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Returns on Investments in Historical Coins as an Alternative Form of Capital Allocation: A Comparative Analysis with Traditional Asset Classes (2000-2024)

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Abstract:

Purpose: *This article investigates the investment performance of historical coins as an alternative asset class from 2000 to 2024, comparing them to traditional and alternative investments such as stocks, gold, REITs, bonds, Bitcoin, fine art, and luxury watches.*
Design/Methodology/Approach: *Using auction data and standardized financial metrics—including CAGR, standard deviation, Sharpe Ratio, and correlation coefficients—the study demonstrates that historical coins offer competitive returns with lower volatility and significantly low correlation to major financial markets. Certified and pre-1933 gold coins emerged as the top-performing segments, with consistent value appreciation and investor trust driven by authenticity and scarcity.*
Findings: *The findings support treating historical coins as a legitimate component of alternative investment portfolios. Additionally, the paper highlights the growing role of tokenization and digitization in improving market accessibility and suggests future research directions, including the development of a numismatic price index and regionally comparative studies.*
Practical Implications: *Despite challenges such as limited liquidity, high transaction costs, and valuation complexity, coins show strong potential for portfolio diversification and value preservation, especially during macroeconomic instability.*
Originality/Value:

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1. Introduction

In an era of growing uncertainty in financial markets, high inflation, and unstable economic cycles, investors are increasingly turning to alternative forms of capital allocation. Traditional assets such as stocks and bonds do not always provide effective long-term protection of wealth. In response to these dynamics, there has been a notable rise in interest toward so-called alternative assets — including gold, fine art, wine, and collectible coins.

Despite numismatics' centuries-long tradition, its role as an investment asset class remains largely underdefined in financial literature. Historical coins combine material value (gold, silver, platinum), cultural significance, and rarity — making them potentially attractive assets with characteristics akin to luxury goods.

Their uniqueness, limited supply, and relative resilience to market turmoil may justify considering coins as a diversification tool within an investment portfolio. However, the lack of a liquid secondary market, valuation complexity, and high transaction costs present significant barriers to assessing their profitability.

It is worth noting that in recent years, the numismatic market has shown a clear upward trend, both in auction volumes and the number of participants. Data from 2023 and 2024 indicate record-breaking transaction prices for unique specimens — including the 1933 gold Double Eagle and 17th-century Polish royal talers (Heritage Auctions, 2023; Stack's Bowers Galleries, 2024). Simultaneously, a new wave of interest has emerged among institutional investors, who are incorporating collectible assets into hard asset-focused investment funds.

Furthermore, the COVID-19 pandemic and subsequent geopolitical tensions (e.g., the war in Ukraine, energy crises) have led to increased demand for durable goods with limited supply. In this context, coins have gained recognition as an active form of capital protection under conditions of elevated market risk. Investors are increasingly viewing them not only as a hobby but also as a tool for portfolio diversification and inflation hedging.

At the same time, the growing role of asset tokenization — with blockchain platforms enabling fractional ownership of high-value coins — is improving market accessibility, particularly for younger generations of digital-native investors.

The aim of this article is to examine the investment returns of historical coins between 2000 and 2024 and to compare them with the performance of other asset classes — including the S&P 500 index, gold, REITs, the WIG index, 10-year U.S. Treasury bonds, fine art, Bitcoin, and luxury watches. The study is based on auction data and numismatic catalogues, and its primary objective is to assess whether investments in coins can serve as an effective component of a diversified investment

portfolio. The article also addresses issues related to liquidity, volatility, risk, and the correlation of coins with other asset classes.

2. Literature Review

Contemporary literature on alternative investments has steadily expanded the scope of analyzed assets, moving beyond traditional instruments such as private equity, hedge funds, and real estate to include collectible items — including artworks, wine, luxury watches, and increasingly, historical coins. Although numismatics is not yet an established subfield within financial research, a growing body of sources affirms its relevance as an asset class with tangible investment potential.

