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REAL SECTOR ASSET TOKENIZATION AS A TRANSFORMATION DRIVER OF GLOBAL CAPITAL MARKETS

ABSTRACT

Real sector asset tokenization is becoming increasingly popular among investors, thereby enhancing the impact of this trend on global capital markets. The aim of the research was to analyse the current state of the tokenized asset market and study the hypothetical impact of this market on global capital markets. The research employed the methods of statistical analysis, correlation analysis, regression analysis, the ARIMA method, and the Granger test. The projected growth of the tokenized asset market is 27 times in 2030 compared to 2023, indicating an increase in its impact on global capital markets. The analysis revealed a positive dependence of the market capitalization of the PAXG token on the gold price. The token's volatility was also found to be higher than that of physical gold, making it more volatile in the short term. The Granger test confirmed the causal effect of the gold price on the market cap of PAXG in the short term, while the reverse effect of the token's capitalization on the gold price was not found. Regression analysis demonstrated that the gold price can explain about 44.5% of the variation in PAXG's market capitalization; however, there are other significant influencing factors. Predictive trends revealed that the token's capitalization is outpacing the growth in the gold price, so it can be assumed that further growth in the token market may have an impact on the price of physical gold. Further research may assess the impact of other classes of tokenized assets on global capital markets.

Keywords: digital technologies, tokenization of real sector assets, token capitalization, gold price, PAXG, volatility, investments

JEL Classification: G15, G23, O33, C58

INTRODUCTION

The tokenization of real-world assets (RWAs) has been developing rapidly in recent years due to the significant advantages of new financial instruments and digital technologies. Tokenization is significantly transforming the way of funding, trading, and managing assets. Asset tokenization is the process of creating a digital representation of a real asset, called a token, on a distributed ledger or blockchain. These tokens are programmable, traceable, and can be transferred between nodes. Each token acts as a digital certificate of ownership or the right to a part of an asset (e.g., a part of a single share, a share of a commercial structure). Tokenization facilitates market access for small investors by allowing fractionalization of assets, breaking them down into smaller, more affordable units. Furthermore, tokenization increases the efficiency of transactions and reduces their cost due to self-executing smart contracts, speeds up settlements, and increases transparency and trust.

RWA tokenization is, however, a relatively new issue for academic research, so the potential impact of the RWA tokenized market on the global capital market remains poorly studied. The key hypothesis of the study is the assumption that there is an impact of tokenized asset capitalization on the example of tokenized Paxos Gold (PAXG) on the gold price as an important indicator of investment attractiveness and global financial stability.

LITERATURE REVIEW

The transformative potential of RWA tokenization has been covered in many studies and applied research (Zheng & Sandner, 2022; Gong, 2024; Lyushenko & Tuholukov, 2025). In a number of works, tokenization is seen as the future of real estate investment (Gupta et al., 2020; Baum, 2021). The essence and mechanism of tokenization are disclosed in detail in the works of Benedetti & Rodríguez-Garnica (2023) and Waliczek (2025). Chow & Tan (2022) and El Jaouhari et al. (2025) explained the benefits of tokenization for small investors, Oza et al. (2024) and Alnabulsi (2024) showed how tokenization increases transaction efficiency.

Liushenko et al. (2025a; 2025b) emphasized the increasing importance of digital assets in private and public relations, but their study did not provide any empirical verification of the described impact. Ani et al. (2024) and Carapella et al. (2023) focused on the relationships of tokenized assets with crypto asset markets and their impact on financial volatility. Their studies do not, however, pay enough attention to assessing the direct impact of tokens on the traditional asset market.

Riabokin & Kotukh (2024) reveal the significant potential of tokenization for increasing the cost-effectiveness of low-liquid assets, as well as reducing barriers to entry for potential investors. In another study, the researchers explored how tokenization of assets of territorial communities can contribute to financial stability and growth through the introduction of innovative financial mechanisms (Kotukh & Riabokin, 2025). However, the mentioned studies also lack empirical confirmation of the described relationships.

Oyebanji (2024) and Peng (2025) note the spread of RWA tokenization in the fields of securities, intellectual property, art, agriculture, real estate, commodities, etc. The researchers also note the problems of an unclear legislative framework and high technological thresholds that prevent tokenization, but the real impact of such problems is not assessed.

Koc (2024) noted that RWAs have become a key concept in the transformation of global financial markets driven by blockchain and tokenization. The paper discusses the relationship between RWAs and escrow mechanisms, but the author limits himself to theoretical analysis without empirical confirmation.

A number of researchers proposed empirical approaches to assessing the transformative potential of asset tokenization. Baltais et al. (2024) estimated the potential profits from the introduction of new financial instruments. Tanveer et al. (2025) noted opportunities to improve transaction efficiency and create new value propositions.

Mottaghi & Steininger (2024), Mottaghi et al. (2024) found a causal relationship between real estate tokens and traditional real estate investment instruments. At the same time, there is a lack of empirical models that would allow quantifying the relationship between the dynamics of tokenized and real assets using the example of other asset classes. This paper comprehensively assesses the relationship between real and tokenized assets, with a special focus on gold tokens. The proposed approach complements earlier studies with new data to compare the behaviour of different classes of tokenized assets.

