PENSIONS AND
LIFETIME SAVINGS
ASSOCIATION

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GOLD INVESTMENT

MADE SIMPLE GUIDE

ACKNOWLEDGEMENTS

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WORLD GOLD COUNCIL

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1 FOREWORD

PLANNING TO SAVE FOR RETIREMENT IS ONE OF THE MOST FISCALLY SOUND DECISIONS A PERSON CAN MAKE. BUT PENSION SCHEMES ARE INCREASINGLY FACING SEVERAL CHALLENGES, RAISING QUESTIONS ABOUT THEIR ABILITY TO MEET THEIR LONG-TERM LIABILITIES. FOUR CHALLENGES STAND OUT:

- **Funded status**
  As people live longer and spend longer in retirement, pension schemes have seen their liabilities grow relative to their assets. According to the SkyVal index, UK defined benefit schemes had a £290bn billion shortfall at the end of September 2019.[1]
- **Market volatility**
  Heightened volatility presents a risk for pension schemes looking to achieve their funding target and manage their costs. Defined contribution funds need to consider where long-term growth can be found when markets are volatile or look overvalued.
- **Illiquidity**
  The low/negative interest rate environment, which has depressed yields on bonds, has inflated future liabilities. As such, pension schemes have been forced to search for returns greater than those from traditional assets, often in illiquid investments that can carry higher risk.
- **Environmental, Social and Governance (ESG)**
  Increasing pressure from authorities and members of pension schemes to implement ESG and stewardship approaches into their investment guidelines.

Addressing these challenges is not easy, but we believe that gold can play an instrumental role. At the World Gold Council, we actively engage with stakeholders around the world and have developed resources, including www.goldhub.com, to provide data, insight, and analytical tools to gain a better understanding of gold as an investment.

John Reade
Chief Market Strategist
World Gold Council

1 www.pwc.co.uk/press-room/press-releases/UK-db-pension-deficit-falls-by-50bn-during-september.html

2 INTRODUCTION

GOLD COINS WERE FIRST STRUCK ON THE ORDER OF KING CROESUS OF LYDIA (AN AREA THAT IS NOW PART OF TURKEY), AROUND 550 BC. THEY CIRCULATED AS CURRENCY IN MANY COUNTRIES BEFORE THE INTRODUCTION OF PAPER MONEY. ONCE PAPER MONEY WAS INTRODUCED, CURRENCIES STILL MAINTAINED AN EXPLICIT LINK TO GOLD (THE PAPER BEING EXCHANGEABLE FOR GOLD ON DEMAND). OVER 2,500 YEARS, GOLD HAS TAKEN ON EMOTIONAL, CULTURAL AND FINANCIAL VALUE AND A RANGE OF USES, IN JEWELLERY, TECHNOLOGY AND BY CENTRAL BANKS AND INVESTORS. AROUND 197,600 TONNES OF GOLD, WORTH APPROXIMATELY £7.3 TRILLION, HAVE BEEN MINED SINCE THE BEGINNING OF CIVILISATION.[2]

Gold is a unique asset, with diverse drivers of supply and demand: gold wires are the backbone of the internet; international tensions can affect stock markets and cause people to invest in gold as a safe asset; gold-based drugs have been developed and used to treat illnesses such as rheumatoid arthritis.

In recent years, the expansion of the middle class in Asia and a renewed focus on effective risk management following the 2008–2009 financial crisis in the US and Europe have both generated increased demand for ways to invest in gold from institutional and retail investors alike. And over the past 10 years, central banks around the world have added £150bn of gold to their foreign exchange reserves.

This guide aims to help pension fund investors understand the role gold could play in portfolios, looking at diversification, returns and liquidity, as well as covering the ESG and climate risk perspective.

