WORLD GOLD COUNCIL

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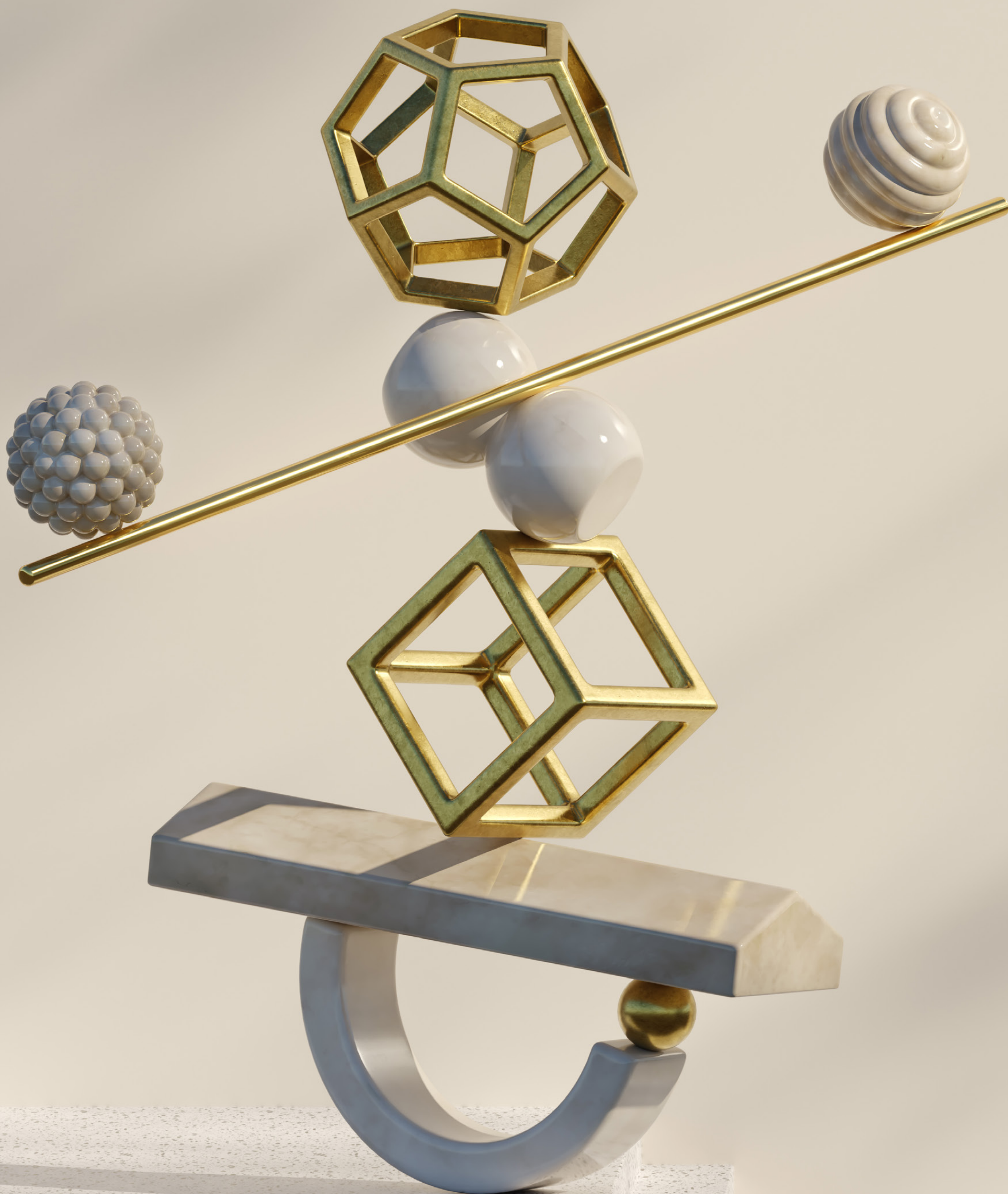
Gold as a strategic asset

2024 edition



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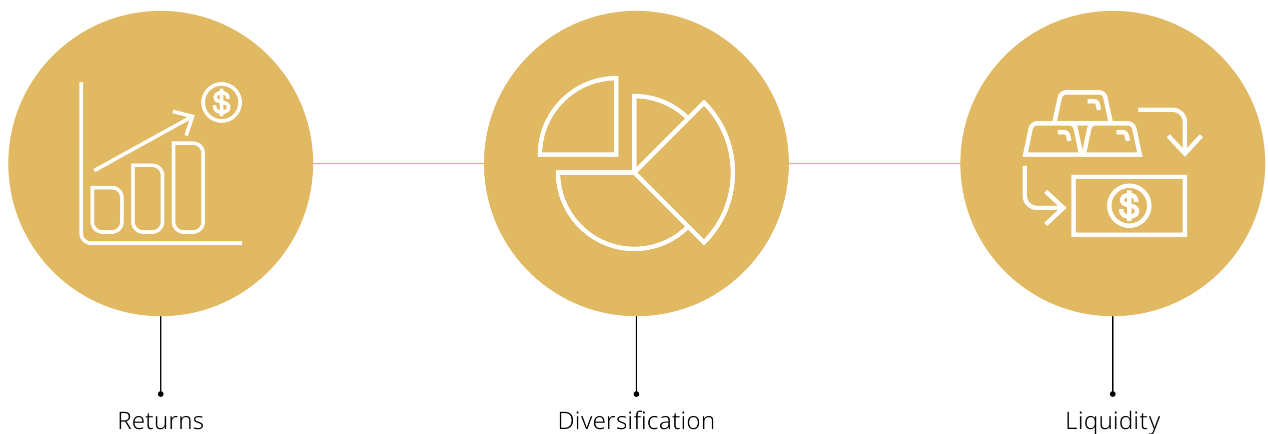
What makes gold a strategic asset?

Gold has a key role as a strategic long-term investment and as a mainstay allocation in a well-diversified portfolio. Investors have been able to recognise much of gold's value over time by maintaining a long-term allocation and taking advantage of its safe-haven status during periods of economic uncertainty.

Gold can enhance a portfolio in three key ways:



Gold is a highly liquid asset, which is no one's liability, carries no credit risk, and is scarce, historically preserving its value over time. It also benefits from diverse sources of demand: as an investment, a reserve asset, gold jewellery, and a technology component. These attributes mean gold can enhance a portfolio in three key ways:

- **Delivering long-term returns (p.2)**
- **Improving diversification (p.5)**
- **Providing liquidity (p.7)**

Combined, these characteristics make gold a clear complement to stocks and bonds and a welcome addition to broad-based portfolios.

Moreover, the shift towards a greater integration of environmental, social and governance (ESG) objectives within investment strategies has important implications and we believe gold can play a role in supporting these. Gold – from established investment sources – should be recognised as an asset that is responsibly produced and delivered from a supply chain that adheres to high ESG standards. Gold also has a potential role to play in reducing investor exposure to climate-related risks.

Gold's key attributes

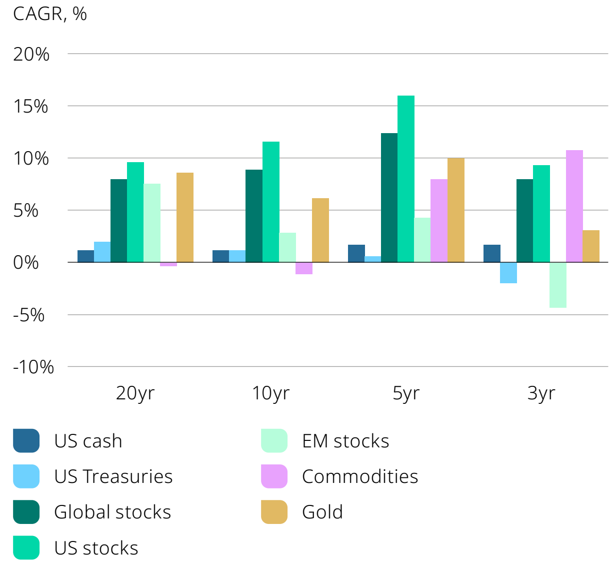
A long-term source of return

Investors have long considered gold a beneficial asset during periods of uncertainty. Yet, historically, it has generated long-term positive returns in both good and bad economic times. Its diverse sources of demand give gold a particular resilience and the potential to deliver solid returns in various market conditions **(Figure 1)**. Gold is, on the one hand, often used as an investment to protect and enhance wealth over the long term, but on the other hand it is also a consumer good, via jewellery and technology demand. During periods of economic uncertainty, it is the counter-cyclical investment demand that drives the gold price up. During periods of economic expansion, the pro-cyclical consumer demand supports its performance. Combined, these factors give gold the ability to provide stability under a range of economic environments.

Looking back over half a century, the price of gold in US dollars has increased by nearly 8% per year since 1971 when the US gold standard collapsed. Over this period, gold's long-term return is comparable to equities and higher than bonds. Gold has also outperformed many other major asset classes over the past 3, 5, 10 and 20 years **(Chart 1)**.

Chart 1: Gold has performed well over the past 3, 5, 10 and 20 years, despite the strong performance of risk assets

Annualised return over the past 3, 5, 10 and 20 years*

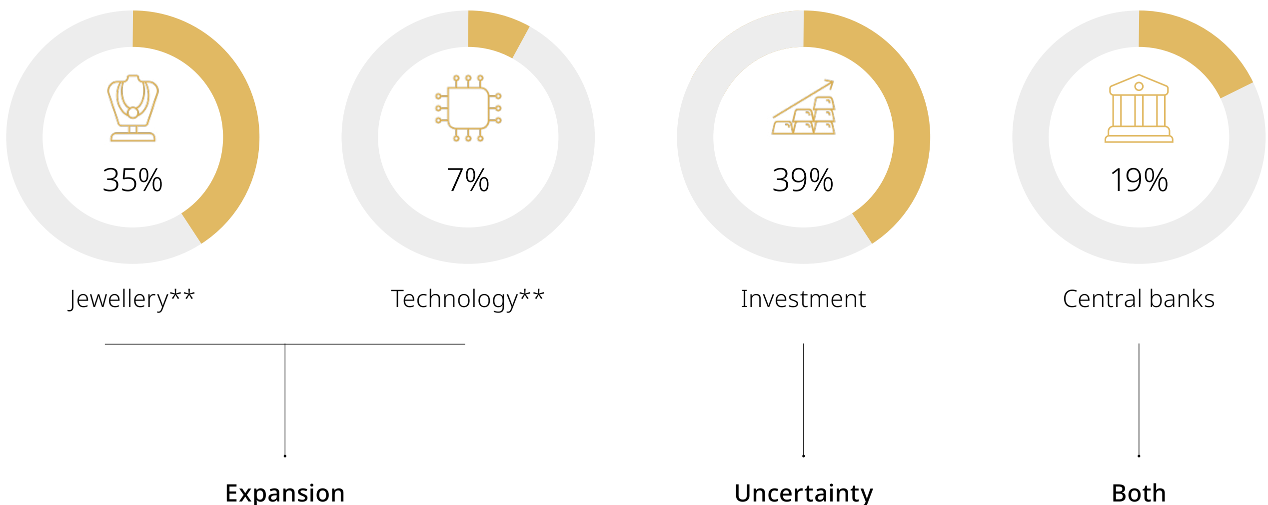


*Returns from 31 December 2003 to 31 December 2023

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Figure 1: Gold's sources of demand

Average annual net demand = 3,126 tonnes* (approx. US$195bn)



*Based on 10-year average annual net demand estimates ending in 2023. Includes: jewellery and technology net of recycling, in addition to bars & coins, ETFs and central bank demand which are historically reported on a net basis. It excludes over-the-counter demand, owing to limitations in data availability.

** Net jewellery and technology demand computed assuming 90% of annual recycling comes from jewellery and 10% from technology.

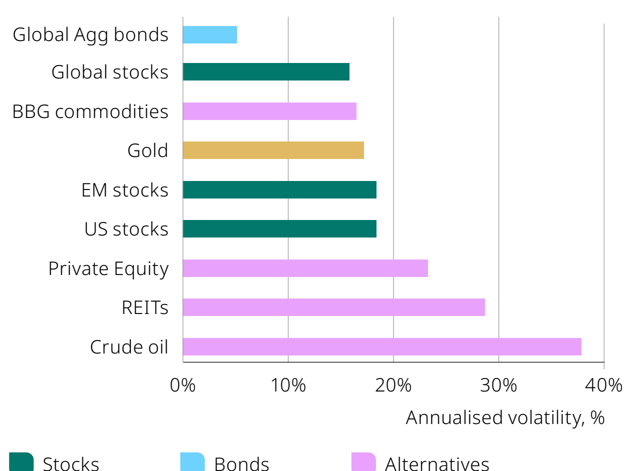
Source: Metals Focus, Refinitiv GFMS, World Gold Council

Gold in US dollars has increased by nearly 8% per year since 1971

Moreover, the diversity of its sources of demand help to make gold a less volatile asset than some equity indices, other commodities or alternatives **(Chart 2)**.

Chart 2: Gold has been less volatile than many equity indices, alternatives and commodities because of its scale, liquidity and diverse sources of demand

Average daily volatility of several major assets since 2003*



*Annualised volatility is computed based on daily returns in US dollars between 31 December 2003 and 31 December 2023. Indices used: Bloomberg Global Aggregate Bond Index, MSCI Daily Gross World Index; MSCI Daily Gross EM; MSCI USA Index; LBMA Gold Price PM, Bloomberg Commodity Index, Bloomberg WTI Crude Oil; S&P Listed Private Equity Index; FTSE Nareit Equity REITs Index USD.

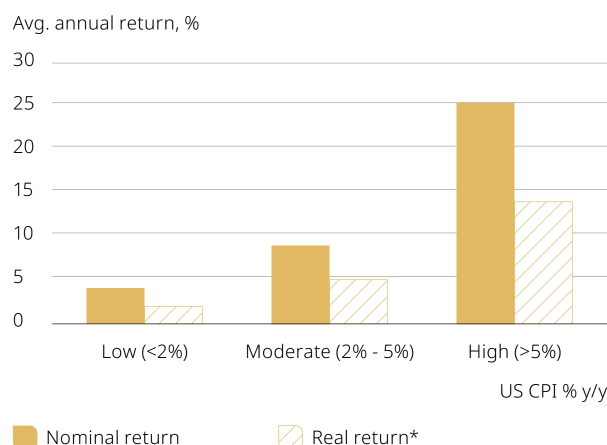
Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Beating inflation, combating deflation

Gold has long been considered a hedge against inflation and the data confirms this: since 1971 it has outpaced the US and world consumer price indices (CPI). Gold also protects investors against high inflation. In years when inflation was between 2%-5%, gold's price increased 8% per year on average. This number increased significantly with even higher inflation levels **(Chart 3)**. Over the long term, therefore, gold has not just preserved capital but also helped it grow.

Chart 3: Gold historically rallies in periods of high inflation

Gold nominal and real returns in US dollars as a function of annual inflation*



*As of 31 December 2023. Based on y/y changes in US dollars for 'gold': LBMA Gold Price PM and 'inflation': US CPI since January 1971.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

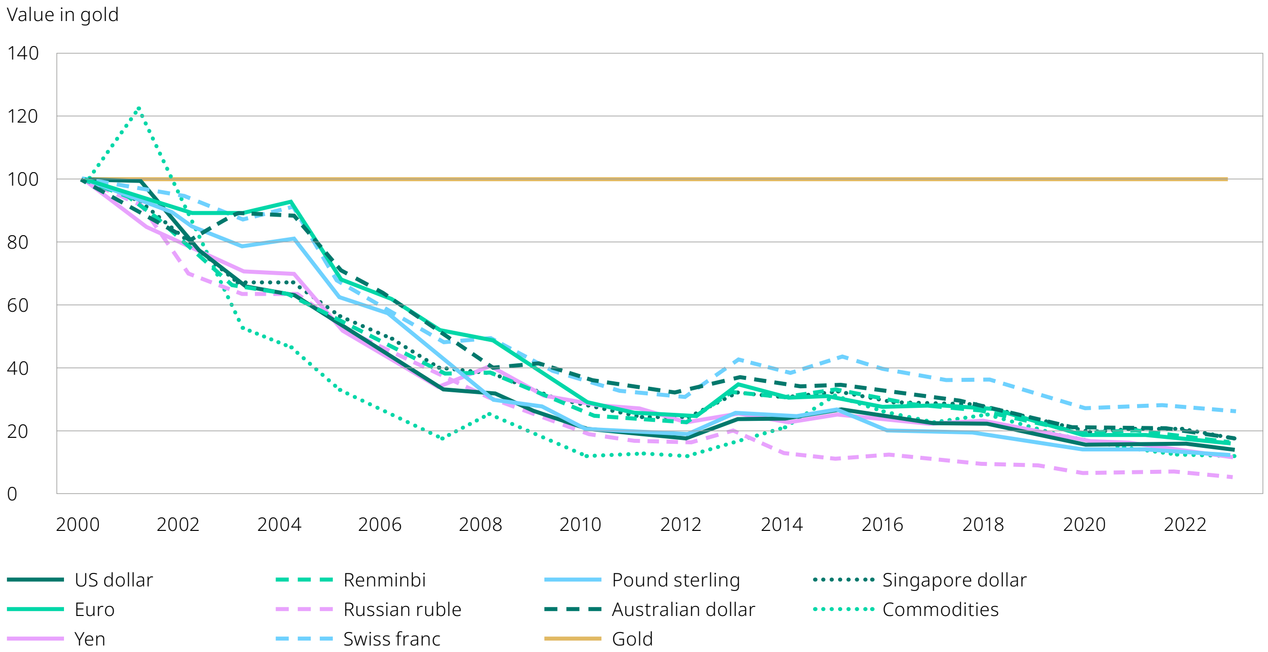
Our research also shows that gold should do well in periods of deflation. Such periods are characterised by low interest rates, reduced consumption and investment, and financial stress, all of which tend to foster gold demand.

Store of value

Historically, major currencies were pegged to gold. That changed with the unravelling of the US gold standard in 1971 and the eventual collapse of the Bretton Woods system. Since then, with few exceptions, gold has significantly outperformed all major currencies and commodities as a means of exchange. And although this outperformance was particularly marked immediately following the end of the gold standard, gold has clearly continued to outperform most major currencies in the more recent past **(Chart 4)**. A key factor behind this robust performance is that gold mine production has grown slowly over time – increasing by approximately 1.7% per year over the past 20 years.

Chart 4: The purchasing power of major currencies and commodities has significantly eroded relative to gold

Value of currencies and broad commodities relative to gold (January 2000 = 100)*



*As of 31 December 2023. Relative value between 'gold': LBMA Gold Price PM, 'commodities': Bloomberg Commodity Index, and major currencies since 2000. Value of commodities and currencies measured in ounces of gold and indexed to 100 in January 2000.

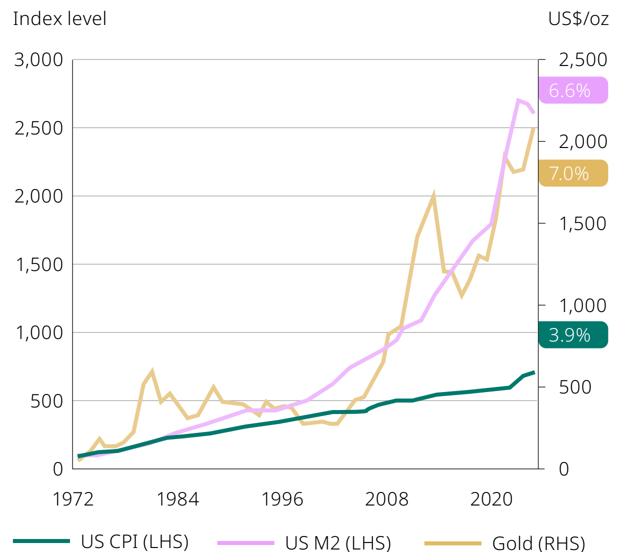
Source: Bloomberg, ICE Benchmark Administration, World Gold Council

By contrast, fiat money can be printed in unlimited quantities to support monetary policy, as exemplified by the quantitative easing measures in the aftermath of the Global Financial Crisis (GFC) and the COVID-19 pandemic. In these crises, many investors turned to gold in order to hedge themselves against currency devaluation and preserve their purchasing power over time.

In fact, the rapidly increasing US money supply and the low-rate environment fostered an optimal environment for gold to perform well **(Chart 5).**

Chart 5: Gold prices have tracked the expansion of US money supply

US M2 growth, US CPI and gold price*



*As of 31 December 2023. US CPI and US M2 were constructed using data from January 1972 and re-based to 100 on January 1972. Gold based on the LBMA Gold Price PM USD.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Diversification that works

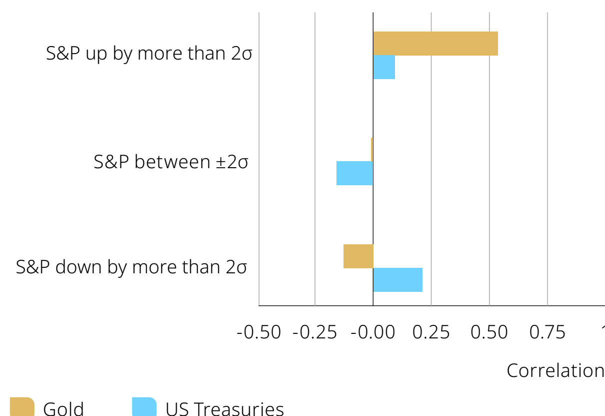
Effective diversifiers are sometimes hard to find. Many assets become increasingly correlated as market uncertainty rises and volatility is more pronounced, driven in part by risk-on/risk-off investment decisions. As a result, many so-called diversifiers fail to protect portfolios when investors need them most.

Gold is different in that its negative correlation to equities and other risk assets increases as these assets sell off **(Chart 6)**. The GFC is a case in point. Equities and other risk assets tumbled in value, as did hedge funds, real estate and most commodities, which were long deemed portfolio diversifiers. Gold, by contrast, held its own and increased in price, rising 21% in US dollars from December 2007 to February 2009. And in the most recent sharp equity market pullbacks of 2020 and 2022, gold's performance remained positive.

This robust performance is not surprising. With few exceptions, gold has been particularly effective during times of systemic risk, delivering positive returns and reducing overall portfolio losses **(Chart 7)**.

Chart 6: Gold becomes more negatively correlated with stocks in extreme market selloffs

Correlation of US stocks versus gold and US stocks versus US Treasuries in various environments of US equity market performance since 1994*

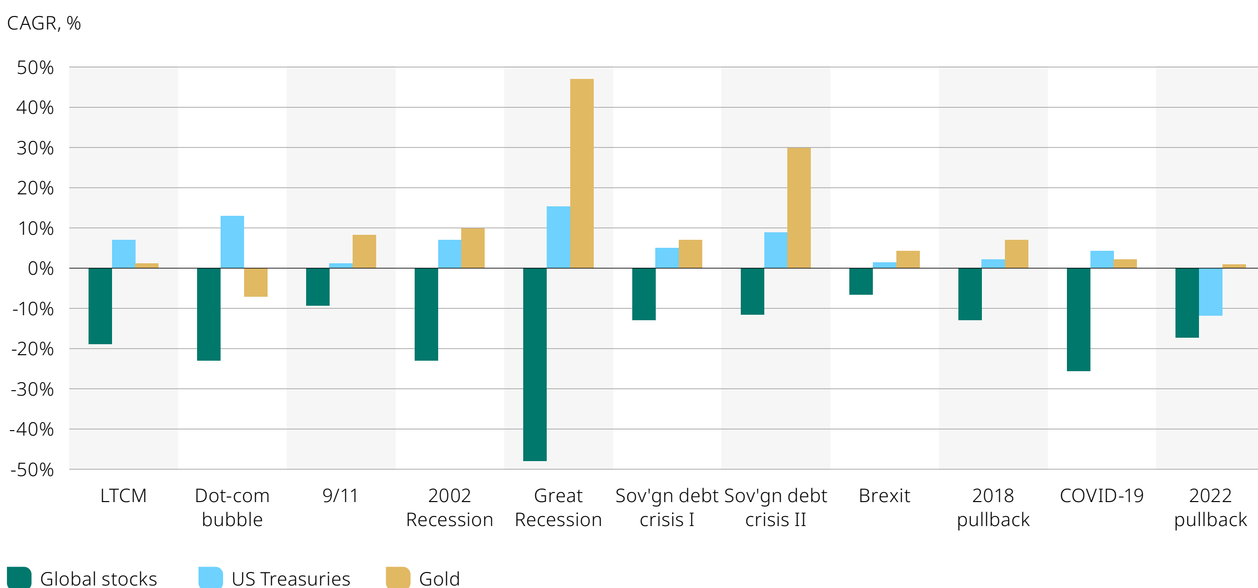


*As of 31 December 2023. Correlations based on weekly returns in US dollars for 'stocks': S&P 500 Index; 'US Treasuries': Bloomberg Barclays US Treasury Index and 'gold': LBMA Gold Price PM since January 1994 due to availability of US Treasury data. The top bar corresponds to the respective correlations when the S&P 500 weekly returns rise by more than two standard deviations. The middle bar corresponds to the respective correlations when the S&P 500 weekly returns are between two standard deviations (or 'σ'), while the bottom bar corresponds to the respective correlation when the S&P 500 weekly returns fall by more than two standard deviations. The standard deviation for the S&P 500 is calculated using weekly returns over the full period.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Chart 7: The gold price tends to increase in periods of systemic risk

Stocks, bonds and gold during various crises*



*As of 31 December 2023. Return computations in US dollars for 'Global stocks': FTSE All World Index; 'US Treasuries': Bloomberg Barclays US Treasury Index; 'gold': LBMA Gold Price PM. Dates used: Black Monday: 9/1987 - 11/1987; LTCM: 8/1998; Dot-com: 3/2000 - 3/2001; September 11: 9/2001; 2002 recession: 3/2002 - 7/2002; global financial crisis (GFC): 10/2007 - 2/2009; Sovereign debt crisis I: 1/2010 - 6/2010; Sovereign debt crisis II: 2/2011-10/2011; Brexit: 23/6/2016 - 27/6/2016; 2018 pullback: 10/2018 - 12/2018; 2020 pullback: 31/1/2020 - 31/3/2020; 2022 pullback: 1/2022 – 12/2022.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

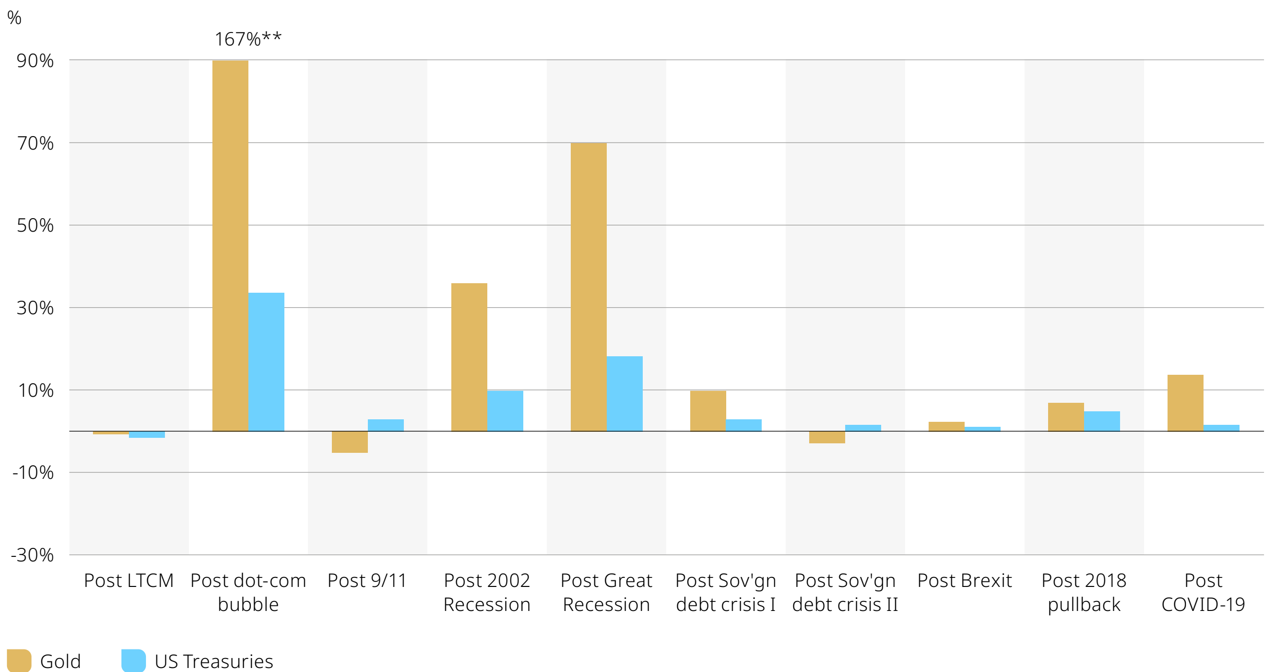
But gold's correlation does not just work for investors during periods of turmoil. It can also deliver positive correlation with equities and other risk assets in positive markets, making gold a well-rounded efficient hedge **(Chart 8)**.

This benefit arises from gold's dual nature: as both an investment and a consumer good. As such, the long-term performance of gold is supported by income growth. Our analysis bears this out, showing that when equities rally strongly their correlation to gold can increase. This is driven by a wealth effect supporting gold consumer demand, as well as demand from investors seeking protection against higher inflation expectations.

Gold has a dual nature as both an investment and a consumer good

Chart 8: Gold performs well in the recovery periods following a systemic selloff

Performance of gold and Treasuries from the market trough (bottom) to the market recovery point (stock market levels before the systemic selloff)*



* As of 31 December 2023. Return computations in US dollars for 'US Treasuries': Bloomberg Barclays US Treasury Index; 'gold': LBMA Gold Price PM. Dates used are based on the end dates of Chart 7. Post Black Monday: 11/1987 - 6/1989; Post LTCM: 8/1998 - 11/1998; Post dot-com: 3/2001 - 5/2007; Post 9/11: 9/2001-11/2001; Post 2002 recession: 7/2002 - 11/2004; Post GFC: 2/2009 - 1/2013; Post sovereign debt crisis I: 6/2010 - 10/2010; Post sovereign debt crisis II: 10/2011 - 2/2012; Post Brexit: 6/2016 - 7/2016; Post 2018 pullback: 12/2018 - 6/2019; Post 2020 pullback: 3/2020 - 7/2020.

** The bar is truncated for the Dot-com bubble recovery due to its extreme differential between others and visibility.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

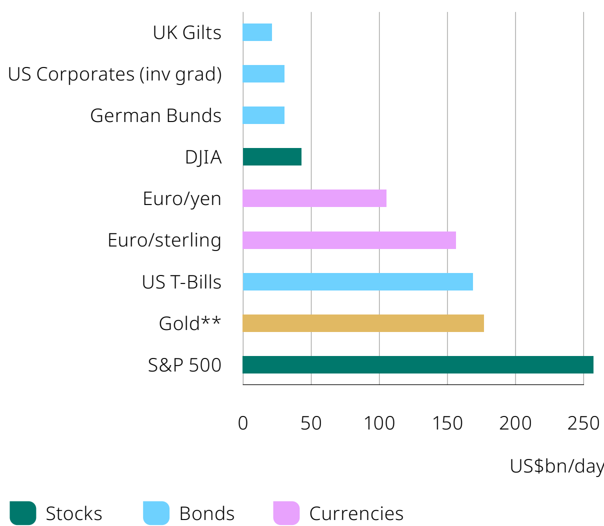
A deep and liquid market

The gold market is large, global, and highly liquid. We estimate that physical gold holdings by investors and central banks are worth approximately US$5.1tn, with an additional US$1.0tn in open interest through derivatives traded on exchanges or the over-the-counter (OTC) market.

The gold market is also more liquid than several major financial markets, including euro/yen and the Dow Jones Industrial Average, while trading volumes are similar to those of US T-Bills **(Chart 9)**. Gold's trading volumes averaged approximately US$163bn per day in 2023. During that period, OTC spot and derivatives contracts accounted for US$99bn and gold futures traded US$62bn per day across various global exchanges. Physically-backed gold ETFs (gold ETFs) offer an added source of liquidity, with global gold ETFs trading an average of US$2bn per day **(Chart 10)**.

Chart 9: Gold trades more than many other major financial assets

Average daily trading volumes over the last year in US dollars*



*Based on estimated average daily trading volumes from 1 January 2023 to 31 December 2023, except for currencies that correspond to April 2022 daily volumes due to data availability.

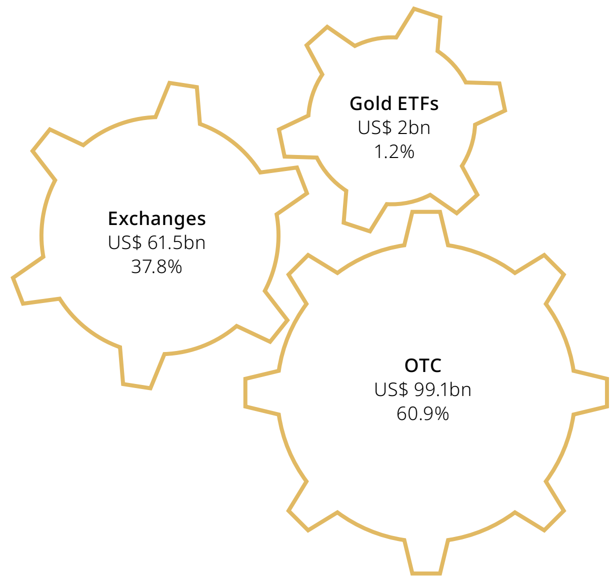
**Gold liquidity includes estimates on OTC transactions and published statistics on futures exchanges, and gold-backed exchange-traded products.

Source: Bloomberg, Bank for International Settlements, UK Debt Management Office (DMO), Germany Finance Agency, Japan Securities Dealers Association, Nasdaq, World Gold Council

Gold's trading volumes averaged approximately US$163bn per day in 2023

Chart 10: Gold is liquid across key investment platforms

Average daily trading volume by point of access in 2023*



*Average daily trading volume from 1 January 2023 to 31 December 2023. Gold liquidity includes estimates of OTC transactions and published statistics on futures exchanges, and gold-backed exchange-traded products.

Source: Bloomberg, Nasdaq, World Gold Council

The scale and depth of the market means that it can comfortably accommodate large, buy-and-hold institutional investors. In stark contrast to many financial markets, gold's liquidity does not dry up, even at times of financial stress. Importantly too, gold allows investors to meet liabilities when less liquid assets in their portfolio are difficult to sell, or mispriced.

Portfolio impact

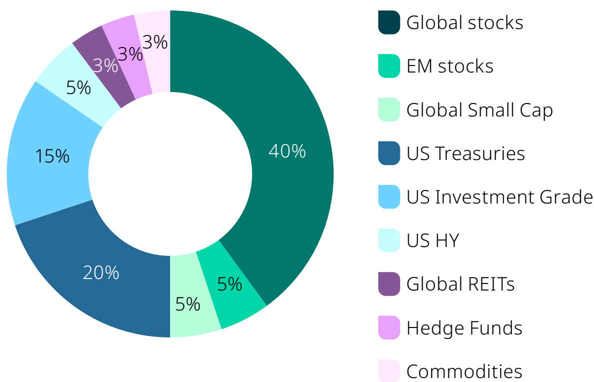
Risk/reward profile

Long-term returns, liquidity and effective diversification all benefit overall portfolio performance. In combination, they suggest that the addition of gold can materially enhance a portfolio's risk-adjusted returns.

Our analysis of investment performance over the past 3, 5, 10 and 20 years emphasises gold's positive impact on an institutional portfolio **(Chart 11)**.

Chart 11: Hypothetical portfolio

Asset allocation: 50% stocks, 40% fixed income, 10% alternatives*



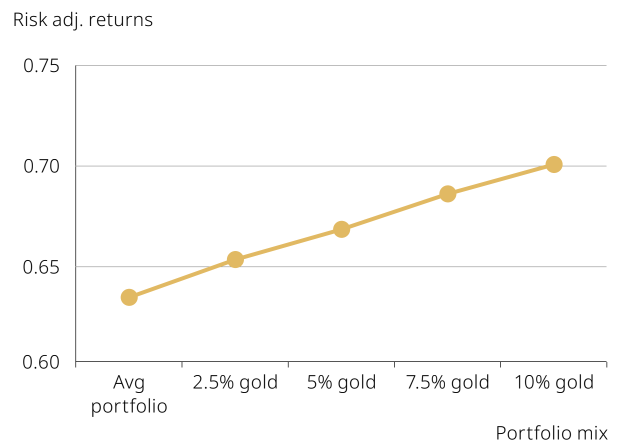
* As of 31 December 2023.

Source: World Gold Council

It shows that an average USD portfolio would have achieved higher risk-adjusted returns and lower drawdowns if 2.5%, 5%, 7.5% or 10% were allocated to gold (**Chart 12** and **Table 1**).

Chart 12: Adding gold over the past 20 years would have increased risk-adjusted returns of a hypothetical USD portfolio

Risk-adjusted returns of a hypothetical portfolio with and without gold*



* Based on US dollar performance between 31 December 2003 and 31 December 2023.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Table 1: Gold has increased risk-adjusted returns while reducing portfolio volatility and maximum drawdowns

Comparison of an average hypothetical USD portfolio and an equivalent portfolio with 5% gold over the past 3, 5, 10 and 20 years based on US-dollar returns*

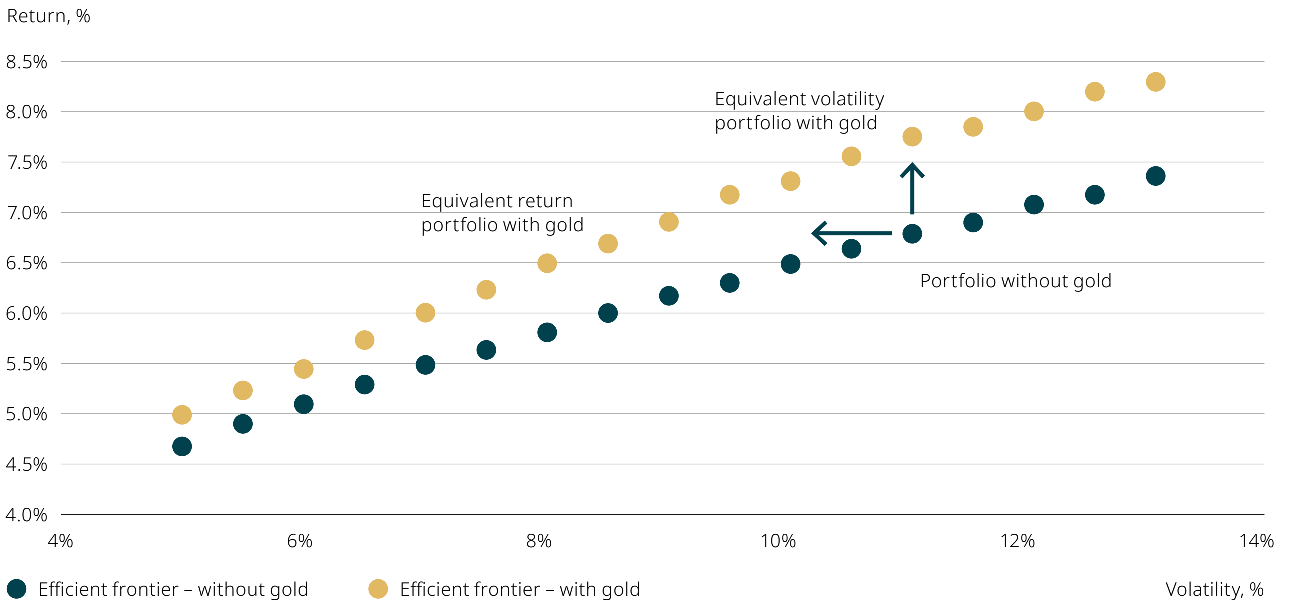
		3-year		5-year		10-year		20-year
	No gold	5% gold	No gold	5% gold	No gold	5% gold	No gold	5% gold
Annualised returns	2.5%	2.6%	7.7%	7.9%	5.5%	5.6%	6.3%	6.4%
Annualised volatility	11.6%	11.3%	11.9%	11.5%	9.5%	9.2%	9.9%	9.6%
Risk-adjusted return	21.5%	22.8%	64.5%	68.2%	57.9%	60.5%	63.3%	66.9%
Maximum drawdown	-19.9%	-19.3%	-19.9%	-19.3%	-19.9%	-19.3%	-35.3%	-33.0%

*As of 31 December 2023.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Chart 13: Gold could significantly improve risk-adjusted portfolio returns across various levels of risk

Efficient frontier of a hypothetical average portfolio*



* As of 31 December 2023.

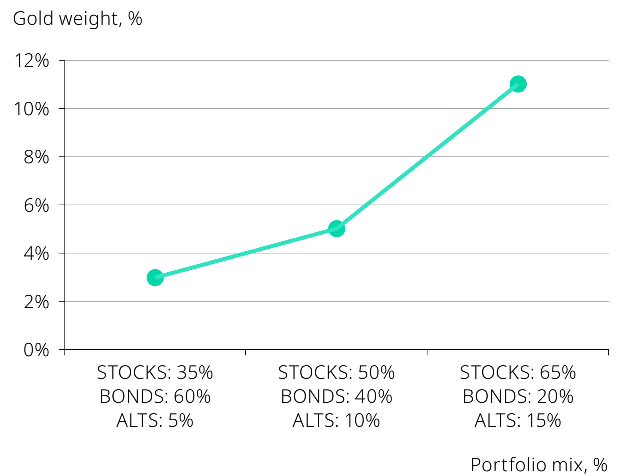
Source: Bloomberg, ICE Benchmark Administration, World Gold Council

In addition to a traditional historical simulation, a mean variance optimisation analysis suggests that an allocation to gold may result in a material enhancement to portfolio risk-adjusted returns by shifting the efficient frontier upwards. For example, a portfolio with gold could deliver a higher return for the same level of risk, or the same return for a lower level of risk **(Chart 13)**.

The 'optimal' amount of gold varies according to individual asset allocation decisions. Broadly speaking, the analysis suggests that the higher the risk in the portfolio – whether in terms of volatility or concentration of assets – the larger the required allocation to gold, within the range in consideration, to offset that risk **(Chart 14)**.

