



The strategic case for gold, recent market developments and outlook

SUERF-Baffi Bocconi e-lecture
October 1 2020

Agenda

- A longer-term perspective on supply and demand
- Exploitable gold reserves and recycling
- ESG Issues and gold
- Impact of recent crises on gold
- Outlook

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Evolving the market

World Gold Council

- Leading industry authority on gold for over 30 years
- Proven track record for strengthening market infrastructure, delivering robust data and insights and developing solutions to expand access to gold globally
- Deep relationships with the institutional investor ecosystem, central banks, sovereign wealth funds and industry participants



Data



Analytics



Research



Market
knowledge



Policies



Infrastructure

Gold-backed ETFs

Launched first gold-backed ETF in the US in partnership with State Street Global Advisors

China Market Expansion

Played key role in evolution of the Shanghai Gold Exchange; currently working towards enabling insurance companies to invest in gold

India Blueprint

Led steering committee comprised of financial institutions and industry and trade associations in the development of a blueprint for a proposed Gold Spot Exchange

Responsible Gold Mining Principles

Worked with mining company members, developed a framework setting out expectations for consumers, investors and the downstream gold supply chain as to what constitutes responsible gold mining

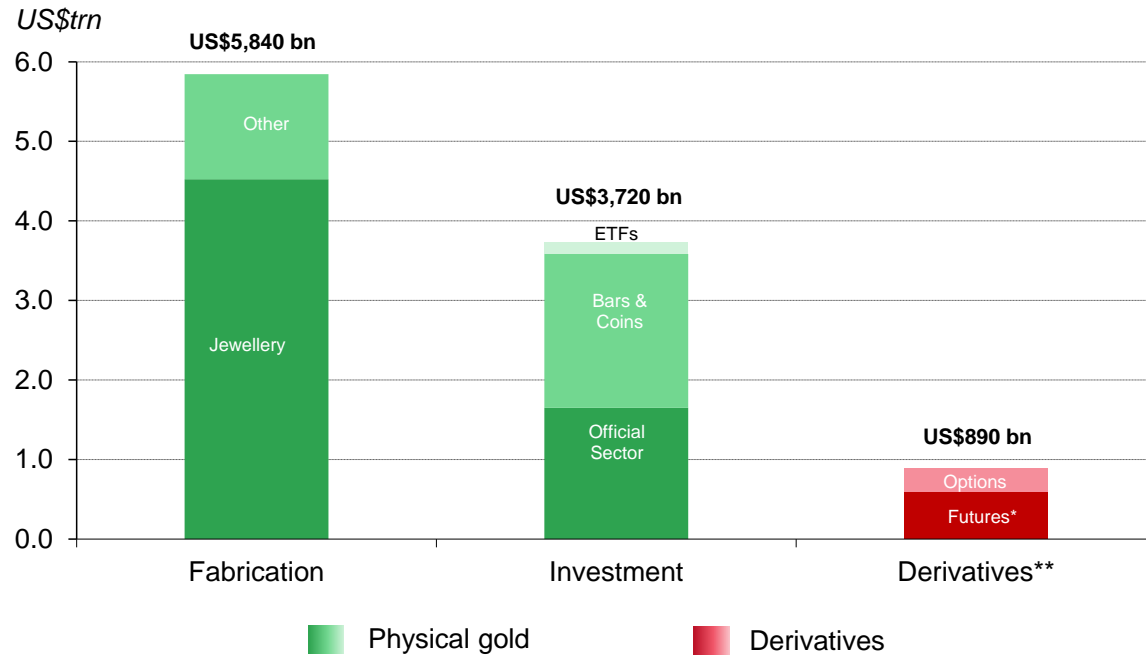
Gold Valuation Framework

Developed an academically endorsed methodology to help investors understand how macroeconomic scenarios might impact gold demand, supply and long-term performance

