

Inflation protection: why gold works better than “linkers”

By David Ranson, H. C. Wainwright & Co. Economics¹

In this report we:

- propose using gold as an effective way to gauge and combat the ravages of inflation on a portfolio;
- explain why using the CPI to formulate a sound strategy for protecting investments against inflation is bound to fail; and
- calculate how much gold to include in a portfolio of Treasury bonds to immunize it from capital loss due to inflation.

When it comes to inflation, Wall Street tends to be late seeing it coming. That's because of the widespread obsession with the CPI as the gauge of choice. Our inflation measure of choice, the prices of gold and other precious metals, has been signaling a return of inflation for some time now; it has taken a long time for Wall Street to recognize it as well.

If, as we expect, inflation continues, portfolio managers will be scrambling to find investment instruments with which they can protect their portfolios from its pernicious effects. There are two serious candidates that purport to shield portfolios from inflation: “linkers” or inflation-

indexed bonds (IIBs) – referred to in the United States as “Treasury Inflation Protected” (TIPs) – and commodities, especially precious metals.

When we examined the ability of inflation-indexed bonds (IIBs) to help immunize a fixed-income portfolio against inflation, we found that while they are constructed to protect investors against fluctuations in official consumer price indices, they offer little protection against inflation as measured by commodity prices such as gold. We argue that if changes in the prices of the precious metals are a superior measure of inflation, the case for including IIBs in a bond portfolio is weak.

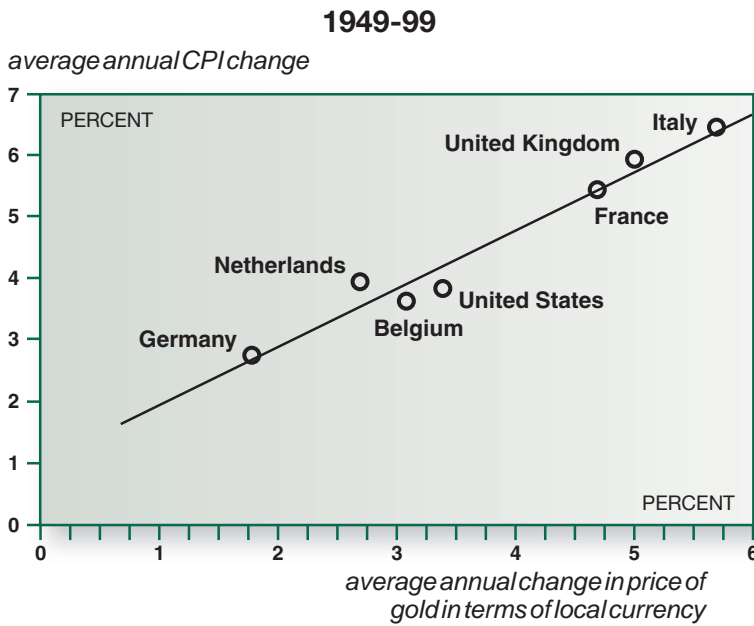
Instead, we propose that a portfolio that includes gold in some form provides a superior hedge against inflation.²

The problem with IIBs. IIBs are issued by the governments of the United Kingdom, Canada, and United States (among others) to provide an asset that is not hurt by inflation. The U.S. began issuing TIPs in 1997; British index-linked gilts have been available since 1981; in Canada, they are called Real Rate Bonds. Such bonds are advertised to protect investors by adjusting the principal amount of the bond and coupons paid in accordance with changes in the official consumer price index of that country.

¹ For more information about the author, please see p. 7-8. Please read the disclaimer on p.9.

² “How best to immunize a portfolio against inflation: TIPs or gold?” Interest-Rate Outlook, H.C. Wainwright & Co., Economics Inc., June 29, 2001.

Figure 1: Currency Performance and Absolute Inflation in Seven Developed Countries



Data: Calendar-year averages of daily U.S. gold prices (Metals Week) converted to local currency at current exchange rates (Federal Reserve Board) and of monthly consumer price indices (International Monetary Fund).
 Source: "Why the euro is not under valued," International Forecaster, Wainwright, May 31, 2000.