Gold may result in a material enhancement to portfolio risk-adjusted returns

Chart 14: The gold allocation that could deliver the maximum risk-adjusted return for each hypothetical portfolio mix



* As of 31 December 2023.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Gold's ESG credentials and contributions

While gold mining is, by definition, an extractive industry, responsible gold miners follow stringent frameworks to mitigate environmental impact and reduce risks. In fact, the social and economic contribution of the gold mining industry plays a key role in the communities and host countries in which it operates. It does so through the payment of wages and taxes, supporting local economic development, improving infrastructure, providing access to healthcare and schooling, and much more. The majority of this expenditure remains in the local economies of host nations and communities, as documented recently in our measurement of the social and economic contribution of gold mining. The industry is also committed to contributing to the advancement of the UN Sustainable Development Goals.

In addition, gold has a potential role to play in reducing investor exposure to climate-related risks. In fact, gold's lack of downstream emissions has important implications, as gold holdings can reduce the overall carbon intensity of the portfolio value. And the positive outlook for future decarbonisation of the gold value chain has potential benefits for the projected carbon profile, 'implied temperature' and climate target alignment of portfolio holdings.

Our analysis suggests that gold has the potential to perform better than many mainstream asset classes under various long-term climate scenarios, particularly if climate impacts create or exacerbate market volatility or we experience a disruptive transition to a net zero carbon economy. Furthermore, gold's value is less likely to be negatively impacted by a rising carbon price, also offering investors a degree of insulation from the likely policy responses needed to accelerate the move to a decarbonised economy.

Gold also has a potential role to play in reducing exposure to climate-related risks

Potential risks and challenges

Given the risk/reward trade off associated with any investment, it is important to acknowledge and understand not only opportunities, but also key risks.

Non-standard valuation: Gold does not directly conform to the most common valuation methodologies used for equities or bonds. Without a coupon or dividend, typical models based on discounted cash flows, expected earnings or book-to-value ratios struggle to provide an appropriate assessment for gold's underlying value. This presented an opportunity for the World Gold Council to develop a framework to better understand gold valuation.

Our gold valuation framework allows investors to understand the drivers of gold demand and supply and, based on market equilibrium, estimate their impact on price performance.

No cash flows: A widely perceived drawback of gold is that it does not provide any regular income, unlike other asset classes such as bonds, property or even some company stocks. But the reason for this is simple: gold has no credit risk. There is no promise to repay. Nor does it bear any counter-party risk. This means, however, that investors depend on price appreciation to benefit from gold. And in this regard gold has a good track record. It has generated long-term positive returns in both good and bad economic times. At the same time, gold has outperformed many other major asset classes over various investment horizons (3 years, 5 years, 10 years, 20 years, and 50 years). Gold's strong performance is no coincidence: it is a by-product of the underlying demand and supply dynamics, which combine a natural scarcity with diverse sources of demand including jewellery, technology, investment and central banks.

Price volatility: Gold is a great diversifier to a portfolio because it behaves so differently to equities and bonds, not because it has a low volatility. And while gold is a less volatile asset than some equity indices, other commodities or alternatives, in some years the metal has posted close to 30% gains (2010) and in other years it has posted close to 30% losses (2013). On balance, however, gold has an asymmetric correlation profile with equities; in other words, it does much better when equities fall than it does badly when equities rise.

Conclusion

Perceptions of gold have changed substantially over the past two decades, reflecting increased wealth in the East and a growing worldwide appreciation of gold's role within an institutional investment portfolio.

Gold's unique attributes as a scarce, highly liquid and uncorrelated asset enable it to act as a diversifier over the long term. Gold's position as an investment and a luxury good has allowed it to deliver annualised returns of nearly 8% since 1971, comparable to equities and more than bonds and commodities.

Gold's traditional role as a safe-haven asset means it comes into its own during times of high risk. But its dual appeal as an investment and a consumer good means it can generate positive returns in good times too. This dynamic is likely to continue, reflecting ongoing political and economic uncertainty, and economic concerns surrounding equity and bond markets.

World Gold Council

We are a membership organisation that champions the role gold plays as a strategic asset, shaping the future of a responsible and accessible gold supply chain. Our team of experts builds understanding of the use case and possibilities of gold through trusted research, analysis, commentary and insights.

We drive industry progress, shaping policy and setting the standards for a perpetual and sustainable gold market.

Research

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Data sets and methodology visit:
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Information regarding Qaurum℠ and the Gold Valuation Framework

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Published: March 2024

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Gold Demand Trends

Q1 2024

Central banks and OTC drove price

Healthy consumer buying offered further support.

Q1 gold demand (excluding OTC demand) slipped 5% y/y to 1,102t, due to continued ETF outflows. Inclusive of sizable OTC buying by investors, total gold demand increased 3% y/y to 1,238t – the strongest first quarter since 2016.

Q1 saw no let-up in the pace of central bank gold buying: 290t (net) was added to official holdings, only part of which is currently reflected in IMF data.

Bar and coin demand matched the previous quarter at 312t, translating to a 3% y/y increase.

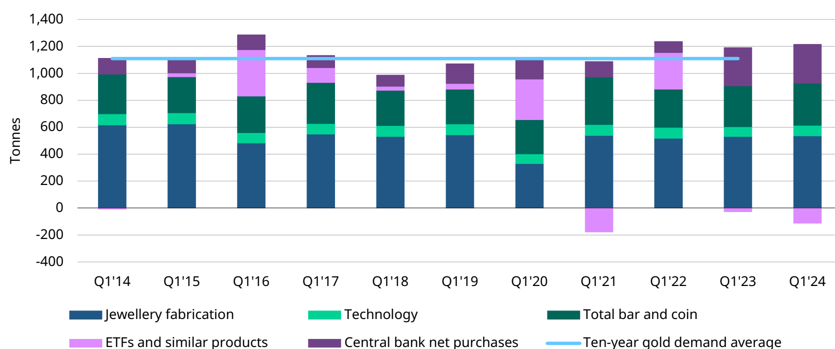
Global gold ETF holdings fell by 114t. Europe and North America both saw quarterly outflows, slightly countered by inflows into Asian-listed products. US-listed funds saw a positive shift late in the quarter.

The jewellery sector was healthy, given the price rally. Global jewellery consumption was just 2% lower y/y at 479t. Jewellery fabrication grew by 1% y/y to 535, resulting in inventory build of 56t during the quarter.

Technology demand for gold recovered 10% y/y as the AI boom boosted demand in the electronics sector.

Chart 1: Q1 demand was in line with its 10-term average

Quarterly gold demand by sector and 10-year quarterly average, tonnes*



*Data as of 31 March 2024.
Source: Metals Focus, World Gold Council

Highlights

The LBMA (PM) gold price averaged a record US$2,070/oz in Q1 – 10% higher y/y and 5% higher q/q. Gold scaled new heights in March, closing the quarter at US$2,214/oz.

Q1 was another quarter of significant OTC demand. OTC buying by investors, while opaque, is reflected in the pace and scale of the price rise. CME net managed money positions, which can be used as a proxy, rose by ~91t.

Mine production increased 4% y/y to 893t – a record first quarter for our data series. Meanwhile, recycling responded to higher prices, climbing 12% y/y to 351t. This makes it the highest quarter of recycling supply since Q3'20, when it shot up in line with gold prices and as a response to the pandemic.

Western and Eastern investors exhibited different behaviour. Western gold buying remained robust, but was met with healthy levels of profit-taking. This contrasted with strong buying into the price surge in Eastern markets.

For more information please contact: research@gold.org

Gold supply and demand

	Q1'23	Q2'23	Q3'23	Q4'23	Q1'24		y/y % change
Supply							
Mine production	855.1	900.9	940.4	939.9	893.0	▲	4
Net producer hedging	39.4	-19.5	19.4	15.9	-5.5	-	-
Recycled gold	311.9	323.9	289.2	314.0	350.8	▲	12
Total supply	1,206.4	1,205.3	1,249.0	1,269.7	1,238.3	▲	3
Demand							
Jewellery fabrication	531.0	493.7	581.7	585.8	535.0	▲	1
Jewellery consumption	488.9	479.6	520.2	623.5	479.0	▼	-2
Jewellery inventory	42.1	14.0	61.5	-37.7	56.0	▲	33
Technology	71.2	71.0	75.4	80.2	78.6	▲	10
Electronics	57.1	57.2	61.4	65.5	64.4	▲	13
Other industrial	11.7	11.4	11.7	12.3	11.9	▲	2
Dentistry	2.4	2.4	2.3	2.4	2.3	▼	-5
Investment	275.3	252.5	155.8	257.1	198.6	▼	-28
Total bar and coin	303.9	273.7	295.0	312.9	312.3	▲	3
Bars	185.9	164.0	206.8	220.7	222.9	▲	20
Official coins	93.6	85.3	54.3	60.3	65.3	▼	-30
Medals/Imitation coins	24.4	24.4	34.0	31.9	24.1	▼	-1
ETFs & similar products	-28.6	-21.1	-139.2	-55.7	-113.7	-	-
Central banks & other inst.	286.2	173.6	357.7	219.6	289.7	▲	1
Gold demand	1,163.7	990.8	1,170.6	1,142.8	1,101.8	▼	-5
OTC and other	42.7	214.5	78.4	126.9	136.4	▲	220
Total demand	1,206.4	1,205.3	1,249.0	1,269.7	1,238.3	▲	3
LBMA Gold Price (US$/oz)	1,889.9	1,975.9	1,928.5	1,971.5	2,069.8	▲	10

Source: ICE Benchmark Administration, Metals Focus, World Gold Council

Outlook

Central banks and retail investment provide the platform for a strong 2024. Western investors on hold

- 2024 is set to produce a much stronger return for gold than we anticipated in our 2024 Gold Outlook, supported by continued EM central bank buying and retail investment even with the continued absence of visible physical Western investment
- The stellar run up in price in the recent weeks will likely prompt a rise in recycling supply and a fall in jewellery demand, although elevated geopolitical risk and the quasi-investment role of jewellery in some countries may limit the impact
- Mine supply is set to break new records on expansions in North America and low levels of hedging, as producer margins hover near record highs.

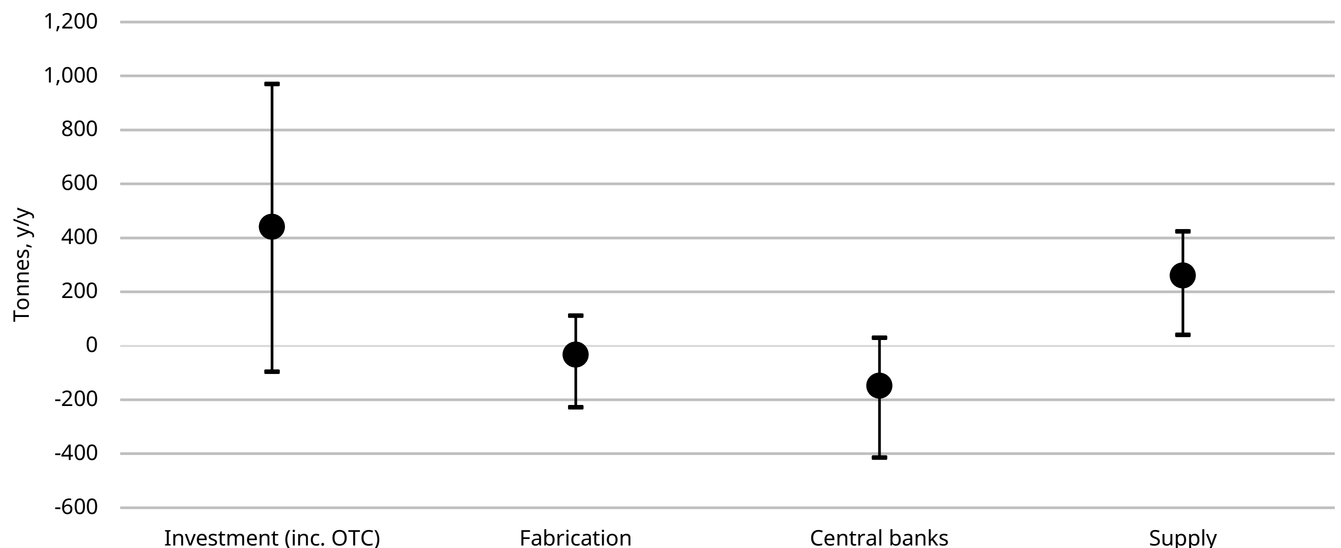
Having made successive record highs throughout March and into April, the gold price has witnessed a correction in recent days, a healthy development in our view.[1] Any levelling off in the gold price in the months ahead should encourage some price sensitive buyers back into the market. Upside potential remains in the gold ETF space as the shift out of gold and into positive yielding bonds in Europe could run its course with ECB rate cuts looming. North American ETF investors banking on Fed rate cuts may have to wait a little longer: a no-landing economic outcome is growing in popularity, suggesting rates will stay quite high. But US economic strength remains somewhat superficial, helped by the long and variable lags of interest rate policy, the full impact of which may not be felt until later in the year. As such, US investors may need to wait for a clear signal to trigger ETF inflows.

Investment

Bar and coin demand is set to remain strong. China is largely responsible, having started the year with the strongest quarter since 2017. With improving household wallets, the positive example set by continued central bank demand, a poor domestic equity, and property market and currency fragility, the conditions are in place for demand to continue at solid levels. Indian bar and coin demand has been lagging model-suggested levels based on economic growth. It is expected to be higher than last year, helped by an expectation for a better monsoon and solid economic growth.

Chart 2: Investment likely to rise on geopolitics and delayed rate cuts

Expected change in annual gold demand and supply, tonnage, 2024 v 2023*



*Data as of 31 March 2024.
Source: World Gold Council

1. As of 22 April, the LBMA PM gold price had pulled back 3% from the 12 April record high of US$2402/oz

ETF demand remains notable by its absence, particularly in Europe – where, anecdotally, institutions refusing to hold negative yielding bonds shifted into gold a few years ago. It seems likely that the past year (and more) has seen a cashing out of gold back into positive yielding bonds, and this might become harder to sustain if and when policy rates are cut. The US has shown a glimmer of hope during April, but rate cuts might be needed to help trigger sustained inflows. Sticky inflation and labour market strength suggest there will be a bit of a wait.

Elsewhere, Chinese funds continue to attract inflows at a solid clip having seen 29t of inflows in the four weeks to 19 April versus 36t of outflows from Europe and neutral US flows over the same period.

Fabrication

Perhaps the most surprising feature of Q1 was the resilience of jewellery demand in the face of much higher prices. The price strength, however, came towards the end of the quarter, and is likely to feed through to some demand weakness in Q2.

China's jewellery demand is expected to remain stable to slightly higher compared to 2023, on rising incomes and stable prices during the rest of 2024. Indian jewellery demand will continue to draw support from the strong economy, but high gold prices, and some election-related weakness are likely to weigh on demand.

Technology demand is set to produce some solid growth, particularly in the chip and automotive segments.

Central banks

Although a whisker away from a new record and comfortably beating our initial – tempered – 2023 forecast, we remain cautious as we look ahead. The multi-year trend of net central bank buying appears established, but there may well be some central banks willing to wait on the sidelines in response to the recent price surge. Equally, opportunistic sellers may be more likely to get drawn out with the stellar rise in prices so far this year.

The March slowdown in monthly reported buying could signal some reticence by reserve managers to accumulate at these levels, despite unreported buying showing no such restraint. A lack of sales was also notable in Q1, but given the late quarter price run-up, Q2 might reflect what Q1 did not; as is likely the case in other demand categories.

Supply

Mine supply is expected to beat the previous record high in 2018 on expansions and ramp-ups.[2]

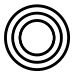
Around two-thirds of this growth is likely to come from Canada, China and Ghana. A mild Northern Hemisphere winter has helped Q1 off to a good start, but a sizeable swing in hedging makes the y/y comparison weaker for total mine supply.

With spot prices expected to stay not only high but above the 90th percentile of the cost curve, marginal producers will be incentivised to continue strong production schedules. AISC margins have almost exceeded their 2020 peak.

Hedging is expected to be small but positive – although some debt financing nearing an end resulted in net de-hedging for Q1. There is still some incentive from a price perspective, to lock in production at these levels and also given the strong forward contango.

Should prices stay high in 2024, models suggest recycling should pick up, as it started to do in Q1 in response to the rapid price rise. Volumes may, however, be constrained by both geopolitically driven concerns and low near-market stocks, particularly in countries like Thailand. And should prices settle, recycling will likely moderate in response.

2. Metals Focus 5-year Forecasting Quarterly.



Jewellery

Jewellery consumption holds up well in the face of surging gold prices

- First quarter gold jewellery consumption of 479t was 2% softer y/y
- Initially aided by the mild correction in the gold price during January and February, demand pulled back as the March rally took off
- Jewellery demand remains under pressure so far in Q2, due to unprecedented price levels. Although buying will likely be encouraged by any price pullbacks, we expect a subdued y/y comparison.

Tonnes	Q1'23	Q1'24		Y/y % change
World total	488.9	479.0	▼	-2
India	91.9	95.5	▲	4
China, P.R.: Mainland	195.6	184.2	▼	-6

Source: Metals Focus, World Gold Council

Global demand for gold jewellery in Q1 came in at 479t, around 3% above the first quarter average from the past five years of 465t.

While gold jewellery volumes were slightly lower than Q1'23, the value of demand confirms that consumers were far from reluctant to spend on gold jewellery even as prices shot up.

The US dollar value of global gold jewellery consumption in Q1 was 7% higher y/y at US$32bn – the highest value for a first quarter demand since 2013 (when volumes were far in excess of recent levels).

Q1 was a tale of two halves: a positive January and February versus a very weak March. The relative stability in the gold price during the first two months of the quarter aided demand during that period: by mid-February, the US$ price had undergone a gentle price pullback of around 4%. Given that this occurred in the lead-up to the lunar New Year it was well-timed to attract jewellery consumers in Asian markets. However, demand collapsed in March as the gold price rocketed and in some markets this resulted in a negative y/y comparison.

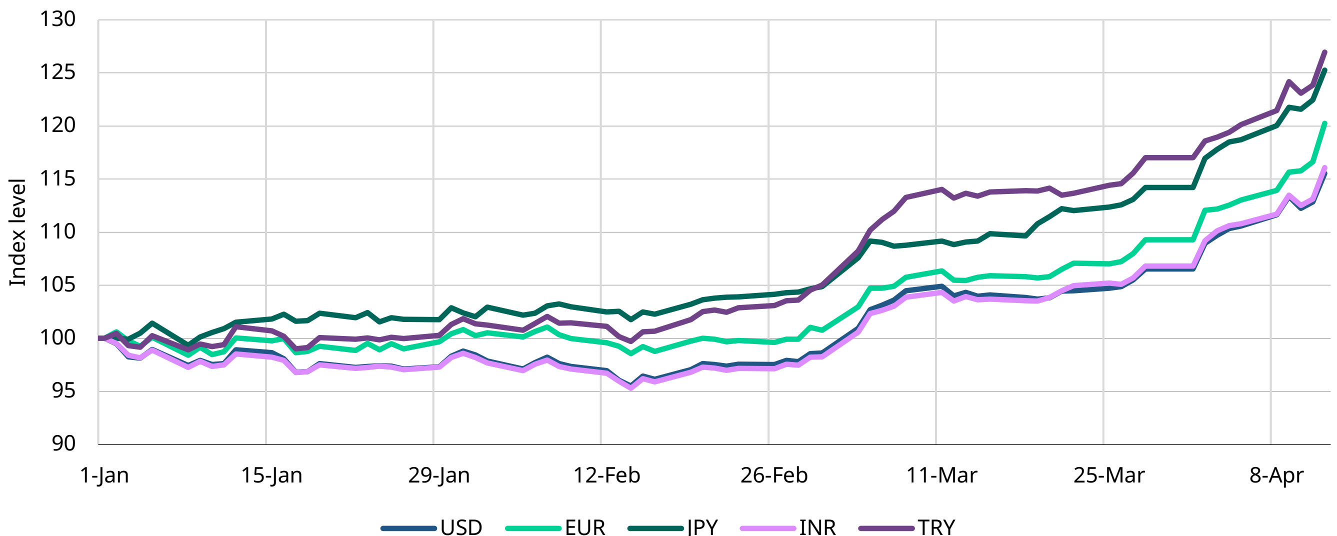
China

Gold jewellery demand in China totalled 184t in Q1 – 6% lower y/y compared to a very strong Q1'23. Nevertheless, demand was 13% above the ten-year average of 162t as demand held broadly in line with levels that were typical in the years prior to the pandemic.

The quarter was something of a roller-coaster ride for Chinese gold jewellery sales. For many wholesalers and manufacturers, January was their busiest start to a year on record thanks to seasonal spending before and during the Spring Festival; the modestly lower gold price; the popularity of items marking the auspicious Year of the Dragon; and continued focus on gold jewellery as a means of wealth preservation given the weaker currency and stock markets.

Chart 3: After a slow start to Q1, March saw gold prices off to the races

Daily gold price in key currencies, indexed to 1 Jan 2024*



*Data as of 12 April 2024.
Source: Bloomberg, ICE Benchmark Administration, World Gold Council

This strength carried over into February, aided by the Chinese New Year (CNY) sales boost and continued price stability.

But March was a different story – demand fell off a cliff due to the double whammy of a sudden gold price surge and the typical seasonal post-CNY lull. Given the comparison with a very strong base period last year, this generated the net y/y decline. Nevertheless, in value terms, jewellery demand surged to almost CNY90bn, second only to the CNY92bn total seen in Q2 2013 – an unparalleled quarter in Chinese jewellery demand, amounting to 327t.

24K hard pure products and Heritage gold jewellery continued to outperform other categories in Q1. This was helped by the industry's design innovation: the touch of various gem and diamond inlays has boosted the popularity of these products. Meanwhile, 18K and 22K products lost further market share to higher carat items, especially as consumers pay increasing attention to gold jewellery's financial value. In general, consumers reacted to surging prices by showing a preference for light-weight items with lower cost, as well as seeking products with lower labour charges.

March demand weakness has so far continued into Q2. Our field research indicates that continued successive record highs in the local gold price during April have kept consumers on the sidelines and retailers cautious in restocking ahead of the traditionally lively Labour Day Holiday. The slowdown in consumer demand led to the retail sector reining in its network expansion plans: store openings will likely be reduced in the coming months.

The fact that Q2 is usually an off season for gold jewellery consumption is likely to create further pressure on demand. That being said, we expect 24K hard pure gold products to outperform other categories thanks to their lighter weights that translate into cheaper unit-total costs and suitability for summer wear.

India

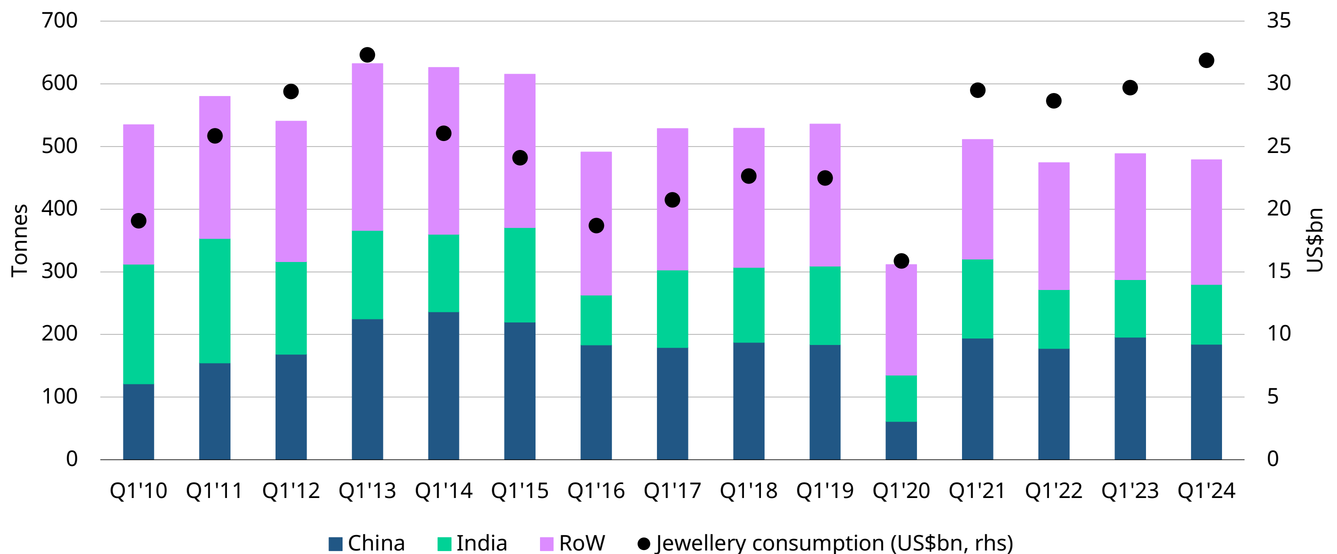
Gold jewellery demand in India was 95t, 4% above the comparatively weak Q1'23. India's continued strong macroeconomic environment was supportive for gold consumption. Rural demand is now seeing similar growth to that of urban India; in recent quarters it lagged behind as it struggled to shake off the effects of the pandemic.

The early improvement in demand was evident in the local gold price, which moved to a premium in late January until late February, before reverting sharply to a sizable discount in March as the surging price choked off demand. The prospect of impending elections likely further contributed to the March slowdown, as gold consumption tends to decline during these periods.

In response to the higher prices, 18K diamond jewellery saw some improvement, as did jewellery with coloured gemstones. Recycling activity also increased in reaction to the price rise, as is typical in price-sensitive markets like India.

Chart 4: Jewellery demand volumes resilient, values rampant

Q1 gold jewellery consumption, tonnes and US$ value*



*Data as of 31 March 2024.
Source: Metals Focus, ICE Benchmark Administration, Refinitiv GFMS, World Gold Council

Demand remains weak so far in Q2, reflecting continued record highs in the gold price. Stock-building in preparation for Akshaya Tritiya and the forthcoming wedding season are reportedly muted. But in contrast to China's conservative retail expansion, large retailers are apparently maintaining expansion plans and continuing with aggressive marketing campaigns. While seasonal factors may support demand in value terms, the prospects for gold jewellery volumes will be muted if the price sees further fresh record highs, particularly as elections will likely impact the sector.

Middle East and Turkey

Jewellery demand in Turkey posted its eighth consecutive y/y gain: demand was 19% higher at 11t. This was the strongest first quarter for jewellery demand in the country since 2015. But the growth in demand volume pales in contrast with the value measure: the local currency value of gold shot up to an unprecedented TRY23bn, more than double the Q1'23 total and 19% higher than the record set in the previous quarter.

Investment motives continue to fuel gold jewellery demand in this high-carat market, among them: official CPI of over 68%; global and regional geopolitical tension; negative real interest rates, and a lack of viable alternative investments.[3]

With no current end in sight to this backdrop, demand is likely to remain robust, albeit that continued record highs in the price may stifle continued strong growth of the scale seen in recent quarters.

Jewellery demand for the Middle East region was 4% lower y/y at 42t in Q1. Weaker demand in the UAE and Saudi Arabia outweighed an improvement in Egypt. The high gold price environment was reportedly the reason for the y/y declines in the UAE (-10%) and Saudi Arabia (-12%). In contrast, Egypt (+3% y/y) saw local gold prices fall in Q1 as the local currency strengthened after the country secured bailout funding from the IMF. Demand in Iran was flat y/y as the impact of rocketing local gold prices offset continued safe-haven-driven buying.

US and Europe

The US market fell by a modest 2%, its eighth consecutive y/y decline as gold jewellery consumption continued to 'normalise' following the bumper years produced by the pandemic. Q1 demand of 25t was nevertheless healthy compared with first quarter volumes typical in the years prior to 2020 (the Q1 average for 2010-2019 was 22t). And in value terms, demand of US$1.6bn was the highest for a first quarter in our US data series.

The resilience of the US economy and labour market have lifted consumer sentiment, which in turn has cushioned demand. Further evidence of this came in the lack of any notable shift towards lower carat items. In fact, field reports suggest that heavier pieces continued to sell well.

At the trade level, the first quarter witnessed heavy restocking after inventories had been run down during 2023 due to a combination of recession fears and an unexpectedly strong and late Q4 holiday buying season. The latter explains a slight upward revision to our Q4'23 US jewellery consumption data (from 48t to 49t).

European jewellery demand edged lower in Q1, declining by 2% y/y to 11t. Similar to the US, the decline was in part due to continued normalisation post-COVID. Germany saw the largest decline (-11% y/y), not helped by the shaky economic backdrop undermining consumer sentiment.

ASEAN markets

Thailand, Vietnam and Indonesia experienced similar y/y declines in Q1 jewellery demand, down by 10% – 12% as the late Q1 gold price rally choked off demand in March.

Thailand's 10% y/y decline in gold jewellery demand to 2t was a price response: demand slowed sharply as prices started to rise in March. Thailand also saw a sharp rise in recycling activity, albeit remaining below levels seen during the pandemic.

Q1 gold jewellery demand in Vietnam registered a fifth consecutive y/y decline. Demand was 10% lower at 4t, the lowest first quarter since 2015. Despite a flurry of demand in February around the Vietnamese New Year celebrations and God of Fortune Day, demand was heavily impacted by the high price of gold.

Indonesia posted a 12% y/y decline to 5t. The rise in gold prices reportedly boosted demand for lower carat jewellery, including 16- and 12-carat pieces.

Rest of Asia

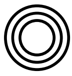
Japan showed continued resilience, with the strongest first quarter of gold jewellery demand since 2019. Demand was 7% higher y/y at just over 3t. Meanwhile, the local currency value of demand jumped 32% y/y to JPY32bn – the highest value for a first quarter in our data series.

In South Korea, gold jewellery consumption increased by 3% y/y to 3t. This was the first quarter of y/y growth since Q4'21 and came in spite of the historically high price rise in March.

Australia

Q1 jewellery demand in Australia weakened by 15% y/y. The picture remained much the same in this quarter as in Q4'23. Consumers remained under pressure from a challenging macroeconomic environment, which, together with rising prices, undermined demand.

3. Turkey Inflation Rate | tradingeconomics.com



Investment

Q1 gold investment (excluding OTC) was notably lower at 199t as ETF outflows eclipsed modest growth in bar and coin demand

- Holdings of global gold ETFs declined by 114t in the first quarter (-US$6bn)
- Q1 bar and coin investment generated a 3% y/y increase to 312t
- OTC investment of 136t was a key contributor to total demand and to the gold price reaching record highs in March.

Tonnes	Q1'23	Q1'24		Y/y % change
Investment	275.3	198.6	▼	-28
Bar & Coin	303.9	312.3	▲	3
India	34.4	41.1	▲	19
China, P.R.: Mainland	65.9	110.5	▲	68
Gold-backed ETFs	-28.6	-113.7	-	-

Source: Bloomberg, Company filings, Metals Focus, World Gold Council

Q1 gold investment (excluding OTC) was down by 28% y/y. Strength in total bar and coin investment was purely due to buoyant demand for small gold bars, which was offset by a slump in demand for gold coins. This partly reflects a divergence in West/East investment behaviour that was evident across all areas of gold investment during the quarter: profit-taking by Western investors contrasted with largely one-way investment demand in Asia.

Global gold ETFs saw an eighth consecutive quarter of outflows. Despite a 114t drop in ETF holdings, assets under management (in US dollar terms) rose to their highest for almost two years at US$222bn, thanks to gold's strong price performance.

A consideration of the 'OTC investment and Other' category completes the picture for global investment. This captures investment buying in the over-the-counter market (over and above central bank activity, which also typically takes place through OTC transactions). It remains a sizable element of global demand, measuring 136t in Q1 and averaging 120t per quarter since the beginning of 2023. Estimating and attributing this investment buying is difficult due to its opaque nature.

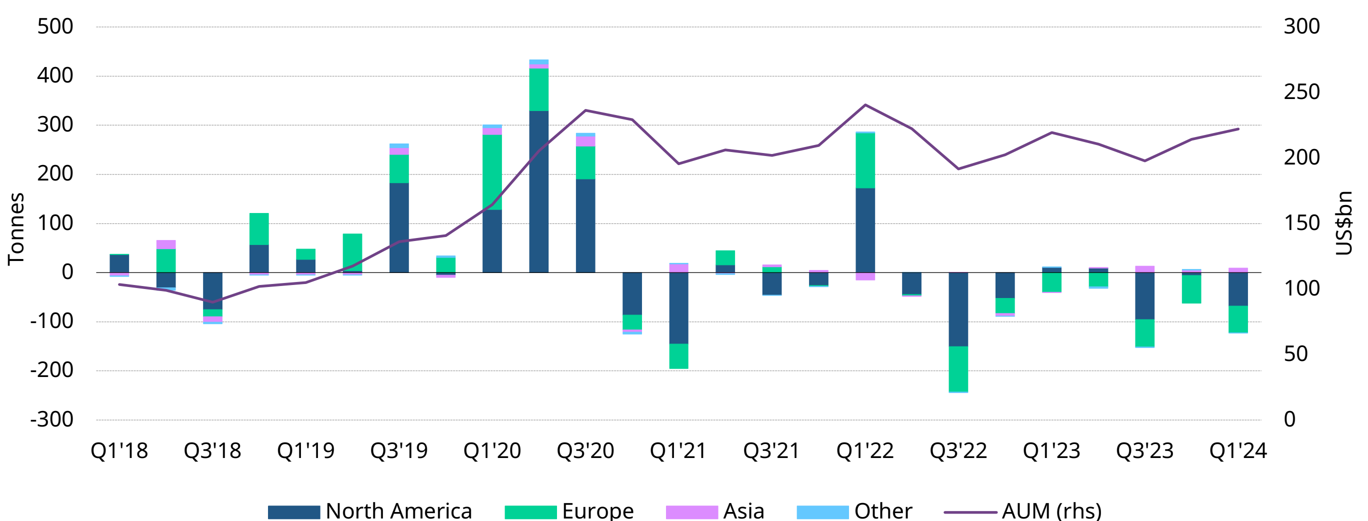
While OTC demand is not directly observable, the positioning of speculative investors in the US futures market can be indicative of it: net long positions held by money managers saw a sharp increase throughout March and reached their highest level for two years, at around 540t. Comparable moves were seen in Chinese futures markets towards the end of the quarter, and more significantly in April. Similar to shifts we reported last year, the OTC volume also incorporated buying by high net worth individuals in several markets, as well as healthy stock build-up in markets across Asia.

ETFs

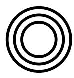
Global gold ETFs lost 114t in Q1 –total holdings declined 4% to 3,113t. Outflows measured US$6bn during the

Chart 5: European and North American gold ETFs saw outflows while Asian funds continued to gain assets

Quarterly change in gold-backed ETFs, tonnes*



*Data as of 31 March 2024.
Source: Bloomberg, Company filings, ICE Benchmark Administration, World Gold Council



quarter, but accounting for the 8% Q1 price gain, total AUM rose 4% to US$222bn. A monthly breakdown shows that outflows slowed markedly, with March seeing a far smaller decline than January or February.

At a regional level, US- and European-listed ETFs both saw a 4% fall in holdings.

In volume terms, North America saw the largest tonnage decline – a function of this being the region with the largest and most liquid funds. The 68t decline in holdings was concentrated in January and February, whereas March witnessed a slight reversal, with modest monthly inflows of US$360mn (+5t).

For much of the quarter investors seemed to focus on the resilience of the US labour market and hotter-than-expected inflation prints, which pushed rate cut expectations further out. Equity market strength further diverted investor attention away from gold. The mid-March turnaround was a reaction to the gold price rally, which triggered activity in the options market and sparked sizable inflows in the closing weeks of the quarter. A fall in both the dollar and Treasury yields early in the month helped spur the inflows, as did comments by the Federal Reserve that a strong labour market, by itself, "would not be a reason to hold off on rate cuts".[4]

US funds have seen only tentative inflows early in Q2, suggesting that the gold price rally has discouraged further significant outflows for now.

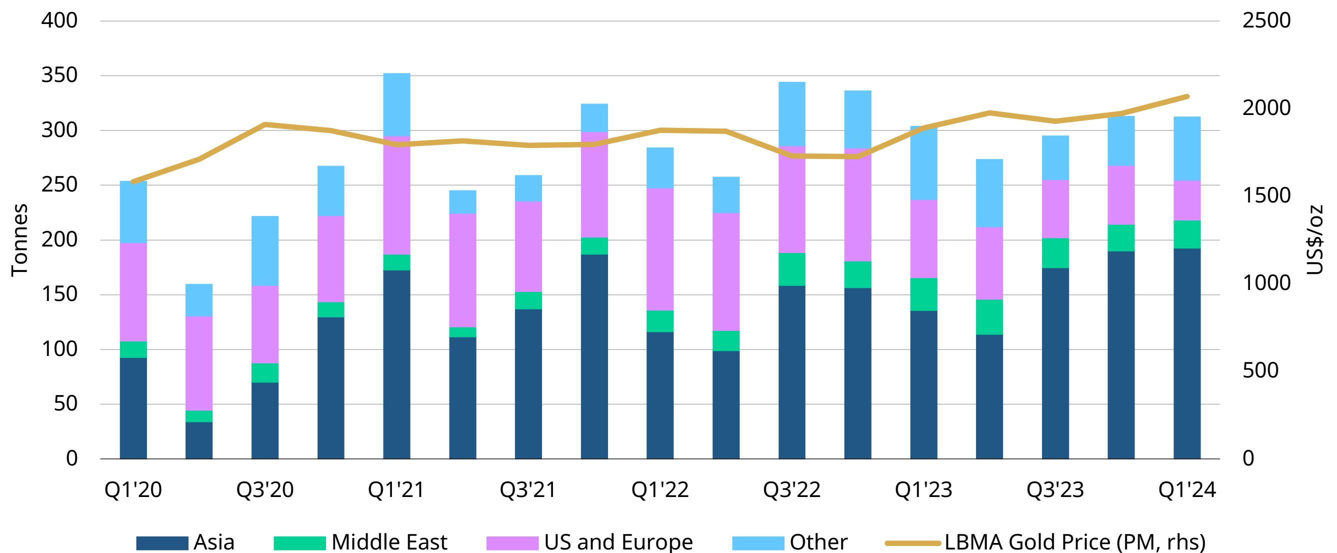
European-listed funds were not far behind their North American counterparts; holdings fell by 54t during the quarter. January and February outflows were driven by similar reasons to the US: investors adjusting their bets on a monetary policy pivot by the ECB and rallying local stock markets.

In contrast to the US, however, outflows in Europe accelerated during March. This was almost entirely due to losses from UK-listed funds, where the pattern of outflows appeared to reflect profit-taking at times that coincided with a pause in gold's price rally. Elsewhere in Europe, funds listed in Germany and France saw small inflows in March.

Asian-listed funds registered non-stop inflows for the fourth consecutive quarter, adding 10t (US$696mn) during the quarter. China generated the bulk of the increase, with investor interest in gold flourishing in an environment of a weakening local currency and poorly performing domestic equity markets. Japan also recorded positive, albeit minor, flows (+2t), amid gold's staggering yen price performance. Funds listed in other regions were barely changed during the quarter, as a small increase in South Africa was counterbalanced by a small decrease in Turkey.

Chart 6: Eastern bar and coin investment takes market share from the West

Quarterly net gold bar and coin investment, tonnes, and the average quarterly gold price, US$/oz*



*Data as of 31 March 2024.
Source: Metals Focus, ICE Benchmark Administration, World Gold Council

4. Transcript of Chair Powell's Press Conference, Federal Reserve, 20 March 2024

Bar and coin

Global bar and coin investment in Q1 matched the previous quarter at 312t, translating to a modest 3% y/y increase. Gold price action helped to maintain buoyant demand, which came in 17% above its five-year average of 268t.

As previously noted, Western and Eastern markets tend to see contrasting trends in gold investment. And while this quarter was no exception, there was something of a turnaround in their respective behaviour. Typically, investors in Eastern markets are more responsive to price and will tend to react to a sharp rise by sitting on the sidelines (waiting for a pause or corrective pullback in the price as an opportunity to buy) and/or by taking profit and cashing in on their gold investments. Western investors have historically been attracted to a rising price and tend to buy into the rally.

The most recent quarter has seen these roles reversed: investment demand in Asia and the Middle East has shown considerable growth, unaccompanied by a marked increase in profit-taking/selling back. In contrast, investors in the US and Europe have taken a different approach. While investment demand for gold bars and coins remains healthy, it has been countered by strong profit-taking from investors keen to realise gains on their gold holdings as the price reached successive record highs.

China

Bar and coin demand in China jumped to 110t in Q1, an increase of 68% y/y and the strongest quarterly total for more than seven years. Value preservation needs, seasonal gifting demand and the outstanding gold price performance attracted investors.

A weaker local currency during the first two months of the year, together with concerns over volatility in the property and stock markets (mainly in January), led Chinese investors to seek value preservation, and spurred demand for gold. Chinese New Year-related purchases added to demand, with investors showing a strong appetite for dragon-themed gold bars and coins.

The staggering gold price rally in March also attracted investors who are faced with a range of poorly-performing alternative investments. And continued announcements of official gold purchases by the People's Bank of China further underscored the positive view of gold, among both small-scale 'average' investors and larger-scale, high-net-worth investors.

In the face of a soaring gold price the local premium eased during March, but the average Q1 premium was the highest ever for a first quarter, at US$40/oz, providing further evidence of the strength of investment buying in China.

China's bar and coin investment should remain healthy over coming quarters. China is likely to continue its path of easing monetary policy to support the country's economic recovery. And gold should therefore remain attractive to local investors as yields trend lower. Investor interest will also likely be sustained by continued weakness in the housing market and ongoing global geopolitical tension, as well as continued central bank gold buying. That being said, any sharp increase in gold price volatility may deter investors, while any speed bumps in China's economic growth could also impact household budgets and the capacity to buy gold.

India

Q1 saw healthy levels of gold bar and coin investment in India, up 19% y/y at 41t. This was on a par with Q1 2022, which was itself the strongest first quarter since 2014.

In a repeat of the pattern seen in India during Q4'23, demand was sparked by the price correction in February, which investors expected would be temporary and would presage a rebound. The subsequent sharp price rally reaffirmed those positive price expectations. Investors bought into the rally as the price reached successive record highs, anticipating a continued uptrend.

The strength in bar and coin investment echoed sentiment elsewhere in India's gold market. ETFs saw positive Q1 inflows (+2t), and two new funds were launched during the quarter, indicating continued growth in these products.

While investor sentiment towards gold remains positive, the domestic general election, which runs from April to June, may keep demand subdued. Data shows that gold consumption tends to decline ahead of such elections, particularly as there is greater scrutiny on the movement of gold and cash.