2 At the end of 2019.

3 DIVERSIFICATION

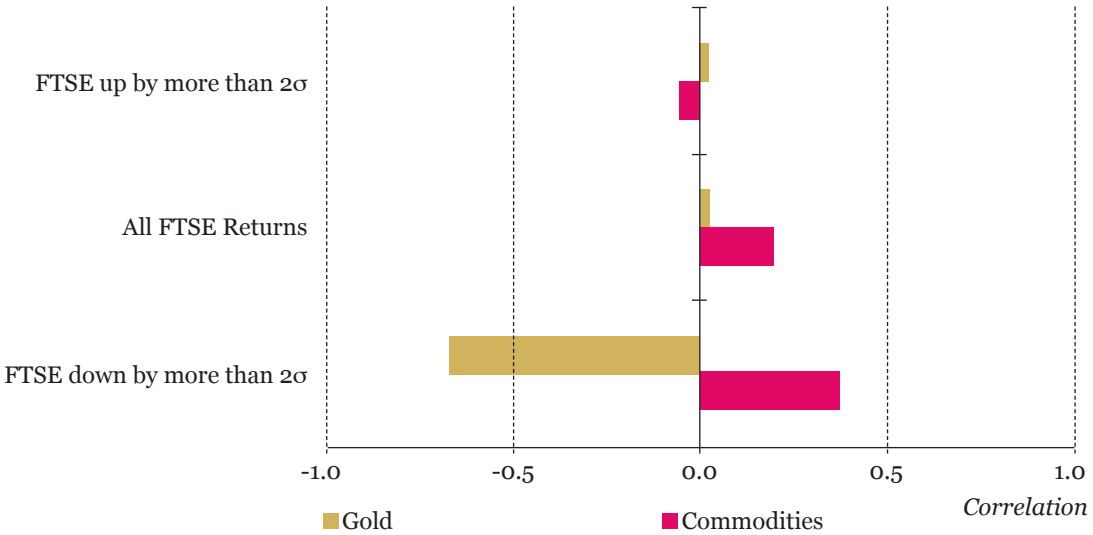
WITHIN A TYPICAL INVESTMENT PORTFOLIO IT IS IMPORTANT TO COMBINE ASSETS THAT BEHAVE DIFFERENTLY – WHICH EITHER DON'T CORRELATE OR NEGATIVELY CORRELATE. ALTHOUGH DIVERSIFICATION DOES NOT GUARANTEE INVESTMENT RETURNS AND DOES NOT ELIMINATE THE RISK OF LOSS, BASED ON HISTORICAL DATA, IT CAN EITHER REDUCE PORTFOLIO RISK FOR THE SAME RETURN OR INCREASE PORTFOLIO RETURNS FOR THE SAME LEVEL OF PORTFOLIO RISK. ALTHOUGH MOST INVESTORS AGREE ON THE IMPORTANCE OF DIVERSIFICATION, EFFECTIVE DIVERSIFIERS ARE NOT EASY TO FIND. CORRELATIONS TEND TO INCREASE AS MARKET UNCERTAINTY (AND VOLATILITY) RISES. INCREASING CONVERGENCE AMONG MAINSTREAM ASSET CLASSES HAS LED INVESTORS TO CONSIDER NON-TRADITIONAL ALTERNATIVE INVESTMENT VEHICLES AS A WAY OF STABILISING AND ENHANCING PORTFOLIO PERFORMANCE.

Gold historically benefits from flight-to-quality inflows during periods of heightened risk.[3] By providing positive returns and reducing portfolio losses, gold has been an effective diversifier during times of systemic crisis when investors tend to withdraw from equities. Gold's liquidity, covered in the next chapter, means it can be sold to meet liabilities while the values of less liquid assets correct. The greater a downturn in stocks and other risk assets, the more negative gold's correlation to these assets becomes (Chart 1).

But gold's correlation doesn't only work in investors' favour during periods of turmoil. Due to its dual nature as an adornment and an investment, gold's long-term price trend is supported by income growth.

Chart 1:

CORRELATION BETWEEN GOLD AND UK STOCK RETURNS IN DIFFERENT ENVIRONMENTS OF STOCK'S PERFORMANCES*



*As of 31 December 2019. Correlations computed using weekly returns in pound sterling based on the Bloomberg Commodity Index and the LBMA Gold Price PM since January 1990. The middle bar corresponds to the correlation conditional on FTSE 100 weekly return falling or rising by less than two standard deviations (or 's'), respectively. The bottom bar corresponds to the correlation conditional on FTSE 100 weekly return falling by more than two standard deviations (or 's') respectively, while the top bar corresponds to the FTSE 100 weekly return increasing by more than two standard deviations. The standard deviation is based on the same weekly returns over the full period.
Source: Bloomberg; ICE Benchmark Administration; World Gold Council

