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CONTENTS

FOREIGN EXPERIENCE IN THE EFFECTIVE ORGANIZATION OF FREE ECONOMIC ZONES 51
Mamadiev Elyor

IMPROVING ORGANIZATIONAL AND ECONOMIC MECHANISMS FOR THE ESTABLISHMENT AND DEVELOPMENT OF FAMILY GUEST HOUSES 55
Boynazarov Ulugbek Egamberdievich

IMPROVING METHODS OF ORGANIZING AND DEVELOPING DOMESTIC TOURISM MARKETS IN UZBEKISTAN 61
Daminov Mirvokhid Isroilovich

THE IMPACT AND SIGNIFICANCE OF INFRASTRUCTURE IN THE DEVELOPMENT OF THE TOURISM SECTOR 67
Dilsora Ibodovna Ibodova

IMPACT OF STUDENTS AGED OVER 40 ON ECONOMIC ACTIVITY AND BUDGETING BASED ON THE COMPETENCY ECOSYSTEM 74
Nigora Ikrom qizi Primova

ОЦЕНКА ЭФФЕКТИВНОСТИ ПРОМЫШЛЕННЫХ ПРЕДПРИЯТИЙ ХОРЕЗМСКОЙ ОБЛАСТИ: ЭКОНОМЕТРИЧЕСКОЕ МОДЕЛИРОВАНИЕ И СЦЕНАРНОЕ ПРОГНОЗИРОВАНИЕ НА 2026–2030 ГОДЫ 80
Юсупов Шерзодбек Бахтиёр угли

IMPROVING THE METHODOLOGY FOR ASSESSING THE PROCUREMENT MANAGEMENT SYSTEM IN COMMERCIAL ENTERPRISES 87
Ergashev Jahongir Bakhodirovich

MULTIVARIATE ECONOMETRIC ANALYSIS OF FACTORS AFFECTING HOUSEHOLD INCOME IN SURXONDARYO REGION 93
Abdunazarova Shahnoza Norquchqor qizi

СРАВНИТЕЛЬНЫЙ АНАЛИЗ ГОСУДАРСТВЕННЫХ ЦИФРОВЫХ УСЛУГ АЗЕРБАЙДЖАНА И УЗБЕКИСТАНА 99
Юсифов Магамед Исмаил оглу, Гасанли Расул Шахин оглу, Белалова Гузаль Анваровна

SUSTAINABLE DEVELOPMENT OF THE MINING INDUSTRY IN THE CONTEXT OF THE GREEN ECONOMY 105
Xudayberdiyeva Kamila Sadilloyevna, Fozilova Zumrad Ahmadovna

IMPROVING THE ECONOMIC EFFICIENCY OF CLOTHING MANUFACTURING ENTERPRISES IN UZBEKISTAN THROUGH DIGITAL TRANSFORMATION 111
Axmedova Gaziza Azim kizi

КОМПЛЕКСНАЯ ОЦЕНКА ПОТЕНЦИАЛА РЕГИОНАЛЬНОГО АГРОПРОМЫШЛЕННОГО ИНТЕГРИРОВАНИЯ НА ОСНОВЕ МОДЕЛИ AHP-TOPSIS 115
Аликулов А.Б.

APPLICATION OF CLUSTER METHODS IN THE DEVELOPMENT OF TOURISM INFRASTRUCTURE AND IMPROVEMENT OF ECONOMIC MECHANISMS IN SAMARKAND CITY 121
Tashov Mizrob Maxmudovich

THE ROLE AND PROSPECTS OF THE GREEN ECONOMY IN THE SERVICE SECTOR 130
Musayeva Shoira Azimovna, Usmonova Dilfuza Ilkhomovna

FACTORS AFFECTING THE EFFICIENCY OF REGIONAL ENTERPRISES 135
Nigora Zokirjon qizi Toxirova

CURRENT STATE OF ATTRACTING INVESTMENTS IN THE DEVELOPMENT OF TOURISM IN THE REGIONS OF UZBEKISTAN AND THE METHODOLOGY OF ECONOMIC EFFICIENCY INDICATORS 142
Temurbek Olimovich Mamayunusov

PRESUPPOSITION SHIFTS IN CROSS-LINGUISTIC RENDERING OF ANECDOTAL NARRATIVES:

A COMPARATIVE INQUIRY INTO TRIGGER RETENTION AND TRANSFORMATION 148
Umaraliyeva Dildora Taxirjanovna

DIGITAL TECHNOLOGIES AND RURAL PUBLIC SERVICE QUALITY: AN EMPIRICAL ECONOMETRIC ANALYSIS 156
Bek Hunsia, Feruza Mansurovna Ollokulova

COMPREHENSIVE ANALYSIS OF THE IMPACT OF WOMEN'S LABOR ACTIVITY ON THE EFFICIENCY OF THE ECONOMIC SYSTEM 164
Ahrorova Asila Abduaziz qizi

IMPROVING TAX ADMINISTRATION IN THE ENTREPRENEURIAL ENVIRONMENT 170
Azizbek Khurramov

FORMATION OF FINANCIAL RESULTS AT MOTOR TRANSPORT ENTERPRISES 180
Shanazarova Nilufar Baratovna

ARIMA-BASED ANALYSIS OF SMALL BUSINESS ACTIVITY IN THE AGRICULTURAL SECTOR OF SURKHANDARYA REGION 185
Fayziyeva Aziza Azamat qizi

ASSESSMENT OF AGRARIAN SECTOR EFFICIENCY THROUGH THE SFA MODEL 192
Utanov Bunyod Kuvandikovich

АКТУАЛЬНЫЕ ВОПРОСЫ УПРАВЛЕНИЯ ГОСУДАРСТВЕННЫМ ВНЕШНИМ ДОЛГОМ 196
Шомуродов Равшан Турсункулович, Жуманазаров Шахобиддин Дилмурод угли

