

# Protecting Purchasing Power in Inflationary and Deflationary Environments

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At GenSpring, our objective has always been to manage risk in order to limit downside losses in difficult markets. By doing so, we are able to compound family capital at a higher starting dollar amount when favorable financial markets return. In our constant pursuit of protecting capital and preparing for numerous possible outcomes, it is important to address the possibility of an inflationary or deflationary environment.

In this report, we explain the components and effects of inflation. We will touch on the most effective investment strategies for an inflationary environment (precious metals, hard assets, t-bills and inflation-linked securities) and a deflationary environment (liquid currency and long duration bonds). GenSpring Family Offices has the responsibility to position our families' portfolios to be prepared for any outcome so that we can succeed on our objective of protecting, maintaining, and growing capital despite difficult conditions.

Inflationary and deflationary environments are monetary phenomena that lead to disruption in rational economics. The often self-reinforcing effects can be devastating to retained wealth as well as real earnings and purchasing power. During the inflationary period of the 1970s and 1980s, asset classes reacted differently to stable-price expectations. Equities and bonds lost value while precious metals, treasury bills, and commodities retained their purchasing power and grew in value. These skewed prices have demonstrated that retaining purchasing power of a

favorable asset is key to preserving wealth, both in the current generation and for future generations.

## **Inflation—A Monetary Phenomenon**

Inflation is generally defined as a rise in the general level of prices of goods and services over a period of time. Economic theory describes inflation as an excess supply of money purchasing a scarcity of goods, resulting in price increases. Thus, the recipe for inflation is aggregate money supply growth in excess of Real GDP output coupled with an increased frequency of purchasing goods and services (i.e., an increased velocity of money).

The government can increase the money supply in two ways: it can print currency or it can issue and monetize debt. Monetizing debt is a two-step process by which the government issues debt to the public in return for an inflow of money. When a government needs more money than creditors are able or willing to lend it at a reasonable price, it turns to the central bank. The central bank can purchase the debt from the public and the public is left with an increased supply of money. The creation of money in the banking system generally will not result in inflationary effects until the money is ready to be spent. Thus, the transition between money supply growth and physical inflation does not manifest until the velocity of money increases which represents the “chasing of goods and services” component (for example, the 2009 financial situation in the United States).

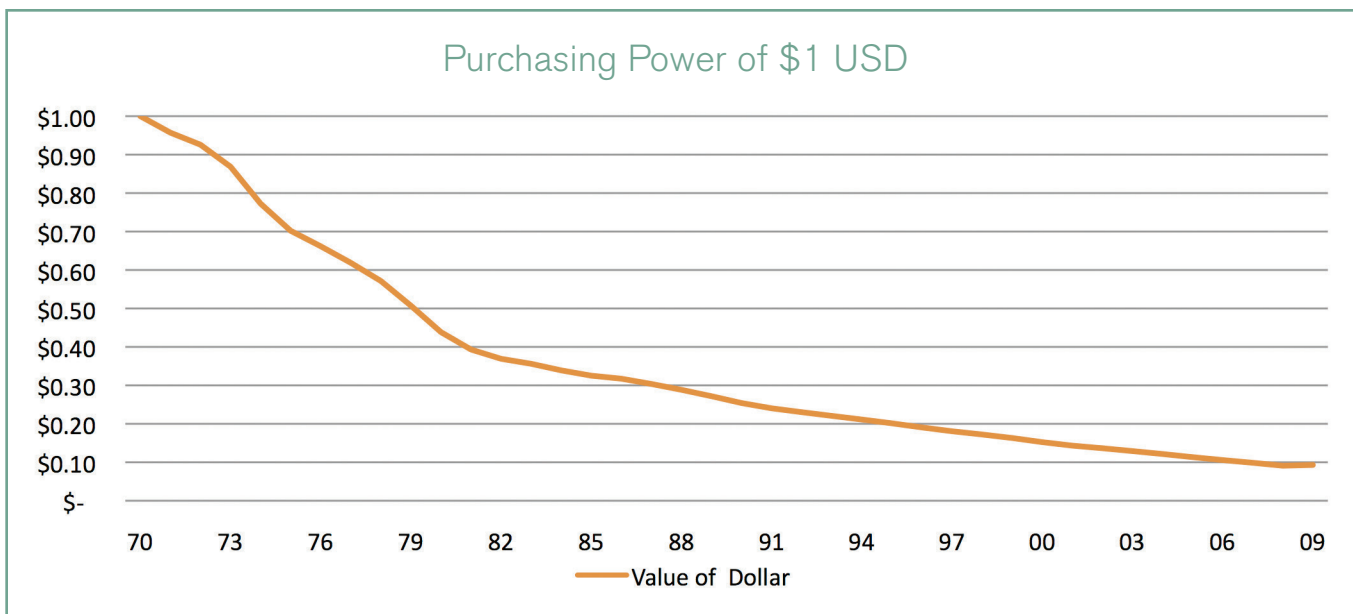
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In an inflationary environment, there are different stages that cause asset classes to behave differently. First is the primary inflation stage, in which money supply grows beyond real GDP output but people do not believe it is more than a temporary phenomena and do not dramatically adjust their behaviors. The velocity of money remains low and there are no significant signs of inflation. Secondly, the inflation expectation stage arises when the public realizes the inflation and believes it will persist and therefore build in an inflation premium (the velocity of money rises and prices rise rapidly). The third stage, the inflation persistence stage, is affected by policy changes toward disinflation but people believe inflation will nevertheless persist and continue their inflationary behavior. The fourth stage, the disinflationary stage, is