3 www.gold.org/goldhub/research/relevance-of-gold-as-a-strategic-asset-in-the-uk

4 LIQUIDITY

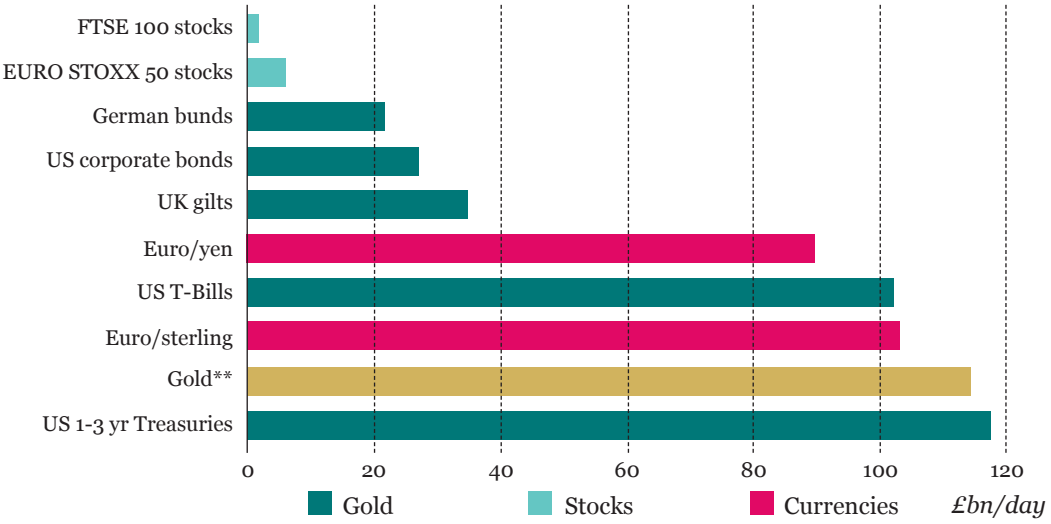
FOR LARGE BUY-AND-HOLD INSTITUTIONAL INVESTORS, SIZE AND LIQUIDITY ARE IMPORTANT FACTORS WHEN ESTABLISHING A STRATEGIC HOLDING OF AN ASSET.

Gold benefits from a large, global market. Physical gold holdings by investors and central banks are worth approximately £2.2 trillion, with an additional £310 billion in open interest through derivatives traded on exchanges or over-the-counter (OTC).

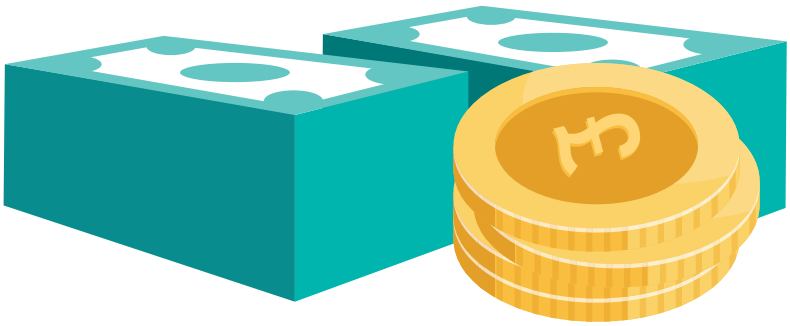
And the gold market is also liquid. Gold trades between £40 billion and £60 billion per day through spot and derivatives contracts OTC. Gold futures trade £25–£40 billion per day across various global exchanges. Gold-backed ETFs offer an additional source of liquidity, with the largest UK-listed funds trading an average of £100 million per day (Chart 2).

