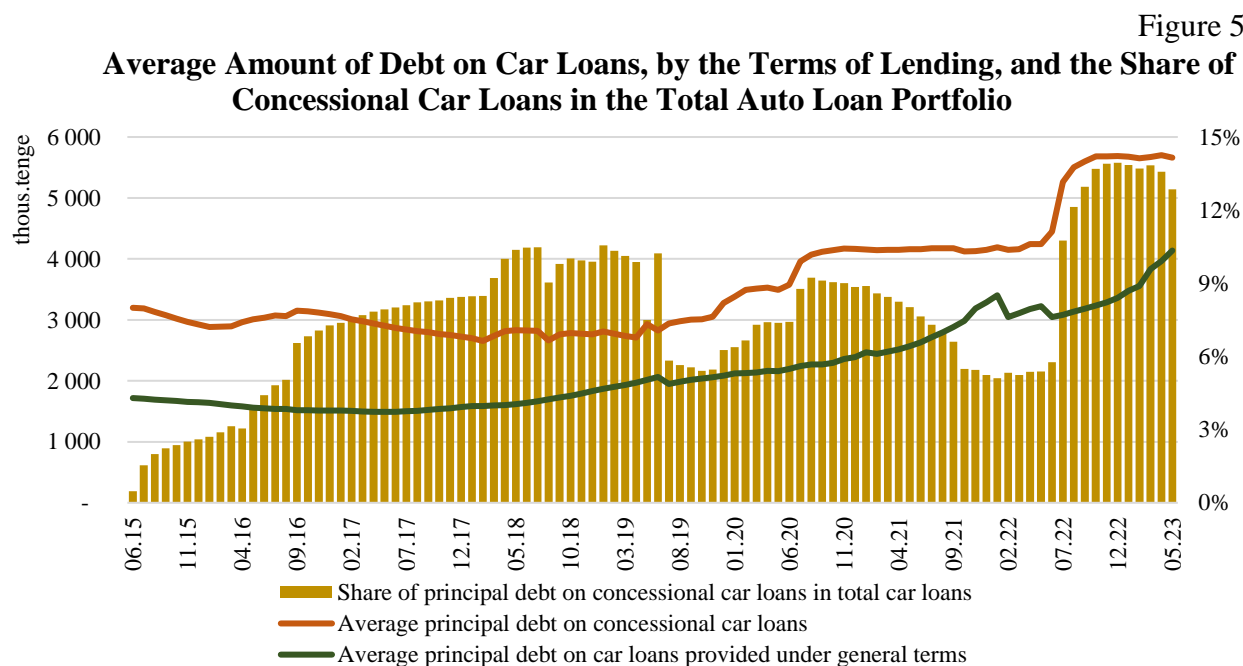
international obligations, a list of domestic goods and services of the manufacturing industry, as well as information and communication services, for which the costs of their promotion to foreign markets are partially reimbursed”.

²⁹ Code of the Republic of Kazakhstan “On Taxes and Other Mandatory Payments to the Budget” (Tax Code).

³⁰ As of July 1, 2023, 4,351,768 passenger cars were registered in Kazakhstan, of which 691,645 vehicles, or 16% of cars, were less than 7 years old.

According to the data from the BNS ASPR RK about the output of the automotive industry in physical terms, during 7 years from 2015 to 2022, 357,335 passenger cars³¹ were manufactured in Kazakhstan, of which 13% were sold under soft loan programs.

Now, the balance of the population's debt on car loans to banks amounts to KZT1.2 trillion, where car loans granted on general market terms (87%) account for a major share. The share of concessional car loans as of May 1, 2023 amounted to 13% of the total portfolio of auto loans (Chart 5). At the same time, the share of concessional loans in the auto loan portfolio has increased since mid-2022 with the launch of concessional lending under the auspices of EDF.



Note: The graph shows the data about outstanding debt on car loans.

Source: NBK's Credit Register

The increase in the share of the concessional car loan portfolio in the total auto loan portfolio in 2022 is a consequence of both the expansion of the volume of financing due to the additionally allocated funds in the amount of 100 billion tenge, and the increase in car prices amid the resulting deficit.

As mentioned in the previous sections, a total of KZT 182 billion was allocated under the government programs; taking into account the revolving mechanism, the total amount of loans actually provided over these 7 years amounted to KZT 299.3 billion, which accounts for 15% and 24%, respectively, of the current outstanding balance of the total portfolio (KZT 1.2 trillion). In this case, the low share of concessional car loans is explained by the limited budget of these programs

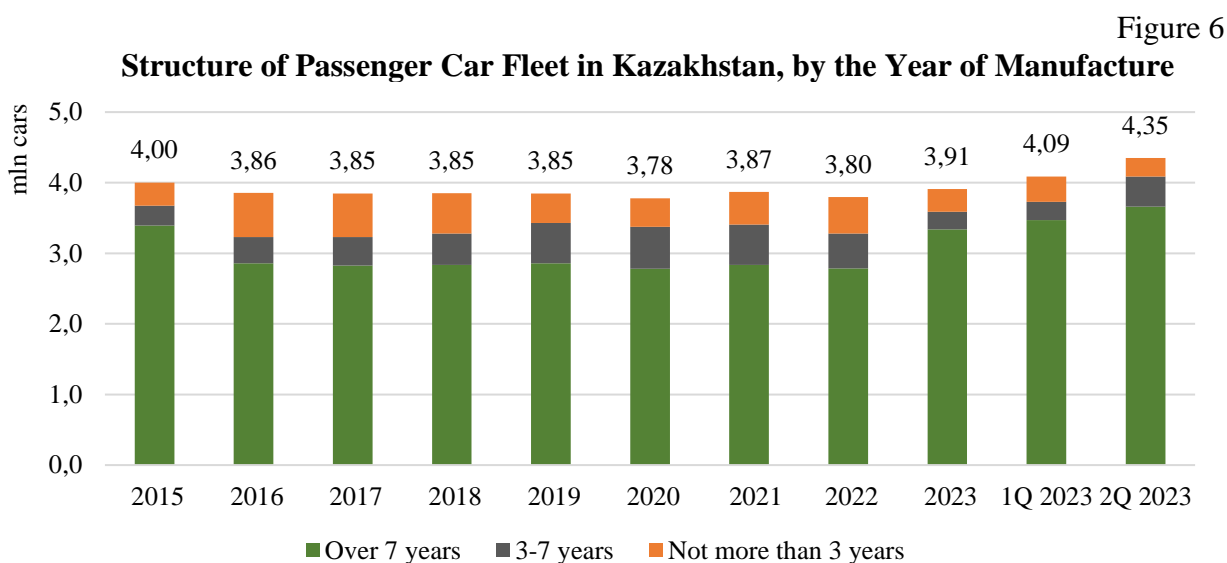
Given the insignificant share of cars sold under the four government programs in the total volume of cars manufactured in Kazakhstan, as well as a small share in the total volume of car loans originated by banks as part of concessional car lending whereby domestically manufactured cars were purchased, the goal to increase availability of domestically manufactured cars for the people of Kazakhstan at the expense of these government programs was not fully achieved. Despite the significant amount of funds allocated under the government programs, their budget was only partially able to meet the demand and need of the population for cars.

³¹ The data before 01.01.2023 is available (<https://taldau.stat.gov.kz/ru/NewIndex/GetIndex/701608?keyword=>).

3.3. Renewal of the Country's Car Fleet

One of the indicators of effective concessional lending programs is also an increase in the share of new cars registered in the country. In addition, the renewal of the country's car fleet is aimed at improving the environment as part of the fourth program in order to stimulate consumer demand through contingent financing from funds borrowed from the EPR operator.

Over the 7 years of implementation of concessional lending programs, there was a natural migration of cars by age groups (increasing service life), while origination of concessional car loans was unable to change the structure of the country's car fleet and reduce the share of aging cars. Thus, the vast majority of passenger cars registered in Kazakhstan were manufactured more than 7 years ago, their share as of July 1, 2023 amounted to 84%, or 3.66 million units, which is comparable to the indicators before the launch of concessional lending programs (at the beginning of 2015: 85%, or 3.39 million units).



Source: BNS ASPR RK

Motor vehicles, especially those with a long operating life, are a significant source of emissions of pollutants and greenhouse gases into the atmosphere. Thus, the amount of these emissions and the state of the environment depend on the age structure of the country's car fleet. Considering the continued high share of cars over 10 years old (they account for 70% of the total car fleet in Kazakhstan in the 2nd quarter of 2023), achieving the goal of improving the environment remains questionable.

In international practice, to reduce carbon dioxide emissions into the atmosphere, the use of electric (hybrid) cars is popularized and the transition to their use as well as the development of charging infrastructure are encouraged. In Kazakhstan's practice, the requirements to the environmental friendliness of vehicles purchased as part of the government program via the EDF are blurred and come down to updating the country's car fleet.

Over the 7 years of implementation of concessional lending programs, the structure of Kazakhstan's motor vehicle fleet by the year of manufacture has not undergone significant changes, and origination of concessional auto loans has not significantly affected the reduction in the share of aging vehicles. Considering the continued high share of cars with an operational life of more than 7 years, the contribution to improving the state of the environment within the framework of the concessional lending program cannot be assessed as significant.

Conclusion

Subsidies and incentives are a common government tool to support both supply and demand. The use of these tools enables to stimulate the allocation of resources to certain sectors, whose development is paramount for the country. In the global practice, there are enough examples

of government support for the purchase of vehicles. For the most part, such programs are targeted, aimed at supporting certain segments of the population experiencing financial difficulties, or at switching to environmentally friendly vehicles and minimizing pollutant emissions into the atmosphere.

In Kazakhstan, starting from 2015, there have been 4 concessional car loan programs that were designed to solve several problems: stimulate the domestic automotive industry, provide the population with new cars manufactured in Kazakhstan, and renew the country's car fleet. At the same time, the programs were not based on targeting, i.e. any citizen of Kazakhstan could receive a concessional car loan, subject to availability of financing in the operator bank at the time of application.

At the moment, the success of solving the tasks set within the programs is not clear, which does not allow speaking about high efficiency of concessional car loan programs practiced in Kazakhstan.

Thus, the first concessional lending program of 2015-2016 made a significant contribution to the development of the domestic automotive industry, which stimulated the population's demand for Kazakhstan-made cars. In subsequent years, the share of cars purchased under concessional lending decreased significantly. The growth in car production was stimulated by other government support measures, such as tax breaks and incentives, measures to support product exports, and reimbursement of a part of the production costs. However, despite the positive dynamics in the production volume of passenger cars, which is an indicator of development of the industry, the share of SKD assembly in the production of passenger cars remains significant. The volume of imported spare parts for the industrial assembly of passenger cars (chassis, bodies and other body accessories) increased in absolute terms, which does not allow asserting that SKD production decreased and Kazakh automakers moved to CKD.

