Correlation Between Gold and Inflation

Introduction:

This report delves into the correlation between gold prices and inflation from 1990 to 2023, examining two distinct periods: years with inflation above 3% and years with inflation below 3%. The correlation coefficients are calculated using a threshold of 3%, shedding light on the dynamics between these two variables.

Methodology:

The correlation coefficient is employed to quantify the strength and direction of the linear relationship between gold prices and inflation. The dataset covers the years 1990 to 2023, and a threshold of 3% is used to classify years into high and low inflation categories.

Correlation During High Inflation Years:

1. 1990 (0.271685375): Weak positive correlation.

2. 1991 (0.739886016): Strong positive correlation.

3. 1992 (0.476599581): Moderate positive correlation.

4. 2008 (-0.743553562): Strong negative correlation (financial crisis).

5. 2011 (0.745269226): Strong positive correlation.

6. 2012 (-0.092920045): Weak negative correlation.

7. 2022 (-0.754193696): Strong negative correlation.

8. 2023 (0.208452086): Weak positive correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.117783923.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is 0.114233937.

Conclusion:

The analysis reveals that during years with inflation exceeding 3%, the correlation between gold prices and inflation varies, ranging from weak to strong. Notably, during financial crises, a strong negative correlation suggests that gold may act as a safe-haven asset. However, during other periods, the relationship is less consistent. Additionally, during years with inflation below 3%, the overall correlation is negative, indicating a potential inverse relationship between gold prices and inflation during low inflationary periods. Understanding these correlations provides valuable insights for investors and policymakers navigating economic uncertainties.

Correlation Between Silver Prices and Inflation:

Introduction:

This report investigates the correlation between silver prices and inflation, focusing on two distinct periods: years with inflation above 3% and years with inflation below 3%. The correlation coefficients are derived from a dataset spanning from 1990 to 2023, providing insights into the relationship between silver prices and inflation during different economic conditions.

Methodology:

Correlation coefficients are utilized to quantify the strength and direction of the linear relationship between silver prices and inflation. The analysis categorizes years into high and low inflation based on a 3% threshold.

Correlation During High Inflation Years:

1. 1990 (-0.760034571): Strong negative correlation.

2. 1991 (-0.451327327): Moderate negative correlation.

3. 1992 (0.941863331): Strong positive correlation.

4. 2008 (-0.761868128): Strong negative correlation (financial crisis).

5. 2011 (-0.029098165): Weak negative correlation.

6. 2012 (0.127105543): Weak positive correlation.

7. 2022 (-0.684806301): Strong negative correlation.

8. 2023 (0.147964971): Weak positive correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.072628583.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is 0.049916081.

Conclusion:

The analysis indicates a dynamic relationship between silver prices and inflation, with correlations varying in strength and direction during different inflationary environments. During high inflation years, silver prices show both strong positive and negative correlations, suggesting sensitivity to economic conditions. Conversely, during low inflation years, the overall correlation is negative, indicating a potential inverse relationship between silver prices and inflation during these periods. Understanding these correlations provides valuable insights for investors seeking to navigate the complex interplay between precious metals and inflation in the financial markets.

Correlation Between Platinum Prices and Inflation:

Introduction:

This report aims to uncover the correlation between platinum prices and inflation, specifically exploring two periods: years with inflation above 3% and years with inflation below 3%. The correlation coefficients provide insights into the relationship between platinum prices and inflation, offering valuable information for investors navigating economic fluctuations.

Methodology:

Correlation coefficients are employed to measure the strength and direction of the linear relationship between platinum prices and inflation. The analysis categorizes years into high and low inflation based on a 3% threshold.

Correlation During High Inflation Years:

1. 1990 (-0.69559955): Strong negative correlation.

2. 1991 (-0.748293588): Strong negative correlation.

3. 1992 (-0.382809036): Moderate negative correlation.

4. 2008 (-0.73657092): Strong negative correlation (financial crisis).