AIMS AND OBJECTIVES

The aim of the research was to analyse the current state of the tokenized asset market and study the hypothetical impact of this market on global capital markets. The aim involved the fulfillment of the following research objectives:

1. To analyse the current and forecast trends of the RWA and tokenized RWA market.
2. To study the potential relationship between the gold price and the PAXG capitalization.
3. To evaluate and compare forecast trends in gold price and PAXG capitalization.

METHODS

Research design

The research design provided for several successive interrelated stages. The main stages involved the advancement of a hypothesis and the purpose of the analysis, the collection and preparation of data, and the analysis conducted in accordance with the set goals, drawing conclusions, and providing recommendations. The key steps of the research procedure are presented in Figure 1.

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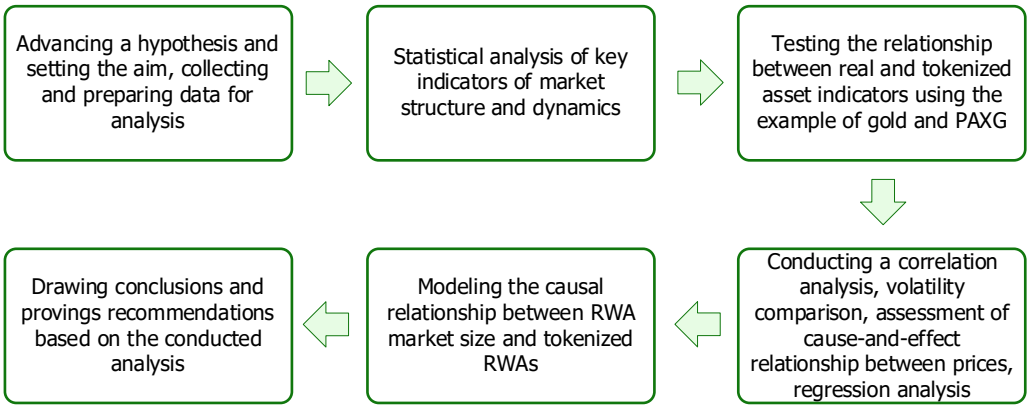

Figure 1. Research design.

Sample

For the analysis, monthly publicly available data for 2019–2025 were used for the following indicators (CoinMarketCap, 2025; DataHub, 2025; Investing.com, 2025; Roland Berger, 2023; Tokeny, 2025; Grand View Research, 2025; Technavio, 2025):

- the size of the real sector asset market;
- the market size of tokenized RWAs;
- the closing price of the PAXG token in USD;
- gold_price – the market price of physical gold (USD/ounce);
- marketCap – market capitalization of the PAXG token (USD);
- volume – trading volume of the PAXG token (USD).

The study was based on the data for gold as the most stable and at the same time liquid asset. In turn, PAXG has the highest capitalization among other tokenized assets. The price of a token reflects its market value and shows the asset's attractiveness to investors. This indicator also allows determining the strength of the relationship with the price of traditional gold, which makes it possible to establish whether the token repeats the dynamics of a real asset and whether it affects the gold market. Market capitalization conveys the scale of a token's distribution, which is important for assessing its potential impact on the market. Trading volume demonstrates the liquidity and activity of investors, which affects price trends and determines the token's role in the market. So, the combination of the observed indicators assesses the strength of the connection between the token market and the physical asset market, as well as the tokens' impact on traditional assets.

Besides, the research provides a statistical analysis of individual indicators of the market structure and dynamics, in particular (CoinGecko, 2024; Roland Berger, 2023):

- countries that are most interested in tokenized RWAs by traffic;
- the forecast size of the RWA market;
- the size of the tokenized assets market; projected tokenized assets market structure in 2030.

The noted indicators are useful for a comprehensive assessment of the state and prospects for the development of the tokenized asset market, determining its geographical structure, capitalization rate, and potential areas of investment activity.

Methods

The research employed the method of classical statistical assessment of profitability and risk (volatility) based on mean and standard deviation. In particular, the monthly yield of gold and tokenized assets was calculated by using the above-mentioned indicators of the price of a token or gold according to formula 1.

$$R_t = \frac{P_t - P_{t-1}}{P_{t-1}} \quad (1)$$

where R_t is the yield of the token or gold in the period t, P_t, P_{t-1} – the price of the token or gold for the previous period.

The calc yield was calculated to further calculate the volatility according to formula 2.

$$\sigma_X = \sqrt{\frac{1}{N-1}\sum_{t=1}^{N}(R_t - \bar{R})^2} \quad (2)$$

where σ_X – the volatility of the return on the asset X; R_t – the return on the asset in period t; $\bar{R}$ – the average value of the yield per sample; N – the number of observations.

The linear relationship between the indicators of traditional and tokenized gold was tested through correlation analysis. This made it possible to assess the strength and direction of such a relationship, which can characterize the potential dependence of their dynamics. For correlation analysis, Pearson's correlation coefficient was used (formula 3):

$$r_{XY} = \frac{\sum(X_i-\bar{X})(Y_i-\overline{Y})}{\sqrt{\sum(X_i-\bar{X})^2\sum(Y_i-\bar{X})^2}} \quad (3)$$

where X_i, Y_i – the observed values of the variables X and Y; $\bar{X}$, $\bar{Y}$ – the average values of the corresponding variables; N – the number of observations.

