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CONTENTS

THE THEORETICAL FOUNDATIONS OF APPLYING TAX INCENTIVES FOR INVESTMENTS DIRECTED TOWARD HUMAN CAPITAL	14
Quliyev Begimqul Melikovich	
ECONOMETRIC MODELS OF CASHLESS SETTLEMENTS AMONG ECONOMIC ENTITIES.....	21
Ruzimuradov Shukhrat Khusanovich	
PROSPECTS FOR THE DEVELOPMENT OF TOURISM BRAND MARKETING IN MODERN CONDITIONS (UAE: DUBAI ON THE EXAMPLE OF A CITY).....	26
Ibodova Dilsora Ibodovna	
CREDIT DEFAULT SWAPS AS A WAY TO HEDGE AGAINST FORTHCOMING FUTURE UNCERTAINTIES IN THE DEBT MARKET OF UZBEKISTAN	31
Abduganiev Abdulaziz Alisher o'g'li	
SHOULD THE REGULATION OF THE E-COMMERCE MARKET IN THE REPUBLIC OF UZBEKISTAN BE CARRIED OUT BY THE NATIONAL AGENCY FOR PERSPECTIVE PROJECTS OR THE CENTRAL BANK?	39
Sadikov Aziz Mirsharapovich	
MECHANISM FOR IMPLEMENTING ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN THE OPERATIONS OF COMMERCIAL BANKS IN UZBEKISTAN.....	46
Bakhriddin Berdiyarov	
INNOVATIVE APPROACHES OF SMALL BUSINESSES IN THE INDUSTRY AND CONSTRUCTION SECTORS AND THEIR IMPACT ON EMPLOYMENT.....	53
Ergasheva Nigora Abdigapparovna	
AI-BASED NORMALIZATION METHODOLOGY FOR COLLECTING AND PROCESSING KPI INDICATORS.....	56
Shuhratov Mamurjon Shuhrat o'g'li	
REFORMS AND PROSPECTS FOR THE DEVELOPMENT OF THE PARTICIPATORY BUDGETING INITIATIVE IN UZBEKISTAN	63
Khamidov Khabibullo Hikmatulla ugli	
PROBLEMS OF THE INWARD PROCESSING CUSTOMS REGIME AND WAYS TO ELIMINATE THEM.....	70
Abdullaev Shakhzodbek	
FINANCIAL ANALYSIS OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP IN CONSTRUCTION	74
Musayeva Shoirazimovna	
MEASURES TO ENHANCE THE ROLE AND EFFECTIVENESS OF SMALL BUSINESS IN REGIONAL ECONOMIC DEVELOPMENT.....	80
Ergashev Jamshid Jamoliddinovich	
THEORETICAL AND METHODOLOGICAL FOUNDATIONS FOR IMPLEMENTING INNOVATIVE TECHNOLOGIES IN EDUCATION.....	84
Alijonova Marjonabonu Jaxongir qizi	
INDIA'S EXPERIENCE IN ENHANCING PUBLIC WELFARE THROUGH THE DEVELOPMENT OF ENTREPRENEURIAL ACTIVITY	88
Aripov Oybek Abdullayevich	
GREEN STRUCTURAL TRANSFORMATION IN UZBEKISTAN: GREEN FINANCE AND ECO-INNOVATION FOR SUSTAINABLE INDUSTRIAL AND AGRICULTURAL DEVELOPMENT.....	93
Egamberdiev Khumoyun	
AGRICULTURAL MANAGEMENT BASED ON INNOVATIVE TECHNOLOGIES AT THE INTERNATIONAL LEVEL: THE EXAMPLE OF UZBEKISTAN.....	101
Bustonov Komiljon Kumakovich	
ANALYSIS OF THE FINANCIAL CONDITION OF ENTERPRISES: ASSESSMENT OF EQUITY EFFICIENCY	110
Umurkul Shukhratovich Fayziev	