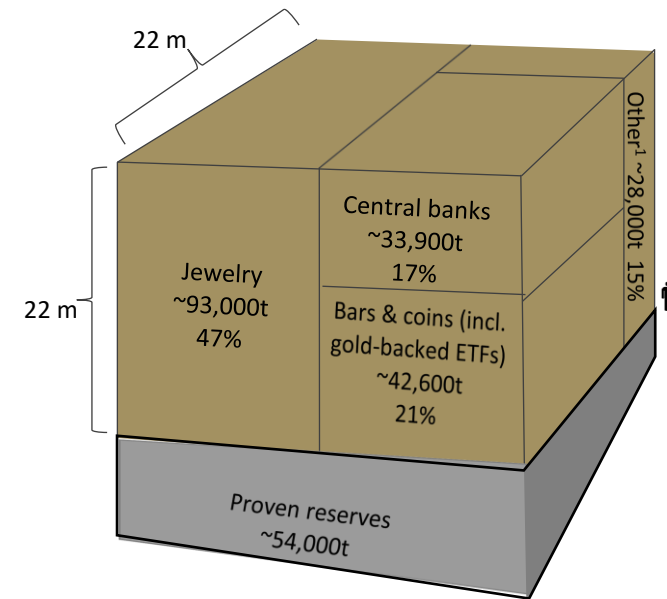
Gold supply and demand

Gold is scarce but the financial gold market is large

Value of above-ground gold and gold derivatives*



Total: ~197,000 tonnes (US\$9.6 trillion)



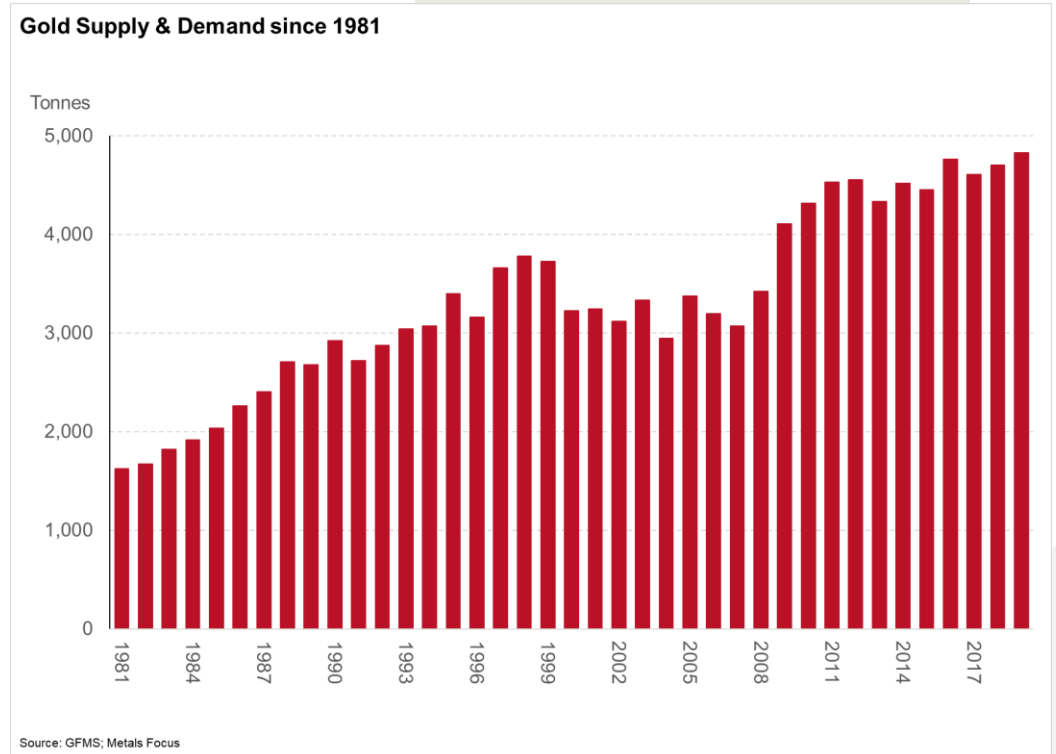
*Data as of 31 December 2019. US-dollar value estimates using the 2019 year-end LBMA Gold Price PM at.