The low level of provision of the population with new domestically manufactured cars purchased under the concessional lending program does not allow insisting that this task was successfully accomplished. Thus, only 1% of passenger cars of the total number of those registered in Kazakhstan as of July 1, 2023 were purchased under concessional lending programs.

Over the 7 years of implementation of concessional lending programs, there was a natural migration of cars by age groups (increasing service life), while origination of concessional car loans was unable to change the structure of the country's car fleet and reduce the share of aging cars.

Government support is an effective tool in stimulating the development of the industry/enterprises and has become an impetus at the stage of formation of a new enterprise, but it must be targeted, temporary and not replace market mechanisms. In this light, the decision to reorient the concessional lending program (through EDF) to modernize the bus fleet in the regions of the country is, in our opinion, a move in the right direction.

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Review of Car Purchase Support Programs in Foreign Countries

#	Country	Program	Description
1.	Australia	The Financial Resilience program / No Interest Loans (NILS) for Vehicles	<p>Interest-free loans for the purchase of vehicles (NILS for Vehicles) are provided to people with low income (up to 70 thousand dollars for singles, up to 100 thousand dollars for couples or people with dependents) in the amount of 2 to 5 thousand dollars to purchase the necessary vehicle, including cars, scooters, stand-on scooters, motorcycles and boats, for a period of up to 48 months.</p> <p>An interest-free loan is provided to persons who meet the following criteria:</p> <ul style="list-style-type: none"> - age: 17 years and older; - citizenship of Australia or the existence of visa that expires after the final maturity of a loan; - a low income level: <ul style="list-style-type: none"> the existence of a Centrelink health or retirement card; income below 70 000 dollars a year (before tax) for singles; income below 100 000 dollars a year (before tax) for couples or people with dependents - no more than 3 existing loans or debts (including rent) and no late payments on obligations (more than 90 days without missed debt payments); - residence at the current address for at least 3 months; - confirmation of the ability to repay the loan within the required time frame. <p>Moreover, organizations providing interest-free car loans may establish additional requirements for their recipients. For example, the Mary MacKillop Foundation, in addition to the general requirements to the program, establishes the following criteria for persons wishing to receive a NILS loan through them:</p> <ul style="list-style-type: none"> - residence in New South Wales or ACT (Australian Capital Territory); - absence of debts on utility services or less than 500 dollars in arrears.
2.	Minnesota, USA	Car Ownership Program	<p>A loan program that offers low-interest car finance to low-income individuals and families living in Minnesota. Loan size is up to USD 6,000.</p> <p>The following persons are eligible for the Program:</p> <ul style="list-style-type: none"> – residents of Ramsey or Washington D.C.; – having continuous work experience of at least 6 months, at least 20 hours per week; – having valid Minnesota driver's license; – having insurance coverage up to the full loan repayment; – with income not exceeding 200% of the federal poverty level.
3.	California, USA	The KEYS Auto Loan Program	<p>A loan program that provides low-interest car loans of up to \$6,000 to CalWORKs participants in Contra Costa County to help them stay employed. Loan size is up to USD 6,000.</p>

			<p>The following persons are eligible for the Program:</p> <ul style="list-style-type: none"> – residents of Contra Costa County; – participants in the CalWORKs (welfare program that provides temporary financial assistance and employment-focused services to families with minor children whose income and assets are below California’s maximum family size limits); – working in the current job for at least 2 months and at least 32 hours a week; – having valid driver’s license; – having insurance coverage up to the full loan repayment; – with income not exceeding 200% of the federal poverty level.
4.	California, USA	The Clean Vehicle Assistance Program (CVA)	<p>The program is aimed at promoting environmentally friendly vehicles in California. The CVA provides grants for the purchase or lease of new zero-emission vehicles up to \$7,500, and up to \$2,000 for the installation of a Level 2 home charger.</p> <p>The following persons are eligible for the Program:</p> <ul style="list-style-type: none"> – resident in the state of California, in one of the disadvantaged communities (DAC) as determined with the help of CalEnviroScreen (a mapping tool used to inspect the condition of environment); – with the level of income not exceeding the established limits. <p>Currently it is suspended due to limited funding (available program funds are allocated to program participants as of June 26, 2023). However, as funds are received back from participants, the program may be resumed (revolving mechanism).</p>
5.	California, USA	The Clean Vehicle Rebate Project (CVRP)	<p>The program aims to promote the use of environmentally friendly vehicles in California. It is similar to the CVA program. For example, the CVRP program can provide grants ranging from \$1,000 to \$7,500 for the purchase/lease of a new zero-emission vehicle (electric, plug-in hybrid electric, and fuel cell vehicles). California residents can take advantage of both programs (CVA and CVRP) at the same time, and the subsidies are cumulative. Participants are responsible for meeting the requirements of each program independently.</p> <p>In order to get a subsidy under the CVRP, one should meet the following conditions:</p> <ul style="list-style-type: none"> - have residence in the state of California; - meet income eligibility requirements at the time of application (income must not exceed \$135 000 for singles, \$200 000 for couples).
6.	Russian Federation	Concessional car lending	<p>In 2015, as part of the “Automotive Industry” sub-program of the “Developing the Industry and Increasing Its Competitiveness” government program, the subsidizing of loans to individuals for the purchase of locally manufactured cars was launched. The government support was aimed at stimulating demand and developing the Russian automotive industry. In its original form, the program implied the</p>

			<p>provision of subsidies to credit institutions to cover their shortfall in income when providing loans to individuals at a discount.</p> <p>This program was extended several times, the conditions and requirements for borrowers changed. The program is currently announced to end at the end of 2023.</p> <p>Initially, the concessional lending program did not provide for requirements for final borrowers-individuals. As the program was extended, changes were made to it, including narrowing the circle of people to whom concessional car loans are available. Requirements were established for borrowers, according to which loans were provided to families with two or more children who did not have a car before the date of application to the credit institution.</p> <p>Currently, when purchasing a car on credit, the program can be used by families with one child or more, buyers of a first car, buyers of an electric car, healthcare or education workers, military personnel and their families, as well as retired military officers.</p> <p>As part of the program, the government provides a subsidy in the amount of 20% of the cost of the car for the down payment to buy on credit a new car worth up to 2 million rubles (in the amount of 25%, but not more than 625 thousand rubles when purchasing an electric car). For residents of the Far Eastern Federal District, a discount of 25% is provided.</p> <p>A specific feature of the Russian concessional lending program is not the subsidization of interest rates, but the provision of cash subsidies for the purchase of cars on credit, i.e. in fact, the government provides a discount on the purchase of a car. The interest rate on a concessional car loan is determined at the level of the current rate on comparable loan products (tenor, amount and size of the down payment on a car loan for the purchase of a comparable type of car) and should not exceed the current key rate of the Bank of Russia by more than 10 pp.</p>
7.	India	Government Subsidy on Electric Vehicles / the Faster Adoption and Manufacturing of Electric Vehicles (FAME)	<p>The Government of India has elaborated and implemented an electric vehicle manufacturing program called Faster Adoption and Manufacturing of Electric Vehicles (FAME) to promote the use of electric vehicles in India. The program was planned to be implemented in two phases: FAME I and FAME II. FAME I was launched in 2015 and aims to stimulate demand for electric and hybrid vehicles by subsidizing the purchase of such vehicles. FAME I phase was valid until the 1st quarter of 2019.</p> <p>From 2019, the second phase of FAME II was launched, its goal was to develop the electric vehicle ecosystem in India, including the development of charging infrastructure, R&D and manufacturing of electrical components.</p> <p>The program uses incentives and bonuses in the form of subsidies for the purchase of an electric vehicle, coupons for which a certain amount is returned later, subsidized interest rates, exemption from transport tax at the time of purchase, exemption from registration fees when purchasing a new electric vehicle,</p>

			<p>income tax benefits, recycling benefits when deregistering obsolete gasoline and diesel vehicles. Thus, for example, when purchasing the following vehicles, discounts apply in the amount of:</p> <ul style="list-style-type: none"> - up to 40% of the initial price in case if two-wheeled motor vehicles are purchased (electric scooters); - about 50 thousand rupees (≈\$600) when purchasing three-wheeled electric vehicles; - about 150 thousand rupees (≈\$1800) when purchasing four-wheeled electric vehicles; - about 5 million rupees (≈\$60 000) when purchasing electric buses.
8.	Brazil	Programa de incentivo a compra de veiculos leves	<p>In June 2023, the Passenger Car Purchase Incentive Program was launched as a temporary measure to stimulate the automotive industry. The Brazilian government's program aimed at stimulating sales of domestically manufactured cars, which provided discounts to individuals on the purchase of new cars from R\$2,000 to R\$8,000 for cars costing up to R\$120,000. The program was positioned as a temporary measure, for up to 30 days or until the allocated funds are exhausted. The size of the discount was determined depending on the characteristics of the purchased car. The maximum discount of 8 thousand reais was received by the buyer of a car with a hybrid engine or running on ethanol, energy consumption less than 1.40 MJ/km, costing less than 70 thousand reais, in which the share of nationally produced parts is more than 75%. Notable is the ban on resale of a car purchased under the program within 6 months from the date of purchase. In case of sale, the discount must be returned to the budget. At the moment, the program has been partially suspended (in terms of passenger cars), while discounts on the purchase of trucks, minibuses and buses continue to apply.</p>
9.	UK	Low-emission vehicle program / Plug-in Car Grant (PiCG)	<p>The UK has a grant scheme to finance the purchase of low emission vehicles. The scheme provides a £2,500 grant towards the purchase of a vehicle worth up to £35,000 that meets certain requirements, such as zero CO2 emissions. For vehicles equipped for wheelchairs, the subsidy can be up to 35% of its cost. In this case, grant funding is sent to car sellers (dealers), who include a discount in the price of the car. Thus, the buyer does not take any action to activate the discount.</p>
10.	Germany	Förderprogramm Elektromobilität	<p>As part of the electric mobility financing program, when purchasing/leasing an electric car worth up to 40 thousand euros, a buyer receives a government bonus of 6 thousand euros. When purchasing/leasing an electric car costing more than 40 thousand euros, the subsidy amount will be 5 thousand euros. Until 2022 inclusive, along with the government bonus, an environmental bonus (Umweltbonus) was awarded, together with which the amount of the government subsidy was 9 thousand euros for cars costing up to 40 thousand euros and 7.5 thousand euros for cars costing over 40 thousand euros. Since 2023, the environmental bonus has been abolished, and in the years to follow, the amount of subsidies will be gradually reduced.</p>
11.	France	Aide à l'achat d'une voiture électrique	<p>The French government provides support through an environmental bonus and a conversion bonus to promote clean mobility by encouraging the purchase of low-polluting vehicles.</p>

