The Role of Gold in Today’s Global Multi-Asset Portfolio

SPDR® Gold Strategy Team

Investors have often used gold tactically in their portfolios, with an aim to help preserve wealth during market corrections, times of geopolitical stress or persistent dollar weakness. But given gold’s historically low or negative correlation with most other asset classes (See Figures 2 and 3), we believe that in addition to gold’s tactical benefits, its function as a core diversifying asset may demonstrate that gold can potentially play a more long-term strategic role in an investor’s portfolio. In fact, research has shown that the modern multi-asset portfolio may be more efficient with a strategic allocation to gold playing a crucial role as a potential core diversifier.1

In this paper, we examine how including gold in a hypothetical multi-asset portfolio that also includes global stocks, various classes of fixed income, real estate, private equity, and commodities may improve its risk-return characteristics. We found that holding between 2% and 10% of SPDR® Gold Shares (GLD®) between January 1, 20052 and September 30, 2020 may have improved the hypothetical portfolio’s cumulative returns and Sharpe ratio and lowered its maximum drawdown, as compared to a portfolio without any gold-backed investments. See Figure 7 for asset weightings of hypothetical portfolios.

Since 1971, when President Nixon removed the US dollar from the gold standard, the price of gold has increased from $43.28/oz to $1,886.90/oz at the end of September 2020. Since that policy move, which we call “The Initial Public Offering of Gold,” the price of gold (in USD) has increased at a compound annual growth rate (CAGR) of 8.01% per year.3 The IPO of Gold unleashed gold’s longstanding currency-like characteristics, giving it the potential to become a mainstream investment. And in November 2004, that potential became a bit more tangible with the launch of GLD, the first US gold-backed exchange traded fund. GLD’s arrival made it convenient and cost effective for investors to hold gold in their multi-asset portfolios. The ETF gathered $1 billion in assets under management in just three days, making it very tradable almost immediately and allowing exposure to gold to rival the ease and efficiency of owning stocks. For more information about GLD click here.

*See Endnote 4 for additional information.

Gold as an Investable Asset: From IPO to ETF

Figure 1
IPO of Gold and SPDR® Gold Shares

<table>
<thead>
<tr>
<th>Year</th>
<th>Gold (USD/Oz)</th>
<th>SPDR® Gold Shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>1925</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>1935</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>1945</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>1955</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>1965</td>
<td>0.00</td>
<td>25.00</td>
</tr>
<tr>
<td>1975</td>
<td>0.00</td>
<td>200.00</td>
</tr>
<tr>
<td>2005</td>
<td>0.00</td>
<td>200.00</td>
</tr>
<tr>
<td>2020</td>
<td>0.00</td>
<td>250.00</td>
</tr>
</tbody>
</table>

“I have directed Secretary Connally to suspend temporarily the convertibility of the dollar into gold or other reserve assets, except in amounts and conditions determined to be in the interest of monetary stability and in the best interests of the United States.”

– President Richard Nixon
August 15, 1971

GLD® Price/Share ($)
We see three potential strategic benefits as major reasons why multi-asset portfolio managers should consider including gold in their portfolios:

**Increase Portfolio Diversification** – When building a multi-asset portfolio, investors must consider not only the potential or forecasted risk-return characteristics of a particular asset class, but also how that asset class or market segment behaves relative to other investments and the impact on the portfolio as a whole. Although many investors tend to focus on constructing portfolios with asset classes offering high forecasted risk-adjusted returns, there are potential benefits to including asset classes that move differently relative to one another. A low correlation between the asset classes in a multi-asset portfolio can potentially help lower portfolio volatility and therefore, all else being equal, increase diversification and enhance the overall risk-adjusted return of the portfolio. Figures 2 and 3 depict gold’s historical correlation to major equity and bond indices. These very low or negative correlations highlight the potential long-term diversification benefits of adding gold to a multi-asset portfolio.