**Represents open interest in COMEX, TOCOM and over-the-counter (OTC) transactions as of 31 December 2019.

Source: Bank for International Settlements, Bloomberg, ICE Benchmark Administration, Metals Focus, Refinitiv GFMS, US Geological Survey, World Gold Council

Gold supply and demand has grown

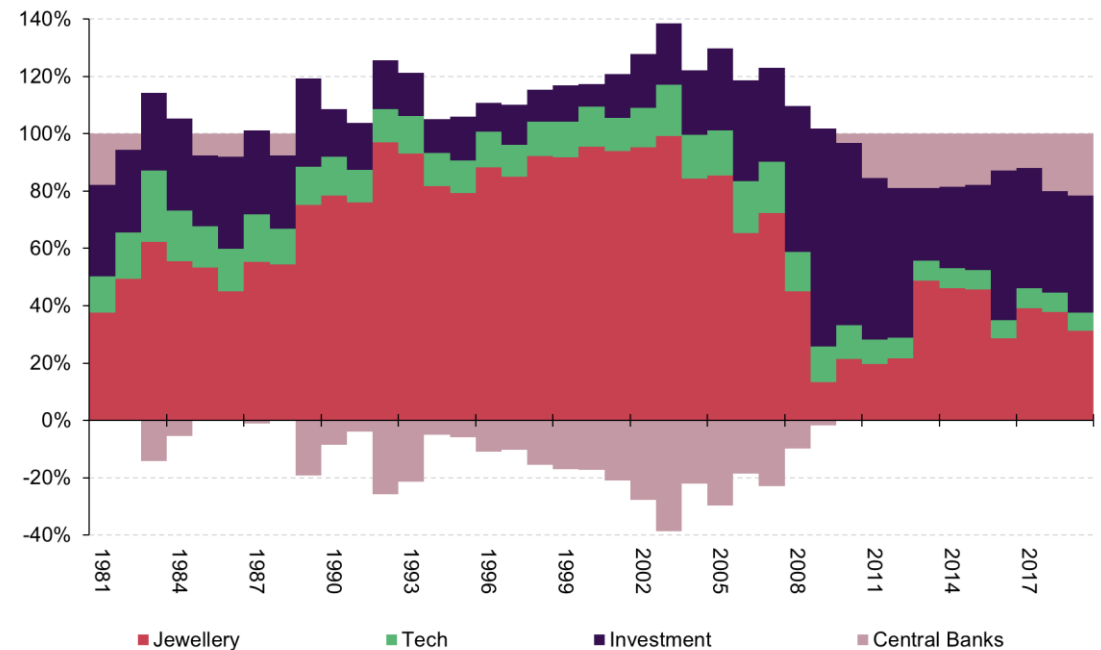
- **Gold mine supply** has increased steadily, and **recycling** has grown too
- **Contributions to demand** have changed significantly in 40 years
- **Central Banks** have changed their behaviour
- **Emerging markets** are crucial to gold demand, even after accounting for Developed Market investment



The make up of demand has changed

- **Gold mine supply** has increased steadily, and **recycling** has grown too
- **Contributions to demand** have changed significantly in 40 years
- **Central Banks** have changed their behaviour
- **Emerging markets** are crucial to gold demand, even after accounting for Developed Market investment