Chart 2:

AVERAGE DAILY TRADING VOLUMES IN POUND STERLING*



*Based on estimated one-year average trading volumes in pound sterling as of 31 December 2019, except for currencies that correspond to March 2019 volumes due to data availability.
** Gold liquidity includes estimates on over-the-counter (OTC) transactions and published statistics on futures exchanges, and gold-backed exchange-traded products.
Source: Bloomberg, Bank for International Settlements, UK Debt Management Office (DMO), Germany Finance Agency, Japan Securities Dealers Association, London Bullion Market Association, World Gold Council



5 RETURNS

LIKE ANY INVESTMENT, AN ALLOCATION IN GOLD IS NOT RISK-FREE. ITS VALUE WILL FLUCTUATE IN THE SHORT-TERM, AND POTENTIALLY MORE SO THAN OTHER ASSETS. BUT OVER THE LONG-TERM, ITS VOLATILITY HAS AVERAGED 16-17%, SIGNIFICANTLY LESS THAN OTHER TRADITIONAL ASSETS SUCH AS EQUITIES OR BONDS (TABLE 1).

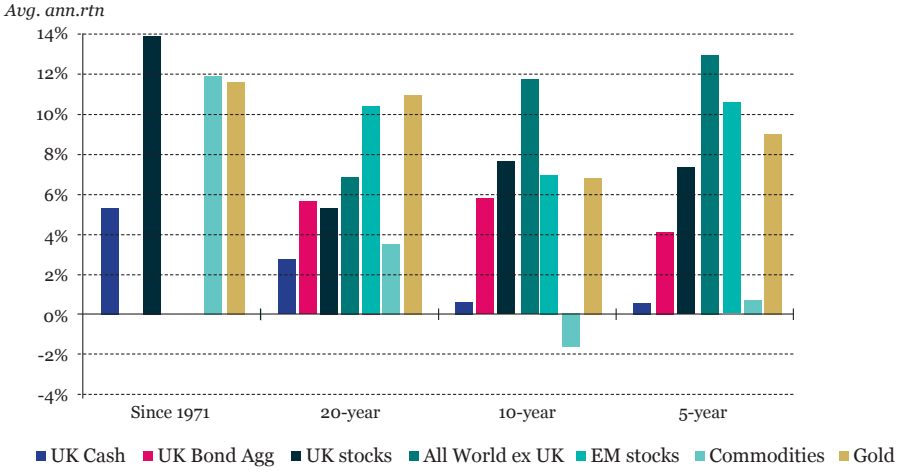
	Gold (GBP/oz)	Gold (US&/oz)	BoE Effective FX (GBP)	S&P GSCI	Brent crude oil (GBP/bbl)	BarCap Sterling Gov Agg	BarCap Sterling Credit	FTSE 100	FTSE Small Cap	MSCI Europe ex UK
1 - year	13.6%	11.7%	7.6%	19.7%	30.3%	4.0%	4.5%	11.6%	7.1%	12.5%
3 - year	29.8%	28.4%	13.7%	34.5%	54.7%	8.1%	8.7%	26.9%	17.1%	32.7%
5 - year	34.6%	34.4%	14.6%	45.3%	70.0%	33.7%	9.7%	36.7%	22.4%	41.1%
10 - year	16.3%	15.5%	7.5%	18.9%	30.0%	4.5%	4.8%	14.8%	9.4%	17.9%
20 - year	17.3%	17.2%	7.3%	22.6%	35.0%	16.9%	4.8%	18.3%	11.2%	20.6%

Gold's volatility computed using LBMA Gold Price. Calculations based on total return indices when applicable. Data ending 31 Jan 2020
Source: Barclays capital, Bloomberg, ICE Benchmark Administration Ltd, MSCI, World Gold Council

And it is a common misconception that gold is only useful in time of heightened uncertainty. Its price, measured in pound sterling, has increased by an average 11.6% per year since 1971 when it began to be freely traded following the end of Bretton Woods (Chart 3). It has outperformed many stock, bond and commodity indices over multiple periods since then.

Chart 3:

AVERAGE ANNUAL RETURN OF KEY GLOBAL ASSETS IN POUND STERLING*



*As at 31 December 2019. Computations in pound sterling of total return indices for Barclays GBP Cash Index, Barclays Gilts Index, FTSE 100 Index, FTSE All -World ex UK and MSCI Emerging Market indices, Bloomberg Commodity Index and spot for LBMA Gold Price PM.
Source: Bloomberg; ICE Benchmark Administration; World Gold Council

Gold's price performance is a result of its multiple sources of demand. Gold is used by investors to protect and enhance wealth over the long-term, and it is no one's liability. It is also sought after as an adornment, valued by jewellery buyers across the world. And it is a key component in electronics. These diverse sources of demand, combined with its relative scarcity, give gold a resilience: the potential to deliver returns in good times and in bad.