The Granger test is used to check whether the values of one variable help to predict the other. The Granger test is used to check for a causal relationship between two time series, for which the data is divided into segments called lags. A lag is a period of time (in this case, 1 lag = 1 month) by which one indicator can be ahead of or behind another. Hypothesis H_0: X does not cause Y (all $\beta_j = 0$); the hypothesis H_1: X causes Y (at least one $\neq\beta_j$ 0). For the two-time series X_t and Y_t (4):

$$Y_t = \alpha_0 + \sum_{i=1}^{\rho}\alpha_i Y_{t-i} + \sum_{j=1}^{\rho}\beta_j X_{t-j} + \varepsilon_t \quad (4)$$

where Y_t – the current value of the dependent variable; X_{t-j} – delayed values of the potentially causal variable; ρ – the number of logs; ε_t – the model error.

The statistical significance of the models was checked by using the F-test (5):

$$F = \frac{(RSS_R - RSS_U)/\rho}{RSS_U/(T-2\rho-1)} \quad (5)$$

where RSS_R – the residual sum of squares for the bounded model (without X); RSS_U – the sum of the squares of the residuals for the unlimited model (with X); T – the number of observations.

If ρ-value < 0.05, the H_0 hypothesis is rejected.

Regression analysis was used to assess the impact of the gold price on PAXG's market capitalization. This made it possible to determine the extent to which the gold price can explain changes in PAXG's market capitalization. Regression analysis is performed using formula 6:

$$Y_t = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \cdots + \beta_k X_{kt} + \varepsilon_t \quad (6)$$

where Y_t – the dependent variable; X_{1t}, X_{2t}, … X_{kt} – independent variables; β_0 – a constant; β_k – regression coefficients showing the influence of each factor; ε_t – a random error.

Time series were forecasted by using the Auto Regressive Integrated Moving Average (ARIMA) according to formula 7.

$$\hat{Y}_t = c + \phi_1 Y_{t-1} + \phi_2 Y_{t-2} + \cdots + \phi_p Y_{t-p} + \theta_1\varepsilon_{t-1} + \theta_2\varepsilon_{t-2} + \cdots + \theta_q\varepsilon_{t-q} + \varepsilon_t \quad (7)$$

where: Y_t – the value of the time series at time t; $\hat{Y}_t$ – predicted value; c – constant (average level of the series after differentiation); ϕ_i – coefficients of the autoregressive (AR) part of the order p; θ_j – moving average (MA) coefficients of the order q; ε_t – white noise (forecast error); d – the order of differentiation, which ensures the stationarity of the series.

After differentiation by an order of d, the formula takes the form (8):

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$$(1 - \phi_1 L - \phi_2 L^2 - \cdots - \phi_p L^p)(1 - L)^d Y_t = c + (1 + \theta_1 L + \theta_2 L^2 + \cdots + \theta_q L^q)\varepsilon_t \quad (8)$$

where L – the lag operator, $LY_t = Y_{t-1}$.

Tools

To carry out calculations and simulations, Excel software (StatPlus add-in) and the Python programming language were used in the work.

RESULTS

The first stage of the research was the analysis of statistical and forecast indicators of the tokenized asset market. This makes it possible to explore the investors' current interest in the new trend, as well as predict future changes in the structure and dynamics of the market. Figure 2 shows which countries are most interested in tokenized RWAs by traffic in 2024.

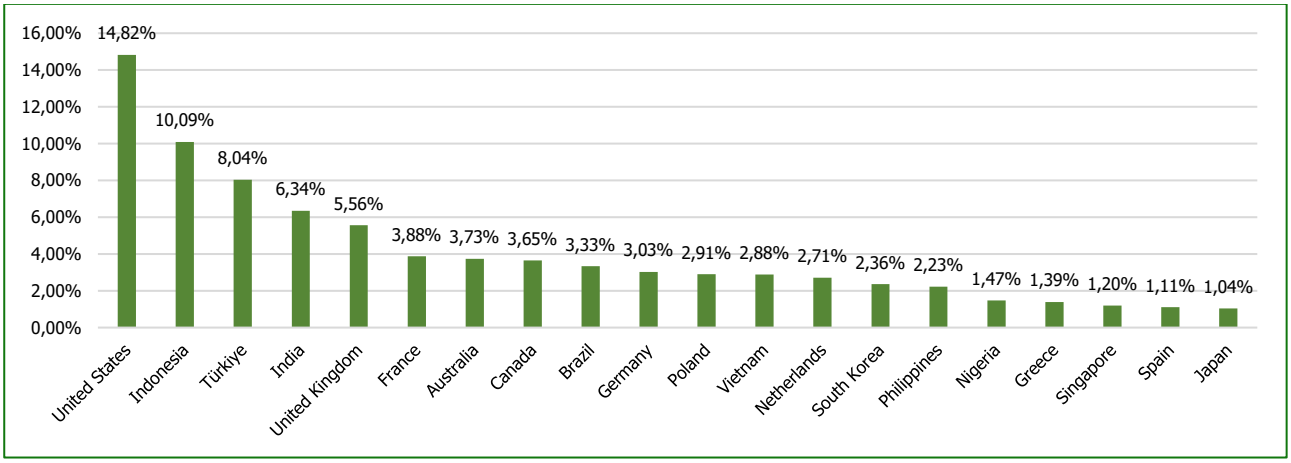

Figure 2. Countries most interested in tokenized RWAs by traffic (for January 1 – September 16, 2024). *(Source: CoinGecko, 2024)*

High interest in tokenized RWAs in terms of traffic is shown by both leading economies (the USA, Canada, EU countries) and countries with the active development of digital finance and crypto ecosystems. The growing inclusion of countries such as India, Indonesia, Australia, Vietnam, Singapore, Nigeria, etc., indicates the global nature of the tokenized asset market. The popularity of tokenized RWAs in different economies may indicate their significant potential to increase investment activity in countries with different income levels and technological readiness. Figure 3 shows the overall projected dynamics of RWA until 2030.

