



Aims to digitalise the circulation of precious metals, precious stones and their products

O.V. Umgaeva¹**D.Kh. Eldeev²****S.A. Umgaev³**¹ Financial Research Institute of the Ministry of Finance of the Russian Federation (Moscow, Russia)² St. Petersburg University (Saint Petersburg, Russia)³ Kalmyk State University named after B.B. Gorodovikov (Elista, Russia)

Abstract

The need to digitalise economic sectors in today's world is perceived as an objective reality. In the circulation of precious metals, precious stones and their products, the digitalisation process is at a fairly high level, with continuous improvement. The article analyses the progress made in achieving the goals of the implementation of the State Integrated Information System in the Sphere of Control over the Circulation of Precious Metals and Precious Stones at all stages (GIIS DMDK), which is the main project of digitalisation of the industry.

Keywords: GIIS DMDK, precious metals, precious stones, digitilisation of the sphere, digitalisation goals, physical marking, jewelry.

For citation:

Umgaeva O.V., Eldeev D.Kh., Umgaev S.A. (2023). Aims to digitalise the circulation of precious metals, precious stones and their products. *Strategic Decisions and Risk Management*, 14(3): 272-277. DOI: 10.17747/2618-947X-2023-3-272-277. (In Russ.)

贵金属、宝石和贵金属制品交易的数字化目标

O.V. Umgaeva¹**D.Kh. Eldeev²****S.A. Umgaev³**¹ 俄罗斯联邦财政部财政研究所 (俄罗斯, 莫斯科)² 圣彼得堡国立大学 (俄罗斯, 圣彼得堡)³ 俄罗斯卡尔梅克戈罗多维科夫国立大学 (俄罗斯, 埃利斯塔)

简介

当今世界, 经济部门的数字化需求已成为客观现实。在贵金属、宝石和贵金属制品、宝石和宝石制品的交易领域, 数字化进程处于相当高的水平, 并在不断改进。文章分析了监管贵金属、宝石和贵金属制品交易各个环节中采用国家综合信息系统的达成目标进程, 该系统是贵金属、宝石和贵金属制品行业数字化的主要项目。

关键词: 贵金属、宝石和贵金属制品交易的国家综合信息系统; 贵金属、宝石、领域数字化、数字化的目标、物理学标志、珠宝制品。

供引用:

Umgaeva O.V., Eldeev D.Kh., Umgaev S.A. (2023). 贵金属、宝石和贵金属制品交易的数字化目标. *战略决策和风险管理*, 14(3): 272-277. DOI: 10.17747/2618-947X-2023-3-272-277. (俄文。)

Digitalisation in the Russian Federation is progressing at a fairly rapid pace, including through the National Digital Economy Project¹, which helps to generate a fairly large number of technical ideas and economic proposals. In this regard, scientific analysis and justification of the key points of digitalisation of the described sphere is an urgent issue of practical implementation of the State Integrated Information System in the field of control over the turnover of precious metals, precious stones and products made from them (hereinafter - GIIS DMDK).

Digitalisation is not just the use of software products, which have become an integral part of the working environment of people in almost every field of activity. At the current stage of development, it is an integral process that accelerates any economic activity, enables the exchange of data in digital form at various levels of communication and characterises the competitiveness of the participants.

This is one of the main reasons why digitalisation has become a subject of study for economists. The field of precious metals, precious stones and products from them, which, in addition to the economy, covers the interests of the state and citizens - consumers of jewellery products, is no exception. The creation of the GIIS DMDK digital platform, operated by Goznak², is aimed at achieving the development goals of a specific sector of the country's economy that works with strategically important mineral raw materials: gold, silver, platinum group metals and diamonds³.

DMDK's sphere of influence encompasses completely different but interdependent areas: mining, refining, processing, acceptance of DMDK scrap, jewellery production and sales. The degree of digitalisation of each of the listed sectors is different, but at the moment this factor is not an obstacle to unification on a single platform of the GIIS DMDK. With the exception of companies engaged in the extraction of precious metals and stones, refining and manufacturing companies, manufacturers and importers of jewellery, workshops, pawnshops, purchase, retail, consignment and online shops are registered in GIIS DMDK, i.e. all companies subject to the Federal Law 'On Precious Metals and Precious Stones'⁴ which provides for special accounting.