Contributions to gold demand 1981-2019

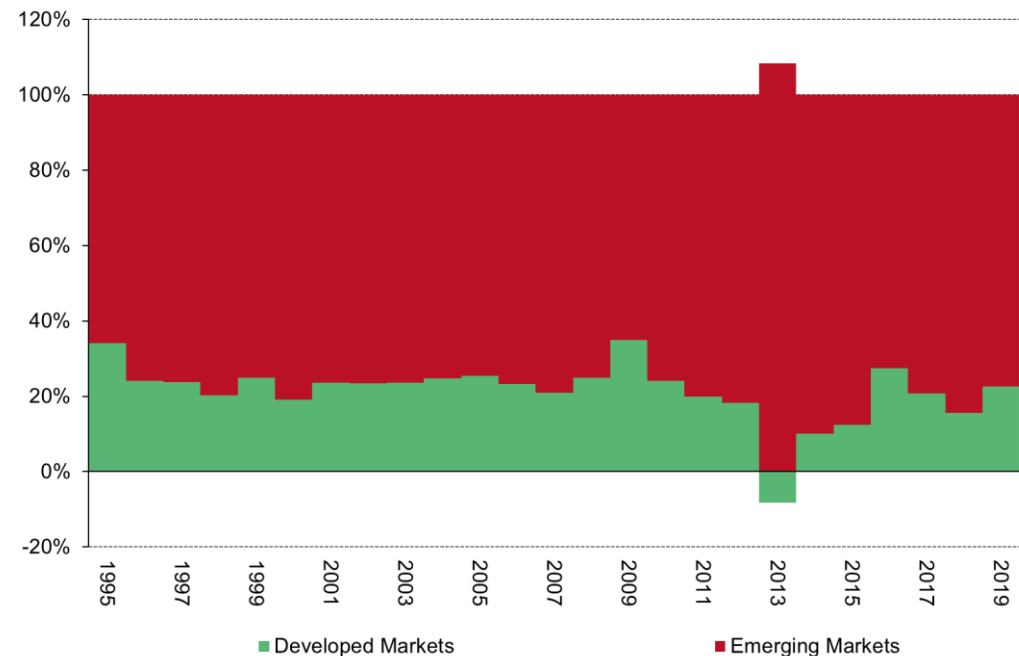


Source: GFMS; Metals Focus

Gold is really an EM story

- **Gold mine supply** has increased steadily, and **recycling** has grown too
- **Contributions to demand** have changed significantly in 40 years
- **Central Banks** have changed their behaviour
- **Emerging markets** are crucial to gold demand, even after accounting for Developed Market investment

Consumer and Investment Gold Demand: Developed vs. Emerging



Source: GFMS; Metals Focus

Drivers of gold demand

Economic expansion

Periods of growth are very supportive of jewellery, technology, and long-term savings

Risk and uncertainty

Market downturns often boost investment demand for gold as a safe haven

Opportunity cost

The price of competing assets such as bonds (through interest rates), currencies and other assets, influences investor attitudes towards gold

Momentum

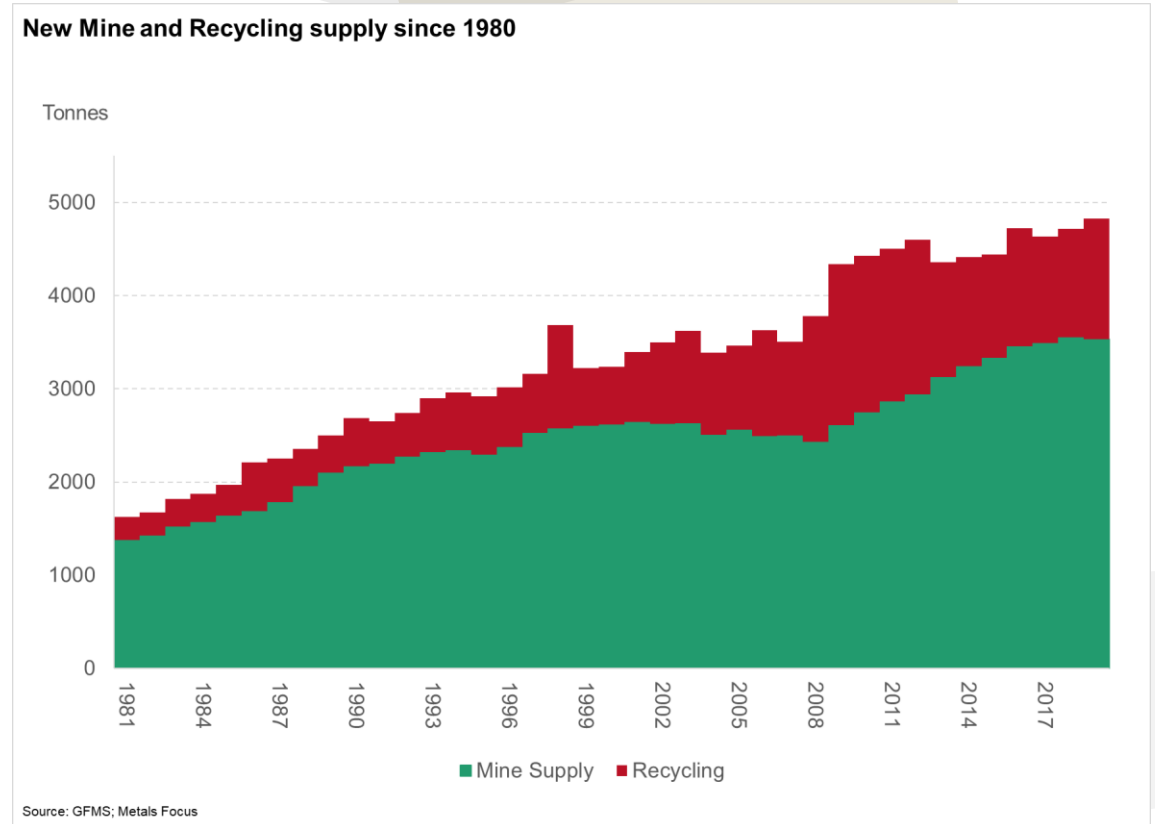
Capital flows, positioning and price trends can ignite or dampen gold's performance



