

THEORETICAL AND APPLIED ASPECTS OF ECONOMIC PROCESSES IN UKRAINE AND IN THE WORLD ECONOMY

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EUROPEAN PRACTICES OF DEVELOPMENT OF THE PRECIOUS METALS MARKET

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precious metals market, innovation, regulatory policy, environmental standards, London Metal Exchange, investments, economic stability, European market, financial reserves.

The article examines the development of the precious metals market in Europe since 2000, with particular emphasis on the impact of globalization, economic crises, innovation, and regulatory changes in the Union. Particular attention is paid to the importance of precious metals for the European economy, including their role as stable investment assets. The consequences of the 2008 financial crisis and the COVID-19 pandemic in 2020, which led to an increase in demand for gold and other precious metals that served as a means of preserving capital, are considered. The role of countries such as the United Kingdom, Switzerland, Germany, and France in the functioning of the global precious metals market is highlighted, in particular through key trading venues such as the London Metal Exchange. The contribution of the European Union to improving the regulatory framework aimed at ensuring transparency, ethics, and sustainability in the precious metals trade is highlighted. The impact of EU directives on business processes and the growth of quality standards is highlighted. Attention is also drawn to the prospects of the European precious metals market, including expanding international influence through technology exports, establishing partnerships with countries implementing «green» technologies, and innovative development. The article emphasizes the importance of legislative reforms and creating conditions for attracting investment, in particular to support technological startups and the development of environmentally sustainable mining methods. In conclusion, the article presents a comprehensive analysis of the current state of the precious metals market in Europe, its key challenges and achievements, emphasizing the importance of a comprehensive approach to the implementation of innovations and regulatory changes in the precious metals market to ensure sustainable economic growth and competitiveness in the global economy.

ЄВРОПЕЙСЬКІ ПРАКТИКИ РОЗВИТКУ РИНКУ ДОРОГОЦІННИХ МЕТАЛІВ**Череп А.В., Савенко Д.М.***Запорізький національний університет
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ринок дорогоцінних металів, інновації, регуляторна політика, екологічні стандарти, Лондонська біржа металів, інвестиції, економічна стабільність, європейський ринок, фінансові резерви.

Стаття досліджує розвиток ринку дорогоцінних металів у Європі після 2000 року, особливо акцентуючи увагу на впливі глобалізації, економічних криз, інновацій та регуляторних змін у рамках союзу. Основна увага приділяється значенню дорогоцінних металів для європейської економіки, включаючи їхню роль як стабільних інвестиційних активів. Розглянуто наслідки фінансової кризи 2008 року та пандемії COVID-19 у 2020 році, які призвели до зростання попиту на золото та інші дорогоцінні метали які виконували роль засобів збереження капіталу. Висвітлено роль таких країн, як Велика Британія, Швейцарія, Німеччина та Франція, у функціонуванні глобального ринку дорогоцінних металів, зокрема через ключові торговельні майданчики, як-от Лондонська біржа металів. Підкреслено внесок Європейського Союзу у вдосконалення регуляторної бази, що спрямована на забезпечення прозорості, етичності та екологічності у сфері торгівлі дорогоцінними металами. Висвітлено вплив директив ЄС на бізнес-процеси та зростання стандартів якості. Також звертається увага на перспективи європейського ринку дорогоцінних металів, включаючи розширення міжнародного впливу через експорт технологій, встановлення партнерств із країнами, які впроваджують «зелені» технології, та інноваційний розвиток. Стаття акцентує на важливості законодавчих реформ і створенні умов для залучення інвестицій, зокрема для підтримки технологічних стартапів і розвитку екологічно стійких методів видобутку. Підсумовуючи, стаття представляє всебічний аналіз сучасного стану ринку дорогоцінних металів у Європі, його ключових викликів та досягнень, підкреслюючи важливість комплексного підходу до впровадження інновацій і регуляторних змін на ринку дорогоцінних металів задля забезпечення стійкого економічного зростання та конкурентоспроможності у глобальній економіці.

The article is aimed at analyzing the development of the precious metals market in Europe after 2000 and determining the impact of globalization, economic crises and the introduction of innovative technologies on its efficiency, as well as the role of regulatory policy and innovations in strengthening the competitiveness of European countries and their ability to adapt to modern economic challenges.

Analysis of recent studies and publications points to the growing role of precious metals in ensuring economic stability and investment attractiveness of European countries. Research emphasizes that the precious metals market is a strategic segment for economic development, especially in the context of globalization, economic crises and innovation [1, 2, 3, 4, 5, 6]. Many articles consider the impact of globalization on international trade, liquidity growth and market adaptation precious metals to global

challenges. Such works highlight how globalization has contributed to the integration of the European market into the global economy and the strengthening of its position through technological advances and regulatory transparency, and highlight the increased demand for precious metals during times of economic instability. Gold has become a key asset for capital preservation, and European countries have confirmed their status as leaders in the trade and storage of precious metals.