IMPROVING THE QUALITY OF ECONOMIC GROWTH THROUGH THE TRANSITION TO THE DIGITAL ECONOMY.....	118
Mamadaliyev Akmaljon	
МЕТОДЫ И МЕХАНИЗМЫ ИССЛЕДОВАНИЯ ПОТРЕБИТЕЛЬСКОГО ПОВЕДЕНИЯ НА ТУРИСТСКОМ РЫНКЕ.....	124
Нурматова Ситора Шавкатовна	
ANALYSIS OF INNOVATION ACTIVITIES.....	133
Alieva Elnara Ametovna	
METHODS AND MECHANISMS FOR STUDYING CONSUMER BEHAVIOR IN THE TOURISM MARKET.....	139
Nurmatova Sitora Shavkatovna	
ALGORITHMS AND METHODS FOR CALCULATING THE AREA OF A GASTRIC ULCER DEFECT USING MODERN MATHEMATICAL TECHNIQUES.....	145
Yusupov Ibrohimbek XXX, Abdusamatova Munira Sultonbek qizi	
UTILIZATION OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN ENTERPRISE MARKETING ACTIVITIES.....	151
Sadikov Shohrux Shukhratovich	
ENSURING THE FINANCIAL SUSTAINABILITY OF HIGHER EDUCATION INSTITUTIONS: STRATEGIC DIRECTIONS, GLOBAL TRENDS, AND POLICY IMPLICATIONS.....	156
Inomiddin Imomov	
THEORETICAL FOUNDATIONS OF THE STRUCTURE OF THE NATIONAL ECONOMY.....	161
Bustonov Mansurjon Mardonakulovich	
IMPORTANT CHARACTERISTICS OF THE DEVELOPMENT OF E-COMMERCE SERVICES.....	169
Jurakulov Shohruh Bahtiyorovich	
AGRICULTURE PROMOTION AND DEVELOPMENT IN MOUNTAIN AND MOUNTAIN REGIONS.....	173
Abdulxayeva Gulshan Maxmudovna	
IMPROVING MECHANISMS FOR ENHANCING ECONOMIC EFFICIENCY IN SERVICE ENTERPRISES.....	178
Seytimbetov Kabul Serimbetovich	
INTEGRATION OF INTELLIGENT CONTROL IN DRYING SYSTEMS: PROCESS OPTIMIZATION THROUGH SENSORS, ARTIFICIAL INTELLIGENCE, AND MODULAR DRYING.....	184
Yangiboyeva Raxbaroy Mashrabboy qizi	
THEORETICAL MODELS AND CONCEPTS OF ECONOMIC DEVELOPMENT IN THE ENERGY SECTOR.....	190
Nigmatullaeva Gulchekhra Nurullaevna	
STATISTICAL ANALYSIS OF REGIONAL ECONOMIC POTENTIAL (A CASE STUDY OF NAMANGAN REGION).....	196
Tursinbayev Azizbek Nabijon o'g'li, Sirojiddinov Kamoliddin Ikromiddinovich	
DIRECTIONS FOR DEVELOPING INVESTMENT AND EXPORT IN REMOTE SERVICE ENTERPRISES.....	203
Uzakov Ortik Shaymardanovich	
SPECIFIC FEATURES OF ENTREPRENEURSHIP IN INCREASING THE INCOME OF THE POPULATION IN THE REGION.....	207
Kuldasheva Maftuna Musurmon kizi	
KEY FACTORS OF ATTRACTING INVESTMENT THROUGH SUBSIDIES AND INVESTMENTS TO INCREASE AGRICULTURAL CROP PRODUCTION IN UZBEKISTAN.....	211
Mamatkulova Nadira Makkamovna	
RAQAMLI MARKETING VA INNOVATSION TEXNOLOGIYALAR ASOSIDA EKOTIZIM SAMARADORLIGINI OSHIRISH USULLARI.....	216
Sobirov Azizbek Avazbekovich	
WAYS TO IMPROVE THE STATISTICAL ASSESSMENT OF FRUIT AND VEGETABLE PRODUCTION PROCESSES AND EXPORT POTENTIAL IN THE REPUBLIC OF UZBEKISTAN.....	223
Anorboeva Bakhtijamol Daniyar kizi	

THE IMPACT OF DEGRADATION ON THE OPERATIONAL CHARACTERISTICS OF PHOTOVOLTAIC MODULES UNDER SHARPLY CONTINENTAL CLIMATIC CONDITIONS	229
Qurbanov Yunus Murtaza o'g'li	
INTEGRATED NEW MEDIA OPERATION MODEL FOR INTELLIGENT TALENT ASSESSMENT PLATFORMS: THE PATH OF QR CODE ACTIVATION AND CONTENT-DRIVEN ENGAGEMENT.....	235
Wang Biao	
METHODOLOGICAL FOUNDATIONS FOR SHAPING THE CREATIVE ACTIVITY OF YOUNGER PUPILS IN SOLVING MATHEMATICAL PROBLEMS	239
Dzhurakulova Adolat Khalmuratovna	
SOLIDWORKS-BASED MODELING OF AN AIR-BLOWING SYSTEM TO ENSURE HIGH-QUALITY FIBER REMOVAL FROM SAW TEETH	247
Mirzakarimov Mirsharoffiddin Mirzaabdurahimovich	
THEORETICAL STUDY OF TEMPERATURE AND THERMAL PHENOMENA IN MECHANICAL CUTTING OF WHITE CAST IRON.....	256
Allanazarov Akmal Abdulxaqovich	
THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF SUSTAINABLE DEVELOPMENT OF THE REGIONAL ECONOMY	262
Turdiyev Ulug'bek Qayumovich	
THE INTERRELATIONSHIP BETWEEN MIGRATION AND THE INDUSTRIAL ECONOMY	266
Khusanbek Begmatov	
THE IMPACT OF ESG PRINCIPLES ON THE HOTEL INDUSTRY	271
Khusenova Mekhrangiz	
CURRENT STATUS OF INDUSTRIAL PRODUCTION AND SERVICES MARKET IN KASHKADARYA REGION.....	276
Norov Murodjon Makhmudovich	
DEVELOPMENT OF AN ARTIFICIAL INTELLIGENCE-BASED CYBERSECURITY SYSTEM FOR THE AUTOMATIC DETECTION OF FAKE FINANCIAL RECEIPTS, PHISHING URLS, AND MALICIOUS APK FILES	284
Shermatov Axlidin Sharobiddin o'g'li	
WAYS TO INCREASE REVENUES IN COMMERCIAL BANK OPERATIONS	287
Ostonaqulova Gulchehraxon Muhammadyoqub qizi	
РОЛЬ СВОБОДНЫХ ЭКОНОМИЧЕСКИХ ЗОН В РЕГИОНАЛЬНОМ РАЗВИТИИ И ЗАРУБЕЖНЫЙ ОПЫТ.....	301
Файзиева Ширин Шодмоновна	
RAQAMLI IQTISODIYOTGA O'TISH SHAROITIDA IQTISODIY O'SISH OMILLARINING TA'SIRINI BAHOLASH METODOLOGIYASI.....	307
Bustonov Mansurjon Mardonakulovich	
FINTECH TRENDS: NEW TOOLS FOR ATTRACTING FINANCING IN THE CONTEXT OF DIGITAL TRANSFORMATION	313
Madjitova Lolakhon Lazizovna	
CHALLENGES AND PROSPECTS FOR THE DEVELOPMENT OF E-COMMERCE IN UZBEKISTAN.....	317
Toshpulatov Akhror Tukhtamurod ugli	
STRATEGIC DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN UZBEKISTAN	326
Rustamov Foziljon	
TYPES AND MEANS OF ADVERTISING IN THE FIELD OF TOURISM	335
Bahriyeva Zarina Nasimovna	
INTELLECTUALIZATION OF TECHNICAL MEANS FOR CONTROLLING TECHNOLOGICAL REFINING PROCESSES.....	340
Ruziyev Umidjon Abdimajitovich	
NECESSITY OF ENSURING AND INCREASING THE COMPETITIVENESS OF PLACEMENT MEANS	349
Sherkulov Dilshod Jurakulovich	
YASHIL IQTISODIYOT VA MOLIYAVIY INKLYUZIYANING O'ZARO BOG'LIQLIK NAZARIYALARI.....	354
Adashaliyev Baxtiyorjon Valisher o'g'li	