MODERN METHODOLOGICAL APPROACHES TO MANAGING EDUCATIONAL SERVICES MARKETING IN HIGHER EDUCATION INSTITUTIONS 201
Shamshieva Nargizakhon Nosirkhuja kizi

FINANCIAL MANAGEMENT OF FOREIGN AND DOMESTIC COTTON GINNING ENTERPRISES: COMPARATIVE ANALYSIS, DIAGNOSTICS, AND IMPROVEMENT DIRECTIONS 208
Orif Jumayevich Murodov

ANALYSIS OF THE INSTITUTIONAL FOUNDATIONS OF STATE INTERVENTION IN THE PRODUCT QUALITY MANAGEMENT PROCESS IN UZBEKISTAN 219
Atakulov Askad Raimkulovich

ИНТЕГРИРОВАННАЯ МОДЕЛЬ ФОРМАЛИЗАЦИИ НЕФОРМАЛЬНОЙ ЗАНЯТОСТИ И РАСШИРЕНИЯ СОЦИАЛЬНОЙ ЗАЩИТЫ В АГРАРНЫХ РЕГИОНАХ (НА ПРИМЕРЕ КАШКАДАРЬИНСКОЙ ОБЛАСТИ) 224
Бобоназарова Юлдуз Ботировна

THE ECONOMIC ESSENCE OF RESOURCE USE EFFICIENCY AND ITS ROLE IN INDUSTRIAL ECONOMICS 229
Baymanova Mavlyuda Djurayevna, Aipova Iroda Ikramovna

THE ROLE OF ARTIFICIAL INTELLIGENCE IN ECONOMIC DEVELOPMENT: EVIDENCE FROM DEVELOPING COUNTRIES 234
Ismatova Diyora Sirojiddin qizi, Ubaydullayeva Gulchexra Erkabayevna

ЭКОЛОГИЧЕСКАЯ УСТОЙЧИВОСТЬ И РЕСУРСНАЯ АДАПТИВНОСТЬ ОТРАСЛИ МАШИНОСТРОЕНИЯ В РОССИИ, КИТАЕ, ИНДИИ 239
Викторова Наталья Геннадьевна, Абрамчикова Наталья Викторовна, Ван Байянь

ENSURING ORGANIZATIONAL AND ECONOMIC MECHANISMS FOR HOUSING STOCK MANAGEMENT 249
Aminova Naima Umar qizi

STRATEGIC MANAGEMENT FOR ECONOMIC GROWTH: PRACTICAL APPROACHES AND IMPROVEMENTS 253
Baymuradov Shokhrukh Makhmudovich, Dilmurodov Komiljon Ahmad o'g'li

IMPROVING THE EFFICIENCY OF SMALL ENTERPRISES IN THE SERVICE SECTOR (A CASE STUDY OF TASHKENT REGION) 259

CONTENTS

Ashirov Alisher

IMPROVING THE ORGANIZATIONAL AND ECONOMIC MECHANISMS FOR THE TRANSFORMATION OF SERVICE ENTERPRISES IN UZBEKISTAN 264
Kurbanova Rahima Jamshedovna

INNOVATIVE IDEAS OF YOUNG ENTREPRENEURS AND INFRASTRUCTURE FACTORS IN THE DEVELOPMENT OF SMALL INNOVATIVE BUSINESSES 270
Ergashev Oybek Khaydaralievich

MARKETING CHARACTERISTICS OF POSITIONING ORGANIC DRIED FRUIT PRODUCTS IN INTERNATIONAL MARKETS 274
Khidirov Shokhrukh

TYPOLOGIZATION OF THE ECONOMIC POTENTIAL AND DEVELOPMENT CHARACTERISTICS OF THE DISTRICTS OF SURKHANDARYA REGION BASED ON STATISTICAL AND NEURAL NETWORK APPROACHES 280
Normurodov Asliddin Alijon ugli

THE ROLE OF FOREIGN EXPERIENCE IN ANALYSING THE THEORETICAL FOUNDATIONS OF THE AUDIT OF FINANCIAL LIABILITIES 291
Palvanov Xusniddin Bekimmatovich

DIGITAL SKILLS AND LABOUR PRODUCTIVITY: A SCENARIO ANALYSIS BASED ON AN INTEGRATED STATISTICAL MODEL 297
Madraimov Xabibulla Madaminovich

АКТУАЛЬНЫЕ ВОПРОСЫ ФОРМИРОВАНИЯ СТРУКТУРЫ АКТИВОВ И ПАССИВОВ ГОСУДАРСТВЕННЫХ БАНКОВ УЗБЕКИСТАНА 303
Т.И. Бобакулов

АКТУАЛЬНЫЕ ВОПРОСЫ ФИНАНСИРОВАНИЯ ВНЕШНЕТОРГОВУЮ ДЕЯТЕЛЬНОСТЬ КОМПАНИЙ С ДОКУМЕНТАРНЫМИ АККРЕДИТИВАМИ 308
М.Т. Ибодуллаева

ФОРМИРОВАНИЕ ИНТЕГРИРОВАННОГО МЕХАНИЗМА УПРАВЛЕНИЯ ОСНОВНЫМИ СРЕДСТВАМИ В УСЛОВИЯХ ИНННОВАЦИОННОЙ ЭКОНОМИКИ 312
Мусаева Жамила Кароматовна

ПРОБЛЕМНЫЕ ВОПРОСЫ ОБЕСПЕЧЕНИЯ КОНКУРЕНТОСПОСОБНОСТИ КОММЕРЧЕСКИХ БАНКОВ УЗБЕКИСТАНА 320
Ш.Т. Ибодуллаев

THE IMPORTANCE OF STATE SUPPORT AND INVESTMENT POLICY IN ENSURING THE FINANCIAL STABILITY OF MASS MEDIA ENTERPRISES 325
Sharipova Shahlo Istamovna