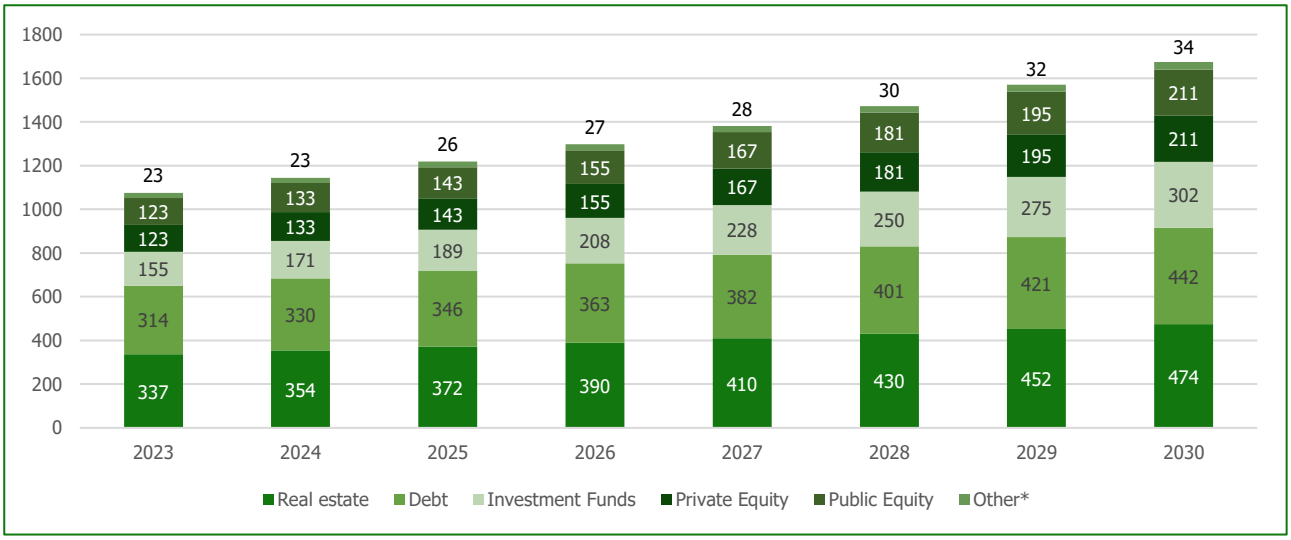

Figure 3. RWA Market Size Forecast. *(Source: Roland Berger, 2023)*

Figure 3 shows the gradual growth of the RWA market size until 2030. A significant increase in investment funds is predicted (almost twice), as well as an increase in public equity and private equity (about 1.7 times). Figure 4 shows the projected size of the tokenized asset market until 2030.

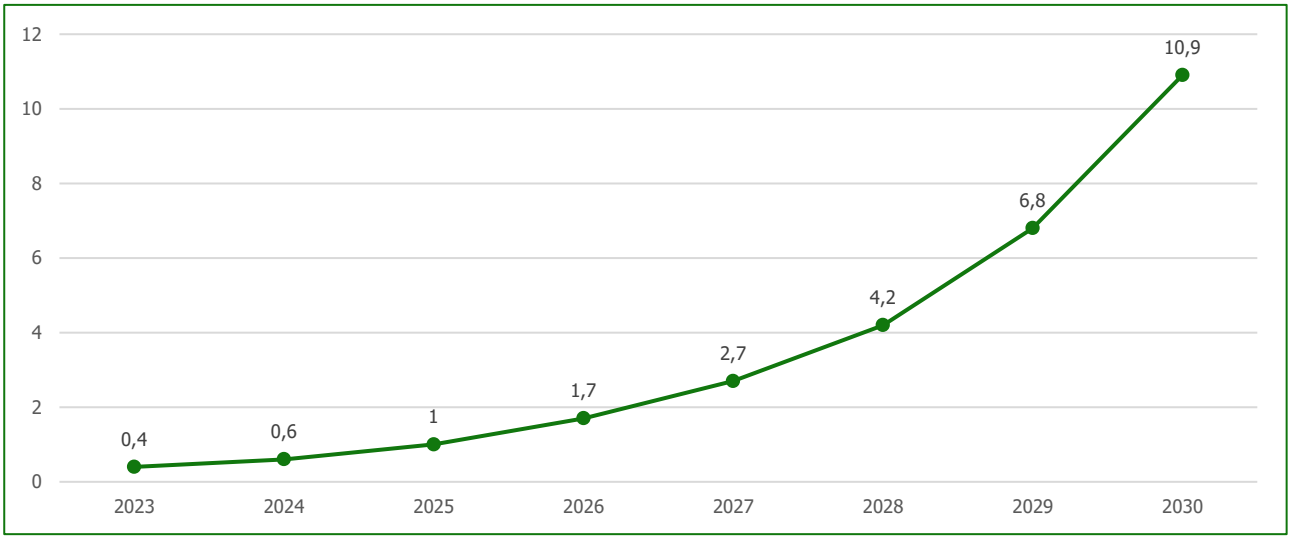

Figure 4. Tokenized asset market size (USD trillion). *(Source: Roland Berger, 2023)*