THE IMPORTANCE OF THE AUDIT OF LEASING OPERATIONS ON FARMS OF THE REPUBLIC OF UZBEKISTAN	359
Tursunov Ulugbek Sativoldievich	
METHODOLOGY DEVELOPMENT RETAIL MARKETING AND TRADING SYSTEM.....	365
Makhmatkulov Golibjon Kholmuminovich	
NECESSITY OF ENSURING AND INCREASING THE COMPETITIVENESS OF PLACEMENT MEANS	369
Sherkulov Dilshod Jurakulovich	
ENVIRONMENTAL FISCAL POLICY AS A DRIVER OF GREEN GROWTH AND EMPLOYMENT IN CENTRAL ASIA: EMPIRICAL EVIDENCE	374
Rakhmatova Zilola Yurevna	
ON THE ISSUE OF CALCULATING THE POWER REQUIRED TO HEAT THE EDGES OF THE PIPE BILLET TO THE WELDING TEMPERATURE.....	379
Zairkulov Elyor Yoqubjon o'g'li	
STATISTICAL ASSESSMENT OF REGIONAL ELECTRICITY GENERATION VOLUMES.....	385
Doliev Shokhabbos Kulmurat ugli	
ANALYSIS OF ICT APPLICATION IN UZBEKISTAN'S TOURISM BASED ON EMPIRICAL RESEARCH.....	389
Nazarov Khusanbek Avazbek ogli	
METHODOLOGY FOR FORECASTING AND ANALYZING MANAGEMENT ACCOUNTING INDICATORS AT AN ENTERPRISE.....	395
Minutdinova Liliya Tagirovna	
WELLNESS TOURISM AS AN ESSENTIAL COMPONENT OF HEALTH TOURISM.....	402
Tashtayeva Saida Kahharovna	
THE EXPERIENCE OF GERMANY IN DEVELOPING SMALL AND MEDIUM ENTERPRISES.....	409
Annaklichev Saxi Saparmuxamedovich	
ANALYSIS OF THE APPLICATION OF THE INTERNATIONAL STANDARD ON AUDITING "ANALYTICAL PROCEDURES" IN NATIONAL AUDIT ACTIVITIES	416
Tajekeev Ziyatdin Kobeyzinovich	
ORGANIZATIONAL AND ECONOMIC FOUNDATIONS OF GREEN ENTERPRISE DEVELOPMENT IN ENSURING REGIONAL ENVIRONMENTAL SAFETY	421
Khamidillo Odilov	
A REALIST-POSITIVIST FRAMEWORK FOR ANALYSING MERGERS AND ACQUISITIONS UNDER ECONOMIC POLICY UNCERTAINTY	429
Zakhidov Azizbek Rustamovich	
DEVELOPING MATHEMATICAL MODELS TO SIMULATE THE DYNAMIC BEHAVIOR OF SEPARATION PROCESSES, CONSIDERING THE IMPACT OF EXTERNAL FACTORS	436
Abdulleva Kamola Rustamovna	
THEORETICAL FOUNDATIONS OF IMPLEMENTING DIGITAL TECHNOLOGIES IN THE TRANSFORMATION OF BANKS.....	445
Umarova Malika Baxtiyarovna	
ON THE ISSUE OF RESEARCH AND DEVELOPMENT OF A SLAG-FORMING BASE FOR ELECTRODE COATINGS FOR WEAR-RESISTANT SURFACING.....	451
Sadikov Jaxongir Nasidjanovich	
MODELING OF HEAT FLOWS IN GAS-FIRED CHAMBER FURNACES.....	456
Rajabov Azamat Toirovich	
DEVELOPMENT OF A MIMO MODEL OF AZEOTROPIC DISTILLATION	462
Shamsutdinova Vinera Khafizovna	
THEORETICAL FOUNDATIONS OF THE INTERACTION OF A COTTON TUFT WITH A SCREW CONVEYOR AND A MESH SURFACE.....	468
Matyaqubova Jumagul Bakhtiyarovna	
FORECASTING LIQUIDITY AND SOLVENCY INDICATORS BASED ON ARTIFICIAL INTELLIGENCE	473
Zaynutdinov Ismoil Samariddin o'g'li	
MODELS FOR PREDICTING THE MANAGEMENT OF COMPLEX TECHNOLOGICAL PROCESSES AND PRODUCTIONS	477
Gulyamov Shukhrat Mannapovich	

