

How the Economy Affects Major Asset Classes

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Asset performance patterns are not always easy to explain, even over longer time frames. For instance, stock and bond prices are positively correlated, but they are also negatively correlated at various times. Asset prices also move differently in periods of uncertainty than in quieter times.



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The importance of the economy's influence on asset prices is universally recognized, yet forecasts of asset returns from economic data are not reliable, largely because market prices can change much more quickly than economic statistics. Still, economic shifts are highly relevant in explaining, if not predicting, asset-price movements.

There are some strong basic connections between asset performance and two obvious and quantifiable measures of the economy's behavior: its growth rate (real Gross Domestic Product) and its inflation rate. In a previous publication, we classified assets by the direction of their relationships with various measures of growth and inflation.¹ Here we reduce the structure of the interrelationships to a simple scheme based directly on empirical evidence.²

Asset Returns, Inflation and Growth. Consider the implications of a change in the inflation rate for two pairs of asset classes that we previously identified as showing opposite responses to changes in inflation.³ Table I uses calendar-year average data to divide the history of the past 45 years into the 22 years in which the CPI inflation rate accelerated from the year before and the 23 years in which it decelerated. This history shows:

- On average, returns from stocks and investment-grade bonds decline when inflation accelerates and increase when inflation decelerates
- Prices of gold and commodities increase when inflation accelerates and decline when inflation decelerates.

Table II shows analogous calculations for the growth rate of real GDP over the same time frame. The data history is divided into the 22 years in which the growth rate accelerated from the year before and the 23 years in which it decelerated. This history shows:

- On average, returns from bonds and gold prices decline when growth accelerates and increase when growth decelerates.
- Returns from stocks and prices of commodities increase when growth accelerates and decline when growth decelerates.

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Table I
CPI Inflation and Asset Returns
Calendar-year Average Data from 1969

Years in which real CPI inflation:	Average year-to-year change in:			
	Return from stocks (% pts.)	Return from T-bonds (% pts.)	Price change in gold (% pts.)	Price change in commodities (% pts.)
Accelerated (22 years averaging 1.3% pts.)	-2.8	-3.0	+6.3	+8.5
Decelerated (23 years averaging -1.5% pts.)	+3.6	+3.3	-5.8	-9.3

Data: Calendar-year averages of the headline price index for all urban consumers (Bureau of Labor Statistics), together with averages of month-end return indices for the S&P 500 companies and long-term Treasury bonds (University of Chicago/Dimensional Fund Advisors) and month-end prices for spot gold (Metals Week) and non-precious commodities (Reuters Bridge Commodity Research Bureau). Crude oil, industrial metals, foodstuffs and textiles are given equal weight, and the index is rebalanced monthly.

Table II
Economic Growth and Asset Returns
Calendar-year Average Data from 1969

Years in which real GDP growth:	Average year-to-year change in:			
	Return from stocks (% pts.)	Return from T-bonds (% pts.)	Price change in gold (% pts.)	Price change in commodities (% pts.)
Accelerated (22 years averaging 1.9% pts.)	+4.3	-3.4	-5.5	+2.2
Decelerated (23 years averaging -1.7% pts.)	-3.2	+3.8	+5.5	-3.2

Data: Calendar-year real gross domestic product (Bureau of Economic Analysis), together with averages of month-end return indices for the S&P 500 companies and long Treasury bonds (University of Chicago/Dimensional Fund Advisors) and month-end prices for spot gold (Metals Week) and non-precious commodities (Reuters Bridge Commodity Research Bureau). Crude oil, industrial metals, foodstuffs and textiles are given equal weight, and the index is rebalanced monthly.

In combination, Tables I and II provide a simple picture of how these four different asset classes perform under different inflation and growth circumstances. Each asset class has a distinct inflation-growth “profile,” and all assets can be classified as belonging to one of these four primary asset categories or, at the very least, as hybrids of them.

At the same time, Tables I and II explain why the correlation between asset classes such as stocks and bonds can sometimes be positive and sometimes negative. When asset returns are measured over annual or multiyear time frames, correlations increase and patterns in correlations become clearer. However, these correlations are less clear when measuring monthly or quarterly asset returns. Factors other than the economy dominate correlations over shorter time frames.⁴

Thus, if inflation is stable while growth is changing, stock and bond returns tend to move in opposite directions (as, for example, during a recession and the subsequent rebound). But if growth is stable while inflation is changing, stock and bond returns move in the same direction. Parallel examples include the movement of gold with other commodities: a negative correlation when growth is extremely unstable (as occurred in 2008-09) but a positive correlation the rest of the time.

“Polar Opposite” Asset Classes. There are pairs of assets between which correlations are consistently inverse:

- If inflation and growth accelerate at the same time, commodities are boosted while bonds are held back on account of both. If inflation and growth decelerate at the same time, the reverse occurs.
- The correlation between gold-price movements and stock returns is also consistently inverse. These assets perform oppositely, whichever direction inflation is going and/or whichever direction growth is going.