			<p>A conversion bonus is available to individuals who purchase a new vehicle (or a used vehicle that meets certain CO2 emission requirements) while scrapping the old vehicle. Depending on income, the bonus amount will be up to 4 thousand euros when purchasing a new or used car with an internal combustion engine (ICE) and up to 6 thousand euros when purchasing an electric and/or hydrogen vehicle.</p> <p>The following requirements should be met:</p> <ul style="list-style-type: none"> – the buyer's old car must be disposed of at an approved ELV (end-of-life vehicle) center; – a new car must have CO2 emissions of no more than 50 g/km (BEV or PHEV); – a used car must have CO2 emissions of no more than 99 g/km (BEV or PHEV). <p>The conversion bonus can be combined with an environmental bonus, which encourages the adoption of electric and/or hydrogen cars in France. The amount of the environmental bonus, depending on the buyer's income, reaches 7 thousand euros (8 thousand euros when purchasing a van). When purchasing a car with an internal combustion engine, an environmental bonus is not paid.</p> <p>In addition, France has a microloan program for environmentally friendly vehicles for low-income households. Under this scheme, citizens with limited access to bank financing, low income or unstable financial situation can purchase a low-emission vehicle through the long-term lease (LLD) or lease-to-own (LOA) at preferential terms.</p>
12.	Italy	Ecobonus: Subsidy for low-emission vehicles	<p>In 2019, the Italian government allocated funds to provide subsidies for the purchase of vehicles with low levels of pollution and emissions, as well as for the development of charging infrastructure. Subsidies are available to buyers of cars with CO2 emissions of up to 60 g/km. However, the size of the subsidy depends on the level of CO2 emissions, as well as on the disposal of the old internal combustion engine vehicle. Thus, the maximum subsidy amount will be 6 thousand euros if the emission level of the purchased car is less than 20 g/km with the simultaneous disposal of the old car.</p>
13.	Spain	Moves III Plan	<p>The Spanish government's MOVES III PLAN aims to promote the transition to a more sustainable economy and reduce greenhouse gas emissions. This program subsidizes the purchase of electric vehicles, thereby stimulating the transition to the use of environmentally friendly vehicles and reducing dependence on petroleum products.</p> <p>The size of the subsidy depends on the type of electric vehicle model chosen, as well as on the old car disposal. Thus, the amount of the subsidy will be:</p> <ul style="list-style-type: none"> – 7 thousand euros with recycling and 4 thousand euros without recycling for electric or hydrogen cars; – 5 thousand euros with recycling and 2.5 thousand euros without recycling for hybrid cars with haulage from 30 to 90 km; – 9 thousand euros with recycling and 7 thousand euros without recycling for electric mini-vans; – 1.3 thousand euros for motorcycles with zero emissions.

			<p>In addition, persons using an electric vehicle as a workplace tool (taxi drivers, VTC) will receive a subsidy of 10% more. The same applies to buyers with limited mobility and residents of municipal districts with population of less than 5,000 people.</p> <p>An important requirement is the price of the electric car – it should not be higher than 45 thousand euros.⁶</p>
14.	Japan	Eco-Car Discount	<p>The Japanese government subsidizes a part of the cost of purchasing clean environment vehicles (CEVs), which include battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs), and fuel cell electric vehicles (FCEVs). The maximum subsidy amount provided per CEV vehicle is approximately 800 thousand Japanese yen, equivalent to 7,200 US dollars.</p> <p>At the same time, the size of the subsidy will vary depending on the method of purchasing a new car: with the replacement of an old car (with recycling, replacement program) or without replacing the old car (non-replacement program).</p>

Program for Financing Domestic Automakers via STBs in 2015-2016³²

Bank name	Amount placed (mln tenge)	Actually Disbursed Loans		
		The number of actually provided loans	The amount of actually provided loans* (mln tenge)	The share of disbursed funds of the amount placed
Eurasian	7 310	4 877	25 904	354%
ATF	1 173	932	4 333	369%
BCC	3 830	2 301	12 406	324%
Halyk	12 045	7 666	36 857	306%
Forte	1 642	1 105	5 692	347%
TOTAL	26 000	16 881	85 192	328%

Table 2

Program of Financing by the “Development Bank of Kazakhstan” JSC for Domestic Automakers from the National Budget through Contingent Financing of Second-Tier Banks to Provide Loans to Individuals in 2018-2019

Bank name	Amount placed	Actually Disbursed Loans		
		The number of actually provided loans	The amount of actually provided loans (mln tenge)	The share of disbursed funds of the amount placed
Eurasian	5 375	1 895	12 438	231%
BCC	3 875	1 257	8 449	218%
Halyk	6 750	2 559	14 998	222%
TOTAL	16 000	5 711	35 885	224%

Table 3

Loan Program for Buyers of Domestically Manufactured Passenger Cars with the Funds of the National Bank of Kazakhstan in 2019-2020

Bank name	Amount placed (mln tenge)	Actually Disbursed Loans		
		The number of actually provided loans	The amount of actually provided loans (mln tenge)	The share of disbursed funds of the amount placed
Halyk	25 000	7 421	46 070	184%
Eurasian	10 000	2 692	18 081	181%
Forte	5 000	1 258	8 458	169%
TOTAL	40 000	11 371	72 609	182%

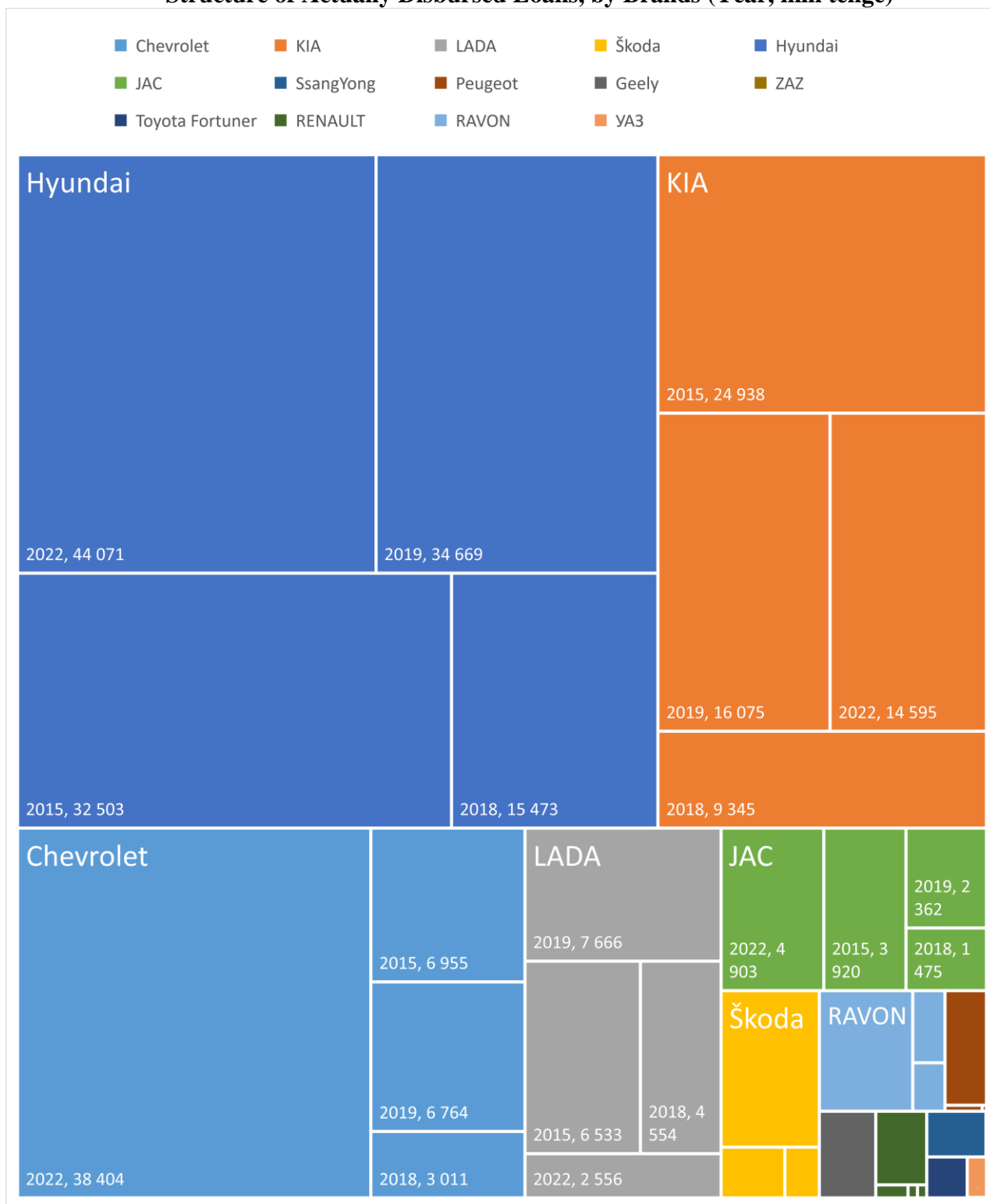
Table 4

The Program of Financing by the ERP Operator for Further Project Financing in the Manufacturing Industry Aimed to Improve the Environment³³.

Bank name	Amount placed (mln tenge)	Actually Disbursed Loans		
		The number of actually provided loans	The amount of actually provided loans (mln tenge)	The share of disbursed funds of the amount placed
BCC	27 500	3 767	29 285	106%
Eurasian	35 000	4 543	37 068	105%
Forte	15 000	1 973	15 624	104%
Halyk	22 500	3 051	23 654	105%
TOTAL	100 000	13 334	105 631	106%

³² According to data from the DBK, as of 28.06.2023.³³ According to data from the EDF, as of 01.06.2023.

Figure 1

Structure of Actually Disbursed Loans, by Brands (Year, mln tenge)

Source: DBK, EDF

The Need in Developing the Classification of Taxes and Fees in the Environment of Increasing Financial Instability in the Global Economy

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Problem Statement. The existing taxation system contributes to the growth of price imbalances between agriculture and industry, the average wage in the real sector and the level of consumer prices. **Formulating the Goal and Objectives of the Study.** The study is aimed at improving corporate taxation. Methodological approaches to the classification of taxes and fees are considered. Particular attention is paid to the compliance of the tax reform carried out in Uzbekistan with the scientific foundations of taxation. **Methodological Basis.** The methodological basis of the study was the theory of labor value, the theory of exchange of equivalents and others. **Research Methods.** Research methods – logical analysis, tabular method, econometric analysis. **Research Results.** The existing principle of profit generation in proportion to the invested capital and its extension to pricing practices do not contribute to the formation of equivalent inter-industry commodity exchange. There is a need to substantiate the category of “added costs” in the economic theory and to construct a new model for regulating economic sectors on this basis. The feasibility of introducing a matrix form of calculation for the products of basic industries and monopolies has been revealed. The effectiveness of a new approach to the formation of a tax system based on the proposed pricing model is substantiated. **Findings.** The results of the study contribute to the understanding of pricing and taxation processes in conditions of deep specialization of production, and contribute to the creation of an optimal system of corporate taxation. Proposals for improving the approaches whereby the classification of taxes, mandatory deductions and fees are carried out are substantiated.