Any further sharp rises in the gold price could present a short-term headwind by sparking profit-taking and may result in a reduction in volumes purchased due to affordability constraints.

Middle East and Turkey

Gold investment demand in Turkey remained greatly elevated at 44t. Bar and coin investment was up 50% on the previous quarter – despite the rocketing domestic price – although the y/y comparison showed a 12% drop from last year's record quarterly high. To put Q1 demand tonnage into context, it stood at 89% above the 24t five-year quarterly average. And in lira value terms, demand was a record-breaking TR91bn, compared with TR58bn in Q1'23.

The ongoing environment of extreme inflation, domestic political tension, global geopolitical volatility and negative real interest rates continued to fuel investment for gold as a safe haven and inflation hedge.

Demand remains lofty despite continued restrictive quotas, limit the official permissible volume of bullion imports to 12t per month. The result has been to drive up local premiums to more than US$200 in March, having ranged between US$50-100 for the earlier months of the quarter.

Bar and coin investment in the Middle East region of 26t was 15% lower y/y, from the very high base of Q1'23. Demand was little changed from the previous quarter and 35% ahead of its five-year average of 19t.

Iran, the largest bar and coin market in the region, saw continued healthy demand against a backdrop of heightened regional tension. Investment in the quarter reached 12t and premiums roughly doubled, to around 10-15% by the end of March. Nonetheless, the y/y comparison shows an 11% decline, reflecting the strength of demand seen in the first quarter of 2023.

Investment demand in the UAE cooled 10% y/y as investors waited for a pause or correction in the soaring gold price. Nonetheless, safe-haven motives provide a solid foundation for demand in this market.

Elsewhere, Egypt's improved economic circumstances diluted the safe-haven motive of gold investors. Economic sentiment soared on the back of the IMF bailout and currency float, while the latter also led to a fall in local gold prices for much of the quarter. These factors combined to knock back gold demand by 36% y/y to 5t.

The West

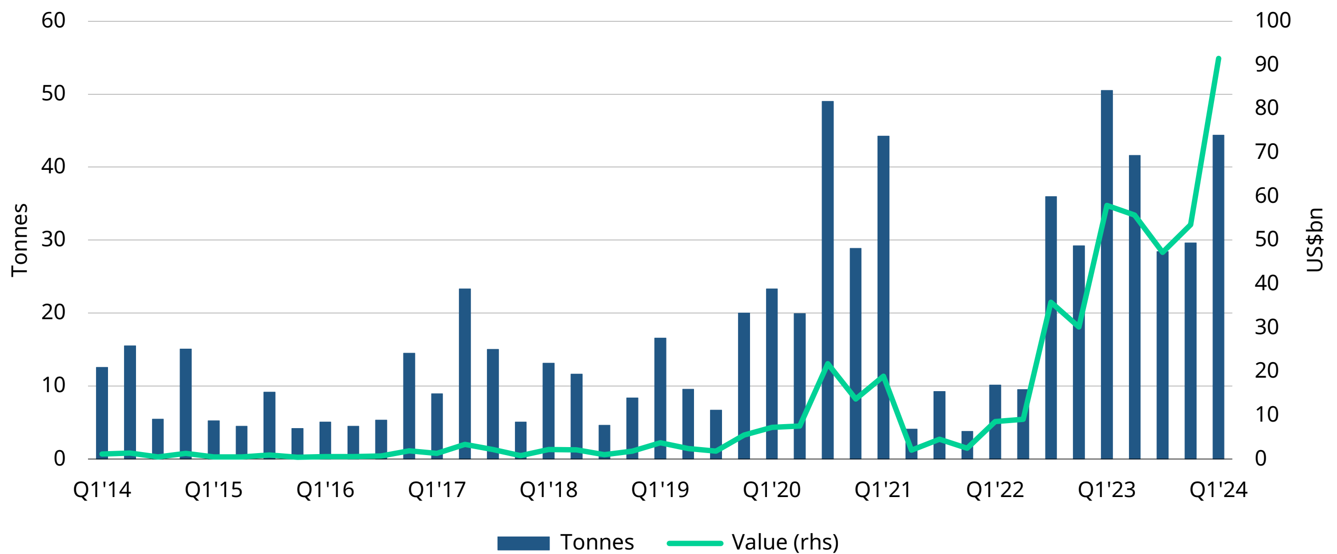
US and European investment markets witnessed a modest Q1 decline in buying of new gold bars and coins, but saw a concurrent sharp rise in selling back; the net impact of which is a sharp drop in overall (net) quarterly bar and coin figures.

We noted a slowdown in US investment during the closing weeks of 2023 and this continued into 2024 as profit-taking proliferated. However, the 44% y/y decline in bar and coin to 18t partly reflects a high base: at 33t, Q1'23 was the highest first quarter in our data series.

Buying interest remained healthy, as suggested by the usual uplift in January sales of Gold Eagle coins reported by the US Mint. Albeit driven by the issuance of the 2024 series of Gold Eagles, the data can be taken as indicative of healthy demand in a market able that is able to absorb new coins. Continued concern over ongoing conflicts in the Middle East and Ukraine, the need for diversification strategies and a helpful – albeit minor – boost from Costco's recent entry to the gold bar market kept demand smouldering at healthy levels.[5]

Chart 7: Turkish investment demand reached eye-watering values in Q1

Quarterly Turkish net gold bar and coin investment, tonnes and US$ value*



*Data as of 31 March 2024.
Source: Bloomberg, Metals Focus, ICE Benchmark Administration, World Gold Council

5. Costco is selling gold bars - and the wholesale giant says they're selling fast | The Independent

But this was met with a jump in liquidations as investors saw continued record high gold prices as too good to pass up, particularly in a quarter without the regional bank failures that lit a fire under demand in Q1 of last year.

Falling premiums reflected loosening dynamics in the market, with robust two-way activity emerging in what had been a largely one-way market for much of the previous four years.

European investment trends echoed those of the US: healthy levels of fresh buying were countered by a wave of selling back as the gold price took off, resulting in lower overall quarterly demand. Regional demand of 18t was half that of Q1'23 as the record gold price encouraged profit-taking.

Germany's investment market reported active two-way trading, resulting in total demand of 7t (-48% y/y). March saw a decline in premiums on German gold investment products, indicative of shifting dynamics.

ASEAN markets

Currency devaluation was a common theme among the ASEAN markets we track in Gold Demand Trends. This fuelled safe-haven/wealth-preservation demand for gold, as well as attracting investors with superlative returns in local prices.

Vietnam registered the strongest Q1 for bar and coin demand since 2015, at just over 14t. Local investors were attracted by gold's outstanding performance during the quarter, particularly in the face of rising energy prices – which are expected to fuel inflation – and local currency depreciation against the dollar. Premiums on gold bars reportedly reached a record of US$650/oz. In an attempt to address these tight market conditions, the Vietnamese government has loosened restrictions on the supply of gold, and the State Bank of Vietnam (SBV) plans to resume its process of auctioning gold bars to the market in late April.

Thailand saw a 10% y/y increase in gold bar and coin investment, to 6t. The local gold price rise outstripped that of the international price, thanks to continued depreciation in the baht during the quarter. Although this drew investor attention, demand in the country remains well below pre-pandemic levels, not least because the rise in online gold trading platforms has cannibalised demand for gold bars and coins to a certain extent. Demand in Indonesia was similarly robust, rising 15% y/y to 7t. The continued erosion of value in the rupiah encouraged investors to seek protection against currency devaluation.

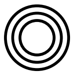
Rest of Asia

Despite the gold price smashing through a series of all-time highs in Q1, Japan saw only mild net selling of just 1t. This continued the recent trend of growing investment interest among a younger cohort, which almost matches the continued liquidations more commonplace among the older generation who invested in gold at much lower prices.

The record high gold price fuelled investor interest in South Korea: bar and coin demand was 27% higher y/y at 5t. This represented the strongest quarter for South Korean investment for over two years.

Australia

Bar and coin demand in Australia halved y/y to 2t in Q1. Australian bar and coin investors reacted to the price rise in a similar way to those in Western markets: continued buying interest was met with a surge in profit-taking.



Central Banks

Central banks double down on gold demand by setting new first quarter record

- Central bank net demand totalled 290t in Q1 – the strongest start to any year on record[6]
- Reported purchases remained broad-based, with China, Turkey and India leading the way
- The strong start reinforces our view that central bank demand will remain robust in 2024.

Tonnes	Q1'23	Q1'24	y/y % change
Central banks and other institutions	286.2	289.7	▲ 1

Source: Metals Focus, World Gold Council

With central banks accelerating their gold purchases to above 1,000t per year in 2022 and 2023, the market is finally beginning to appreciate the importance of their contribution to gold demand. Accounting for almost a quarter of annual gold demand in both those years, many have attributed central banks' ongoing voracious appetite for gold as a key driver of its recent performance in the face of seemingly challenging conditions: namely, higher yields and US dollar strength.

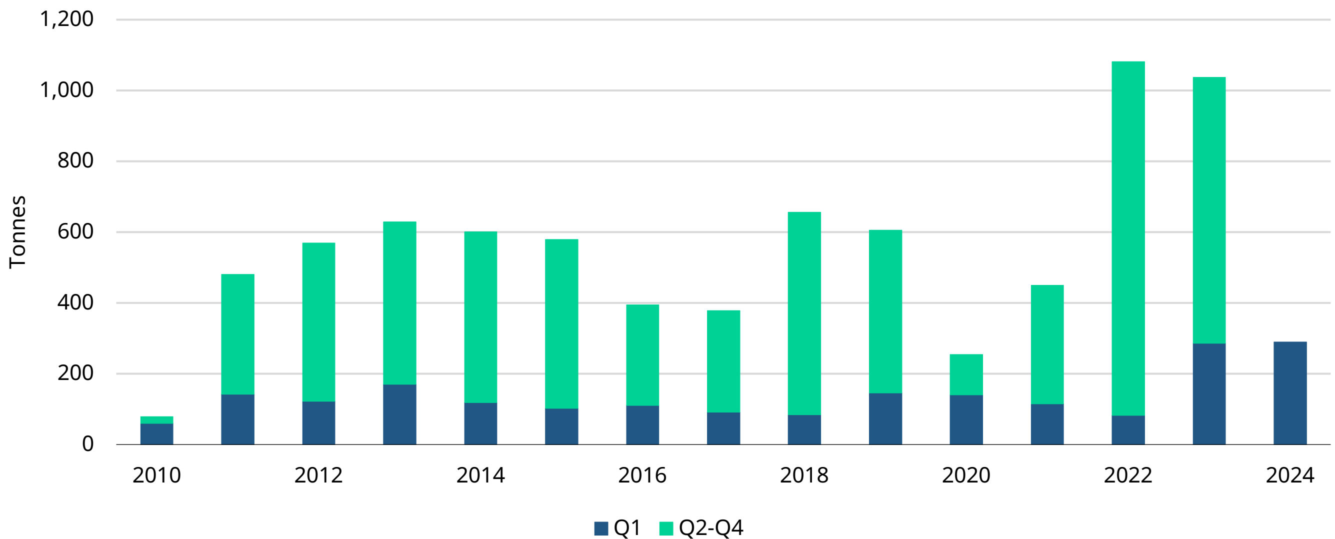
And despite the high bar set in the last two years, the voracious buying has continued into 2024 in the face of the renewed gold price rally. Global official gold reserves rose by a net 290t, the highest Q1 total in our data series back to 2000; 1% higher than the previous Q1 record set in 2023 (286t) and 69% more than the five-year quarterly average (171t).

Not only is the long-standing trend in central bank gold buying firmly intact, it also continues to be dominated by banks from emerging markets. Ten central banks reported increased gold reserves (of a tonne or more) during Q1, all of whom have been active over recent quarters.

East and Central Asian central banks accounted for the majority of Q1 net purchases. The People's Bank of China carried its recent momentum into Q1, reporting an addition of 27t to its gold reserves during the quarter.

Chart 8: Central banks carry gold buying momentum into 2024

Central bank net purchases, tonnes*



*Data as of 31 March 2024.
Source: Metals Focus, Refinitiv GFMS, World Gold Council

6. As publicly reported at the time of writing. For purposes of Gold Demand Trends, central bank demand is defined as net purchases (i.e. gross purchases less gross sales) by central banks and other official sector institutions, including supra national entities such as the IMF and sovereign wealth funds where applicable. Our quarterly central bank demand data is sourced from Metals Focus, whose proprietary estimates of official sector activity incorporate various sources, including IMF IFS reports, international trade data, and others. As such, IMF IFS publicly reported data is a subset of what is included in Gold Demand Trends. Both data sets are subject to revision as new information is made available and/or to accommodate late or updated data reported by official institutions data.

This marks the 17th consecutive monthly increase, helping to lift its reported gold holdings to 2,262t (16% higher than at the end of October 2022 when it resumed reporting monthly additions). The data indicates that this is the PBoC's longest ever reported streak of monthly additions to its gold reserves.

Together with the higher gold price, this pushes gold's share of total reserves close to 4.6%, notably higher than the 3.2% share it had in October 2022.

The Reserve Bank of India grew its gold reserves by 19t during the first quarter, exceeding last year's annual net purchases (16t). The National Bank of Kazakhstan (16t), the Monetary Authority of Singapore (2t) – the only developed market bank to add to its gold reserves – the Central Bank of Oman (4t) and the National Bank of the Kyrgyz Republic (2t) were the other notable buyers in the region.

In Europe, both the Czech National Bank (5t) and the National Bank of Poland (1t) reported increasing their gold reserves during the period. And in the Middle East, the Qatar Central bank reported a 2t increase in its gold reserves in Q1.

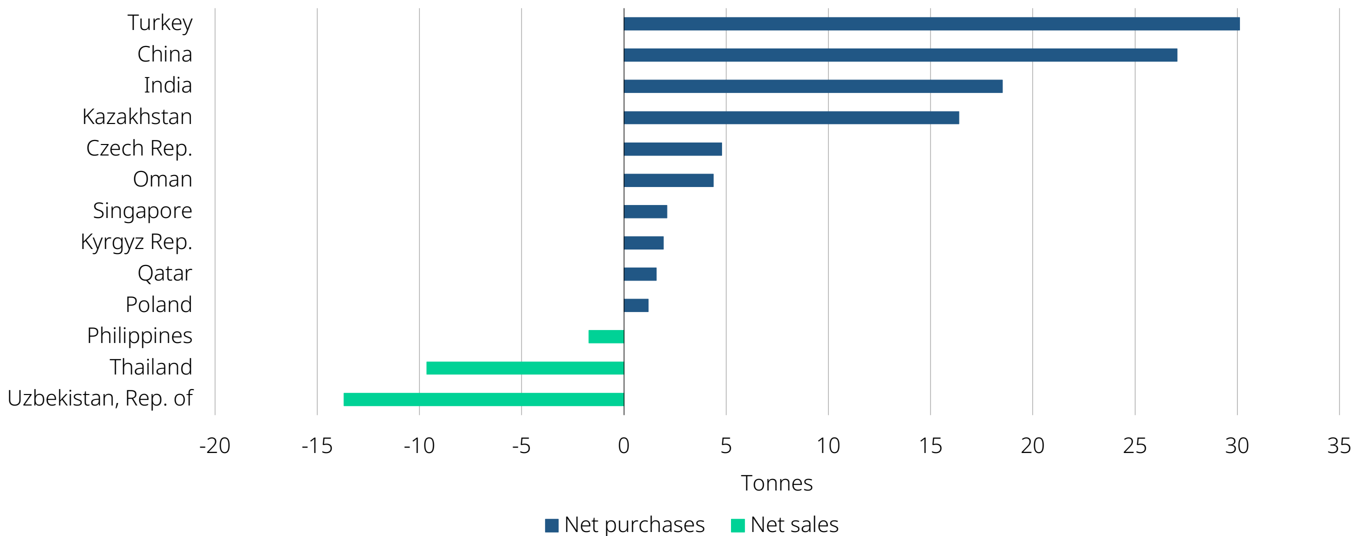
Elsewhere, the Central Bank of Turkey continued to accumulate gold through Q1. It bought a further 30t, bringing its gold reserves to 570t. There was no repeat of the selling that occurred in March last year, despite continued tightness in the domestic gold market due to heightened demand. The central bank has now bought gold for ten consecutive months, helping to lift gold reserves towards levels seen a year ago.[7]

Reported gold reductions (of a tonne or more) totalled 25t in Q1. But a breakdown of this figure shows that the Central Bank of Uzbekistan (14t) and the Bank of Thailand (10t) accounted for the lion's share. It should be noted for the latter, however, that "The reduction was not due to any gold sale.". The Bank of Thailand further stated that: "Starting March 29, 2024, monetary gold is revised to be in line with gold reported in International Reserves and to comply with IMF definition where only gold with a purity of at least 995/1,000 should be recorded.".[8] By comparison, notable selling from the Central Bank of the Philippines (2t) was far more modest.

In April, a Bloomberg report stated that the National Bank of Kazakhstan may resume gold sales owing to the "positive dynamics" of the gold price. However, it also indicated that its plan was to keep gold's share of total reserves at 50-55%. This is not the first report of this kind, where the central bank has made clear that it continues to optimise its international reserves. Given that since 2011 the central bank has had the right to buy all domestically produced gold, and that its international reserves hold a substantial weight of gold, some selling from time to time can be expected.[9]

Chart 9: Turkey, China and India led the way as buying outweighed sales during Q1

Year-to-date central bank net purchases and sales by country*



*Data as of 31 March 2024, where available. Note: chart includes net purchases/sales of a tonne or more.
Source: IMF IFS, respective central banks, World Gold Council

7. Turkey official sector gold reserves are the sum of central bank owned gold and Treasury gold holdings. This is equivalent to gross gold reserves less all gold held at the central bank in relation to commercial sector gold policies, such as the Reserve Option Mechanism (ROM), collateral, deposits and swaps. Please follow this link for information on this methodology: www.gold.org/download/file/16208/Central-bank-stats-methodology-technical-adjustments.pdf

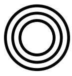
8. ธนาคารแห่งประเทศไทย | Bank of Thailand (bot.or.th)

9. Kazakhstan was the 15th largest gold producing nation in 2022 – the latest data available. For more, please see: Global mine production by country | World Gold Council

Unreported buying – the difference between quarterly data presented in Gold Demand Trends and central bank activity reported via public sources, such as the IMF – jumped back up to levels not seen since 2022. Lags in reported data mean that further detail around this activity may yet come to light.[10]

In what was an interesting quarter for the gold market, central banks made clear their commitment to the longstanding trend of gold buying. While the recent price rally may have impacted trade execution, for those central banks that manage their gold reserves more actively, we do not expect it will derail any strategic gold accumulation plans they may have. But more data will be needed to better assess how the current price levels may/may not have impacted central bank activity. As such, we retain our view that central banks will remain net buyers in the coming quarters, providing a key pillar of support for gold. For more on this, please see the Outlook section.

10. Most central banks report their data on a regular basis, which means our data is up to date with a two-month lag. However, very often institutions are late in reporting and do not report their updated gold holdings for several months. In these cases, gold purchases and sales will be reported with a significant delay, due mostly to the late reporting of the central bank.



Technology

Supply chain restocking in the electronics sector bolsters gold demand during Q1

- Industrial demand for gold in Q1 rose by 10% y/y to 79t
- This growth was driven by a recovering electronics sector, which saw a 13% y/y rise to 64t
- Other industrial applications recorded a small rise of 2% y/y to 12t, while dental demand continued its long-term decline with a fall of 5% y/y to 2t.

Tonnes	Q1'23	Q1'24		Y/y % change
Technology	71.2	78.6	▲	10
Electronics	57.1	64.4	▲	13
Other Industrial	11.7	11.9	▲	2
Dentistry	2.4	2.3	▼	-5

Source: Metals Focus, World Gold Council

The reported Q4 2023 recovery in the electronics sector continued into early 2024 as production increased across most segments in East Asian countries. This was driven by supply chain restocking and emerging AI-related opportunities. Overall, technology demand is expected to continue its upward trend throughout the year.

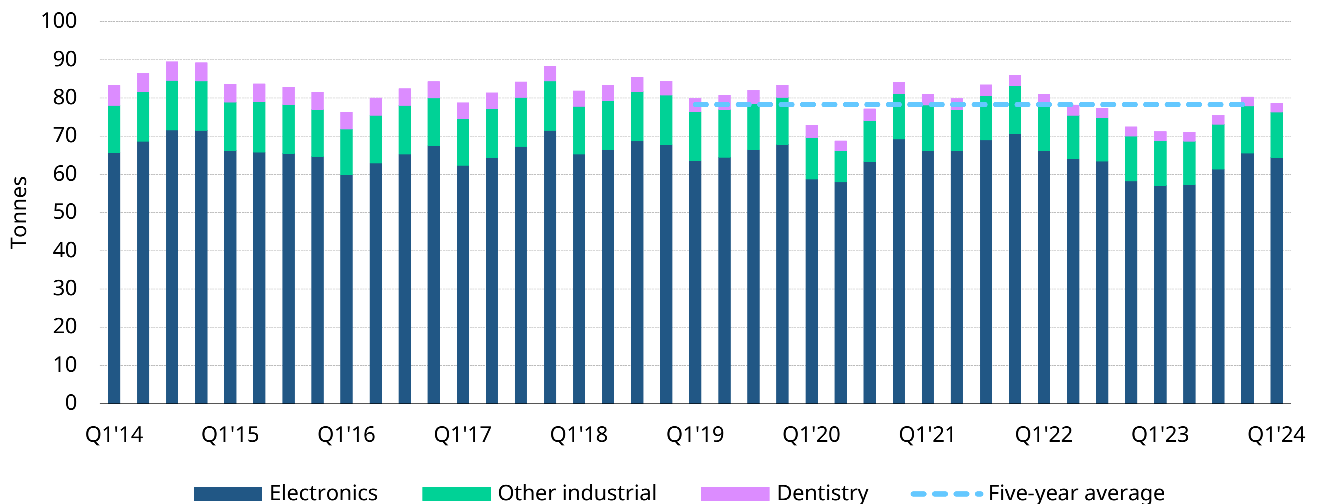
Electronics

Gold demand in the electronics sector increased in Q1. Expected growth in AI-related devices and infrastructure was reportedly behind much of this recovery. For example, analysts at Gartner forecast strong growth for AI-enabled PC and smartphones,[11] alongside stabilising demand for traditional devices after almost two years of decline.

Demand from the wireless sector surged during Q1, with strong growth reported in several areas. The replenishment of depleted inventories across the supply chain gained pace and the release of new smartphones led to an increase in power amplifier demand.[12] The rapid growth of cloud computing catalysed by the AI boom boosted demand for high-end communication chips. Meanwhile, the adoption of low earth orbit satellites (LEOs) has moved faster than expected as operators accelerated deployment and expanded new applications. Looking forward, the evolution of WiFi-6 to WiFi-7[13] is expected to provide further support throughout 2024 alongside the ongoing stabilisation of the consumer electronic market.

Chart 10: Solid AI-driven recovery in electronics boosts total sector demand

Quarterly gold volumes used in technology and the five-year quarterly average, tonnes*



*Data as of 31 March 2024.
Source: Metals Focus, World Gold Council

11. Gartner Predicts Worldwide Shipments of AI PCs and GenAI Smartphones to Total 295 Million Units in 2024

12. Power amplifier chips are used to amplify the signal transmitted from the phone's antenna to the cell tower and are critical components of modern mobile phones.

13. Wi-Fi 7: Poised To Revolutionize Wireless Connectivity | forbes.com

Gold used in Light Emitting Diodes (LEDs) also strengthened during the quarter. This was fuelled by another strong period of automotive demand, as well as a resurgence in demand for displays/panels, helped by the prospect of major events such as the Paris Olympics and Euro 2024. After inventories in the panel industry ended 2023 at normal levels, Q1 saw an increase in stocking activity and a 5-10% rise in capacity utilisation. We expect this rebound in the backlight LED market to last for the first half of the year at least.

Memory chips, traditionally a steady source of demand, also reported Q1 growth. DRAM and NAND-Flash saw significant upticks in procurement as downstream users stockpiled specific components for AI-related applications. AI is certainly the driving force behind this strong demand and in turn has boosted demand for High Bandwidth Memory (HBM).[14] Earnings of major memory manufacturers such as Samsung are likely to be fuelled by this "AI-driven memory upturn cycle" as chip prices rebound over the coming two years.[15]

The Printed Circuit Board (PCB) sector was the only segment to record a small fall in demand. Q1 is the traditional low season for PCBs, but consumer electronics manufacturers exercised caution in their orders due to an uncertain outlook for H2. There has also been considerable structural change in the sector as PCB manufacturing continues to be transferred to South East Asian countries such as Thailand, Vietnam and Malaysia.[16] However, demand from the automotive sector remains healthy and capacity utilisation rates are expected to rise q/q throughout the year.

At the aggregate level, all four major electronics fabrication hubs around the world recorded a y/y increase in gold demand during Q1: Japan – 19t (24.0%); South Korea – 6t (20.2%); the US – 17t (1.6%), and Mainland China and Hong Kong – 17t (18.5%).

Other industrial and dentistry

Other industrial applications recorded a y/y increase of 2% to 12t during Q1, again mostly due to the post-COVID recovery in China. In contrast, Italy saw some losses due to non-price-related substitution in plating options and Indian offtake fell as a result of weak discretionary spending that fed through to weak gifting demand. Dental demand fell 5% y/y to 2t due to ongoing structural losses.

14. High-Bandwidth Memory (HBM) - Semiconductor Engineering | semiengineering.com
15. Samsung Q1 2024 earnings guidance: Memory chip prices rebound | cnbc.com
16. Thailand emerges as key PCB production hub, reshaping global supply chains | DIGITIMES Research

Supply

Total supply rose 3% in Q1 due to record mine production and higher recycling

- Q1 mine production increased 4% y/y to a record level for the first quarter
- Gold recycling volumes rose by 12% y/y as the gold price increased
- Mine production looks set to new record in 2024, while higher prices may encourage more – but limited – recycling.

Tonnes	Q1'23	Q1'24		Y/y % change
Total supply	1,206.4	1,238.3	▲	3
Mine production	855.1	893.0	▲	4
Net producer hedging	39.4	-5.5	-	-
Recycled gold	311.9	350.8	▲	12

Source: Metals Focus, World Gold Council

Total gold supply increased by 4% y/y in Q1'24. This was driven by strong mine production of 893t – an all-time Q1 high in our data series, which dates back to 2000 – and a 12% y/y increase in recycling to 351t. Total supply would have increased further, but provisional estimates suggest a modest reduction in the aggregate hedge book, although as usual there is room for substantial revisions in this data-set once mining companies have released their quarterly reports.

Mine production

The first quarter mine production of 893t represents a 4% y/y increase from the previous Q1 record of 855t, set in 2023.

On a q/q basis, however, production fell by 5%, due primarily to seasonal fluctuations: open pit and alluvial operations tend to cut back or stop altogether in the coldest part of the year, especially in China, Russia and other Central Asia countries. South Africa's gold mining industry is also subject to reduced output as a result of the long summer holidays over Christmas and the New Year.

Notable Q1 production increases – based on data available at the time of publication – occurred in the following countries[17]:

- Higher production in **Canada** at Meadowbank and Magino mines – the latter due to high growth as it ramps up – are estimated to have driven up production by 16% y/y
- **Ghana** saw production up 15% y/y due to the recovery in production at the Ahafo mine. Operations had been impacted by the failure of a conveyor to the primary crusher and damage to the SAG mill[18]
- Higher production at the vast Grasberg copper-gold mine together with higher forecast output from Batu Hijau and Tujuh Bukit should see **Indonesian** mine output up 14% y/y
- In **China** mine production increased 5% y/y. Growth was reported from mines in key provinces such as Shandong and Henan early in the quarter; lower grade operations are expected to expand due to the high gold price.

Operations in some countries were hit by a mix of mining, geological and weather factors:

- **Bolivia** saw output down 38% y/y due to lower production from Amayapampa and decreased artisanal and small-scale mining (ASM)
- In **Mexico** mine production is believed to have fallen 19% y/y after guidance was cut for some mines, including Peñasquito, La Herradura, Morales and Mulatos. Peñasquito is scheduled to produce lower grade ore throughout 2024
- Mine production in the **Philippines** is estimated to be 5% lower y/y due to lower throughput and lower ore grades
- In **Australia**, mine production fell by 4% y/y due to a combination of lower output from Cadia Valley, Boddington and Fosterville together with adverse weather conditions, which affected some mines.

Regionally, Africa and Asia are estimated to report the largest Q1'24 increases in mine production, each up 7% y/y on higher volumes from Ghana and China respectively. Gold production is also expected to increase in North America (+5t y/y) and Central and South America (+3t y/y) due to higher output from Canada and Brazil, respectively. For 2024 as a whole and over the next five years, Canadian mine production is expected to report a notable production increase as mines are commissioned, ramped up or expanded.

Based on current estimates, mine production started 2024 strongly, up 4% y/y. As a result, the year looks set to surpass the previous record of 3,656t set in 2018.

17. Q1 production figures presented here are currently estimated owing to the lag in company reporting. As more information is released, this data will be updated in future Gold Demand Trends reports.

18. SAG stands for semi-autonomous grinding.

In Q4'23, based on the latest data available, average all-in sustaining costs (AISC) for the gold mining industry reached a record high, up 7% y/y to US$1,342/oz. Average AISC for the industry increased in each quarter of 2023, but cost inflation slowed sharply compared to the very rapid increases seen in 2021 (up 11%) and 2022 (+12% to US$1,276/oz).

Net producer hedging

The global delta-adjusted producer hedge book climbed by 16t to 226t in Q4'23, the last available data for producer hedging. This takes the annual change in the industry's position to +55t, the largest yearly increase in the global hedge book since 2014. We estimate that modest amounts of de-hedging took place in Q1, although with gold's recent strength it is possible that our current estimate of a 6t decline may be reversed once first-quarter company reports have been received.

In the previous edition of this report, we argued that "The past year has been a useful test of the presumption that gold mining companies are reluctant to expand their hedging activities". Although we have revised up our estimates of the 2023 additions to the aggregate hedge book (to +55t from +17t), we stand by this view. Despite the 32% y/y increase, the absolute level of the global producer hedge book remains small; it stood at a higher level in 2016 and 2017 (259t and 234t respectively).

Recycled gold

Gold recycling in Q1 rose to 351t (+12% q/q and y/y) in response to higher gold prices. This was the strongest first quarter volume of recycling supply since 2014 and the strongest quarterly performance since Q3'20.

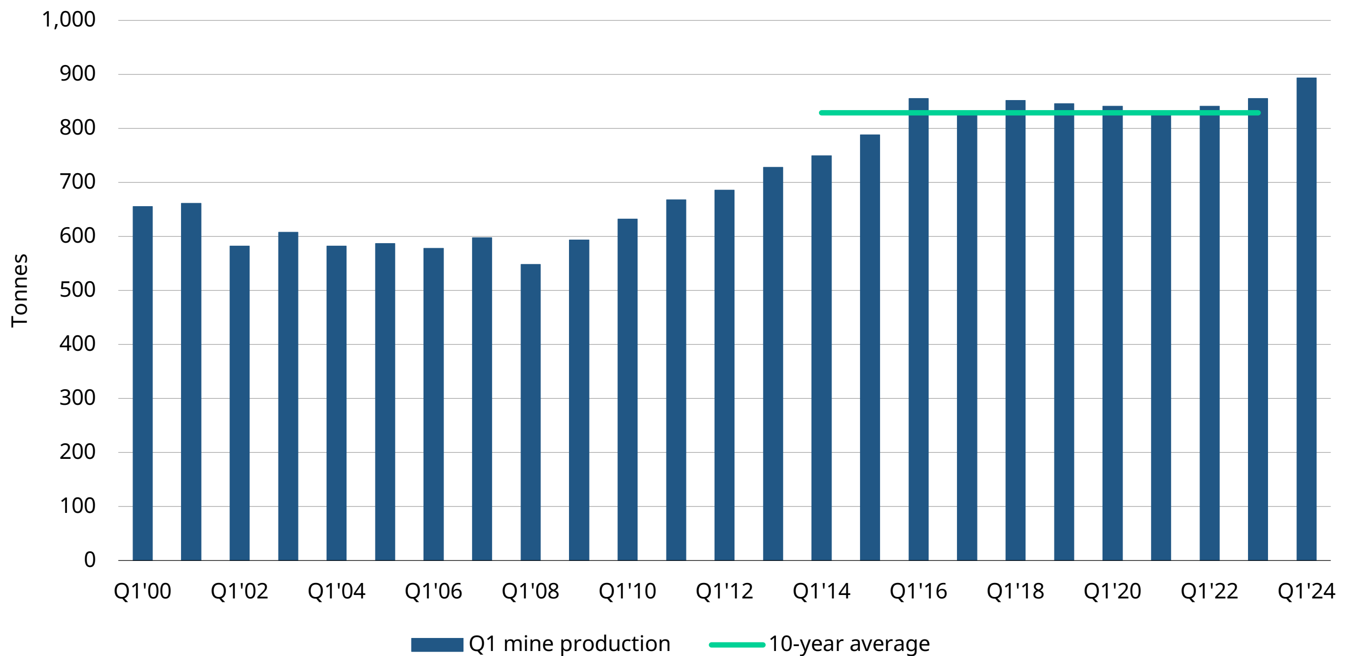
Increases were seen in almost all markets and regions, with higher gold prices the common theme. This upturn should come as no surprise to followers of the gold market – rapidly rising prices are usually accompanied by increased volumes of gold recycling, primarily in the form of jewellery but the increase in volumes has been more modest than some may have been expecting given the gold price ascent.[19]

Developments in major markets:

- **East Asia** saw the largest regional increase. This was mostly driven by stronger volumes in **China** – a consequence of the lingering COVID impacts seen in Q1'23. In addition, we received reports of high levels of recycling volumes from the (jewellery) trade
- Considering the rapid gold price rise during the quarter, **Thailand** saw relatively muted recycling supply. Normally, Thai holders of jewellery are quick to sell back if prices move higher. But a lot of gold was liquidated during the financial distress of COVID, which hit Thailand particularly hard, resulting in lower near-market supplies

Chart 11: Mine production hit a new first quarter record in 2024

Q1 global gold mine production, tonnes*



*Data as of 31 March 2024.
Source: Metals Focus, Refinitiv GFMS, World Gold Council

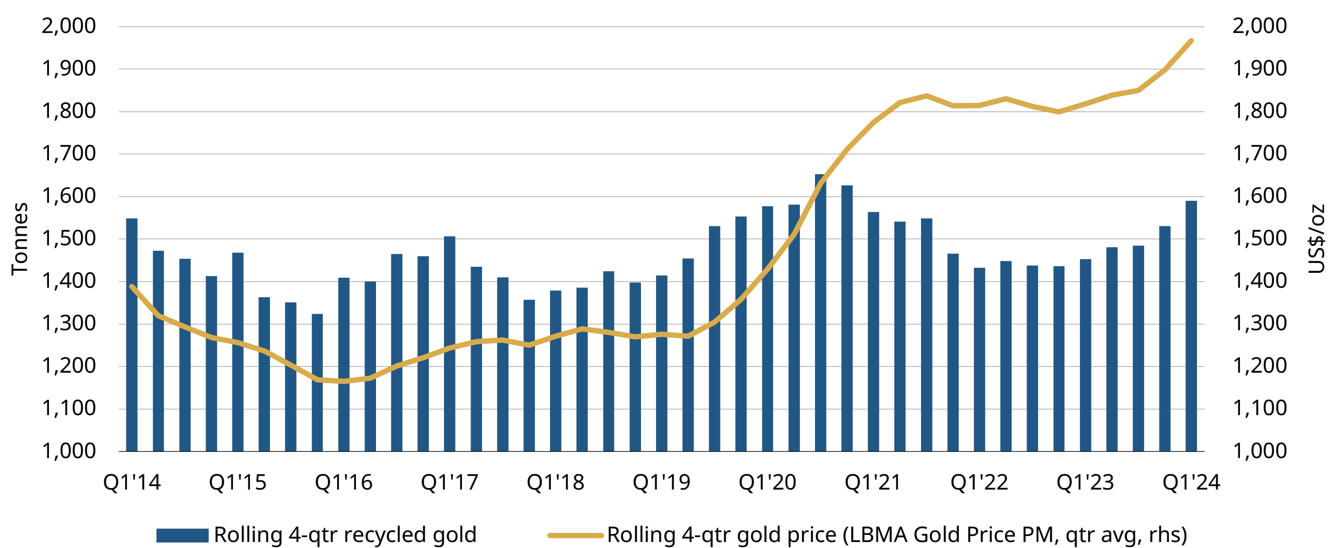
19. Recycling supply consists of 90-95% gold jewellery and the remainder from technology. Selling back of bars and coins is not included in recycling as these will typically be sold in the secondary market, and are included within the net total bar and coin investment figure.

- Although **Indian** recycling volumes increased, there were very few reports of distress selling. With a strong economy and expectations of a normal-to-good monsoon, there seems little desire to cash in on high gold prices at the moment
- **Europe** also saw minimal distress selling. Another explanation for the relatively small increase in Europe is that the gold price, at EUR60/g for much of January and February, was less enticing to gold holders. Gold only broke much higher, to approximately EUR 65/g, in March. This may be a prelude to higher recycling supply in Q2
- In the **US** recycling volumes increased only marginally: reports suggest that trade rather than retail flows were behind the uptick. As well as 'cost of carry' arguments – i.e. high gold prices and high interest rates make the cost of holding gold more expensive – there has been some talk of an increasing novelty factor in the US jewellery market. If a new line fails to sell well when introduced, it is quickly abandoned. It will be interesting to see whether this trend extends to other developed markets
- **Middle Eastern** recycling volumes increased marginally q/q but posted a y/y decline, the only region to do so. A combination of regional conflict and some economic distress has kept recycling volumes relatively depressed; gold holders have been inclined to hold onto safe-haven assets such as gold.

While the increase in recycling supply was lower than may have been expected, almost all markets responded to higher prices. Continued gold price gains at the start of the second quarter, if sustained for any length of time, are likely to prompt further increases in scrap supply. We remain of the view, however, that near market stocks have been somewhat depleted in many regions, potentially limiting any increase in recycling supply in the coming quarters and beyond.

Chart 12: Recycled gold rose to its highest level since Q3 2020

Quarterly supply of recycled gold, tonnes*



*Data as of 31 March 2024.
Source: ICE Benchmark Administration, Metals Focus, World Gold Council

Notes and definitions

Notes

Revisions to data

All data is subject to revision in the light of new information.

Historical data series

Demand and supply data from Q1 2014 are provided by Metals Focus. Data between Q1 2010 and Q4 2013 is a synthesis of Metals Focus and GFMS, Thomson Reuters data, which was created using relatively simple statistical techniques. For more information on this process, please see Creating a consistent data series by Dr James Abdey.

Definitions

Bars

Net investment (i.e. gross purchases less gross sales) in small gold bars (1kg and below) sold at the retail level. Where identifiable, this also includes gold bought and stored via online vendors.

Central banks

Net purchases (i.e. gross purchases less gross sales) by central banks and other official sector institutions, including supra national entities such as the IMF. Swaps and the effects of delta hedging are excluded.

Comex net long positioning

The Commodity Futures Trading Commission (CFTC) publishes a weekly Commitment of Traders (COT) report that provides information on the positioning of speculative investors in the U.S. futures markets. The report gives the aggregate positions held by traders from the previous Tuesday, including the number of long contracts (that stand to benefit if prices rise) and short contracts (that benefit if they fall). The report is often used as an indicator of market sentiment regarding the price of gold: short positioning reflects bearish sentiment while long positioning reflects bullish sentiment in the gold futures' markets.

Consumer demand

The sum of jewellery consumption and total bar and coin investment occurring within a country i.e. the amount (in fine weight) of gold purchased directly by individuals. Technology demand is not included at the individual country level, as it is measured at the point of fabrication rather than at the point of consumption.

Electronics

The volume of gold bullion or grain fabricated into components used in the production of electronics, including – but not limited to – semiconductors and bonding wire.

Dentistry

The volume of gold bullion or grain fabricated into products destined for dental applications such as dental alloys.

Gold-backed Exchange-Traded Funds (ETFs) and similar

The volume of gold held in physical form by open-ended Exchange Traded Funds (ETFs) and other products such as close-end funds, and mutual funds. Most funds included in this list are fully backed by physical gold. While several funds allow other holdings such as cash, derivatives or other precious metals, we monitor only those funds investing at least 90% in physical gold and appropriately adjust their reported assets to estimate physical holdings only. For funds that include physical holdings of multiple precious metals, the total AUM depicted for such funds is lower than their actual total AUM. Over time, the data set will adapt to most accurately represent the universe of active funds. For a comprehensive list of the funds we track or to subscribe to our monthly update on gold-backed ETF holdings, visit https://www.gold.org/goldhub/data/global-gold-backed-etf-holdings-and-flows

Fabrication

Fabrication is the first transformation of gold bullion into a semi-finished or finished product.

Gold bullion

Gold, in bar form, refined to a purity of at least 99.5%.

Gold demand

The total of jewellery fabrication, technology fabrication, investment and net purchases by central banks.

Jewellery consumption

End-user (consumer) demand for all newly-made carat jewellery sold at the retail level, by volume of fine gold. Measured on a gross basis (i.e. includes recycled gold). Excludes: purchases funded by the trading-in of existing carat gold jewellery (gold-for-gold exchange); and purchases of second-hand jewellery, other metals plated with gold, and coins and bars used as jewellery. At the global level, it is measured as jewellery fabrication adjusted for changes in inventories held by the trade. At the country level, it is jewellery fabrication adjusted for changes in trade stocks plus imports, less exports.

Jewellery fabrication

Jewellery fabrication is the first transformation of gold bullion into semi-finished or finished jewellery. This differs from jewellery consumption as it excludes stock building/de-stocking by manufacturers and distributors. At the individual country level, it also excludes imports or exports.

Jewellery inventory

Changes to the level of jewellery stocks along the jewellery distribution chain, this is the difference between gold fabrication and gold consumption. A negative figure represents a draw-down of stocks when consumption exceeds fabrication. A positive figure represents a build-up of stocks.

LBMA Gold price PM

Unless otherwise specified, gold price values from 20 March 2015 are based on the LBMA Gold price PM administered by ICE Benchmark Administration (IBA), with prior values being based on the London PM Fix. For more information, see https://www.gold.org/goldhub/research/market-primer/gold-prices

Medals/imitation coins

Fabrication of gold coins without a face value, produced by both private and official/national mints. India dominates this category with, on average, around 75% of the total. 'Medallion' is the name given to unofficial coins in India. Medals of at least 99% purity are also included.