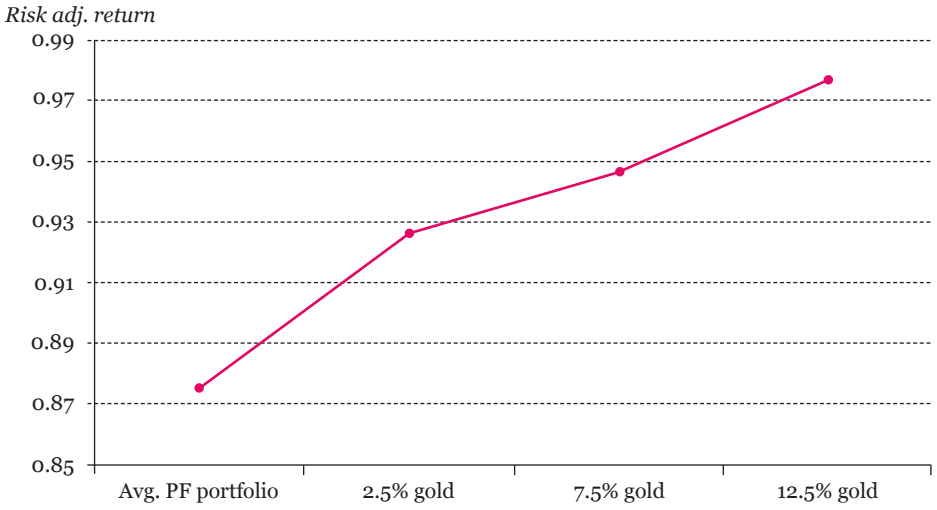
As a result, and in order to maximise potential benefits to their portfolios, gold can be best viewed by investors as a long-term strategic asset.

6 PORTFOLIO IMPACT

WORLD GOLD COUNCIL ANALYSIS SUGGESTS THAT OVER THE PAST FIVE, 10- AND 20-YEARS, THE AVERAGE UK PENSION FUND WOULD HAVE ACHIEVED HIGHER RISK-ADJUSTED RETURNS IF 2.5%, 7.5% OR 12.5% OF THE PORTFOLIO WERE ALLOCATED TO GOLD.[4] ALLOCATIONS OF 2.5% TO 12.5%, PROPORTIONALLY REDUCING ALL ASSETS, WOULD HAVE RESULTED IN HIGHER RISK-ADJUSTED RETURNS OVER 10 YEARS (CHART 4).

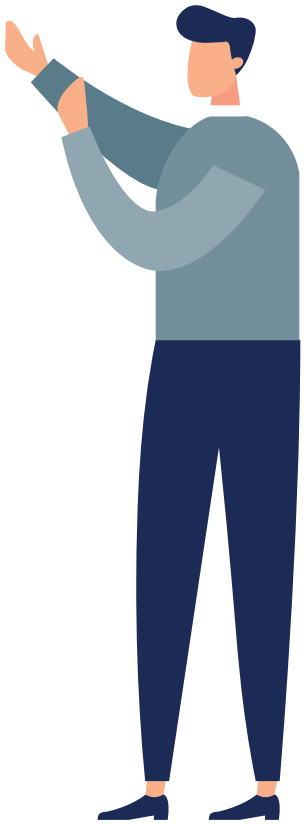
Chart 4:

PERFORMANCE OF A HYPOTHETICAL AVERAGE PENSION FUND (PF) PORTFOLIO WITH AND WITHOUT GOLD

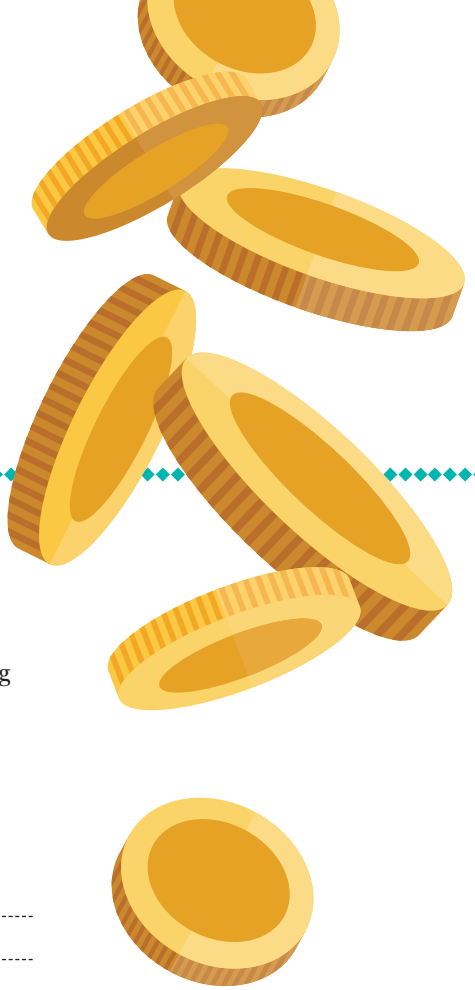


Source: Bloomberg; ICE Benchmark Administration; World Gold Council

Broadly speaking, the higher the risk – whether in terms of volatility, illiquidity or concentration of assets – the larger the required allocation to gold, within the range in consideration, to offset that risk.



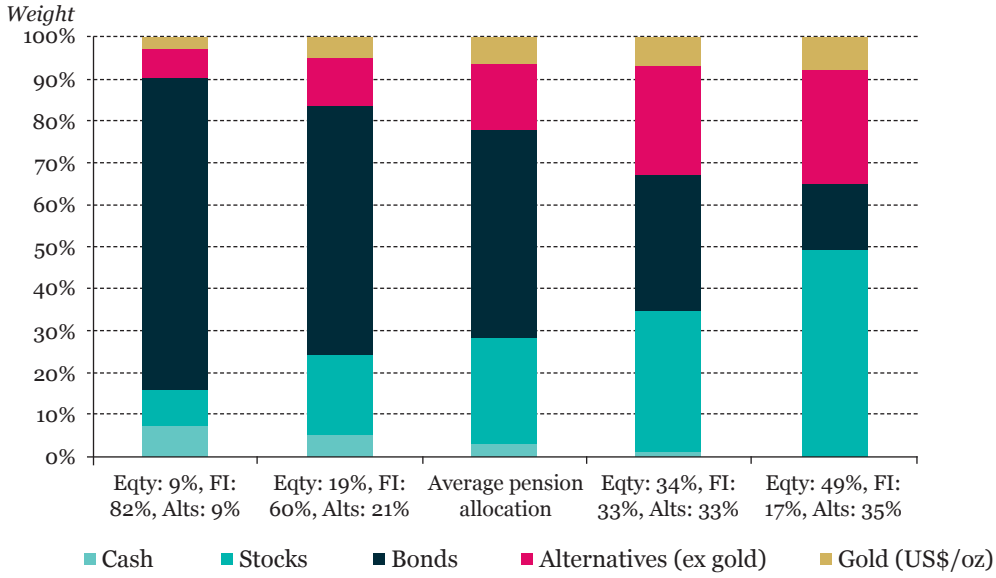
4 Based on performance in pound sterling between 31 December 1999 and 31 December 2019. The hypothetical average UK pension fund portfolio is based on Willis Tower Watson Global Pension Assets Study 2019 and Global Alternatives Survey 2017. It includes quarterly-rebalanced total returns of a 30% allocation to stocks (8% FTSE 100 Index, 22% FTSE All-World ex UK), 49% allocation to fixed income (13% Barclays YK Govt Inflation-Linked All Maturities Index, 11% Barclays Sterling Gilts Index, 10% S&P UK Investment Grade Corporates Index, 10% Barclays Global Aggregate Corporate Bonds, 3% Barclays EM Bond Index, 2% Barclays Overnight GBP Index), and 21% alternative assets (8% HFRI Hedge Fund Index, 7% FTSE EPRA Nareit Developed Europe Index, 6% LPX Europe Listed Private Equity Index). The allocation to gold comes from proportionally reducing all assets. Risk-adjusted returns are calculated as the annualised return/annualised volatility.
The resulting performance of various investment outcomes that can be generated through allocation to gold are hypothetical in nature, may not reflect actual investment results and are not guarantees of future results. Diversification does not guarantee investment returns and does not eliminate the risk of loss. Neither World Gold Council nor any of its affiliates guarantee or warranty any calculations and models used in any hypothetical portfolios or any outcomes resulting from any such use. See Important information and disclaimers at the end of this paper.