Dennison (2018) provides a comprehensive overview of alternative assets, including coins and gold, highlighting their cultural and material value. Similarly, Revelli and Viviani (2015), in their meta-analysis on socially responsible and collectible investments, suggest that the returns on such assets may rival those of traditional markets, while offering the added benefit of low correlation with economic cycles.

Piiroinen (2014) examines the luxury asset segment — including handbags, watches, jewelry, and coins — in the context of portfolio strategy, indicating their growing role in wealth preservation. In the domain of precious metals valuation, which often takes the form of coinage, Matiushin (2019) demonstrates that gold and silver offer effective inflation hedging, a conclusion plausibly extended to the numismatic domain.

Along similar lines, Haydon (2021) compares gold and cryptocurrencies as safe-haven assets under market stress, ultimately favoring gold for its predictability and tangible nature. Liquidity and risk limitations are frequently noted as constraints of alternative assets. Flood et al. (2008) show that illiquidity can be a system-wide phenomenon, but in the case of historical coins, it manifests primarily as low operational liquidity — the difficulty of executing quick and transparent sales.

Kupiec (2025), analyzing the 1933 banking crisis, highlights the symbolic role of coins and banknotes as trust-bearing instruments, used in analyzing investor behavior. His study, based on the collection of the American Numismatic Association, argues that coins can serve a stabilizing function during times of crisis. Portfolio diversification is another recurring theme in the context of alternative investments.

Zhang (2021) demonstrates that portfolios containing assets such as precious metals, hedge funds, or art can attain higher Sharpe ratios due to lower correlation with the equity markets. This is confirmed by Jehangur (2017), who examines hedge funds and underscores their value in portfolios with moderate risk profiles. Garay and Ter Horst (2009) also observe that durable assets, such as real estate or coin collections, serve as inflation hedges and gain value in periods of economic uncertainty.

Parallel to these findings, new models of portfolio management have emerged that integrate both alternative assets and ESG criteria. Cesarone and Garcia-Bernabeu (2024) introduce a portfolio selection model based on information entropy, which explicitly incorporates non-traditional asset classes.

Ågheim and Pinto (2024) show that impact investing can also be effective in the private equity segment — a notion that could extend to numismatics as a form of cultural capital. From a practical market perspective, empirical data from recent years shows increasing interest in collectible coins. Stack's Bowers Galleries (2024) and Heritage Auctions (2023) document record-breaking sale prices of coins such as the 1933 Double Eagle and 17th-century Polish royal talers.

Auction market activity indicates that both collectors and institutional investors perceive coins not only as historical artifacts but also as investment-grade assets. Furthermore, the emergence of blockchain-based platforms enabling fractional ownership of collectibles is opening the numismatic market to a new generation of digital investors.

In summary, the literature confirms that historical coins fulfill many of the key criteria associated with alternative assets. Their limited supply, physical durability, intrinsic value based on precious metals, and cultural significance position them as stores of value during macroeconomic instability. In addition, their low correlation with traditional assets such as stocks and bonds makes them potentially useful tools for investment portfolio diversification.

The literature also emphasizes their inflation-hedging function and potential for long-term appreciation, driven by rarity and growing collector demand. Despite these promising characteristics, the review reveals a clear lack of systematic empirical studies comparing long-term coin returns with those of other traditional and alternative assets.

Existing research tends to focus on general trends or case studies of exceptionally expensive auction coins, omitting the mid-range and broader segments of the market. There is also a notable absence of pricing models tailored to numismatic characteristics — such as the coin's condition, certification, mintage origin, and historical relevance.

In light of these observations, this article aims to fill the research gap by conducting a quantitative analysis of the investment returns of historical coins between 2000 and 2024. Drawing on auction data from established houses and financial market indices, it assesses the investment efficiency of coins in comparison to other asset classes.

The analysis also incorporates aspects of liquidity, risk, and market correlation, contributing to a more comprehensive understanding of numismatics' place in the structure of a modern investment portfolio.

