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Article

Inventory Accounting in Uzbekistan: Differences Between Nas 4 and Ifrs 2 and Ways to Converge Them

Abduganiyeva Sevara Abdukhamid qizi[1]

1. ISFT "International School of Finance Technology and Science"
* Correspondence: Abduganiyeva97@gmail.com

Abstract: General Background: Inventory accounting significantly influences the accuracy of financial reporting, especially in economies undergoing globalization. Specific Background: In Uzbekistan, inventory accounting is governed by NAS 4, while IFRS 2 is the global standard, creating methodological discrepancies. Knowledge Gap: Limited comparative research exists on the specific divergences between NAS 4 and IFRS 2 and the challenges of harmonizing them within Uzbekistan's regulatory and institutional framework. Aims: This study aims to conduct a comparative analysis of NAS 4 and IFRS 2 in the context of inventory accounting, identify key differences, and propose pathways for convergence. Results: The analysis reveals major contrasts, particularly in valuation (cost vs. lower of cost or net realizable value), write-off methods (inclusion/exclusion of LIFO), impairment recognition, and disclosure requirements. IFRS 2 offers more flexibility and transparency but requires comprehensive adjustments in accounting practices, policies, and systems. Novelty: The study integrates a detailed examination of both domestic and international regulatory frameworks and draws on the experiences of countries like Poland, Russia, and China to suggest a phased, practical transition strategy for Uzbekistan. Implications: Implementing IFRS 2 in Uzbekistan will enhance the transparency and comparability of financial statements, attract foreign investment, and align national accounting with global standards—though this will require reforms in legislation, education, software systems, and professional training.

Keywords: NAS 4, IFRS 2, inventory accounting, inventory valuation, write-off methods, financial reporting, accounting, international standards, harmonization, accounting reform

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1. Introduction

Inventory accounting plays a key role in the formation of reliable financial statements of enterprises, since inventories make up a significant part of the assets of most organizations. In the context of globalization and integration of economies, there is a need to harmonize national accounting standards with International Financial Reporting Standards (IFRS) [1]. In the Republic of Uzbekistan, inventory accounting is regulated by NAS 4, while IFRS 2 is applied at the international level, which leads to a number of differences in the methodology for estimating, recognizing and writing off inventories [2].

The importance of the study is due to the fact that discrepancies between NAS 4 and IFRS 2 can affect the transparency and comparability of financial statements, which is especially important in the context of attracting investments and entering international markets for domestic companies. The purpose of the study is to conduct a comparative analysis of inventory accounting under NAS 4 and IFRS 2, to identify their differences and similarities, as well as to determine possible directions for adapting the national accounting system to international standards.

2. Materials and Methods

In the course of the study, an analysis of regulatory documents governing inventory accounting, including NAS 4 (Inventories) and IFRS 2 (Inventories), was carried out. The study of these standards made it possible to identify key differences and similarities in the methodology of accounting, valuation and write-off of inventories. The study is also based on the analysis of regulatory documents and scientific publications on inventory accounting according to national and international standards.

In the work of **Shokhrukh K. U. Sh.,** the main provisions of IAS 2 "Inventories" are considered, including the criteria for estimating the cost of inventories, methods of their write-off and principles of recognition in financial statements. The author emphasizes the importance of accounting for inventories at the lower of two values - cost or net possible realizable value, which distinguishes the international standard from some national accounting systems [3].

In the **article by Mukhametov A. B., Matkulieva S. I. and Matrasulov B. E.** The article discusses the specifics of the application of IFRS 2 in comparison with NAS 4, including methods for estimating the cost of inventories (FIFO, weighted average cost) and the complexity of their adaptation to national accounting conditions [4].

Bazarova I. In her work, she examines inventory accounting from the point of view of domestic and foreign experience. She points out the key differences between NAS 4 and IFRS 2, including differences in the recognition of costs associated with inventories and the procedure for their reflection in accounting. The author emphasizes that national standards in some cases require adaptation to international requirements to increase the transparency of financial statements of enterprises [5].

The publication of Yakubova's "Analysis of the Main Aspects of the Inventory Accounting Methodology under NAS and IFRS" highlights the main differences between the two standards [6]. In particular, the issues of recognition and valuation of reserves, methods of their write-off, as well as the impact of exchange rate differences on accounting indicators are considered. It is emphasized that, unlike IFRS 2, NAS 4 does not allow the revaluation of inventories to their net possible realizable value, which can lead to distortions of financial data.