Mine production

The volume (in fine weight) of gold mined globally. This includes an estimate for gold produced by artisanal and small-scale gold mining (ASGM), which is largely informal. For more information, refer to: https://www.gold.org/goldhub/research/market-primer/mine-production

Net producer hedging

The net impact in the physical market of mining companies' gold forward sales, loans and options positions. Hedging transactions – which release gold to the market from existing above-ground stocks – accelerates the sale of gold. De-hedging – the process of closing out hedged positions – has the opposite impact and will reduce the amount of gold available to the market in any given quarter. Over time, hedging activity does not generate a net change in the supply of gold. For more information, refer to: https://www.gold.org/goldhub/research/market-primer/mine-production

Official coins

Net investment in gold bullion coins (i.e. gross purchases less gross sales) at the retail level. It is equal to the volume of fine gold in coins fabricated by official/national mints which are, or have been, legal tender in the country of issue. It is measured at the country of consumption rather than at the country of origin (for example, the Perth Mint in Australia, sells most of the coins it produces through its global distribution network). In practice it includes the initial sale of many coins destined ultimately to be considered as numismatic rather than bullion.

OTC and other

This number captures demand in the OTC market (for which data is not readily available), changes to inventories on commodity exchanges, any unobserved changes in fabrication inventories and any statistical residual. It is the difference between total supply and gold demand.

Other industrial

Gold used in the production of compounds, such as

Gold Potassium Cyanide, for electro-plating in industrial applications as well as in the production of gold-plated jewellery and other decorative items such as gold thread. India accounts for the bulk of demand in this category.

Over-the-counter (OTC)

Over-the-counter (OTC) transactions (also referred to as

'off exchange' trading) take place directly between two parties, unlike exchange trading which is conducted via an exchange.

Recycled gold

Gold recovered from fabricated products, including unused trade stocks, which is refined back into bullion. This specifically refers to gold sold for cash. It does not include gold traded-in for other gold products (for example, by consumers at jewellery stores) or process scrap (scrap generated during manufacturing, which never becomes part of a fabricated product but instead returns as scrap to a refiner). For more information, refer to https://www.gold.org/goldhub/research/market-primer/recycling

Technology

This captures all gold used in the fabrication of electronics, dental, medical, decorative and other technological applications, with electronics representing the largest component of this category. It includes gold destined for plating jewellery.

Tonne (Metric)

1,000 kg or 32,151 troy oz of fine gold.

Total bar and coin

Total net investment in gold bars, coins and medals/imitation coins.

Total supply

The total of mine production, net producer hedging and recycling.

Year-to-date (y-t-d)

In Gold Demand Trends, year-to-date refers to the period to the end of the quarter being reviewed (i.e. for Gold Demand Trends Q2 2017, 'year-to-date' referred to the period from 31/12/2016 to 30/06/2017).

World Gold Council

We are a membership organisation that champions the role gold plays as a strategic asset, shaping the future of a responsible and accessible gold supply chain. Our team of experts builds understanding of the use case and possibilities of gold through trusted research, analysis, commentary and insights.

We drive industry progress, shaping policy and setting the standards for a perpetual and sustainable gold market.

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www.gold.org/goldhub/data/gold-supply-and-demand-statistics

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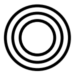

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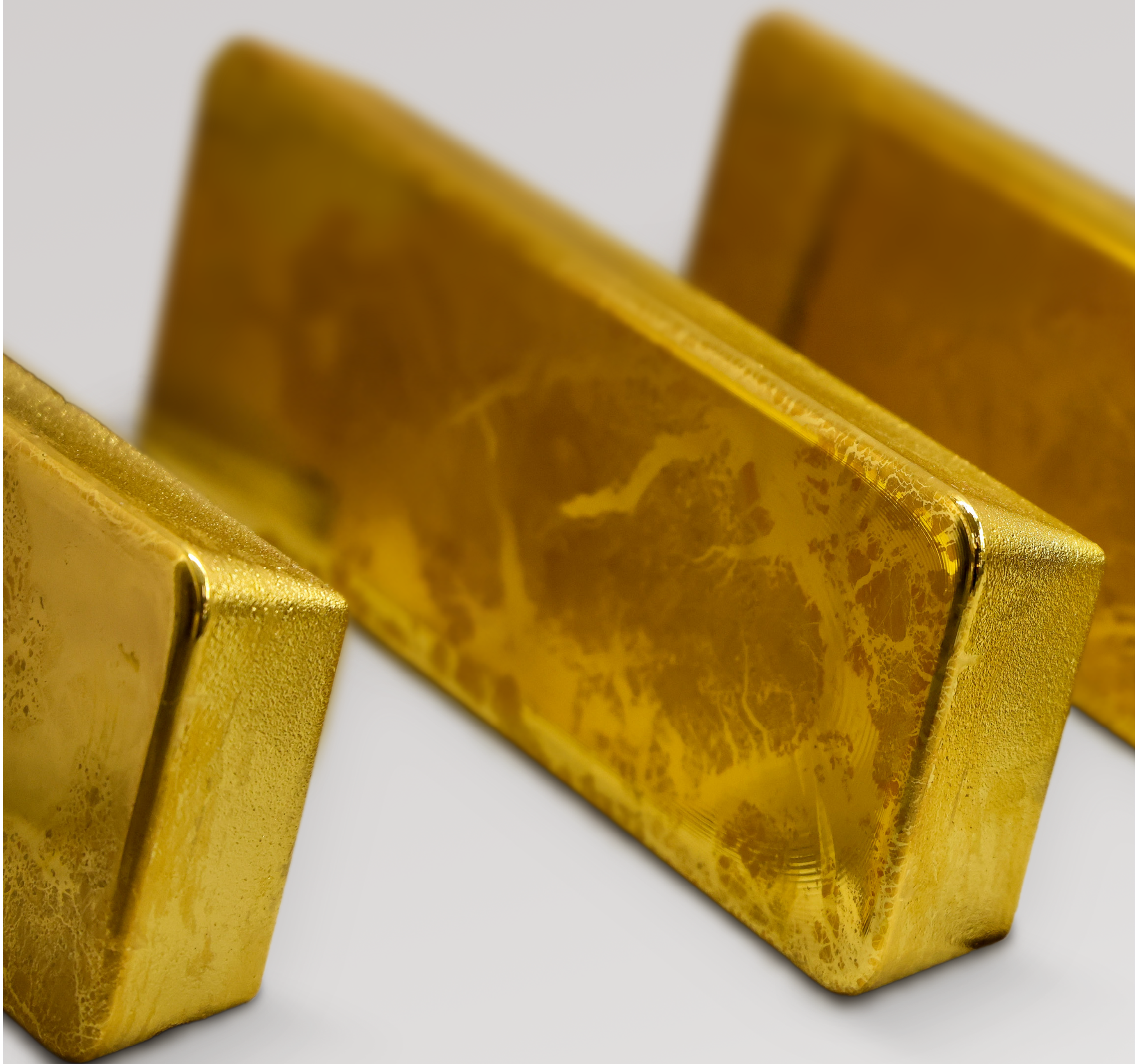
WORLD GOLD COUNCIL

YouGov

Central Bank Gold Reserves Survey
June 2024



Executive Summary

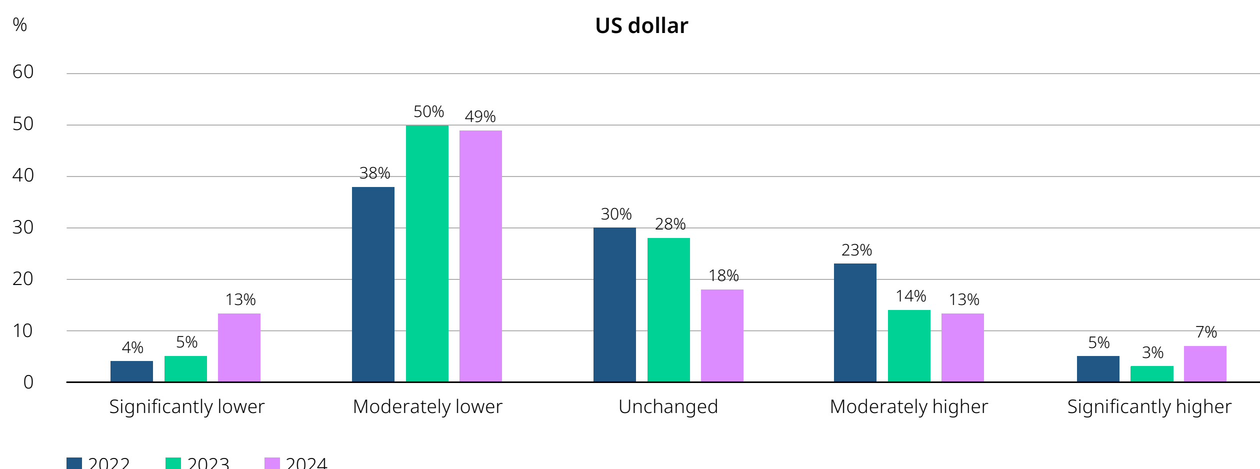
An increasingly complex geopolitical and financial environment is making gold reserves management more relevant than ever. In 2023, central banks added 1,037 tonnes of gold – the second highest annual purchase in history – following a record high of 1,082 tonnes in 2022.

Following these record numbers, gold continues to be viewed favourably by central banks as a reserve asset. According to the 2024 Central Bank Gold Reserves (CBGR) survey, which was conducted between 19 February and 30 April 2024 with a total of 70 responses, 29% of central banks respondents intend to increase their gold reserves in the next twelve months, the highest level we have observed since we began this survey in 2018. The planned purchases are chiefly motivated by a desire to rebalance to a more preferred strategic level of gold holdings, domestic gold production, and financial market concerns including higher crisis risks and rising inflation (Q15, page 22).

These results come amidst a backdrop of ongoing geopolitical tensions – conflict in the Middle East, a protracted war in Ukraine and elevated US-China tensions. On the macroeconomic front, while global inflation is starting to cool, economic recovery is proceeding at an uneven pace around the world and concerns loom regarding underlying financial vulnerabilities. Accordingly, "interest rate levels", "inflation concerns", and "geopolitical instability" continue to be the leading factors in central bankers' reserve management decisions as they were last year.

In a continuation of a trend observed in last year's survey, the view of the US dollar's future proportion of total reserve assets has continued to decline, with 62% of respondents thinking that the dollar's share will diminish five years from now, up from 55% in 2023 and 42% in 2022 (Chart 1). There continues to be a gulf in thinking between advanced economy and Emerging Market and Developing Economy (EMDE) central banks on this question, however. Whereas 30% of advanced economy respondents think the US dollar's share of global reserves will remain unchanged five years from now, only 11% of EMDE respondents share this view. While 56% of advanced economy respondents believe the US dollar's share of global reserves will fall, 64% of EMDE respondents believe it will do so (Q5, page 13). It is notable though that the percentage of advanced economy respondents who believe that the US dollar's share of global reserves will fall has increased from 46% in 2023 to 56% in 2024 – reflecting increased pessimism even among advanced economy respondents about the US dollar's future share of global reserves.

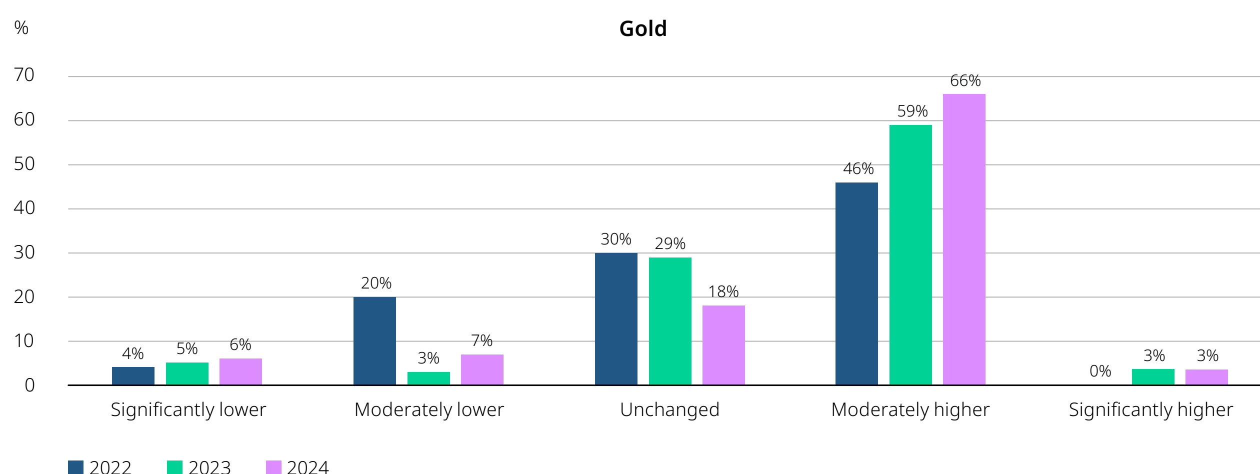
Chart 1: What proportion of total reserves (foreign exchange and gold) do you think will be denominated in US dollars 5 years from now? (2022-2024 responses shown).



2024 Base: All central banks (68); Advanced economy (23); EMDE (45). 2023 Base: All central banks (57); Advanced economy (13); EMDE (44).
2022 Base: All central banks (56); Advanced economy (13); EMDE (43). See Note 1 for a detailed explanation of the answer options.

When asked about gold's future share in global reserves, 69% of respondents thought that gold would occupy a higher proportion five years from now, up from 62% in 2023 and 46% in 2022 (Chart 2). While 57% of advanced economy respondents think gold's share will rise, 75% of EMDE respondents believe it will do so. Meanwhile, 35% of advanced economy respondents think that it will remain unchanged five years from now, a view shared by only 9% of EMDE respondents (Q8, page 16). EMDE central banks, which have been the primary driver of gold buying since the 2008 global financial crisis, appear to more pessimistic about the US dollar's future share of global reserves and more optimistic about that of gold. Nonetheless, it is notable too that the percentage of advanced economy respondents who believe that gold's share of global reserves will rise has increased significantly from 38% in 2023 to 57% in 2024.

Chart 2: What proportion of total reserves (foreign exchange and gold) do you think will be denominated in gold 5 years from now? (2022-2024 responses shown).



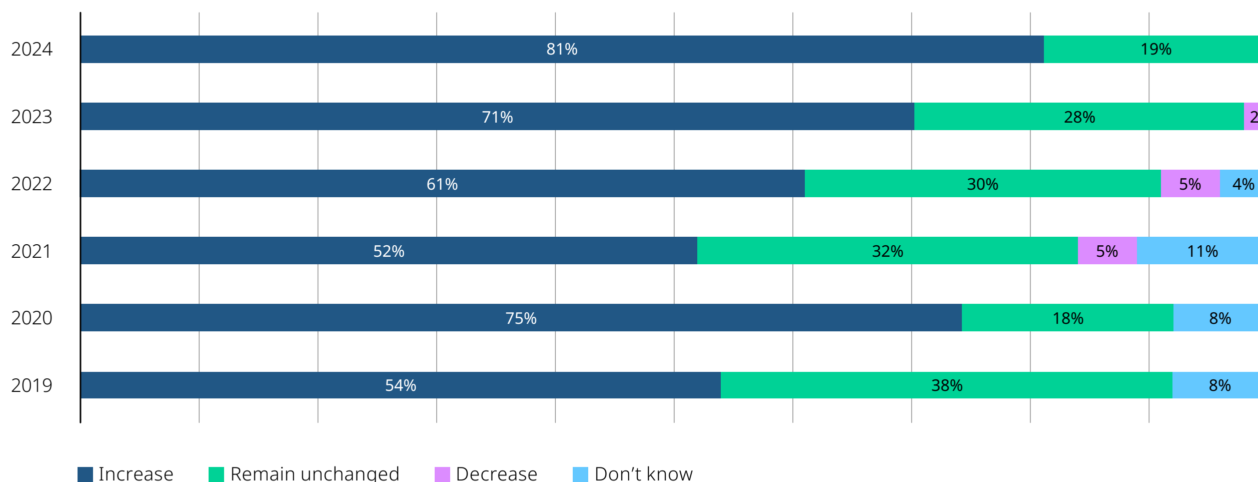
2024 Base: All central banks (68); Advanced economy (23); EMDE (45). 2023 Base: All central banks (57); Advanced economy (13); EMDE (44).
2022 Base: All central banks (56); Advanced economy (13); EMDE (43). See Note 2 for a detailed explanation of the answer options.

1. The proportion of US dollars in total reserves (foreign currency and gold) on which respondents were asked to base their view was different in each survey year: 49% (2024), 51% (2023), 51% (2022). Correspondingly, the answer options varied in each survey year and are therefore presented with descriptions in this chart. The answer options in each year were: Significantly lower: less than 40% (2024), less than 40% (2023), less than 40% (2022); Moderately lower: between 40-48% (2024), between 40-50% (2023), between 40-50% (2022); Unchanged: 49% (2024), 51% (2023), 51% (2022); Moderately higher: between 50-60% (2024), between 52-60% (2023), between 52-60% (2022); Significantly higher: greater than 60% (2024), greater than 60% (2023), greater than 60% (2022).
2. The proportion of gold in total reserves (foreign currency and gold) on which respondents were asked to base their view was different in each survey year: 16% (2024), 15% (2023), 14% (2022). Correspondingly, the answer options varied in each survey year and are therefore presented with descriptions in this chart. The answer options in each year were: Significantly lower: less than 10% (2024), less than 10% (2023), less than 10% (2022); Moderately lower: between 10-15% (2024), between 10-14% (2023), between 10-13% (2022); Unchanged: 16% (2024), 15% (2023), 14% (2022); Moderately higher: between 17-25% (2024), between 16-25% (2023), between 15-25% (2022); Significantly higher: greater than 25% (2024), greater than 25% (2023), greater than 25% (2022).

Hence, this year's survey continues the trend observed in previous surveys of a growing role for gold in global reserves. While EMDE central banks exhibit stronger optimism about gold's future share of global reserves (and corresponding stronger pessimism about the USD dollar's future share), there is a notable shift in advanced economy central banks towards the same perspective.

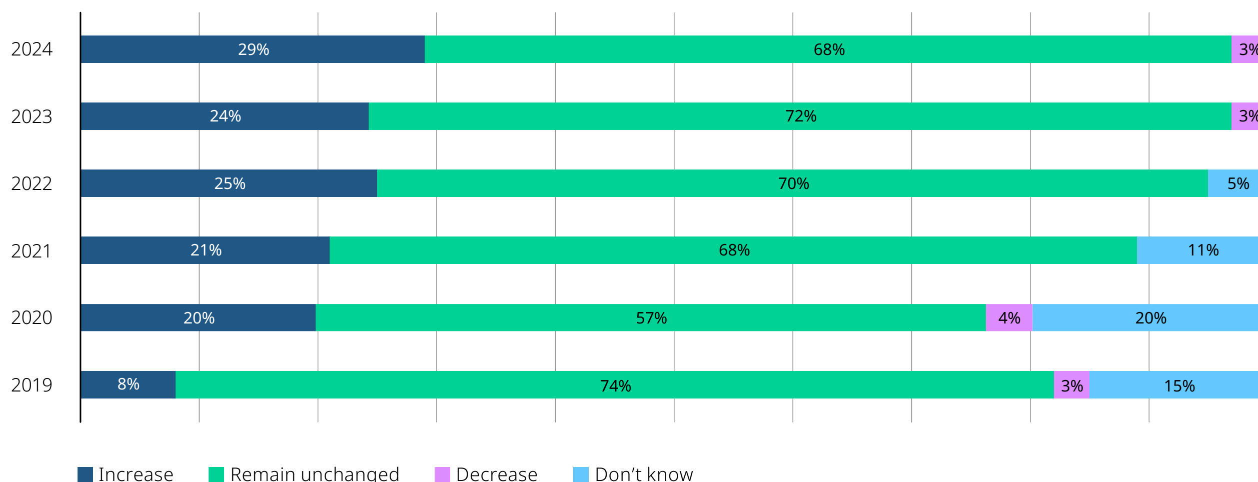
Overall, central banks view gold's prospects as a reserve asset over the next twelve months slightly more favourably than last year, with 81% saying that global central bank gold holdings will rise in the next twelve months compared to 71% last year (Chart 3). Compared to last year, a slightly higher proportion of respondents (29%) say they have plans to increase their own gold holdings in the next twelve months (Chart 4). Both of these responses represent the highest level of positivity towards gold since we began asking this question in 2019.

Chart 3: How do you expect global central bank gold holdings to change over the next 12 months?



2024 Base: All central banks (69); Advanced economy (24); EMDE (45). "Don't know" was removed as a option from the 2023 survey onwards.

Chart 4: How do you expect your institution's gold reserves to change over the next 12 months?

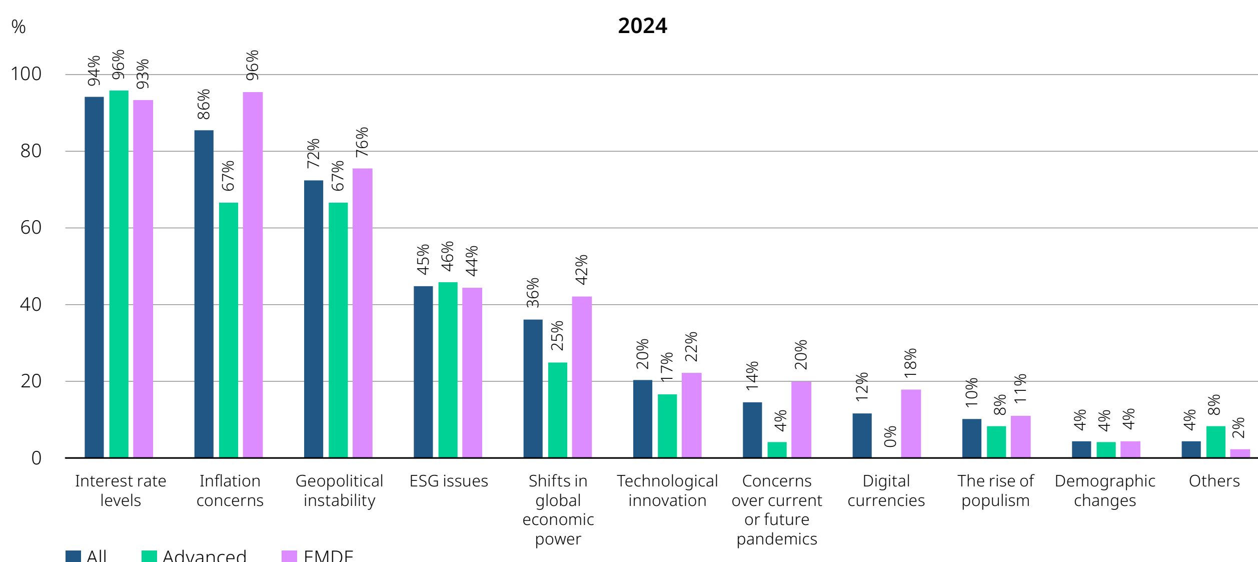


2024 Base: All central banks (69); Advanced economy (24); EMDE (45). "Don't know" was removed as a option from the 2023 survey onwards.

Strategic Considerations in Reserves Management

In 2024, 71% of respondents reported higher total reserve levels than five years ago, little changed from the 69% reported last year (Q3, page 11). Among the factors that influence reserve management decisions, “interest rate levels”, “inflation concerns”, and “geopolitical instability” continue to occupy the top three positions as they did last year. As noted in previous surveys, a dichotomy of attitudes persists between advanced economy and EMDE central banks in their views towards some of these factors. While both groups were aligned in their views towards the top factor – “interest rate levels” – other factors resulted in split opinions. Interestingly, while both groups of central banks rated the second and third factor – “inflation concerns” and “geopolitical instability” – similarly in 2023, the divergence is apparent in 2024. This year, 96% and 76% respectively of EMDE central banks rated “inflation concerns” and “geopolitical instability” as relevant, while only 67% of their advanced economy counterparts did. Compared to their advanced economy peers, EMDE central banks are more concerned by “shifts in global economic power” (Chart 5).

Chart 5: What topics are relevant for your reserve management decisions? (Select all that apply).

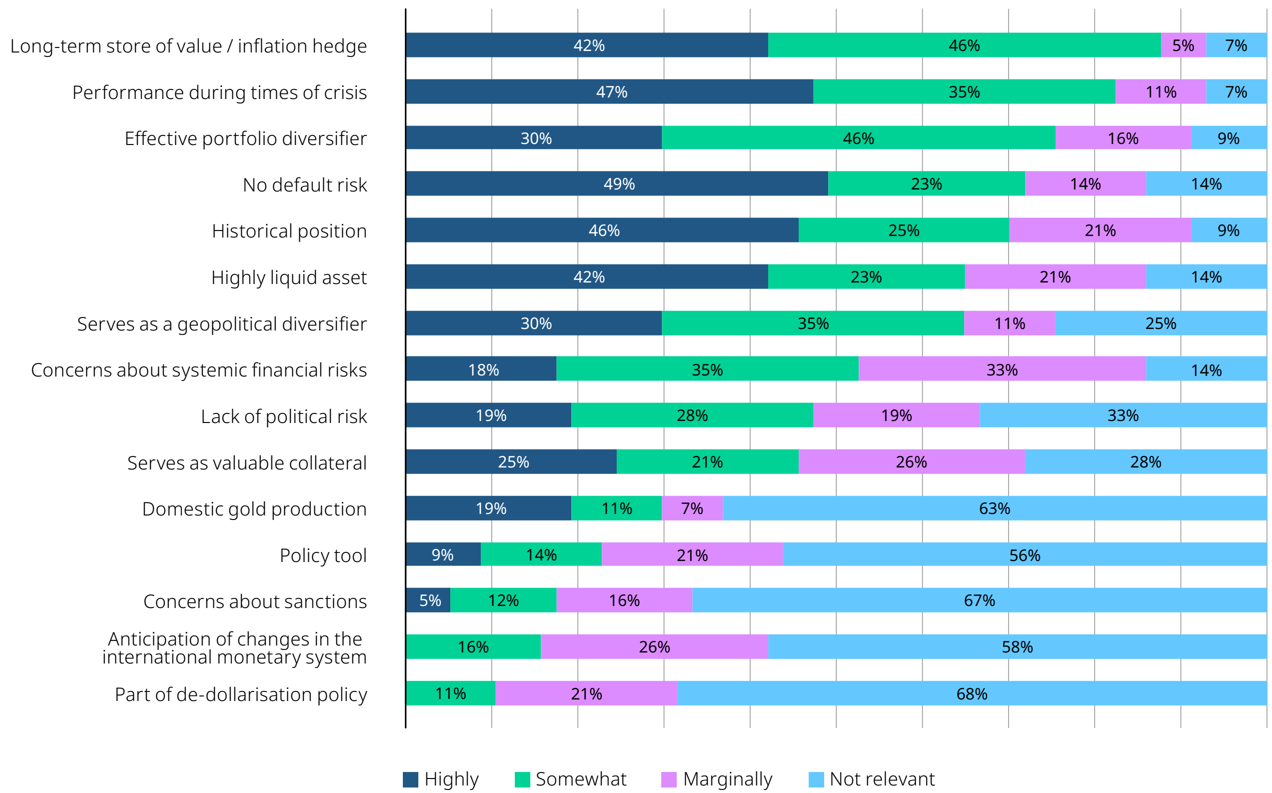


Base: All central banks (69); Advanced economy (24); EMDE (45).

This year, 83% of central banks surveyed hold gold as part of their total international reserves, a percentage that is line with previous results (Q9, page 17). While in prior years, gold's “historical position” was the top reason for central banks to hold gold, this factor dropped significantly to number five this year. This year, the top reason for central banks to hold gold is “long-term store of value / inflation hedge” (88%), followed by “performance during times of crisis” (82%), “effective portfolio diversifier” (75%) and “no default risk” (72%) (Chart 6).

When broken into advanced economy and EMDE responses (Chart 7), a higher proportion of EMDE central banks viewed the following factors as more relevant – “concerns about systemic financial risks”, “lack of political risk”, “concerns about sanctions”, “policy tool” and “anticipation of changes in the international monetary system”.
In fact, no advanced economy respondents rated the latter three reasons as relevant. Nevertheless, a notable convergence between EMDE and advanced economy respondents’ views towards gold has emerged in this year’s survey. Whereas previous surveys showed wide gaps in how both camps viewed factors like “effective portfolio diversifier”, “performance during times of crisis”, “and “highly liquid asset”, the divergence narrowed significantly this year. Advanced economy central banks appear to be valuing gold’s financial role to a higher degree compared to previous years.

Chart 6: How relevant are the following factors in your organisation's decision to hold gold?



Base: All central banks that hold gold (57); Advanced economy (18); EMDE (39). Ranked by "highly relevant" plus "somewhat relevant".

Chart 7: How relevant are the following factors in your organisation's decision to hold gold? (2023 vs. 2024).

2024

%	Advanced	EMDE
Long-term store of value / inflation hedge	83%	90%
Performance during times of crisis	83%	82%
Effective portfolio diversifier	78%	74%
No default risk	67%	74%
Historical position	78%	67%
Highly liquid asset	61%	67%
Serves as a geopolitical diversifier	67%	64%
Concerns about systemic financial risks	33%	62%
Lack of political risk	33%	54%
Serves as valuable collateral	44%	46%
Domestic gold production	0%	44%
Policy tool	0%	33%
Concerns about sanctions	0%	26%
Anticipation of changes in the international monetary system	0%	23%
Part of de-dollarisation policy	6%	13%

2023

%	Advanced	EMDE
Long-term store of value / inflation hedge	27%	89%
Performance during times of crisis	64%	78%
Effective portfolio diversifier	64%	72%
No default risk	45%	75%
Historical position	100%	69%
Highly liquid asset	27%	72%
Serves as a geopolitical diversifier	45%	61%
Concerns about systemic financial risks	18%	58%
Lack of political risk	18%	47%
Serves as valuable collateral	36%	47%
Domestic gold production	0%	28%
Policy tool	0%	19%
Concerns about sanctions	0%	25%
Anticipation of changes in the international monetary system	0%	19%
Part of de-dollarisation policy	0%	11%

2024 Base: All central banks that hold gold (57); Advanced economy (18); EMDE (39), 2023 Base: All central banks that hold gold (47); Advanced economy (11); EMDE (36). Ranked by "highly relevant" plus "somewhat relevant" based on 2024 responses.

These results seem to reflect an underlying theme of EMDE central banks, but also increasingly advanced economy central banks, valuing gold's strategic role amidst uncertain geopolitical times and renewed concerns about financial stability. This underscores the challenging economic and strategic circumstances faced by both groups.

Technical and Operational Considerations of Reserves Management

Among survey respondents, 67% manage gold separately from other reserve assets, a decrease compared to 83% last year (Q18, page 24). There was a corresponding increase – from 8% last year to 23% this year – in respondents which manage gold in the investment tranche. With regard to the reasons for managing gold separately, 79% of advanced economy respondents chose "it is a historical legacy asset" as a relevant reason. 71% of both advanced economy and EMDE respondents chose "it is a strategic asset" as a relevant reason. Meanwhile, 21% of EMDE respondents chose "different accounting regimes compared to other asset classes" while no advanced economy respondent picked this option.

London Good Delivery[3] bars continue to be the most popular option for physical gold, with more than half of respondents buying physical gold in that form and nearly all respondents holding physical gold in that form, while kilo bars and doré were much less popular options (Q21, page 26 and Q22, page 27).

This year, 19% of respondents have considered upgrading gold holdings that do not conform to Good Delivery standards (Q23, page 27). A small proportion of central banks (all EMDE central banks) say they would consider establishing a domestic gold purchase programme, and 15 EMDE central banks state that they already have such a programme in place. Of these 15, two refine their domestically purchased gold at a refinery owned by the government, three at a private refinery in their country, and seven at a private refinery overseas. The majority of these EMDE central banks also pay the spot international gold price for their gold (Q25c, page 29).

The Bank of England continues to be the most popular storage location, with 55% of respondents vaulting there. Domestic storage increased from last year with 41% of respondents citing it as the location of their gold, compared to 35% last year (Q26, page 30). 74% of respondents indicate there has been no change in their custody arrangements over the last year, 4% indicate an increase in domestic storage and 4% indicate a decrease in domestic storage, and 19% preferred not to answer (Q27, page 30). Looking forward, 15% plan to make some change to their custody arrangements, while 67% have no plans to change and 19% preferred not to answer (Q28, page 31).

The proportion of respondents who actively manage their gold reserves increased to 37% this year from 33% last year and 28% in 2022. Of the 22 respondents that actively manage their gold, 86% indicate that the aim of active management is yield enhancement. Of the same 22 respondents, 13 are currently active in deposits and another three are considering being active in deposits. Swaps (giving gold as collateral) and forwards were the next popular forms of active management.

3 Refers to gold bars that meet the Good Delivery standards set by the London Bullion Market Association: www.lbma.org.uk/good-delivery/about-good-delivery

Conclusion

This year's Central Bank Gold Reserves Survey indicate continuing central bank interest in gold on the back of record levels of central bank gold buying. Geopolitical tensions and macroeconomic factors such as inflation and interest rates are front of mind for many central bank reserve managers. EMDE central banks in particular have expressed continuing concerns about the impact of geopolitics and potential financial instability on their reserve management decisions, with many valuing gold as a way to manage these risks. The future of the international monetary system continues to be in flux, with central banks expressing less confidence in the US dollar's sustained supremacy. In the face of these trends and an ever-changing investment environment, central bank gold demand is likely to remain robust.

Methodology

For the seventh year in a row, the World Gold Council has worked with YouGov to conduct a survey of central banks. The questionnaire was primarily designed by the World Gold Council with YouGov providing additional design consultation. Once the English questionnaire was approved, it was translated into four additional languages (Arabic, French, Russian, and Spanish) in order to make the survey accessible to a wide audience.

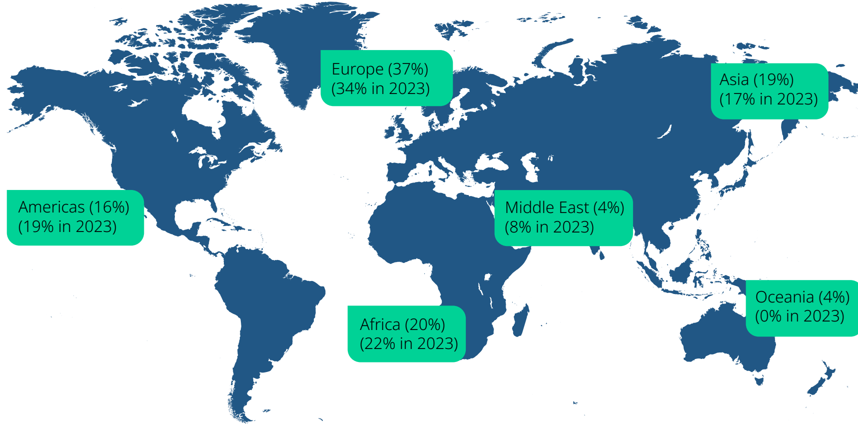
The questionnaire was scripted and set up on YouGov's secure survey system and was thoroughly tested before fieldwork was launched. The World Gold Council was given a test link to ensure it was satisfied with the way the survey had been implemented. Unique, anonymised links were then provided to the World Gold Council to send to their contacts within central banks around the world. Central banks that are under sanctions were not contacted. Fieldwork was conducted between 19 February and 30 April 2024, with a total of 70 eligible responses (up from 59 last year) representing a 47% response rate amongst all central banks who were contacted.

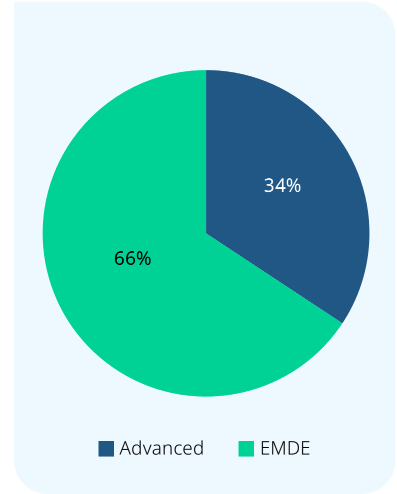
Data in the report is shown at an overall level but is also sub-divided by advanced economy countries and Emerging Market and Development Economy (EMDE) countries as defined by the IMF.

Detailed Results

Q1. Please indicate within which region your institution is located.

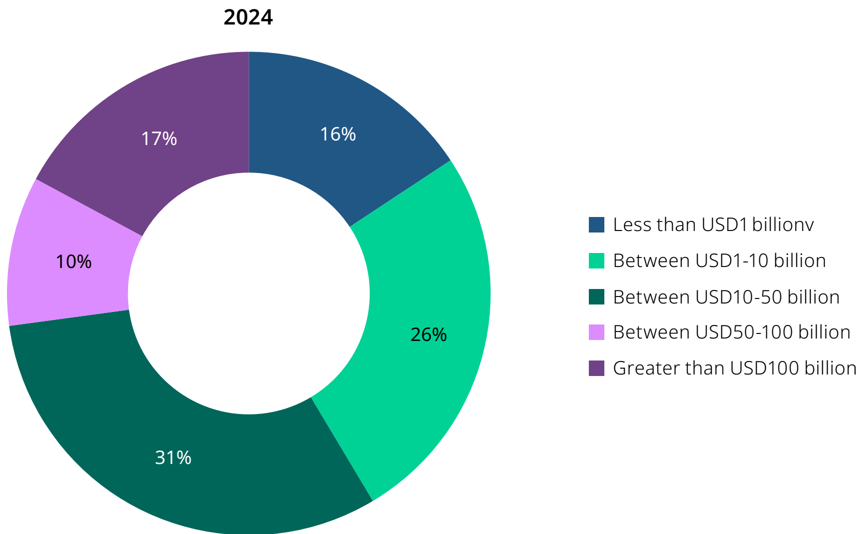
70 central banks responded with 34% from advanced economies and 66% from EMDE countries.





Base: All central banks (70); Advanced economy (24); EMDE (46).

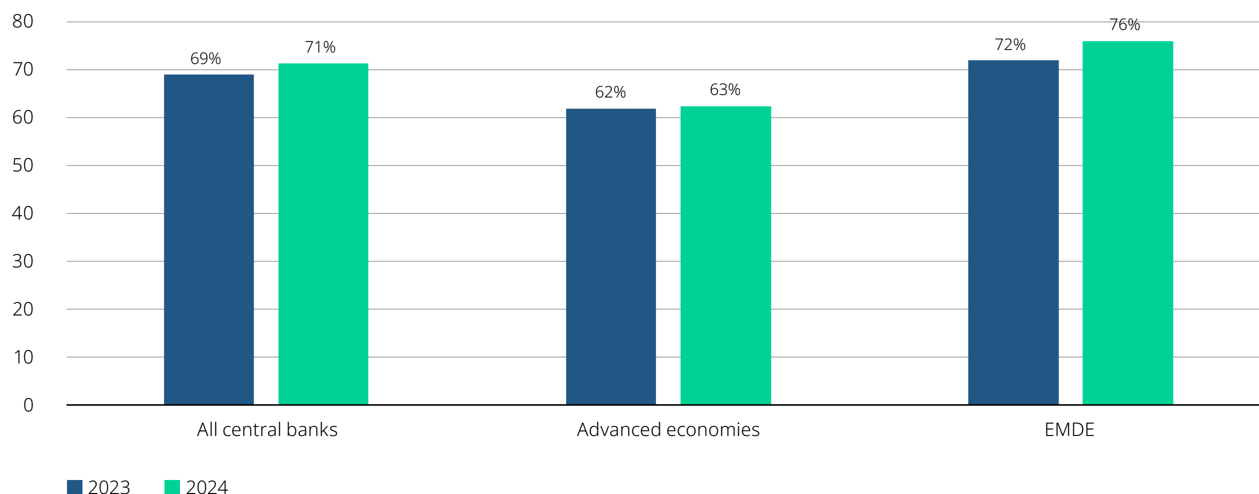
Q2. Please indicate the current size of your institution's total reserves (foreign exchange and gold).



Base: All central banks (70); Advanced economy (24); EMDE (46).

Q3. Is your institution holding a higher level of total reserves (foreign exchange and gold) now than it was 5 years ago?

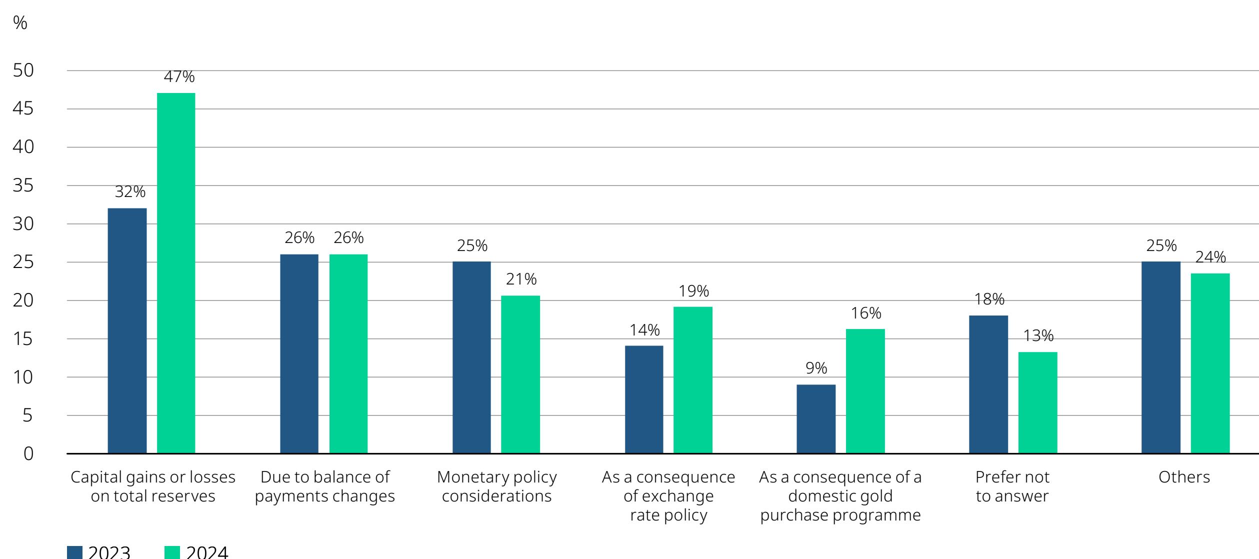
The proportion of central banks holding a higher level of total reserves now than 5 years ago is 71%, which is similar to last year. The proportion of EMDE central banks which responded "Yes" is 76%, higher than the 63% among advanced economy central banks.