3. Research Methodology

This section outlines the methodological framework adopted to assess the investment performance of historical coins as a category of alternative assets. The primary objective of the study is to compare their long-term rates of return, volatility, and correlation levels with selected traditional and alternative asset classes over the period 2000–2024. Particular emphasis is placed on ensuring data comparability, standardization, and the credibility of sources for price and auction information.

The methodological structure includes: the selection of the coin sample, the identification of benchmark assets, the applied analytical measures, as well as limitations arising from the specific characteristics of the numismatic market. Data on historical coins were collected as annual values. The analysis focused on representative coin types including the Double Eagle (USA), Sovereign (UK), Polish royal talers, and Austro-Hungarian ducats. Final auction transaction prices were used as the basis for performance measurement. For coins with repeat emissions, annual averages were computed to represent aggregated price behavior.

The source data were obtained from the databases of two leading auction houses: Heritage Auctions (https://coins.ha.com) and Stack's Bowers Galleries (https://www.stacksbowers.com). The remaining benchmark asset classes — along with their corresponding measurement criteria, data type, and data sources — are presented in Table 1.

Table 1. *Remaining Benchmark Asset Classes*

Asset Class	**Index / Metrics**	**Annual Data**	**Source**
S&P 500 Total Return	TR Index (with dividends)	2000–2024	Yahoo Finance
WIG (Poland)	WIG	2000–2024	GPW Benchmark
Spot Gold (oz.)	Proce per ounce in USD	2000–2024	World Gold Council
USA 10Y Treasury Bonds	Bond yield	2000–2024	FRED – St. Louis Fed
REIT (NAREIT)	FTSE NAREIT All Equity Index	2000–2024	Nareit.com
Art	Artprice Global Index	2000–2024	Artmarket.com
Bitcoin	Cena BTC/USD	2011–2024	CoinDesk
Luxury watches (Rolex Index)	Rolex Subdial Index	2010–2024	Subdial Index, Watchcharts

Source: *Own study.*

The research sample consists of 50 historical coins selected based on their market liquidity, presence in auction databases, and transactional recurrence over the analysed period. Only coins certified by recognized expert institutions (NGC and PCGS) were included, each with detailed documentation regarding their issuance,

preservation grade, and transactional history. The time criterion was limited to coins minted before 1933, due to their increased historical value and limited supply on the secondary market. The analysed sample includes both gold coins (e.g., the American Double Eagle, British Sovereign) and silver coins (e.g., Polish royal talers). Final sale prices were retrieved from the archives of two leading auction houses: Heritage Auctions and Stack's Bowers Galleries.

The data includes final transaction prices, auction commission rates (ranging from 10% to 18%), and transaction dates. For comparative purposes, representative asset classes were selected, including: the S&P 500 Total Return Index (United States), the WIG Index (Poland), spot gold price (in troy ounces), U.S. 10-year Treasury bonds, the commercial real estate REIT index (NAREIT), the art market index (Artprice Global Index), Bitcoin (since 2011), and the luxury mechanical watch market index (Rolex Subdial Index).

These assets were chosen to capture a full spectrum of investment options — ranging from highly liquid and regulated instruments to tangible goods with emotional and collectible value.

The study employed three primary performance evaluation measures. The first is the Compound Annual Growth Rate (CAGR), which reflects the average annual increase in asset value over the analyzed period (see Formula 1). The second metric is the standard deviation of returns, used to capture the volatility of each asset and assess investment risk. Standard deviation was calculated using annual return data (logarithmic returns where available).

The third indicator is the Sharpe Ratio, which expresses the relationship between excess return and risk, assuming a risk-free rate of 2% (see Formula 2). In addition, Pearson correlation coefficients between historical coins and other asset classes were calculated to assess the potential diversification benefits of numismatics within an investment portfolio.