The implementation of International Financial Reporting Standards is widely discussed in the works of both domestic and foreign researchers. Among the key works analyzing the impact of IFRS on the economy and accounting are the studies of Ahmed et al. (2013), which conducted a meta-analysis of the effects of IFRS implementation and pointed to their positive impact on the transparency and quality of financial statements [7]. Poleshchuk T.A. in his work "International Financial Reporting Standards: Problems of Implementation" emphasizes the importance of rethinking the criteria for the formation of accounting information in countries with transition economies. It focuses on the need to unify national standards to achieve greater comparability of reporting [8]. A study by B. Al-Shammari et al. (2018) highlights the role of the quality of compliance with standards, which can vary significantly between different jurisdictions [9]. These findings are supported by evidence of an increased role for disclosure in companies that have implemented IFRS. The works of Zaripova S.Z. analyze the stages of integration of accounting in Uzbekistan with the application of IFRS. The author highlights the key differences between national and international standards and gives recommendations for overcoming existing barriers [10]. Important conclusions are also presented in the studies of Daske and Gebhardt (2006), who note that the transition to IFRS in European countries has contributed to the improvement of the quality of accounting and the strengthening of investor confidence [11].

3. Results

An analysis of regulatory documents and scientific publications revealed the key differences between NAS 4 Inventories and IAS 2 Inventories. The main differences are presented in the table 1.

Table 1

Main Differences Between NAS 4 Inventories and IAS 2 Inventories

Criterion	NAS 4 (Uzbekistan)	IAS 2
General Accounting Principles	National standard adapted to local conditions	International standard aimed at unification of accounting
Valuation of reserves	Inventories are valued at cost	Inventories are valued at the lower of cost or net realizable value
Write-off methods	FIFO **and** weighted average cost **methods are allowed**	FIFO and weighted average (**LIFO is not allowed)** methods are acceptable
Impairment of inventories	Reflected only when selling	Can be recognised before sale (impairment to net realisable value)
Storage and transportation costs	Included in the cost of inventories	They are included in the cost price if they are necessary to bring the inventory to its current state and location
Exchange rate differences	Included in other income/expenses	Recorded in accordance with IFRS 21 Effects of Changes in Foreign Exchange Rates
Disclosure	Inventory Movement Disclosure Required	Requires additional information on valuation methods, cost changes and impairment

The results of the analysis show that IFRS 2 provides a more flexible approach to the measurement and recognition of inventories, while NAS 4 is more conservative and does not provide for some key aspects of international practice, such as provisional impairment of inventories.

Analysis of inventory valuation and write-off methods

Inventory valuation and write-off methods have a significant impact on a company's financial results by determining the cost of goods sold and the residual value of material resources. Both **NAS 4** and **IFRS 2** provide for the use of different methods, but international standards set more stringent requirements for their application and disclosure in reporting [12].

One of the most common methods is **FIFO (First In, First Out),** which assumes that the first purchased inventories are written off first. This method is especially relevant in the context of inflation, as it leads to a higher assessment of inventories in the balance sheet and a decrease in the cost of goods sold. FIFO is allowed in both the national and international standards, which indicates its universality.

Another widely used method is **the weighted average cost**, in which the cost of inventories is calculated on the basis of the weighted average of all receipts. This method smooths out price fluctuations and provides more stable reporting performance. It is also recognized by both standards, underscoring its practical relevance.

In some cases, **the method of specific identification** is used, in which accounting is carried out for each unit of inventory. This approach is typical for expensive or unique goods, for example, cars or jewelry. Despite its accuracy, it is not widely used in mass production, since it requires complex accounting.

A significant difference between NAS 4 and IFRS 2 is the use of **the LIFO (Last In, First Out) method**. It is not prohibited in the national standard, but it is practically not used, while international rules exclude its use. LIFO allows you to take into account the last acquired inventories first, which leads to a decrease in taxable profit during periods of price increases, but at the same time can distort the real value of the company's assets. is explained by the desire for a more accurate reflection of the financial condition of the organization.

Another important aspect is the procedure for recognizing the cost and writing off inventories. If in NAS 4 inventories are written off at the time of sale, then in IFRS 2 they are allowed to be revalued to the net possible realizable price in the event of a decrease in market value. This approach makes International Standards more flexible and allows companies to take into account possible losses in advance, reflecting a more objective picture of their financial position. Despite the similarity of the main methods for estimating inventories in NAS 4 and IFRS 2, international standards offer a more dynamic accounting system focused on market changes [13]. They provide greater transparency of financial statements by prohibiting the LIFO method and mandatory accounting for the impairment of inventories. These differences must be taken into account when adapting the national accounting system to international requirements**.**

Identified problems in the transition to IFRS

The process of adapting inventory accounting to the requirements of IFRS 2 is accompanied by a number of difficulties related to both methodological differences between national standards and international norms, and practical aspects of the introduction of new approaches. Tashnazarov S. notes that the main problems can be divided into regulatory, methodological and technical [14].