5. 2011 (-0.776579788): Strong negative correlation.

6. 2012 (0.129366128): Weak positive correlation.

7. 2022 (-0.659675351): Strong negative correlation.

8. 2023 (0.599620547): Moderate positive correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.051872682.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is -0.101042668.

Conclusion:

The analysis reveals a nuanced relationship between platinum prices and inflation, with varying correlations during different economic conditions. During high inflation years, platinum prices demonstrate strong negative correlations, emphasizing the potential impact of economic uncertainties on platinum values. Conversely, during low inflation years, the overall correlation is negative but less pronounced, suggesting a more intricate relationship. Investors and analysts can leverage these findings to make informed decisions regarding platinum investments and consider the metal's behavior in diverse economic environments.

Correlation Between Palladium Prices and Inflation:

Introduction:

This report delves into the correlation between palladium prices and inflation, scrutinizing two distinctive periods: years with inflation above 3% and years with inflation below 3%. By examining correlation coefficients, we aim to unveil the relationship between palladium prices and inflation, offering valuable insights for investors navigating economic dynamics.

Methodology:

Correlation coefficients are utilized to quantify the strength and direction of the linear relationship between palladium prices and inflation. The analysis categorizes years into high and low inflation based on a 3% threshold.

Correlation During High Inflation Years:

1. 1990 (-0.895529684): Strong negative correlation.

2. 1991 (0.823205506): Strong positive correlation.

3. 1992 (-0.769400564): Strong negative correlation.

4. 2008 (-0.796262022): Strong negative correlation (financial crisis).

5. 2011 (-0.911318487): Strong negative correlation.

6. 2012 (0.503118217): Moderate positive correlation.

7. 2022 (-0.665528755): Strong negative correlation.

8. 2023 (0.809942298): Strong positive correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.226529203.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is 0.042344394.

Conclusion:

The analysis reveals a dynamic relationship between palladium prices and inflation, showcasing varying correlations during different economic conditions. Palladium prices demonstrate both strong positive and negative correlations during high inflation years, emphasizing the metal's sensitivity to economic uncertainties. Conversely, during low inflation years, the overall correlation is negative but less pronounced, suggesting a more nuanced relationship. Investors can leverage these findings to make informed decisions regarding palladium investments and consider the metal's behavior in diverse economic environments.

Correlation Between Gold Prices and Interest Rates:

Introduction:

This report delves into the correlation between gold prices and interest rates, with a specific emphasis on periods when inflation exceeds 3%. The examination of correlation coefficients sheds light on the intricate relationship between gold prices and interest rates, offering insights for investors navigating economic conditions.

Methodology:

Correlation coefficients are employed to assess the strength and direction of the linear relationship between gold prices and interest rates. The analysis categorizes years into two groups based on inflation levels, focusing on years with inflation above 3%.

Correlation During High Inflation Years:

1. 1990 (2.54203E-15): Near-zero correlation.

2. 1991 (0.220813987): Weak positive correlation.

3. 1992 (0.567293825): Moderate positive correlation.

4. 2008 (0.660490292): Strong positive correlation.

5. 2011 (Standard Deviation = 0): Unique condition, correlation possibly influenced by data characteristics.

6. 2012 (Standard Deviation = 0): Correlation undefined due to constant interest rates.

7. 2022 (-0.755971236): Strong negative correlation.

8. 2023 (-0.01240786): Weak negative correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.908257363.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is -0.73689441.

Conclusion:

The analysis reveals a complex relationship between gold prices and interest rates, particularly during periods of elevated inflation. Gold prices display varying correlations, from weak to strong, during years with inflation above 3%. Notably, the correlation becomes strongly negative in 2022, indicating a potential inverse relationship. During years with inflation below 3%, the overall correlation is strongly negative, highlighting gold's sensitivity to interest rate movements during these periods. Investors can leverage these findings to make informed decisions regarding gold investments, considering the influence of interest rates in diverse economic environments.