The monographs also actively explore modern challenges and prospects for market development in the context of technological innovations. The paper considers automation, digitalization, recycling of precious metals, as well as environmental initiatives that strengthen the competitiveness of European countries on the world stage. The authors offer recommendations for regulators and businesses to optimize business processes, increase market

transparency, and create an ecosystem that contributes to the sustainable development of the industry [7].

In general, recent publications show that in order to maintain a leading position in the global economy, the European precious metals market needs to actively innovate, adapt to changing conditions and use international best practices. This will ensure the stability of the market, strengthen its investment attractiveness and contribute to the sustainable development of the European economy as a whole.

Problem statement: touches on the need to improve regulatory policy and introduce innovative technologies in the precious metals market in the European Union in the context of globalization, economic crises and growing environmental awareness. European countries often face challenges that require adaptation to new realities, so the problems are the need to ensure market transparency, the introduction of environmentally sustainable mining and processing practices, as well as overcoming the risks associated with price volatility and increased international competition.

Presentation of the main material

The precious metals market in Europe after 2000 underwent significant transformations due to economic, technological and social changes, because metals themselves have always played a strategic role in the global economy, as they are used as a tool for preserving capital, a key component of industrial production or as a basis for financial stability. After 2000, the demand for precious metals increased significantly, in particular for gold and silver, which have become the main tools for preserving value in conditions of economic instability, and the main reason for such an increase in demand was globalization, which not only expanded market access, but also increased the liquidity of precious metals, making them more accessible to a wide range of investors. Interestingly, the

development of the precious metals market in Europe is also due to a change in investment preferences, because gold and other metals began to be perceived not only as assets for physical ownership, but also as the basis for financial instruments such as exchange-traded funds, futures and options. This has expanded opportunities for investors and made the market more attractive, while increasing its complexity and volatility (Fig. 1).

The economic crisis of 2008 rightfully became one of the largest financial shocks in history, which significantly affected global markets, in particular the precious metals market, because if we recall those events, it arose due to the collapse of the US mortgage market, which caused the collapse of large financial institutions and grew into a global financial crisis, and it is thanks to this that precious metals Gold, in particular, has gained the status of a "safe haven" as investors have begun to look for safe assets to protect their capital from financial instability. Gold became the main asset that ensured the preservation of value in the face of the collapse of traditional financial instruments such as stocks and bonds, so the demand for it increased among both private investors and central banks seeking to increase their reserves to maintain currency stability. As a result, gold prices increased significantly, reaching record levels at that time: for example, in the period from 2008 to 2011, the price of gold more than doubled (Fig. 1) [8, 9].

A similar situation was repeated during the COVID-19 pandemic in 2020. This crisis, which was caused by a sharp slowdown in economic activity due to quarantine restrictions, disruption of global supply chains and reduced production, once again confirmed the status of precious metals as a reliable asset, which, again, became a key tool for investors during a period of high volatility in the stock markets. In addition, financial crises have affected the dynamics of the extraction and trade of precious metals. For example, during the same COVID-19 pandemic,

