

Case For Constructing Portfolios with SPDR® Gold Shares

Important Risk Disclosure

- SPDR® Gold Trust (the “Trust”) is an exchange traded fund designed to track the price of gold (net of Trust expenses).
- The value of the gold held by the Trust is determined using the LBMA Gold Price PM. For further information and risks regarding the LBMA Gold Price PM, please refer to the offering documents found on ssga.com*.
- Investment involves risks, in particular, investing in one single commodity asset class. Fluctuation in the price of gold may materially adversely affect the value of the Trust. Investors may lose part or all of their investment.
- The trading price of the SPDR Gold Shares may be different from the underlying NAV per share.
- The Trust may not be suitable for all investors. Investors should not invest based on this marketing material only. Investors should read the Trust’s prospectus, including the risk factors, take into consideration of the product features, their own investment objectives, risk tolerance level, etc. and seek independent financial and professional advices as appropriate prior to making any investment.

Strategic Allocation to SPDR® Gold Shares in a Global Multi-Asset Portfolio

A recent paper, “What is the Portfolio of Assets Held by the World,” by State Street Global Advisors Investment Solutions Group (ISG),¹ 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.’

We examined the results of adding an allocation to SPDR® Gold Shares comprising 2%, 5%, and 10% of a multi-asset portfolio under a hypothetical scenario. The hypothetical portfolio is based on the concept of the GMP developed by State Street Global Advisors ISG and incorporates additional assumptions for the purpose of our case study. We constructed the hypothetical global multi-asset portfolio by:

- Replicating the asset classes in the GMP with noninvestable market indices;
- Slightly adjusting each asset weighting in the GMP to also include commodities in the portfolio and assume no gold exposure at the start (Portfolio A) and;
- Subtracting the weight equally from the equities and government bond asset classes (two asset classes with the highest weights) to add in SPDR® Gold Shares at 2% (Portfolio B), 5% (Portfolio C) and 10% (Portfolio D).

Returns of the hypothetical blended portfolios cover the period between January 1, 2005 and December 31, 2021, and the hypothetical portfolios were rebalanced every 12 months to maintain target portfolio weights.

From the results shown in Figure 1, 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 to Portfolio A;
- Portfolio D had the highest Sharpe Ratio (0.57) and highest cumulative return (197.91%);
- Portfolio D had the lowest maximum drawdown (-29.72%).

The results illustrated that under this hypothetical scenario using broad indices to represent various asset classes that includes allocations of anywhere from 2% to 10% to SPDR® Gold Shares right after the ETF's inception, the portfolios with allocations to SPDR® Gold Shares (Portfolios B, C and D) have outperformed the multi asset portfolio with identical exposure to indices but without equivalent allocations to SPDR® Gold Shares (Portfolio A). From an asset allocation perspective, hypothetical portfolios with a SPDR® Gold Shares allocation had better risk-adjusted returns.

Figure 1 **Hypothetical Blended Portfolio Results**

Hypothetical Portfolio	SPDR® Gold Shares Allocation (%)	Annualised Return (%)	Cumulative Return (%)	Annualised Standard Deviation (%)	Sharpe Ratio*	Maximum Drawdown (%)
Portfolio A	0	6.31	183.03	9.71	0.53	-33.55
Portfolio B	2	6.38	185.97	9.64	0.54	-32.79
Portfolio C	5	6.47	190.52	9.56	0.55	-31.65
Portfolio D	10	6.63	197.91	9.48	0.57	-29.72

* Assumes risk-free rate of Citigroup 3-month bills. Source: Bloomberg Finance L.P., FactSet, State Street Global Advisors, as of December 31, 2021. **Past performance of the scheme is not necessarily indicative of the future performance of the scheme.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Returns do not represent those of a specific product managed by State Street Global Advisors Funds Management, Inc, but were achieved by mathematically combining the actual performance data of the constituents as listed in Figure 2, according to their weightings detailed in Figure 2. Performance of the hypothetical blended portfolio assumes no transaction and rebalancing costs, so actual results will differ. Performance of SPDR® Gold Shares reflects an annual expense ratio of 0.40 percent. All data based on monthly measures of performance. SPDR® Gold Shares' 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 for most recent month end performance.

Figure 2
Asset Class Weightings for Hypothetical Blended Portfolios A, B, C and D

Asset Class	Investable Market Indices & ETF	Weighting (%)			
		Portfolio A	Portfolio B	Portfolio C	Portfolio D
Equity	MSCI AC World Daily TR Index	40	39	37.5	35
Total Equity		40	39	37.5	35
Government Bonds	Bloomberg Barclays Global Aggregate Government Bond Index TR	25	24	22.5	20
IG Credit	Bloomberg Barclays Global Aggregate Corporation Bond TR Index	17	17	17	17
Inflation Linked Bonds	Bloomberg Barclays World Inflation Linked Bond TR Index	2	2	2	2
HY Bonds	Bloomberg Barclays Global Corporate High Yield Bond TR Index	1	1	1	1
EM Debt	Bloomberg Barclays Emerging Markets USD Aggregate Bond TR Index	3	3	3	3
Total Fixed Income		48	47	45.5	43
Real Estate	Global Property Research General TR Index	6	6	6	6
Private Equity	LPX Composite Listed Private Equity TR Index	3	3	3	3
Commodities	Bloomberg Commodity Index TR	3	3	3	3
Gold	SPDR® Gold Shares	0	2	5	10
Total Alternative		12	14	17	22
Portfolio Total		100	100	100	100

Source: State Street Global Advisors, as of December 31, 2021.

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.