One of the key barriers is the discrepancy between NAS 4 and IFRS 2 in the valuation of reserves. The national standard does not provide for their revaluation to the net possible selling price, while in international practice this mechanism is widely used. As a result, companies switching to IFRS are faced with the need to change the approach to the valuation of inventories, which may lead to an adjustment in financial indicators and, as a result, to a change in the financial result. An equally significant problem is the prohibition of the LIFO method in IFRS. Although this method is not widely used in Uzbekistan, its theoretical feasibility creates additional uncertainty for enterprises that need to choose between FIFO and weighted average value. Such a transition requires a revision of the company's accounting policy and corresponding changes in information systems.

In addition, the disclosure requirement set out in international standards is complex. Unlike NAS 4, where the amount of inventory disclosures is limited, IFRS 2 requires detailed information on valuation methods, the amount of impairment and costing principles. For many enterprises, the transition to this level of transparency becomes a serious challenge, since it requires improving the internal accounting and reporting system. Another problem is the incompatibility of existing accounting systems with the requirements of IFRS [15]. Many enterprises use software that is focused on national standards, which makes it difficult to automate accounting according to international standards. The implementation of new systems requires additional financial and time costs, as well as personnel training.

Finally, the lack of qualified professionals with knowledge of both national and international accounting standards remains an important aspect. The transition to IFRS requires not only the technical adaptation of accounting systems, but also a change in the mindset of accountants and auditors, which involves significant investments in improving the skills of personnel. Thus, the transition to IFRS 2 is associated with a number of challenges that require an integrated approach. It includes improving the regulatory framework, adapting accounting systems, modernizing software and training specialists. These changes are aimed at increasing the transparency of accounting and bringing the financial statements of Uzbek companies closer to international standards.

4. Discussion

Interpretation of the results: the significance of the differences between NAS 4 and IFRS 2 for financial reporting

The identified differences between NAS 4 and IFRS 2 have a significant impact on the financial statements of enterprises, since they determine the principles of valuation of inventories, their write-off and disclosure of information. One of the key differences is the approach to the recognition of the cost of inventories: in international practice, inventories are valued at the lower of two values - cost or net possible selling price. This means that in the face of market fluctuations, IFRS entities recognize in advance potential losses associated with the impairment of inventories, which makes financial statements more realistic. In contrast, NAS 4 does not provide for such revaluation, which can lead to an overstatement of the company's assets and underestimation of risks.

Another important aspect is the difference in the methods of inventory write-off. The prohibition of the LIFO method in IFRS is because its use can lead to a distortion of the value of inventories, especially in conditions of inflation. The FIFO method, on the contrary, gives a more objective view of the financial condition of the company, which increases the reliability of reporting. This is especially important for businesses seeking to attract foreign investment or enter international markets, where reporting transparency standards are crucial.

The additional disclosure requirements in IFRS 2 also play an important role in the preparation of financial statements. International regulations require detailed disclosure of data on the movement of inventories, methods of their valuation and possible impairments. This increases the level of confidence from investors and regulators, as well as contributes to a better understanding of the company's financial position. In Uzbekistan, where inventory accounting is still largely focused on national standards, the introduction of such requirements can contribute to increased transparency of reporting and a more accurate assessment of financial risks.

Prospects for Improving Inventory Accounting in Uzbekistan

The transition to IFRS in Uzbekistan is an urgent task, especially in the light of the processes of globalization of the economy and the growing interest of foreign investors in the local market. Improving inventory accounting requires an integrated approach that includes both regulatory changes and the development of the institutional environment.

One of the key areas of modernization is the adaptation of the national standard to international requirements. This may include the gradual introduction of an inventory impairment mechanism, which will allow businesses to more accurately reflect financial results. In addition, it is advisable to expand the requirements for disclosure of information, bringing them closer to IFRS standards. An equally important step is the professional development of accountants and auditors working in Uzbekistan. The introduction of international standards requires new approaches to accounting and reporting, and this, in turn, requires an appropriate level of training of specialists. The development of IFRS education programmes, seminars and certification courses can play a key role in this process. In addition, the improvement of inventory accounting should be accompanied by the modernization of accounting systems and software. The introduction of automated solutions capable of supporting accounting by international standards will reduce labor costs and minimize errors.

The differences between NAS 4 and IFRS 2 are not only important for financial reporting, but also determine the direction for the future development of accounting in Uzbekistan. Improvement of the regulatory framework, training of specialists and introduction of modern accounting technologies can contribute to the successful integration of the national accounting system into international practice.

Experience of other countries in adapting IFRS 2

The transition to **IAS 2** and its adaptation to national accounting systems is a process that many countries have faced. An analysis of international experience shows that the successful integration of international standards requires comprehensive measures, including legislative changes, reform of the education system, as well as modernization of accounting processes in companies.