CURRENT STATUS AND DEVELOPMENT TRENDS OF MOTOR TRANSPORT SERVICES 329
Rakhimov Azamat Hamrakulovich

ПРИМЕНЕНИЕ ЭКСТРЕМАЛЬНЫХ МОДЕЛЕЙ В ОЦЕНКЕ ЭКОНОМИЧЕСКОГО ПОТЕНЦИАЛА ПРЕДПРИЯТИЯ 333
Мусаева Шоира Азимовна

MULTI-FACTOR ECONOMETRIC MODELS OF WATER RESOURCE USE IN ENSURING REGIONAL ECONOMIC STABILITY 341
Xaitbaev Jasurbek Otaxanovich

СОВЕРШЕНСТВОВАНИЕ ПРАКТИКИ ИСПОЛЬЗОВАНИЯ ИНСТРУМЕНТОВ ЭЛЕКТРОННОГО ДОКУМЕНТООБОРОТА В КОММЕРЧЕСКИХ БАНКАХ 345
Шомуродов Равшан Турсункулович

THE WAYS OF IMPROVING COMPETITIVENESS IN COMPANIES OF THE CONSTRUCTION INDUSTRY 350
Buriev Khakim Toshimovich, Usmanov Ilxom Achilovich, Tolibov Abduazim Zoxid ugli

MACROECONOMIC MODELS AND PROSPECTS OF TRANSITION TO A GREEN ECONOMY IN UZBEKISTAN 357
Sharipboyev Hasanboy Marks ugli, Sharipov Kuvondik Baxtiyorovich

THE IMPACT OF HRM PRACTICES ON ACADEMIC STAFF WORK EFFICIENCY IN HIGHER EDUCATION INSTITUTIONS 366
Sultonboyeva Munira Bahodirovna, Sultanova Kamila Muktorali Kizi

CONTENTS

CONTENTS

THE ECONOMIC ROLE OF RENEWABLE ENERGY SOURCES IN THE DEVELOPMENT OF THE GREEN ECONOMY IN UZBEKISTAN 374
Inatullayeva Intizor Jamshid qizi

ОЦЕНКА ФИЗИОЛОГИЧЕСКИХ ПОКАЗАТЕЛЕЙ КРУПНОГО РОГАТОГО СКОТА, ЗАВЕЗЁННОГО В РЕСПУБЛИКУ КАРАКАЛПАКСТАН ИЗ-ЗА РУБЕЖА, С ИСПОЛЬЗОВАНИЕМ ЦИФРОВЫХ ТЕХНОЛОГИЙ 378
Аскарова Нилуфар Бахтияровна

COOPERATIVE MECHANISMS FOR REGIONAL DEVELOPMENT: A FRAMEWORK ANALYSIS OF CULTURAL TOURISM ENTERPRISE PARTNERSHIPS 382
Shohruzbek Ruziyev

IMPROVING THE ECONOMIC EFFICIENCY OF RESOURCE UTILIZATION IN METALLURGICAL ENTERPRISES: INTERNATIONAL EXPERIENCE AND MODERN DEVELOPMENT TRENDS 393
Matkuliev Akbar Karimovich

TAX INCENTIVES GRANTED TO ENTERPRISES LOCATED IN SPECIAL ECONOMIC ZONES 397
Torayeva Nafısa Odıljonovna

REQUIREMENTS FOR TRANSITIONING TO ELECTRONIC BUSINESS AND CONDITIONS FOR DIGITALIZATION 402
Ismoilov Diyorbek Ismoiljon ugli

DEVELOPMENT OF ALTERNATIVE ENERGY AS AN IMPORTANT FACTOR IN ENSURING A SUSTAINABLE ECONOMY AND ENERGY SECURITY 407
Ergash Bobobekov

ANALYSIS OF WAGE DYNAMICS IN THE EXAMPLE OF SURKHANDARYA REGION BASED ON PANEL DATA 412
Abdunazarova Shahnoza Norquchqor kizi

THE ROLE OF MARKETING STRATEGIES IN IMPROVING THE MARKET COMPETITIVENESS OF CARPET INDUSTRY ENTERPRISES 420
Arzieva Sevinch Shomurot kizi

CONSUMER PROPERTIES OF FOOD PRODUCTS IN UZBEKISTAN: TRADITIONS, TRANSFORMATION AND NEW QUALITY STANDARDS 425
Gayrat Pardaev

DIRECTIONS FOR STIMULATING ECONOMIC GROWTH THROUGH THE IMPROVEMENT OF THE TAX SYSTEM 431
Yakhshimuratova Khasiyat Khudaybergenovna

THE ROLE OF E-COMMERCE IN THE ECONOMY OF UZBEKISTAN AND ITS DEVELOPMENT PROSPECTS 435
Kambaraliyeva Intizor Suxrobovna
Aliyarov Olim Abdug'aparovich

ISSUES OF IMPROVING PRE-TRIAL TAX DISPUTE RESOLUTION MECHANISMS BASED ON INTERNATIONAL EXPERIENCE 439
Solihova Xumora Xasan kizi

INCREASING THE ATTRACTIVENESS OF DIVIDEND POLICY IN UZBEKISTAN COMPANIES 446
Akmal Komiljonovich Shermukhamedov

COMMUNITY-BASED HERITAGE TOURISM MODELS AS A TOOL FOR ENHANCING HANDICRAFT DEVELOPMENT IN UZBEKISTAN 451
Olimjonova Farog'at Dilmurod qizi
Amiriddinova Muslima Zayniddin qizi

ИНСТИТУЦИОНАЛЬНЫЕ МЕХАНИЗМЫ СОЦИАЛЬНОЙ ЗАЩИТЫ НАСЕЛЕНИЯ В УСЛОВИЯХ ПЕРЕХОДНОЙ ЭКОНОМИКИ: ОПЫТ РЕСПУБЛИКИ УЗБЕКИСТАН 458
Шоахмедов Шохрух Шорахимович