Base: All central banks (70); Advanced economy (24); EMDE (46).

Q3a. Please indicate the reason for any change in your institution's level total reserves (foreign exchange and gold) compared to 5 years ago. (Select all that apply).

"Capital gains or losses on total reserves" is the most relevant reason, followed by "due to balance of payments changes" and "monetary policy considerations".

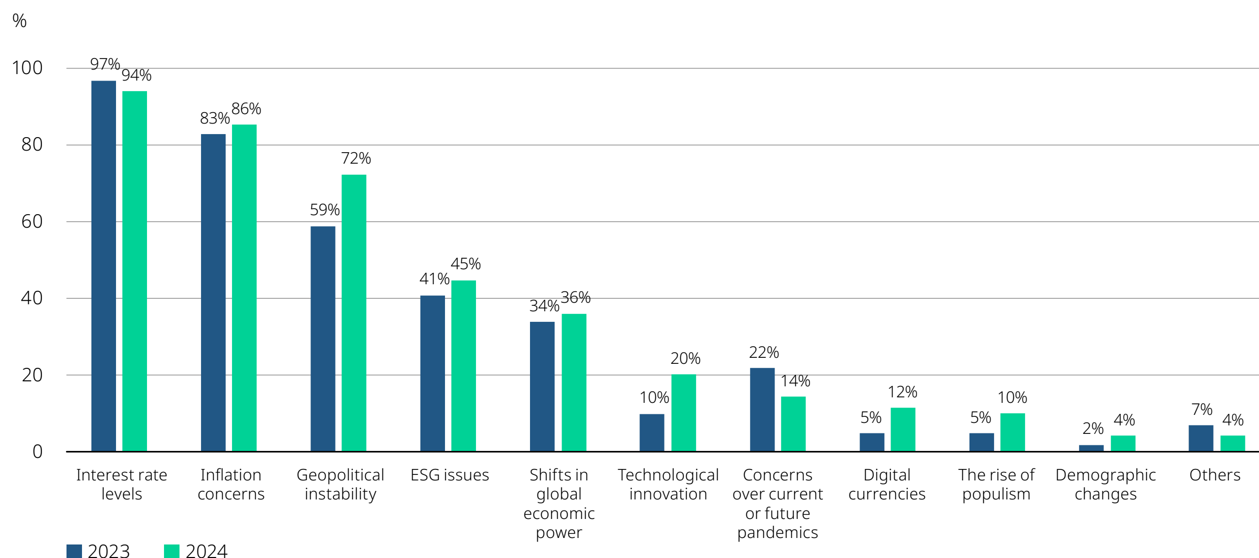


Base: All central banks (70); Advanced economy (24); EMDE (46).

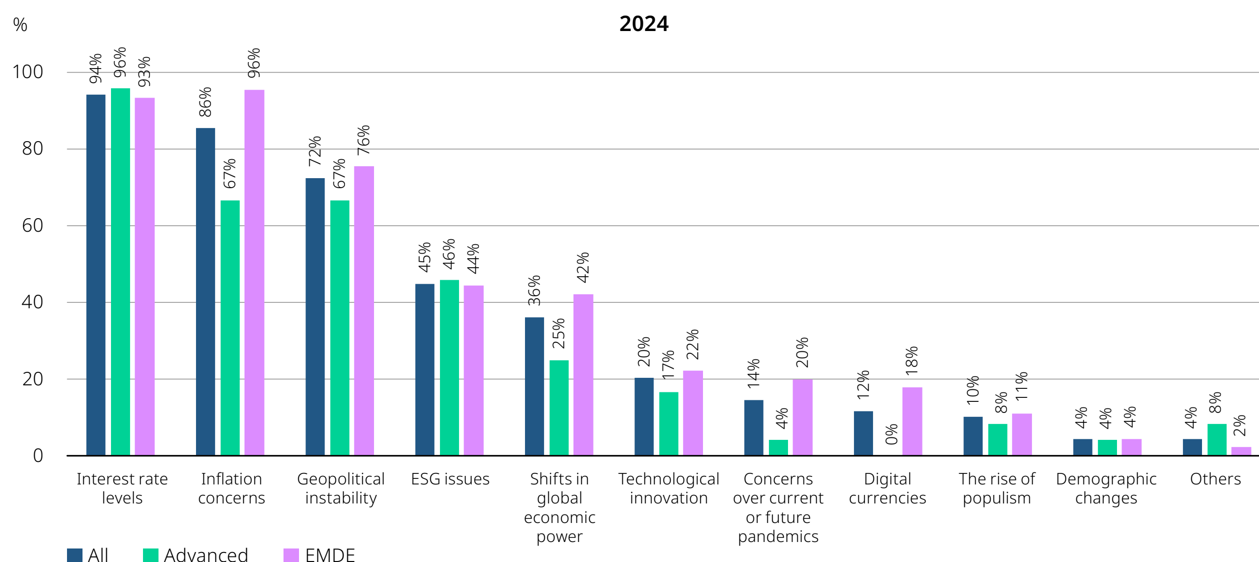
Q4. What topics are relevant for your reserve management decisions? (Select all that apply).

Similar to last year, "interest rate levels" is the most relevant topic, followed by "inflation concerns" and then "geopolitical instability".

For EMDE central banks, "inflation concerns" is the top factor with 96% choosing this option. For this group of central banks, "interest rate levels" is a close second at 93%. For advanced economy central banks, "interest rate levels" is the top factor with 96% choosing this option. For this group of central banks, 67% chose "inflation concerns" – a significantly lower percentage compared to their EMDE counterparts.

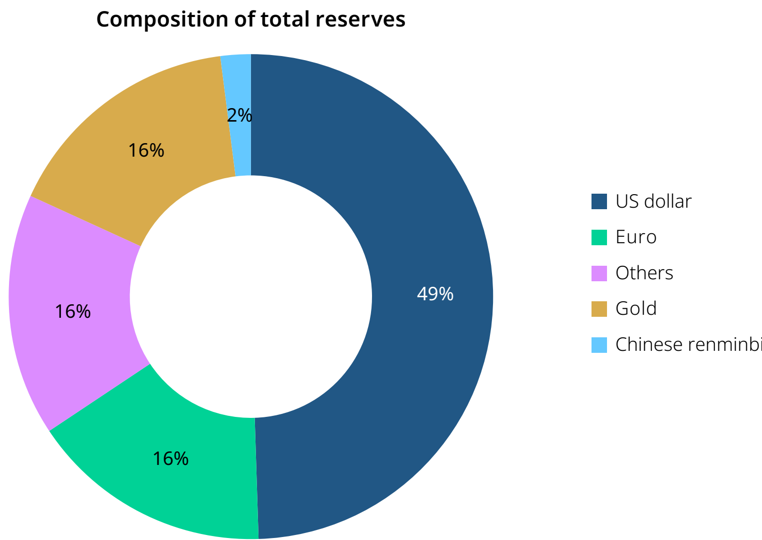


Base: All central banks (69); Advanced economy (24); EMDE (45). "Inflation concerns" and "Geopolitical instability" were added in 2022. "Concerns over future pandemics" was added in 2021.



Base: All central banks (69); Advanced economy (24); EMDE (45). "Inflation concerns" and "Geopolitical instability" were added in 2022. "Concerns over future pandemics" was added in 2021.

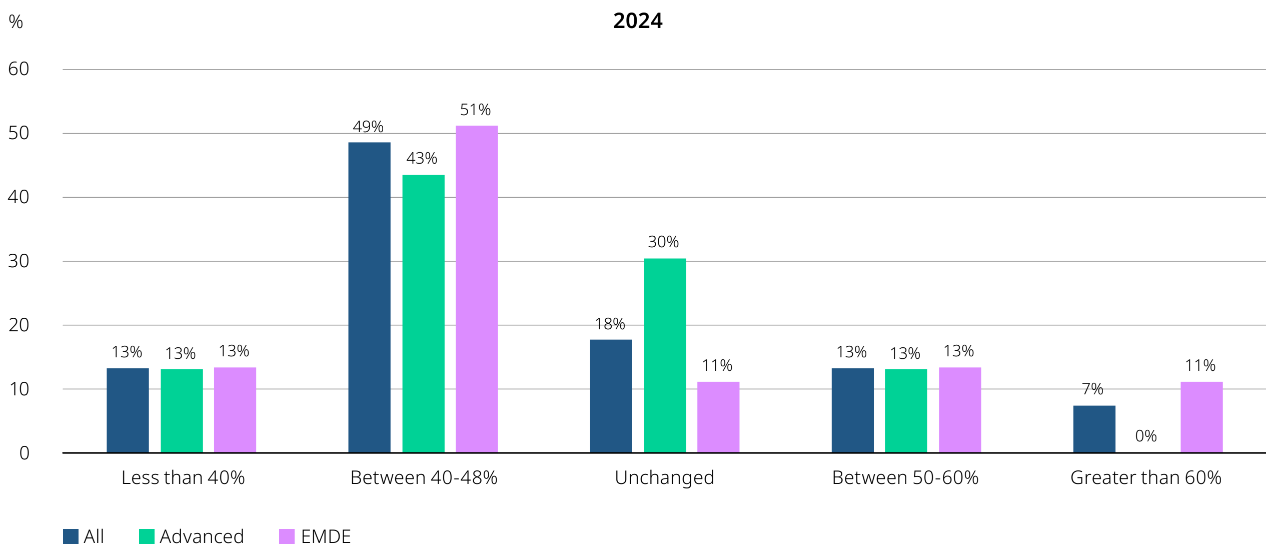
All respondents were shown the chart below detailing the composition of total reserves (foreign exchange and gold) as of the end of Q3 2023. Respondents were then asked about what proportion of total reserves (foreign exchange and gold) they expect to be denominated in US dollars, euros, Chinese renminbi, and gold in five years' time.



Based on Q3 2023 IMF COFER data with gold added into the total, calculated excluding unallocated reserve assets.
Source: IMF COFER and World Gold Council

Q5. US dollars accounted for 49% of total reported reserves (foreign exchange and gold) in Q3 2023. What proportion of total reserves (foreign exchange and gold) do you think will be denominated in US dollars 5 years from now?

62% of respondents expect the US dollar to decline as a proportion of total reserves in the next 5 years, up from 55% last year and 42% in 2022. Similar to last year, EMDE central banks are less optimistic on the role of the US dollar, with 64% expecting the US dollar to decline in proportion, as compared to 56% of advanced economy central banks



Base: All central banks (68); Advanced economy (23); EMDE (45).

Select comments from respondents provide additional insight into their views of the US dollar:

"Although US dollar will remain as the main reserve currency because of its extensive use in international trade and finance, its importance is going to diminish gradually with the rise of alternative reserve currencies such as RMB and the increase in the bilateral trade agreements and swap lines among countries."

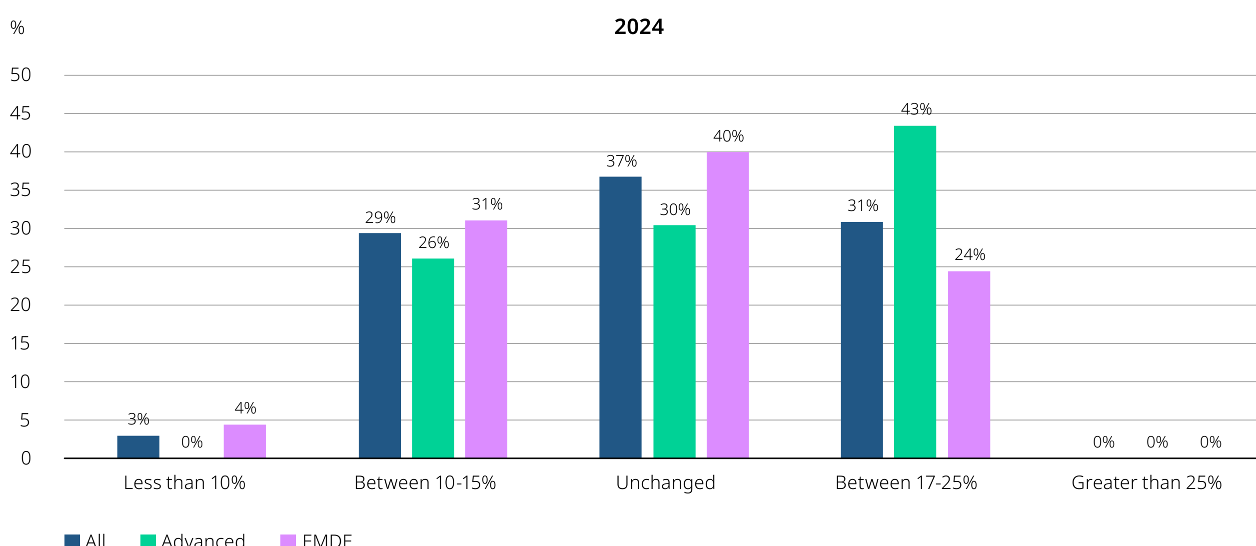
"The role of the dollar is being slowly challenged, especially the so-called weaponisation of the dollar. The ability to access your USD reserves can be determined by the US at times of sanctions."

"Our reserve is very much USD centric because of: 1) Returns due to interest rate differential 2) USD dominates our international trade basket."

Comments from respondents may have been edited for clarity or translated into English.

Q6. Euros accounted for 16% of total reported reserves (foreign exchange and gold) in Q3 2023. What proportion of total reserves (foreign exchange and gold) do you think will be denominated in euros 5 years from now?

Overall, respondents' views on the euro are quite evenly split - 32% of respondents expect the future share of the euro to decline while 31% expect it to increase. EMDE central banks are less optimistic on the role of the Euro, with 35% expecting the Euro to decline in proportion, as compared to 26% of advanced economy central banks.



Base: All central banks (68); Advanced economy (23); EMDE (45).

Select comments from respondents provide additional insight into their views of the Euro:

"Despite relatively weak EU macroeconomic fundamentals and fragmented financial markets, the euro is an important foreign reserves diversifier."

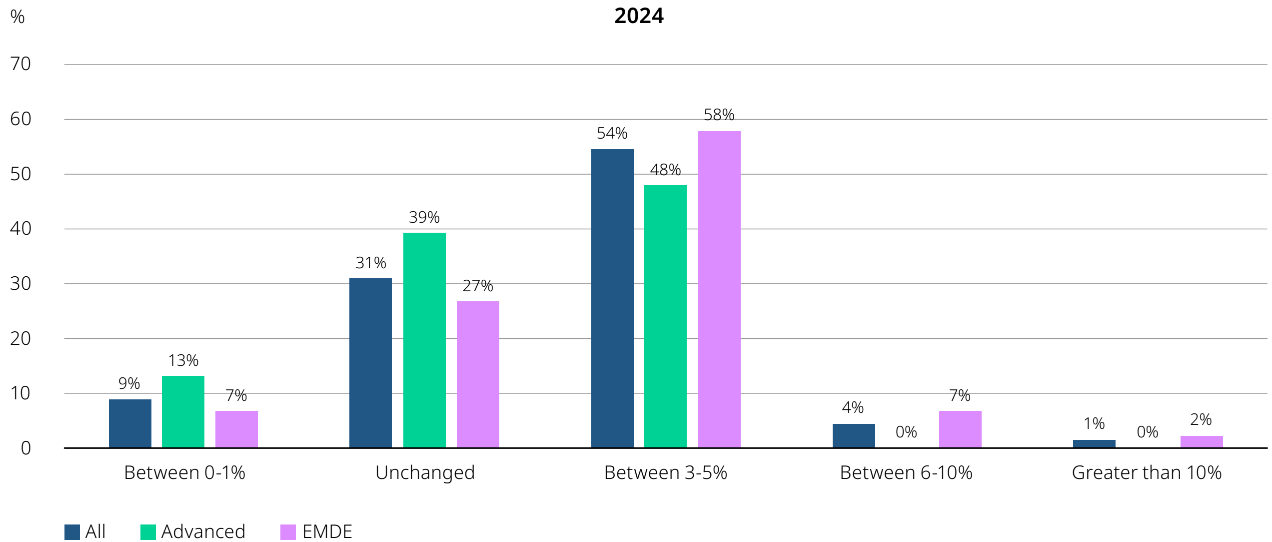
"Given the current position of the euro as a major reserve currency and ongoing efforts to strengthen the eurozone's economic and financial stability, it's plausible to anticipate a modest increase in the proportion of total reserves denominated in euros over the next five years. However, a significant surge in the euro's share of reserves may depend on factors such as geopolitical developments, the European Central Bank's monetary policy decisions, and the eurozone's economic performance relative to other regions."

"As rates in Euro area continue to increase and stay in the positive territory and the euro-dollar parity strengthen, the euro holdings of central banks are expected to increase to some extent."

Comments from respondents may have been edited for clarity or translated into English.

Q7. Chinese renminbi accounted for 2% of total reported reserves (foreign exchange and gold) in Q3 2023. What proportion of total reserves (foreign exchange and gold) do you think will be denominated in Chinese renminbi 5 years from now?

59% of respondents expect the Chinese renminbi's share to increase, down from 79% last year.



Base: All central banks (68); Advanced economy (23); EMDE (45).

Select comments from respondents provide additional insight into their views of the Chinese renminbi:

"Due to uncertainties surrounding the evolution of the Chinese economy and geopolitical factors, we do not anticipate a significant increase in central bank's investments in RMB."

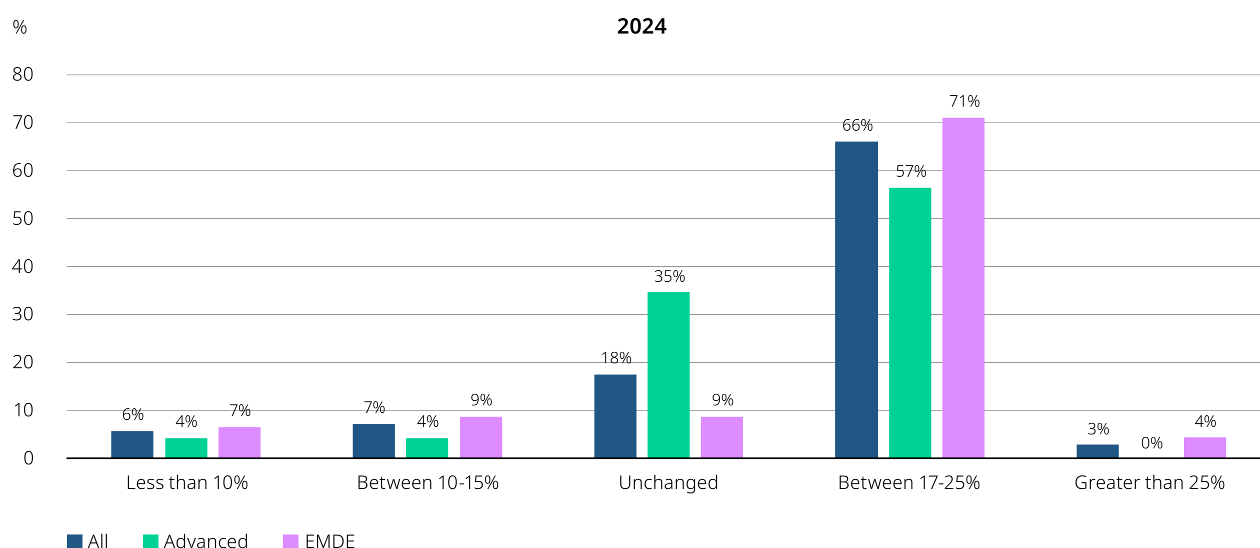
"Based on our foreign trade data and geographical location, we tend to maintain a long FX position on the RMB."

"The current allocation of reserves indicates a relatively small proportion held in Renminbi, reflecting the gradual internationalization of the Chinese currency. However, as China continues its efforts to promote the renminbi as a global reserve currency and enhances its financial infrastructure, we may see a gradual increase in its share of total reserves over the next five years."

Comments from respondents may have been edited for clarity or translated into English.

Q8. Gold accounted for 16% of total reported reserves (foreign exchange and gold) in Q3 2023. What proportion of total reserves (foreign exchange and gold) do you think will be denominated in gold 5 years from now?

57% of advanced economy respondents think gold's share will rise while 75% of EMDE respondents believe it will do so. The percentage of advanced economy respondents who believe that gold's share of global reserves will rise has increased significantly from 38% in 2023. Meanwhile, 35% of advanced economy respondents think that gold's share will remain unchanged 5 years from now, a view shared by only 9% of EMDE respondents. The proportion of respondents who think that gold's share will rise has increased in recent years, from 46% in 2022 to 62% in 2023, and finally to 69% this year.



Base: All central banks (68); Advanced economy (23); EMDE (45).

Select comments from respondents provide additional insight into their views of gold:

"Gold's long-standing status as a reliable store of value and hedge against economic uncertainties suggests that its proportion within total reserves may remain relatively stable or experience modest fluctuations within the range of 17-25%. This dual perspective underscores the evolving landscape of reserve currencies and the enduring appeal of precious metals in safeguarding against market volatility"

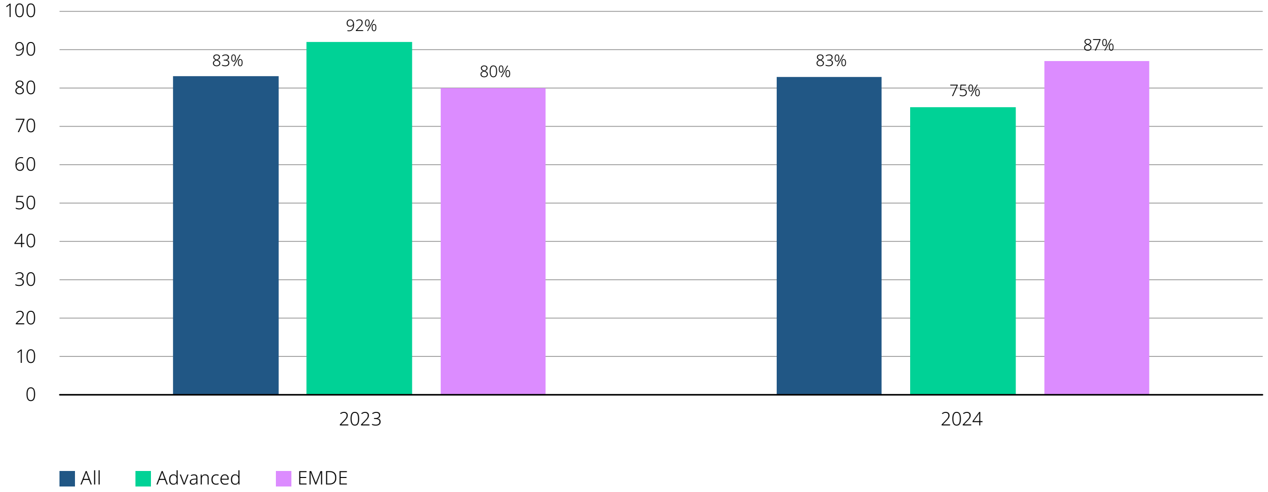
"Being a hedge against inflation, market volatility and geopolitical risks, the share of gold is expected to increase in a gradual manner if the current inflationary environment, financial uncertainty and/or geopolitical tensions continue despite the rise in global rates"

"It is most likely that Gold prices will continue its upward trajectory over the next decade due to the: 1) continued fragmentation of the world economy, 2) expectation that the USD will weaken."

Comments from respondents may have been edited for clarity or translated into English.

Q9. Do you currently hold gold as part of your total reserves?

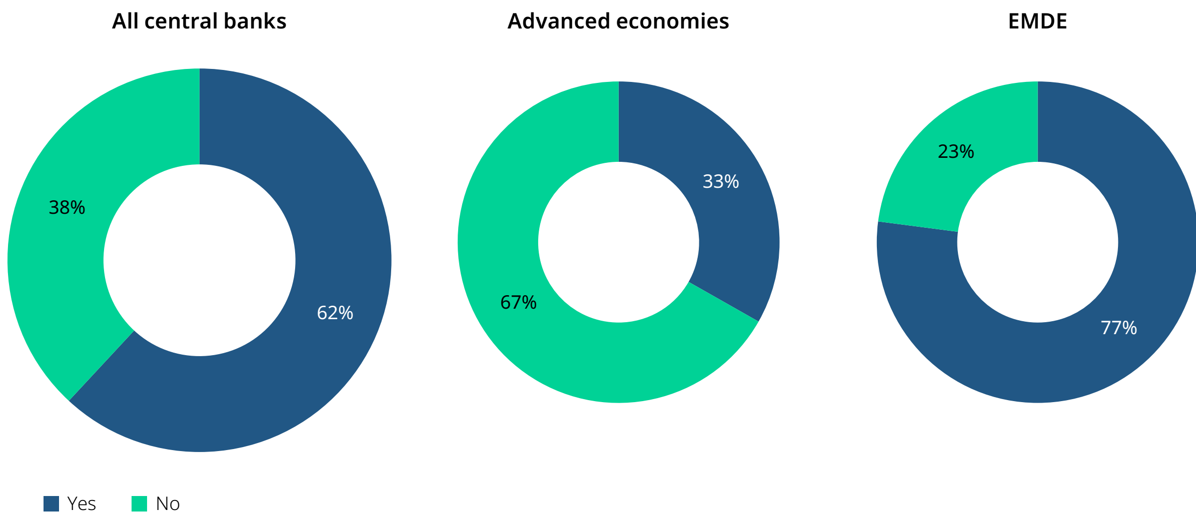
83% of central banks hold gold in their reserves, the same percentage as last year.



Base: All central banks (70); Advanced economy (24); EMDE (46).

Q10. Have you bought or sold any gold, or used any gold management tools (e.g. deposits, swaps, options, forwards, ETFs) in the last 5 years? ***New question for 2024 survey.***

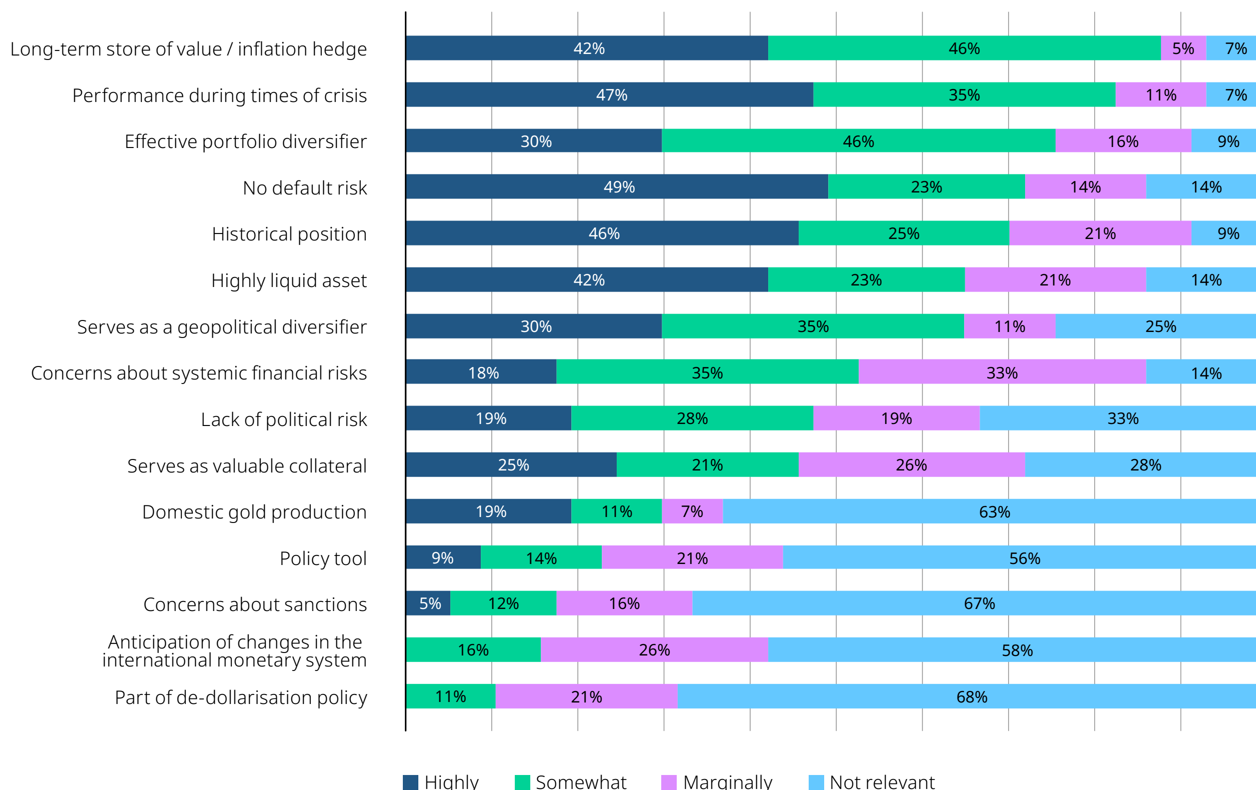
62% of central banks responded "yes". A significantly higher proportion of EMDE central banks (77%) indicated "yes" as compared to their advanced economy counterparts (33%).



Base: All central banks that hold gold (57); Advanced economy (18); EMDE (39).

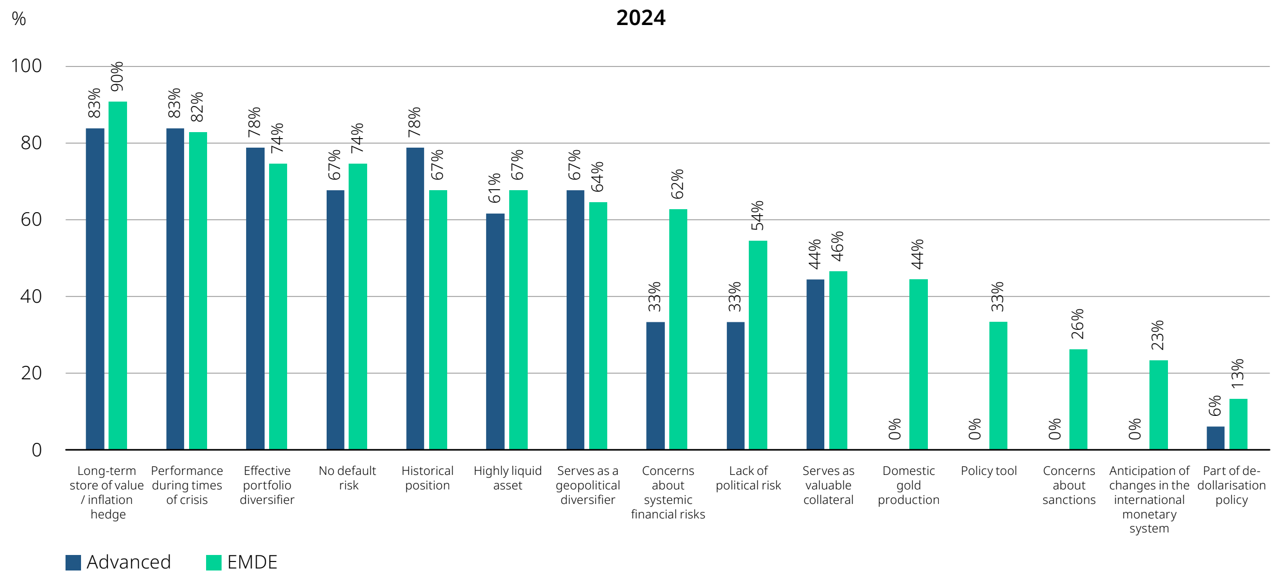
Q11. How relevant are the following factors in your organization's decision to hold gold?

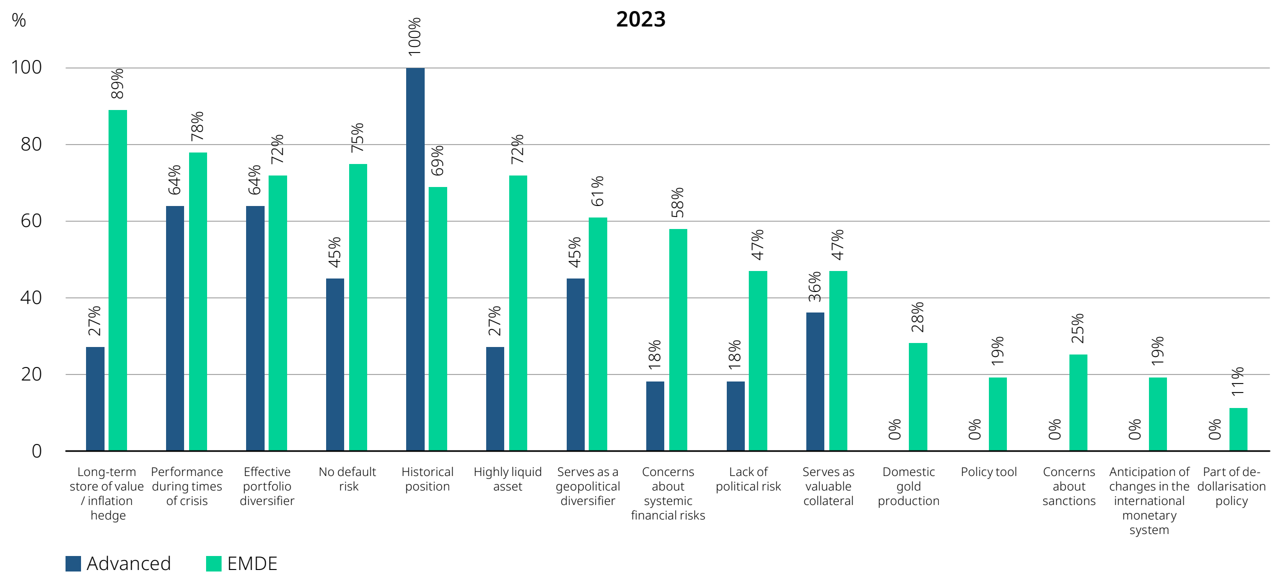
This year, the top reason for central banks to hold gold is "long-term store of value / inflation hedge" (88%), followed by "performance during times of crisis" (82%), "effective portfolio diversifier" (75%) and "no default risk" (72%). While gold's "historical position" was in prior years the top reason for central banks to hold gold, this factor dropped significantly to number five this year.



Base: All central banks that hold gold (57); Advanced economy (18); EMDE (39).
Ranked by adding "Highly relevant" and "Somewhat relevant".

A higher proportion of EMDE central banks viewed the following factors as more relevant – "concerns about systemic financial risks", "lack of political risk", "concerns about sanctions", "policy tool" and "anticipation of changes in the international monetary system". No advanced economy respondents rated the latter three reasons as relevant. There has been a significant convergence in views between advanced economy and EMDE central banks towards the factors which are relevant to hold gold. "Performance during times of crisis" was rated as highly- or somewhat relevant by 83% of advanced economy respondents and 82% of EMDE respondents, "serves as a geopolitical diversifier" by 67% and 64% respectively, and "highly liquid asset" by 61% and 67% respectively. This is a notable departure from the divergence in views between the two groups of central banks observed in previous surveys.





2024 Base: All central banks that hold gold (57); Advanced economy (18); EMDE (39), 2023 Base: All central banks that hold gold (47); Advanced economy (11); EMDE (36). Ranked by "highly relevant" plus "somewhat relevant" based on 2024 responses.

Q12. How relevant are the following factors in your organization's decision to not hold gold?

The small number (n=12) of central banks that indicated they do not currently hold gold were asked about the relevance of a variety of factors in their decision not to hold gold.

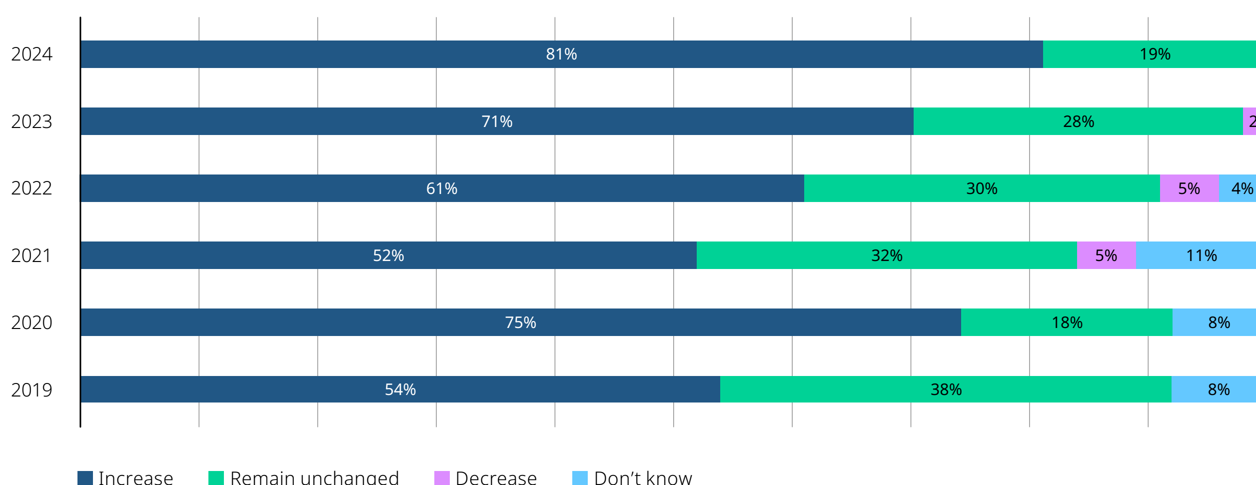
As this question has a very small number of respondents, percentages will not be meaningful. Hence, we have provided the raw data to give some indication of which factors are most relevant (highly or somewhat relevant), along with data from previous surveys for comparison.

	2023	2024
Preference for better yielding or higher returning assets	6 out of 10	9 out of 12
Higher volatility than other reserve assets	7 out of 10	6 out of 12
Unsure how to value gold	6 out of 10	6 out of 12
Costs of holding hold (vaulting or custodial fees, etc.)	5 out of 10	6 out of 12
Accounting related issues	5 out of 10	6 out of 12
Ability to transact in large sizes	4 out of 10	4 out of 12
Not enough understanding of the market	6 out of 10	3 out of 12
Not permitted under current investment guidelines	1 out of 10	3 out of 12
Difficulty in accessing relevant data	6 out of 10	2 out of 12
Headline risk	5 out of 10	2 out of 12
ESG concerns	3 out of 10	2 out of 12

Base: All central banks that do not hold gold (12); Advanced economy (6); EMDE (6).

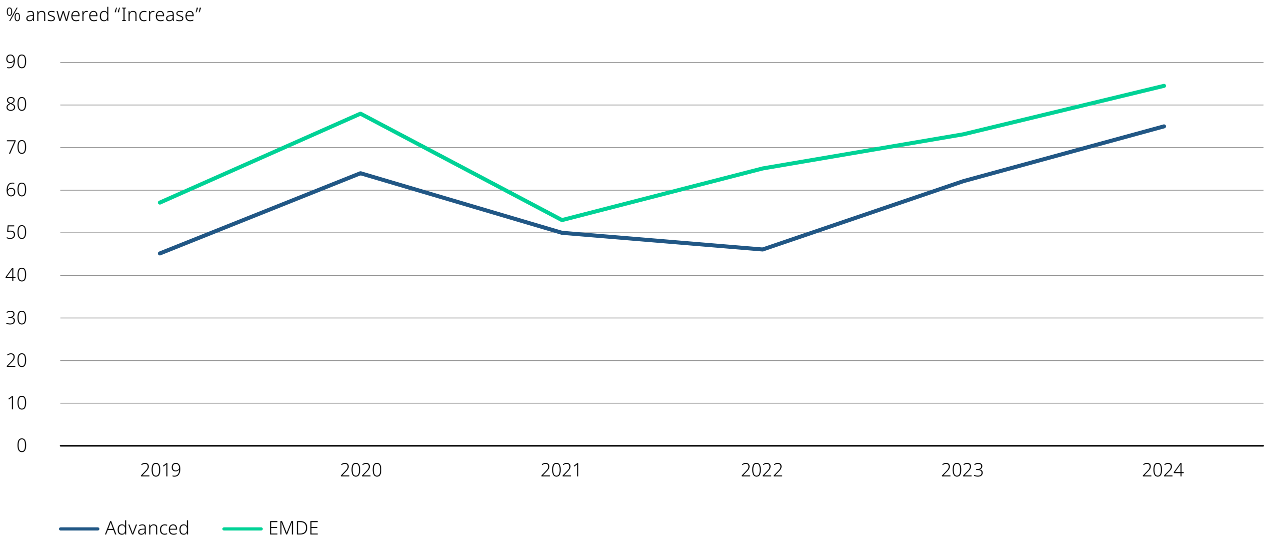
Q13. How do you expect global central bank gold reserves to change over the next 12 months?

Central banks are more positive on the trajectory of gold reserves, with 81% of respondents stating they expect global gold reserves to increase over the next 12 months, as compared to 71% last year. This marks the highest proportion saying that central banks will increase their gold reserves since this question was included in our survey in 2019.



Base: All central banks (69); Advanced economy (24); EMDE (45).
"Don't know" was removed as an option in 2023.

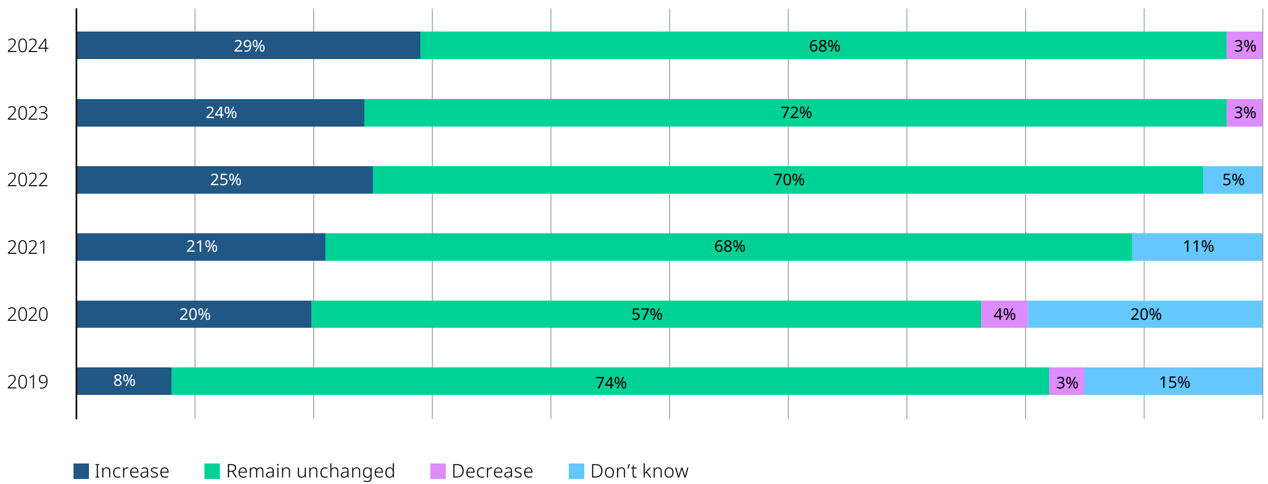
EMDE central bank respondents are more optimistic on gold's trajectory over the next 12 months, with the proportion of EMDE central banks expecting global gold reserves to increase consistently higher than the proportion of advanced economy central banks.