On the surface this seems an effective way to immunize IIBs from the ravages of inflation, but there are several caveats:

1. Although the par value of an IIB is tied to the consumer price index, its pricing in the open market is not. IIBs only hold their "real" value if held to maturity. If sold before then, their prices are subject to the same market fluctuations as any other bond. In fact, the price will be affected whenever the market changes its expectations of future consumer price movements.
2. There is a delay of some months before adjustments for inflation are made.
3. In any case, official consumer price indices are tardy and inaccurate measures of inflation.
4. In practice we found little correlation between changes in the RPI and changes in the price of British IIBs.³

5. IIBs protect only that portion of the portfolio invested in them; they have no ability to counteract the effect of inflation on other assets.

It is difficult to assess the ability of such

bonds to act as an inflation hedge for the following reasons:

- especially in the U.S. the data history is too short to provide a reliable reading;
- there hasn't been any significant period of high inflation since their inception; and
- in any case, the total quantity of index-linked bonds issued to date by the U.S. Treasury is only a small fraction of the assets that the plan-sponsor industry would need to protect the fixed-income portion of their portfolios.

Inflation: finding a better yardstick.

Official measures provide little help to investors who must plan for the future, because they only tell about what is over and done with – and they are not accurate even about that. *Wainwright* publications have been suggesting for years that gold is a much better gauge. Figure One shows that over very long time spans the local-currency price of gold tracks price indices very closely from country to country, and the relation-

Figure 2: Local-Currency Gold Price Movements as an Inflation Predictor

AVERAGES for years in which the annual change in local-currency gold prices:	Changes in CPI Inflation in Developed Countries, 1968 to date		
	accelerated the most (ten years)	change in CPI inflation in current plus two following years intermediately (ten years)	decelerated the most (ten years)
Belgium	1.80%	-0.2%	-2.2%
France	1.2 pts.	0.0 pts.	-2.3 pts.
Germany	0.3	0.8	-1.3
Italy	2.8	-0.6	-2.1
Netherlands	0.2	0.7	-1.7
United Kingdom	2.2	-0.8	-1.8
United States	1.9	-0.4	-2.1
Five EMU economies*	1.4	-0.3	-1.6

Data: Calendar-year averages of monthly consumer price indices (International Monetary Fund) and of daily local-currency gold prices calculated from exchange rates (Federal Reserve Board) and U.S. gold prices (Metals Week).

Source: As for Figure One.

*Belgium, France, Germany, Italy and the Netherlands with equal weight.

³ "Inflation-indexed bonds: a new U.S. asset class. Will they perform as promised?" Interest-Rate Outlook, Wainwright, May 29, 1998, p. 5.

ship is roughly one-for-one. The fact that the best-fit line intercepts the vertical axis at about 1.0 is very interesting, because it suggests that consumer prices rise one percent per annum faster than the price of gold over the long haul. It is probably no accident that the 1996 Boskin Report found that (as a result of a variety of measurement biases) the U.S. CPI consistently overestimates the annual inflation rate by one percent or so.⁴

Figure Two confirms that the local-currency price of gold provides an effective forecast of the direction of consumer-price inflation throughout the developed world. Over shorter time periods, movements in the price of gold are a multiple of movements in official price indices. Figure Three shows that when inflation was highest in Britain (ten years in which the RPI inflation rate averaged 14.4 percent) the price of gold rose an average of 25.4% per annum during the four years prior. It shows that the same is true – even more so, in fact – for the U.S. When the CPI increased most, at an average rate of 11.1 percent a year, the annualized price change for gold over the four prior years averaged 36.9 percent.

Even the Fed takes an interest in the gold-price signal. In remarks to the U.S. Congress in 1999, Federal Reserve Chairman Alan Greenspan expressed his long-held opinion that falling gold prices are “a reflection of a global reduction in the long-term inflation outlook.”⁵

Using the bond market to compare indicators of inflation. Even if an asset could be constructed to mirror the consumer-price index adequately, it might still not be immunized against changes in

the true price level since no accurate measure of this exists. However, we can use the bond market itself as circumstantial evidence. The question is whether movements in the price of gold carry information about inflation that the official index does not.