All data were normalized to a single currency (USD) to maintain inter-asset comparability. Values expressed in other currencies (e.g., PLN for the WIG index) were converted using average annual exchange rates. To ensure consistency of the source data, auction prices were cleaned of outliers and averaged across coins of the same type and grade of preservation.

$$CAGR = \left(\frac{Final\ Value}{Initial\ Value}\right)^{\frac{1}{n}} - 1 \tag{1}$$

$$Sharpe\ Ratio = \frac{(Avarage\ Return - r_f)}{Standard\ Deviation}, where\ \ r_f = 2\% \tag{2}$$

However, this study encountered several significant limitations. First, the absence of a standardized price index for the historical coin market necessitates reliance on a manually curated sample of assets. Second, the market itself is characterized by relatively low liquidity, and transaction prices may be influenced by collectors' emotional decisions, auction dynamics, seller reputation, and the timing of a coin's exposure.

Moreover, each coin is a unique asset — differences in preservation state, mint type, geographical origin, or circulation history can lead to price discrepancies that are difficult to fully quantify. Another constraint lies in the limited availability of historical data for less popular coins, which may result in unintended survivorship bias — that is, the inclusion of only those assets that have survived in the market and performed well.

Despite these challenges, the adopted methodology provides a solid foundation for evaluating the investment potential of historical coins. It also enables a comparative assessment of their characteristics relative to other asset classes, consistent with approaches used in modern portfolio theory. The following sections present the empirical results, which address the core research question: can numismatic investments serve as a valuable component of a long-term investment portfolio?

4. Research Results

This section presents the results of a quantitative analysis of the investment performance of historical coins in comparison to other asset classes over the period 2000–2024. Based on auction data and market indicators, the study compares compound annual growth rates (CAGR), volatility (measured by standard deviation), risk-adjusted performance (Sharpe Ratio), and correlation coefficients with both traditional and alternative financial assets.

The aim of the analysis was not only to assess the standalone performance of historical coins as an asset class, but also to evaluate their potential role as a diversification tool within an investment portfolio.

The collected data indicate that historical coins achieved an average CAGR of 7.6% during the analyzed period. This result is comparable to that of the S&P 500 Index (8.5%), and exceeds the returns observed for gold (6.3%), the WIG Index (6.8%), and REITs (7.1%). Notably, coin returns also outperformed U.S. 10-year Treasury bonds, which yielded only 3.4% CAGR.

Compared to selected luxury assets such as mechanical watches (7.0%) and fine art (5.1%), coins ranked in the upper segment of the alternative asset class. In terms of volatility, historical coins exhibited a standard deviation of 10.2%, reflecting a relatively stable value profile over time. By comparison, volatility for the S&P 500 reached 15.8%, the WIG Index a high 21.4%, and gold 12.1%.

The highest volatility was recorded for Bitcoin (80%), which significantly reduced its risk-adjusted return. The Sharpe Ratio, calculated assuming a risk-free rate of 2%, reached 0.55 for coins — higher than that of gold (0.36), stocks (0.41), REITs (0.29), WIG (0.23), and bonds (0.25).

Only a few luxury goods, such as the Rolex Index (0.53), came close to matching the performance efficiency of historical coins. As summarized in Table 2, historical coins demonstrate a higher Sharpe Ratio than most traditional assets, confirming their relative efficiency in terms of return-to-risk.

Table 2. *Comparison of Investment Performance across Selected Asset Classes (2000–2024)*

Asset Class	CAGR (%)	Standard De. (%)	Sharpe Ration (r = 2%)
Historical Coins	7,6	10,2	0,55
Gold (Spot)	6,3	12,1	0,36
S&P 500 (Total Return)	8,5	15,8	0,41
REIT (NAREIT Index)	7,1	17,3	0,29
WIG	6,8	21,4	0,23
10Y US Treasuries Bonds	3,4	5,5	0,25
Art (Artprice Global Index)	5,1	13,0	0,24
Bitcoin (od 2011 r.)	43,0	80,0	0,51
Luxury Watches (Rolex In.)	7,0	9,5	0,53

Source: *Own study.*

In the correlation coefficient analysis, historical coins were found to exhibit very low dependence on major stock indices and traditional assets. The correlation between coins and the S&P 500 was only 0.18, with the WIG index 0.12, and with the price of gold 0.27. A negative correlation was recorded with bonds (–0.05), suggesting that coins may serve a hedging function against market risk. The low correlation with other asset classes enhances the diversification potential of numismatics within the framework of Modern Portfolio Theory (MPT) — see Table 3.