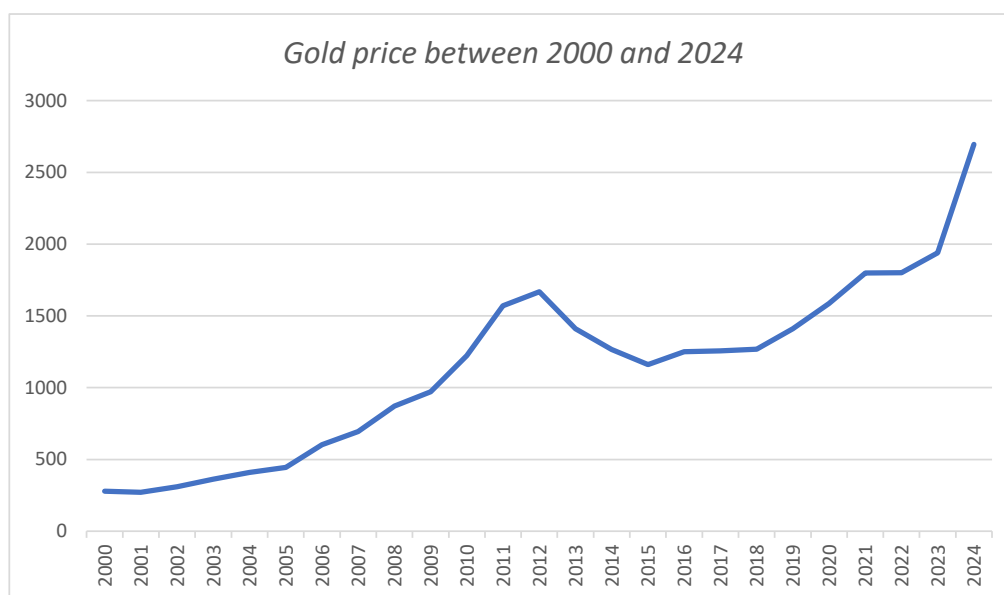


Fig. 1 – Gold price between 2000 and 2024 (source: National Mining Association: historical gold prices) [8, 9]

production was temporarily halted in many countries due to quarantine measures, which created shortages and additional pressure on prices, but at the same time, the demand for precious metals remained stable, which further increased their value. It is also necessary to mention the role of the Central Banks of European countries, which also played an important role in stabilizing the market during these crisis periods, because their increase in their gold reserves became one of the ways to protect economies from exchange rate fluctuations and global financial instability. Germany, France and Switzerland were particularly active in this regard, which not only increased their reserves, but also kept gold as part of their economic sustainability strategy.

Since 2000, the European Union has been actively introducing a variety of legislation, which, although not primarily aimed at regulating the precious metals market, have had a significant impact on this sector and required it to be more focused on ethics, transparency and environmental responsibility. Among the main regulations are:

1. Regulation on the Responsible Supply of Conflict Minerals (2017/821): entered into force on 1 January 2021 and ensures the responsible supply of precious metals from conflict areas, preventing the financing of terrorist groups and human rights violations. Obliges importers to comply with identification, management and reporting procedures.

2. RoHS Directive (2011/65/EU, supplemented by 2017/2102): restricts the use of hazardous substances to reduce the impact on the environment and human health. The 2017 addition extended the requirements to more products and improved certification, as well as contributed to safer electronics production, improving environmental friendliness and product quality.

3. Anti-Money Laundering and Countering the Financing of Terrorism Directive (5th and 6th): strengthens the control of financial transactions to prevent criminal activity, requires customer identification, transaction monitoring and reporting of suspicious transactions. It directly affects the precious metals market due to new rules, increased control and changes in trade dynamics.

From this we can say that the EU, although it has not issued direct laws regarding the regulation of the precious metals sector, they are actively engaged in its regulation through directives that control other sectors of the Union and thanks to this approach, the EU influences numerous aspects of the work with precious metals, forming high standards of environmental safety, transparency of supply chains and ethics, which also affects their price.

Technological innovations have become a key factor in the development of the precious metals market in Europe, providing increased efficiency in mining, processing and

reducing environmental impact. European companies began to actively implement automation, digital technologies or innovative metal processing methods in their business, which allowed them to remain competitive in the global market. Automation of production processes is also being actively introduced, in particular the use of robotic systems, which significantly reduces the level of manual labor and increases safety at mining facilities, along with the latest quality monitoring technologies, which allow you to accurately determine the composition and characteristics of materials, which contributes to the optimization of production cycles and cost reduction. Particular attention is also paid to precious metal recycling technologies, which help reduce dependence on the extraction of new resources and ensure the efficient use of metals from waste devices and materials, reducing the environmental footprint and costs of enterprises.

The results of the research show that a comprehensive approach to regulatory policy, the introduction of innovations and adaptation to global challenges create significant strategic advantages for the precious metals market in Europe, in particular, EU initiatives such as the Conflict Minerals Regulation and the RoHS Directive contribute to increasing transparency, environmental friendliness and responsibility of the industry. The research also confirms that during the crises of 2008 and the pandemic of 2020, precious Metals, especially gold, played a key role as a stable asset, ensuring the preservation of capital.

Conclusions

Regulatory policies and technological innovations create significant strategic advantages and new challenges for the precious metals market in Europe, in particular by showing that the implementation of EU directives such as the Conflict Minerals Regulation and the RoHS Directive has contributed to increasing market transparency, ethics and environmental friendliness, which directly affects this market. The same technological innovations such as automation, recycling and energy efficiency have also significantly increased and continue to increase the efficiency of metal mining and processing, while reducing their impact on the environment, allowing the European market to meet high environmental standards and maintain global competitiveness. As for crisis moments, periods of economic crisis, such as the financial crisis of 2008 and the COVID-19 pandemic, confirmed the importance of precious metals as stable assets for capital preservation, which contributed to the growth of demand for gold and other metals, and the centralized increase in reserves in the EU countries was a key and important step towards stabilizing financial systems during these periods.

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