Key Words: tax classification, tax reform, classification criteria, pricing, equivalent exchange.

JEL-Classification: A10.

1. Preamble

The economy of the Republic of Uzbekistan is at the stage of large-scale structural and economic transformations. This also applies to the area of taxation. Thus, in accordance with the amendments made to the Constitution of the Republic of Uzbekistan as a result of the Referendum held on April 30, 2023, the following important innovations were introduced into the fundamental principles of tax policy:³⁴

- “Abatements are established only in accordance with the law and must comply with the principles of social justice” (Article 19);
- “People are required to pay taxes and fees established by law. Taxes and fees must be fair and must not prevent people from exercising their constitutional rights” (Article 63).

Further changes in the tax sphere will be carried out based on these fundamental principles. It is noteworthy that one of the areas of tax reform carried out in the republic since 2019 is the improvement of the taxation system. This course was adopted in order to overcome negative trends

³⁴ About Constitution of the Republic of Uzbekistan. Fundamental Law. People’s Word, 02.05.2023 www.xs.uz/ru;https://lex.uz/docs/35869#43446

in the national economy that grew in 2010-2018.

From January 1, 2019, a new system of personal and corporate taxation was introduced in the republic, and from January 1, 2020, these innovations were enshrined in the new version of the Tax Code. Its provisions radically change the procedure for applying international treaties in the field of taxation. From that moment on, contracts began to be concluded based on the state of the economy (Dzhumagaldiev, 2019).

An important task of tax reform at the present stage is to ensure economic stability in the national economy. New tax mechanisms should be applied to support entrepreneurship and increase state budget revenues (Mirziyoyev, 2020).

In recent years, Uzbekistan has taken measures to speed up the process of joining the World Trade Organization (WTO). In this regard, the republic needs to adapt the currently used tax system to the requirements of this international organization. If this task is not solved in a timely manner, then certain sectors of the economy and enterprises may experience serious financial difficulties (Uruguay Round of Multilateral Trade Negotiations (1986-1994)). According to experts, due to the influence of excessive protectionist policies, a number of industrial sectors in the economy of Uzbekistan have low competitiveness, for example, the automotive industry (Umirdinov, Turakulov, 2019, pp.301-333). This is also noted by other economists (Wacziarg, Welch, 2008, pp.187-231). We can agree with the opinion that entrepreneurs in the country need to look for new markets for their products with high added value (International Finance Corporation, 2018).

The purpose of this study is to develop proposals aimed at improving methodological and practical approaches to taxation of enterprises based on a generalization of the theoretical provisions of generally recognized scientific schools for their application in the conditions of the formation of a social state. The objectives of this research include studying the theoretical foundations of taxation; comparing the criteria for reform of the taxation system in the Republic of Uzbekistan and the scientific foundations of taxation; developing a new classification of taxes and mandatory payments; adapting the proposed classification of taxes and fees to the pricing mechanism; justifying the need to adjust the basic political-economic statement “equal profit per equal capital” in creating a real socially-oriented market economy.

2. Theoretical Approaches to Building the Taxation System

Innovations introduced in recent years into the tax legislation of the Republic of Uzbekistan have had a significant impact on the activities of business entities. It will be possible to evaluate the changes made after a sufficiently long period. However, it is already possible to assess how well the implemented measures complied with the scientific principles of taxation.

Initially, it makes sense to consider how the key ideas of taxation developed in the economic theory. The theory of taxation was created on the basis of the classical economic school. Adam Smith considered taxes to be a source of budget replenishment and a fair price for paying for government services (Pushkareva, 2014, pp. 83-92). The basic statement of this research area is the methodological approach about the priority of “supply” over “demand”. The market is recognized as an automatic regulator of trade relations (Smith, 2007).

The theory of exchange emerged from these fundamental foundations. Its essence is manifested in the reimbursable nature of taxation. In accordance with this theory, all people buy public goods from the state (security, legal proceedings, etc.) and must pay taxes for this (Friedman, 2009).

However, David Ricardo noted that taxes are the source of evil, preventing the accumulation of capital. In his opinion, taxes should be charged primarily on luxury goods. This economist substantiated the concept of a tax-free minimum for individuals receiving income from their activities (Ricardo D., 2023).

The exchange theory at the beginning of the 20th century was transformed in the works of Francesco Nitti into the concept of satisfying “collective needs.” In this model, taxes are the payment for satisfying collective needs. Tax, according to the views of Francesco Nitti, is “the part

of the wealth that citizens give to the state in order to satisfy collective needs” (Nitti, 1904).

Another well-known economist, Arthur Laffer, criticized John Keynes’s idea of advisability of high tax rates. In his opinion, it is necessary to use tax rates in the economy that will not infringe on the interests of the population. From that moment on, economists began to pay special attention to justifying the limits of taxation. First of all, there had been disputes regarding the level of permissible tax rates, whereby the formation of budgetary funds as well as a high level of business activity are ensured. There is a relationship between the tax burden on the operations of enterprises and the scale of the shadow economy (Blaug, 1994).

There are significant difficulties in implementing the theoretical principles of Arthur Laffer in practice. Thus, there is ongoing debate in the scientific field about the methodology for calculating the tax burden on enterprises. Until now, there is no complete agreement on what should be considered the profit of enterprises, and which expense items should include taxes, fees and other mandatory deductions when pricing. Therefore, there are various methods for determining the tax burden. Depending on the methodology used, calculations of the tax burden for different countries differ significantly from each other. What indicator of the tax burden (minimum, average or maximum) can be considered optimal is still unclear.

In recent decades, individual economists have proven the thesis about the ineffectiveness of progressive income taxation and the need to switch to a proportional approach to taxation (Alesina, 2014, p.147-156) and establish optimal tax rates (Yutkin, 1999, p.11).

In the scientific community, there are other options for taxation models and mechanisms. At the same time, the results of studying the fundamentals of taxation indicate a convergence of the provisions of the main tax theories. This is evident from the experience of Germany, France, the Russian Federation, Kazakhstan, Uzbekistan and other countries.

At the same time, the governments of a number of countries are increasingly adhering to liberal neoclassical approaches when conducting fiscal policy. This direction, used in practice in formulating the fiscal policy, enables to reduce the government’s responsibility to taxpayers for the final results of the socio-economic policy of the respective country.

However, as foreign experience shows, the period of liberal reforms often ends with many years of economic crisis, economic stagnation and its gradual recovery (in the 20th century – the Great Depression of the 30s, the economic crisis in the late 90s in the Russian Federation, etc.).

A special period for taxation emerged in 2020-2021; it is characterized by negative impact on the economy from restrictive measures taken by the governments of many countries that were aimed at containing the spread of the coronavirus pandemic and mitigating its consequences. The governments of a number of countries not only provided deferrals for payment of taxes and mandatory payments but also took measures to write off tax debts for the most affected industries and areas of activity. A temporary departure from liberal ideas in taxation helped many countries preserve the potential of tourism, air travel, small and private businesses from bankruptcy and ruin.

Summarizing the trends in the development of the fundamentals of taxation, it is worth mentioning that over the last century various approaches have developed in this area. Among them, the most popular approaches that were implemented in taxation practice were “the theory of exchange”, “the theory of exchange of equivalents”, “theory of collective needs”, and “the theory of social needs”. Their essence is that the total amount of taxes collected must be equal to the value of the services provided by the state.

At the same time, another area has emerged in taxation methodology. It views “taxes” as an “evil” that should be reduced as much as possible. This model includes the theory of “supply-side economics”. The mechanisms of this model were widely used after the 70s of the last century.

Now it is advisable to consider which scientific and theoretical theses from the main theories of taxation were applied in Uzbekistan during the tax reform of 2019-2020.

Edwin Seligman, a representative of the “exchange theory,” proposed initially using a proportional system of personal income tax (PIT), and after that using a progressive tax scale. In Uzbekistan, from January 1, 2019, a flat personal income tax scale was introduced at a rate of 12%. This innovation is fully consistent with the provisions of the “exchange theory”. In our

opinion, the premature use of progressive taxation in the republic (from 1992 to 2019) in conditions of comparatively low purchasing power of wages led to a widespread shadow employment with corresponding negative consequences for the economy.

Arthur Laffer, a founder of “supply-side economics,” argued that the tax burden on business should be reduced. In Uzbekistan, the tax burden on the economy has decreased significantly: 27.6% (of GDP taking into account expenditures of government specialized funds, or GSF) in 2018, 27.6% in 2019, 25.9% in 2020, 26.9% in 2021 and 22.7% in 2022. At the same time, excluding GSF expenditures, on the contrary, the tax burden on the economy increased: 18.6% in 2018, 21.2% in 2019 and 22.1% in 2020, 22.4% in 2021 and 22.7% in 2022. In 2019-2020, during the tax reform, the burden on large businesses decreased, while the burden on small and medium-sized businesses increased³⁵.

David Ricardo, a representative of the classical school, argued that luxury goods should be taxed primarily. He also put forward the idea of the need to introduce a non-taxable minimum. In Uzbekistan, during the tax reform, from October 1, 2019, VAT benefits for 9 types of essential food products were abolished. In addition, from January 1, 2019, the non-taxable minimum when calculating personal income tax was abolished. From October 10 to December 31, 2021, imports and sales of meat products, live animals, potatoes and frozen fish were exempt from VAT (from April 2021 – vegetable oil, sunflower seeds, flax and soybeans).³⁶ In 2023, instead of providing VAT benefits for these types of products, a VAT refund rule was introduced for low-income people.

According to specialists from the Ministry of Finance of the Republic of Uzbekistan (currently the Ministry of Economy and Finance), the fiscal policy pursued in the country's economy in 2018-2019 had signs of an expansionary fiscal policy. Its implementation led to the growth in consolidated budget deficit of about 1.4% of GDP in 2019 (0.5% in 2018), which was covered by external borrowings and the issuance of government securities³⁷.

The use of the “SMART Simulation Tool” in data analysis showed that, despite the use of expansionary fiscal policy, Uzbekistan managed to maintain sustainable growth rates due to the availability of its own non-ferrous metals, export prices for which increased in 2019-2020 (SMART Simulation Tool, 2020).

If Uzbekistan joins the WTO, industries that produce high value-added products may experience serious financial difficulties, and the government may not have enough funds to support them through subsidies (Todd A., Scalera J., 2012). The WTO rules affect countries unevenly. Therefore, each country joining the WTO needs to have a “safety buffer”, which, if necessary, can be used to protect the most vulnerable sectors of the national economy (Subramanian, Shang-Jin Wei, 2007). The government needs to create conditions for expanding the export of high-tech products and facilitate the entry of exporters into new markets (Pomfret, 2020). These statements have not lost their relevance now, when Uzbekistan intends to accelerate its accession to the World Trade Organization.