Investment-grade bonds and commodities (along with other assets that belong in the same category as commodities) should be considered “polar opposite” asset classes. Domestic stocks and gold are too. One far-reaching result is that portfolio mixes of bonds and commodities and of stocks and gold may have very much lower performance volatility than their constituent assets.⁵

Distinct Economic Profiles for the Four Primary Asset Classes. The data can be presented in another helpful way by taking each asset class in turn and showing what its average

return has been under different combinations of inflation and growth.

- For example, Figure I shows increases and declines in the average return from stocks under three different circumstances: most unfavorable (inflation accelerating with growth decelerating), most favorable (inflation decelerating with growth accelerating) and intermediate (inflation and growth moving in the same direction).
- Figure II shows the corresponding data for movements in the price of gold using the same inflation-growth categories. As expected, the performance pattern for stocks is exactly opposite that of gold.

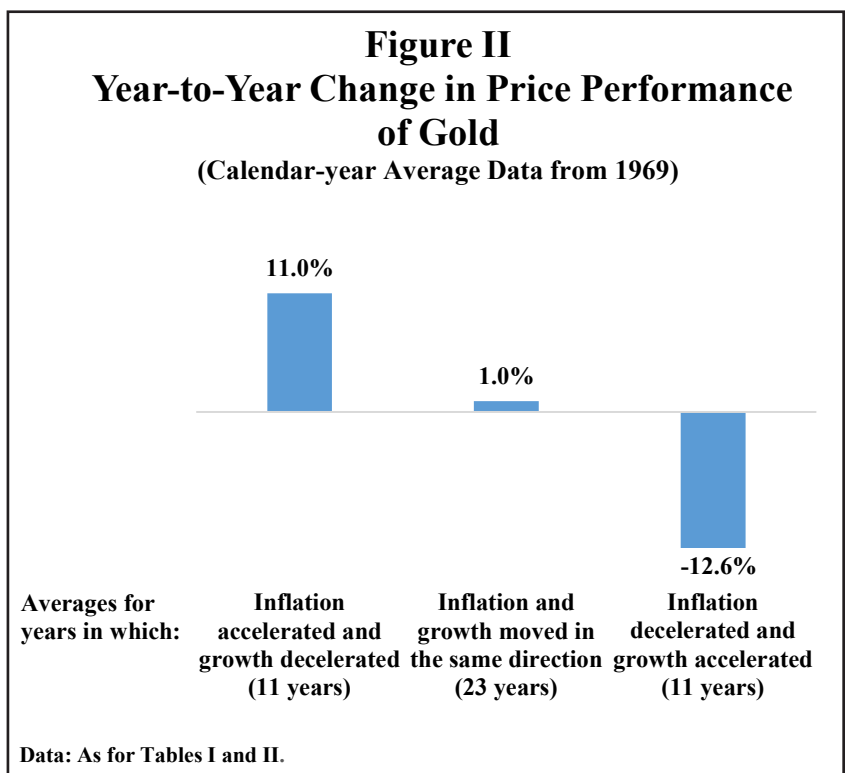
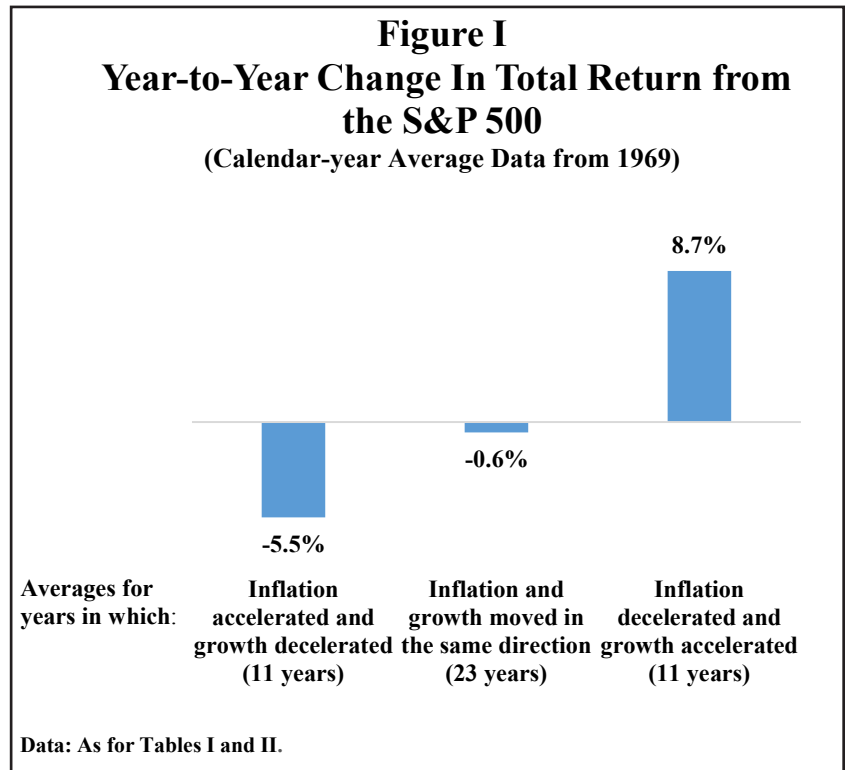
The permutations of the inflation and gold variables in Figures III and IV are different from Figures I and II. They show asset performance under three different circumstances: inflation and growth both accelerating, inflation and growth both decelerating, and intermediate cases where inflation and growth move in the same direction. Figure III shows increases and declines in the average return from bonds in each circumstance.