WAYS TO ADJUST LAND RESOURCE USE MECHANISMS FOR FARMERS BASED ON THE EXPERIENCE OF FOREIGN COUNTRIES.....	482
Akhmatov Abutolibkhon Ochilkhon oglu	
STATE SUPPORT MECHANISMS FOR THE DEVELOPMENT OF THE MACHINE-BUILDING INDUSTRY	487
Kursandov Komiljon Makhmatkulovich	
EMPIRICAL ANALYSIS OF TOURISM FLOW FORECASTING IN CENTRAL ASIA BASED REGRESSION MODELS	491
Suratova Mokhirakhon Shavkat Kizi	
THE ROLE OF LOANS IN THE DEVELOPMENT OF THE REGIONAL ECONOMY.....	498
Meylikov Fazliddin Abduhalim o'g'li, Valiev Oybek Shukhrat ugli	
PROPAGATION OF SMALL MOTIONS IN A TWO-LAYER DISPERSE MEDIA FLOW.....	503
D. S. Yakhshibaev	
FURTHER IMPROVEMENT OF THE AUTOMATION SYSTEM OF ELECTRONIC SERVICES AND TOURIST PERMITS.....	511
Najmiddinov Sultan Nurali ugli	
THE NECESSITY OF DISCLOSING INFORMATION ON SELLING EXPENSES IN ACCOUNTING REPORTS OF PHARMACEUTICAL ENTERPRISES.....	516
Xudaynazarova Dilnoza Gafurovna	
INVESTMENT FINANCIAL MECHANISMS AND THEIR ROLE IN THE NATIONAL ECONOMY	521
Karjavova Khurshida Abdumalikovna	
WESTERN COUNTRIES' EXPERIENCES IN ENSURING THE FINANCIAL PERFORMANCE OF BANKING ACTIVITIES.....	526
Alimjanova Dilrabo Sobirjanovna	
MAIN FEATURES OF DIVIDEND POLICY IN COMMERCIAL BANKS.....	530
Aliyev G'ulomnozir Maxamatjonovich	
OPTIMIZATION OF THE DESIGN OF AN ENERGY- AND RESOURCE-EFFICIENT PRESSING DEVICE FOR CONVERTING DRIED LEAVES, FALLEN FOLIAGE, AND PLANT RESIDUES INTO LOCALLY PRODUCED ORGANIC FERTILIZERS.....	536
Toirova Nuriya Abdiyevna, Toirov Murtoza Shavkidinovich, Urinova Xulkar Shokirovna	
FUNDAMENTALS OF FORMING ACCOUNTING POLICIES FOR LEASING COMPANIES BASED ON INTERNATIONAL FINANCIAL REPORTING STANDARDS	540
Baxadirov Alisher Komilovich	
THE USE OF DUE DILIGENCE PROCEDURES TO ENSURE TRANSPARENCY OF FINANCIAL REPORTING IN JOINT-STOCK COMPANIES	545
Prokudina Kristina Aleksandrovna	
INTERNATIONAL EXPERIENCE: EXAMPLES OF HISTORICAL CITIES (FLORENCE, LVIV, GRANADA, AND OTHERS)	550
Radjabova Mavluda Ergash qizi	
APPLYING LINEAR PROGRAMMING TO ANALYZE THE STATE OF COMMODITY AND RAW MATERIAL RESOURCES IN INDUSTRIAL ENTERPRISES	554
Beknazarov Farxod Abduvaxidovich, Usmanov Shakhzod Shokhrukhovich	
INTEGRATED EDUCATION MODEL IN TEACHING WATER-SAVING IRRIGATION TECHNOLOGIES.....	561
Shokhimardanova Niginabonu Shavkatovna	
IMPACT OF INFLATIONARY PROCESSES ON PROBLEM LOANS.....	566
Tojiyev Sardor Dilmurod ugli	