Figure 4 shows that the tokenized asset market is projected to grow by about 27 times by 2030 (compared to 2023). This gives grounds to assume that the impact of tokenized assets will grow over time, strengthening their role as a transformation driver of global capital markets. Figure 5 reveals the projected structure of the tokenized asset market in 2030.

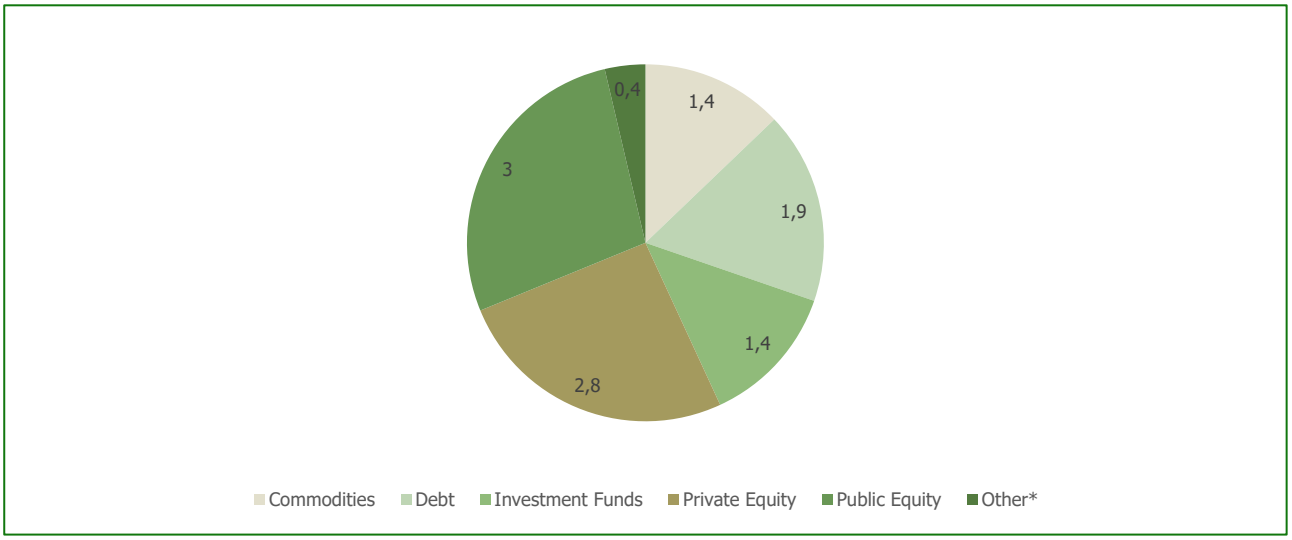

Figure 5. Projected Tokenized Asset Market Structure in 2030 (USD trillion). *(Source: Roland Berger, 2023)*

Figure 5 shows that public capital will have the largest share in the tokenized assets structure in 2030. Private equity and debt instruments also have high shares. On these grounds, we can note the growing interest in riskier or less liquid tokenized assets.

The next stage of the study was testing the relationship between individual indicators of real and tokenized assets using the example of gold and PAXG as a tokenized form of ownership of physical gold. The verification will assess how much tokenized assets reproduce or predict the behaviour of real assets. A correlation analysis was applied between the gold price and the price indicators of the PAXG token, the market capitalization of the PAXG token, and the trading volume of the PAXG token. A correlation analysis was applied between the observed indicators to assess the strength and the relationship between them. Table 2 presents the results of the correlation analysis.

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Table 2. The result of the correlation analysis of the studied indicators. *(Source: calculated by the authors based on CoinMarketCap, 2025; DataHub, 2025; Investing.com, 2025)*

	close	volume	Market Cap	Gold price
close	1			
volume	0.67431	1		
Market Cap	0.659666	0.701404	1	
Gold price	0.994306	0.681918	0.673186	1

The correlation analysis found a very high positive correlation (0.9943) between the price of the PAXG token and the gold price. This is the expected result, because the token's value is directly related to the price of the physical gold it represents. Accordingly, changes in the token price reflect fluctuations in the gold price, repeating its dynamics. The token's trading volume is also positively correlated with the gold price (0.6819), indicating an upward trend in trading activity as the price rises. The change in capitalization also reflects the growth in the gold price and market activity, positively correlating with these indicators (0.6732 and 0.7014, respectively).

Therefore, the token price is closely related to the price of physical gold, and the token's trading volume and market cap also react to the market fluctuations of gold. In other words, tokens accurately reflect the price dynamics of gold, but they differ from a traditional asset in terms of volatility and market risk because of their specifics. The next step of the research was to calculate the volatility of gold and PAXG based on the returns on these assets (Table 3).