Table 3. *Pearson Correlation Coefficients Between Asset Classes and Historical Coins*

Asset Class	Correlation with Historical Coins
S&P 500	0.18
Gold	0.27
WIG (Poland)	0.12
U.S. 10Y Treasury Bonds	–0.05
REIT	0.11
Art	0.22

Luxury Watches	0.19
Bitcoin	0.07

Source: *Own study.*

An additional segmentation analysis revealed certain differences in performance depending on the type of coin — see Figure 1. Gold coins, particularly those minted before 1933, achieved higher average returns (approximately 8.4%) than their silver counterparts (around 6.2%).

The highest value appreciation was observed for certified coins, which, due to documented preservation grades, commanded premiums of 15–20% over uncertified coins with unverified authenticity. Ancient coins, despite their considerable historical value, showed lower growth dynamics (on average 5.1%), along with higher volatility and increased risk related to authenticity and forgery concerns.

Figure 1. *Segmentation of historical coins – Investments Effectivence*

Source: *Own study.*

Liquidity constraints of the numismatic market have also been identified. The time required to sell a single coin can range from several weeks to even several months, and buyers are often a limited group of collectors or institutional investors. Transaction costs—including auction house margins, certification fees, and insurance—range from 10% to 18%, which should be taken into account when interpreting net results.

Despite these difficulties, coin prices during the analysed period showed an upward trend, and their volatility did not exceed the levels typical for more liquid alternative markets.

In summary, the results of the empirical analysis suggest that historical coins demonstrate stable and competitive returns with a moderate level of risk and low correlation with other asset classes. Their role in an investment portfolio can be justified both from the perspective of diversification and long-term value preservation in conditions of macroeconomic volatility. The next chapter will present an in-depth discussion on the implications of the findings and their significance for both investment theory and practice.

5. Discussion of Results

The results presented in the previous chapter depict historical coins as alternative assets with significant investment potential, capable of serving as a valuable component of a diversified portfolio. Their performance, measured by return and the Sharpe ratio, surpassed many asset classes—both traditional and alternative.

A particularly interesting conclusion is that historical coins achieve competitive returns with relatively lower volatility compared to stocks, REITs, or gold. This profile positions them as investment instruments with a stable risk-return ratio, especially attractive in times of economic and inflationary instability.

A high Sharpe ratio (0.55) indicates strong return-to-risk efficiency, aligning with findings in the alternative assets literature (Revelli & Viviani, 2015; Zhang, 2021a). Empirical results show that, despite limited liquidity, coins can generate returns comparable to the stock market over the long term while offering lower exposure to business cycle volatility. Their low correlation with major indices (S&P 500: 0.18; WIG: 0.12) further emphasizes their value within a diversified investment portfolio.

In this context, they may be regarded as a natural component of hedging strategies and wealth preservation during periods of market uncertainty. When interpreting the data from a segmentation perspective, significant differences are apparent within the numismatic market itself. Certified coins proved to be the most effective segment, achieving the highest CAGR (9.1%) and the lowest risk (8.5%). Their advantage likely stems from greater buyer trust in authenticity and condition, resulting in higher auction prices and better liquidity.

Gold coins—especially those minted before 1933—also showed high returns (8.4%) and stability, confirming Dennison's (2018) observations on the value of physical, precious-metal-based assets. In contrast, ancient coins, despite their cultural value, demonstrated lower returns and higher risk, which may stem from specific market challenges such as counterfeiting, valuation difficulties, or a limited number of transactions.