Eicher T.S., Theo S., Henn C. (2011, pp.137-153) speak about the same problem in their study, noting that preferential trade agreements contribute strongly, but unevenly, to trade development. In the event of an unprepared country's accession to the WTO and the emergence of fierce competition in basic sectors of the economy as a result of foreign trade liberalization, the country may find itself in the same situation as a number of African countries (Claire Emilienne Wati Yameogo, Joseph Ayoola Omojolaibi, 2021). Some economists question the thesis that a country's accession to the WTO will promote increased trade (Rose, 2004, pp.98-114). Only in conditions of support from the state and the conclusion of a beneficial agreement for one's country can one count on the positive effect of joining the WTO (Rose, 2010).

It must be taken into account that the results of analyzing the consequences of a country's

³⁵ The data of the Ministry of Economy and Finance of the Republic of Uzbekistan (www.mf.uz)

³⁶ The Senate approved the zero-rated VAT for meat and potato imports. www.gazeta.uz/ru/2021/10/21/vat-meat/

³⁷ Expected macroeconomic performance at the end of 2019. <https://www.mf.uz/home/o-ministerstve/press-sluzhba/minfin-news/4699.html>.

accession to the WTO should be approached with caution, since it is not always clear how confident we can be in the assessments of free trade agreements (Thomas, Hummels, Ivanic, Keeney, 2007, pp.611-635). There is academic support for the view that the WTO has contributed significantly to trade expansion but that it has done so unevenly (Subramanian, Shang-Jin, 2007, pp.151-175).

Uzbekistan already had a negative experience of liberal reforms in the chemical industry, when the industry was in a difficult production and financial condition (until 2018). Only thanks to support from the state and tax incentives provided to enterprises in the chemical industry, it was possible to restore the sustainable growth of this sector and the profitability of production. The industry's problems largely arose due to the growing disparity in prices for agricultural products and the chemical industry, which led to an increase in overdue receivables and payables (Mukhamedov, Shipkova, 2014). In this regard, the process of Uzbekistan's accession to the WTO should be accompanied by the introduction of measures that will facilitate the restoration of parity in trade between the products of the chemical industry and agriculture, as well as between other basic sectors of the economy. Market relations themselves will not allow solving this problem but will mainly contribute to a rise in prices for products of these industries. Therefore, upon joining the WTO, Uzbekistan will have to postpone large-scale liberalization of foreign economic activity in basic sectors of the economy (Melnikovová, Shadmanov, Voronin, Qoraboev, 2022).

3. Methodological Approaches to Building the Taxation System

It can be concluded that the methodological approaches to the implementation of economic policy at the initial stage of reform, used in Uzbekistan, corresponded to the liberal stance of economic theory. As a result of implementation of this strategy as well as under the influence of increased government spending to reduce negative consequences of the coronavirus pandemic, support the economy, business and population, there is a significant increase in the country's external debt. In this regard, one can agree with the opinion of experts who characterize the current fiscal policy in the republic as expansionist, which is accompanied by certain negative trends in the economy.

In our opinion, in order to create favorable conditions for a socially oriented economy and to stimulate the development of entrepreneurship, certain adjustments should be made to the existing taxation frameworks. In particular, it is advisable to apply approaches arising from the theory of "collective needs" when improving the classification of tax payments and their use in practice.

In the tax legislation of the republic, to date, insufficient attention has been paid to improving the methodological approaches used in developing the classification of taxes and fees, as well as for taking them into account when pricing. Disadvantages in the classification of taxes and fees distort calculations of the level of tax burden on the activities of business entities and sectors of the economy. In the Tax Code, in force since 2020, the classification of taxes and fees is presented in a generalized form, which does not reveal their essence and target functions (only two groups of exemptions are presented: taxes and fees).

When carrying out a tax reform, it is very important to determine the optimal level of tax burden on sectors of the economy. A reasonable determination of this indicator is important for maintaining sustainable economic growth. There is also an opinion from experts about the need to improve the structure of the tax system. Thus, the results of theoretical and empirical studies of economic growth factors, as well as international comparisons of the tax burden, allow concluding that the key task of the reform should be to improve the structure of the tax system and not to reduce the overall tax burden (Vasilieva, Gurvich, Subbotin, 2003, p. 38 -60).

However, there is another opinion from experts. Thus, according to economists from Kazakhstan, "the need to ensure inclusive economic growth objectively requires increasing the tax burden and strengthening the redistribution function of the budget. Additional calculations with the prolongation of the natural limit of fiscal burden – the Laffer point of the first kind, showed that in Kazakhstan a real gradual increase the tax burden by 4-5% of GDP is possible over 10 years

from the 2018 level without a negative effect on economic growth and tax collection...” (Alpysbaeva, Kenzhebulat, Karashulakov, 2019, p.365-383).

The above conclusions have not lost their relevance during the spread of the coronavirus pandemic and forced restrictions (2020-2022). During this period, the governments of a number of countries began to radically update the tax system. Depending on the characteristics of each country, the mentality of citizens and other factors, governments entered into agreements with entrepreneurs on an acceptable level of tax burden on businesses and coordinate support measures with them.

Taxpayers must feel the effect of the taxes and fees paid. The more taxpayers pay in taxes, the greater the return to them should be in the form of quality government services and subsidies. In this case, the high level of tax burden will no longer restrain economic growth and contribute to the spread of the shadow economy.

In order to develop an optimal taxation system, it is advisable to return to the consideration of theoretical foundations of cost and price formation, as well as to taking into account taxes and mandatory payments in pricing.

It is known from the economic theory that the cost of production breaks down into the following economic elements³⁸:

$$C + V + m = W \quad (1)$$

In this theoretical model, the cost of production (W) includes C – fixed capital, V – variable capital, m – surplus value. In this model, enterprise expenses for paying taxes, fees and other mandatory payments can be conditionally included in surplus value. Now you can set yourself the task of transforming this model into a price formation formula in a market economy. In theory, the following pricing formula is known:

$$C + V + P = \text{Price} \quad (2)$$

In this formula, “surplus value” turns into “profit”, which is already formed in a market economy in practice (profit is proportional to the advanced capital). Now we will try to decompose this model into individual economic elements (hypothesis). In our opinion, in a market economy, the classical formula for price formation (individual economic elements into which the price of any product is divided) can take on the following form:

$$\text{CMEC} + [D+W] + E + \text{VAT} + (\text{Excise}) = \text{Price}, \quad (3)$$

where:

CMEC – current material and equivalent costs;

D – depreciation charges from PPE;

W – wages paid to industrial and production personnel;

[D + W] – enterprise’s costs (EC) added to CMEC;

[D+W+E] – value added by the enterprise to CMEC or value added by the enterprise (VA).

Currently, this model is not used in practice in this form. In this model, enterprise expenses for paying taxes for the use of human capacity, land, water resources and property of legal entities are proposed to be included in CMEC.

Currently, the category “added costs” is used very narrowly in practice and only in accounting. In production accounting, “added costs” are operating costs plus various accruals (to account for the movement of intermediate products between workshops and warehouses at enterprises).

In the broad sense of the “added costs” phrase, in our opinion, are the enterprise’s expenses for labor costs and depreciation of PPE. Taking into account profit, added costs are already an added value, i.e., the value added by the enterprise in the long technological chain of production of the final product. Current material costs of the enterprise, services of third-party organizations under the proposed scheme should not be included into the amount of “added costs”. The enforcement of this provision will enable to simplify the taxation system and will prevent from including expenses for CMEC into the taxable base for assessment of a number of taxes (prevent

³⁸ <https://www.booksite.ru/fulltext/1/001/008/120/478.htm>

from surcharging “a tax for tax”).

In Uzbekistan, the following model for the formation of financial results and gross revenue (product cost, financial result) is used in practice based on Form No. 2 of the “Financial Performance Report”:

$$\text{Input costs} + \text{Gross margin} + \text{VAT} + \text{Excise} = \text{Gross proceeds} \quad (4)$$

In this formula, the social tax on the payroll fund of production personnel and compensation payouts for emissions within the normal range are included in the production cost, and the social tax on wages of administrative and managerial personnel and other employees, compensation payouts in excess of the norm and other taxes and fees are included in the gross profit.

To determine the financial result of the “operating earnings”, the “period expenses” are deducted from gross margin:

$$\text{Gross margin} - \text{Period expenses} = \text{Operating earnings} \quad (5)$$

Thus, when generating financial results, resource and direct taxes are included in gross margin, and indirect taxes act as a markup on the price of products.

The Russian Federation has a slightly different model for the formation of product costs and financial results (“profit from sales”):

$$\text{Gross margin} - \text{Administrative expenses} - \text{Sales} = \text{Profit from sales} \quad (6)$$

In this case, “profit from sales” includes all direct and resource taxes, which is very important for determining indicators of the tax burden, as well as indicators of profitability of products and production and economic activities of enterprises.

At the same time, in Uzbekistan, when calculating these indicators, the following distortions arise in the calculation of the level of profitability of products and production:

- gross margin includes expenses and earnings of an enterprise;
- operating earnings of an enterprise do not include resource taxes and property tax paid by economic entities;
- full cost of production and sale of products is not determined when generating the financial result (only the input costs are used).

As a result, individual indicators of product profitability, calculated against production costs, lose their economic meaning and their significance for assessing the effectiveness of the financial results of an enterprise (Gross margin/Production cost and Operating earnings/Production cost).

In order to improve the quality of financial performance indicators of enterprises and sectors of the economy, taking into account the tax factor, it is proposed to change the approach to systematization and classification of taxes (based on the approaches previously proposed by the classics of economic theory). In our opinion, to improve the quality of indicators of the tax burden on enterprise operations, grouping taxes and mandatory payments based on the characteristics of “regularity” of tax payment and “divisibility” of public services provided by the government is of great importance (Rasulev, Voronin, 2020, p. 59).

There is still no consensus among economists about which taxes and payments can be classified into the above groups. Thus, according to the Russian economist M.R. Pinskaya, “...at present, in the Russian economic literature, the prevailing interpretation of the tax is as a forced withdrawal by the government authority of part of the funds from business entities and individuals...” (Pinskaya, 2018, p. 53). The problem of “regularity” of tax payments in connection with the “divisibility” of public services in the development of taxation frameworks in recent years has remained without due attention.

Based on the principles of “regularity” of tax payment and “divisibility” of public services,

in order to assess the level of taxation by economic sectors and individual enterprises, it is advisable to group tax and other obligatory payments into the following consolidated groups: taxes; rent payments; fees, charges and duties; environmental taxes and compensation payments. For each of these groups, their substance should be clearly defined and taken into consideration (Table 1). In this case, the name of the tax, fee or mandatory deduction must follow from its main function.