Table 3. Gold and PAXG volatility. *(Source: calculated by the authors based on CoinMarketCap, 2025; DataHub, 2025; Investing.com, 2025)*

	Volatility
Gold_return	0.030814
Token_return	0.041019

A tokenized asset has higher volatility than physical gold. Therefore, the token is more volatile and riskier compared to traditional gold in the short term. Accordingly, the token's price reacts more quickly to market fluctuations and can be more unpredictable for investors. The next step of the research is the Granger causality test to determine whether one phenomenon really causes another. Table 4 presents the results of the Granger test —the verification of the impact of the gold price on the PAXG capitalization.

Table 4. Granger test results (impact of gold price on PAXG capitalization). *(Source: calculated by the authors based on CoinMarketCap, 2025; DataHub, 2025; Investing.com, 2025)*

Lag	F-test	p-value	Conclusion
1	8.3928	0.0051	there is a causal relationship
2	3.4439	0.0382	there is a causal relationship
3	2.2689	0.0898	on the verge of significance
4	1.6234	0.1811	no causal relationship
5	1.6693	0.1581	no causal relationship

A test at five lags determined how long the effect lasts. Table 4 demonstrates that the relationship is statistically significant at lags 1 and 2, and also, potentially, at 3. Therefore, the dynamics of gold prices causally affect the dynamics of PAXG's capitalization in the short term. Table 5 examines the feedback – whether PAXG capitalization affects the price of physical gold.

Table 5. Granger test results (impact of PAXG capitalization on the gold price). *(Source: calculated by the authors based on CoinMarketCap, 2025; DataHub, 2025; Investing.com, 2025)*

Lag	F-test	p-value	Conclusion
1	0.7896	0.3775	no causal relationship
2	0.1913	0.8264	no causal relationship
3	0.4599	0.7113	no causal relationship
4	0.9034	0.4683	no causal relationship
5	0.7693	0.5761	no causal relationship

Table 5 shows that the token's capitalization does not have a statistically significant impact on the gold price. So, it can be summarized that the tokenized asset market remains reactive. At the same time, it can be assumed that they will gradually begin to have a greater impact on the underlying markets with the development of the tokenized asset market, the growth of their liquidity, trading volumes, and capitalization. The next stage of the study involved conducting a regression analysis, which determined the extent to which the gold price could explain the token's market capitalization (Table 6).

Table 6. Results of regression analysis of the impact of the gold price on PAXG market cap. *(Source: calculated by the authors based on CoinMarketCap, 2025; DataHub, 2025; Investing.com, 2025)*

	Coefficients	Std Err	LCL	UCL	t Stat	p-value	H0 (5%)
Intercept	-348,092,117.3933	99,194,196.1049	-546,031,053.8989	-150,153,180.8878	-3.5092	0.0008	Rejected
Gold price	356,780.8504	47,526.3131	261,943.5691	451,618.1316	7.5070	1.7198E-10	Rejected

The resulting model is as follows: *Market Cap = - 348,092,117.3933 + 356,780.8504* Gold price.* Turning to regression statistics, it can be noted that the gold price can explain about 44.51% of the variation in the capitalization of PAXG. The impact of the gold price is statistically significant (p-value < 0.05). The market capitalization of the PAX Gold token increases by an average of USD 356,781 with the increase in the price of physical gold by USD 1, all other things being equal. Intercept, which may indicate the existence of a significant influence of other factors not included in the model. These factors may be the volume of tokens in circulation, demand in the crypto market, the regulatory environment, investor confidence, etc. Therefore, although the gold price is a statistically significant factor influencing the token's market capitalization, there are other factors that determine it. A scatter chart of the market capitalization of the PAXG token depending on the gold price is illustrated below (Figure 6).