OF EFFECTIVE USE OF AGRICULTURAL LAND 464
Umarov Muzaffar Yusupbayevich

ECONOMIC CONTENT OF INTANGIBLE ASSETS IN THE FIELD OF INFORMATION AND COMMUNICATION TECHNOLOGIES AND SPECIFIC CHARACTERISTICS OF THEIR RECOGNITION 469
Ishankulov Izzatilla Nurillaevich

DETERMINANTS OF NON-PERFORMING LOANS IN SERVICE SECTOR LENDING AND CREDIT RISK MITIGATION MECHANISMS 473
Nurmukhammedov Abdijabbar Yunusovich

ESG INTEGRATION PRACTICES INTO CORPORATE CULTURE SYSTEM IN THE JOINTSTOCK SECTOR OF UZBEKISTAN: A CASE STUDY OF “DORI-DARMON” JSC 479
Sadikova Muslima Alisher kizi

DEVELOPMENT OF THE METAL MARKET IN THE TASHKENT REGION AND WAYS TO IMPROVE IT 485
Musayeva Shoira Azimovna

SMALL BUSINESS AS A CATALYST FORREGIONAL ECONOMIC DEVELOPMENT: AN EMPIRICAL ANALYSIS WITH EVIDENCE FROM UZBEKISTAN 491
Jo‘rayev Ilhomjon Kamolidinovich

ISSUES OF DEVELOPING DEPOSIT OPERATIONS IN COMMERCIAL BANKS 497
Rahimov Akmal Matyaqubovich

IMPROVING TEXTILE LOGISTICS AND SUPPLY CHAIN MANAGEMENT IN UZBEKISTAN 503
Isroilov Madaminjon Mukhsinovich

FEATURES OF SUMMARIZING AND EVALUATING THE RESULTS OF FINANCIAL STATEMENT AUDITING IN UZBEKISTAN PRACTICE 509
Isroil Ismoilovich Meliev

ГОСУДАРСТВЕННОЕ УПРАВЛЕНИЕ ФИНАНСАМИ И СОЦИАЛЬНОЕ РАВЕНСТВО В УЗБЕКИСТАНЕ: ИНТЕГРАЦИЯ МЕТОДОЛОГИИ PEFA С ДИСТРИБУТИВНЫМ АНАЛИЗОМ НА ОСНОВЕ ПОДХОДА CEQ 516
Зокиржонов Мухаммадсодик Равшанбек угли

FACTORS AFFECTING DAIRY PRODUCTION EFFICIENCY: CORRELATION AND REGRESSION ANALYSIS 530
Ergashev M.Y.
Tairova Z.M.

METHODOLOGICAL FOUNDATIONS OF COST ACCOUNTING AND ANALYSIS IN AQUACULTURE CLUSTERS: IFRS INTEGRATION, ECONOMETRIC MODELING, AND ESG PERSPECTIVES 537
Shodiev Aslam Rahmatilloevich

APPLICATION OF ARTIFICIAL NEURAL NETWORKS FOR PREDICTING CUSTOMER LOYALTY IN COMMERCIAL BANKS 544
Jumaniyozova Mukaddas

SUSTAINABLE REGIONAL SPECIALIZATION UNDER WATER SCARCITY: GLOBAL EXPERIENCE AND PROSPECTS FOR UZBEKISTAN 550
Sodiqova Nigora Turayevna

CURRENT STATE AND STRUCTURAL ANALYSIS OF EXPORT ACTIVITIES OF BUSINESS ENTITIES IN THE BUKHARA REGION 555
Djurayeva Munira Sadilloyevna

EVALUATION OF THE EFFICIENCY OF STRATEGIC MANAGEMENT OF EDUCATIONAL SERVICES EXPORTS IN THE BUKHARA REGION 560
Alimova Shamsiya Abidovna

CONTENTS

ADVANCING AN INTEGRATED STATISTICAL ASSESSMENT METHODOLOGY FOR COMMERCIAL BANKS' DIGITAL ACTIVITIES AND CREDIT PORTFOLIO QUALITY 565
Rakhmataliev Muzaffar Eshdavlatovich

EFFECTIVENESS OF USING BIOLOGICAL METHODS IN PLANT PROTECTION: STATISTICAL ANALYSIS OF DISTRIBUTION STRATEGY AND PRACTICAL IMPLEMENTATION DENSITY 570
Suyundikova Dilafruz Mamarajabovna

МЕТОДОЛОГИЯ ФОРМИРОВАНИЯ «КАРТЫ ПРОЗРАЧНОСТИ ПО МСФО» НА ОСНОВЕ КЛАСТЕРИЗАЦИИ АКЦИОНЕРНЫХ ОБЩЕСТВ ПО УРОВНЮ КАЧЕСТВА 577
Лутфуллаев Сардорбек Уткур угли

INDICATOR-BASED IMPROVED METHODOLOGY FOR DETERMINING INTERNAL AUDIT SIGNIFICANCE LIMITS IN THE PUBLIC SECTOR 586
Ismatillayev Baypolat Khushvaqtovich

METHODOLOGY FOR IDENTIFYING CASHGENERATING UNITS AND ADJUSTING THE DISCOUNT RATE TO NATIONAL CAPITAL MARKET CONDITIONS IN THE IMPAIRMENT ASSESSMENT OF LONG-TERM ASSETS 593
Fayzullayev Begzod Bakhtiyor o'g'li

IMPROVING THE SCIENTIFIC AND METHODOLOGICAL APPROACHES TO THE FUNCTIONAL CLASSIFICATION OF INVENTORIES IN COMMUNICATION ENTERPRISES 599
Jamilov Jushkin Jonon o'g'li