All legal entities subject to special accounting are interconnected according to the tolling principle, which makes it possible to create a system of traceability of

the movement of strategic raw materials, to which the legislation of the Russian Federation includes precious metals, precious stones and products from them⁵. 'Digital technologies in modern conditions are the main tool determining the functioning of the value chain. Currently, production networks unite independent economic entities of the market, taking into account the high level of coordination of interests and interdependence of participants based on the common goal of production' [Bogachev, Trifonov, 2022].

In addition to legal entities subject to special registration, the GIIS DMDK programme is used by all ministries and departments whose functions include the control and supervision of the turnover of the sphere. Thus, the composition and scope of users of the GIIS DMDK system make it possible to solve two of the five declared objectives at the same time⁶: ensuring traceability and effective control. Let us take a closer look at the results of achieving the other objectives of the integrated system.

Ensuring the transition to electronic document management – a goal that was stated since the beginning of the mass use of computers, both in government control and accounting and in business. Unfortunately, the need to store documentation in two formats - electronic and paper - remains a guarantee of the authenticity and security of information. In addition, not all business partners use electronic document management, document formats are different, not all primary documents are subject to digitisation, etc. Experienced users therefore note that electronic document management has not ensured the transition to digital accounting, but has made it easier to maintain.

In the case of GIIS DMDK, the situation is somewhat different: the information entered into the system, along with the general capabilities of continuous improvement of digitalisation, can be easily restored and compared across previous and subsequent transmission links of the counterparts. 'Modern principles for the construction of such systems are aimed at the creation of multi-level software that makes the interaction through the communication environment transparent. For interaction, high-level mechanisms are used, many of which have already been adopted as standards for information processing systems' [Belyakov, 2004].

The digitalisation of the sector related to precious metals, precious stones and products from them has

¹ Passport of the national programme 'Digital Economy of the Russian Federation' (approved by the Presidium of the Council under the President of the Russian Federation for Strategic Development and National Projects on 24 December 2018, No. 16). <https://base.garant.ru/72190282/>.

² You don't change horses at the crossing: The Government of the Russian Federation has extended the functions of Goznak as the operator of GIIS DMDK.07.10.2023. <https://www.jewelry-club.ru/novosti/2023/konej-na-pereprave-ne-menyayut-pravitelstvo-rf-prodlilo-funkcii-goznak-v-kachestve-operatora-giis-dmdk.html?ysclid=lo038pvh10261866628>.

³ Decision of the Government of the Russian Federation dated 30 August 2022 N 2473-r 'On Approval of the List of Main Types of Strategic Mineral Resources' «Об утверждении перечня основных видов стратегического минерального сырья». <https://www.garant.ru/products/ipo/prime/doc/405118925/>.

⁴ Federal Law No. 41-FZ of 26 March 1998 'On Precious Metals and Precious Stones'. <http://www.kremlin.ru/acts/bank/12117>.

⁵ Id.

Decree of the Government of the Russian Federation dated 30 August 2022 No. 2473-r 'On Approval of the List of Main Types of Strategic Mineral Raw Materials'. <https://www.garant.ru/products/ipo/prime/doc/405118925/?ysclid=lnyyq02lmb423093813>.

⁶ About GIIS DMDK. <https://dmdk.ru/about/>.

led to the abandonment of the practice of providing reports to market participants in non-electronic form and to working with electronic data as the main source of information. The specificity of the sector, its diversity and remoteness, and the wide range of related industries required a single platform. GIIS DMDK manages the structure of the turnover, taking into account the basic parameters, rules and methods of interaction of the different areas and modules.

The interaction mechanism within the system is constantly being improved, taking into account the wishes of both the companies operating in the area, and therefore the programme, and the authorities controlling it. In each module, taking into account its functional features, mechanisms of interaction with suppliers, buyers, supervisory authorities are formed, as well as with other information and integration systems of a similar type operating in the Russian Federation, which help to track the movement of products. Other systems best known to the mass user include USAIS - alcoholic product sales control, USAIS - timber accounting and transactions, FSIS 'Mercury' - sales accounting for products subject to veterinary control. 'All of the listed integrated information systems have the same principle - accounting for the promotion of labelled goods in order to exclude illegal trade, tax evasion, payment of duties and fees, and protection of consumers from counterfeit products' [Ivanova, Umgaeva, 2023].