IMPACT OF INFLATIONARY PROCESSES ON PROBLEM LOANS

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Abstract: This article analyzes the impact of inflationary processes on the problem loans portfolio of commercial banks. The study theoretically and practically highlights the relationship between inflation and the quality of the loan portfolio. Statistical data on inflation indicators and the dynamics of problem loans were obtained and practically analyzed from a special electronic website of the Central Bank of the Republic of Uzbekistan. It was also analyzed how the growth rate of prices in the macroeconomic environment affects the solvency of borrowers, real interest rates, and the level of risk of banks. At the same time, this article theoretically analyzes the direct and indirect impact of inflationary processes on the loan portfolio of commercial banks of Uzbekistan, in particular, on the share of non-performing loans. At the same time, recommendations have been developed aimed at ensuring the stability of the banking system.

Key words: inflation, bad loans, real income, profitability, interest rates, loan portfolio quality, cash flow.

Annotatsiya: Mazkur maqolada inflyatsion jarayonlarning tijorat banklari muammoli kreditlar portfeliga ta'siri tahlil qilingan. Tadqiqotda inflyatsiya darajasi bilan kredit portfeli sifati o'rtasidagi bog'liqlik nazariy va amaliy jihatdan yoritib berilgan. O'zbekiston Respublikasi Markaziy bankingning maxsus elektron veb-saytidan inflyatsiya ko'rsatkichlari hamda muammoli kreditlar dinamikasiga oid statistik ma'lumotlar olinib, amaliy tahlil qilingan. Shuningdek, makroiqtisodiy muhitda narxlar o'sish sur'atlarining qarz oluvchilarning to'lovga layoqatliligi, real foiz stavkalari va banklar risk darajasiga ta'siri o'rganilgan. Shu bilan birga, maqolada inflyatsion jarayonlarning O'zbekiston tijorat banklari kredit portfeliga, xususan, ishlaymaydigan kreditlar ulushiga to'g'ridan-to'g'ri va bilvosita ta'siri nazariy jihatdan tahlil qilingan. Tadqiqot yakunida bank tizimi barqarorligini ta'minlashga qaratilgan tavsiyalar ishlab chiqilgan.

Kalit so'zlar: inflyatsiya, muammoli kreditlar, real daromad, rentabellik, foiz stavkalari, kredit portfeli sifati, pul oqimi.

Аннотация: В статье проанализировано влияние инфляционных процессов на портфель проблемных кредитов коммерческих банков. В исследовании теоретически и практически раскрыта взаимосвязь между уровнем инфляции и качеством кредитного портфеля. На основе статистических данных, полученных с официального электронного сайта Центрального банка Республики Узбекистан, проведен практический анализ показателей инфляции и динамики проблемных кредитов. Также исследовано влияние темпов роста цен в макроэкономической среде на платежеспособность заемщиков, реальные процентные ставки и уровень банковских рисков. Вместе с тем в статье теоретически проанализировано прямое и косвенное воздействие инфляционных процессов на кредитный портфель коммерческих банков Узбекистана, в частности на долю неработающих кредитов. По итогам исследования разработаны рекомендации, направленные на обеспечение устойчивости банковской системы.

Ключевые слова: инфляция, проблемные кредиты, реальные доходы, рентабельность, процентные ставки, качество кредитного портфеля, денежные потоки.

INTRODUCTION

In recent years, against the backdrop of global economic changes, the intensification of inflationary processes has had a significant impact on the banking and financial systems of the countries of the world. In the economy of Uzbekistan, the trend of changes in the inflation rate is also showing high rates. This, in turn, directly affects banks' loan portfolios, savings, investment volume, and the solvency of the population and business entities. As a result, an increase in the inflation rate leads to an increase in problem loans in the banking system. This negatively affects the liquidity, profitability, and overall financial stability of commercial banks.

The growth of non-performing loans jeopardizes not only the activities of banks, but also the stability of the entire economic system. Therefore, the study of the mechanism of influence of inflationary processes on problem loans, the analysis of this process, and the development of scientifically based proposals for its mitigation is a relevant scientific and practical issue today.

The purpose of this article is to study the impact of inflationary processes on problem loans using the example of commercial banks of Uzbekistan, to analyze their interrelationships, and to develop proposals and recommendations for reducing problem loans.

REVIEW OF LITERATURE ON THE SUBJECT

Several scientists have conducted research on the influence of macroeconomic factors, in particular inflation, on problem loans. In particular, according to Gelmanova Zoya Salikhovna, inflation can significantly increase the financial burden for borrowers who have received long-term loans, for example, a mortgage loan. As a result of inflation, increased payments and a decrease in real incomes make it difficult to pay debts on time, which can lead to the accumulation of overdue debts. In his research, T. Ptashits theoretically asserted that if interest rates do not change in nominal terms, inflation reduces the real value of debt, therefore the lending process becomes easier, and this, in turn, leads to a decrease in the volume of problem loans. At the same time, Maja Ristevska, Hemlata Sharma, Aparna Andhalkar, Oluvaseun Ajao, Bayode Ogunleye showed that inflation, unemployment, and other macroeconomic factors are associated with credit risk. Such foreign scientists as P.L.Dimitrios, T.V.Angelos, and L.M.Vasilios have determined the degree of influence of macroeconomic factors, including inflation, on problem loans.