Production and recycling

Mine supply and recycling

- **Gold mine supply** has increased steadily, and **recycling** has grown too
- **Similar drivers:** Different timescales
- **Peak gold** but more to be found
- **USGS 50,000t means 16 years supply remaining** but its not a real number.



Responsible gold mining principles & ESG



Responsible Gold Mining Principles (RGMPs)

Overarching ESG framework

Developed with strong input from civil society, governments, and supply chain participants

Embraced by World Gold Council members

Committed to full implementation by September 2022

Conformance is externally validated

Requires public disclosure and independent assurance

1. Ethical conduct



2. Understanding our impacts



3. Supply chain



4. Safety & health



5. Human rights & conflict



7. Working with communities



6. Labour rights



9. Biodiversity, land use & mine closure



8. Environmental stewardship



10. Water, energy and climate change



Gold: ESG portfolio perspective

1

Climate risk mitigating asset; gold is likely to perform better than most mainstream asset classes under various long-term climate scenarios

2

Can lower the carbon footprint of an investment portfolio over time; carbon emissions associated with holding physical gold are minimal

3

Mechanisms to validate responsible gold production; gold miners and refiners follow demanding standards, which require external assurance

4

Commitment to UN's Sustainable Development Goals; gold mining, refining and fabrication contribute meaningfully to socio-economic development globally

Gold: not just for crises

Gold and recent crises

- Revisiting **Drivers of gold demand** shows how the drivers of gold react to crises
- **3 out of 4:** Boost investment demand at the expense of consumer demand
- Recent crises have shifted **contributions to gold demand** and could be sustained
- But gold is **Not Just for Crises**
 - Source of returns, diversification and liquidity that benefit your portfolio performance

Drivers of gold demand

Economic expansion

Periods of growth are very supportive of jewellery, technology, and long-term savings

