


The Investment Performance of Rare U.S. Coins

By Raymond E. Lombra, Ph.D.

An independent study of the investment performance of rare U.S. coins for the period January 1979 to December 2016.

Analysis by R L Associates, Penn State University, February 2017.



Raymond E. Lombra, Ph.D., Professor of Economics and Senior Advisor to the Dean at Penn State University, has authored numerous economic and financial books, publications and periodicals. Professor Lombra has been a consultant to the House Banking Committee of the U.S. Congress, the Federal Reserve System, the Congressional Budget Office, the Joint Economic Committee, Morgan-Stanley, the International Monetary Fund and the U.S. Treasury. His many honors and awards include election to Who's Who in Economics.

Overview

This study updates and extends several of my earlier studies, the first of which was prepared for the Joint Committee on Taxation of the U.S. House and Senate. It focuses on the longer run performance of gold and rare coins, both relative to each other and to the more typical array of assets comprising most portfolios—stocks, bonds, and money market instruments, specifically, Treasury bills.



Risk and Return on Broad Asset Classes

In collecting, arraying and analyzing the data, I assume that the typical investor has at least a one-year holding period or investment horizon; this assumption is reasonable in a study that takes as given that frequent trading by typical investors, particularly within their retirement accounts, will yield inferior returns, especially when transaction costs are factored in.

Table 1 shows the average annual rate of return on stocks, bonds, gold and rare coins over the last 38 years (1979-2016 inclusive). While any particular sample period is somewhat arbitrary, I wanted a period long enough to cover several economic cycles. As can be seen, high-quality coins and stocks had the highest returns over the past three and three-quarters decades.

Table 1. Evaluating the Performance of Individual Asset Classes Over Time

Average Annual % Returns 1979-2016	
Stocks	12.6%
Treasury Bonds	8.0%
Gold Bullion	5.2%
Coins (all types – MS65)	11.0%
Coins (all types – MS63-65)	9.3%



Volatility

Next, I extend the analysis of “performance” to include the historical fluctuation or volatility of the annual returns, typically measured by the standard deviation of the returns. I also provide a simple count of the number of years each asset type registered positive and negative returns; this calculation provides a sense of the challenges facing those who might think that timing the ups and downs in the returns on various assets is a viable investment strategy.

The data in Table 2 show that the returns on stocks, gold and coins were the most volatile, while, not surprisingly, those on Treasury bills were the least volatile.

Table 2. Investment Returns, Risk and Timing

A Long Term View: 38 Years, 1979-2016

	Average Annual % Return	Years Pos	Years Neg	Best Year % Return	Worst Year % Return	Standard Deviation
Gold	5.2	22	16	100.2	-28.9	15.0
Stocks	12.6	32	6	36.8	-37.3	12.3
3 Month T-bill	4.7	38	0	14.3	0.02	2.9
Treasury Bond	8.0	31	7	34.8	-9.3	8.2
Coins (all types MS65)	11.0	23	15	198.8	-40.6	20.0
Coins (gold type- MS63-65)	9.3	25	13	198.8	-42.7	19.1

Source: R L Associates, Penn State University

Market Timing

In five out of six years over the last 38, the returns on stocks were positive; however, the -37.3% for 2008 (Russell 3000) was the worst over the period. In comparison, annual gold returns were positive in twelve of the past fifteen years and rare coin returns were positive in **thirteen** of the last fifteen years. These data are again suggestive of both the difficulties of implementing a successful market timing strategy and of the possible benefits of investing in a diversified portfolio over the longer run.