Table 1

Grouping Taxes and Other Payments based on the Features of “Regularity” of Payment and “Divisibility” of Services provided by the Government

Group #	Item	Characteristics
1	Taxes	Regular mandatory payments for public “indivisible” goods or services provided by the state to all citizens of the country without regard to the enterprise’s contribution to the creation of national wealth. Citizens use these services free of charge either immediately at birth or upon the occurrence of certain circumstances established by the state. When pricing, these taxpayer expenses are proposed to be included into account in gross margin (i.e., direct and indirect taxes).
2	Rental payments	Regular payments by an enterprise for the use of human, land, water and other public resources for commercial and non-commercial purposes. When pricing, these taxpayer expenses are proposed to be included into the cost of production (as part of the economic element of CMEC).
3	Charges, fees, duties (payment for license)	One-time payments for public services of an individual nature, provided to individuals and legal entities, the payment of which is one of the conditions for the performance of legally significant actions in relation to payers by representatives of state interests as compensation for the provision of these services (for example, payments for the preparation of documents and the issuance of permits, etc.). It is proposed to include the costs of enterprises for these services into the cost of production (as part of CMEC).
4	Environmental taxes and compensation payouts	Payments for pollutant emissions (PEs), obtaining a permit for emissions in a certain volume, for activities in a protected natural area, etc.

Source: prepared by the authors based on the study of works of economists. Initially, classification for three tax groups was proposed: see Rasulev A.F., Voronin S.A. New architecture for building a tax system of the Republic of Uzbekistan // Economics and Finance. 2020. No.3. Pp.59-60

This classification of taxes and other mandatory payments should be used when determining the maximum tax burden in the context of economic sectors in order to regulate pricing for the products of natural monopolies and monopolistic enterprises, as well as for certain consumer goods of essential necessity (for example, panned loaf).

It is advisable for the government to decide which expenses of enterprises should be reimbursed from their income (profits, salaries, dividends), and which – from expenses of enterprises. This will create conditions for a reasonable determination of the level of tax burden on economic sectors and enterprises. For each of the proposed tax groups, it is suggested to establish a maximum level of tax burden. In this case, it will be possible to put into practice Arthur Laffer’s idea of the need to identify and use the maximum permissible level of tax burden. Enforcement of this measure will help reduce the scope of shadow activities if the optimal level of tax burden is applied.

If the tax is paid for the provision of “indivisible” services by the state, then expenses of the business entity for its payment must be reimbursed either from the enterprise’s profit, or in the

form of a markup on the price of the product (VAT, excise tax). If the payment is made for a specific public resource provided to the taxpayer (subsoil, land and water resources, human capacity, etc.), then these expenses must be reimbursed from the cost of the products produced or services provided (included in CMEC). It is advisable to include this statement in the pricing rules, as well as in the Tax Code of the Republic of Uzbekistan (Rasulev, Voronin, 2020, p.57-58).

Thus, in formula (3), it is advisable to include the enterprise's expenses for paying taxes and mandatory payments to the state budget in the following elements of the cost of production (enterprise expenses):

- the enterprise's expenses for payment of land, water and property taxes as well as compensation payouts for emissions within the normal range may be included into the "CMEC";
- compensation payouts for pollutant emissions above the quota shall be deducted from "E";
- expenses related to the VAT payment and excise tax shall be recorded as a markup to the price of a product or production.

In practice, the use of this method of accounting for enterprise expenses when pricing and determining financial results will allow achieving the following important results:

- improving the quality of financial performance indicators and of profitability of production;
- increasing effectiveness of the government regulation of pricing of products manufactured by natural monopolies and monopolist enterprises as well as for certain basic consumer goods;
- a feasibility of entering into a social contract between tax payers and the government in relation to each group of taxes and mandatory payments.

In addition, when using the proposed approach, it will be possible to change the VAT calculation method (offsetting mechanism). Instead of VAT, either a tax on the acquisition of material resources (differentiated), and these enterprise expenses are included in CMEC, or a tax on added costs [D+W] can be introduced and can be accounted as a markup on the price of goods (without an offsetting mechanism). Using this approach will relieve tax authorities from problems associated with VAT refunds and fraud in this area of taxation.

For enterprises with a government's share in the authorized capital, natural monopolies and monopolist enterprises, it will be possible to introduce a mandatory matrix method for calculating production costs (Table 2).

Table 2

A Matrix for Calculation of Production and Selling Costs, in Standard Units

Cost (Expenses)	Cost Inputs	Period Expenses	Total Costs
1.Current material and equivalent costs (CMEC), total, including	55.0	15.0	70.0
1.1.Material costs	33.0	2.0	35.0
1.2.Outsourcing services	17.0	3.0	20.0
1.3.Rental payments for the use of human and natural resources	0	8.0	8.0
1.4.Environmental payments and compensation payouts	5.0	2.0	7.0
2.Added costs (AC), total, including:	20.0	10.0	30.0
2.1. Depreciation (scheduled maintenance and major overhaul of PPE)	15.0	5.0	20.0
2.2.Payroll fund excl. the amount of mandatory deductions to the insurance fund (in Uzbekistan – social tax)	5.0	5.0	10.0
3.Total costs	75.0	25.0	100.0

Source: prepared by the authors.

The matrix form of cost calculation enables all complex expense items of an enterprise to be grouped by economic elements. Calculation using this method is advisable for subjects of natural monopolies, monopolistic enterprises and a narrow list of enterprises that produce essential products for the population (bread, sugar, utilities, public passenger transport, etc.). This calculation allows you to determine the amount of costs for depreciation of fixed assets and wages, i.e. added costs. At regulated prices, the state approves the maximum (maximum and minimum) level of profitability of products and fixes the price level. Previously, the level of profitability was set in proportion to the cost of production and was ineffective.

In the context of the proposed classification, it will be possible to use differentiated tax rates depending on the duration of their validity. Tax rates for the provision of indivisible services to taxpayers are proposed to be set for a period of 10-20 years, and the rates of mandatory deductions and contributions, fees and state duties, customs duties – annually or for 3 years. Using this approach, the government will have the opportunity to quickly influence the financial condition of those enterprises and sectors of the economy, whose operations largely depend on the dynamics of world prices for exported raw materials, imported materials and components (i.e., on the effect of external and force majeure factors). The implementation of the proposed measures will ensure the sustainability and stability of the tax system, which is very important for expanding business activities and ensuring the balanced development of the national economy (Rasulev, Voronin, 2020, p.59-60).

4. Conclusion

The use of the proposed grouping of taxes and mandatory payments as well as the matrix method of cost calculation follows from the provisions of the “theory of equivalent exchange” and is aimed at finding a “compromise” between taxpayers and the government in the environment of global instability, growing challenges and risks.

It is advisable for society to create conditions for entrepreneurship whereunder profit would be generated not in proportion to the “equal invested capital” but in proportion to the amount of “added costs” of the economic entity, the amount of which is proposed to be used to regulate pricing in order to achieve a balance of inter-industry trade relations between the basic sectors of the economy, in which the “price scale” is formed as the basis of the entire system of prices and valuations.

Under the proposed conditions, it will be easier for the government to monitor changes in the level of added costs ($A + C$) at the level of industries and sectors of the economy as a whole. This category can become the basis for achieving payback for the activities of basic sectors of the economy. This is primarily agriculture and industry (rural-urban), fuel and energy complex and other industries. Market leverage and competition, as experience shows, do not allow achieving a well-balanced trade between basic industries. It is necessary to apply the input-output balance (IOB) and the system of national accounts (SNA). All other areas can trade with each other according to market rules (free pricing, supply and demand, competition).

The goal is to ensure that balanced trade relations between key sectors create a favorable basis for increasing the competitiveness of all other areas of the economy. In a liberal economy, the opposite happens. The constant rise in prices for the products of basic sectors of the economy suppresses the development of areas in which intermediate and final products are produced. Often, only goods produced in the shadow economy or that have passed through the stage of movement in the shadow economy become available to a significant part of the population.

The proposed model for regulating pricing will significantly reduce the disparity in prices for industrial and agricultural products between the level of wages in the real sector of the economy and consumer prices. It is almost impossible to achieve balance in the economy only using the market instruments.

Using the proposed model of pricing and cost calculation by economic elements, it is possible to build a new system of taxation of legal entities, which will stimulate the achievement of a balance in inter-industry exchange and the formation of optimal prices.

It is necessary to organize planned regulation of operations of basic industries and market regulation of all other spheres of the economy (with the exception of the public sector). Profit in the environment of creation of a well-balanced economy (socialist, socially oriented) should be generated in proportion to added costs, which will ensure the achievement of goals. Under the conditions of liberal capitalism, profit is generated in proportion to the invested capital, and a significant part of it, as a rule, is passed on to “oligarchs”. At the same time, the assessment of the contribution of “labor” in the form of wages is, as a rule, underestimated. Sectors with the government presence should become a model for justice, and not an area for corruption and poor quality of products and services provided. These provisions must be taken into account when creating conditions for building a truly social state in the future, in which human “work” will be protected and the environmental situation will significantly improve.

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Sovereign Wealth Funds: Investment Goals and Strategic Asset Allocation

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This paper provides an overview of the sovereign wealth funds that are members of the International Forum of Sovereign Funds (IFSWF), which support the Santiago principles and apply international best practices. In particular, an analysis of investment strategies was carried out as well as a comparative analysis of asset management approaches of sovereign funds - participants of the IFSWF and the National Fund of the Republic of Kazakhstan. Based on the analysis, conclusions are presented that can be used for further development of the asset management process of the National Fund of the RK.

Key Words: asset allocation, sovereign wealth funds, financial instruments.

JEL-Classification: G11, G23.

*“Prepare, not predict”
- Global Investment Corporation*

Preamble

Currently, interest in sovereign wealth funds is actively growing, since they are large investors and important participants in the global financial system.

According to Global Sovereign Wealth Funds organization, there were 174 sovereign wealth funds worldwide at the end of 2022, with assets under management estimated to have a market value of US\$11.4 trillion (Global SWF Annual Report, 2023). According to the Santiago Principles adopted by the International Monetary Fund in 2008, sovereign wealth funds (SWFs) are investment funds or special purpose vehicles owned by the government of a country. The Funds hold and manage assets to achieve financial objectives and employ a range of investment strategies that include investing in foreign financial assets. The International Forum of Sovereign Funds (IFSWF) classifies these funds based on their goals into savings, stabilization, strategic and hybrid types.

Type	Goal Description
Savings funds	accumulating savings for future generations
Stabilization funds	accumulating capital reserves, which can be used by governments to balance the budget
Strategic funds	investing in strategic sectors to stimulate their development by promoting the economic growth and generating financial returns
Hybrid funds	these funds consist of a combination of two or more functions listed above by combining the goals of saving, stabilization and/or development.

The generally accepted principles and practice (GAPP) rest upon the following high-level goals for SWFs:

1) helping maintain stable global financial system, free movement of capital and investments;

- 2) complying with applicable regulations and requirements on information disclosure in countries where they invest in;
- 3) investing based on economic and financial risks as well as profitability considerations;
- 4) creating a transparent and reliable governance structure that ensures adequate operational control, risk management and accountability.