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Opportunity cost

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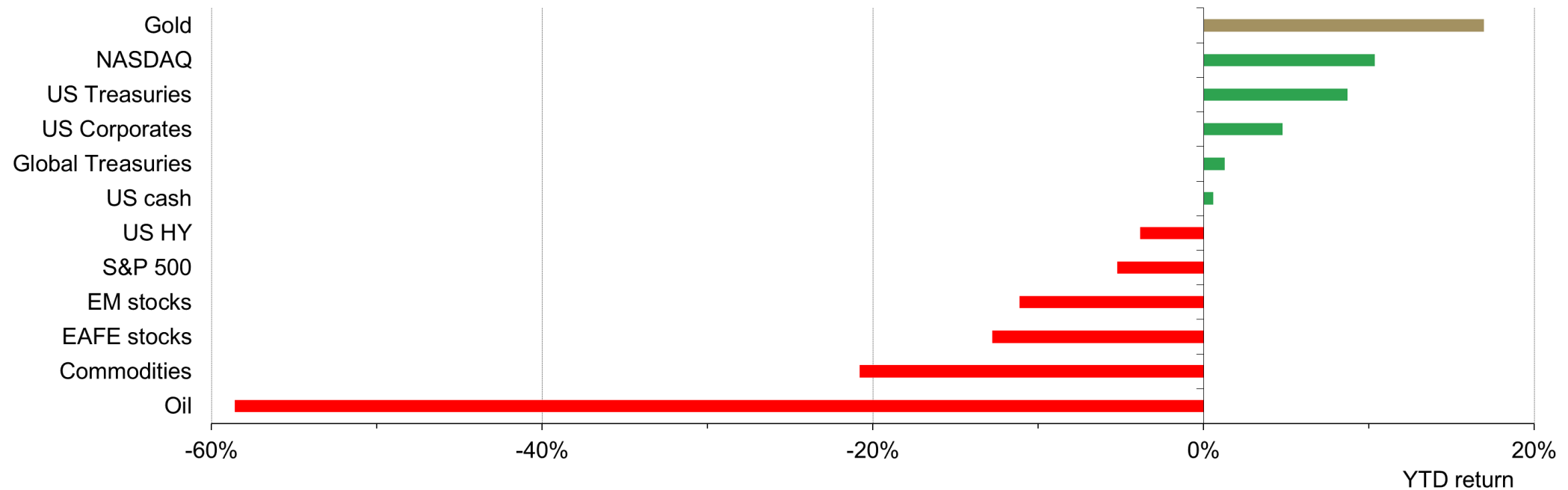
Momentum

Capital flows, positioning and price trends can ignite or dampen gold's performance