In his article "Factors Affecting Non-Performing Loans: Empirical Evidence from Commercial Banks in Uzbekistan," published in 2024, Uzbek scholar Ulmas Isakov assessed the main factors influencing the level of NPL for banks in Uzbekistan using econometric models, and also took indicators such as GDP growth, interest rates, exchange rates, and inflation as macroeconomic factors and determined their relationship with NPL. In his article "Trends and Patterns of Accumulation of Non-Performing Loans in the Banking Sector of Uzbekistan," Jonibek Rustamov analyzed the structure and growth dynamics of NPLs in the banking system of Uzbekistan, and also detailed and analyzed how fluctuations in economic conditions (including inflationary changes and exchange rate fluctuations) affect the quality of loans.

RESEARCH METHODOLOGY

In this study, the influence of inflationary processes on the quality of the loan portfolio of commercial banks, in particular, the share of non-performing loans (NPL), was theoretically and practically analyzed. The methodological basis of the research consists of methods of economic analysis, statistical assessment, and empirical observation. Through the method of theoretical analysis, the economic content of such concepts as inflation, problem loans, interest rates, solvency, their interrelationships, and mechanisms of influence were studied based on scientific literature, international experience, and national legislation. Through comparative and dynamic analysis methods, the inflation rate and the trend of changes in the share of non-performing loans in the banking system of Uzbekistan in recent years (2020-2025) were analyzed in a comparative aspect. Based on this, scientifically based recommendations were developed to reduce the impact of inflation on problem loans.

ANALYSIS AND RESULTS

As we all know, inflation means a decrease in the purchasing power of the national currency. As a result of rising prices for goods and services, the purchasing power of the population decreases and real incomes decrease, savings depreciate, and this situation negatively affects economic stability.

Inflation is a continuous increase in prices in a country and on the world market. Inflation is a major source of risk for any macroeconomic system. It is known that a decrease in the quality of the loan portfolio and an increase in the share of non-performing loans threaten the stability of the banking system. At the same time, the impact of inflation on the bank loan portfolio and the volume of non-performing loans remains a pressing issue in the conditions of Uzbekistan.

Inflation occurs in the economies of almost every country, however, in some countries it is at a lower level, and in others - at a very high rate. Central banks try to keep inflation at a certain level, because moderate inflation stimulates economic growth, but excessive inflation increases economic risks.

Inflation occurs on the basis of various factors, which can be divided into the following groups:

1. Factors related to money circulation - the outflow of unfunded money into the economy.
2. An increase in production costs is an increase in the price of raw materials, fuel, or labor.

3. The factor of inflationary expectations in public opinion is the anticipation of price increases by the population and entrepreneurs.

Typically, the following types of inflation are distinguished:

- Demand-pull inflation. Demand inflation occurs when aggregate demand exceeds the supply of goods and services in the economy. For example, if the population's income increases and purchasing power increases, but production volume cannot meet this demand, prices will rise. For example, although the construction of new housing has slowed down, prices will rise as a result of increased demand for housing.
- Cost inflation. This type of inflation is associated with an increase in production costs. When the price of wages, energy, or raw materials rises, producers add the costs to the price of the product. For example, when the price of fuel or gas increases, transportation and production costs also increase. This will lead to a general increase in prices.
- Expectancy inflation. Expected inflation occurs as a result of participants in economic segments acting with the expectation that prices will rise in the future. For example, entrepreneurs raise prices in advance, thinking prices will rise; the population buys more. This process will further accelerate inflation.
- Import inflation. When the prices of imported goods and raw materials rise, the national currency depreciates, resulting in inflation.
- Structural inflation. This inflation is caused by imbalances in the economy. For example, we can cite the weakness of the logistics system and the financial and economic backwardness of certain sectors. The emergence of such discrepancies leads to a slowdown in commodity and money circulation. As a result, inflation increases (Figure 1).