Figure 2
**Gold Has Had Low or Negative Correlation With Major Equity Indices Since 2000**

![Correlation Chart]


Figure 3
**Gold Has Had Low or Negative Correlation With Major Bond Indices**

![Correlation Chart]

**Hedge Tail Risk** — Gold has historically been used to provide potential tail risk mitigation during times of market stress, as it has tended to rise during stock market pullbacks. Figure 4 shows that gold has delivered competitive returns and outperformed other asset classes during a number of past black swan events. This demonstrates that including gold in a multi-asset portfolio may provide investors with a means of moderating market volatility and reducing portfolio drawdown.

![Gold Performance in US Equity Drawdowns ≥ 15%](image)


Past performance is not a guarantee of future results. Performance above does not reflect charges and expenses associated with the fund or brokerage commissions associated with buying and selling exchange traded funds. Performance above is not meant to represent the performance of any investment product.

**Manage Inflation** — Gold has historically fared well during various inflationary regimes, but it is often viewed as beneficial only during periods of heightened price inflation — like that experienced during the OPEC oil crisis in the 1970s. But gold may not just act as a potential hedge against price inflation. In fact, gold’s long track record as a store of value may be driven by its ability to preserve wealth and purchasing power over time by hedging both price inflation and currency devaluation (monetary inflation).

Looking more closely at price inflation, gold has preserved purchasing power across multiple price inflation environments. Its ability to perform well through varied inflation scenarios is supported by the fact that several factors beyond inflation may influence the price of gold, including interest rates and multiple supply/demand forces. Analyzing gold’s price performance since the 1970s shows that during periods when the annual rate of inflation in the US has been below 2%, the gold price has risen at an average rate of 9.41% a year. But gold has shown its greatest effectiveness in preserving purchasing power when price inflation has been running above 5% a year. During such times, the gold price has increased by an average annual rate of 16.2%.
The Interest Rate Effect — The price of gold is also influenced by real rates of return. One of the main reasons why the price of gold did not appreciate during the 1980s and 1990s was because interest rates were nominally higher than they are today and other asset classes were performing so well. Conversely, as Figure 6 illustrates, gold has generally appreciated at times when real returns on assets like bonds have been low.

In the 1980s, T-notes averaged a real rate of return of 4.50%; in the 1990s, it averaged 3.44%. Real returns continued to drop in the first decade of the new century, averaging 2.28%. Since 2010, real rates have averaged 0.46% — with a steady decline since the Global Financial Crisis and the advent of new central bank policies that followed, such as negative interest rates or quantitative easing. Notably, the last time real rates were this low was in the 1970s when they averaged 1.02%. These lower real rates were one of the major drivers supporting the price of gold appreciating from $43 an ounce at the time of the “IPO of Gold” to $850 early in 1980.

The prevailing environment of low-to-negative real rates around the world has continued to support gold’s price in recent years, as shown in Figure 6.
Strategic Allocation to GLD in a Global Multi-Asset Portfolio — “What is the Portfolio of Assets Held by the World,” by State Street Global Advisors’ Investment Solutions Group (ISG) examined the global investable opportunity set and its implications for investors. They defined the Global Multi-Asset Market Portfolio (GMP) as the portfolio consisting of all investable capital assets, where the proportion invested in each asset corresponds to that asset’s market value divided by the sum of the market value of all assets in the portfolio. It is the sum of all investors’ holdings and a de facto proxy for the investable opportunity set available to all investors globally, or what is usually known as the “market portfolio.” This represents a good starting point for many investors looking to build a globally diversified investment portfolio.