when changes become readily apparent and people move to disinflationary/deflationary behavior.

### Effects of Inflation

The Consumer Price Index (CPI) is an inflationary indicator that measures the change in the cost of a basket of products and services that seek to encompass the cost of living. While on the Gold Standard, the CPI index (from 1913-1970) doubled roughly every 29 years. After abandoning the Gold Standard in 1971, the federal government was unconstrained in monetary creation, corresponding with CPI doubling every 10 years (using pre-1990 standard CPI calculation<sup>1</sup>). Between 1970-2009, the value of \$1 USD lost over 90 percent of its value, now worth roughly \$0.09 in terms of real purchasing power.



<sup>1</sup> The Bureau of Labor Statistics changed the calculation of CPI in 1990 – a change that has resulted in an arguable underestimate of CPI.

Regardless of CPI calculations, the price of everyday goods has risen significantly:

	<b>Published CPI Index</b>	<b>Kellogg's Cornflakes/ oz. in cents</b>	<b>Listerine Mouthwash/ oz. in cents</b>	<b>Oil/Barrel (3 yr moving average)</b>	<b>Median Housing Price</b>	<b>Average Price of 3 most purchased car models</b>
1970	38.8	2.11	0.05	\$3.8	\$23,000	\$2,249
2008	215.3	24.92	0.41	\$74.1	\$216,658	\$19,098
<b>Price Increase (1970-2008)</b>	<b>454.9%</b>	<b>1080.4%</b>	<b>723.5%</b>	<b>1848.7%</b>	<b>842.0%</b>	<b>749.2%</b>

*Data compiled from the Morris County, New Jersey Library of Prices; 1970-2008*

As an inflationary environment causes the cost of goods and services to increase, the amount of money needed to maintain a constant lifestyle goes up. In real terms, this represents a deterioration of retained wealth and savings and requires an adequate investment return to maintain real constant wealth. Below is an example of how inflation adversely affects the goal of maintaining a constant spending lifestyle:

### The Effects of Inflation on Real Spending Power

**Assumptions:**

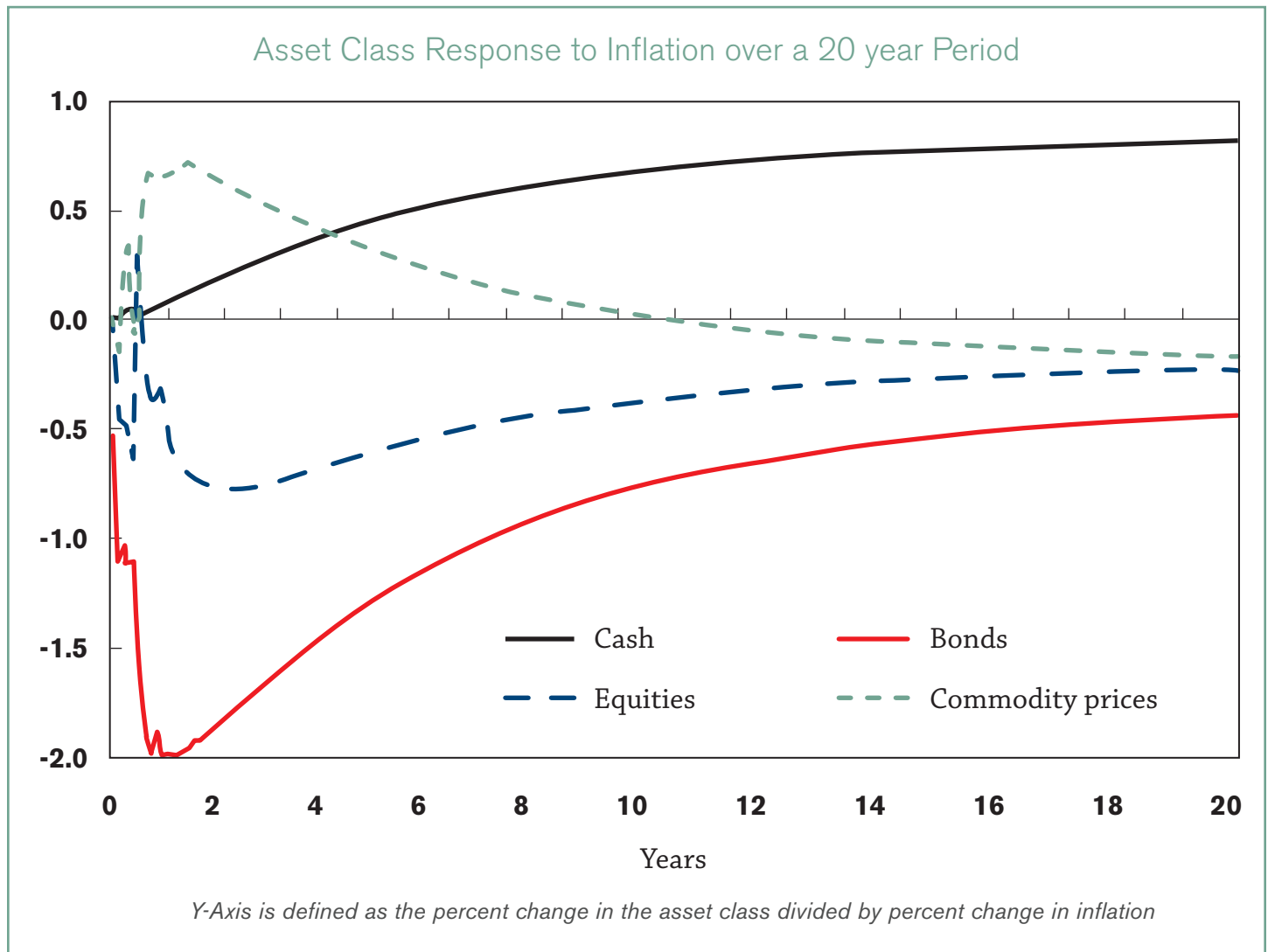
\$30,000,000 portfolio	
\$900,000 annual spending* (inflation-adjusted)	
Annualized Investment Return	<b>8%</b>
LT Cap Gains Rate	<b>15%</b>
Ordinary Income Rate	<b>35%</b>
50/50 Bond/LT Equity Income	

<b>Inflation Rate:</b>	<b>3%</b>	<b>5%</b>	<b>7%</b>	<b>10%</b>
<b># of Years Until Portfolio Depletion:</b>	<b>35</b>	<b>22</b>	<b>17</b>	<b>12</b>

\* Based on a constant lifestyle

### The Inflation Effect on Asset Classes

Runaway inflation causes prices on goods and services to become quickly revalued and disrupted which, historically, has placed a premium on such real, tangible assets as precious metals, commodities, property, and equipment. Conversely, financial assets such as equities and long-term bonds perform poorly.