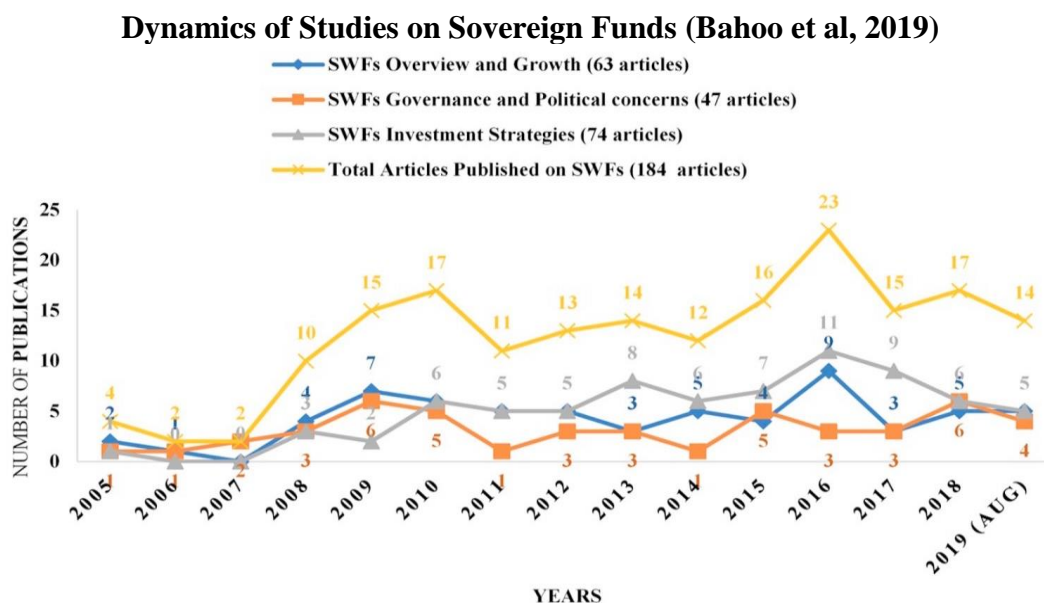
This paper provides an overview of the sovereign wealth funds included in the IFSWF that participated in the creation and/or support the Santiago Principles and apply international best practices. In particular, investment goals, approaches to asset allocation were considered and a comparative analysis of the practices used by the funds-members of the IFSWF and the National Fund of the Republic of Kazakhstan was carried out.

Literature Review

SWFs are a heterogeneous group that includes fiscal stabilization funds, provident funds, investment reserve corporations, development funds, and pension reserve funds with no direct pension liability. As the industry evolves with the emergence of new vehicles with mixed legal structures and portfolios, the definition of SWF becomes increasingly complex (Global SWF Annual Report, 2023).

A literature review from 2005 to August 2019, consisting of a bibliometric citation analysis, includes an analysis of 184 articles in the field of SWF, the main areas of research, the most influential aspects of the literature, areas of future research (Bahoo et al, 2019). The authors divided the research on sovereign wealth funds into the following three areas: SWF overview and growth, SWF investment strategies, and SWF governance issues. Figure 1 shows the dynamics of studies in these areas:

Figure 1



SWFs' ability to take a long-term investment approach and overcome business cycles in many circumstances adds important diversity to global financial markets that can be extremely beneficial, especially during the periods of financial crises or macroeconomic stress. Portfolio management involves navigating a dynamic macroeconomic environment, assessing emerging technologies and new investment approaches, applying advanced quantitative techniques, meeting changing regulatory requirements in different countries, and effectively executing an investment strategy.

When considering investment approaches for sovereign wealth funds, it is necessary to take into account investment goals, which imply the investment horizon, risk profile and asset allocation.

Comparative Analysis of Approaches to Asset Management of Funds Participating in the International Forum of Sovereign Wealth Funds and of the National Fund of the Republic of Kazakhstan

The main objective of the National Fund of the Republic of Kazakhstan is to save financial resources by creating savings for future generations and reducing the dependence of the national budget on the situation in the global commodity markets³⁹.

Based on the saving goals of creating savings for future generations of Kazakhstanis, similar to the strategies of sovereign funds in the world, the investment strategy of the National Fund is elaborated for the long term. Reducing the dependence of the national budget on the situation in global commodity markets is a component of stabilization goals. Based on the classification of sovereign funds used by the International Forum of Sovereign Wealth Funds (IFSFW), a distinctive feature of the National Fund is the combination of savings and stabilization goals.

Funds such as Abu Dhabi Investment Authority, Global Investment Corporation, Alaska Permanent Fund Corporation, and New Zealand Superannuation Fund are primarily savings funds based on their goals. Pursuant to their stated objectives, these funds invest on behalf of the government in accordance with strategies aimed at creating long-term value.

Thus, savings investment goals define a long-term investment horizon. The APFC measures investment performance by its return over a period of 10 years. The GIC measures investment performance by a 20-year rolling real return. The assessment of investment management of the National Fund assets is carried out over a long-term horizon using a rolling assessment method over the last 5 and 10 years and from the beginning of the management of the National Fund assets.

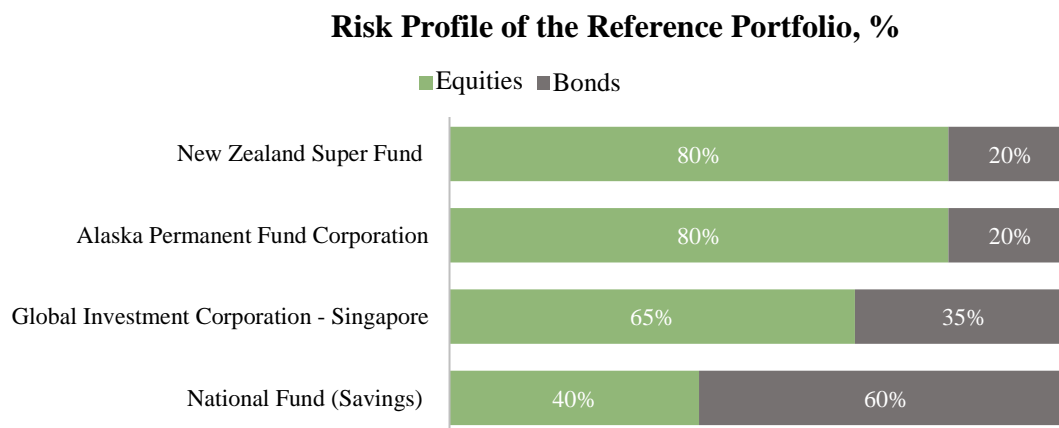
The investment objectives of the funds are aimed at achieving profitability at a certain level of risk. As of 2023, APFC's risk profile is determined by its risk-tolerance portfolio (RTP), which consists of 80% global equities and 20% global investment-grade bonds. The NZ Super Fund's risk profile is determined by the risk of its reference portfolio, which consists of 75% global equities, 5% New Zealand equities and 20% global investment-grade bonds. The purpose of a reference portfolio of sovereign wealth funds is to identify the best possible long-term risk profile within the capabilities defined in the mandates. The ADIA and GIC risk profiles are also based on the reference portfolio. GIC's reference portfolio reflects the risk that the Singapore government is willing to accept in long-term investment strategies. At the same time, the reference portfolio is not a benchmark, but expresses the general risk that an investor is willing to accept. GIC's reference portfolio consists of 65% global equities and 35% global bonds.

The National Fund, due to the combination of savings and stabilization goals, does not create a single reference portfolio. The risk profile of the National Fund's savings portfolio is based on the risk of a balanced portfolio consisting of 60% global bonds and 40% global equities. The risk profile of the stabilization portfolio is characterized by highly liquid instruments of the US money market. The function of the stabilization portfolio consists of maintaining the liquidity of the National Fund assets and involves the allocation of guaranteed and earmarked transfers to the national budget. Figure 2 shows the structure of the risk profile of the funds under consideration.

In accordance with the risk profile, the increase in portfolio value is ensured through strategic asset allocation. The process involves diversifying asset classes and sub-categories based on long-term market expectations. The primary objective of strategic asset allocation is to allocate investments in the most efficient manner to achieve the fund's objective while balancing associated returns and risks. Therefore, the analysis of optimal strategic allocation begins with the most explicit definition of the fund's goal or objective.

³⁹ Presidential Decree of the Republic of Kazakhstan dated 10.09.2022 No.1005 "On Approval of the Concept for Management of Public Finances of the Republic of Kazakhstan until 2030"

Figure 2



The target value is not only a set of weights in a strategic allocation, but also the risk profile that this set of weights provides. Targeting a specific risk profile with a structured and dynamic approach to maintaining that risk profile is very important.

According to the structure of the above risk profile, equities make up more than 60% of the reference portfolio of NZ Super Fund, APFC, and GIC. Thus, assets with high volatility and profitability will dominate the portfolios of these funds. For this reason, alternatives make up over 20%; public equities make up over 30% of the strategic asset allocation of NZ Super, APFC, and GIC. Since bonds make up 20-35% of the reference portfolios of NZ Super, APFC, GIC, this asset class represents less than 35% of the strategic asset allocation of the funds in question (Figures 3-5).

According to the Concept for Asset Management of the National Fund of the Republic of Kazakhstan until 2030, the transition from a conservative (80% in bonds and 20% in equities) to a balanced allocation of assets of the National Fund's savings portfolio began in 2019. A balanced allocation of the National Fund's savings portfolio involves diversifying the bond portfolio (60%) into government bonds of advanced markets (29%), corporate bonds (10%), government bonds of emerging markets (21%), expanding the equities portfolio (30%), and investing the Fund's assets into alternative classes of instruments and gold, which expand additional diversification. Thus, a balanced allocation of the National Fund's savings portfolio increases the expected risk-adjusted return with the appropriate risk profile of the reference portfolio (40% equities, 60% bonds) over a long-term investment horizon.