Figure IV shows corresponding data for commodities, an asset class that is a polar-opposite asset to bonds. As expected, the performance pattern for bonds is exactly opposite that of commodity markets.

Investment Conclusions. Investment returns are closely related to the economy, and it is possible to make these linkages clearly visible in the history despite the countless other factors that affect asset prices at the same time.

But it is a challenge to find the best way to portray the data so that the signals are separated from the noise. Some of the most vital relationships are invisible unless asset-price movements are expressed over intervals of one year or longer.

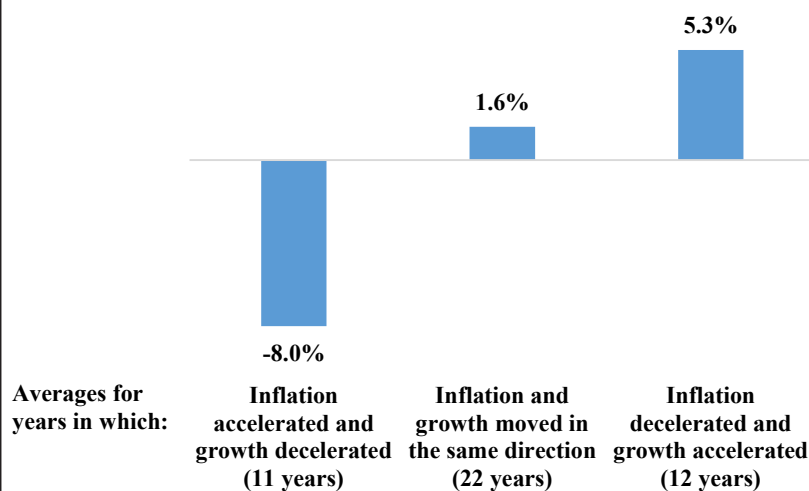
Inflation is one of two economic factors that affect different assets in diverse ways.



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Figure III
Year-to-Year Change in Total Return from Long T-Bond

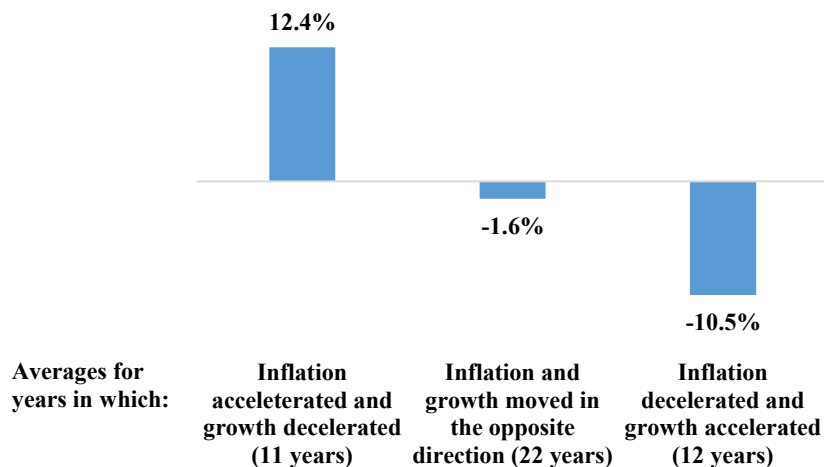
(Calendar-year Average Data from 1969)



Data: As for Tables I and II.

Figure IV
Year-to-Year Change in Price Performance of Commodities

(Calendar-year Average Data from 1969)



Data: As for Tables I and II.

Stocks and bonds perform best when the inflation rate is slowing, but gold and commodity prices respond positively to an acceleration in inflation. The other factor is growth. Bonds and gold prices perform best when economic growth rate is slowing, but stocks and commodity prices respond positively to an acceleration in growth.

All these relationships are statistically significant, and together they provide a clear and simple structure for recognizing how capital markets relate to the economy.

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Notes

1. For information on the compass, see David Ranson, "How Does the Economy Affect Investments?" NCPA Taxes and Retirement blog, available at <http://retirementblog.ncpa.org/how-does-the-economy-affect-investments-this-compass-shows-you/#sthash.HNnsGX5j.pow5rKaM.dpbs>.
2. "How the Economy Explains Capital Markets: A Clearer Focus," *Strategic Asset Selector*, HCWE & Co., May 15, 2013.
3. "Inflation-Resistant Assets Back on the Rise," *Strategic Asset Selector*, HCWE & Co., July 16, 2009.
4. "What Analysts Don't Know About Asset Correlations Could Be Vital," *Strategic Asset Selector*, HCWE & Co., May 21, 2014.
5. "Bond-like Returns With Cash-Like Stability," *Interest-Rate Outlook*, HCWE & Co., April 22, 2014; and "A Powerful Way To Stabilize the Performance of a US Stock Portfolio," *Strategic Asset Selector*, HCWE & Co., May 29, 2015.