## Asset Classes and Inflation

### **Precious Metals: The Most Effective Hedge**

In an environment of inflationary expectations, precious metals such as gold and silver provide exceptional hedges. From the increasing inflation environment from 1973 through 1980, precious metals formed a price bubble as the price of gold and silver increased drastically. When inflation expectations diminished between 1980 and 1982, the gold and silver bubble subsided but precious metals still remained the best asset class through this environment.

### **Commodities: Effective Short-Term Hedge, but Protection Erodes over Time**

Over the short term, commodities are among the best-performing asset class. However, the long-term effects of inflation cause prices to fall gradually over time. After about two years, commodity prices begin to decline as a result of rising real interest rates. As interest rates and commodity prices tend to be inversely correlated, this most often lowers commodity prices.

### **Cash Alternatives (Money Market): Liquidity for Future Deployment**

Cash alternative returns increase in response to an inflation expectation, but the response is gradual. While the value of money declines, a liquidity premium is placed on the ability to quickly purchase goods and services. In addition, the low duration of money markets and short term t-bills allow for the capture of rising interest yields as key rates rise to coincide with inflation. There is one caveat: cash returns are to a large extent determined by monetary policy and the real interest rate targeted by policy makers.

### **Bonds: Suffer Short Term, Then Recover**

Nominal bonds are affected by inflationary pressure for two reasons. First, the increase of interest rates on bonds has an inverse effect on the nominal bond price (bond duration determines the severity of the price depreciation). Second, the bond coupon and principal become less on a real basis as the purchasing power of the coupon diminishes with time in an inflationary environment.

Long duration corporate and treasury bonds are among the worst-performing asset classes as inflation expectations rise. Over the long term, however, returns begin to be dominated by higher running yields rather than price declines. Inflationary expectations are likely to lead to higher yields on newly issued bonds which increase the total return of bonds as an asset class.

### **Equities: Experience Losses with No Meaningful Recovery**

In an environment of monetary inflation, equities can experience a short-term run-up in price as the increase in money supply channels sends additional funds to equity markets. However, this short-term effect is not lasting as the nominal increase in equity prices are not sustained by real output of earnings in the long run. Similarly, Price/Earnings (P/E) ratios have historically decreased in inflationary environments according to analysis of the P/E of the S&P 500 coupled with inflationary periods over the last 100 years. Of the total observed periods of inflation, 86 percent of the time the S&P 500 had a P/E ratio of less than 15. With the S&P P/E currently at around 20 this translates to a possible drop in equities prices.

At the aggregate level and over the long run, the company can pass through inflation in the form of higher prices. However, this becomes burdensome on profits as the company must be an intermediary for passing on price inflation of goods and labor. These factors over the long run have a deteriorating effect on earnings as companies effectively subsidize price appreciation in the value chain.

In addition, an environment of runaway inflation can cause companies to act hastily with cash and earnings reserves which have, in the past, led to a capital spending bubble. As companies look to convert cash into tangible value, they increase commodities, inventory, and equipment spending which often leads to oversupply and/or imprudent purchases.

### **Real Estate: An Imperfect Hedge**

Because real estate is backed by land and real assets, it can provide a hedge against inflation.

However, due to the historical lag in the property market's response to inflation and the often poor price discovery that results from the illiquid nature of the real estate market, real estate has a downside in hedging against inflation. It is also necessary to consider the rising cost of ownership, including interest, maintenance, insurance, and property taxes. On the residential side, taxes can be confiscatory as retirees struggle for cash flow even though the home price is up.