In Eastern **European countries**, such as Poland and the Czech Republic, the implementation of IFRS took place in stages. The first step was the recognition of international standards as a priority for public companies, after which work began on their integration into national accounting rules. The main difficulty was the change in approaches to the valuation of inventories, since the requirement of impairment at the net possible selling price required a revision of the accounting policy of enterprises. Along with the amendment of regulations, considerable attention was paid to the training of accountants and auditors, which minimized the risks of incorrect application of the new norms.

In **Russia**, where national standards have long been focused on tax accounting, the transition to IFRS 2 also required changes in the approach to inventory valuation. One of the important steps was the creation of a unified chart of accounts that allows accounting by both Russian and international standards. However, one of the problems remains the imperfection of the software, which is not always adapted for accounting under the requirements of IFRS.

In **China**, which is rapidly integrating into the global economy, the process of adapting international standards was accompanied by strict government regulation. Chinese enterprises, especially state-owned ones, were required to implement IFRS in their reporting, which was accompanied by active control by regulators. Standards.

The experience of these countries shows that the key factors for the successful adaptation of IFRS 2 are a clear legislative framework, the availability of educational programs in accordance with international standards and the development of accounting systems that meet the new requirements.

Taking into account the identified problems and international experience, several directions for reforming the inventory accounting system in Uzbekistan can be proposed:

Modernization of NAS 4 taking into account the requirements of IFRS 2

- Introduction of a mechanism for revaluation of inventories at the lower of two values - cost or net possible selling price.
- Expansion of inventory disclosure requirements, including valuation method, impairment and balance structure.
- Prohibition of the LIFO method, which is not in line with international practice.

Creation of a transitional accounting system

- Development of a unified chart of accounts that will allow accounting according to both national and international standards.
- Introduction of double counting for large enterprises that must prepare financial statements under both NAS and IFRS.

Educational and methodological reforms

- Inclusion of the study of IFRS 2 in the programs of universities and professional courses.
- Development of national methodological recommendations for inventory accounting in accordance with international standards.
- Organization of training programs and certification courses for accountants and auditors.

Automation and digitalization of accounting

- Development of accounting software that allows accounting in accordance with IFRS.
- Creation of integrated digital platforms for the exchange of financial information between enterprises and government agencies.

Government support and monitoring of the transition to IFRS

- Development of a program for the phased implementation of IFRS 2 for various categories of enterprises.
- Introduction of a system of tax and administrative incentives for companies switching to international standards.

Harmonization of accounting standards in Uzbekistan will increase the transparency of financial reporting, simplify the attraction of foreign investment and integrate the national economy into the global financial system. However, this requires consistent reforms, including both changes in legislation and active support for enterprises at all stages of the transition to international standards.

5. Conclusion

The introduction of IFRS 2 and the harmonization of inventory accounting with international standards is a strategically important direction for the development of accounting in Uzbekistan. An analysis of the differences between NAS 4 and IFRS 2 showed that the main discrepancies are the approaches to the valuation of inventories, their revaluation, write-off methods and disclosure of information in the financial statements. In national standards, accounting is carried out mainly at historical cost without necessarily reflecting possible impairment, while international standards require the valuation of inventories at the lower of two values - cost or net possible selling price. In addition, IFRS 2 prohibits the use of the LIFO method, which requires enterprises to revise their accounting policies.

An analysis of the methods of valuation and write-off of inventories has shown that in international practice, the methods of FIFO and weighted average value have become the most widespread, since they provide a more objective reflection of the value of inventories in the context of market fluctuations. At the same time, enterprises operating according to national standards face difficulties in switching to these methods, as this can affect financial performance and taxation.

One of the key challenges in the transition to IFRS 2 is the need for detailed disclosure of inventory information. Unlike national standards, which require a minimum amount of information, international rules require detailed data on valuation methods, write-off amounts, inventory movements and impairment mechanisms. This creates additional difficulties for enterprises, as it requires modernization of accounting systems, advanced training of personnel and changes in corporate reporting. The experience of other countries, such as Poland, Russia and China, shows that the successful adaptation of international standards requires a comprehensive approach, including legislative reforms, the development of educational programs and the introduction of modern digital solutions in accounting. In Poland and the Czech Republic, the process of adaptation was accompanied by a gradual change in the accounting policy of companies, in Russia special attention was paid to the creation of a unified chart of accounts, and in China, the transition was controlled by the state with strict regulation and support for enterprises.

The introduction of IFRS 2 in Uzbekistan is not only a requirement of the time, but also an important step towards the country's integration into international economic processes. Improving inventory accounting will make the financial statements of Uzbek companies more transparent, increase investor confidence, and ensure compliance with global corporate governance standards. However, successful implementation of reforms will require not only changes in the regulatory framework, but also the active participation of business, educational institutions and government agencies in the process of adapting new accounting principles.

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