IMPROVING THE CHART OF ACCOUNTS AND ANALYTICAL ACCOUNTING FOR FINANCIAL INVESTMENTS IN ACCORDANCE WITH IFRS 9 604
Jumamurodov Toliboy Yeldashbayevich

RISK-BASED METHODOLOGY FOR CALCULATING MATERIALITY IN INTERNAL AUDITS OF BUDGETARY ORGANIZATIONS 608
Misirov Akbarali Pardayevich

IMPROVING AUDIT SAMPLING EFFICIENCY THROUGH RISK-BASED STRATIFICATION IN THE INTERNAL AUDIT OF BUDGETARY ORGANIZATIONS 613
Muqumov Jasur Bosimovich

INTEGRATED INDEX MODEL FOR THE COMPREHENSIVE ASSESSMENT OF INTERNAL AUDIT EFFECTIVENESS IN COMMERCIAL BANKS 619
Narziyev Khayotjon Azamatovich

RISK-BASED INTERNAL AUDIT METHODOLOGY FOR PUBLIC PROCUREMENT 625
Rajabov Shukhrat Ismailovich

INTEGRATED REAL-TIME AUDIT MODEL FOR FRUIT AND VEGETABLE PROCESSING ENTERPRISES 630
Rakhmatullayev Mirjalol Khatamson

IMPROVING THE ACCOUNTING AND AUDITING OF BIOLOGICAL ASSETS BASED ON INTERNATIONAL STANDARDS 634
Akhmetova Salima Seytovna

IMPROVING GREEN ECONOMY MECHANISMS FOR THE SUSTAINABLE DEVELOPMENT OF THE INDUSTRIAL SECTOR: EVIDENCE FROM UZBEKISTAN 641
Yusupov Bekzod Ulug'bekovich

IMPROVING MECHANISMS FOR ATTRACTING INVESTMENT IN HUMAN CAPITAL BASED ON ARTIFICIAL INTELLIGENCE TECHNOLOGIES 644
Akhmadaliyeva Nikholakhon

IMPROVING THE METHODOLOGY FOR THE COMPREHENSIVE ASSESSMENT OF AUDIT RISK AND MATERIALITY IN THE AUDIT OF COMMERCIAL BANKS' FINANCIAL STATEMENTS 649
Ibragimov Nodirbek Bakhodir o'g'li

RISK-FOCUSED AUDIT PROCEDURES FOR EXAMINING EXPECTED CREDIT LOSSES (ECL) AND RESERVES UNDER IFRS 9 IN THE AUDIT OF COMMERCIAL BANKS............................656
Ibragimov Nodirbek Bakhodir o‘g‘li

RISK-FOCUSED AUDIT PROCEDURES FOR EXAMINING EXPECTED CREDIT LOSSES (ECL) AND RESERVES UNDER IFRS 9 IN THE AUDIT OF COMMERCIAL BANKS

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Abstract. This article develops a set of risk-focused audit procedures for examining expected credit losses (ECL) and loan provisions in accordance with IFRS 9 in the audit of commercial banks. The research problem lies in the absence of a unified methodology and the limited coverage of ECL and provision testing. Based on case study and analytical methods, a six-block ECL audit program and a differentiated sampling approach by IFRS 9 stages are proposed and tested using the real loan portfolio of JSCB "Khalq Bank." As a result, the quality of the loan portfolio audit is improved.

Keywords: ECL, IFRS 9, loan provisions, bank audit, risk-focused procedures, ISA 540, audit sampling, model validation, collateral valuation, loan portfolio.

Аннотация. В статье разработан комплекс риск-ориентированных аудиторских процедур для проверки ожидаемых кредитных убытков (Expected Credit Losses, ECL) и резервов по кредитам в соответствии с требованиями **МСФО (IFRS) 9** при аудите коммерческих банков. Научная проблема исследования заключается в отсутствии единой методики и недостаточной проработанности процедур проверки ECL и кредитных резервов. На основе методов кейс-анализа и аналитического исследования разработаны шестиблочная программа аудита ECL и дифференцированный подход к формированию аудиторской выборки по стадиям IFRS 9. Предложенная методика апробирована на материалах кредитного портфеля АО «Народный банк». Результаты исследования свидетельствуют о повышении качества аудита кредитного портфеля, совершенствовании проверки ожидаемых кредитных убытков и повышении надёжности аудиторского заключения.

Ключевые слова: ожидаемые кредитные убытки (ECL), МСФО (IFRS) 9, резервы по кредитам, аудит банков, риск-ориентированные аудиторские процедуры, МСА 540, аудиторская выборка, валидация моделей, оценка обеспечения, кредитный портфель.

INTRODUCTION

The largest and most uncertain item in a commercial bank's financial statements is the expected credit loss (ECL) provision, calculated in accordance with IFRS 9. This item is formed on the basis of a number of management judgments, including the probability of default, collateral value, macroeconomic scenarios, and the staging of loans. Therefore, ECL is one of the areas that requires the highest level of professional judgment and attention in a bank audit.

The most significant issue in bank auditing lies precisely in this area: the absence of a unified and systematic methodology adapted to the specific characteristics of banks for examining ECL and reserves. In practice, in many bank audits, the examination of ECL is limited to a general and superficial review of bank calculations, while independent model validation and full-population recalculation are rarely applied. The limitations of such a superficial approach were demonstrated in practice by the ECL measurement error identified at JSC "People's Bank" in 2021. As a result, the bank's capital decreased by approximately 1,333.7 billion soums, or about 29 percent.

LITERATURE REVIEW

The theoretical and methodological foundations for the audit of accounting estimates are set out in ISA 540 (Revised), which requires the auditor to examine three aspects of an accounting estimate: the method and model used, the data applied, and the key assumptions made by management (IAASB, 2023). Mautz and

Sharaf, who developed the philosophical and methodological foundations of auditing theory, emphasized the role of professional skepticism in auditing accounting estimates (Mautz and Sharaf, 1961). In areas with high uncertainty, such as ECL, professional skepticism is of particular importance.