Base: All central banks (69); Advanced economy (24); EMDE (45).

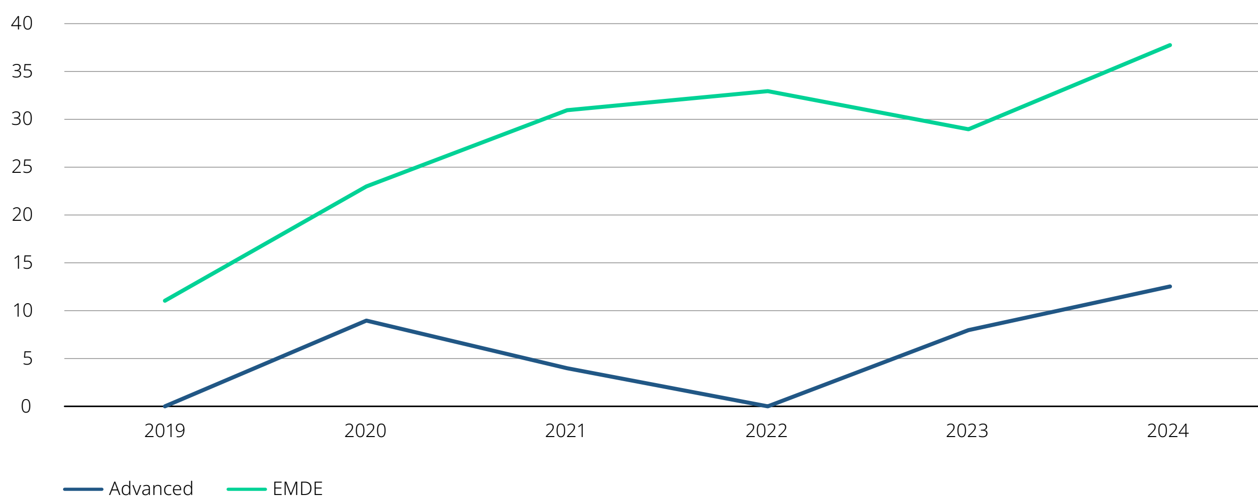
Q14. How do you expect your institution's gold reserves to change over the next 12 months?

The proportion of central bank respondents that intend to increase their gold reserves is 29%, up slightly from 24% last year. The majority expect their gold reserves to remain unchanged, while a small proportion expect it to decrease. This marks the highest proportion saying that their institution will increase its gold reserves since this question was included in our survey in 2019.



Base: All central banks (69); Advanced economy (24); EMDE (45).
"Don't know" was removed as an option in 2023.

The proportion of EMDE central banks that intend to increase their gold reserves is substantially higher than the proportion of advanced central banks.



Base: All central banks (69); Advanced economy (24); EMDE (45).

Q15. What factors are driving your institution's plan to increase gold reserves in the next 12 months? (Select all that apply).

The relatively small number of central banks (n=20) that told us they anticipate an increase in gold reserves in the next 12 months were asked about the factors influencing their decision. As this question has a very small number of respondents, percentages will not be meaningful. "Re-balancing of reserve allocations to a preferred strategic level" is the top factor.

	2023	2024
Re-balancing of reserve allocations to a preferred strategic level	8 out of 14	10 out of 20
More purchases from a domestic gold buying programme	9 out of 14	9 out of 20
Need for more gold as a hedging instrument (e.g. hedge against inflation, US dollar exposure, market instability, etc.)	3 out of 14	9 out of 20
Rise in the gold price	3 out of 14	9 out of 20
Rising inflation	6 out of 14	8 out of 20
Higher economic risks in reserve currency economies (e.g. rising budget deficit in the US, slower growth in advanced economies, etc.)	2 out of 14	8 out of 20
Rising political risk in advanced economies	3 out of 14	6 out of 20
Anticipation of a structural change in the international monetary system (a decrease in the share of advanced economy currencies and a rise in the share of emerging currencies)	2 out of 14	5 out of 20
Interest rate environment in advanced economies	1 out of 14	5 out of 20
Higher risk of a global financial crisis	6 out of 14	4 out of 20
Part of a policy of de-dollarisation	4 out of 14	4 out of 20
Uncertainty stemming from global pandemics	3 out of 14	4 out of 20
Increased need to include ESG compliant assets	2 out of 14	4 out of 20
Rising risk of central bank sanctions	1 out of 14	3 out of 20
Other	1 out of 14	3 out of 20
Rising political risk in emerging markets	0 out of 14	3 out of 20
US dollar weakness	0 out of 14	3 out of 20

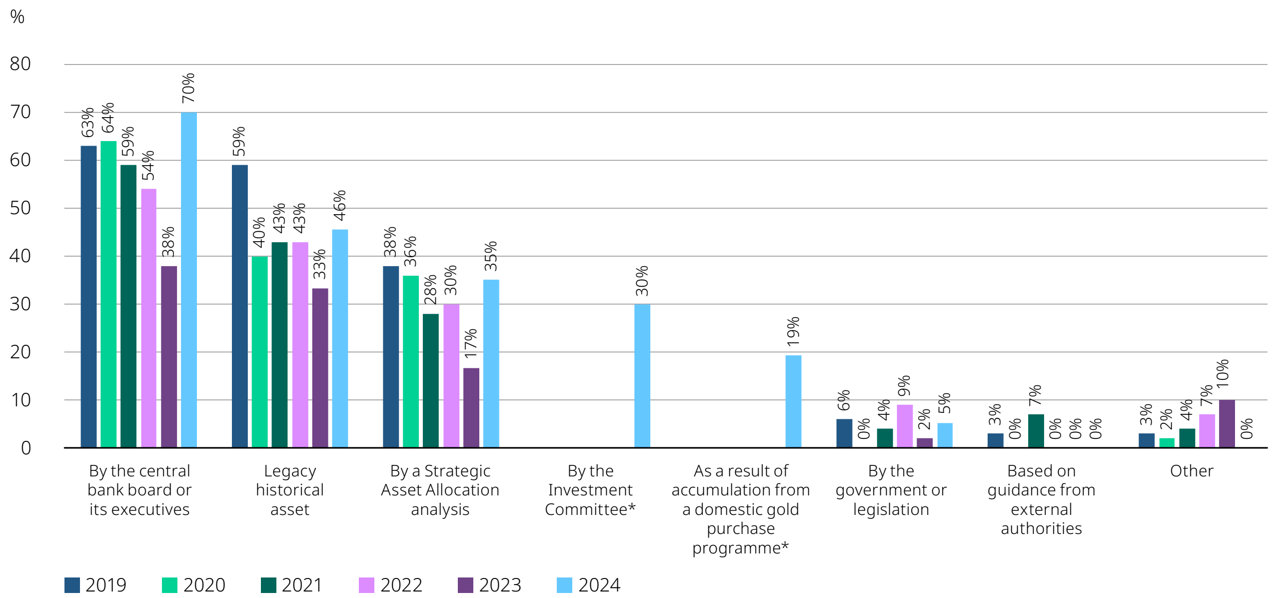
Base: All central banks who intend to add gold (20); Advanced economy (3); EMDE (17).

Q16. What factors are driving your institution's plan to decrease gold reserves in the next 12 months? (Select all that apply).

The small number of central banks (n=2) that indicated they anticipate a decrease in gold reserves in the next 12 months were asked about the factors influencing their decision. Both respondents cite "re-balancing of reserve allocations to a preferred strategic level" and "need for liquidity" as reasons. One respondent cited "higher yields on advanced economy debt" as a reason. One respondent cited "decreased purchases from a domestic gold buying programme" as a reason.

Q17. Which of the following options best describes how you determined your gold reserves allocation? (Select all that apply).

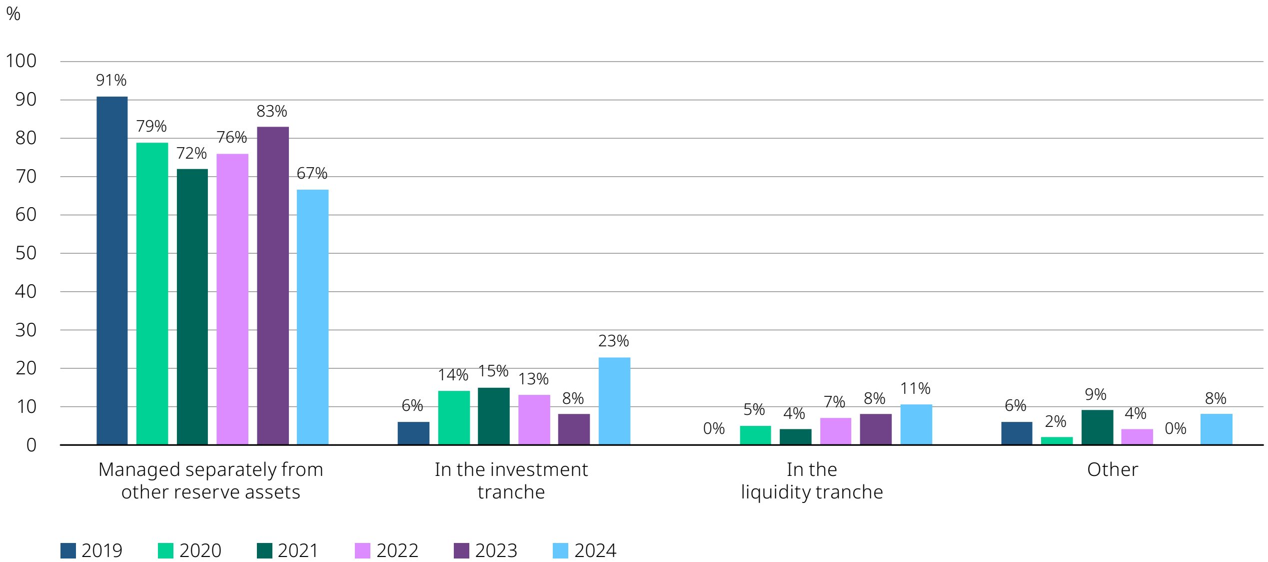
The main way in which central banks determine their gold reserves allocation is by central bank board or its executives. Gold's position as a legacy historical asset continues to be the second-most cited option, followed by determination by Strategic Asset Allocation analysis. "By the investment committee" and "As a result of accumulation from a domestic gold purchase programme" were added as options in this year's survey.



*New options in 2024.
Base: All central banks who hold gold (57); Advanced economy (18); EMDE (39).

Q18. Which of the following options best describes how you manage your gold reserves?

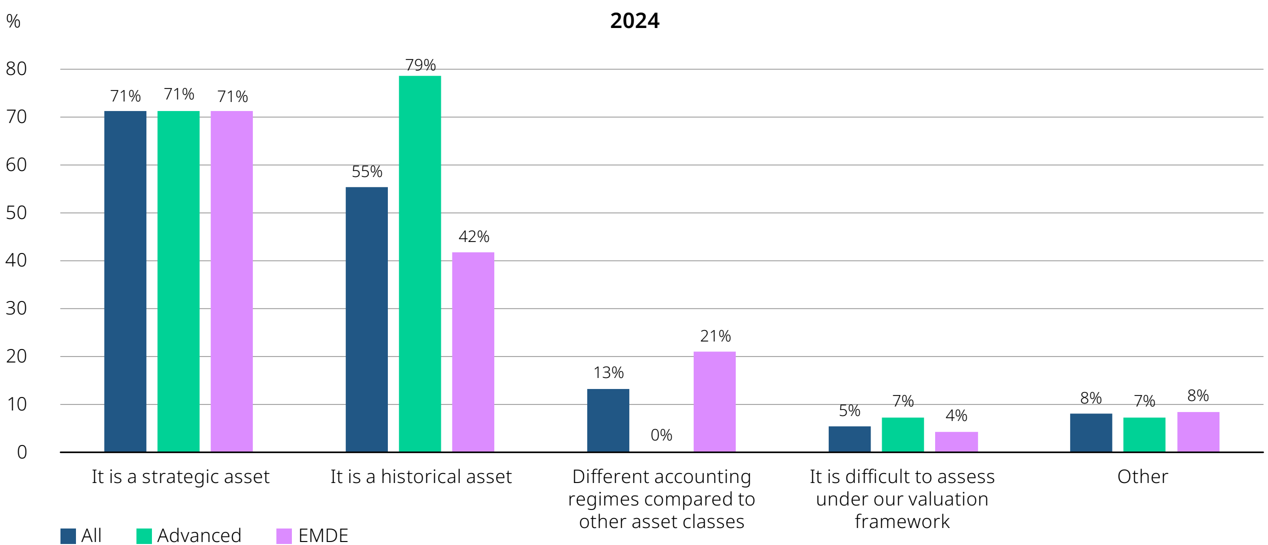
Similar to the responses from prior years, gold reserves are most likely to be managed separately from other reserve asset. However, there were increases in the proportion saying they include gold in either an investment tranche or in a liquidity tranche.



Base: All central banks who hold gold (57); Advanced economy (18); EMDE (39).

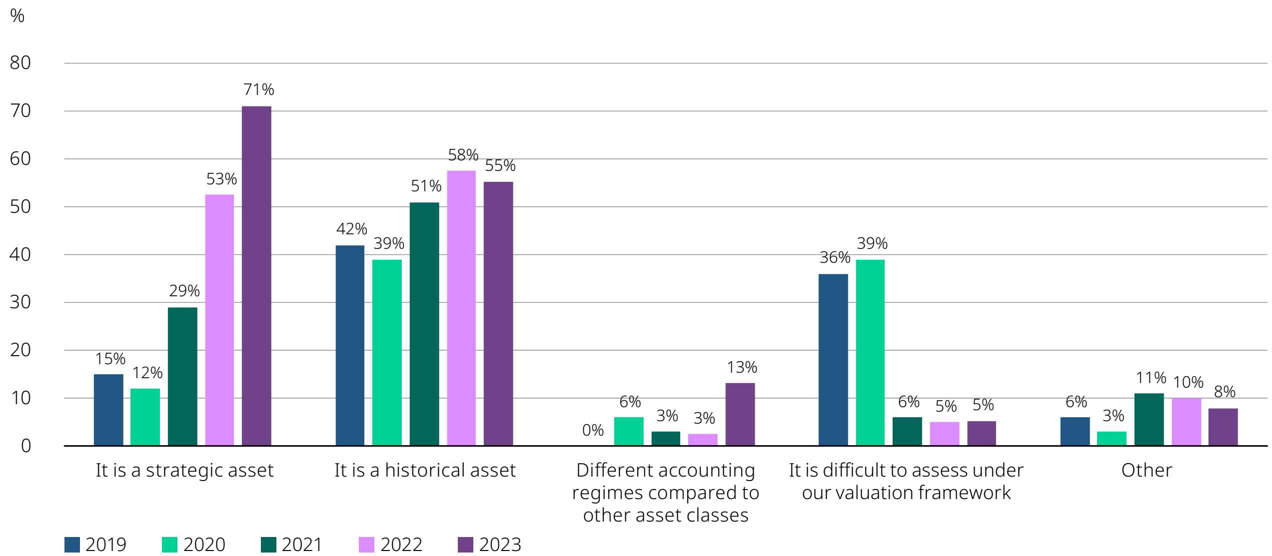
Q19. Why is gold managed separately? (Select all that apply).

The central banks which indicated that they managed gold separately from other reserve assets were asked this question. The top reason that advanced economy central banks manage gold separately is due to it being an historical legacy asset, while a close second is because it is a strategic asset. For EMDE central banks, the top reason is because gold is a strategic asset.



Base: All central banks who said they manage gold separately (38); Advanced economy (14); EMDE (24).

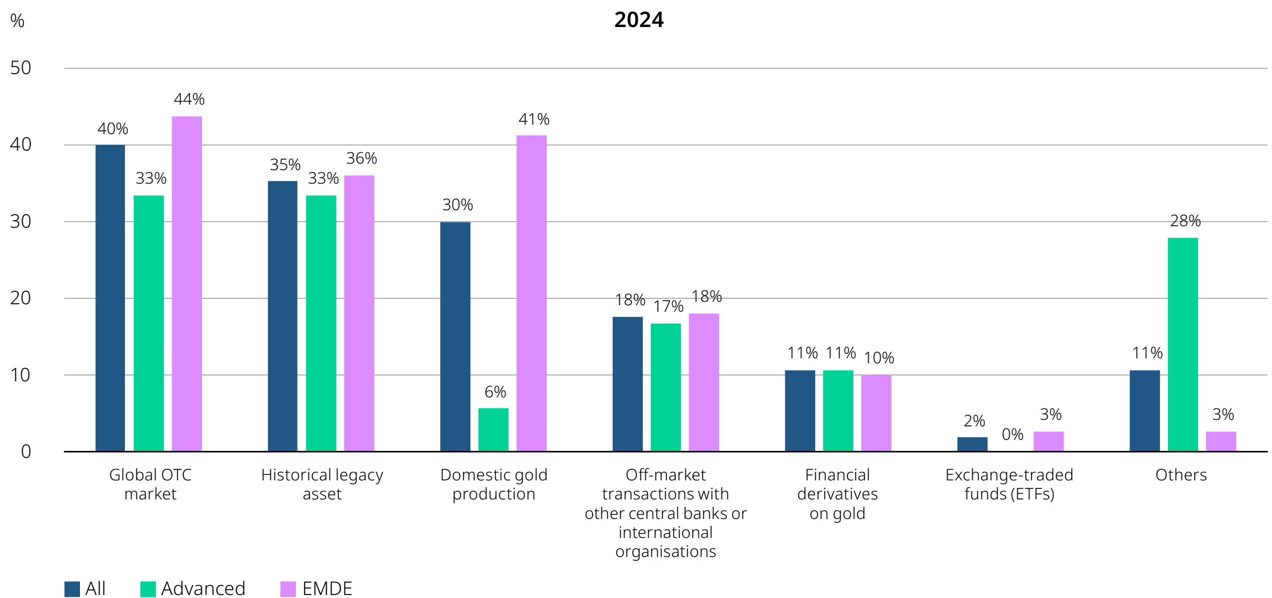
While "historical legacy asset" as a reason to manage gold separately has remained somewhat static in recent years, there has been a significant increase in the proportion saying they do so because "it is a strategic asset". "It is difficult to assess under our valuation framework" has fallen as a reason over time.



Base: All central banks who said they manage gold separately (38); Advanced economy (14); EMDE (24).

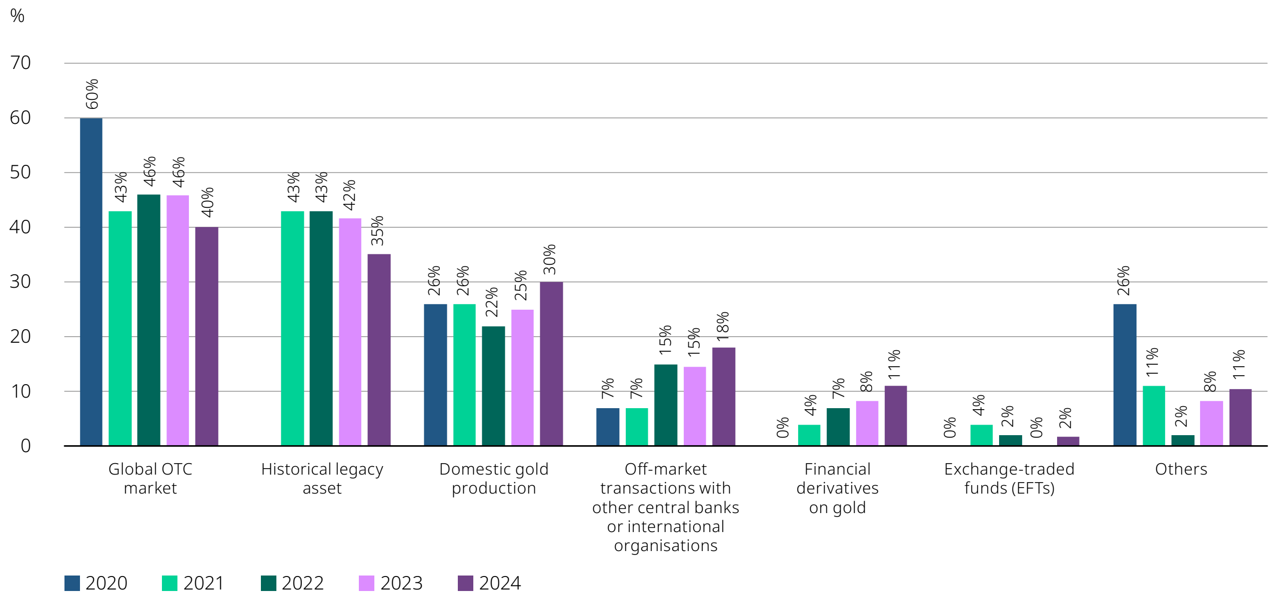
Q20. How do you purchase gold? (Please select all that apply).

Buying gold through the global OTC market remains the most common method. Domestic gold production is dominated by EMDE central banks.



Base: All central banks who hold gold (57); Advanced economy (18); EMDE (39).

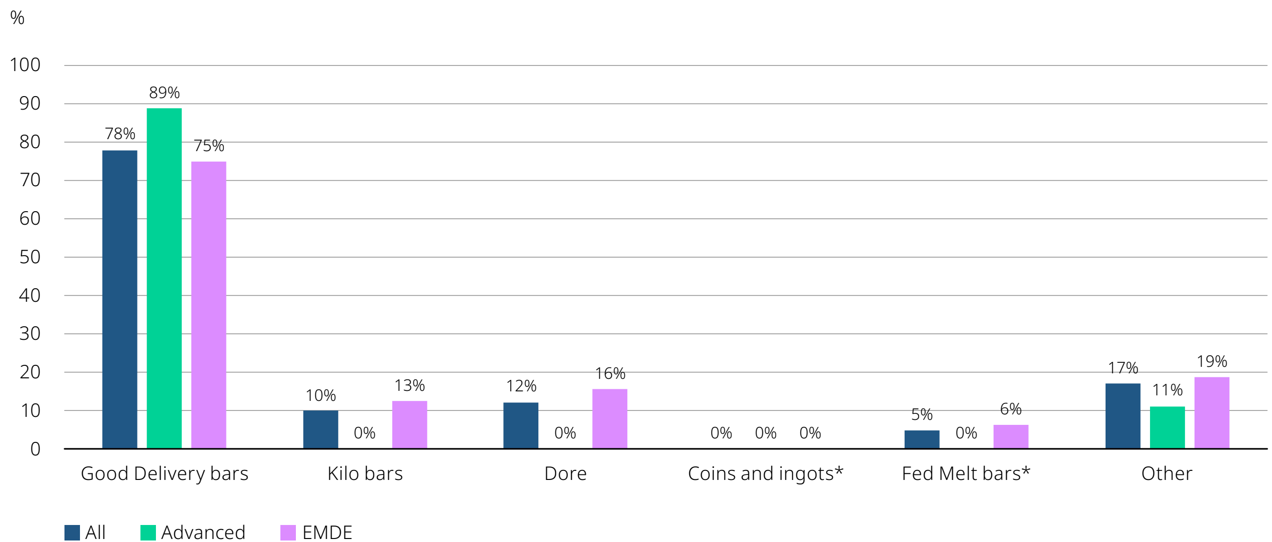
Over time, there have been moderate rises in the proportion saying they purchase gold through domestic gold production, through off-market transactions with other central banks or international organisations, and financial derivatives on gold.



Base: All central banks who hold gold (57); Advanced economy (18); EMDE (39).
"Historical legacy" was not an option in 2020.

Q21. In what form do you purchase physical gold, if applicable? (Please select all that apply).

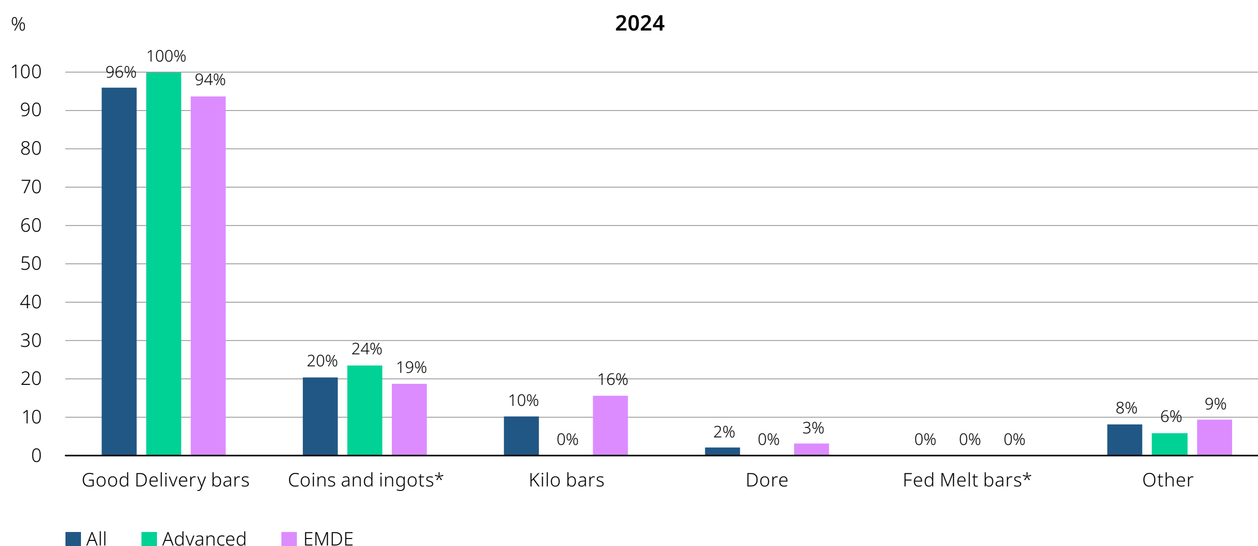
Buying Good Delivery bars continues to be the most popular method. "Fed melt bars" and "Coins and ingots" were added as options this year.



*New options in 2024.
Base: All central banks who hold gold (56); Advanced economy (17); EMDE (39).

Q22. In what form do hold purchase physical gold, if applicable? (Please select all that apply).

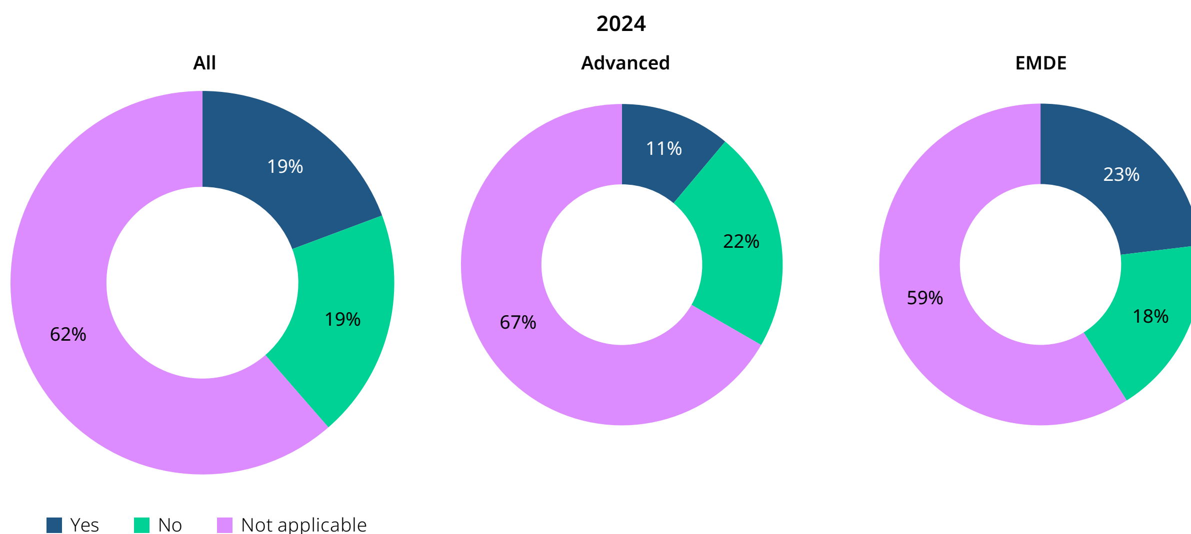
Good Delivery bars continue to be the most popular form. "Fed melt bars" and "Coins and ingots" were added as options this year.



*New options in 2024.
Base: All central banks who hold gold (57); Advanced economy (18); EMDE (39).

Q23. Have you considered upgrading or re-refining your gold holdings to meet Gold Delivery standards (if you have any gold holdings that currently do not meet these standards)?

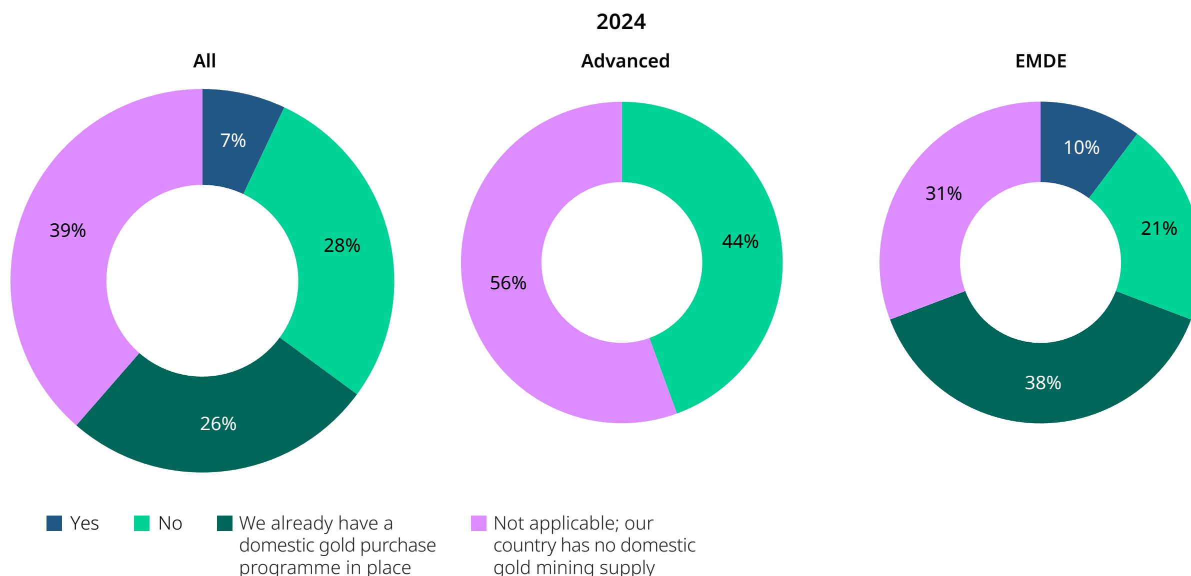
Among respondents, 19% say they have considered upgrading their gold holdings with a higher proportion coming from EMDE central banks compared with their advanced economy counterparts.



Base: All central banks who hold gold (57); Advanced economy (18); EMDE (39).

Q24. Have you considered establishing a domestic gold purchase programme to add gold from mining supply produced within your country?

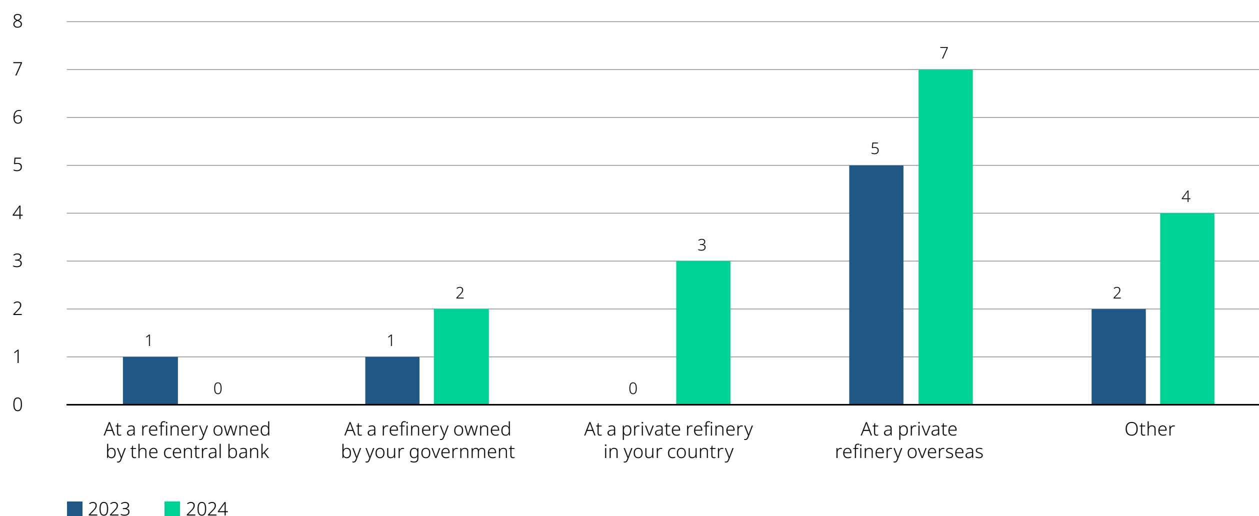
Among respondents, 7% say they have considered establishing a domestic gold purchase programme while 26% say they already have such a programme in place. All of these responses came from EMDE central banks.



Base: All central banks who hold gold (57); Advanced economy (18); EMDE (39).

Q25a. How do you refine gold purchased under your domestic gold purchase programme?

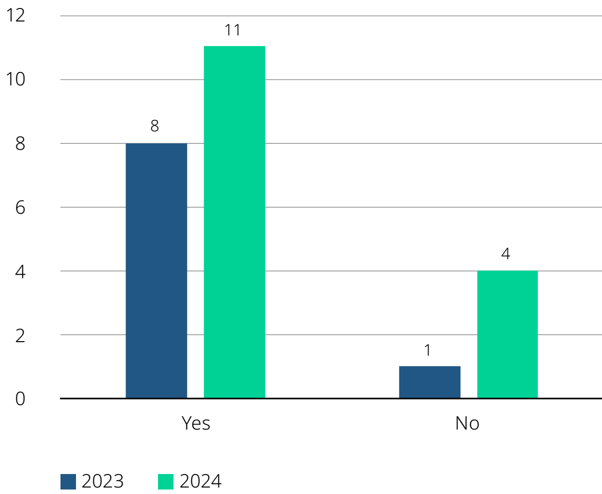
Asked to those who said they already have a domestic gold purchase programme in place and presented by the number of respondents due to the low number of respondents, the most selected response was refining at a private refinery overseas.



Base: All central banks who operate a domestic buying programme (15); Advanced economy (0); EMDE (15).

Q25b. Is your gold refined at an LBMA Good Delivery List refinery?

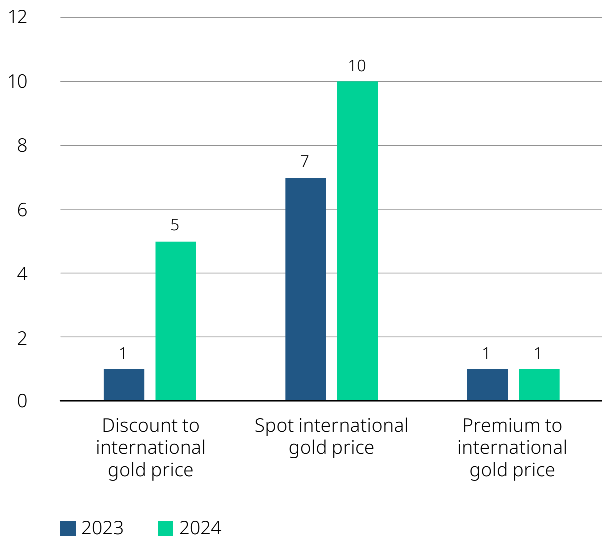
Asked to those who said they already have a domestic gold purchase programme in place and presented by the number of respondents due to the low number of respondents.



Base: All central banks who operate a domestic buying programme (15); Advanced economy (0); EMDE (15).

Q25c. What price do you pay for gold under your domestic gold programme? (Select all that apply).

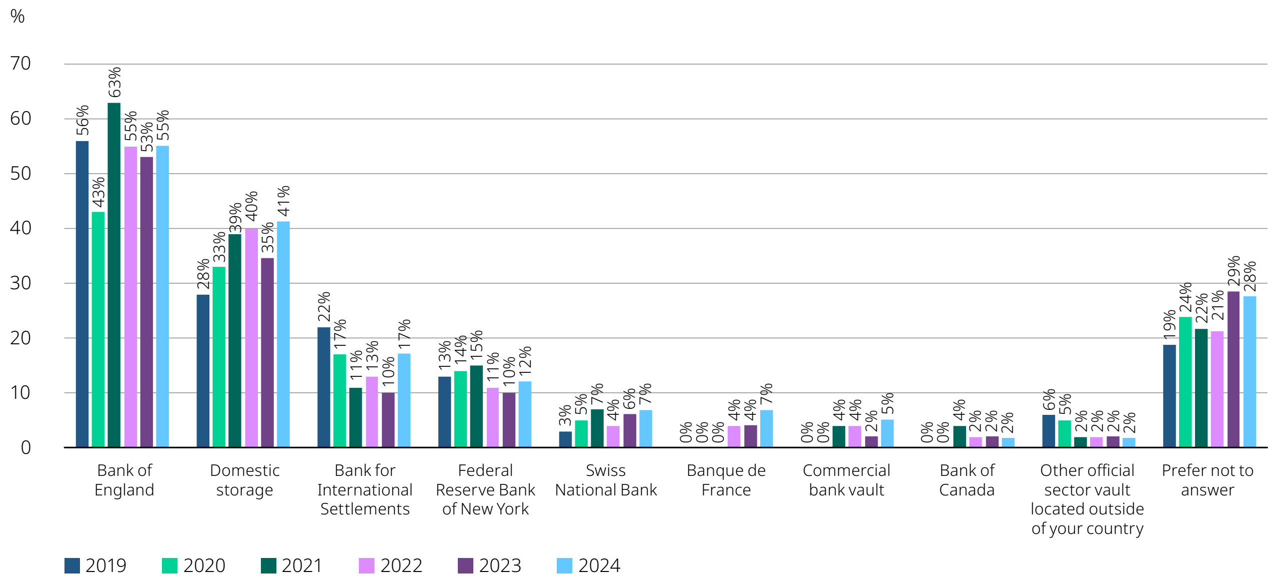
Asked to those who said they already have a domestic gold purchase programme in place and presented by the number of respondents due to the low number of respondents.



Base: All central banks who operate a domestic buying programme (15); Advanced economy (0); EMDE (15).

Q26. Where do you currently vault your gold reserves? (Select all that apply).

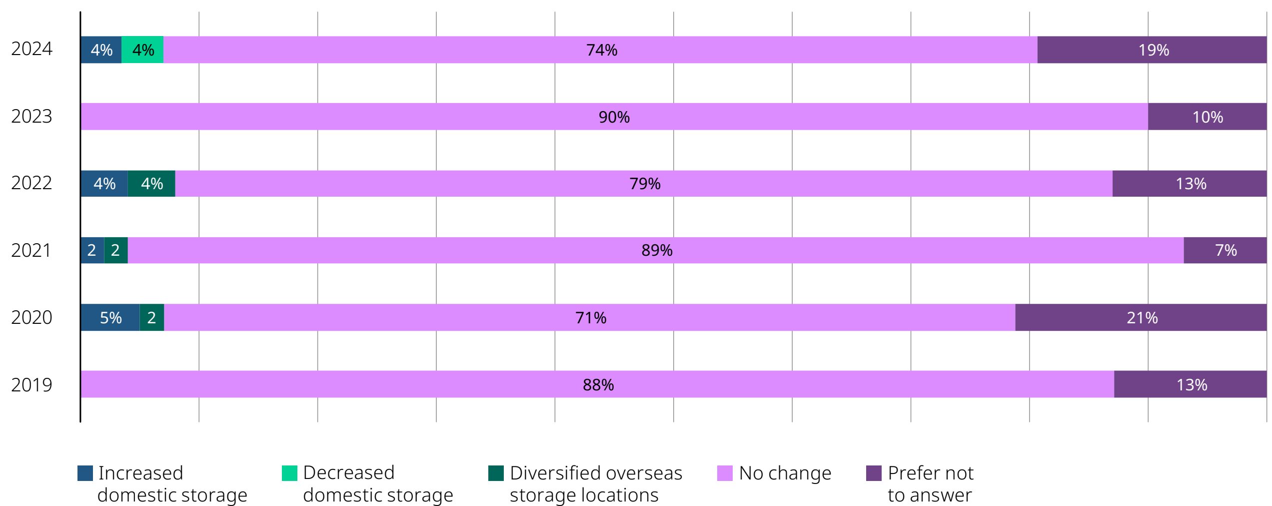
The Bank of England continues to be the most popular location for central banks to vault their gold reserves. Domestic storage has witnessed a moderate uptick compared to previous years.



Base: All central banks who hold gold (58); Advanced economy (18); EMDE (40).

Q27. How, if at all, have your custody arrangements changed over the past 12 months?