To examine the potential results of adding a 2%, 5% or 10% strategic allocation to GLD into a multi-asset portfolio, we constructed hypothetical global multi-asset portfolios based on the concept of the GMP developed by ISG by:

- Replicating the asset classes in the GMP with noninvestable market indices
- Slightly adjusting each asset weighting in the GMP to include commodities and assume no gold exposure at the start (Portfolio A)
- Subtracting the percentage to be allocated to gold equally from the equities and government bonds asset classes (the two asset classes with the highest weights) to add in GLD at 2% (Portfolio B), 5% (Portfolio C) and 10% (Portfolio D)

Figure 7 below identifies the asset class weightings in each of the hypothetical portfolios we’ve constructed. It’s important to note that the impact of adding GLD to an investor’s portfolio will vary based upon an investor’s asset allocation decisions and market performance, among other things.

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Investable Market Indices &amp; ETF</th>
<th>Weighting (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Portfolio A</td>
</tr>
<tr>
<td>Equity</td>
<td>MSCI AC World Daily TR Index</td>
<td>40</td>
</tr>
<tr>
<td>Total Equity</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>Government Bonds</td>
<td>Bloomberg Barclays Global Aggregate Government Bond Index TR</td>
<td>25</td>
</tr>
<tr>
<td>IG Credit</td>
<td>Bloomberg Barclays Global Aggregate Corporation Bond Index TR</td>
<td>17</td>
</tr>
<tr>
<td>Inflation Linked Bonds</td>
<td>Bloomberg Barclays World Inflation Linked Bond TR Index</td>
<td>2</td>
</tr>
<tr>
<td>HY Bonds</td>
<td>Bloomberg Barclays Global Corporate High Yield Bond TR Index</td>
<td>1</td>
</tr>
<tr>
<td>EM Debt</td>
<td>Bloomberg Barclays Emerging Markets USD Aggregate Bond TR Index</td>
<td>3</td>
</tr>
<tr>
<td>Total Fixed Income</td>
<td></td>
<td>48</td>
</tr>
<tr>
<td>Real Estate</td>
<td>Global Property Research General TR Index</td>
<td>6</td>
</tr>
<tr>
<td>Private Equity</td>
<td>LPX Composite Listed Private Equity TR Index</td>
<td>3</td>
</tr>
<tr>
<td>Commodities</td>
<td>Bloomberg Commodity Index TR</td>
<td>3</td>
</tr>
<tr>
<td>Gold</td>
<td>SPDR® Gold Shares (GLD®)</td>
<td>0</td>
</tr>
<tr>
<td>Total Alternative</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Portfolio Total</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Source: State Street Global Advisors, as of September 30, 2020.

The asset allocation scenario is for hypothetical purposes only and is not intended to represent a specific asset allocation strategy or recommend a particular allocation. Each investor’s situation is unique and asset allocation decisions should be based on an investor’s risk tolerance, time horizon and financial situation. It is not possible to invest directly in an index.
From a risk-adjusted return perspective, our hypothetical blended portfolio results showed that adding a 2%, 5% or 10% allocation to GLD in the portfolio would have improved Sharpe ratios. Further, the results demonstrated that this hypothetical scenario would have outperformed multi-asset portfolios with identical index exposure but without equivalent allocations to GLD. From a risk management perspective, hypothetical portfolios with a GLD allocation had lower maximum drawdowns, with a 10% allocation to GLD reducing maximum drawdown by almost 383 bps.  

Given that adding a 2% to 10% strategic asset allocation to GLD in a hypothetical multi-asset portfolio between January 1, 2005 and September 30, 2020 improved risk-adjusted return and reduced maximum drawdown compared with the portfolio without any exposure to gold-backed investments, global multi-asset portfolio managers should consider the merits of including gold in their portfolios.