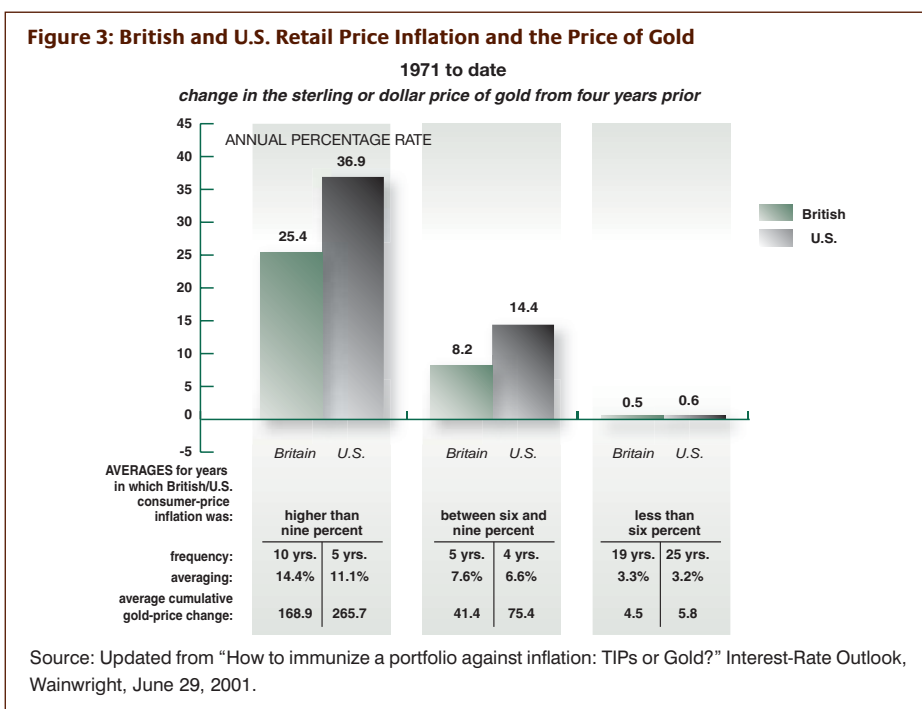
The CPI does contain relevant information about inflation to which the bond market reacts, as illustrated in Figure Four. It shows that bond-market performance is correlated with the change in the CPI inflation rate over a two-year period. This is understandable, as one of the well-known characteristics of the CPI inflation rate is auto correlation. Only a small portion of the variation in the annual CPI inflation rate is a surprise when it occurs. We surmise that what the bond market reacts to is this “surprise” component.

In Figure Five we let gold-price movements compete with accelerations and decelerations in CPI inflation to see

which factor exerts the most influence on the bond market. We conclude that price changes in the gold market are significantly more potent interest-rate predictors than movements in the CPI. This can be seen by observing that bond yields increase after the price of gold rises, even if CPI inflation decelerates; whereas bond yields decline after the price of gold falls, even if CPI inflation accelerates.

As Figure Three demonstrates, gold held as an asset is far more sensitive to inflation than indexed debt. In fact, the power of gold to immunize a portfolio against loss in an inflationary environment is several times greater than that of IIBs. It is so great, in fact, that it can easily offset the losses that bonds regularly sustain during such periods.