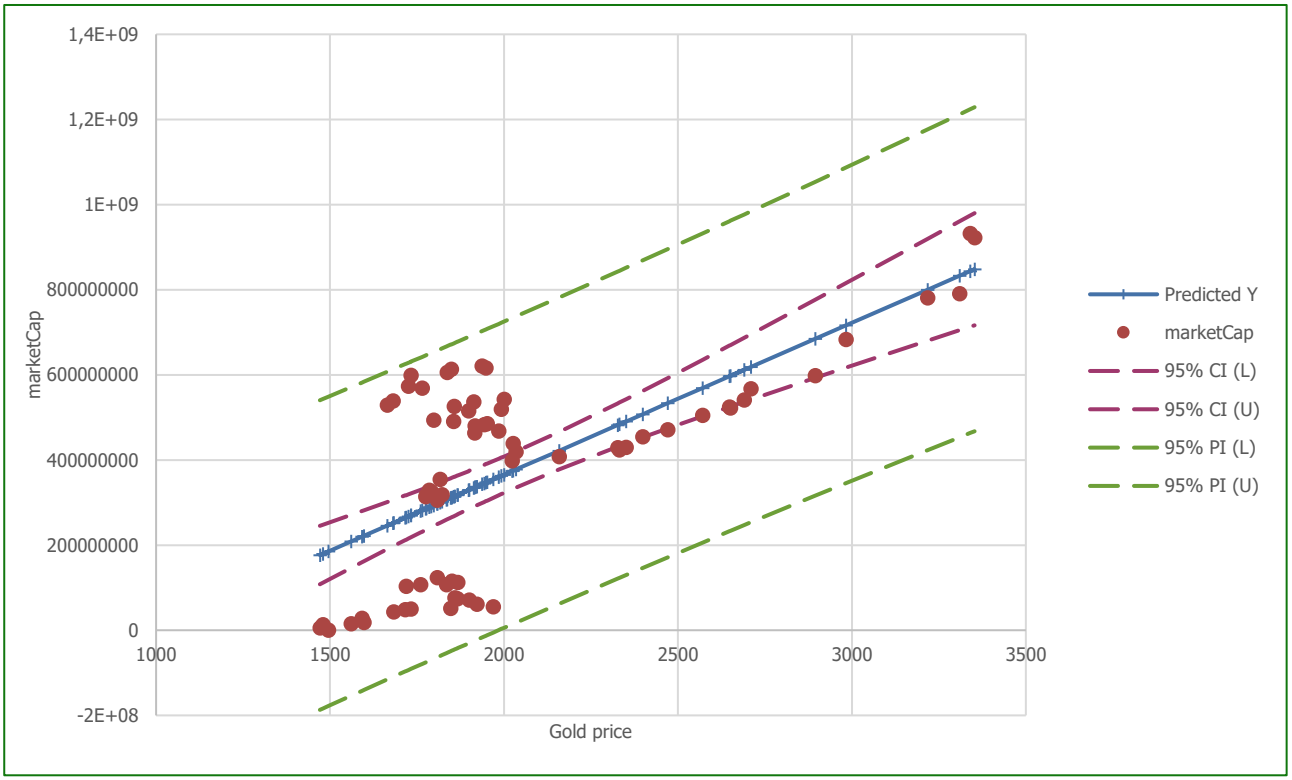

Figure 6. Scatter chart of the market cap of the PAXG token based on the gold price. *(Source: calculated by the authors based on CoinMarketCap, 2025; DataHub, 2025; Investing.com, 2025)*

The above Figure 6 demonstrates a clear positive relationship between the analysed indicators. The position of the points on the chart, namely, their placement above or below the provided ones, indicates the presence of other influential factors. Most of the points are within the confidence interval, which confirms the statistical significance of the model. The forecast interval shows the range of possible future values of the token's capitalization for the gold price. As noted above, despite the reflective nature of the tokenized asset market, it can be assumed that there will be a potential impact on the RWA market if it continues to grow. Forecast data that enable comparing the growth rate of the gold price and the PAXG capitalization are provided below.

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Figure 7. Forecast trends of gold price growth and PAXG capitalization. *(Source: calculated by the authors based on CoinMarketCap, 2025; Data-Hub, 2025; Investing.com, 2025)*

Forecast trends show growth, with the token's capitalization outpacing the gold price. Theoretically, they could begin to influence the price of physical gold if the token market continues to grow, especially if investors actively buy the token instead of physical gold. So, it can be assumed that the impact of real-sector asset tokenization as a transformation driver of global capital markets will grow over time, indicating the need for close monitoring.

DISCUSSION

The conducted analysis showed that the tokenized asset market can significantly affect the RWA market. At the same time, the example of tokenized gold showed that the tokenized asset capitalization remains reactive and does not determine the price of a real asset. Along with this, the token is characterized by higher volatility and high sensitivity to market changes.

The author's conclusions regarding the potential enhancement of the impact of tokenized assets on global capital markets are supported by many studies. As in our study, Carapella et al. (2023) and Peng (2025) confirmed the relationships between the digital asset ecosystem and the traditional financial system. Riabokin & Kotukh (2024; 2025) showed how tokenization can contribute to a more efficient use of public resources and the modernization of the country's financial infrastructure as a whole.

Along with theoretical confirmations, the author's results are supported by the conclusions of other authors drawn on the basis of empirical analysis. Baltais et al. (2024) emphasized that RWA tokenization offers a dramatic change in the current market structure. The researchers found that financial asset classes with less efficient markets will benefit the most from RWA tokenization. Tanveer et al. (2025) empirically confirmed the impact of tokenization on improving transaction efficiency and creating new value propositions.

In the context of the authors' findings, it is appropriate to refer to BlackRock's experience, one of the world's largest investment management companies. BlackRock is currently expanding beyond traditional public markets (stocks and bonds) to private assets such as infrastructure and private lending. At the same time, the company is actively exploring the potential of asset tokenization as a tool to increase the liquidity, efficiency, and availability of investment products. In particular, BlackRock is considering the possibility of creating tokenized funds in cooperation with leading technology companies. Such funds provide instant settlement and reduce transaction costs by combining the advantages of traditional and digital financial markets. This demonstrates BlackRock's strategy to diversify investment opportunities and increase the transparency and accessibility of private markets. This approach is consistent with the author's conclusion about the value of tokenized assets as an additional and diversifying investment class (Fink, 2025).

The analysis conducted in our study mainly focused on assessing the relationship between investing in tokenized and traditional gold. Instead, Mottaghi & Steininger (2024) focused on the relationship between real estate tokens and tradi-

tional real estate investment instruments. The researchers found significant differences in the dynamic intensity of cointegration between the analysed assets, which is not so intensively manifested in the example of gold. This is confirmed by Tiwari et al. (2025), who found a time-variable relationship between tokenized real-sector assets and commodities.