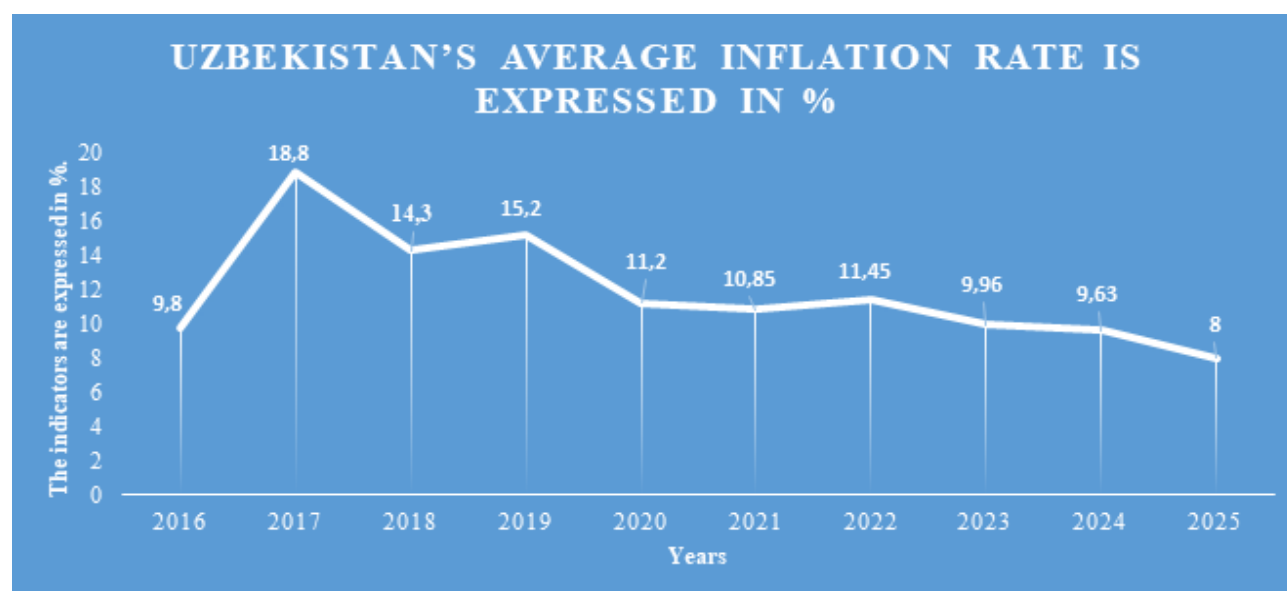


Figure 1. Inflation rate dynamics in Uzbekistan

According to the above graph data, the inflation rate in the economy of Uzbekistan for 2016-2025 was variable, but had a downward trend. In 2017, inflation increased sharply, reaching 18.8 percent, and in subsequent years, a gradual decline will be observed. The projected value for 2025 is around 8 percent, which is almost 2.3 times lower than the 2017 level. In 2017, after the free convertibility of the national currency, the official exchange rate was brought closer to the market rate. As a result, imported goods became more expensive, and, naturally, domestic prices rose. Many state-regulated prices, such as fuel, transport, electricity, and utilities, have also been liberalized. Due to this, the inflation rate reached a high level in 2017.

This situation shows that the inflation targeting policy pursued by the Central Bank is yielding results, and the price growth rate is gradually stabilizing.

The relationship between inflation and interest rates is one of the most important macroeconomic relationships in the economy. They directly influence each other and play a key role in determining the country's monetary policy.

Simply put, interest rates usually rise when inflation rises, because this is one of the measures taken by the Central Bank to curb inflation by raising the refinancing rate. As a result, the share of financial resources allocated for economic development decreases, interest rates decrease when inflation decreases, which serves to stimulate economic activity.

Inflationary processes directly affect the functioning of the banking system, especially the quality of the loan portfolio of commercial banks. When the inflation rate increases, not only prices but also credit risks also increase. Because inflation changes the real value of loans, reduces borrowers' solvency, and increases interest rate volatility. Therefore, inflation is one of the most important macroeconomic risk factors for commercial banks.

When inflation increases, the real value of borrowed funds decreases, meaning they actually pay off their debts with cheaper money. On the one hand, this situation seems favorable to borrowers, but it is detrimental to banks, as they lose the real value of the loan they provided.

However, in the long run, inflation puts pressure on income and production costs, resulting in a deterioration in borrowers' solvency. Thus, payment discipline on the loan will be violated, the number of overdue debts and problem loans will increase.

During periods of high inflation, household savings decrease because real incomes fall. As a result, bank deposits decrease, which reduces banks' lending capabilities. This weakens bank liquidity and slows down the growth of the loan portfolio.

Inflation leads to an increase in costs in manufacturing sectors. In some industries, demand decreases, and the competitiveness of products is lost. Therefore, loans issued to these sectors become risky assets (Figure 2).

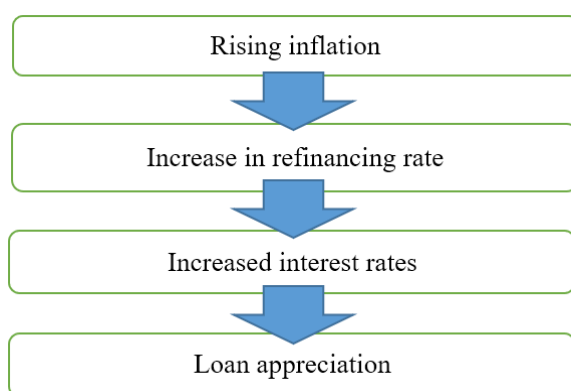


Figure 2. The effect of inflation on bank interest rates

The financial stability of commercial banks is directly related to the quality of their loan portfolio. Loans constitute the main part of bank assets, therefore a decrease in their quality affects the reliability of the entire banking system. Loans in the loan portfolio with a violation of repayment terms, overdue interest payments, or not paid at all are called problem loans.

A problem loan is a loan that is not repaid by the client in a timely manner in accordance with the terms of the contract, interest payments are delayed, or are not paid at all.

In other words, in cases where loan obligations are overdue by more than 90 days, it is classified as a problem loan (according to Basel Committee standards).