Correlation Between Silver Prices and Interest Rates:

Introduction:

This report explores the correlation between silver prices and interest rates, focusing particularly on periods when inflation exceeds 3%. The examination of correlation coefficients offers insights into the nuanced relationship between silver prices and interest rates, providing valuable information for investors navigating economic conditions.

Methodology:

Correlation coefficients are utilized to measure the strength and direction of the linear relationship between silver prices and interest rates. The analysis categorizes years into two groups based on inflation levels, concentrating on years with inflation above 3%.

Correlation During High Inflation Years:

1. 1990 (-1.61329E-15): Near-zero correlation.

2. 1991 (-0.377372328): Weak negative correlation.

3. 1992 (0.845443262): Strong positive correlation.

4. 2008 (0.743511376): Strong positive correlation.

5. 2011 (Standard Deviation = 0): Correlation undefined due to constant interest rates.

6. 2012 (Standard Deviation = 0): Correlation undefined due to constant interest rates.

7. 2022 (-0.409851653): Moderate negative correlation.

8. 2023 (-0.128315108): Weak negative correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.859081746.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is -0.713483109.

Conclusion:

The analysis reveals a dynamic relationship between silver prices and interest rates, particularly during periods of elevated inflation. Silver prices demonstrate varying correlations, ranging from weak to strong, during years with inflation above 3%. Notably, the correlation becomes strongly negative during years with inflation below 3%, suggesting a potential inverse relationship. The undefined correlations in 2011 and 2012 are attributed to constant interest rates during those years. Investors can leverage these findings to make informed decisions regarding silver investments, considering the influence of interest rates in diverse economic environments.

Correlation Between Platinum Prices and Interest Rates:

Introduction:

This report investigates the correlation between platinum prices and interest rates, with a specific focus on periods when inflation exceeds 3%. The analysis of correlation coefficients aims to uncover the nuanced relationship between platinum prices and interest rates, providing valuable insights for investors navigating economic conditions.

Methodology:

Correlation coefficients are employed to quantify the strength and direction of the linear relationship between platinum prices and interest rates. The analysis categorizes years into two groups based on inflation levels, concentrating on years with inflation above 3%.

Correlation During High Inflation Years:

1. 1990 (2.2404E-16): Near-zero correlation.

2. 1991 (-0.454724976): Weak negative correlation.

3. 1992 (-0.075283734): Weak negative correlation.

4. 2008 (0.736984122): Strong positive correlation.

5. 2011 (Standard Deviation = 0): Correlation undefined due to constant interest rates.

6. 2012 (Standard Deviation = 0): Correlation undefined due to constant interest rates.

7. 2022 (-0.368436308): Moderate negative correlation.

8. 2023 (-0.671927854): Strong negative correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.706262121.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is -0.637884695

Conclusion:

The analysis reveals a complex relationship between platinum prices and interest rates, particularly during periods of elevated inflation. Platinum prices display varying correlations, ranging from weak to strong, during years with inflation above 3%. The correlations in 2011 and 2012 are undefined due to constant interest rates during those years. Notably, the overall correlation during years with inflation below 3% is strongly negative, suggesting a potential inverse relationship. Investors can leverage these findings to make informed decisions regarding platinum investments, considering the influence of interest rates in diverse economic environments.

Correlation Between Palladium Prices and Interest Rates:

Introduction:

This report investigates the correlation between palladium prices and interest rates, with a specific focus on periods when inflation exceeds 3%. Through the examination of correlation coefficients, we aim to uncover the intricate relationship between palladium prices and interest rates, offering valuable insights for investors navigating economic conditions.

Methodology:

Correlation coefficients are employed to measure the strength and direction of the linear relationship between palladium prices and interest rates. The analysis categorizes years into two groups based on inflation levels, concentrating on years with inflation above 3%.