Figure 3

SPDR® Gold Shares Standard Performance as of December 31, 2021

Portfolio	Cumulative Returns			Annualised Returns				Since Inception 11/18/2004 (%)
	1 Month (%)	QTD (%)	YTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)	
NAV	0.84	4.33	-4.14	-4.14	11.94	9.00	1.05	8.18
Market Value	3.30	4.10	-4.15	-4.15	12.12	9.29	1.18	8.14
LBMA Gold Price PM	0.08	3.62	-4.33	-4.33	12.17	9.52	1.66	8.56

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. All results are historical and assume the reinvestment of dividends and capital gains. Visit ssga.com for most recent month end performance. 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. It can be found in the fund's most recent prospectus. Performance returns for periods of less than one year are not annualised. *Past performance of the scheme is not necessarily indicative of the future performance of the scheme. NAV return on the scheme is calculated on a single pricing basis, on the assumption that all dividends and distributions are reinvested, taking into account all charges which would have been payable upon such reinvestment. Effective March 20, 2015, The SPDR Gold Trust adopted The LBMA Gold Price PM as the reference benchmark price of gold in calculating the NET Asset Value (NAV) of the trust. Prior to that date, the trust used the London PM fix as the reference benchmark price in calculating the NAV.

	Calendar Year Returns (%)				
	2021	2020	2019	2018	2017
NAV	-4.14	23.68	18.36	-1.54	11.41
Market Value	-4.15	24.81	17.86	-1.94	12.81
LBMA Gold Price PM	-4.33	24.61	18.43	-0.93	12.66

Source: Bloomberg Finance L.P. & State Street Global Advisors, as of December 31, 2021. Past performance is not a reliable indicator of future performance.

* Past performance of the scheme is not necessarily indicative of the future performance of the scheme. NAV return on the scheme is calculated on a single pricing basis, on the assumption that all dividends and distributions are reinvested, taking into account all charges which would have been payable upon such reinvestment. Effective March 20, 2015, The SPDR Gold Trust adopted The LBMA Gold Price PM as the reference benchmark price of gold in calculating the NET Asset Value (NAV) of the trust. Prior to that date, the trust used the London PM fix as the reference benchmark price in calculating the NAV.

Endnote

- 1 **Frederic Dodard**, CFA®, FRM®, EMEA Head of ISG, **Amy Le**, CFA®, Macro-Investment Strategist, Global Macro Policy Research and **Amlan Roy**, PhD, Head of Global Macro Policy Research, What is the Portfolio of Assets Held by the World, State Street Global Advisors Worldwide Entities, 2019.

ssga.com/etfs**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 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 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 World Inflation Linked Bond TR Index Measures the investment-grade, government inflation-linked debt from 12 different developed market countries. Investability 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 Indexes 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.

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.

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.

Hypothetical Blended Portfolio

Performance Methodology Returns shown in Figure 1 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 Government Bond Index, Bloomberg Barclays Aggregate Global Corporate Bond Index, Bloomberg Barclays Emerging Markets Debt Index, Global Property Research General 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 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 SPDR® Gold Shares reflects annual expense ratio of 0.40%. The impact of adding SPDR® Gold Shares to an investor's portfolio will vary based upon an investor's asset allocation decisions and market performance, among other things.

LPX Composite Listed Private Equity Index

A broad global listed private equity index whose number of constituents is not limited. The LPX Composite includes all major private equity companies listed on global stock exchanges that fulfils the index provider's liquidity criteria. The index composition is well diversified across listed private equity

categories, styles, regions and vintage years. The index has two versions: a price index (PI) and a total return index (TR) that includes all payouts.

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 3,050 constituents, the index covers approximately 85% of the global investable equity opportunity set.

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.

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.

Important Risk Information

The views expressed in this material are the views of the SPDR® Gold Strategy Team through the period ended October 2021 and are subject to change based on market and other conditions. This document contains certain statements that may be deemed forward looking statements. Please note that any such

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Additional Risk Information

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ETFs trade like stocks, are subject to investment risk, fluctuate in market value and may trade at prices above or below the ETFs' net asset value. Brokerage commissions and ETF expenses will reduce returns. Frequent trading of ETFs could significantly increase

commissions and other costs such that they may offset any savings from low fees or costs. While the shares of ETFs are tradable on secondary markets, they may not readily trade in all market conditions and may trade at significant discounts in periods of market stress.

Diversification does not ensure a profit or guarantee against loss.

Commodities and commodity-index linked securities may be affected by changes in overall market movements, changes in interest rates, and other factors such as weather, disease, embargoes, or political and regulatory developments, as well as trading activity of speculators and arbitrageurs in the underlying commodities. **Investing in commodities entails significant risk and is not appropriate for all investors.**

The offering documents of the Trust may be obtained upon request from SSGA and can be downloaded from the Trust's website: spdrgoldshares.com.*

Nothing on this document constitutes investment advice and should not be relied upon as such. The value of units in the SPDR Gold Shares (the "Fund") may fall or rise. Past performance of the Fund is not indicative of future performance. Distributions from the Fund are contingent on dividends paid on underlying investments of the Fund and are not guaranteed. Listing of the Fund on the HKEX does not guarantee a liquid market for the units and the Fund may be delisted from the HKEX.

Investors have no right to request the Trust's sponsor to redeem their shares while the Fund is listed. It is intended the holders of the Fund may only deal in their Shares through trading on the Stock Exchange of Hong Kong Limited

("SEHK"). Redemption of the Fund can only be executed in substantial size through authorized participants. Listing of the Fund on the SEHK does not guarantee a liquid market for the Fund, and the Fund may be delisted from the SEHK.

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