The presence of non-performing loans negatively affects the adequacy of bank capital, profitability, and liquidity. When the NPL share increases, the bank's profit decreases, the reserve requirement increases, and lending volume decreases (Table 1).

Table 1. Loans allocated by commercial banks of the Republic of Uzbekistan from April 1, 2020 to the present (in national currency and soums) billion soums

Years	Total credits	of which problem loans	
		amount	Share of the total (in %)
As of 1 April 2020	221,934.00	5,021.00	0.86
2020	276,975.00	5,785.00	2.09
2021	326,386.00	16,974.00	5.20
2022	390,049.00	13,992.00	3.59
2023	471,406.00	16,621.00	3.53
2024	533,121.00	21 185.00	3.97
As of September 1, 2025	581,057.00	21,802.00	3.75
Total	2,578,994.00	101,380.00	3.93

As can be seen from the table, in the period from the beginning of 2020 to September 2025, the total volume of loans issued by commercial banks increased more than 2.6 times, from 221.9 trillion soums to 581.1 trillion soums. This indicates a sharp increase in the volume of satisfying the loan demand of economic entities in the country. In 2020 and 2021, a sharp increase in problem loans was observed due to the global pandemic. However, by 2022, after the pandemic, due to the restoration of production volumes and logistics chains, export activity, and the recovery of domestic demand and supply, cash flows began to flow to enterprises, resulting in the possibility of repaying loans. Also, due to the policy of banks to extend loan repayment terms for clients affected by the pandemic, a number of relief measures were provided for loan payments. Due to similar reasons, the share of non-performing loans sharply decreased in 2022.

Inflationary processes directly affect the quality of the loan portfolio in the banking system. Problems with the repayment of bank loans arise as a result of price increases, changes in interest rates, and a decrease in the real income of borrowers. Therefore, inflation is one of the most important macroeconomic factors leading to the growth of NPLs.

When inflation rises, prices for goods and services rise rapidly, but the population's wages and businesses' incomes do not grow as rapidly. As a result, real incomes decrease, purchasing power decreases, and it becomes difficult for borrowers to make timely loan payments.

For example, if the average monthly wage increases by 10%, but inflation is 15%, real income actually decreases by 5%. This leads to the untimely repayment of loans. As a result, the share of overdue and bad loans in the bank's portfolio will increase.

When the inflation rate increases, the Central Bank increases the key interest rate to curb it. This will force commercial banks to raise interest rates on loans. As a result:

- new loans become more expensive, the demand for them decreases;
- Payment burden on existing loans increases;
- Debtors' solvency deteriorates.

This process will lead to an increase in the share of nonperforming loans. This risk is especially high for loans issued based on a variable interest rate .

Inflation is usually accompanied by the devaluation of the national currency. In the case of Uzbekistan, when inflation increases, the value of the soum against the US dollar decreases.

If the enterprise received a loan in foreign currency, then the amount of payment in soums will increase. Therefore, repayment of the loan becomes even more difficult for the borrower. As a result, the risk of NPL on loans issued in foreign currency will be high.

Inflation is also dangerous for manufacturing enterprises. An increase in prices for raw materials, fuel, transport, and energy increases costs, reduces profits, and decreases cash flow. This reduces the enterprise's ability to repay debts. Increase in production costs, decrease in profits, delay in payments, creates a chain of problem loans growth.

CONCLUSIONS AND SUGGESTIONS

To reduce the impact of high inflation on the conversion of bank loans into problem loans, the following measures can be taken:

1. Changing interest rate policy. Instead of a floating interest rate based on the central bank's key interest rate, offer loans with a fixed interest rate or with a fixed rate limit (i.e., the rate changes within a certain range, but not indefinitely) taking into account the dynamics of inflation changes;

2. Diversification of the loan portfolio. Diversify the loan portfolio by industry, currency, and term, limit the volume of lending to import-dependent industries, as well as expand lending to export-oriented enterprises and clients with foreign currency earnings.

3. Conducting the credit allocation process based on real cash flows. Many problem loans are allocated based on collateral rather than the client's real solvency. Therefore, banks should consider the borrower's cash flow as the primary object of analysis. At the same time, it is advisable to conduct a detailed analysis of the client's real financial indicators.

4. Re-structuring of loans. Under inflationary pressure, businesses face temporary financial problems. However, to keep them healthy, banks need to implement the following actions in a way that does not affect their profitability:

- extension of the loan payment term;
- temporary restriction of interest payments;
- introduction of mechanisms for the payment of principal debt in installments in a seasonal manner.

Although the risk of problem loans during inflation is an integral part of the economic system, there is an opportunity to reduce them. Commercial banks in this process should be guided by the principles of prewarning, risk diversification, credit quality monitoring, and customer cooperation .

Inflation has a significant impact on the activities of banks, especially on the quality of the loan portfolio. The rise in prices reduces the solvency of the population and enterprises, leading to an increase in the number of non-performing loans. When inflation is high, banks should carefully pursue credit policy and strengthen risk mitigation measures.

Maintaining a stable inflation rate, balancing monetary policy, and improving banks' risk management systems will also help reduce the volume of non-performing loans.

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