From the results shown below in Figure 9, we found that under our hypothetical scenario:

- Portfolios B, C and D had higher Sharpe ratios, lower maximum drawdowns and lower standard deviations with higher returns compared with Portfolio A, the portfolio with no exposure to gold

- Portfolio D had the highest Sharpe Ratio (0.50) and highest cumulative return (153.56%)

- Portfolio D had the lowest maximum drawdown (-29.72%)

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**Figure 8**

**GLD Has Had Low Correlation to Other Asset Classes in the Hypothetical Portfolio**

<table>
<thead>
<tr>
<th>Index</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPX Composite Listed Private Equity TR Index</td>
<td>0.09</td>
</tr>
<tr>
<td>MSCI AC World Daily TR Index</td>
<td>0.17</td>
</tr>
<tr>
<td>Bloomberg Barclays Global Corporate High Yield Bond TR Index</td>
<td>0.22</td>
</tr>
<tr>
<td>Global Property Research General TR Index</td>
<td>0.23</td>
</tr>
<tr>
<td>Bloomberg Barclays Emerging Markets USD Aggregate Bond TR Index</td>
<td>0.38</td>
</tr>
<tr>
<td>Bloomberg Barclays Global Aggregate Corporation Bond TR Index</td>
<td>0.44</td>
</tr>
<tr>
<td>Bloomberg Barclays World Inflation Linked Bond TR Index</td>
<td>0.49</td>
</tr>
<tr>
<td>Bloomberg Commodity Index TR</td>
<td>0.46</td>
</tr>
<tr>
<td>Bloomberg Barclays Global Aggregate Government Bond Index TR</td>
<td>0.55</td>
</tr>
</tbody>
</table>

While investment in physical gold bullion is the most direct way to invest in gold, it may involve higher ongoing costs for transport, storage and insurance. Gold mining company shares are another way to gain exposure to gold, but their growth and performance also depend on effective management, production costs, reserves and exploration, among other factors. Gold futures are also widely used by some investors looking for exposure to gold and have the benefit of being traded in standardized contracts on exchanges. Futures do not require full funding upfront, which may be preferable to those investors looking for leverage, but the requirement to regularly roll futures contracts to maintain exposure does mean ongoing management of the gold position is required for a longer-term strategic allocation.

Physical-backed gold ETFs, like GLD, may help to eliminate many of the issues mentioned above, as ETFs seek to provide investors a relatively transparent and cost-effective way to track the price of gold. The “IPO of Gold” helped legitimate gold as an asset class in 1971, and the arrival of GLD in November 2004 transformed gold into an accessible mainstream investment. We believe that as the size and the number of investable asset classes continue to grow, gold — an asset with historically low and negative correlation with other asset classes — may play a more central strategic role in multi-asset portfolios and GLD may offer investors the transparency and convenience in one cost-effective wrapper.
Figure 10

**Gold ETFs vs. Other Gold Investment Vehicles**

<table>
<thead>
<tr>
<th></th>
<th>Gold ETFs</th>
<th>Mutual Funds</th>
<th>Gold Futures</th>
<th>Gold Mining Stocks</th>
<th>Gold Bars or Coins</th>
<th>Paper Gold Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Potential Advantages</strong></td>
<td>• Transparency • Intraday Trading Capability • Mostly backed by physical gold</td>
<td>• Mostly actively managed • May be able to generate alpha</td>
<td>• Leverage • Intraday Trading Capability • Relatively large positions with low commissions</td>
<td>• Leverage • Intraday Trading Capability • Offers operating and financial leverage</td>
<td>• Physical possession • Transparency</td>
<td>• Ease of use • Transparency</td>
</tr>
<tr>
<td><strong>Consideration</strong></td>
<td>• Asset-Weighted Expense ratio (~$5 bps)</td>
<td>• Potentially higher management fees than ETFs • Portfolios may include other asset classes in addition to gold</td>
<td>• Management of position • Basis risk</td>
<td>• Have not exhibited perfect tracking to gold price • Exposed to company specific factors</td>
<td>• Transport costs • Storage costs • Insurance costs • Required to pay a ‘premium’ over spot</td>
<td>• Not backed by physical gold</td>
</tr>
<tr>
<td><strong>Trade Characteristics</strong></td>
<td>• Tactical and Strategic</td>
<td>• Strategic</td>
<td>• Tactical</td>
<td>• Tactical and Strategic</td>
<td>• Strategic</td>
<td>• Strategic</td>
</tr>
</tbody>
</table>

Source: State Street Global Advisors, Bloomberg Finance L.P., as of September 30, 2020. There can be no assurance that a liquid market will be maintained.