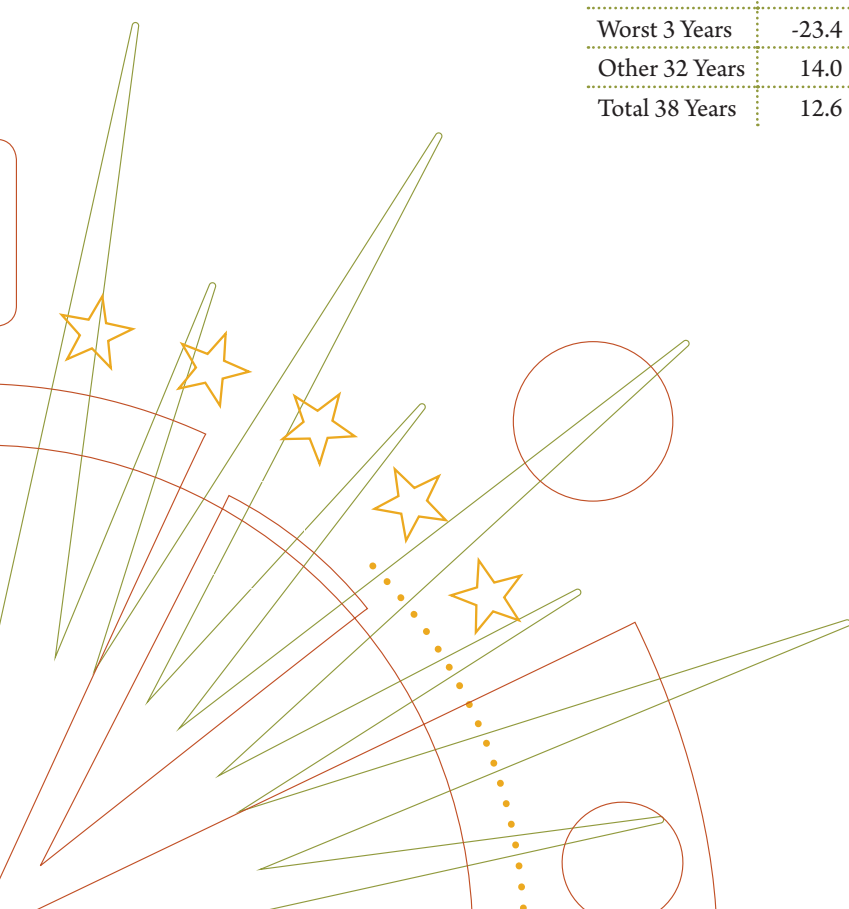
The data in Table 3 provide additional perspective on market timing. The best years for coins and gold were indeed very good, especially for coins, with average annual returns in excess of 100% for the best three years. In contrast, the worst three years for stocks, gold and coins were significantly negative, while the remaining 32 year returns were, on average, still attractive for stocks and coins, even if corrected for 3.5% inflation, on average, in those years.

Table 3. Market Timing

1979–2016, Average Rate of Return

	Stocks	Treasury Bonds	Coins MS65	Coins MS63-65	Gold Bullion
Best 3 Years	34.1	29.5	107.4	101.3	53.0
Worst 3 Years	-23.4	-8.5	-27.9	-34.7	-27.1
Other 32 Years	14.0	7.6	5.6	5.3	3.8
Total 38 Years	12.6	8.0	11.0	9.3	5.2

Source: R L Associates, Penn State University



Too Risky?

Taken together, these data suggest that yearly returns on individual asset classes vary quite a lot over time. Is this sufficient to conclude that asset classes with large standard deviations and a non-trivial number of low or negative return years are “too risky” to be included in a typical investor’s portfolio? The simple answer, of course, is “no.”

The data presented so far show the performance of each asset in isolation from other assets and from the economic environment, particularly the rate of inflation.



The Economic Environment

Table 4 shows the correlation of asset returns with inflation over the disinflation period 1979-2016. The table clearly shows that gold is a better hedge against inflation than stocks and much better than Treasury bonds. Rare coins are an even better hedge against inflation than gold and thus, much better than stocks and Treasury bonds. Thus, the contention that gold is a better hedge against inflation than, say, rare coins, is not supported by the data.

Looking ahead, with the monetary and fiscal stimulus still flowing into the world economy, at some point talk of deflation and an anemic global recovery will give way to the reality of inflation. As Chairman Yellen's comments about the US being close to full employment attest, a pickup in US wages and prices may be near at hand. Given the considerable uncertainty about timing and duration, the longer term relationships embedded in Table 4 are relevant for those with longer term investment horizons.