Increasing the efficiency of consumer protection procedures is the fourth of the stated objectives of the implementation of the GIIS DMDK. As a means of achieving this, a decision was taken to physically mark gold and platinum jewellery (hereafter referred to as jewellery). According to the decree of the Government of the Russian Federation⁷ as of 1 March 2024, all jewellery sent to the Federal Assay Office of the Russian Federation (hereinafter referred to as the FAO) for examination, as well as all imported products that have passed through customs, will be subject to mandatory marking. From 1 September 2024, all products subject to marking and offered for sale must have a DM code applied directly to the jewellery. The gradual implementation of the stated goal is explained by the strategy of the Ministry of Finance of the Russian Federation 'to ensure a smooth transition without affecting legally operating businesses'. At the same time, the main message we want to convey to the industry is that labelling is a benefit. The sooner the system is up and running, the sooner the end user will appreciate the result of our work together⁸. Marking of

jewellery made from precious metals, precious stones and products from them is in accordance with the Concept of the creation and operation in the Russian Federation of a system for marking goods by means of identification and traceability of the movement of goods, approved by the Order of the Government of the Russian Federation⁹. The concept aims to protect consumer rights against counterfeit, uncertified products.

However, the implementation of the product labelling process itself does not yet allow to guarantee the success of the implementation within the set timeframe, which is not planned to be postponed. Specialists calculate a fairly large number of parameters to make the codes on products absolutely readable. In addition, if the depth of application of the DM code is determined by the participants during testing in conjunction with the FAO, further implementation of the project will be left to those who plan to, if not increase, then at least maintain sales volumes.

It should be noted that, according to a number of experts, the labelling of jewellery is rather difficult to promote because of the additional costs involved. 'It would be possible for a company to at least make it easier - to enter not the UIN (Unique Identification Number - author's note) but the IBN - the individual batch number - in the DM code applied directly to the piece of jewellery. Yes, theoretically, without reading the UIN directly from the products coming from the FAO after they have been branded and marked, the manufacturing plant could make a mistake. They'll find out. There will be no need to spend on everything associated with reading marks off metal products'¹⁰.

To comply with the law, many sellers, mainly small businesses, will need to purchase readers, provide lighting, train staff and collect and label all unsold, unlabelled products. According to Jeweler Soft, the developer of the GIIS DMDK system, 'taking into account the time needed to collect a batch and the subsequent processing/sorting of the products arriving from the FAO, we come to the conclusion that it was necessary to start marking balances at retail outlets yesterday. All new jewellery entering the retail chain must already be physically marked. Failure to do so will result in all new products received being sent to the FAO at your expense for labelling as surplus. This has both financial and time costs. The time taken to physically mark a product at the FAO may be a key factor, as no additional staff are foreseen at the FAO for the residue marking period'¹¹. For example, the introduction of labelling for jewellery products was complicated by

⁷ Resolution of the Government of the Russian Federation dated 02/26/2021 No. 270 "On certain issues of control over the turnover of precious metals, precious stones and products made from them at all stages of this turnover and Amendments to Certain Acts of the Government of the Russian Federation" (with amendments and additions). <https://base.garant.ru/400380713/?ysclid=lo1pheup44671954577>.

⁸ Trukhanova E. Jewellers hope for the abolition of physical markings on jewellery. 20.09.2022. <https://rg.ru/2022/09/20/reg-cfo/vse-ravno-ne-razgliadet.html?ysclid=lnq68ck2v3444770594>.

⁹ By order of the Government of the Russian Federation dated 28 December 2018 No. 2963-r. <http://static.government.ru/media/files/xZ2pPl6khqfC8tCkRXf3z7VQ8JgeZbk3.pdf>.

¹⁰ Zboykov V. We create problems for ourselves so that we have something to overcome. 24 September 2023. <https://uvelir.info/news/vladimir-zboykov-myi-sami-sozdaem-sebe-problemyi-chtobyi-byilo-cto-preodolevat/>.

¹¹ How to prepare for the physical marking of jewellery? Jeweller Soft. 17 July 2023. <https://uvelirsoft.ru/blog/giis-dmdk-cto-ostalos-k-chemu-gotovitsya/?ysclid=lnq654inu0626900211>.

the additional costs involved, which were prohibitive for a certain part of the business.