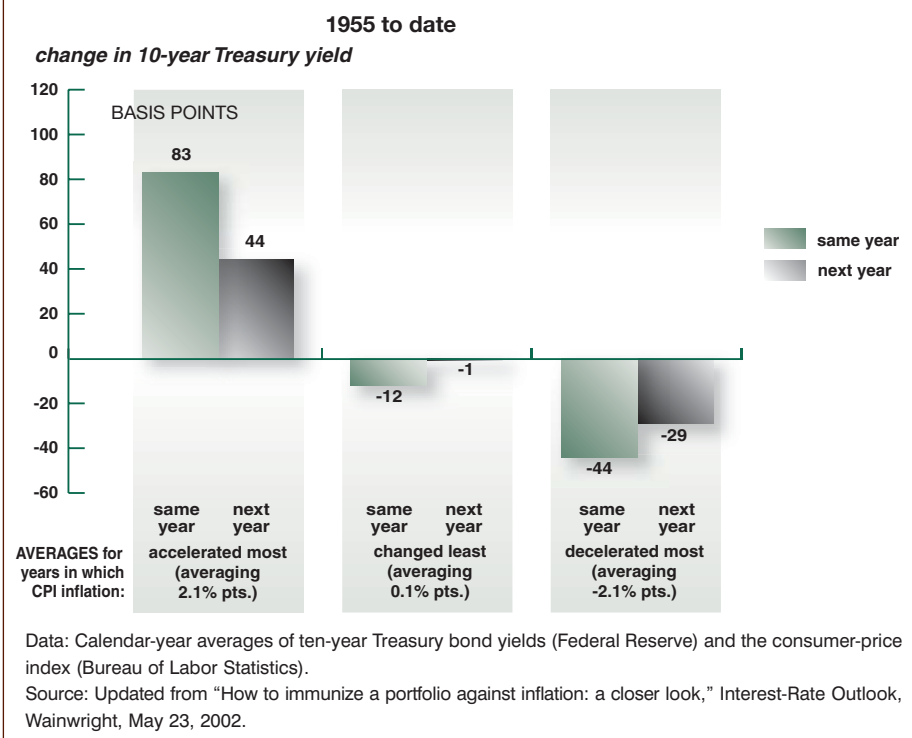
Least-squares analysis determines that a one percentage-point acceleration of the CPI inflation rate is associated with an 8.8% pts. increase in the return from gold. This is a much more positive out-



⁴ Michael Boskin et al, Report of the Advisory Commission to Study the Consumer Price Index, Senate Finance Committee, December 1996.

⁵ Alan Greenspan, The Economic Outlook and Monetary Policy Hearing, Joint Economic Committee, Congress of the United States, 106th Congress, First Session, June 17, 1999, p. 31.

Figure 4: Impact of CPI Inflation on the U.S. Bond Market



come than the 2.8% pts. negative return from bonds. The ratio between 8.8 and 2.8 is 3.1 to 1. This provides a rough estimate of what portfolio mix of gold and bonds would provide immunization against a CPI inflation "surprise": namely, 24% gold and 76% bonds.⁶

But it gets even better. This estimate takes account only of the contemporaneous relationships between CPI movements and returns from the two assets. It ignores the significant additional immunizing power that accrues from the fact that movements in the price of gold reflect changes in inflation much quicker than bonds—so much so that gold moves ahead of the bond market by a full year. *Wainwright* identified a strong statistical relationship between gold and bonds fifteen years ago.⁷

Failure to recognize this difference in timing results in a significant understatement

of the immunizing power of gold. In order to take it into account we recalculate the impact of inflation changes by considering the returns from gold and bonds in consecutive years rather than in the same year. In other words, when

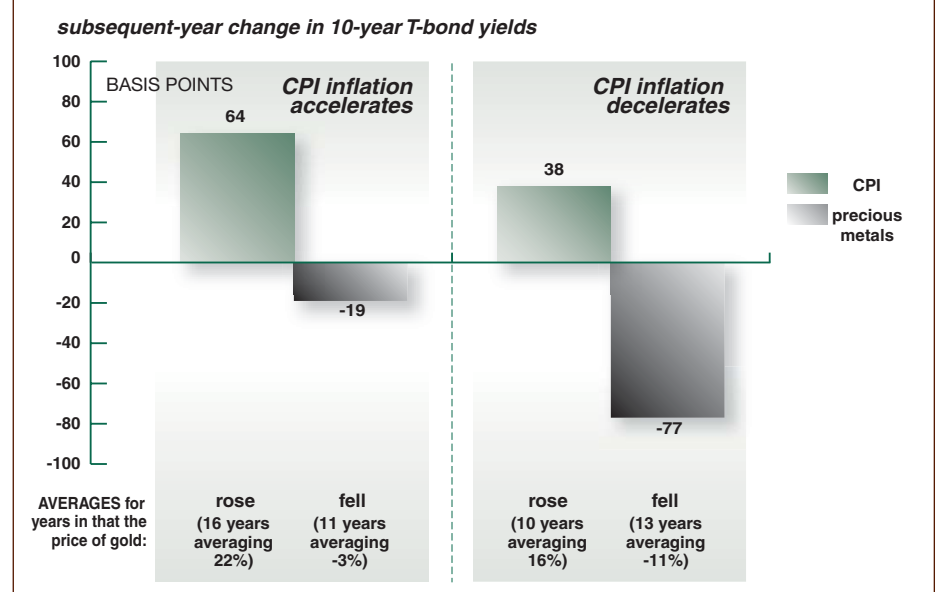
assessing the annual returns, the bond portion is calculated for the calendar year in question, but the gold portion is priced as it was in the prior year.