Therefore, our findings complement and expand on other researchers' groundwork, providing a deeper understanding of trends and the relationship between traditional assets and their tokenized analogues. The practical value of the study is the assessed relationship between the price trends of traditional gold and the PAXG capitalization, which gives grounds to determine how much tokenized gold reflects the behaviour of the physical gold market. The practical use of these results is that they can serve as a tool for investment analysis and decision-making for investors.

Limitations

The forecast estimates in the paper are based on current trends and models, so real changes may differ due to unpredictable economic, regulatory, or technological factors. Another limitation is that the regression analysis was aimed at assessing the impact of the gold price on the market capitalization of PAXG only. Therefore, this analysis did not take into account other factors that may also explain the variation of the dependent indicator.

Recommendations

The research findings give grounds to provide the following *recommendations for investors and other stakeholders*:

1. Investments in tokenized assets, in particular, tokenized gold, may be a promising investment direction in view of the projected growth of the tokenized RWA market, but the increased volatility of tokens is worth noting.
2. Tokens can act as an additional asset class to diversify an investment portfolio, but cannot replace traditional assets.
3. Tracking long-term forecasts can allow for more efficient planning of token investments, taking into account the potential growth of the market.

Recommendations for public governance:

1. The study found that asset tokenization can affect global financial markets. Therefore, it is necessary to closely monitor the dynamics of the RWA market and tokenized assets to assess potential risks and opportunities.
2. Plan and develop the existing regulatory framework for tokenized assets, ensuring transparent rules and accountability.
3. Plan risk management for tokenized assets by analysing various market development scenarios.

CONCLUSIONS

The study revealed the growing role of RWA tokenization as a driver of the transformation of global capital markets. At the same time, the analysis carried out in the paper did not confirm the advanced hypothesis about a significant impact of PAXG capitalization on the gold price. However, the forecast trends of these indicators show that the situation may change significantly in the future.

The analysis revealed that both leading economies and countries with active development of digital finance show high interest in tokenization, which indicates the global nature of the market. The predictive analysis showed a gradual growth of the RWA market until 2030, and the tokenized asset market grew by almost 27 times compared to 2023, indicating an increase in their influence on global capital markets.

The study showed a positive dependence of the token's market capitalization on the gold price. At the same time, the token's volatility is higher than that of physical gold, making it more volatile in the short term. The Granger test results confirmed the causal effect of the gold price on PAXG market cap in the short term, while the reverse effect of the token's capitalization on the gold price was not found. Regression analysis revealed that the gold price can explain about 44.5% of the variation in PAXG market capitalization, while there are other factors determining its value.

Predictive trends demonstrate that the token's capitalization is outpacing the growth in the gold price. Despite the reflective nature of the tokenized asset market, it can be assumed that they may begin to influence the price of physical gold if the token market continues to grow. This indicates the need to closely monitor the development of tokenized assets as a potential transformation driver of global capital markets. Further research should expand on the findings by analysing the impact of other classes of tokenized assets on the global capital market.

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ADDITIONAL INFORMATION

AUTHOR CONTRIBUTIONS

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The Authors declare that there is no conflict of interest.

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ТОКЕНІЗАЦІЯ АКТИВІВ РЕАЛЬНОГО СЕКТОРУ ЯК ДРАЙВЕР ТРАНСФОРМАЦІЇ ГЛОБАЛЬНИХ РИНКІВ КАПІТАЛУ

Токенізація активів реального сектору стає дедалі більш популярною серед інвесторів, що посилює вплив цієї тенденції на глобальні ринки капіталу. Метою роботи був аналіз поточного стану ринку токенізованих активів та дослідження гіпотетичного впливу цього ринку на глобальні ринки капіталу. В роботі було використано методи статистичного аналізу, кореляційного аналізу, регресійного аналізу, метод ARIMA, тестування за допомогою теста Грейнджера. В результаті дослідження було відзначено прогнозне зростання ринку токенізованих активів у 27 разів у 2030 році порівняно з 2023 роком, що свідчить про посилення їх впливу на глобальні ринки капіталу. Аналіз засвідчив позитивну залежність ринкової капіталізації токена PAXG від ціни золота. Також було виявлено, що волатильність токена вища, ніж фізичного золота, що робить його більш нестабільним у короткостроковій перспективі. За тестом Грейнджера було підтверджено причинно-наслідковий вплив ціни золота на ринкову капіталізацію PAXG у короткостроковій перспективі, тоді як зворотний вплив капіталізації токена на ціну золота не виявлено. Регресійний аналіз продемонстрував, що ціна золота може пояснити близько 44,5% варіації ринкової капіталізації PAXG, однак існують і інші значущі фактори впливу. Прогнозні тенденції показали, що капіталізація токена випереджає зростання ціни золота, тож можна припустити, що подальше зростання ринку токенів може чинити вплив на ціну фізичного золота. Подальші дослідження можуть стосуватися оцінки впливу інших класів токенізованих активів на глобальні ринки капіталу.

Ключові слова: цифрові технології, токенізація активів реального сектору, капіталізація токенів, ціна золота, PAXG, волатильність, інвестиції

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