Gold has outperformed all major assets in 2020

Y-t-d performance of major global assets*

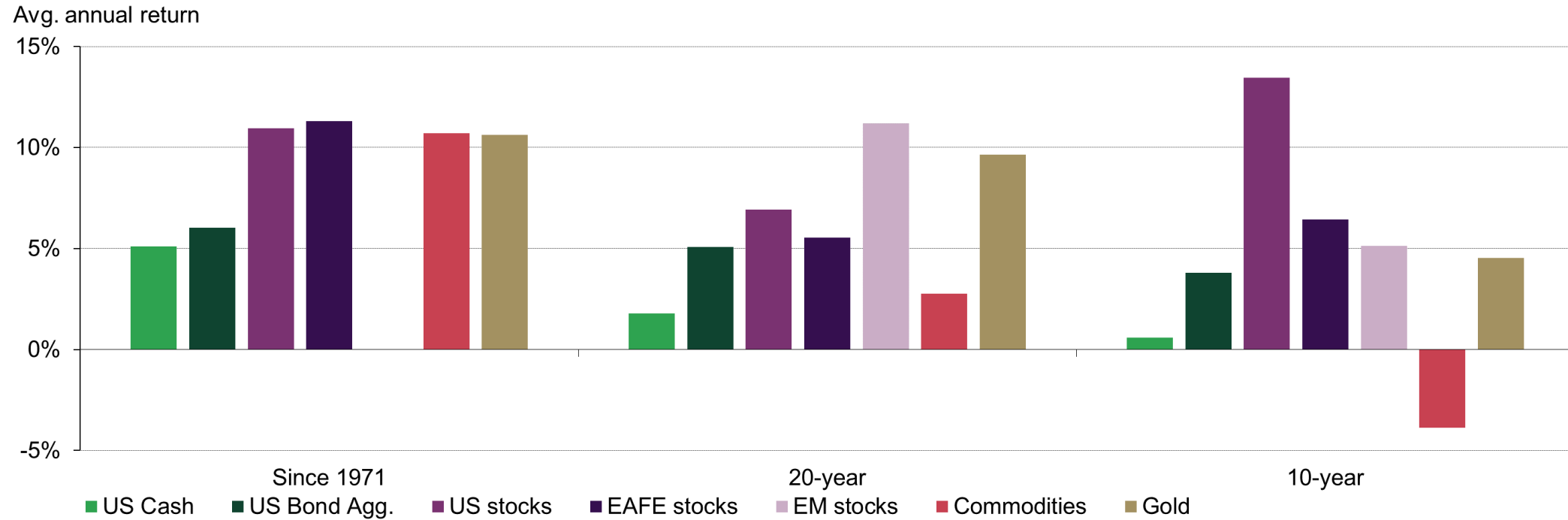


*As of 30 June 2020. Returns based on the LBMA Gold Price PM, Nasdaq Composite, Bloomberg Barclays US Treasury Index and Global Treasury Index ex US, ICE BAML US 3-month T-bill Index, Bloomberg Barclays US Corporate and High Yield Indices, MSCI EM Index, Bloomberg Commodity TR Index, MSCI EAFE Index, S&P 500 Indices, and Bloomberg Oil TR Index.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Strategic case for gold: returns

Average annual return of key global assets in US dollars*

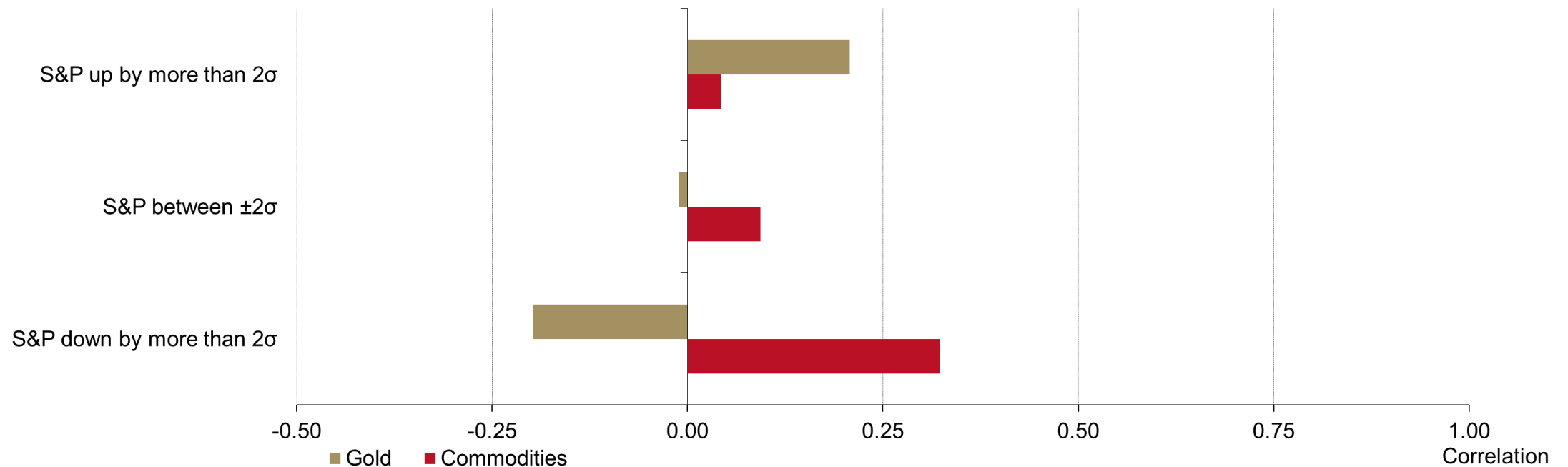


*As of 31 December 2019. Computations in US dollars of total return indices for ICE 3-month Treasury, Bloomberg Barclays US Bond Aggregate, MSCI US, EAFE and EM indices, Bloomberg Commodity Index, and spot for LBMA Gold Price PM.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Strategic case for gold: diversification

Correlation between gold and US stock returns in various environments of stocks' performance*