The best confirmation of this comes from the Russian Federal Tax Service. ‘According to the Federal Tax Service, the number of small jewellery businesses has decreased by 35 per cent since the beginning of 2023. Some seven thousand small industries have closed or gone into hiding, and many of those that remain have reduced production volumes and the number of employees. Industry representatives and experts attribute this to the abolition of the Simplified Tax System (STS) for jewellery. They also believe that the introduction of the GIIS DMDK - a system for monitoring the circulation of precious metals, stones and products - has had an impact’¹².

Indirectly, the difficulties of physical marking of products have been confirmed by the Chamber of Commerce and Industry of the Russian Federation, which supports the abolition of compulsory marking of jewellery exported from the EAEU. According to the President of the Chamber of Commerce and Industry, S. Katyrin, ‘the Russian hallmark is not recognised in countries outside the EAEU, which significantly reduces the competitiveness of Russian jewellery on the world market. At the same time, jewellery buyers in these countries may perceive the imprint of the Russian hallmark as a damage during processing that violates the aesthetic perception of the product’¹³.

If this proposal is implemented, Russian manufacturers will mark products only for domestic consumption and for sale in the EAEU countries. Physical marking on jewellery in the coming years will be applied only to products for the domestic market of Russia, since none of the EAEU countries, despite the signed agreement in the sphere of circulation of DMDK¹⁴, has started it, with the exception of the Republic of Belarus, and then as an experiment. The analysis of the analytical information from the GIIS DMDK system will show how this will affect the competitiveness of Russian manufacturers, the quality of control over DMDK sales and the protection of consumer rights.

The generation of analytical information on the state of the precious metals and jewellery industry is an objective which, among other things, opens up the possibility of scientific analysis of the effectiveness of the system. To date, the GIIS DMDK does not provide summary information for analysis by third parties. Information for buyers is available both on the website and in the DMDK mobile application: you can get information about a standard or measured Russian ingot, jewellery and its characteristics using a unique

identification number. Coming back to the question of the physical marking of jewellery, it is logical to check the information at the time of purchase. For this purpose, the information and the digital code on the label are sufficient for the buyer.

The digitalisation of the circulation process of DMDK and products made from it is a definite plus, and labelling is a mandatory tool for its implementation. Thanks to the inclusion of DMDK in the GIIS system, the information will be available to all the government departments involved in controlling sales, as well as to buyers, producers and distributors. The first is the FAO, which is the authorised body for state control of the circulation of precious stones, metals and products made from them. At the same time, on the FAO website, all the proposed list options (market participants who comply with the legislation of the Russian Federation and violate it; market participants who do not reflect information in the GIIS DMDK; market participants who submit their products for physical labelling etc. are available.¹⁵) are not numbered and do not include a total. The analyst must generate the necessary information independently.

On the website of this department, in the ‘Open Data’ section, more analytical information is presented. For example, the Register of Special Accounts of Legal Entities and Individual Entrepreneurs Dealing in Precious Metals and Precious Stones is numbered. There are 21,968 of these on 27 October 2023; there is no information in the open data on how many were specifically registered with the FAO before the introduction of the GIIS DMDK. The FAO website also provides information on the number of licences issued by the territorial bodies of the Federal Assay Chamber, information on the composition of the Public Council. This information is not sufficient to assess the effectiveness of the system and of digitisation efforts in general.

The GIIS DMDK system allows you to create a compilation of open data on all government agencies involved in the process of regulating and controlling the circulation of DMDK and products made from it. This mechanism will primarily help control structures to benefit from the digitalisation of the sales process and to analyse each other’s data when making decisions. The stated aim of the GIIS DMDK is to achieve a complete transition to an electronic document management system. It implies the completeness of analytical information.

An attempt to find information on the websites of GIIS DMDK, FAO, Goznak on how many people downloaded the mobile version of ‘DMDK’, how many

¹² Ledyeva M. Why the small jewellery business decreased by a third. 17 October 2023. <https://rg.ru/2023/10/17/reg-szfo/serebro-uhodit-v-podval.html>.

¹³ The Chamber of Commerce and Industry supports the abolition of compulsory hallmarking of jewellery exported from the EAEU. 11 August 2023. <https://ap-dm.ru/news/tpp-podderzhala-otmenu-obyazatel'nogo-klejmeniya-yuvelimnyh-izdelij-pri-vyvoze-iz-eaes>.