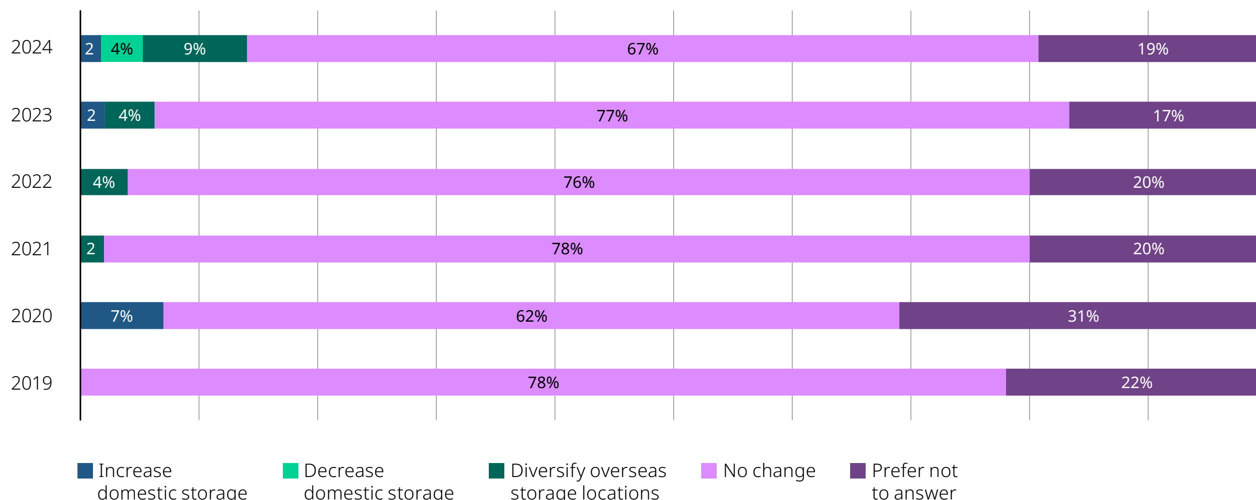
Among respondents, 4% say they have increased domestic storage while 4% say they have decreased domestic storage.



Base: All central banks who hold gold (57); Advanced economy (18); EMDE (39).

Q28. How, if at all, do you intend to change your custody arrangements in the next 12 months?

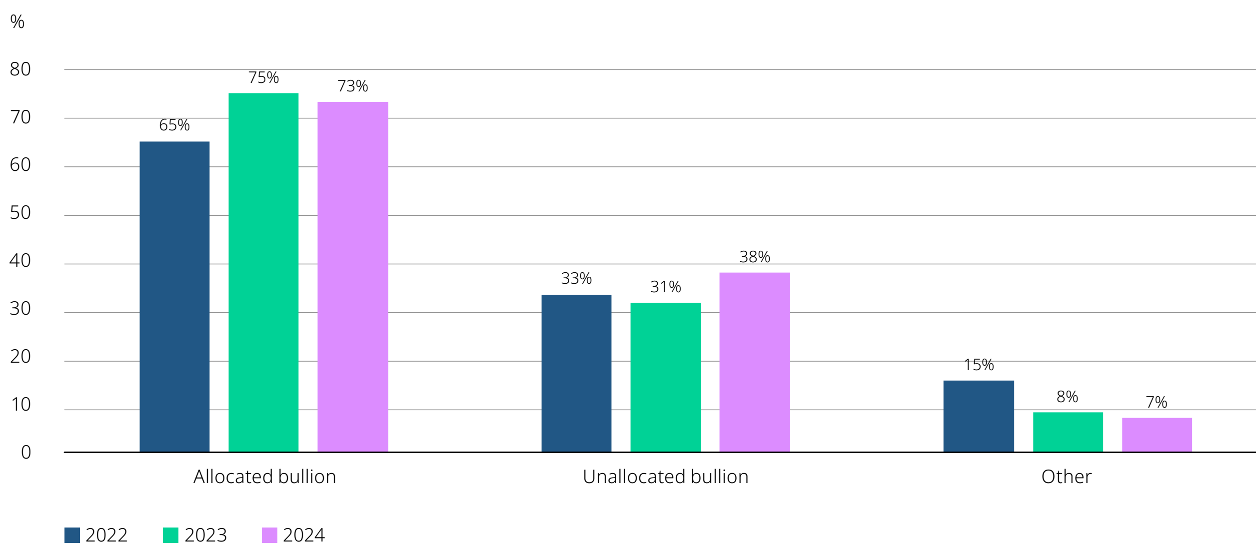
Among respondents, 2% say they plan to increase domestic storage, 4% say they plan to decrease domestic storage, and 9% say they plan to diversify overseas storage locations. Overall, 15% of respondents say they have plans to change their custody arrangements in some way, an increase compared to previous years.



Base: All central banks who hold gold (57); Advanced economy (18); EMDE (39).

Q29. How do you hold your gold reserves? Please note that gold bullion stored at an official sector facility in your home country is considered to be Allocated bullion. (Select all that apply).

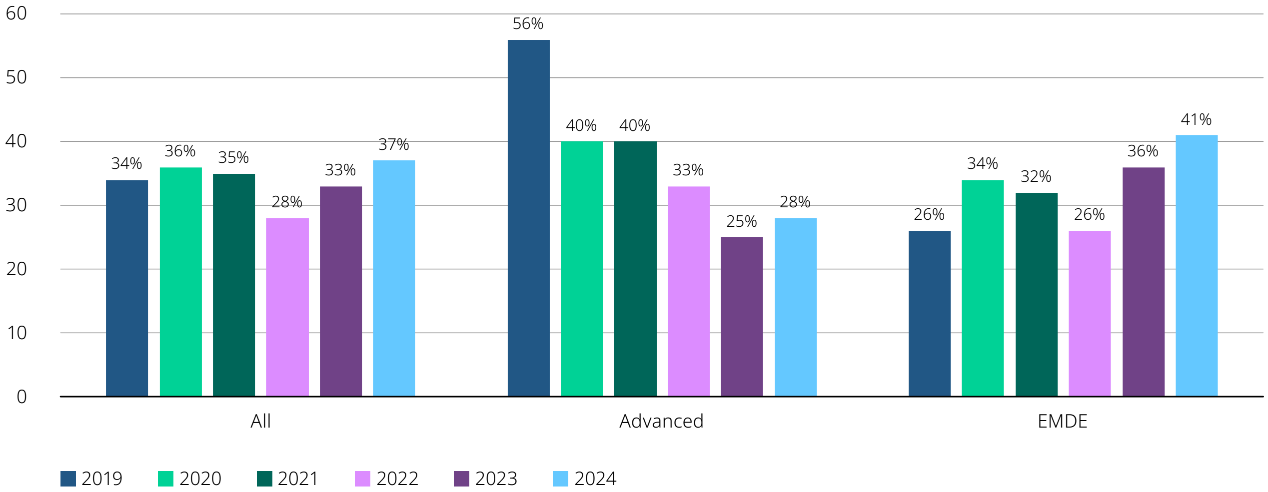
Among respondents, 73% say they hold allocated bullion while 38% say they hold unallocated bullion.



Base: All central banks who hold gold (56); Advanced economy (18); EMDE (38).

Q30. Do you actively manage your gold reserves?

Among respondents, 37% say they actively manage their gold reserves.



Base: All central banks who hold gold (57); Advanced economy (18); EMDE (39).

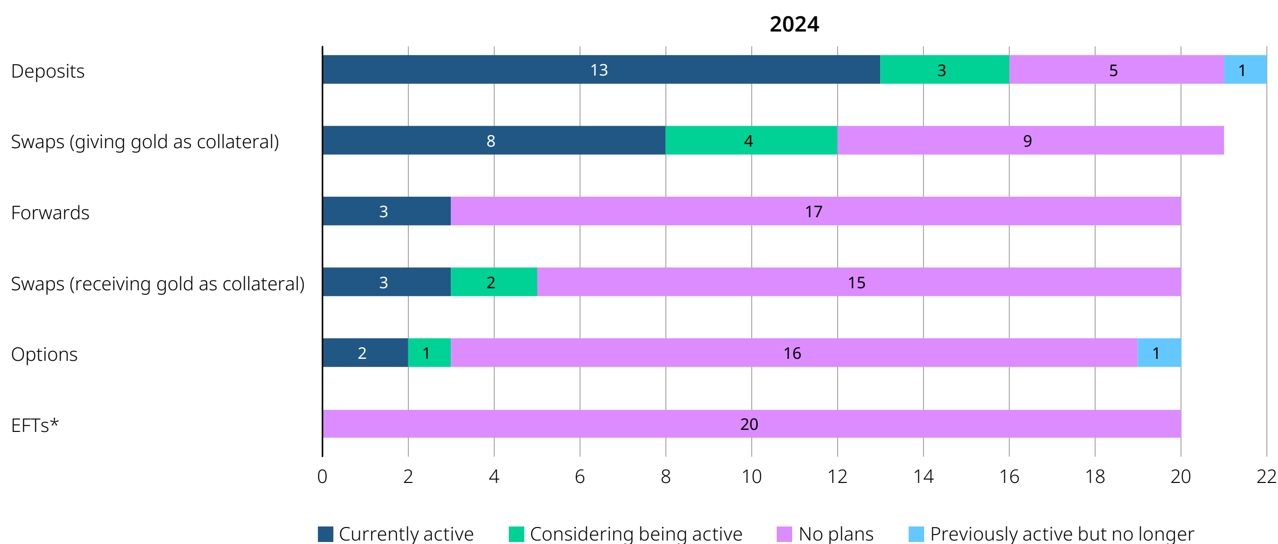
Q31a. What is the aim of active management of your gold reserves? (Select all that apply)
New question for 2024 survey.

Yield enhancement in the most popular reason for central banks to actively manage their gold reserves.

Base: All central banks who actively manage their gold reserves (22); Advanced economy (5); EMDE (17).

Q31b. Please describe how you actively manage your gold reserves. (Select all that apply).

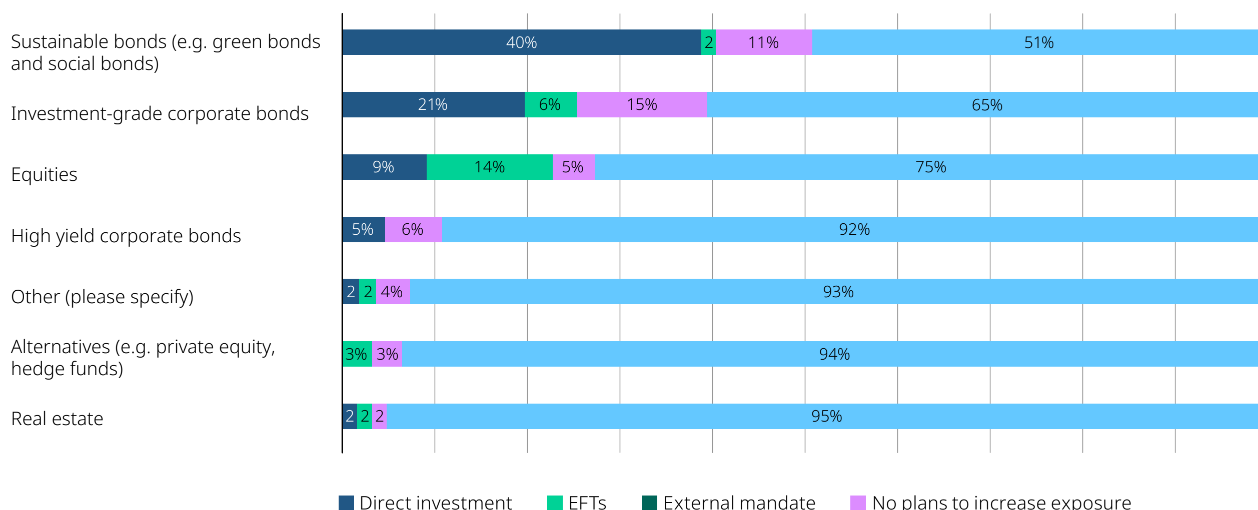
Deposits continue to be the most common way that central banks actively manage their gold reserves while swaps (giving gold as collateral) is second. Due to the low number of responses (n=22), answers are not given as percentages.



Base: All central banks who actively manage their gold reserves (22); Advanced economy (5); EMDE (17).
"Swaps (receiving gold as collateral)" was labelled as "receiving gold as collateral" in the 2020 and 2019 surveys. The wording was changed to provide more clarity.

Q32. Is your institution planning on increasing its allocation into any of the following non-traditional central bank reserve assets in the next 12 months? If so, how would you invest in that asset class? (Select all that apply).

As with previous surveys, sustainable bonds are the most common asset class in which central banks intend to grow their allocation.



Base: All central banks (66); Advanced economy (24); EMDE (42).

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Published: June 2024

Insights
2024 Midyear ETF Market Outlook

Resilience Under Pressure

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What Happens After the Soft Landing?

A funny thing happened while investors foolishly obsessed about both the timing and number of Federal Reserve (Fed) rate cuts this year — the long anticipated US economic soft landing transpired over the past 12 months or so. Distracted investors likely missed it. But for only the fourth time since World War II and the first time in 30 years, the US economy, guided by the Fed, stuck the rare soft landing. The economy slowed, but never entered recession. US GDP (gross domestic product) expanded at an annual rate of 4.9% in the third quarter of 2023, moderating to 1.6% for the first quarter of 2024.[1]

Despite slower economic growth, the labor market remains remarkably resilient. The US has added about 2.8 million jobs over the past 12 months, averaging monthly job gains of 234,000.[2] Initial jobless claims data continue to suggest that businesses are reluctant to let go of qualified skilled workers. And, at 3.9%, the unemployment rate hovers near an all-time low.[3] Gainfully employed consumers will go on spending, repelling recession for at least a little while longer.

Meanwhile, considerable progress has been made over the past couple of years to tame inflation. According to the Bureau of Labor Statistics, the Consumer Price Index (CPI) peaked at an annual rate of 9.1% in June 2022, cooled to 3% a year later, and sat at a still-too-hot 3.4% in April 2024.[4] The Fed is likely pleased, but not satisfied, with inflation's deceleration.

Yet, the first quarter earnings season reveals that businesses are in exceptionally good shape. Seventy-eight percent of S&P 500® companies reported a positive earnings surprise for the first quarter. Year-over-year earnings grew by 5.7%. S&P 500 companies' net profit margin of 11.7% is above the previous quarter, year ago, and 5-year average. Analysts are predicting that S&P 500 companies will grow their earnings by 11.1% this year and an even better 14.1% next year.[5]

At the same time, several major economies including the United Kingdom, Europe, Japan, and China are now emerging from past bouts of economic malaise.

Investors have enthusiastically celebrated the soft landing by pushing global stock markets to all-time highs. Credit spreads are extraordinarily tight, and most measures of capital market volatility are restrained.

Must All Good Things Come to an End?

Although the environment for risk assets remains largely attractive, early gains from achieving the soft landing are likely in the rearview mirror for investors. It's going to get tougher from here. The soft landing, resilient labor market, falling inflation, spendthrift consumers, strong businesses, and potential Fed rate cuts are already reflected in stretched valuations and record-high asset prices. Risks are decidedly skewed to the downside for the remainder of the year.

The increasing likelihood of a Fed monetary policy mistake, stubborn inflation, disappointing earnings results, toppling over the US fiscal cliff, rising geopolitical tensions, and contentious elections all pose serious risks to the rally.

But, after such strong first half performance, it's likely that capital markets will deliver solid results for investors this year, especially if the typical post-US election rally unfolds. Investors should consider these three strategies when constructing investment portfolios for the second half of 2024:

1 Diversify Beyond Mega-cap Stocks

2 Optimize Income with Short-term Core and Credit

3 Position for Macro Volatility With Real Assets

Theme 1: Diversify Beyond Mega-cap Stocks

Resilient earnings and solid economic data continue to support the global equities rally that began last November. But the manufacturing recovery and continued strength in consumer spending have put upward pressure on inflation, reducing the number of expected rate cuts by the Fed. At the May Federal Open Market Committee (FOMC) press conference, Chairman Powell all but eliminated the probability of additional rate hikes but didn't signal when the Fed would begin cutting.

So, despite solid economic growth and encouraging corporate fundamentals, sticky inflation and the Fed's data-dependent approach mean continued uncertainty on the rate path will impact rate sensitive equities. And, the longer the Fed delays rate cuts, the more relevant downside risks become.

In a higher-for-longer interest rate environment, for example, we remain cautious about the downside risks to US large-cap earnings growth beyond big tech — even though S&P 500 companies have exceeded earnings expectations by a large margin in Q1 and positive revisions are at a year-to-date high.[6]

On the other hand, if cooling inflation allows the Fed to cut rates aggressively in the second half of 2024 without a looming recession, small caps' low single-digit growth projection looks achievable given significant downgrades in their 2024 earnings over the past six months. And small caps' near decade-low valuations relative to large caps certainly provide a better risk/reward trade-off.

Despite this monetary policy uncertainty, the US is still expected to lead growth in developed countries. But the eurozone economy has shown positive development, with faster-than-expected Q1 GDP growth and continued disinflation. Additionally, the European Central Bank (ECB) has clearly signaled rate cuts will begin in June with more coming by year end. Along with positive earnings sentiment and attractive valuations, this supports our constructive view of eurozone equities.

To prepare for the wide range of economic outcomes from the Fed's inflation battle and divergence between the US and eurozone monetary policy, consider diversifying portfolios with:

- Equal-weighted exposure to Tech leaders for resilient growth without concentration
- US small caps at attractive valuations to position for rate cuts
- Eurozone equities that may benefit from rate cuts and potential economic revival

Tech Leaders: High Quality to Sustain Resilient Growth

Today's extreme market concentration — driven by a few mega-cap, AI-related stocks — rivals levels seen during the Dotcom era. And it's caused investors to question whether the AI hype over the past 18 months has created a valuation bubble.

Magnificent Seven (Mag 7) stocks' price-to-earnings multiple (P/E), based on the next 12 months' earnings, has expanded 44% since the end of 2022 compared to 14% for the rest of the S&P 500. Yet, Mag 7 valuations are 35% below their pandemic peak and 9% below where they were before the Fed signaled the start of the rate hike cycle.[7] More importantly, the Mag 7's rally has been driven more by stronger growth than by multiple expansions. Changes to their forward P/E accounted for 29% of their total return since 2022 compared to nearly 60% for the rest of the S&P 500.[8]

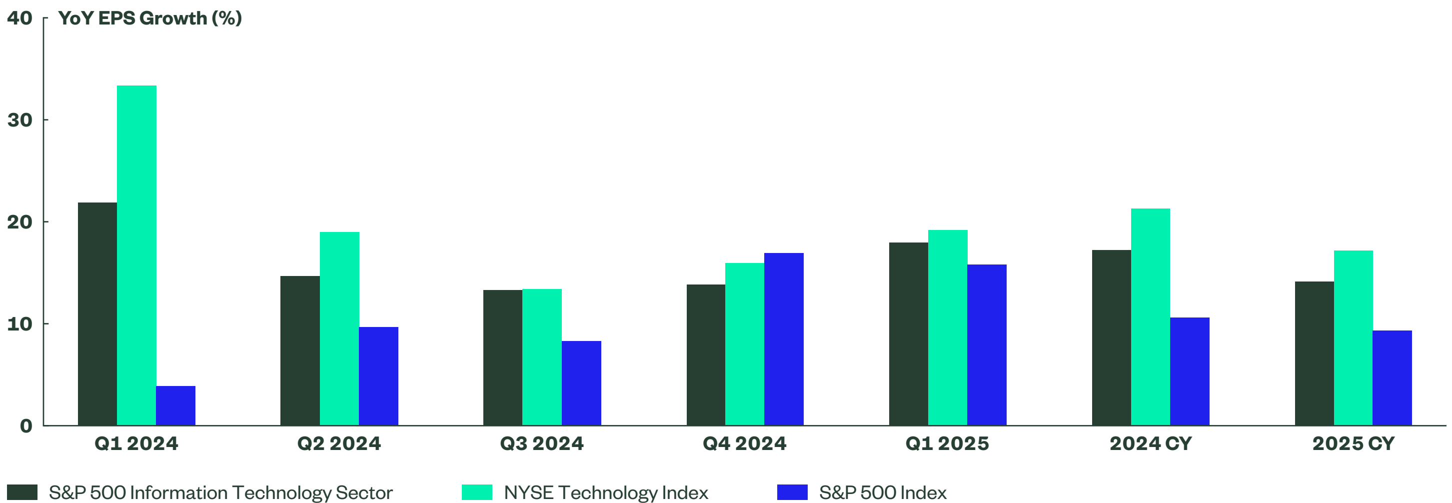
There's no question that growth momentum in AI applications and infrastructure remains strong, despite the current economic uncertainty. Q1 earnings results from Microsoft, Amazon, Alphabet, and Meta show both higher AI spending through 2024 and gains in AI-aided revenue.[9] As organizations transition from early experimentation to aggressive data infrastructure-building to broadening adoption, worldwide spending on traditional and generative AI is projected to grow by 31% and 86%, respectively, on an annualized basis — surpassing a total of $300 billion in 2027.[10]

The resulting industry and geographic concentration of the Mag 7 will further reduce the diversification in investors' equity portfolios. That's why we favor an equal-weighted exposure to Tech leaders across multiple sectors and countries (the NYSE Technology Index) to capture companies most likely to benefit from the broadening of AI applications and monetization. This includes software development, online consumer platforms, social media, and AI infrastructure (e.g., advanced chip makers and cloud computing) companies.

Due to their high quality characteristics and strong earnings growth, these Tech leaders offer quality growth exposure. In fact, their aggregated earnings grew by 22% in 2023, compared to 1% for the S&P 500.[11] Based on consensus earnings estimates, this less concentrated Tech leader exposure is expected to outpace the broad market again this year with above 20% growth.[12]

While this growth advantage will likely narrow in the next few quarters as the broad market plays catch up, the near-term earnings growth visibility of these Tech leaders is better, given the increases in AI-related monetization and capital expenditure spending revealed in Q1 earnings releases. As a result, their earnings growth estimates for the next three quarters were raised by large margins since the start of the year, compared to negative revisions for the rest of the market (Figure 1).[13]

Figure 1 **Tech Leaders' Earnings Growth Estimates Set to Outpace the Broad Market and Tech Sector**



Source: FactSet, as of May 8, 2024. **Past performance is not a reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income as applicable.

Tech leaders' strong profitability and healthy balance sheets are also attractive, particularly in a higher-for-longer interest rate environment. After having focused on growth efficiency and cost cutting over the past two years, Tech leaders' profitability has improved significantly. Their return on equity is at record highs on an absolute and relative basis.[14]

Strong balance sheets, where long-term debt to capital ratio is near its lowest since 2018, should help Tech leaders continue to invest for future growth, even with high financing costs.

US Small Caps: Fed Cuts Support Growth and Valuations

Though recent inflation trends posed some risks to the soft landing, progress on goods inflation and cooling wage inflation warrant less restrictive monetary policy in the coming months if the Fed is to achieve its dual mandate of maximum employment and stable prices. Solid economic growth, coupled with potential rate cuts not driven by a looming recession, provide a positive backdrop for US small caps, especially given their attractive valuations.

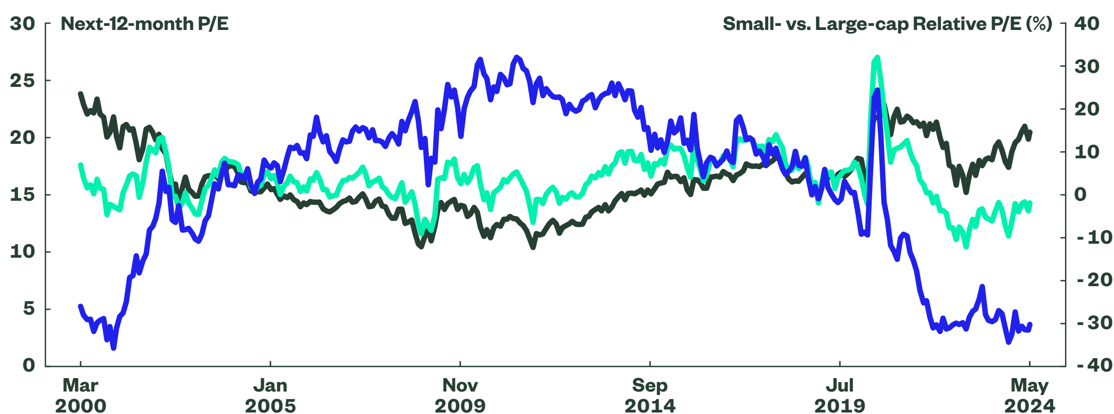
Thanks to a solid labor market and continued strength in consumer spending, the US economy remains resilient, despite expanding at a much slower pace than it did the second half of 2023 due to the drag from trade and inventories. Positive real income growth, alongside a $37 trillion increase in household wealth since the pandemic, should support consumption in the coming months.[15]

Weaker-than-expected April payrolls and a 0.1% increase in the unemployment rate drove negative headlines. But given how payrolls surprised to the upside in Q1, we view the recent slowdown in payroll gains plus moderating wage inflation as a positive step toward a better supply-demand balance in the labor market, not a threat to consumer demand.

Since the beginning of the year, the consensus US GDP forecast for 2024 has been upgraded to 2.4% from 1.3%.[16] The Atlanta Fed GDPNow estimate for Q2 real GDP growth has been above 3% since late April, signaling solid growth in the first half of 2024. But even against this solid economic backdrop, earnings sentiment in small caps has been gloomy this year as Treasury yields rose to above 4%. Small caps' earnings per share (EPS) estimates have been slashed by more than 5% since the start of the year, with growth expectations falling to low single digits, compared to their 12% estimate from six months ago and the 11% estimate for their large-cap peers.[17]

Rising Treasury yields definitely burden small caps more than they do large caps, mainly because small caps issue more short-term debt and are more sensitive to the current high interest rates. Indeed, small-cap current valuations are pricing in a significant level of financial stress for companies, with small caps' forward P/E 13% below the long-term average and at a 30% discount to US large caps (Figure 2).

Figure 2
Small Caps' Forward P/E at a Record Discount to US Large Caps



Source: FactSet, as of May 13, 2024. **Past performance is not a reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income as applicable.

But we believe peak interest rates are behind us.

And rate cuts in the second half of this year amid a solid economic environment would ease pressure on small-cap valuations. Given their bearish earnings sentiment so far this year, a resilient US economy may support small caps to deliver upside surprises in the second half, potentially outperforming large caps as US earnings growth broadens out.

Eurozone Equities: Strengthened by a Dovish ECB and Economic Momentum

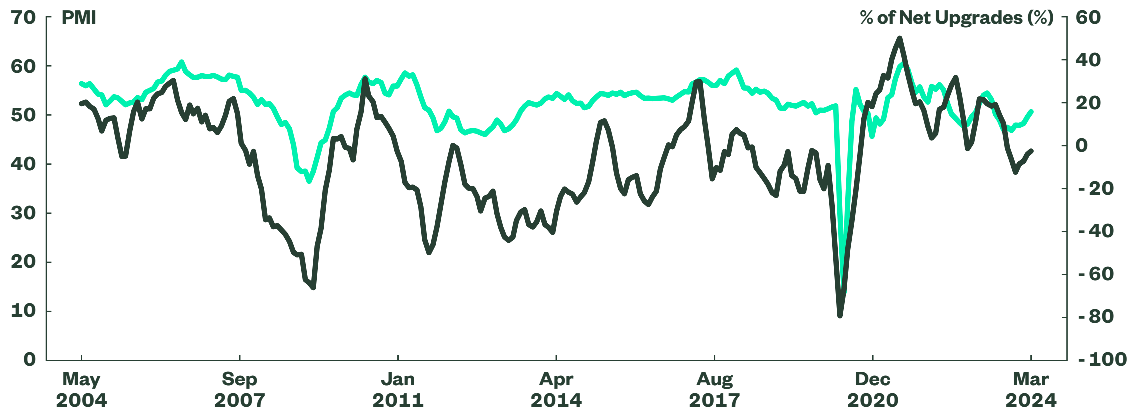
Green shoots of an economic rebound in the eurozone have appeared in macroeconomic surveys and earnings fundamentals after the region's annual growth decelerated sharply last year to 0.4%.

In April, the Eurozone Composite PMI (Purchasing Managers Index) indicated overall business activity had expanded at the fastest pace over the past 11 months, driven by above-trend growth in the service sector.[18] Although manufacturing PMI took a breather from its recent rebound, a shallower decline in output and a two-year high in business confidence support positive development.

Record low unemployment, strong nominal wage growth, and steep disinflation provide a powerful boost to consumer income, potentially supporting domestic consumption and continued expansion in the service sector. A stabilizing Chinese economy may help pull Germany, the largest economy in the eurozone, out of the manufacturing downturn.

Historically, increasing Composite PMI bodes well for positive earnings sentiment (Figure 3). At the beginning of May, earnings upgrades outpaced downgrades for the first time in 10 months as the region's economic recovery progressed.[19] Despite lower growth estimates compared to the beginning of the year, Q1 earnings beats came in stronger than Q4 and above the historical average thanks to resilient profit margins. This suggests room for greater upside surprises in the coming quarters if positive economic momentum continues.[20]

Figure 3
Increasing Eurozone Composite PMI Bodes Well for Earnings Upgrades



Source: FactSet, Bloomberg Finance, L.P., as of May 7, 2024. **Past performance is not reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income as applicable.

Meanwhile, steep disinflation and weak economic growth have opened the door for the ECB to dial back policy restrictions. While eurozone inflation peaked at a higher level and later than in the US, it's made greater progress toward the ECB's target. Core inflation has fallen from its peak of 7.5% in March 2023 to 2.8% in April. The replacement of Russian gas suppliers with American ones, warm weather, and prudent energy consumption all resulted in eurozone headline inflation declining even more steeply to 2.4% in April.

As a result, the central bank has strongly signaled rate cuts would begin in June. Our economists project a total of 100 basis points (bps) of cuts this year as their baseline view. With a dovish ECB and steady global demand, a meaningful economic rebound is achievable for the second half of the year, supporting an earnings recovery.

Eurozone equity valuations have become more expensive compared to last year due to the equity market having reached all-time-highs, even outperforming the S&P 500 year to date. But the market's forward P/E ratio (13.8x) is still below its 10-year average (14.8x).[21]

Relative to US equities, eurozone equities are trading at a 15% greater discount than the historical average — around the bottom decile of the past 10 years.[22] Given the prospect of monetary easing and continued positive economic momentum, these valuations may have room for further expansion.

Implementation Ideas

To position for uncertain monetary policy, diversify by balancing quality growth with cyclical value and consider:

Leading Tech companies for resilience and high quality growth	**XNTK**	SPDR® NYSE Technology ETF
US small caps for growth and attractive valuations during rate cuts	**SPSM**	SPDR® Portfolio S&P 600™ Small Cap ETF
European stocks supported by a dovish ECB and economic momentum	**FEZ**	SPDR® EURO STOXX 50® ETF

Theme 2: Optimize Income With Short-term Core and Credit

Uncertainty over Fed policy has led to record-breaking rate volatility for core aggregate bonds. And, the resulting losses have added to core bonds' double-digit two-year drawdown.[23] Given the Fed's reliance on data, and with key economic data coming in with more variability relative to expectations, it's likely that increased market volatility will continue.

But credit isn't witnessing the same volatility. Foundations for its year-to-date gains are underpinned by sturdy economic growth, improving earnings fundamentals, and positive ratings momentum. Spreads, however, are noticeably tight. And while that can be cause for concern, historically, at these current levels, returns have still been positive over the following 12 months.[24]

Given that the outlook for credit is favorable while broad core bond exposures are challenged by policy-related rate volatility, investors should consider:

- **Actively managed floating rate loan strategies** that seek to limit rate volatility without sacrificing income potential by focusing on high-yielding below investment-grade markets
- **Short-term active core strategies** to pursue more yield with less volatility than core bonds, by balancing exposure to rate- and credit-sensitive sectors
- **Balanced high-quality intermediate investment grade bonds** to take on more fairly-compensated credit and rate risks, given their yield, duration, and spread profiles relative to core bonds

Fed's Policy Patience Delays Rate Cuts

After significant declines in 2023, CPI has since made limited progress toward the Fed's 2% target. As a result, the Fed anticipates keeping rates elevated for longer than previously expected, until more progress is made to temper stubborn inflation.[25] This should keep short-term rates, like the US 2-year yield, close to the fed funds rate, limiting the slope of the curve. In fact, consensus economic forecasts have the differential between the US 2- and 10-year remaining inverted until Q1 2025, with the 3-month and 10-year differential not having an upward slope until at least Q3 2025.[26]

Futures implied forecasts show the market slowly warming to the idea of higher for a little bit longer. At the start of the year, implied futures pricing projected the lower bound of fed funds rate to be 4.35% by July whereas current projections expect it to be 5.25% (indicating no cuts by July).[27] The same trend exists for the year-end rate level. To start the year, futures markets had the fed funds rate at 3.75% while current projections have the average rate at 4.8%.[28]

Big picture? The curve will likely remain inverted for a bit longer, as long as short-term rates remain high. But *some* rate cuts may occur in the second half of this year — just not as many as previously expected. There's also a slight risk of no rate cuts this year, as some Fed officials have warned against not finishing the job on cooling inflation.[29]

Analysis from Strategas Research Partners reinforces this risk. They found that multiple waves of inflation are common — with a second wave of US inflation starting on average 30 months after the first peak. The US is now almost 24 months past the June 2022 peak in CPI.[30]

New Challenges Cloud Rate Risks

The data-dependent Fed is challenged by the increased variability of key economic data releases. This variability likely stems from changes in consumption, employment, and social behaviors during the pandemic that have made accurate economic data forecasts more difficult.

For example, CPI prints this year have deviated from consensus expectations by an average of 10 bps. It's the fourth consecutive year where prints have deviated by more than the pre-pandemic 10-year average of 7 bps.[31] The same trend exists with labor reports; data this year is coming in over/under estimates by a wider range than normal (~50% deviation from expected versus pre-pandemic average of 31%).[32]

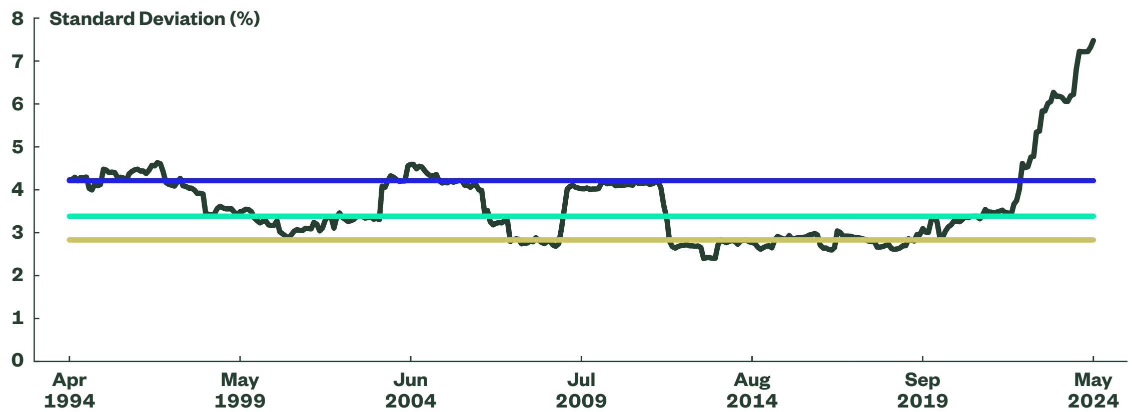
The calendar also will challenge the Fed's ability to remain patient. The window to implement policy decisions prior to a systemic macro event like the US election closes a little more each day. And as data continues to exhibit higher variability than normal, rate volatility will have more reason to remain elevated — challenging rate-sensitive bond allocations.

These challenges are underscored by the fact that long-term US Treasury bonds' rolling 90-day standard deviations of returns (13%) are greater than US equities' (12%).[33] Typically, perceived safe-haven long-term US Treasurys have a realized volatility that is four percentage points *less* than stocks.[34] Not so in this new rate risk regime.

Core bonds are experiencing a similar trend. While not greater than stocks, their own standard deviation of returns over the past 90 days plots in the historical 89th percentile over the past 30 years.[35] In fact, this latest bout of realized rate risks has exacerbated the longer trend, as the Bloomberg U.S. Aggregate Bond Index's (Agg) trailing 3-year standard deviation of returns is at all-time highs (Figure 4).

Figure 4
Realized Rate Risks Are at Record Highs, and Rising

Rolling 36-month Standard Deviation of US Agg Returns
Median
80th Percentile
20th Percentile



Source: Bloomberg Finance, L.P., as of May 14, 2024, based on monthly returns for the Bloomberg U.S. Aggregate Bond Index. **Past performance is not reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income as applicable.

Credit Outlook More Favorable

The same healthy economic signs that led to rate cut repricing have helped support credit exposures. In fact, five tailwinds underpin the case for credit:

1. **A growing economy:** A healthy labor market, resilient household demand, and business investment fueled a 3.1% real rise in final sales to private domestic purchasers. This key gauge of underlying demand has expanded for three consecutive quarters.[36]

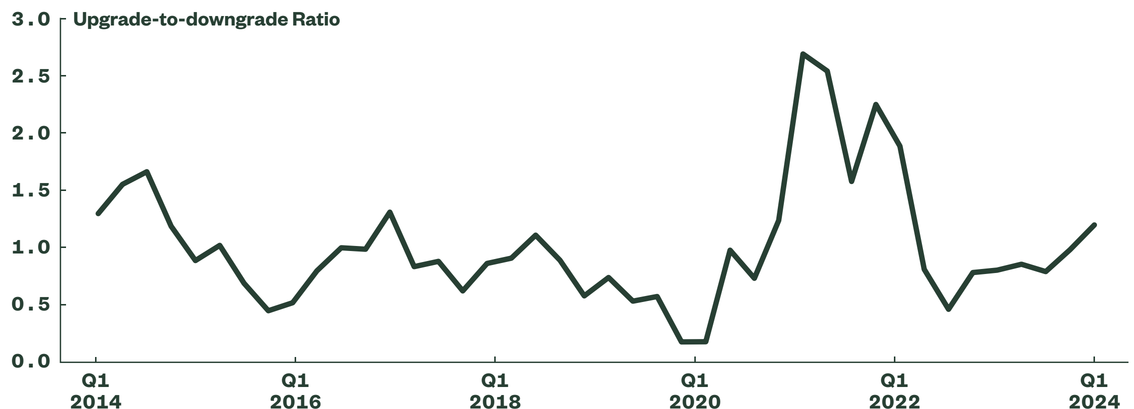
2. **Positive earnings growth:** After a string of negative quarters, earnings for US equities are poised to record their third consecutive quarter of growth.[37] Earnings growth is projected for the two remaining quarters of 2024 and for all of 2025.[38] For below investment-grade issuers, the same trends exist as positive Q1 earnings surprised to the upside.[39]

3. **Improving ratings momentum:** After downgrades outpaced upgrades for seven consecutive quarters, the upgrade-to-downgrade ratio finally moved above 1 (indicating more upgrades than downgrades) in Q2. Positive ratings momentum indicates improving overall credit fundamentals, a trend also reflected in improving debt coverage ratios for below investment-grade issuers (Figure 5).[40]

4. **A healthy coupon (i.e., carry):** High yield bonds yield around 8%, while senior loans have a yield above 9%[41] — greater than their own historical averages and the yields of today's core bonds.[42]

5. **Supportive technicals:** High-yield issuers have brought $113 billion of new issuance to the market, almost twice the pace of this time last year.[43] And in April, more than 40 US investment-grade firms sold $53 billion of bonds over a three-day stretch, the most crowded three-day calendar since 2021, while high-yield issuers priced nearly $11 billion — seizing on strong investor demand for the carry associated with credit.[44]

Figure 5
Positive Credit Rating Trends Help Support the Case for Credit



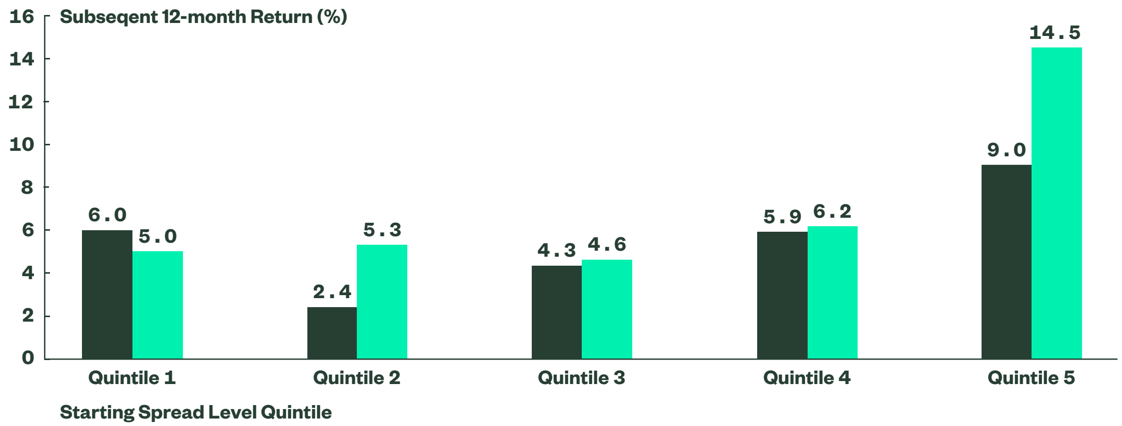
Source: Bloomberg Finance, L.P., as of May 14, 2024, based on S&P ratings for North American corporate issuers for investment-grade and below-investment-grade debt. **Past performance is not reliable indicator of future performance.**

Tight credit spreads are cause for concern. For both high-yield and investment-grade corporate bonds, spreads are approximately 40% below their historical averages and plotting in the lowest quintile over the past 20 years.[45] Yet, our research shows that the relationship between the starting spread level and the subsequent 12-month returns is mixed.

Rather than a linear relationship, where the lowest returns occur when spreads are in the bottom quintile and the best returns when spreads are in the top quintile, returns show more of a "smile" pattern (Figure 6). In fact, quintile one's (today's) starting spread level returns are higher than quintiles two or three for investment-grade corporates and high yield.

Figure 6

Starting Spread Levels Have Historically Shown an Uneven Relationship



Source: Bloomberg Finance, L.P., as of April 30, 2024, based on the Bloomberg U.S. Corporate Bond Index and the Bloomberg U.S. High Yield Corporate Bond Index spread and subsequent 12-month returns from 1994 to 2024. **Past performance is not reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income as applicable.