Correlation During High Inflation Years:

1. 1990 (1.02042E-15): Near-zero correlation.

2. 1991 (0.695161912): Moderate positive correlation.

3. 1992 (-0.897514156): Strong negative correlation.

4. 2008 (0.719450483): Strong positive correlation.

5. 2011 (Standard Deviation = 0): Correlation undefined due to constant interest rates.

6. 2012 Standard Deviation = 0): Correlation undefined due to constant interest rates.

7. 2022 (-0.613814982): Moderate negative correlation.

8. 2023 (-0.942849439): Strong negative correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.627204697.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is -0.563372973.

Conclusion:

The analysis reveals a dynamic relationship between palladium prices and interest rates, particularly during periods of elevated inflation. Palladium prices demonstrate varying correlations, ranging from weak to strong, during years with inflation above 3%. The correlations in 2011 and 2012 are undefined due to constant interest rates during those years. Notably, the overall correlation during years with inflation below 3% is negative, suggesting a potential inverse relationship. Investors can leverage these findings to make informed decisions regarding palladium investments, considering the influence of interest rates in diverse economic environments.

Correlation Between Gold Prices and GDP Growth:

Introduction:

This report delves into the correlation between gold prices and GDP growth, with a specific focus on periods when inflation exceeds 3%. The examination of correlation coefficients aims to shed light on the intricate relationship between gold prices and economic growth, providing valuable insights for investors navigating diverse economic conditions.

Methodology:

Correlation coefficients are utilized to assess the strength and direction of the linear relationship between gold prices and GDP growth. The analysis categorizes years into two groups based on inflation levels, concentrating on years with inflation above 3%.

Correlation During High Inflation Years:

1. 1990 (-0.550655079): Moderate negative correlation.

2. 1991 (0.671322798): Strong positive correlation.

3. 1992 (-0.328680665): Weak negative correlation.

4. 2008 (0.811315496): Strong positive correlation.

5. 2011 (-0.829741628): Strong negative correlation.

6. 2012 (0.305665661): Weak positive correlation.

7. 2022 (0.724458275): Strong positive correlation.

8. 2023 (-0.165683007): Weak negative correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.200800112.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is -0.116085318.

Conclusion:

The analysis reveals a nuanced relationship between gold prices and GDP growth, particularly during periods of elevated inflation. Gold prices demonstrate varying correlations, ranging from weak to strong, during years with inflation above 3%. Notably, strong positive correlations are observed during economic downturns in 2008 and 2022, suggesting gold's role as a safe-haven asset. Conversely, the overall correlation during years with inflation below 3% is negative, indicating a more complex relationship. Investors can leverage these findings to make informed decisions regarding gold investments, considering the influence of GDP growth in diverse economic environments.

Correlation Between Silver Prices and GDP Growth:

Introduction:

This report delves into the correlation between silver prices and GDP growth, with a specific emphasis on periods when inflation exceeds 3%. The analysis of correlation coefficients aims to unravel the intricate relationship between silver prices and economic growth, providing valuable insights for investors navigating diverse economic conditions.

Methodology:

Correlation coefficients are employed to quantify the strength and direction of the linear relationship between silver prices and GDP growth. The analysis categorizes years into two groups based on inflation levels, focusing on years with inflation above 3%.

Correlation During High Inflation Years:

1. 1990 (0.788273629): Strong positive correlation.
2. 1991 (-0.518547511): Moderate negative correlation.
3. 1992 (-0.917811371): Strong negative correlation.

4. 2008 (0.880091803): Strong positive correlation.
5. 2011 (-0.444762089): Moderate negative correlation.
6. 2012 (0.076698138): Weak positive correlation.

7. 2022 (0.669790317): Moderate positive correlation.
8. 2023 (-0.050998053): Weak negative correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.11466.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is -0.0478826.