Figure 11

**SPDR® Gold Trust Standard Performance as of September 30, 2020**

<table>
<thead>
<tr>
<th></th>
<th>1 Month (%)</th>
<th>QTD (%)</th>
<th>YTD (%)</th>
<th>1 Year (%)</th>
<th>3 Years (%)</th>
<th>5 Years (%)</th>
<th>10 Years (%)</th>
<th>Since Inception 11/18/2004 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Value</td>
<td>-4.17</td>
<td>5.83</td>
<td>23.95</td>
<td>27.54</td>
<td>13.35</td>
<td>10.62</td>
<td>3.31</td>
<td>9.05</td>
</tr>
<tr>
<td>LBMA Gold Price PM</td>
<td>-3.60</td>
<td>6.72</td>
<td>24.57</td>
<td>27.04</td>
<td>13.70</td>
<td>11.10</td>
<td>3.74</td>
<td>9.57</td>
</tr>
</tbody>
</table>

Source: Gross Expense Ratio: 0.40%. The gross expense ratio is the fund’s total annual operating expense ratio. It is gross of any fee waivers or expense reimbursements and can be found in the fund’s most recent prospectus. Performance quoted represents past performance, which is no guarantee of future results. Investment return and principal value will fluctuate, so you may have a gain or loss when shares are sold. Current performance may be higher or lower than that quoted. Visit ssga.com/etfs for most recent month end performance.
Endnotes


2 SPDR Gold Shares was listed on the New York Stock Exchange on November 18, 2004, so returns of our hypothetical blended portfolio began with the first full year of GLD’s existence.


4 From 1900–1967, the dollar price of gold is calculated from the average annual exchange rates of the dollar against the British pound taken from a table published for the London and Cambridge Economic Service by Times Newspapers Ltd. as part of The British Economy: Key Statistics. From 1968 — March 19, 2015, the gold price is based on the London Gold Fix, a daily survey of spot gold prices conducted by telephone. From March 20, 2015-present, the gold price is based on the LBMA Gold Price, which is determined twice each business day (10:30 a.m. and 3:00 p.m. London time) by participants in a physically settled, electronic and tradable auction. All gold prices from 1968-present based on data compiled by Bloomberg Finance L.P. Performance quoted of SPDR Gold Shares above represents past performance, which is no guarantee of future results. Investment return and principal value will fluctuate, so you may have a gain or loss when shares are sold. Current performance may be higher or lower than that quoted. Visit ssga.com/etfs for most recent month end performance.


Glossary
Asset Allocation — a method of diversification which positions assets among major investment categories. Asset Allocation may be used in an effort to manage risk and enhance returns. It does not, however, guarantee a profit or protect against loss. Diversification does not ensure a profit or guarantee against loss.

Bloomberg Barclays Emerging Markets
Hard Currency Aggregate Index — A flagship hard currency Emerging Markets debt benchmark that includes USD-denominated debt from sovereign, quasi-sovereign, and corporate EM issuers.

Bloomberg Barclays Emerging Markets
USD Aggregate Bond TR Index — A flagship hard currency Emerging Markets debt benchmark that includes USD-denominated debt from sovereign, quasi-sovereign, and corporate EM issuers.

Bloomberg Barclays Euro Aggregate Bond
Index TR — Includes fixed-rate, investment-grade Euro denominated bonds. Inclusion is based on the currency of the issue, and not the domicile of the issuer. The principal sectors in the index are treasury, corporate, government-related and securitized.