Modern risk-based and business-risk audit approaches encourage the auditor to focus on high-risk areas (Bell et al., 1997; Arens et al., 2017; Hayes et al., 2014). This approach is especially important in the examination of ECL, since different segments of the loan portfolio have different levels of risk. Impaired loans require the greatest audit attention, while low-risk loans require relatively less extensive procedures.

The role of substantive procedures and audit sampling under ISA 530 in collecting audit evidence is widely discussed in the scientific literature. In high-risk areas, the sample size should be increased, or full testing should be conducted (Bychkova, 2003; Messier et al., 2019). V.I. Podolsky and A.A. Savin have examined the organizational aspects of collecting audit evidence and applying sampling techniques (Podolsky and Savin, 2017). These works form the theoretical basis of risk-based sampling.

IFRS 9 requires the calculation of expected credit losses in stages, including 12-month and lifetime ECL, and provides for the classification of loans into three stages (IFRS Foundation, 2024). ISA 540 (Revised) pays special attention to inherent risk factors, including complexity, subjectivity, and uncertainty, when auditing accounting estimates. ECL is considered an accounting estimate with a high level of all three factors, which places it in the significant risk category (IAASB, 2023). The Basel Committee recommends that external audits of banks pay particular attention to the examination of credit risk and provisions (Basel Committee on Banking Supervision, 2024). These international documents form the methodological basis of the ECL audit program.

RESEARCH METHODOLOGY

The research is based on a qualitative and case study paradigm, with the design and practical application of an audit program to a real loan portfolio forming its methodological core. The requirements of IFRS 9 and the International Standards on Auditing, including ISA 540, ISA 530, ISA 500, ISA 520, and ISA 620, were used as the basis for developing the program. For each audit block, specific audit procedures, the relevant standard basis, and the expected audit evidence were identified.

ANALYSIS AND RESULTS

The complexity of ECL testing stems from its multi-stage and multi-parameter nature. Misstatements may occur at any stage of the model, including methodology, input data, staging, forward-looking information, or management adjustments. Therefore, the proposed audit program consists of six blocks covering all the main aspects of ECL calculation: model methodology, input parameters such as PD, LGD, and EAD; staging and significant increase in credit risk (SICR); forward-looking information and scenarios; management adjustments, or overlays; and collateral valuation. The specific audit procedure for each block of the program, its standard basis, and the expected audit evidence are presented in Table 1.

Table 1
ECL and reserves audit program (proposal)[1]

Inspection object	Audit practice	The basis	Expected proof
ECL model methodology	Assessing the model's compliance with IFRS 9 requirements	IFRS 9, ISA 540	Analysis of model documents
Inputs PD, LGD, EAD	Check historical data and redo the calculation	ISA 540, ISA 500	Recalculation results
Phase Distribution (SICR)	SICR criteria and credit migration testing	IFRS 9, ISA 540	Step test results
Prospective information and scenarios	Evaluation of macroeconomic hypotheses and scenarios	ISA 540	Scenario analysis
Management corrections (overlays)	Assessment of the validity of corrections	ISA 540	Overlay documents
Collateral value	Use of expert work and price verification	ISA 620	Evaluation report
Credit files	Risk-based sampling	ISA 530	File check results

An important feature of the program is that, in complex areas such as collateral valuation and accounting estimates, the auditor is expected to use the work of an expert in accordance with ISA 620, which increases the reliability of estimated values. The program enables the auditor to apply a systematic and consistent approach to the examination of ECL by dividing the audit into separate blocks and requiring the collection of specific

1 The author's work is based on the requirements of IFRS 9 and ISA.

evidence for each block. This approach addresses the problem of the absence of a unified methodology.

The key parameters of the ECL model form the core of the program. Probability of default (PD) represents the likelihood that a loan will default; loss given default (LGD) represents the expected loss if default occurs; and exposure at default (EAD) represents the outstanding exposure at the time of default. The auditor should examine each parameter separately: PD is compared with historical default statistics, LGD is compared with the actual realizable value of collateral, and EAD is compared with the loan agreement and unused limits. Errors in these parameters may have a disproportionate effect on the ECL amount; therefore, they should be recalculated independently.

Forward-looking information is a specific aspect of an ECL audit. IFRS 9 requires several macroeconomic scenarios, such as optimistic, baseline, and pessimistic scenarios, and their probability weights to be considered when calculating ECL. The auditor assesses the validity of these scenarios, their sources, such as forecasts from central banks or international organizations, and the consistency of the assigned weights. This block requires particularly heightened professional skepticism, since the ECL amount may be manipulated by changing the scenarios or their weights.

Management overlays are another sensitive area of ECL auditing. Overlays are used to account for factors that the model cannot capture, such as a new economic shock or sector-specific problem. However, they may also be used as a tool for managing reported results. The auditor examines the basis, supporting evidence, and consistency of each adjustment and assesses its contribution to the overall ECL. Unjustified or undocumented adjustments may call into question the validity of the provisions.

Since it is not practical to review all loan files in banks with a large branch network, it is proposed to select a stratified sample based on the risk level of loans according to IFRS 9 stages. High-risk loans classified as Stage 3 are reviewed in full, while medium- and low-risk loans are reviewed to a lesser extent. The sample coverage and types of review by stage are presented in Table 2.

Table 2
Risk-oriented sampling (proposal) according to the 9 steps of MHXS[2]

Step	Risk level	Sample coverage (suggestion)	Type of inspection
Stage 1	Low	≈ 5–10% (statistical sample)	Limited, analytical
Stage 2	Medium	≈ 20–30%	Detailed examination
Stage 3	Up	100% (or higher coverage)	Full inspection

The proposed program should be supplemented with substantive analytical procedures. For example, checking the consistency of the coverage ratio and ECL levels with loan portfolio quality indicators allows anomalies to be detected at an early stage. This approach directs audit resources to the highest-risk areas and increases audit efficiency.