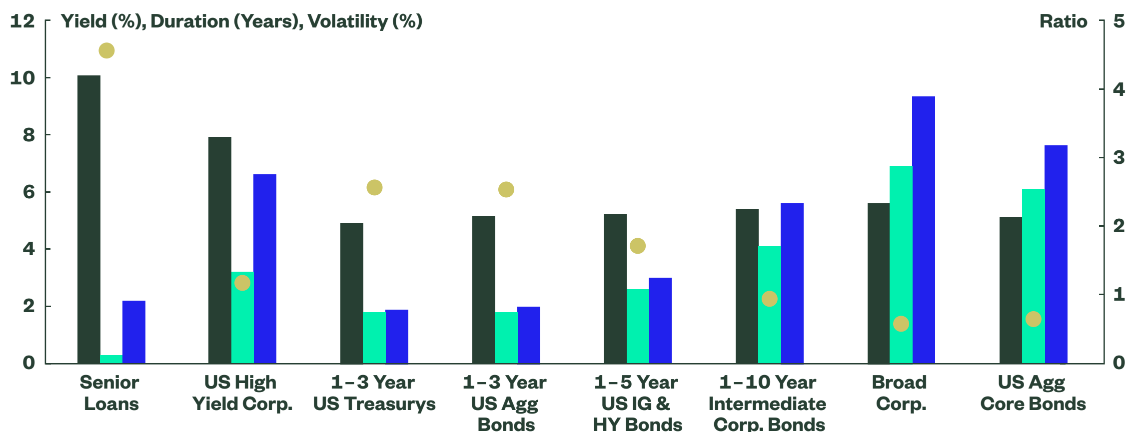
Optimizing Income Opportunities While Managing Rate Risks

Elevated rate risks and conducive credit trends support using credit-related strategies that have the potential to limit rate-induced price swings. Expressing a bias to credit can take many forms, however.

Figure 7 illustrates the yield, duration, volatility, and yield-per-unit-of-volatility ratio profiles of short-term bond sectors to help you decide how to pursue today's credit opportunities in an evolving rate risk regime.

Figure 7

Short-term Core and Credit Strategies Help Balance Income and Risk



Source: Bloomberg Finance, L.P., as of May 15, 2024. US High Yield Corp = Bloomberg U.S. High Yield Corporate Bond Index, 1–3 Year US Treasurys = Bloomberg U.S. 1–3 Year Treasury Index, 1–3 Year US Agg Bonds = Bloomberg 1–3 Year U.S. Aggregate Bond Index, Broad Corporates = Bloomberg U.S. Corporate Bond Index, US Agg Core Bonds = Bloomberg U.S. Aggregate Bond Index, Senior Loans = Morningstar LSTA Leveraged Loan Index, 1–5 Year US IG & HY Bonds = Bloomberg U.S. Universal 1–5 Year Index. **Past performance is not reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income as applicable.

The flexibility of active strategies to manage rate risks, while pursuing opportunities amid a broader universe, may be the most beneficial approach in the core. More so, duration-controlled active strategies that combine both traditional bond sectors (e.g., investment-grade corporates and US Treasurys) and non-traditional ones (e.g., CLOs, securitized credits) can support tactical positioning along the yield and credit curve.

An actively managed senior loan strategy can also help limit rate risks, without sacrificing income. Due to their floating rate coupons, senior loans have minimal interest rate risk — resulting in realized volatility of just 2.2%, versus the Agg's 7.6% over the past year.[46]

Since senior loans are below investment-grade rated securities, this reduction in rate risk doesn't constrain their potential for income generation. Yields are above 9%, leading to a yield-per-unit-of-duration more than four times that of core bonds and three times that of fixed-rate high yield (Figure 7). And active strategies' prudent risk management and sector and security selection may help navigate a credit market with healthy fundamentals and supportive technicals, but rich valuations.

Balanced credit strategies can also be found within investment-grade markets. High-quality investment-grade corporate bonds with maturities between 1 and 10 years, leading to a weighted duration of four years, allow investors to take on *some* duration risk, but with a better balance toward income. The segment's 5.41% is greater than core bonds' 5.07% and on par with broad corporates' 5.60%.[47]

Sitting in the short-plus belly of the curve cuts out the long-term tail of corporate bond exposures that offer little yield pickup (30 bps) while adding eight years of duration relative to the 1–10 year space.[48] As a result, the 1–10 year part of the corporate curve helps strike a better balance between yield, duration, and potential rate volatility relative to other broad corporate bond and Treasury sectors.

Implementation Ideas

To protect against rate volatility and also take on credit risk in response to positive economic trends, consider:

Actively managed floating rate loan strategy	**SRLN**	SPDR® Blackstone Senior Loan ETF
Short-term active core strategy	**STOT**	SPDR® DoubleLine® Short Duration Total Return Tactical ETF
Balanced high-quality intermediate investment-grade bonds	**SPIB**	SPDR® Portfolio Intermediate Term Corporate Bond ETF

Theme 3: Position for Macro Volatility With Real Assets

For nearly 40 years, a global peacetime dividend between the world's economic superpowers, combined with increasing globalization, created a powerful one-two punch to stabilize interest rates and inflation at benign levels. As a result, long duration investments such as stocks and bonds performed well. The traditional 60/40 investment portfolio thrived in this environment.

Today, rising geopolitical tensions and deglobalization in the aftermath of the pandemic threaten to destabilize the global economy through higher rates and inflation. Investors may need a different set of investments in a diversified portfolio to achieve their long-term goals and objectives.

Investors should consider:

- Gold for its low correlations to both stocks and bonds and historical trend of preserving purchasing power during periods of above-average inflation.[49]
- Inflation-sensitive assets like inflation-linked bonds, infrastructure, real estate, and natural resource equities.
- Agriculture, energy, and metals and mining industries, all likely to benefit from stubborn inflation and potentially higher commodity prices.

US Economy Beating Expectations

The US economy, aided by massive amounts of fiscal stimulus, continues to defy consensus expectations for a meaningful slowdown. Instead, the mid-May Federal Reserve Bank of Atlanta GDPNow estimate for annualized real GDP growth for the second quarter is a robust 3.6%.[50] At the same time, several major economies including the United Kingdom, Europe, Japan, and China are emerging from recent bouts of weakness.

Should something go unexpectedly wrong, global central banks such as the Fed, Bank of England, ECB, Bank of Japan, and People's Bank of China stand ready to lend support to their respective economies through monetary policy accommodation. In addition, considerable progress has been made in taming inflation since it peaked two years ago in the summer of 2022. As a result, several central banks, including the Fed, are expected to begin cutting interest rates later this year.

Supported by determined fiscal and monetary policies, steady economic growth has combined with strong labor markets, growing corporate profits, and healthy consumer spending to create an attractive backdrop for risk assets. But much of this favorable environment for risk taking is already reflected in stretched valuations and high asset prices. Many stock markets around the world are at or near all-time highs, credit spreads are historically tight, and most measures of capital market volatility are remarkably subdued.

Global Macroeconomic Landscape Grows More Fragile

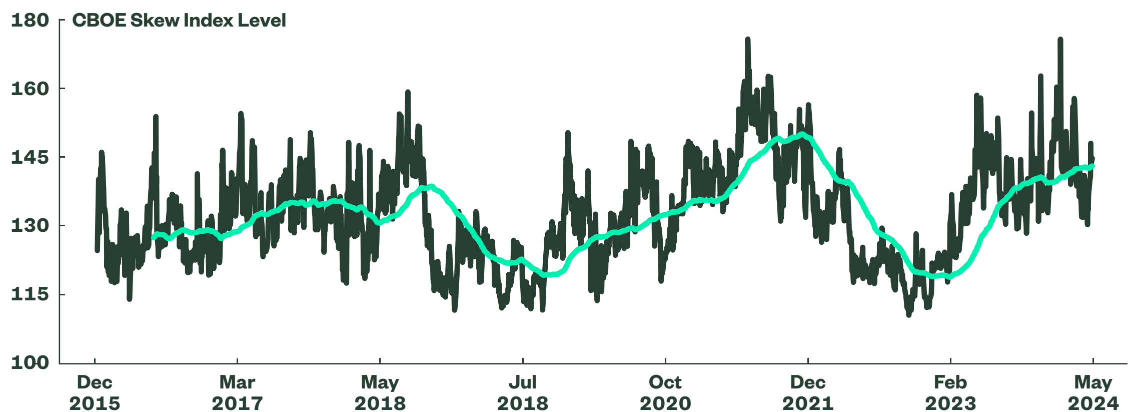
Market volatility likely will be exacerbated by the fact that more than 40% of the world's population is eligible to vote in an election this year.[51] November's US presidential election promises to be one of the closest and most divisive races in US history. Investors should brace themselves for greater election headline risks.

Figure 8

Increased Implied Tail Risks Reflect a Wider Range of Outcomes

SKEW Index

200-day Moving Average



Source: Bloomberg Finance, L.P., as of May 16, 2024. **Past performance is not a reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income as applicable.

Meanwhile, the probability of a monetary policy mistake is rising. Central banks are desperately trying to find the right balance between inflation and economic growth.

If central bankers cut interest rates prematurely, they risk repeating the stop and go monetary policy mistakes of the 1970s that enabled inflation to come roaring back. If they wait too long, central bankers risk producing an unwanted recession, capital market catastrophe, or possibly both — the more typical monetary policy mistake. Regrettably, central bankers find themselves in an unwelcome Catch-22 situation.

Ballooning fiscal deficits resulting from extraordinary government spending to combat the negative consequences of the pandemic likely brought future economic growth forward. Governments must now issue an increasing amount of sovereign debt to fund those deficits. This is especially true in the US and it's happening at a time when central banks, including the Fed, and other natural purchasers of sovereign debt are buying fewer bonds.

As a result, the supply of sovereign debt is rising while demand is falling. This likely has contributed to higher and more volatile interest rates than many market participants had anticipated. This could destabilize the global economy and result in a correction in lofty asset prices.

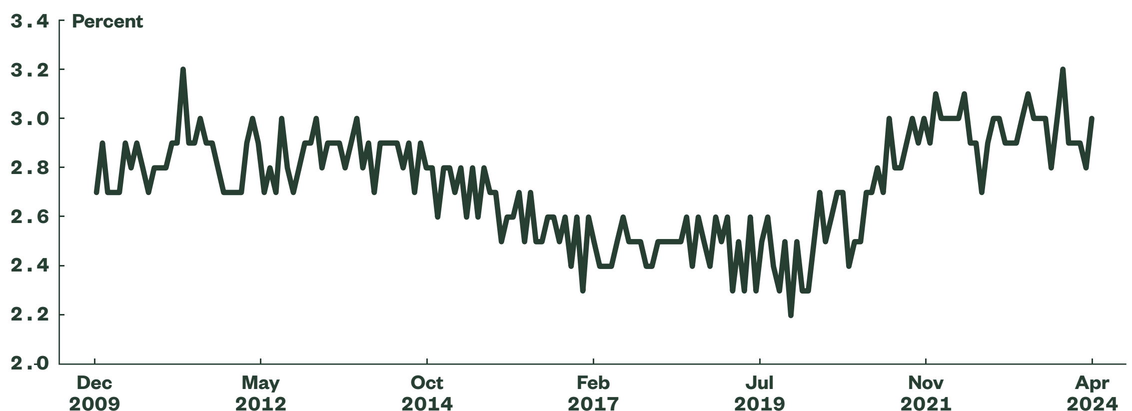
Stubborn inflation is possibly the greatest risk to macro stability.

Supply-demand imbalances in the housing and labor markets remain. For example, the supply of affordable housing remains too low while demand remains high. Similarly, in the labor market, the supply of qualified skilled workers is constrained but businesses' demand remains high. These imbalances could put upward pressure on housing prices and wages, ultimately further fueling inflationary pressures.

The multi-decade transition from fossil fuels to alternative sources of cleaner energy has been far more inflationary than many policymakers expected. The transition has increased the demand for commodities and natural resources required to leave fossil fuels behind while supply remains constrained, pushing prices higher.

Geopolitical tensions in the Russia-Ukraine war, Middle East conflict, and friction between the US and China over Taiwan could damage the global economy and bolster inflation. Rising trade protectionism — like the recent increased tariffs on Chinese imports from semiconductors to solar cells and medical products — likely will hurt the global economy and result in higher prices.

Figure 9
Expectations for Future Price Increases Are Rising



Source: Bloomberg Finance, L.P., as of April 30, 2024, based on the University of Michigan Expected Change in Prices During the Next 5–10 Years: Median Response. **Past performance is not a reliable indicator of future performance.**

Diversify Portfolios Given Shifts in the Macro Environment

In a more volatile macro environment with higher interest rates and sticky inflation, a different mix of investments may be needed in a diversified portfolio to enable investors to reach their long-term goals and objectives.

Long duration Treasurys, for example, haven't provided the expected diversification benefits or added protection that many investors anticipated this year. In fact, for the first time ever, long duration Treasurys have delivered negative performance in the 10-months following the last Fed rate hike in July 2023. Long duration Treasurys have experienced a notable drawdown since August 2020 and have delivered virtually no return since 2012.[52]

Long duration bonds may not be investors' best option for income and stability. Instead, including more real assets in a diversified investment portfolio could be an increasingly attractive option for investors.

Building a 5–10% real assets allocation, drawing equally from stocks and bonds and/or funding it using elevated cash balances, could help further diversify portfolios and better prepare them for today's macro volatility, higher interest rates, and inflationary environment.

Implementation Ideas

To position for increasing macro volatility with real assets, consider:

Gold offers low correlations to both stocks and bonds along with a historical trend of preserving purchasing power during periods of above-average inflation.[53]	**GLD®**	SPDR® Gold Shares
	GLDM®	SPDR® Gold MiniShares® Trust
This tactical real assets ETF allocates to multiple inflation-sensitive markets beyond commodities, including gold, inflation-linked bonds, infrastructure, real estate, and natural resource equities. Its prudent risk management approach has the potential to generate higher risk-adjusted returns.	**RLY**	SPDR® SSGA Multi-Asset Real Return ETF
A global portfolio of natural resource producers focused on agriculture, energy, and metals and mining industries will likely benefit from stubborn inflation and the potential for higher commodity prices.	**GNR**	SPDR® S&P® Global Natural Resources ETF

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Glossary

60/40 Shorthand for an asset allocation approach that combines equities and fixed income, with 60 percent in stocks and the remaining 40 percent in bonds. The combination is meant to balance potential to generate capital gains (and losses) associated with stocks with the capacity to protect principal inherent in income-generating bonds.

Bank of Japan Japan's central bank. The BoJ is responsible for implementing monetary policy, managing the currency, and controlling money supply for the world's third-biggest economy.

Basis Point (bps) A unit of measure for interest rates, investment performance, pricing of investment services and other percentages in finance. One basis point is equal to one-hundredth of 1 percent, or 0.01%.

Bloomberg U.S. Aggregate Bond Index (Agg) A benchmark that provides a measure of the performance of the US dollar denominated investment-grade bond market. The "Agg" includes investment-grade government bonds, investment-grade corporate bonds, mortgage pass through securities, commercial mortgage-backed securities and asset backed securities that are publicly for sale in the US.

Bloomberg U.S. Corporate Bond Index A fixed-income benchmark that measures the 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 U.S. Intermediate Corporate Bond Index A benchmark designed to measure the performance of US corporate bonds that have a maturity of greater than or equal to one year and less than 10 years.

Consumer Price Index (CPI) A widely used measure of inflation at the consumer level that helps to evaluate changes in cost of living. The CPI is composed of a basket of consumer goods and services across the economy and is calculated by the US Department of Labor by assessing price changes in the basket of goods and services and averaging them. Core CPI is the same series, but excluding food and energy prices, which are considered volatile enough to distort the meaning and usefulness of so-called headline CPI. The absence of food and energy, means the core series reflects long-term inflation trends more accurately.

Correlation The historical tendency of two investments to move together. Investors often combine investments with low correlations to diversify portfolios.

Credit Spreads The difference in yield between a US Treasury bond and a debt security with the same maturity but of lesser quality.

Deglobalization A movement toward a less connected world, characterized by powerful nation states, local solutions, and border controls rather than global institutions, treaties, and free movement.

Drawdowns A specific decline in the stock market during a specific time period that is measured in percentage terms as a peak-to-trough move.

Dotcom Era The speculative stock-market run-up of the late 1990s that grew out of excitement about the potential of the Internet. While companies such as eBay and Amazon were born in this period, countless other start-ups with vague business plans and no profits were funded by investors dreaming of winning big. The fervor peaked on March 10, 2000, and a nearly three-year bear market followed.

Earnings Per Share (EPS) A profitability measure that is calculated by dividing a company's net income by the number of shares outstanding.

European Central Bank (ECB) The European Union's central bank, which is responsible for monetary policy within the EU. The ECB was founded in 1998.

Eurozone The eurozone, also sometimes referred to as “euroland,” is the geographic and economic region that consists of all the European Union countries that have incorporated the euro as their national currency since the currency’s launch in 1999. This area comprises 27 countries currently.

Forward Price-to-earnings (P/E) The price of a security per share at a given time divided by its projected earnings per share over the coming year. A forward P/E ratio is a way to help determine a security’s stock valuation — that is, the fair value of a stock in a perfect market. It is also a measure of expected, but not realized, growth.

Gross Domestic Product (GDP) The monetary value of all the finished goods and services produced within a country’s borders in a specific time period.

Inflation An overall increase in the price of an economy’s goods and services during a given period, translating to a loss in purchasing power per unit of currency. Inflation generally occurs when growth of the money supply outpaces growth of the economy. Central banks attempt to limit inflation, and avoid deflation, in order to keep the economy running smoothly.

Investment-grade Bonds Bonds that have a relatively low risk of default. Bond-rating firms, such as Standard & Poor’s, use different lettered descriptions to identify a bond’s credit quality. In S&P’s system, investment-grade credits include those with ‘AAA’ or ‘AA’ ratings (high credit quality), as well as ‘A’ and ‘BBB” (medium credit quality). Anything below this ‘BBB’ rating is considered non-investment grade.

Magnificent Seven (Mag 7) The Magnificent Seven refers to the group of 7 stocks that currently dominate most major indexes: Apple, Microsoft, Alphabet, Amazon, Nvidia, Meta Platforms and Tesla. Due to their outsized market capitalizations, Magnificent Seven stocks hold a disproportionate influence on the market-cap weighted Nasdaq composite and S&P 500 indexes.

NYSE Technology Index An equal-dollar weighted index designed to objectively represent the technology sector by holding 35 of the leading U.S. technology-related companies.

People’s Bank of China The central bank of the People’s Republic of China, which oversees the world’s second-biggest economy.

Percentile Percentile ranking is a system of ranking scores that shows the percentage of results that are lower than the benchmark or fund in question for the most recent three-year period. Every year, each score is updated with the most recent year’s percentiles.

Purchasing Managers Index (PMI) An indicator of the economic health of the manufacturing sector. The PMI is based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment.

Quality Companies The term refers to companies with a consistent track record of strong earnings and stable balance sheets.

Recession A period of temporary economic decline during which trade and industrial activity are reduced.

Return on Equity The amount of net income returned as a percentage of common shareholders’ equity. ROE shows how well a company uses investment funds to generate earnings growth.

S&P 500® Index A popular benchmark for U.S. large-cap equities that includes 500 companies from leading industries and captures approximately 80% coverage of available market capitalization.

Senior Loans Floating-rate debt issued by corporations and backed by collateral such as real estate or other assets.

Soft Landing A soft landing is a gradual slowdown in economic growth that avoids a recession. A soft landing is the goal of a central bank when it seeks to raise interest rates just enough to stop an economy from overheating and experiencing high inflation, without causing a severe downturn.

Valuation The process of determining the current worth of an asset or a company.

Volatility The tendency of a market index or security to jump around in price. Volatility is typically expressed as the annualized standard deviation of returns. In modern portfolio theory, securities with higher volatility are generally seen as riskier due to higher potential losses.

Yield-per-unit-of-duration Yield-per-unit of duration is expressed by yield-to-worst being divided by effective duration where duration is a measure of the sensitivity of the price of a bond to a change in interest rates and yield to worst is a measure of the lowest possible yield that can be received on a bond with an early retirement provision.

Yield-per-unit-of-volatility Calculated by subtracting the risk-free rate of return from the expected return and dividing the result by the negative portfolio's standard deviation. The higher the ratio, the better the risk-adjusted yield may be.

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Important Risk Information

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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.

Passively managed funds invest by sampling the index, holding a range of securities that, in the aggregate, approximates the full Index in terms of key risk factors and other characteristics. This may cause the fund to experience tracking errors relative to performance of the index.

Actively managed funds do not seek to replicate the performance of a specified index. An actively managed fund may underperform its benchmarks. An investment in the fund is not appropriate for all investors and is not intended to be a complete investment program. Investing in the fund involves risks, including the risk that investors may receive little or no return on the investment or that investors may lose part or even all of the investment.

A "value" style of investing emphasizes undervalued companies with characteristics for improved valuations, which may never improve and may actually have lower returns than other styles of investing or the overall stock market.

A "quality" style of investing emphasizes companies with high returns, stable earnings, and low financial leverage. This style of investing is subject to the risk that the past performance of these companies does not continue or that the returns on "quality" equity securities are less than returns on other styles of investing or the overall stock market.

Equity securities may fluctuate in value and can decline significantly in response to the activities of individual companies and general market and economic conditions.

The fund is classified as "diversified" under the Investment Company Act of 1940, as amended (the "1940 Act"); however, the Fund may become "non-diversified," as defined under the 1940 Act, solely as a result of tracking the Index (e.g., changes in weightings of one or more component securities). When the Fund is non-diversified, it may invest a relatively high percentage of its assets in a limited number of issuers.

Because of their narrow focus, sector funds tend to be more volatile than funds that diversify across many sectors and companies.

Foreign (non-U.S.) Securities may be subject to greater political, economic, environmental, credit and information risks. Foreign securities may be subject to higher volatility than U.S. securities, due to varying degrees of regulation and limited liquidity. These risks are magnified in emerging markets.

Non-diversified funds that focus on a relatively small number of securities tend to be more volatile than diversified funds and the market as a whole.

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There can be no assurance that a liquid market will be maintained for ETF shares.

Concentrated investments in a particular sector or industry (technology sector and electronic media companies) tend to be more volatile than the overall market and increases risk that events negatively affecting such sectors or industries could reduce returns, potentially causing the value of the Fund's shares to decrease.

Technology companies, including cyber security companies, can be significantly affected by obsolescence of existing technology, limited product lines, competition for financial resources, qualified personnel, new market entrants or impairment of patent and intellectual property rights that can adversely affect profit margins.

Multi-cap investments include exposure to all market caps, including small and medium capitalization ("cap") stocks that generally have a higher risk of business failure, lesser liquidity and greater volatility in market price. As a consequence, small and medium cap stocks have a greater possibility of price decline orloss as compared to large cap stocks. This may cause the Fund not to meet its investment objective.

Actively managed ETFs do not seek to replicate the performance of a specified index. Because the SPDR SSGA Active Asset Allocation ETFs are actively managed, they are therefore subject to the risk that the investments selected by SSGA may cause the ETFs to underperform relative to their benchmarks or other funds with similar investment objectives.

Bonds generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates rise, bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

Investments in asset backed and mortgage-backed securities are subject to prepayment risk which can limit the potential for gain during a declining interest rate environment and increases the potential for loss in a rising interest rate environment.

Government bonds and corporate bonds generally have more moderate short-term price fluctuations than stocks, but provide lower potential long-term returns.

Increase in real interest rates can cause the price of inflation-protected debt securities to decrease. Interest payments on inflation-protected debt securities can be unpredictable.

The values of debt securities may decrease as a result of many factors, including, by way of example, general market fluctuations; increases in interest rates; actual or perceived inability or unwillingness of issuers, guarantors or liquidity providers to make scheduled principal or interest payments; illiquidity in debt securities markets; and prepayments of principal, which often must be reinvested in obligations paying interest at lower rates.

Derivatives are based on one or more underlying securities, financial benchmarks, indices, or other obligations or measures of value; additional risks with derivatives trading (e.g., market, credit, counterparty and illiquidity) are possibly greater than the risks associated with investing directly in the underlying instruments. Derivatives can have a leveraging effect and increase fund volatility that can have a large impact on Fund performance.

Floating rate securities are often lower-quality debt securities and may involve greater risk of price changes and greater risk of default on interest and principal payments. The market for floating rate bank loans is largely unregulated and these assets usually do not trade on an organized exchange. As a result, floating rate bank loans can be relatively illiquid and hard to value.

Bank Loans are subject to credit, interest rate, income and prepayment risks. The fund may invest in secured and unsecured participations in bank loans. Participation loans are loans made by multiple lenders to a single borrower, e.g., several banks participate in one large loan with one of the banks taking the role of the lead bank. The lead bank recruits other banks to participate and share in the risks and profits. There is also the risk that the collateral may be difficult to liquidate or that a majority of the collateral may be illiquid. In participation the fund assumes the credit risk of the lender selling the participation in addition to the credit risk of the borrower.

Investments in senior loans are subject to credit risk and general investment risk. Credit risk refers to the possibility that the borrower of a senior loan will be unable and/or unwilling to make timely interest payments and/or repay the principal on its obligation. Default in the payment of interest or principal on a senior loan will result in a reduction in the value of the senior loan and consequently a reduction in the value of the Portfolio's investments and a potential decrease in the net asset value ("NAV") of the Portfolio.

STOT is actively managed. The sub-adviser's judgments about the attractiveness, relative value, or potential appreciation of a particular sector, security, commodity or investment strategy may prove to be incorrect, and may cause the fund to incur losses. There can be no assurance that the sub-adviser's investment techniques and decisions will produce the desired results.

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.

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Important Information Relating to GLD® and GLDM®:

GLD and the World Gold Trust have each filed a registration statement (including a prospectus) with the Securities and Exchange Commission ("SEC") for GLD and GLDM, respectively. Before you invest, you should read the prospectus in the registration statement and other documents each Fund has filed with the SEC for more complete information about each Fund and these offerings. Please see each Fund's prospectus for a detailed discussion of the risks of investing in each Fund's shares. The GLD prospectus is available by clicking here, and the GLDM prospectus is available by clicking here. You may get these documents for free by visiting EDGAR on the SEC website at sec.gov or by visiting spdrgoldshares.com. Alternatively, the Funds or any authorized participant will arrange to send you the prospectus if you request it by calling 866.320.4053.

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Shares of each Fund trade like stocks, are subject to investment risk and will fluctuate in market value.

The values of GLD shares and GLDM shares relate directly to the value of the gold held by each Fund (less its expenses), respectively. Fluctuations in the price of gold could materially and adversely affect an investment in the shares. The price received upon the sale of the shares, which trade at market price, may be more or less than the value of the gold represented by them.

None of the Funds generate any income, and as each Fund regularly sells gold to pay for its ongoing expenses, the amount of gold represented by each Fund share will decline over time to that extent.

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Gold ownership on the rise among North American professional investors

26 June, 2024

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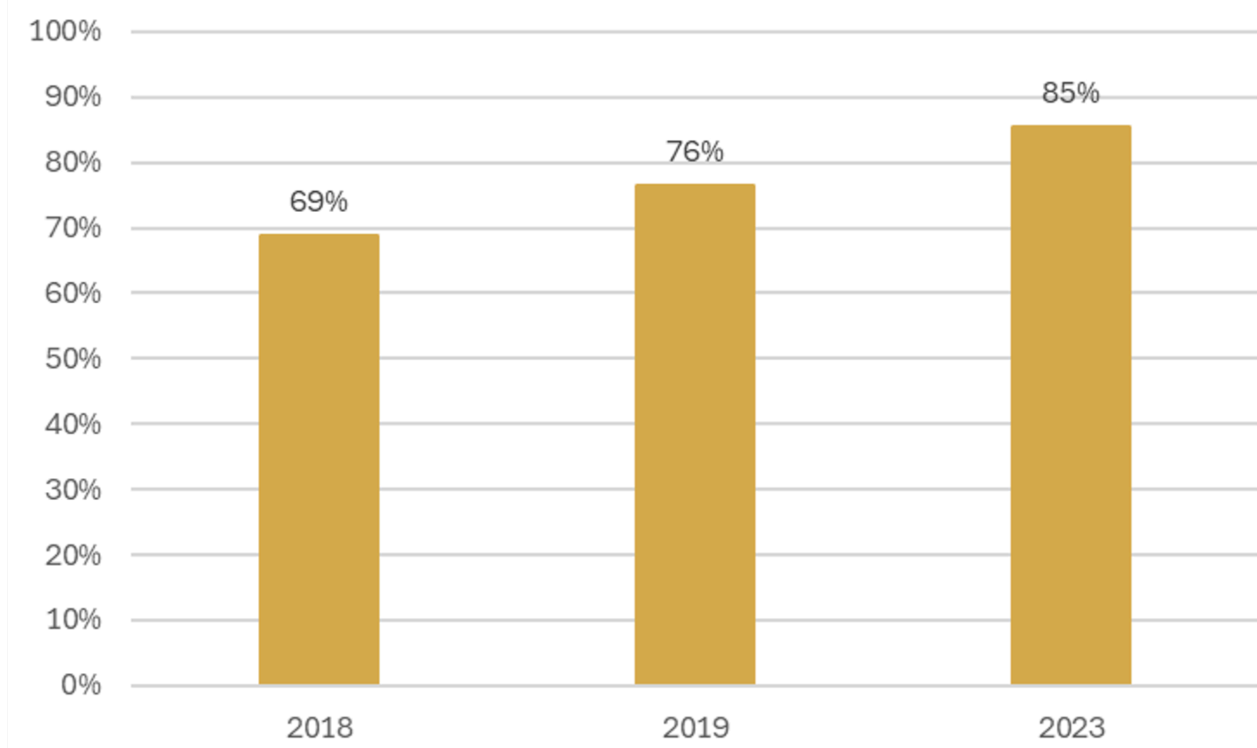
Gold has rarely been out of the headlines in recent months, having outperformed most other global assets and repeatedly reached record highs. According to our research, North American professional investors are reaping the rewards.[1]

We recently commissioned a survey of 525 North American professional investors – a mix of large institutions, consultants and financial advisors – the results from which confirmed a growing trend of gold ownership among this audience. A staggering 85% reported an allocation to some type of gold investment, up from 69% in 2018 and 76% in 2019 (**Chart 1**).

Chart 1: Gold ownership among North American professional investors has risen steadily since 2018

% of respondents with a gold allocation



Source: ZoomRX, World Gold Council

Base: North American Asset Owners (75); North American Consultants (50); North American Financial Advisors (400).

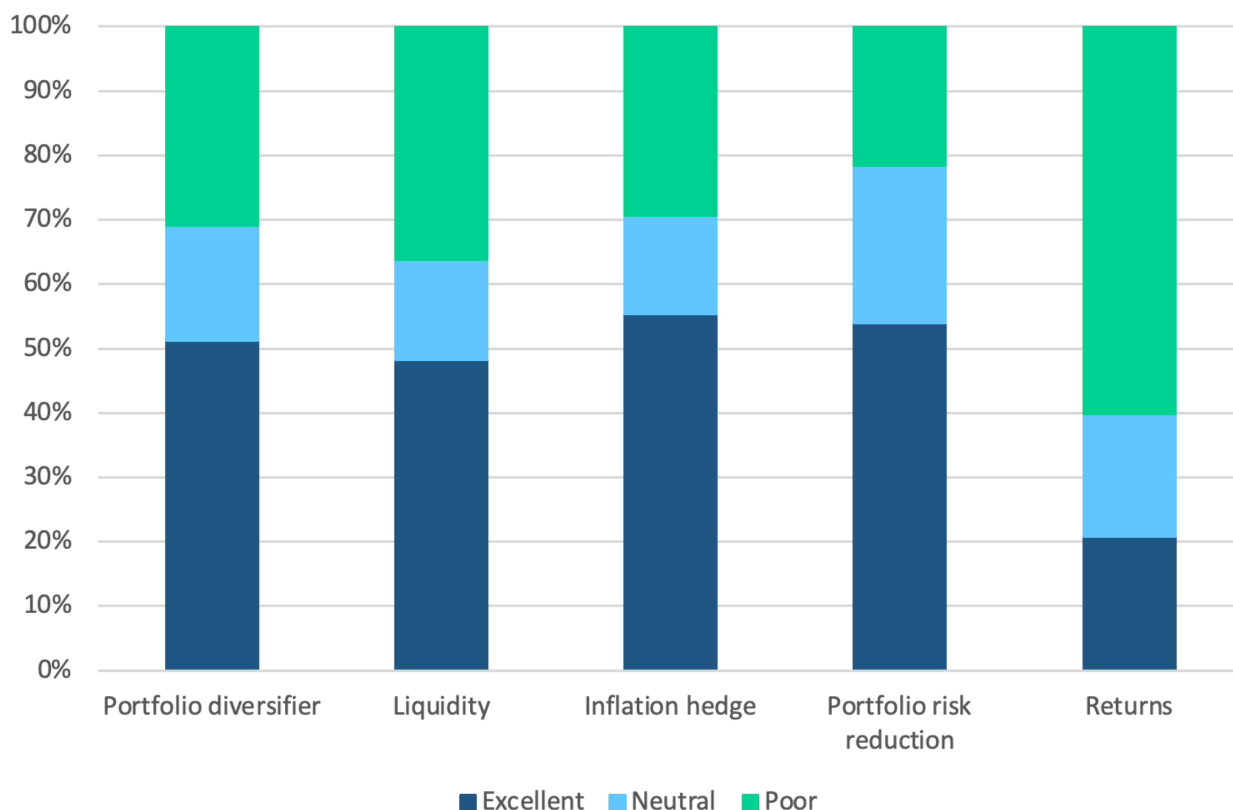
Question: Thinking about your total AUM/the assets in the fund(s) you work on, approximately what percentage is currently invested in gold?

At face value this may seem a surprisingly high percentage. And delving deeper into the data reveals that just over a quarter of respondents hold only very small (<1% AUM) gold allocations. But it was particularly interesting to see that more than half held at least 1% of AUM in gold, with 24% having an allocation of 3% or more.

These investors have perceptions around gold that are comfortingly familiar to us and confirm that gold's core attributes are, on the whole, well recognised. The majority of respondents view gold as an excellent portfolio diversifier and inflation hedge, and agree that it reduces portfolio risk (**Chart 2**). Among the most compelling reasons that might encourage the respondents to invest in or increase allocations to gold were its track record in portfolio diversification and its role as a proven dollar- and inflation-hedge.[2]

Chart 2: Gold's core benefits are well recognised, with the exception of its long-term returns

% of respondents agreeing with various statements regarding gold's investment characteristics



Source: ZoomRX, World Gold Council

Base: North American Asset Owners (75); North American Consultants (50); North American Financial Advisors (400).

Question: Please indicate the point on the spectrum that best describes your perceptions on gold: 'Gold is a poor portfolio diversifier – gold is an excellent portfolio diversifier'; 'I do not consider gold to be a liquid investment – I

consider gold to be a liquid investment.'; 'Gold is a poor inflation hedge – Gold is a good inflation hedge'; 'Gold increases risk within a portfolio – Gold decreases risk within a portfolio'; 'Compared to other asset classes, gold delivers poor long-term returns – Compared to other asset classes, gold delivers excellent long-term returns'

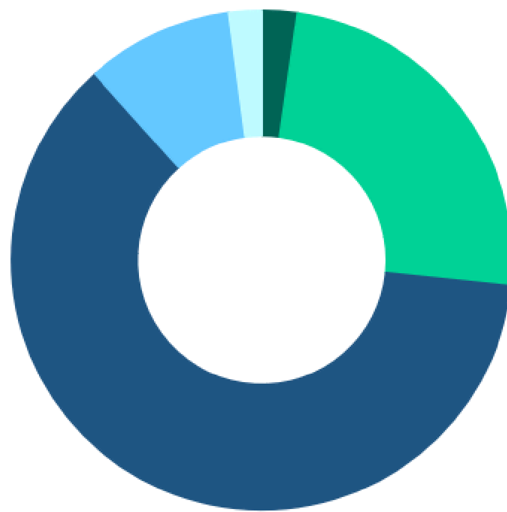
While most of these investors seem to be holding gold for its portfolio protection, they appear to be less aware of its impressive long-term performance. 60% of respondents believe that gold tends to deliver less than sparkling long-term returns compared with other asset classes. This, despite it having outperformed US equities over the last 25 years with its 8% average annual return.[3]

Gold's stellar recent performance will have been an unexpected boon to such investors, although perhaps less of a surprise to the 21% who agree that gold generates 'excellent' comparative long-term returns.

Gold's liquidity profile is also less well recognised, with just under half of our sample agreeing that gold is a liquid asset. Unsurprisingly, this view is stronger among non-owners: almost a quarter of respondents with no gold holdings cited liquidity as a barrier to investing in gold. And only a quarter of non-owners said they view gold as a liquid asset, compared with 52% of those who do own it. If this group can be made aware of gold's profile as a highly liquid asset, they could perhaps be encouraged to invest and benefit from its enviable performance.

Chart 3: Overall gold allocations will be steady-to-higher over the next 12-18 months

% of respondents selecting each option



Source: ZoomRX, World Gold Council
Base: North American Asset Owners (75); North American Consultants (50); North American Financial Advisors (400).
Question: 'Over the next 12 to 18 months do you expect that the percentage invested in gold will…?'

Gold's role as a 'proven diversifier, especially in periods of financial turmoil and economic uncertainty' was the most commonly cited reason for increasing gold allocations – 46% of the sample chose it as one of their top three motivations.[4] Today's backdrop of heightened global uncertainty, geopolitical tension and sky-high equity valuations could help explain why most North American investors are planning to either maintain or increase their gold allocations. Over one-quarter of respondents said they were planning to increase their allocations in the next 12 to 18 months – more than double the number who said they were planning to reduce them (**Chart 3**).

Unsurprisingly, respondents who currently have gold allocations hold some differing views from those who do not. Institutions that don't own gold are more likely to say that one of their top three barriers to investing is that 'Other large institutions are not investing in gold'. This is clearly a misconception: our survey shows that 79% of North American asset owners and consultants have a gold position.[5] If our data can dispel such a myth, it could help these investors overcome this barrier to investing and encourage greater participation in the gold market.

At the aggregate level, North American investors seem likely to increase their allocations to gold over the year ahead. We recently flagged that gold is historically

under-owned in the US, signalling the potential for headroom and supporting a positive outlook for gold ownership.

The survey has given us a bounty of useful insights into the views and behaviours of global professional investors. This is just a sneak peek – we'll share more as we dive deeper into the data. Stay tuned...

Footnotes

[1]The World Gold Council and State Street Global Advisors commissioned ZoomRX (formerly Vivisum) to survey 75 North American Asset owners, 50 North American consultants, 400 North American Financial Advisors, 250 Australian Financial Advisors and 75 Asia Pacific Asset Owners. Fieldwork was conducted between 20 Oct and 18 Dec 2023.

[2]Respondents selected from a list of statements to answer the question: 'What do you think are the three most compelling reasons that you might invest in gold or increase your existing investments in gold?'

[3]LBMA Gold Price PM (US$) vs MSCI Daily TR Gross USA index (US$)

[4]The other top reasons chosen were: 'Gold has stood the test of time as a safe and proven store of value' (33%); 'Our clients express a desire to invest in gold' (31%), and 'Gold is a proven hedge against a weakening dollar' (30%).

[5]The 79% ownership figure excludes Financial Advisors. Including Financial advisors, ownership is 85%.

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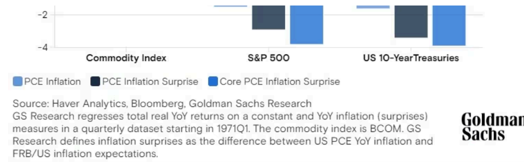
Which commodities are the best hedge for inflation?

Published on 26 JUN 2024

Topic: COMMODITIES

Investors are alert to US inflation risks as corporate earnings exceed expectations, the US persistently runs large budget deficits, and because of the opportunity for inflationary policies following the presidential election in November. Commodities have demonstrated strong resilience in the face of inflation and have been a critical hedge for bonds and equities when prices and wages are climbing, according to Goldman Sachs Research.

A 1 percentage point surprise increase in US inflation has, on average, led to a real (inflation adjusted) return gain of 7 percentage points for commodities, while that same trigger caused stocks and bonds to decline 3 and 4 percentage points, respectively, write Daan Struyven, head of oil research in Goldman Sachs Research, and analyst Lina Thomas in the team's report.



The team finds that commodities provide a direct hedge against negative commodity supply shocks, which tend to depress bond and stock returns as interest rates rise, as well as providing a hedge against lower stock returns as rising prices cause GDP growth to slow. Commodities also tend to rally when inflation is boosted by economic growth, and they can provide wealth preservation when central bank credibility declines.

For its analysis, Goldman Sachs Research examines five inflationary periods over the past 50 years: the oil embargo of the early 1970s, the Iranian Revolution later that decade, China's economic boom in 2005, its late-cycle boom in 2007-2008, and the post pandemic recovery that began in 2021. Each period was marked by shocks in terms of supply, demand, and/or growth. "Despite the different make-up in inflation drivers, commodities outperformed equities and bonds across all five episodes," Struyven and analyst Thomas write. The same result occurs when considering inflation surprises in excess of 1 percentage point.

That said, not all commodities respond the same to higher inflation.

- **Gold:** The yellow metal typically only guards against very high inflation and large inflation surprises caused by losses in central bank credibility and geopolitical supply shocks. Gold usually didn't perform well in response to positive demand shocks when the central bank responded swiftly by hiking rates.
- **Energy:** Historically, energy generated the strongest real returns across assets when inflation surprised to the upside. That's because energy usually responded both to supply and demand shocks. While

livestock have provided similar inflation protection, as agriculture prices typically rose in response to negative energy supply shocks and could also rise during positive demand shocks.

- **Industrial metals:** Given their large exposure to cyclical manufacturing and the housing sector, industrial metals have demonstrated they could offer protection against demand-led inflation. Industrial metals generated especially high returns (average total real returns of 30%) late in the cycle when economy-wide inflation risks are the largest. One caveat is that the average real return for industrial metals has been only modestly positive when inflation surprises have been in the top 20% of history, probably because of their greater sensitivity to interest rate hikes.

How will the US election in November filter through the economy? Goldman Sachs Research's US economists and cross-asset strategists expect that a unified government is more likely to see larger fiscal deficits, large shifts in fiscal policy, and downward pressure on bond returns than a divided government.

A sweep by Democrats could lead to significant increases in corporate taxes, which, along with tariff increases, could be negative for stocks. There may be higher inflation risks, and more risks to bond returns, under a Republican sweep amid, on the supply side, higher tariffs, slower immigration, and tighter sanctions on Iranian oil. On the demand side, lower taxes and stronger attempts to influence Fed policy may push up inflation.

The market reaction to geopolitical shocks, including tariffs, is the biggest swing factor in asset markets.

Gold may be the best hedge against inflation and geopolitical risks

drops if a trade war erupts, and it has upside if concerns mount about the US debt load or if the Fed is subordinated by a new administration.

Goldman Sachs Research also sees opportunity in oil as a geopolitical/inflation hedge — both because of its strong historical record as a broad inflation hedge and because there's potential for a hawkish shift in US policy against some major oil-producing countries.

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