Bloomberg Barclays Global Aggregate
Corporate Bond TR Index — Corporate Index is a flagship measure of global investment grade, fixed-rate corporate debt. This multi-currency benchmark includes bonds from developed and emerging markets issuers within the industrial, utility and financial sectors.

Bloomberg Barclays Global Corporate High Yield Bond TR Index — A multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive.

Bloomberg Barclays Global Aggregate
Government Bond Index TR — Government index is a measure of investment grade rated debt from 25 local currency markets. This multi-currency benchmark includes treasury and government-related fixed-rate bonds from both developed and emerging markets issuers.

Bloomberg Barclays U.S. Aggregate Bond
Index TR — A benchmark that provides a measure of the performance of the US dollar denominated investment grade bond market, which includes investment grade government bonds, investment grade corporate bonds, mortgage pass through securities, commercial mortgage backed securities.

Bloomberg Barclays US Corporate Bond
Index TR — A benchmark that measures the US investment grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

Bloomberg Barclays US Corporate High Yield Bond Index TR — Measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba3/BB-/BB+ or below. Bonds from issuers with an emerging markets country of risk, based on Barclays EM country definition, are excluded.

Bloomberg Barclays U.S. Treasury Bond
Index TR — A benchmark of US dollar denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint, but are part of a separate Short Treasury Index.

Bloomberg Barclays World Inflation Linked
Bond TR Index — Measures the investment-grade, government inflation-linked debt from 12 different developed market countries. Inconvertibility is a key criterion for inclusion of markets in this index, and it is designed to include only those markets in which a global government linker fund is likely and able to invest.

Bloomberg Commodity Index TR — A broadly diversified commodity price index distributed by Bloomberg Indices that tracks 22 commodity futures and seven sectors. No one commodity can compose less than 2 percent or more than 15 percent of the index, and no sector can represent more than 33 percent of the index.

Brexit — An abbreviation of the term “British Exit” referring to the UK referendum on June 23, 2016 that resulted in the country’s decision to withdraw from the European Union.

GPI, or Consumer Price Index — A widely used measure of inflation at the consumer level that helps to evaluate changes in cost of living.

Debt Ceiling Crisis — A contentious debate in July 2011 regarding the maximum amount of money that the US government should be allowed to borrow. Congress did end up immediately raising the “debt ceiling” by $400 billion, from $14.3 trillion to $14.7 trillion, with the possibility of future increases included in the agreement as well, but the contentious nature of the debate led Standard and Poor’s to downgrade the US’ credit rating from AAA to AA+, even though the US did not default.

Diversification — A strategy of combining a broad mix of investments and asset classes to potentially limit risk, although diversification does not guarantee protection against a loss in falling markets.

 Fiat Currency — Currency that a government declares to be legal tender, but that it is not backed by a physical commodity. The value of fiat money is linked to supply and demand rather than the value of the material that the money is made of, such as gold or silver historically. Fiat money’s value is instead based solely on the faith and credit of the economy.

Global Financial Crisis — The economic crisis that occurred from 2007–2009 that is generally considered one of the biggest economic challenges since the Great Depression of the 1930s. The GFC was triggered largely by the sub-prime mortgage crisis, which led to the collapse of systemically vital US investment banks such as Lehman Brothers. The crisis began with the collapse of two Bear Stearns hedge funds in June 2007, and the stabilization period began in late 2008 and continued until the end of 2009.

Global Property Research General Index — A broad-based global real estate benchmark that contains all listed real estate companies that conform to General Property Research’s index-qualification rules, bringing the number of index constituents to more than 650. The index’s inception date was Dec. 31 1983.

Gold Standard — A monetary standard under which the basic unit of currency is defined by a stated quantity of gold. In 1971 US President Richard Nixon ended the ability to convert US dollars into gold at the fixed price of $35 per ounce.

LBMA Gold Price — The LBMA Gold Price is determined twice each business day – 10:30 a.m. London time (i.e., the LBMA Gold Price AM) and 3:00 p.m. London time (i.e., the LBMA Gold Price PM) by the participants in a physically settled, electronic and tradable auction.