While commercial real estate is backed by real assets as well, it has a greater codependence on economic factors and many of the characteristics of equities. The nature of income-producing property is that cash flow is dependent upon occupancy. Logically, occupancy can be adversely

affected by unemployment, bankruptcy, and reduced tenant output. During the 1972-1983 inflationary bubble, commercial real estate exhibited a volatile relationship with inflation.

### **Asset Classes and Deflation**

Deflation generally occurs as a result of too few dollars chasing a surplus of goods. The surplus of goods and the deficiency of funds leads to a decrease in aggregate demand and an overall price decline. Deflation generally occurs when a financial system has too much leverage and moves to reduce it—resulting in asset deflation as seen in 2002 and 2008/2009. The psychological effect of a perpetual decline in asset prices causes consumers to put off buying today what they could buy tomorrow. This decrease in consumption has a negative impact on the economy. It becomes increasingly difficult for businesses to sell products and services, which results in decreased earnings, restructuring, bankruptcy, layoffs, and increased unemployment.

Unemployment and lack of business growth creates a negative feedback loop as unemployment further reduces aggregate demand and spending, thus creating a shrinking business cycle. The deflationary outcomes that followed the Great Depression and the post-1990 Japan-era manifested into an economic pandemonium as asset class prices stagnated or dropped significantly. This type of environment causes a “bunker” effect in which capital is allocated into whatever assets will preserve wealth. Only two assets have proved to protect an investor during deflation: longer-term government bonds and cash equivalents.

### **Bonds: Maintains Purchasing Power**

Bonds are among the best performers in a deflationary environment as coupon payments increase in terms of real purchasing power. Bonds also pay out at par at maturity, thus sheltering the nominal par value of the bond from real price decline. Long-term treasury bonds are among the best asset classes in a deflationary environment as their top credit quality and long duration provide a sustained interest payment cash flow as well as assurance of full principal payment at maturity. Long-term corporate bonds of questionable credit quality can become hazardous as bankruptcies generally rise, thereby increasing the default risk of bonds.

### **Gold: A Store of Wealth or “Bunker Asset”**

Gold is considered an effective deflation hedge as it protects wealth in times of economic crisis. In times of economic crisis, investors begin to question the value and solvency of paper-based assets and financial instruments. While the value of most intangible and real assets is in a state of decline, gold acts as a “bunker asset” as it has become an insurance policy against financial panic and economic instability.

### **Real Assets: Lack of Demand Leads to Price Declines**

Real asset prices fall in deflationary environments as both personal and business consumption decline. Real asset deflation begins as there are fewer buyers than the supply of goods, creating an aggregate price decline. The deflationary cycle continues as those who do have funds to buy goods delay purchases in anticipation of future price decline.

### **Equities: Experience Significant Losses**

Equities do very poorly in deflationary environments as falling aggregate demand for products and services causes a reduction in earnings and often forces restructuring and bankruptcy. In the past 100 years, 98 percent of observed periods of deflation were coupled with the S&P 500 P/E ratios being less than 15. With the S&P P/E currently at around 20 this translates to a possible drop in equities prices (during the deflationary period of the Great Depression, equity P/Es were as low as 3).

### **Conclusion**

With the unwinding of leverage in the private sector, the United States has faced a deflationary environment in 2008 and 2009. The stock market, home prices, and durable assets have experienced a significant price decline over the last two years. To combat asset deflation, the government has tirelessly implemented the policy of increasing money supply to stimulate growth and prevent future deflation. While there have not been any signs of inflation yet, there is a genuine possibility that inflation could manifest in the future if a monetary exit strategy is too late or improperly executed. While GenSpring cannot control inflation or deflation, we can position our families’ portfolios to achieve our ultimate objective of protecting and growing capital and ensuring that our clients are able to maintain a constant lifestyle. To accomplish this goal, we believe it is important to balance the short-term and long-term horizon by selecting assets that provide some type of protection against inflationary and deflationary outcomes. By having the right knowledge and executable strategies, we strive to give our families the best chance of success in either a deflationary or inflationary environment.

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