The practical relevance of the proposed program and sampling approach is clearly demonstrated by the case of the real loan portfolio of JSC “People’s Bank.” The bank’s total loans before provisions amount to 23,031.7 billion soums, while the ECL ratio is 23.81 percent. Loans are classified according to IFRS 9 stages, and the auditor selects a stratified sample: Stage 3 impaired loans are examined almost completely, while Stage 1 loans are examined based on a statistical sample. In addition, taking concentration risk into account, ten large debtors accounting for 12.8 percent of the portfolio are examined separately and in full. The calculation of sample coverage is presented in Table 3.

Table 3
Calculation of the stratified sample coverage for AT “Khalq Bank”[3]

Category / stage	Loan value (billion soums)	Sample scope	Check. value (billion soums)
Stage 3 (depreciated)	4 103.4	100%	4 103.4
Ten major debtors	2,946.6	100%	2,946.6
Stage 2	2,285.2	≈ 30%	≈ 686
Stage 1	4,711.6	≈ 8%	≈ 377
Total auditable	—	**≈ 35%**	**≈ 8,113**

2 Author development.
3 Calculation based on the author’s methodology and real data of JSC “Khalq Bank”.

The calculation results indicate that approximately 8,113 billion soums, or 8.1 trillion soums, of loans are subject to review. This accounts for approximately 35 percent of the loan portfolio but covers almost all of the highest-risk loans, including impaired and large exposures. This enables the auditor to cover the main part of the risk using limited resources, which is crucial for detecting systemic misstatements, as was the case in 2021. A stratified approach is more effective than examining all loans in the same manner, as it focuses audit efforts on concentrated risk areas.

The most important part of the ECL audit is the independent validation of the bank's model. This includes comparing probability of default (PD) with historical default data through backtesting, testing loss given default (LGD) based on the realizable value of collateral, assessing the accuracy of exposure at default (EAD), evaluating macroeconomic scenarios and their weights, and checking the consistency of staging criteria, including significant increase in credit risk (SICR). Since the 2021 error occurred precisely during model measurement, model validation is a central element of the proposed program. As far as possible, the auditor should form an independent ECL estimate and compare it with the bank's estimate.

In addition to independent recalculation, the auditor uses substantive analytical procedures under ISA 520 to examine ECL. This involves analyzing the dynamics of the coverage ratio. For example, if the reserve ratio increased sharply in 2021 and then stabilized at around 23.81 percent, the auditor should compare this ratio with the industry average, previous periods, and similar banks, and investigate the reasons for unusual differences. An unexpected decrease in the reserve ratio may indicate insufficient provisions, while a sharp increase may indicate deterioration in credit quality.

ECL for Stage 3 impaired loans is largely dependent on the value of collateral. Therefore, the auditor separately reviews the valuation of collateral by assessing the relevance of the valuation date and method, the independence of the appraiser, and the possibility of realizing the collateral. For large corporate loans, where the ECL share for legal entities is approximately 29 percent, the value of collateral is particularly important, as unclear or overestimated collateral may artificially reduce provisions. If necessary, the auditor engages an independent valuation expert in accordance with ISA 620.

Another important aspect of the proposed program is its coordination with the bank's internal audit and risk management functions. The external auditor may use the results of the bank's internal audit work on ECL in accordance with ISA 610, but should form an independent conclusion. The program is also compared with the results of stress tests developed by the bank's risk management department. Such a multi-source approach enables a comprehensive verification of the validity of the ECL estimate.

The program also supports dialogue between the bank's external auditor and the regulator. According to the recommendations of the Basel Committee, the external auditor of a bank may, where necessary, coordinate with the Central Bank on important issues related to credit risk and provisions. The results of the ECL audit and identified significant misstatements serve as a valuable source of information for the regulator in assessing the bank's prudential position. Such coordination strengthens the link between the financial statement audit and prudential supervision and contributes to the early identification of systemic risks.

A comparison of the proposed program with existing practice in Uzbekistan shows its superiority. Currently, in many bank audits, ECL verification is limited to a general review of bank calculations, while independent model validation is rarely applied. By contrast, the proposed six-block program provides for a comprehensive examination of ECL through methodology, parameters, staging, and independent recalculation. This fills the gap in existing practice and improves the quality of loan portfolio audits.

The expected results of the program are clear. First, systemic errors in the ECL model, similar to those identified in 2021, will be detected earlier and with a higher probability. Second, audit resources will be directed toward the highest-risk loans, including Stage 3 loans and large debtors, thereby increasing audit efficiency. Third, the existence of a unified methodology will ensure consistency in the quality of work performed by different auditors. If the 2021 error had been detected in a timely manner, the bank's financial statements would have been published without a capital misstatement of 1,333.7 billion soums, and users would have received accurate information about the bank's true financial position. This clearly demonstrates the practical value of the program.

Understanding the economic logic of the ECL model is essential for the proper application of the audit program. IFRS 9 divides loans into three stages: Stage 1, where credit quality has not significantly deteriorated since initial recognition and 12-month expected losses are recognized; and Stages 2 and 3, where lifetime expected losses are recognized. For the auditor, this means that incorrect allocation of a loan from one stage to another, for example, leaving a Stage 2 loan in Stage 1, may significantly reduce provisions. Therefore, checking the staging criteria is one of the most sensitive blocks of the program.

External confirmation under ISA 505 is an important tool for gathering audit evidence on loans. The auditor may obtain written confirmations from major borrowers and counterparties regarding loan balances, interest rates, and contractual terms. Since evidence obtained from external sources is more reliable than internal evidence, external confirmation is effective in verifying the existence and rights-and-obligations assertions for loans. This practice is particularly useful for examining positions with high concentration risk, such as ten major borrowers.