LPP Composite Listed Private Equity
Index — A broad global listed private equity index whose number of constituents is not limited. The LPP Composite includes all major private equity companies listed on global stock exchanges that fulfills the index provider’s liquidity criteria. The index composition is well diversified across listed private equity categories, styles, regions and values. The index has two versions: a price index (P) and a total return index (TR) that includes all payouts.

MSCI AC Asia ex Japan Index — Captures large and mid cap representation across 2 of 3 Developed Markets (DM) countries (excluding Japan) and 9 Emerging Markets (EM) countries in Asia. With 1687 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI ACWI Index, or MSCI All Country
World Index — Captures large and mid cap representation across 23 Developed Markets (DM) and 26 Emerging Markets (EM) countries. With 2,050 constituents, the index covers approximately 85% of the global investable equity opportunity set.

MSCI Emerging Markets (EM) Latin America Index — Captures large and mid cap representation across 6 Emerging Markets (EM) countries in Latin America. With 112 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI Europe Index — Captures large and mid cap representation across 15 Developed Markets (DM) countries in Europe. With 431 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across the European Developed Markets equity universe.

MSCI Japan Index — Designed to measure the performance of the large and mid cap segments of the Japanese market. With 324 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.

Real Rate of Return — The return realized on an investment, usually expressed annually as a percentage, which is adjusted to reflect the effects of inflation or other external factors, on the so-called nominal return. The real rate of return is calculated as follows: Real Rate of Return = Nominal Interest Rate – Inflation.

The S&P 500 Index — Widely regarded as the best single gauge of large-cap US equities and serves as the foundation for a wide range of investment products. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

Sharpe Ratio — A measure for calculating risk-adjusted returns that has become the industry standard for such calculations. It was developed by Nobel laureate William F. Sharpe. The Sharpe ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk. The higher the Sharpe ratio the better.

Sovereign Debt Crisis — A period of time beginning in 2008 when several European countries on the periphery of the Eurozone became unable to repay or refinance government debt or bail out banks without the assistance of the European Central Bank and the International Monetary Fund. It was brought to heel in July 2012 with the ECB’s pledge to save the euro and the Eurozone at all costs. While the crisis began with the collapse of Icelandic and Irish banks, it became largely focused on southern European countries – mainly Greece, but also Spain, Portugal and even Italy.

Standard Deviation — A statistical measure of volatility that quantifies the historical dispersion of a security, fund or index around an average. Investors use standard deviation to measure expected risk or volatility, and a higher standard deviation means the security has tended to show higher volatility or price swings in the past. As an example, for a normally distributed return series, about two-thirds of the time returns will be within 1 standard deviation of the average return.

The Role of Gold in Today’s Global Multi-Asset Portfolio

Hypothetical Blended Portfolio
Performance Methodology — Returns shown in Figure 9 do not represent those of a fund but were achieved by mathematically combining the actual performance data of MSCI AC World Daily TR Index, Bloomberg Barclays Global Aggregate Bond Index, Bloomberg Barclays Aggregate Global Corporate Bond Index, Bloomberg Barclays Emerging Markets Debt Index, Global Property Research General

ssga.com/etfs
Index, S&P Listed Private Equity Index, Bloomberg Barclays World Inflation Linked Bond Index, Bloomberg Barclays Global Corporate High Yield Index, S&P GSCI Index, and SPDR® Gold Shares (GLD) between January 1, 2005 and June 30, 2020. Each portfolio is re-balanced at the beginning of each year to maintain target portfolio weights. The performance assumes no transaction and rebalancing costs, so actual results will differ. It is not possible to invest directly in an index. Performance of GLD reflects annual expense ratio of 0.40%. The impact of adding GLD to an investor’s portfolio will vary based upon an investor’s asset allocation decisions and market performance, among other things.

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