¹⁴ Agreement on the Specifics of Transactions with Precious Metals and Precious Stones within the Eurasian Economic Union of 22 November 2019. <http://publication.pravo.gov.ru/Document/View/0001202105280015?ysclid=lna5ize7t351504704>.

¹⁵ <https://probpalata.gov.ru/spisok-uchastnikov-rynka-sovershayushhix-oborot-s-naruseniem-zakonodatelstva-rossijskoj-federacii/>.

used it, how many fakes were detected was not successful. All departments only provide a link to download the information resource on their websites and do not make any marketing efforts to promote it. Promoting such an important source of information will also help to achieve the main goals of digitising the sphere - transparency of sales, increased competitiveness of products and increased revenues for the industry.

The objectives of the implementation of the GIIS DMDK, which is a key mechanism for the digitisation of the circulation area of the DMDK and its products, are gradually being achieved. Thanks to the implementation of the system, production processes in jewellery manufacturing and sales, in the management system of industrial enterprises in the sphere, refineries, pawnshops and recycling of precious metals scrap have changed significantly; logistics have been simplified, additional jobs have been created, the mechanism of interaction

between business and regulatory structures has been accelerated and clarified.

At the same time, the level of readiness (financial, human, technical) of each participant registered in the DMDK sales system determines the potential for the development of the digital space not only in his company, firm, but also in the entire sphere. The level of readiness of companies varies greatly. However, it must be stressed that the digitalisation of the sphere is necessary to create the conditions for its development, and not vice versa. From an economic point of view, it is illogical to develop the sphere in a way that it considers unprofitable when introducing digitalisation. This principle is conclusively formulated for the purpose of the implementation of the GIIS DMDK, and provided that they are fully achieved, the area under study will contribute to the digitisation and development of the Russian economy as a whole.

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About the authors

Olga V. Umgaeva

Candidate of economic sciences, associate professor, leading researcher, Centre for Research in the Field of State Regulation of the Precious Metals and Precious Stones Industry, Financial Research Institute (Moscow, Russia). ORCID: 0000-0001-9640-9529; SPIN: 6978-6926.

Research interests: regional, sectoral economics, territorial planning, theoretical foundations of economics, budget policy.

OUmgaeva@nifi.ru

Dolan Kh. Eldeev

Master of Mathematics and Mechanics Faculty of St. Petersburg State University (Saint Petersburg, Russia).

Research interests: digitalisation of processes in economic sectors.

eldeev.dolan@gmail.com

Semyon A. Umgaev

Senior lecturer, Kalmyk State University named after B.B. Gorodovikov (KalmSU) (Elista, Russia). ORCID: 0000-0003-0778-1607; SPIN: 5956-1779.

Research interests: international relations, cultural and historical space, the impact of digitalisation and other integration processes on the socio-economic and spiritual development of society.

sam_umg@yahoo.com

作者信息

Olga V. Umgaeva

经济学博士，副教授，俄罗斯联邦财政部金融研究所贵金属和宝石国家监管研究中心首席研究员（俄罗斯莫斯科）。ORCID: 0000-0001-9640-9529; SPIN: 6978-6926。

学术兴趣: 区域经济、行业经济、国土规划、经济的理论基础、预算政策。

OUmgaeva@nifi.ru

Dolan Kh. Eldeev

俄罗斯圣彼得堡国立大学数学与力学硕士（俄罗斯，圣彼得堡）。

学术兴趣: 经济部门过程的数字化。

eldeev.dolan@gmail.com

Semyon A. Umgaev

俄罗斯卡尔梅克戈罗多维科夫国立大学的高级讲师（俄罗斯，埃利斯塔）。ORCID: 0000-0003-0778-1607; SPIN: 5956-1779。

学术兴趣: 国际关系, 文化和历史空间，数字化和其他一体化进程对社会经济和精神发展的影响。

sam_umg@yahoo.com

The article was submitted on 25.09.2023; revised on 14.10.2023 and accepted for publication on 17.10.2023. The authors read and approved the final version of the manuscript.

文章于 25.09.2023 提交给编辑。文章于 14.10.2023 已审稿，之后于 17.10.2023 接受发表。作者已经阅读并批准了手稿的最终版本。