When calculated on this basis, the ratio between the increase in the return on gold and the decrease in the return on bonds climbs to 4.7 to 1. Based on this ratio, we calculate that a portfolio consisting of 18 percent gold and 82 percent bonds would be insensitive to accelerations in the CPI inflation rate.

Figure Six illustrates this with a spectrum of hypothetical portfolios consisting of mixtures of gold and bonds and allowing for the one-year timing difference. In each case we use least-squares analysis to estimate the effect of a one percentage-point acceleration in CPI inflation on portfolio return. The result is a straight line that crosses the zero axis close to the 18:82 mix that we calculated above.

Inflation and equities. Interestingly, persistent inflation does more damage to stocks than bonds. This becomes evi-

Figure 5: Which Inflation Indicator does the Bond Market Pay Most Attention To? The CPI or Precious Metals?

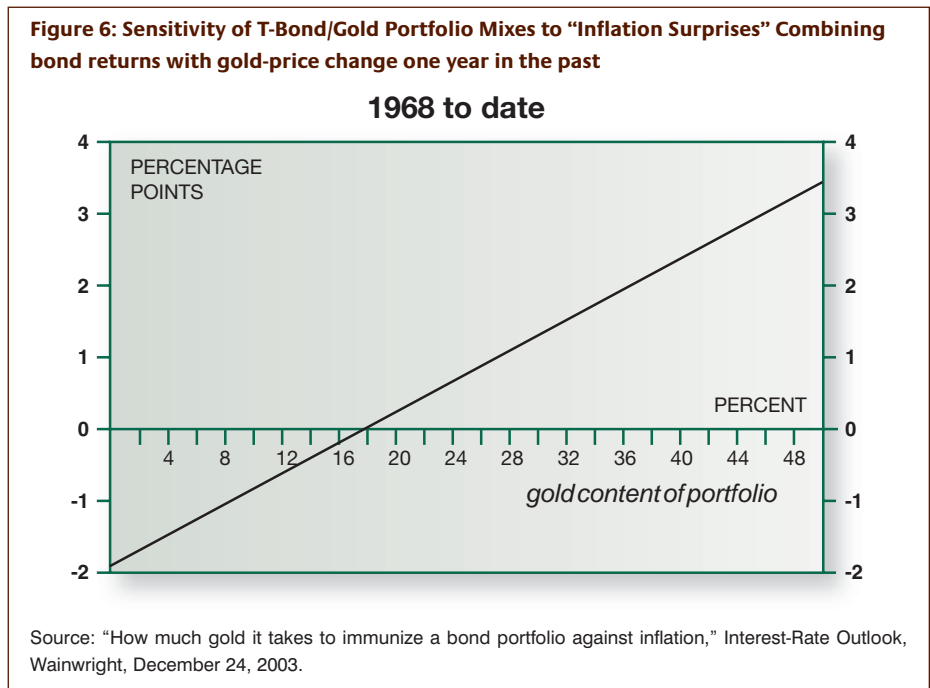


⁶ "How much gold it takes to immunize a bond portfolio against inflation," Interest-Rate Outlook, Wainwright, December 24, 2003.

⁷ Why gold, not oil, is the superior predictor of inflation," H.C. Wainwright & Co., World Gold Council, November 2005.

dent when we use the price of gold as an indicator of the general price level and compare correlations between its year-to-year change and subsequent stock and bond performance. Although bonds are hurt more by inflation than equities in the short term, over time the reverse is true, as Figure Seven demonstrates. This means that, contrary to popular opinion, stocks are the opposite of a hedge against inflation.⁸ And since inflation hurts equities as well as bonds, gold serves as an effective inflation immunizer for an equity portfolio as well.