Gold's optimal weight in hypothetical portfolios is statistically significant even if investors assume an annual return for gold of between 2% and 4% – well below its actual long-term historical average annual growth rate of 11.6% since 1971. And it shows that this is also the case for investors who already hold other inflation-hedging assets, such as inflation-linked bonds, as well as for investors who hold alternative assets, such as real estate, private equity and hedge funds.[5 6 7]

Chart 5:

LONG-RUN OPTIMAL ALLOCATIONS BASED ON ASSET MIX



Source: World Gold Council

5 Gold as a tactical inflation hedge and long-term strategic asset, World Gold Council, July 2009.
6 How gold improves alternative asset performance, Gold Investor, Volume 6, World Gold Council, June 2014.
7 Based on monthly total returns from December 1999 to December 2019. The hypothetical average UK pension fund portfolio is based on Willis Tower Watson Global Pension Assets Study 2019 and Global Alternatives Survey 2017. Each hypothetical portfolio composition is roughly equivalent to the portfolio in Chart 5 and reflects a percentage in stock (Eqty), alternative assets (Alts), cash and bonds (FI). For example: the average pension allocation includes quarterly-rebalanced total returns of a 30% allocation to stocks (8% FTSE 100 Index, 22% FTSE All-World ex UK), 49% allocation to fixed income (13% Barclays UK Govt Inflation-Linked All Maturities Index, 11% Barclays Sterling Gilts Index, 10% S&P UK Investment Grade Corporates Index, 10% Barclays Global Aggregate Corporate Bonds, 3% Barclays EM Bond Index, 2% Barclays Overnight GBP Index), and 21% alternative assets (8% HFRI Hedge Fund Index, 7% FTSE EPRA Nareit Developed Europe Index, 6% LPX Europe Listed Private Equity Index). The allocation to gold comes from proportionally reducing all assets. The optimal gold allocation is added to the 'Alts' bucket. Risk-adjusted returns are calculated as the annualised return/annualised volatility. Analysis based on New Frontier Advisors Resampled Efficiency. For more information see Efficient Asset Management: A Practical Guide to Stock Portfolio Optimization and Asset Allocation, Oxford University Press, January 2008.

7 ESG PERSPECTIVE

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) ISSUES ARE NOW SHAPING THE AGENDA FOR PENSION TRUSTEES, ADVISERS, PROVIDERS AND ASSET MANAGERS, IN LINE WITH WIDER SOCIETAL EXPECTATIONS BUT ALSO DRIVEN BY A HOST OF LEGAL AND REGULATORY CHANGES.

In September of 2019, UK pension trustees became obliged to have a strategy recognising ESG factors, including climate change, as 'financially material' considerations. The following month, regulations were introduced requiring pension schemes with more than 100 members to disclose an understanding of the potential impacts on their investments from ESG-related risks. [8] [9]

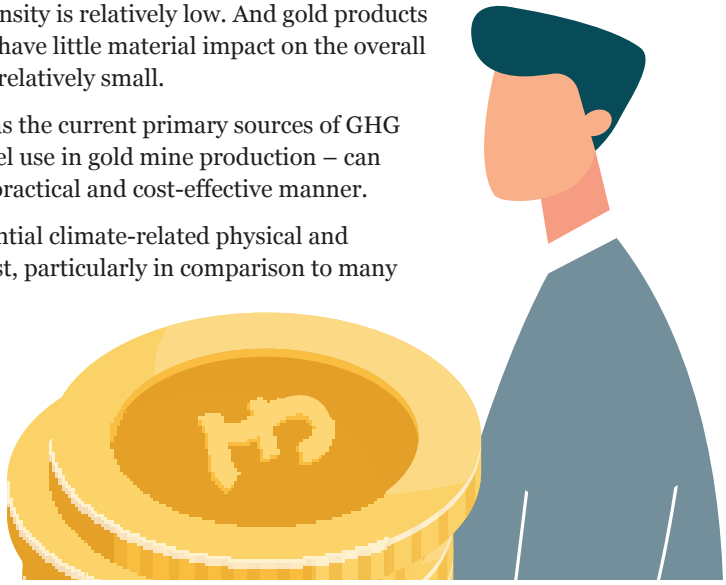
The moves towards better understanding of these risks, and actions to mitigate their negative impacts, have also been key factors shaping the evolution of the gold supply chain, and gold's developing role as a portfolio asset.