Table 4. Correlation with Inflation 1979-2016

A Long Term View

Stocks	.16
Treasury Bonds	-.10
Gold	.28
Coins	.59

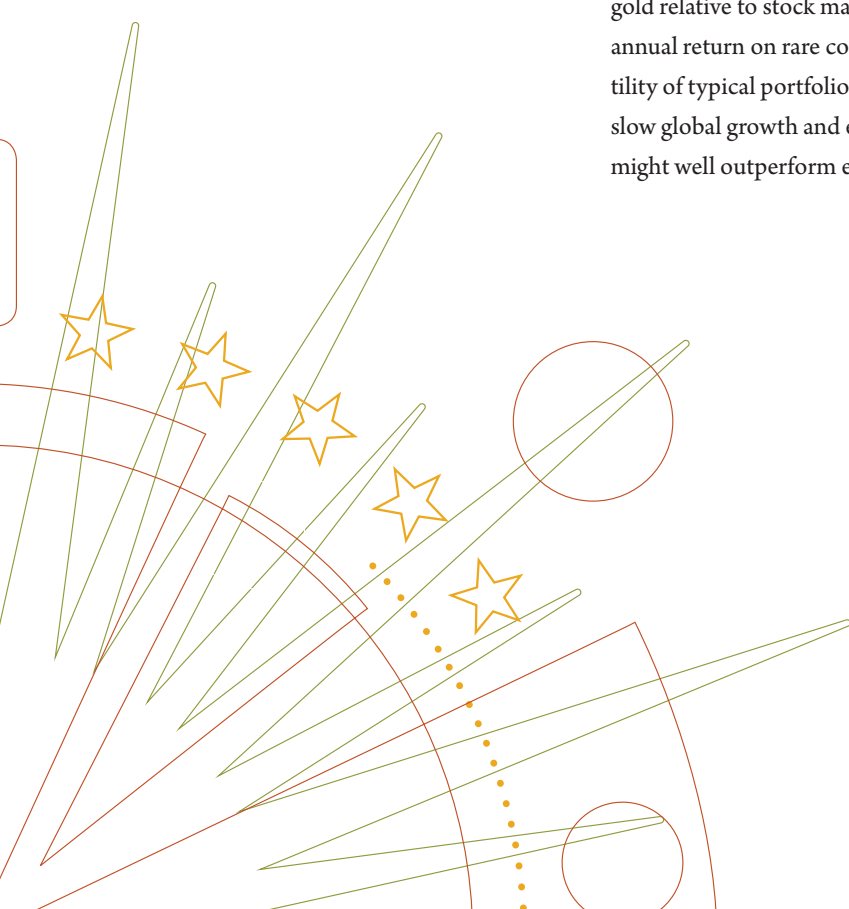
NOTE: +1.00 is a "perfect" correlation, meaning moves exactly in tandem.
 -1.00 is a "perfect negative" correlation, meaning moves exactly opposite.
 To hedge against inflation, highest positive correlation best.

Source: R L Associates, Penn State University



Rare Coins and Gold: Hedging against stock market fluctuations?

- Risk averse investors typically want to arrange their portfolios in a manner that reduces volatility without giving up overall return. The volatility of the return on an asset relative to the volatility of the stock market is captured by the beta coefficient; if, for example, when the stock market is down 5%, the return on a particular asset is typically down 10%, the correlation is 1.0 but the beta is 2.0. In this case, the asset fluctuates more than the stock market and thus can increase the volatility of the return on a portfolio containing both stocks and such an asset. Conversely, the lower the beta, say 0.5 (return down only 2.5%), the more effective the particular asset will be in hedging, that is, improving a portfolio's overall performance--reducing volatility, ideally without sacrificing return.
- Coins and gold both have low betas. Accordingly, over the turbulent 1987-2016 period, a stern test, covering the 1987 and 1989 "crashes," the dot-com collapse, 9/11 and the subsequent recession, and the 2008 financial crisis, the volatility of the returns on rare coins and gold relative to stock market returns, was relatively low. At the same time, the **5.0%** average annual return on rare coins, and **4.6%** on gold means that both would have reduced the volatility of typical portfolios without sacrificing overall return. With the array of concerns about slow global growth and even deflationary forces, the low betas also imply coins and gold might well outperform equities.



Summary of Findings

1. Over the last 38 years, high quality coins and stocks had the highest average annual returns.
2. At the same time, the annual returns on stocks, gold, and coins were the most volatile.
3. Taken together, these findings suggest that holders of stocks and coins were “rewarded” for bearing the extra risk thought to be associated with larger fluctuations in annual returns.
4. The correlation of the return on coins with inflation over the last 38 years is well above that of other assets considered, and twice that of gold; thus, the contention that gold is a better hedge against inflation than, say, rare coins, is not supported by the data. More generally, hypothetical portfolios containing stocks, Treasury bills and bonds, and a modest proportion of rare coins, generally perform somewhat better than those without coins or those with a modest proportion of gold, over the past three decades and for various sub periods. These findings also imply that when inflation turns up, the response of coin prices could well be quicker and larger than the returns on most other assets.
5. The results continue to suggest that over the longer run including rare U.S. coins within an existing portfolio could improve investment performance. This is especially noteworthy given the sharp cumulative drop in gold prices in 2013-16 (approximately 32 %) and the 2 % gain for rare coins.