Conclusion:

The analysis reveals a dynamic relationship between silver prices and GDP growth, particularly during periods of elevated inflation. Silver prices demonstrate varying correlations, ranging from strong positive to strong negative, during years with inflation above 3%. The strong positive correlations in 1990 and 2008 suggest silver's role as a hedge against economic uncertainties. Conversely, the overall correlation during years with inflation below 3% is negative, indicating a more intricate relationship. Investors can leverage these findings to make informed decisions regarding silver investments, considering the influence of GDP growth in diverse economic environments.

Correlation Between Platinum Prices and GDP Growth:

Introduction:

This report investigates the correlation between platinum prices and GDP growth, with a specific focus on periods when inflation exceeds 3%. The analysis of correlation coefficients aims to unravel the intricate relationship between platinum prices and economic growth, providing valuable insights for investors navigating diverse economic conditions.

Methodology:

Correlation coefficients are employed to quantify the strength and direction of the linear relationship between platinum prices and GDP growth. The analysis categorizes years into two groups based on inflation levels, focusing on years with inflation above 3%.

Correlation During High Inflation Years:

1. 1990 (0.746615): Strong positive correlation.

2. 1991 (-0.56866): Moderate negative correlation.

3. 1992 (0.187869): Weak positive correlation.

4. 2008 (0.876224): Strong positive correlation.

5. 2011 (0.447872): Moderate positive correlation.

6. 2012 (-0.01523): Weak negative correlation.

7. 2022 (0.758919): Strong positive correlation.

8. 2023 (0.110163): Weak positive correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.08667.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is -0.0353572.

Conclusion:

The analysis reveals a dynamic relationship between platinum prices and GDP growth, particularly during periods of elevated inflation. Platinum prices demonstrate varying correlations, ranging from strong positive to weak negative, during years with inflation above 3%. The strong positive correlations in 1990 and 2008 suggest platinum's sensitivity to economic growth during inflationary periods. Conversely, the overall correlation during years with inflation below 3% is negative, indicating a more complex relationship. Investors can leverage these findings to make informed decisions regarding platinum investments, considering the influence of GDP growth in diverse economic environments.

Correlation Between Palladium Prices and GDP Growth:

Introduction:

This report delves into the correlation between palladium prices and GDP growth, with a specific emphasis on periods when inflation exceeds 3%. The analysis of correlation coefficients aims to unveil the intricate relationship between palladium prices and economic growth, providing valuable insights for investors navigating diverse economic conditions.

Methodology:

Correlation coefficients are employed to quantify the strength and direction of the linear relationship between palladium prices and GDP growth. The analysis categorizes years into two groups based on inflation levels, focusing on years with inflation above 3%.

Correlation During High Inflation Years:

1. 1990 (0.836053): Strong positive correlation.

2. 1991 (0.930034): Very strong positive correlation.

3. 1992 (0.875924): Strong positive correlation.

4. 2008 (0.8989): Very strong positive correlation.

5. 2011 (0.571978): Moderate positive correlation.

6. 2012 (-0.24715): Moderate negative correlation.

7. 2022 (0.630325): Moderate positive correlation.

8. 2023 (0.238384): Weak positive correlation.

Correlation During Low Inflation Years:

The overall correlation during these years, spanning from 1993 to 2007, 2009, 2010, and from 2013 to 2021, is -0.08667.

Overall Correlation Across the Entire Dataset (1990-2023):

The overall correlation for the entire dataset is 0.01468035.

Conclusion:

The analysis reveals a dynamic relationship between palladium prices and GDP growth, particularly during periods of elevated inflation. Palladium prices demonstrate varying correlations, ranging from very strong positive to moderate negative, during years with inflation above 3%. The strong positive correlations in 1990 and 2008 suggest palladium's sensitivity to economic growth during inflationary periods. Conversely, the overall correlation during years with inflation below 3% is weakly positive, indicating a more nuanced relationship. Investors can leverage these findings to make informed decisions regarding palladium investments, considering the influence of GDP growth in diverse economic environments.