To ensure that gold is produced sustainably and responsibly, key market participants across the supply chain have developed a range of industry initiatives and standards to provide greater confidence in the provenance of gold as a responsibly sourced asset.[10] [11]

Most recently, the World Gold Council launched the Responsible Gold Mining Principles, a comprehensive framework through which gold mining companies can set out their position on a wide range of ESG factors.[12] Independent validation of conformance to these principles – reinforced by external assurance on performance – is intended to both provide reassurance that the gold production process adheres to high ESG standards and help mitigate the risk of "greenwashing".

Of all ESG risks, perhaps the most substantial and urgent are those relating to climate change. There is strong evidence that gold can play a constructive role in the mitigation of climate-related risks and support greater resilience in investment portfolios in the face of potentially destructive climate impacts. This evidence primarily rests on the following:

- On a value basis, gold's greenhouse gas (GHG) intensity is relatively low. And gold products – gold used in bullion, jewellery, and electronics – have little material impact on the overall carbon footprint of the gold supply chain, which is relatively small.
- But gold's climate impacts can be reduced further as the current primary sources of GHG emissions in the gold supply chain – energy and fuel use in gold mine production – can transition towards a net zero carbon pathway in a practical and cost-effective manner.
- Gold's risk-return profile and its sensitivity to potential climate-related physical and transition risks and scenarios looks relatively robust, particularly in comparison to many other mainstream assets.[13]



8 assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739331/response-clarifying-and-strengthening-trustees-investment-duties.pdf
9 See ESG Made Simple and ESG & Stewardship: a practical guide to trustee duties
10 www.gold.org/about-gold/gold-supply/responsible-gold/responsible-gold-mining-principles
11 www.icmm.com/en-gb/members/member-commitments/icmm-10-principles
12 www.gold.org/about-gold/gold-supply/responsible-gold/responsible-gold-mining-principles
13 www.gold.org/goldhub/research/gold-and-climate-change-current-and-future-impacts

8 WAYS TO INVEST IN GOLD

THERE ARE SEVERAL WAYS TO ACCESS THE GOLD MARKET, FROM HOLDING PHYSICAL ASSETS TO GOLD DERIVATIVES.

Gold-backed exchange-traded funds (ETFs)
ETFs offer investors the convenience of buying gold on the stock exchange as easily as they would any other share. Gold-backed ETFs are regulated financial products, with each share corresponding to a specific amount of gold and a share price that generally reflects the underlying gold price, less expenses. Unlike gold derivative instruments, most of these funds are fully backed by vaulted physical gold.

Bullion bank gold accounts
In an "allocated" gold account, gold is stored in a vault owned and managed by a recognised bullion bank. Specific bars which are numbered and identified by hallmark, weight and fineness, are allocated to each investor, who pays the custodian for storage and insurance. The holder of gold in an allocated account has full ownership of the gold in the account, and the bullion bank that owns the vault where the gold is stored may not trade, lease or lend the bars except on the specific instructions of the account holder.

In an "unallocated" account, investors do not have specific bars allotted to them (unless they take delivery of their gold, which they can usually do within two working days).

The over-the-counter (OTC) market
The OTC market offers investors a further range of gold products, including spot and forward contracts and tailor-made structured products. However, because the entry level is typically high, this market is dominated by institutional players or ultra-high net worth individuals. Investors wishing to use this channel should contact a bullion bank.

Gold futures and options
Gold futures contracts are firm commitments to make or take delivery of a specified quantity and purity of gold on a prescribed date at an agreed price. These are traded on exchanges around the world, the largest of which is COMEX, part of CME Group.

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