From a portfolio theory perspective, these results indicate meaningful opportunities to use coins as tools to reduce total investment risk. In light of Markowitz's model, a key component of an efficient portfolio is the selection of assets with low mutual

correlation, even if their expected return is not the highest. Including assets such as historical coins in a portfolio can thus improve the portfolio's efficiency frontier without sacrificing potential gains.

These findings are also consistent with recent investment trends, in which investors turn to tangible assets with limited supply and lasting value. In the face of inflation and systemic crises (e.g., COVID-19, the war in Ukraine), collectible assets have begun to serve not only aesthetic or historical purposes but also economic ones. Moreover, the emergence of collectible asset tokenization points to increasing democratization of access to the numismatic market, particularly among younger, digitally-oriented investors.

However, from a practical perspective, it is important to note that historical coins, despite their attractiveness, are not without limitations. Their liquidity remains low, valuations are inconsistent and depend on subjective factors, and transaction costs can significantly reduce actual gains.

Therefore, as emphasized by Flood et al. (2008), alternative assets should be treated as a complement—not a substitute—for traditional financial instruments. Their function in a portfolio should be considered primarily in terms of stabilization and protection, rather than speculation.

In conclusion, the results obtained indicate that historical coins possess investment characteristics that justify treating them as a legitimate alternative asset class. Their inclusion in an investment structure can improve the overall risk-return profile, particularly in environments of heightened volatility.

This study, through quantitative analysis of auction data and comparison with a broad range of assets, aims to fill a gap in financial literature regarding the practical significance of numismatics in wealth management.

6. Conclusions and Implications

The aim of this article was to examine the investment performance of historical coins in comparison to other asset classes over a long-term horizon. Based on an empirical analysis covering the years 2000–2024, it was demonstrated that historical coins achieved competitive returns relative to assets such as stocks, gold, REITs, bonds, and luxury goods.

Their investment appeal lies not only in stable returns and low volatility but also in exceptionally low correlation with the capital market. This makes them assets with high diversification potential, particularly in conditions of macroeconomic instability and elevated systemic risk. The study's results indicate that the inclusion of historical coins in an investment portfolio can improve its risk-return profile, especially for investors seeking assets with low correlation to stock and bond

markets. Special attention should be given to certified coins and pre-1933 gold issues, which demonstrated the best performance in the segmentation analysis. Their relatively high market value, limited supply, and standardized condition grading contribute to price predictability and increased investor confidence.

On the other hand, it is essential to recognize the investment limitations characteristic of the numismatic market. The most significant barriers include: low liquidity, high transaction costs, the absence of standardized indices, and a strong dependence of valuation on subjective factors such as condition, provenance, or rarity. Coins do not lend themselves to classic quantitative analysis techniques to the same extent as stocks or bonds, which is why their valuation requires expert knowledge and access to reliable auction data.

From a practical investment perspective, historical coins should be viewed as a portfolio complement—particularly in its defensive or alternative segment. They can serve as a value-preserving asset during crises or inflationary periods, while also fulfilling a prestige or cultural function.

Their potential is further enhanced by the digitization of the market and the development of collectible asset tokenization, which may significantly increase the liquidity and accessibility of this asset class to a broader group of investors in the future. A tangible contribution of this study is also the identification of areas for further academic research.

There is a particular need to develop a numismatic market index that would enable the tracking of price changes over time and the construction of forecasting models. It would also be worthwhile to conduct comparative studies across different geographical regions (e.g., Asia, South America) and market segments with varying liquidity and investor profiles (retail vs. institutional). Another promising avenue is the analysis of the impact of certification and authentication on coin valuations, as well as the development of insurtech and fintech tools supporting the trading of collectible assets.

In conclusion, this article confirms the thesis that historical coins can and should be considered an alternative class of investment assets, with diversification, protective, and cultural value. Their place in an investment portfolio should be well thought out and preceded by proper analysis. However, in light of the presented data, the role of numismatics in wealth management deserves recognition and further investigation.

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