Investment implications. T-bond prices are hurt by accelerations in the rate of inflation as measured by the consumer price index. But the price of gold is several times more sensitive on the upside. Thus including gold in a bond portfolio is an effective way to immunize portfolio returns against rising inflation. In addition to being a superior inflation gauge to the CPI itself, gold has some

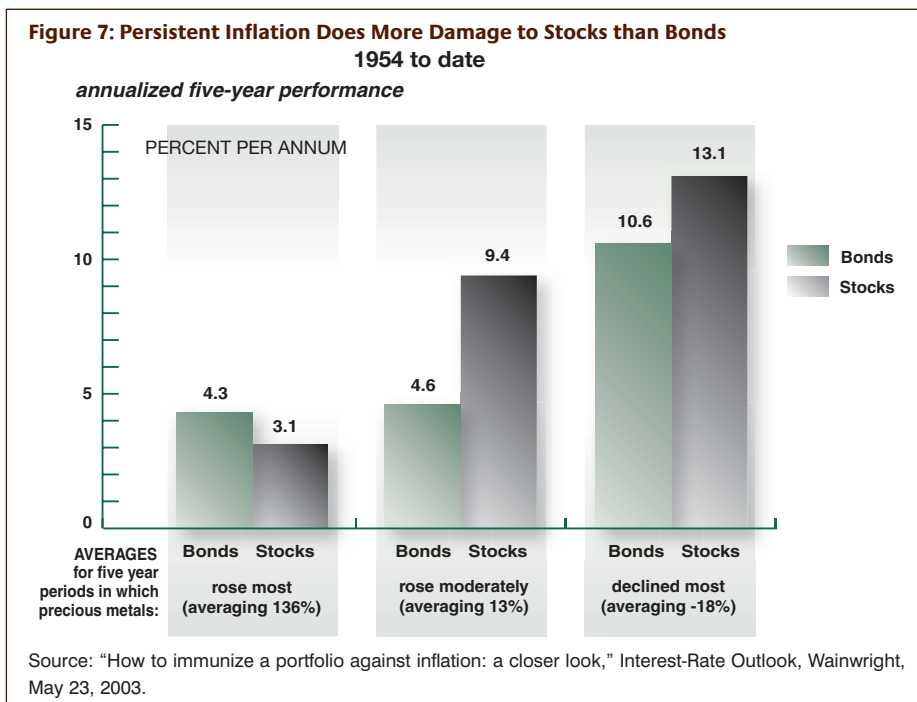


very attractive properties as an inflation-immunizing asset. While IIBs can only immunize that part of the portfolio they represent, and then only in terms of par value and not price, gold is an asset that goes up with inflation—and better still, its price increases at several times the inflation rate.

Thus gold is an excellent choice for the investor seeking an asset to hedge against inflation. The only immunizing asset we can identify that is superior to gold is a basket of precious metals that includes silver and platinum in addition to gold.

But there are a couple of important caveats. First, the correlation between gold prices and T-bond prices is very close, but gold leads bonds by a year. In order to take full advantage of the immunizing properties of gold, the investor must have invested in gold a year before inflation shows up in the CPI data. That’s no problem since gold starts moving two years ahead of the CPI. Second, holding gold in a portfolio as inflation decelerates would be damaging, because the price of gold is leveraged on the downside as well as the upside.

There are other benefits from including gold or gold derivatives in a portfolio, and in our judgment they outweigh the downside exposure when inflation decelerates as it



⁶ “How much gold it takes to immunize a bond portfolio against inflation,” Interest-Rate Outlook, Wainwright, December 24, 2003.

eventually must. One is the diversification that results from having two incompletely correlated assets in the portfolio. Another is the capital preservation that gold provides. While dollar-denominated assets fluctuate merely as a result of a variable dollar, the real purchasing power of gold remains the same even when in the

worst-case scenario in which the dollar price of gold goes down. Finally, gold and its derivatives are, if anything, even more liquid than Treasury bonds.

Still, given our confidence that the U.S. has now entered an inflationary period, the time is right for investors to consider including gold in some form in their

portfolios. This will minimize the damage that increased inflation is sure to do. In the case of a T-bond portfolio, complete protection implies a portfolio mix of 18 percent gold and 82 percent bonds. The introduction of any percentage of gold, however, can do nothing but help.

Approach and Investment Philosophy



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