Figure 3

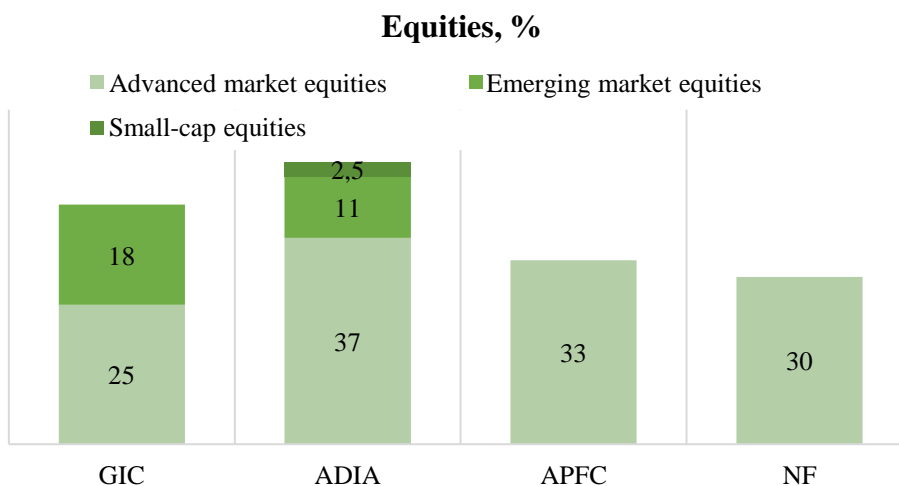


Figure 4

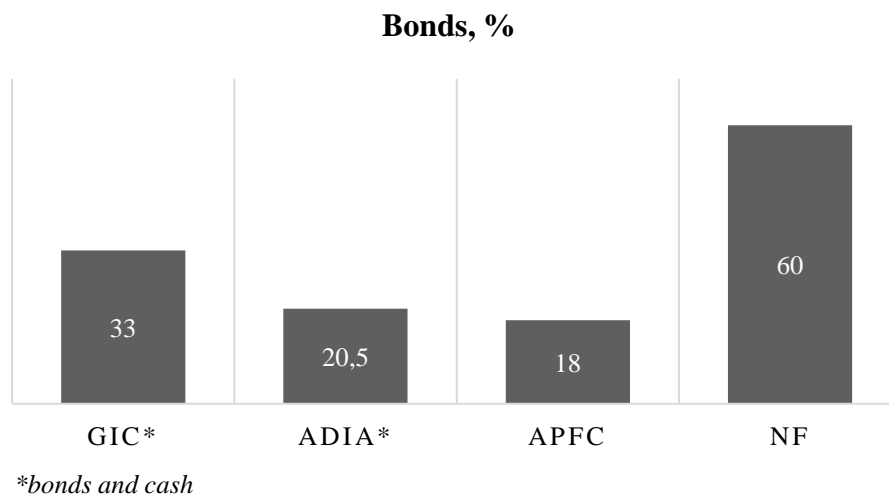


Figure 5

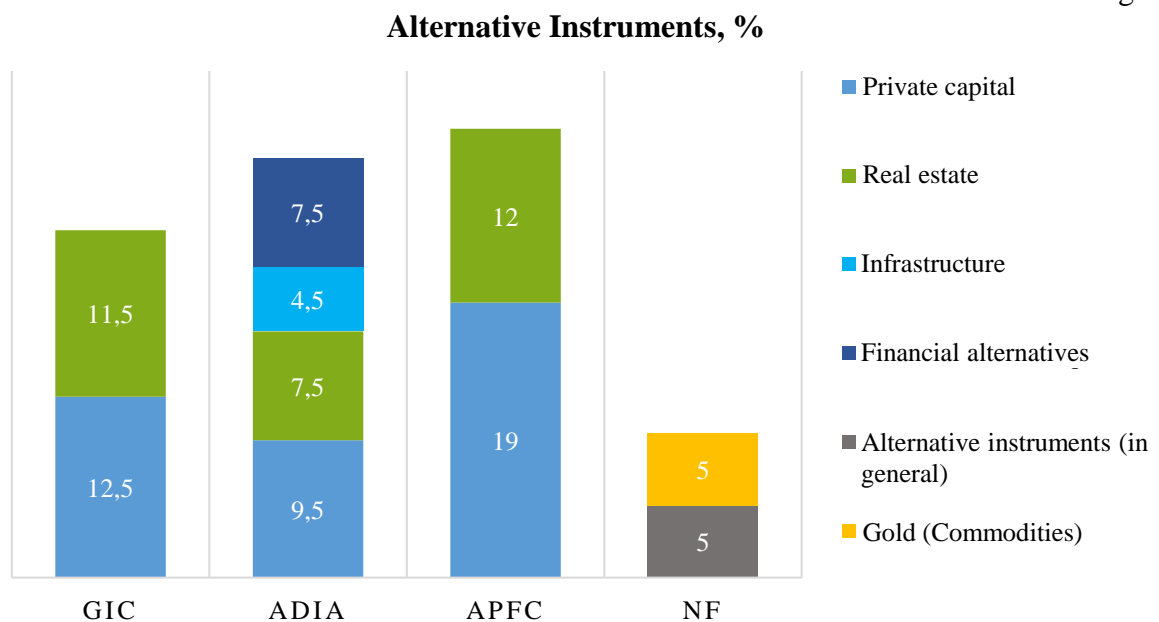


Table 1

Investment Goals and Asset Allocation of Funds Participating in the IFSWF

Fund Name	<i>Alaska Permanent Fund Corporation (1976)</i> Permanent Fund of the state of Alaska
Assets under Management	US\$73 bln (2022)
Mission	All generations of Alaskan residents should benefit from the Fund
Investment Goals	Achieving maximum investment performance consistent with the established risk tolerance and prudent investment practices
Investment Target	Investment efficiency: CPI + 5% over 10 years (a long-term goal) in line with the Fund's risk appetite

Risk Profile	Risk appetite is determined by (a) a risk-tolerance portfolio, and (b) liquidity level: Risk-tolerance portfolio (RTP):		
	Share	Asset Class	Index
	80%	equities	MSCI ACWI IMI
	8%	bonds	Bloomberg US Aggregate
	8%	bonds	Bloomberg US Corporate
	4%	bonds	Bloomberg Global Treasury excl. US
	Liquidity level: overall allocation to public equities, bonds, cash of at least 40%		
Asset Allocation	Conducting a study of the Fund’s asset allocation at least once every five years to revise asset class assumptions. Asset allocation plan by 2025 (from 2020):		
	Share	Asset Class	Index
	33% ±5	equities	MSCI ACWI IMI
	18% ±5	bonds	Treasury
			US Aggregate
			US BB High Yield
			US Corporate IG
	19% ±5	private capital	
	12% ±3	real estate investments	
18%	other		
Source of Financing	The country’s revenues from oil sale		
Fund Name	The New Zealand Superannuation Fund (2003)		
Assets under Management	US\$59.64 bln (March 2022)		
Mission	Sustainable investments that provide high returns for all New Zealanders (to pre-finance future New Zealand superannuation costs)		
Investment Goals	Maximize returns without excessive risk for the Fund as a whole		
Investment Target	Expected return above Cash – 2.8% (p.a.) Long-run risk – 13.8% (volatility p.a.)		
Returns since the Fund’s inception	10.23% (p.a.)		
Risk Profile	The reference portfolio differs from the widely used approach of strategic asset allocation (SAA) in that: - it is a risk reference and does not define an actual portfolio composition; - contains traditional asset classes only; - the portfolio structure is not subject to change in the environment of a short-term market turbulence and alters only in case of fundamental changes in the market and in the Fund’s mandate. A review of the Fund’s current reference portfolio was conducted in 2020; its structure was approved for 5 years. Reference Portfolio:		
	Share	Asset Class	Index
	75%	equities	MSCI ACWI IMI hedged to NZD
	5%	equities	S&P/NZX 50 Gross Index
	20%	bonds	Bloomberg Barclays Global Aggregate hedged to NZD

Asset Allocation	Actual portfolio as at June 2022:	
	Share	Asset Class
	48%	global equities
	21%	debt securities
	9%	alternative instruments
	5%	agriculture and wood products
	5%	private equity
	4%	New Zealand equities
	4%	infrastructure
	3%	real estate
Source of Financing	Public contributions to fixed capital	
Fund Name	<i>Abu Dhabi Investment Authority (1976)</i>	
Assets under Management	about US\$900 bln	
Mission	supporting Abu Dhabi's long-term prosperity via capital growth through a disciplined investment process	
Investment Goals	Invests on behalf of the Government of Abu Dhabi through a strategy focused on increasing value over the long term ADIA combine a long-term portfolio horizon with the ability to quickly respond to investment opportunities as they appear	
Asset Allocation	Strategic Asset Allocation:	
	Share*	Asset Class
	32-42%	advanced market equities
	7-15%	emerging market equities
	1-5%	small-cap equities
	7-15%	government bonds
	2-7%	debt instruments (investment- and non-investment grade class)
	5-10%	financial alternatives
	5-10%	real estate
	7-12%	private capital
	2-7%	infrastructure
	0-10%	cash on hand
	<p>* ranges of the strategic allocation portfolio within which allocation may fluctuate; they do not make up 100% in total.</p> <p>The ADIA's investment strategy begins with determining risk appetite based on a reference portfolio. The increase in portfolio value occurs through the process of strategic asset allocation (diversification of assets across classes and sub-categories, based on long-term market expectations). This allows the ADIA to achieve a higher expected return compared to the reference portfolio at a comparable level of risk. In the ADIA strategy, Asset Allocation is a key driver of long-term investment performance.</p>	
Fund Name	<i>Global Investment Corporation (Singapore) (1981)</i>	
Assets under Management	US\$690 bln (2022)	
Investment Goals	Building a diversified, sustainable portfolio to secure Singapore's financial future	

Investment Target	GIC investment strategy is to design a portfolio consisting of asset classes that can provide long-term returns above global inflation. GIC's primary measure of investment performance is the 20-year rolling real returns	
Returns	The annual nominal and real (above global inflation) return on the GIC portfolio was 7.0% and 4.2% per annum, based on the data over a 20-year period (as of March 31, 2022)	
Risk Profile	The Reference Portfolio was adopted in 2013 and reflects the risk that the Singapore government is willing to accept in long-term investment strategies. The reference portfolio is not a benchmark, but expresses the overall risk.	
	Share	Asset Class
	65%	global equities
	35%	global bonds
Strategic Allocation	Strategic portfolio (policy portfolio) as a long-term strategy of GIC asset allocation. The strategic portfolio is expected to ensure a risk-adjusted return during a 20-year period	
	Share	Asset Class
	25-30%	bonds and cash
	20-30%	advanced market equities
	15-20%	emerging market equities
	11-15%	private capital
	9-13%	real estate
	4-6%	inflation-indexed bonds
Actual portfolio	GIC may adjust the level of assumed risk, if possible. Actual portfolio as at March 2022:	
	Share	Asset Class
	14%	advanced market equities
	16%	emerging market equities
	37%	bonds and cash
	17%	private capital
	10%	real estate
	6%	inflation-indexed bonds
Source of financing	Sources of financing include receipts from issuance of Singapore government securities and special Singapore government securities, the state budget surplus and proceeds from the sale of land by the Government	

Findings and Conclusion

The comparative analysis of approaches to managing sovereign funds' assets in accordance with investment objectives has shown that the approach of determining the risk profile and strategic asset allocation used in managing the savings portfolio of the National Fund is the world's leading practice. However, unlike most sovereign funds, the risk profile of the National Fund is characterized by a relatively low degree of risk due to prevalence of the stabilization function over the savings function in recent years.

At the same time, sovereign wealth funds worldwide still face challenges, such as maintaining a balance between long-term and short-term investment objectives, uncertainty in designing a portfolio, developing methodologies for including alternative asset classes in the portfolio, and communicating with stakeholders.

IFSWF participants create a platform for about 40 sovereign wealth funds that support the Santiago principles to work together and strengthen the community through research and

discussion of these topics. In order to further develop the National Fund asset management process and apply world best practices, there is a plan to consider joining the IFSWF.

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