The proposed program is also closely related to the requirements of audit documentation under ISA 230. Since the procedures performed, evidence obtained, and conclusions reached for each block of the program are recorded separately, the audit work is documented at a level that enables an experienced auditor, previously unfamiliar with the engagement, to understand it. This increases the explainability of the auditor's decisions in such a complex area as ECL and facilitates external audit quality control. The program also forms the necessary basis for presenting ECL as a key audit matter under ISA 701 in the audit report.

The prudential aspect of the ECL audit is also noteworthy. Errors in ECL and provisions directly affect the bank's capital and capital adequacy ratio. The 2021 error at JSC "People's Bank," which reduced capital by 29 percent, is a clear example of this. Therefore, when examining ECL, the auditor assesses not only the fairness of the financial statements but also the possible impact of the misstatement on prudential standards. This approach links the ECL audit with the assessment of the bank's going concern assumption under ISA 570, since a capital deficiency may threaten the stability of the bank.

The importance of ECL auditing goes beyond an individual bank and is of public interest. Since provisions reflect the true financial condition of a bank, their fair valuation is crucial for depositors, investors, and regulators. A reliable ECL audit reduces the expectation gap and strengthens confidence in bank reporting. In this sense, the proposed program is not only a technical tool but also a mechanism that serves the transparency of the financial system.

The advantage of the proposed program lies in its consistency and repeatability. The six-block structure and stage-based sampling can be applied by different auditors using the same logic, which ensures consistency in audit quality. In addition, the program has a modular structure; it can be expanded, for example, by adding blocks for consumer loans or microloans, or simplified depending on the specific characteristics of the bank. Such flexibility allows the program to be used in audits of various types of commercial banks.

The quality of credit data and information system controls is also crucial in an ECL audit. The ECL model is fed by the bank's credit database, including credit history, default records, collateral information, and payment schedules. If these data are incomplete or unreliable, even a methodologically sound model will produce incorrect results, in line with the "garbage in, garbage out" principle. Therefore, the auditor assesses the effectiveness of IT general controls (ITGCs) and operational controls that shape credit data, and tests data integrity where necessary.

An integral part of the program is the review of credit risk disclosures in the financial statements. IFRS requires banks to provide extensive disclosures, including credit risk exposure, ECL movements, stage breakdowns, and sensitivity analyses. The auditor reviews these disclosures for completeness, accuracy, and consistency with the figures presented in the main financial statements. Adequate and understandable disclosures enable users to assess the bank's credit risk and provisioning policies and therefore require special attention from the auditor.

Related-party lending under ISA 550 requires special attention in an ECL audit. Loans to related parties, including shareholders, management, or affiliated companies, may be granted on terms that differ from market conditions and may not adequately reflect credit risk. The auditor identifies such loans separately and carefully examines their terms, collateral, and ECL valuation. This is particularly important in the context of socially oriented and directed loans in state-owned banks.

Events after the reporting date under ISA 560 may affect the ECL estimate. For example, if a major debtor becomes insolvent after the reporting date or macroeconomic conditions change significantly, this may require a revision of the ECL estimate as of the reporting date. The auditor monitors events between the reporting date and the audit report date and assesses their impact on provisions. This ensures that the ECL estimate fairly reflects conditions existing at the reporting date.

In banks with a large branch network, the ECL audit is combined with the group audit approach under ISA 600. The quality and risk profile of the loan portfolio may differ across branches and subsidiaries; therefore, the group auditor identifies the most important components and determines the ECL audit approach for them. The large network of JSC "Khalq Bank," with 197 branches, makes such a component-based approach particularly relevant. This ensures the reliability of provisions in the consolidated financial statements.

However, it is important to note certain limitations of the program's implementation. First, independent model validation and full-population recalculation require the auditor to have strong expertise in IFRS 9 and econometric modeling. Second, the specific percentages of stratified sample coverage should be adjusted depending on the structure of the bank's portfolio. Third, effective use of the program requires high-quality and complete data from the bank, including historical default statistics and collateral data. Despite these limitations, the program represents an important step toward a systematic and risk-based approach to auditing ECL and loan provisions.

CONCLUSIONS AND RECOMMENDATIONS

As a result of the study, a set of risk-based audit procedures for examining ECL and loan provisions under IFRS 9 in the audit of commercial banks was developed. The set is based on a six-block ECL audit program covering model methodology, PD/LGD/EAD inputs, staging, forward-looking information, management adjustments, and collateral valuation, as well as a stratified sampling approach across IFRS 9 stages.

Testing the program using the real loan portfolio of JSC “People’s Bank” confirmed its practical validity. Although the stratified sample covers approximately 35% of the portfolio, it includes almost all of the highest-risk loans, namely impaired and large exposures, thereby covering the main part of the risk. The actual ECL error identified in 2021 clearly demonstrated the predictive and practical value of the program.

Based on the results obtained, the following recommendations are proposed: first, audit organizations should use the six-block ECL program when auditing bank loan portfolios; second, a stage-based approach under IFRS 9 should be applied in sample selection, with full verification of Stage 3 loans and large debtors; third, independent validation of the ECL model, including PD backtesting and LGD/EAD verification, should be introduced as a mandatory practice; and fourth, methodological guidelines on ECL auditing should be developed at the level of the regulatory body and the Chamber of Auditors, while auditors’ skills in IFRS 9 and model validation should be improved.

One of the important practical results of the program is that it creates the necessary basis for transparently presenting ECL as a key audit matter under ISA 701 in the audit report. The evidence collected across the six blocks allows the auditor to clearly explain why ECL is significant and what audit procedures were applied. This increases the informativeness of the audit report and its value for users. In quantitative terms, if the 2021 error had been detected in a timely manner, the bank’s financial statements would have been published without a capital misstatement of approximately 1,333.7 billion soums. This clearly demonstrates the economic effectiveness of the program.

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