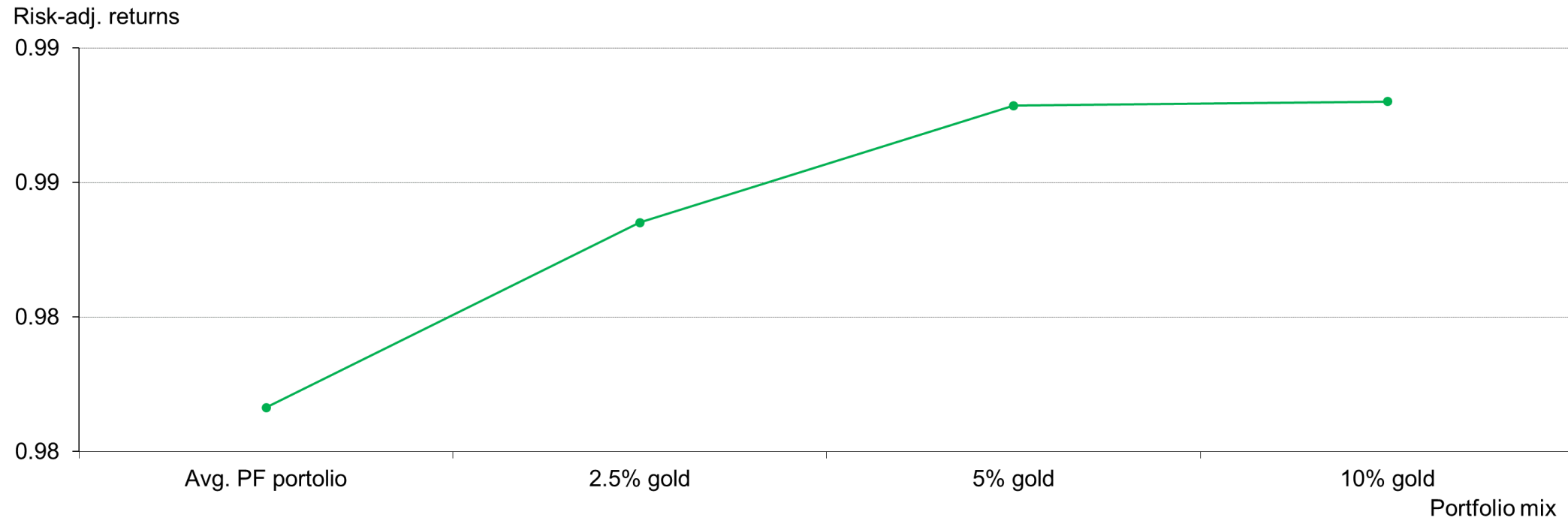


*As of 31 December 2019. Correlations computed using weekly returns based on the Bloomberg Commodity Index and the LBMA Gold Price PM since January 1971. The middle bar corresponds to the unconditional correlation over the full period. The bottom bar corresponds to the correlation conditional on S&P 500 weekly return falling by more than two standard deviations (or 's') respectively, while the top bar corresponds to the S&P 500 weekly return increasing by more than two standard deviations. The standard deviation is based on the same weekly returns over the full period.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Strategic case for gold: portfolio impact

Performance of a hypothetical average pension fund (PF) portfolio with and without gold*



*Based on performance between 31 December 2009 and 31 December 2019. The hypothetical average US pension fund portfolio is based on Willis Tower Watson Global Pension Assets Study 2019 and Global Alternatives Survey 2017. It includes annually rebalanced total returns of a 42% allocation to stocks (27% MSCI USA Net Total Return and 15% MSCI ACWI ex US), 27% allocation to fixed income (21% Barclays US Aggregate, 3% Barclays Global Aggregate ex US, 1% JPMorgan EM Global Bond Index, and 3% short-term Treasuries), and 30% alternative assets (13% FTSE REITs Index, 8% HFRI Hedge Fund Index, 8% S&P Private Equity Index, and 1% Bloomberg Commodity Index). The allocation to gold comes from proportionally reducing all assets. Risk-adjusted returns are calculated as the annualised return/annualised volatility. See important disclaimers and disclosures at the end of this presentation.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council



Outlook

2020 Outlook: investment drivers

1

Combination of high risk, low opportunity cost and positive price momentum

2

Unexpectedly sharp rally in stocks without underlying fundamentals could lead to pullbacks

3

Low returns and limited risk protection from bonds

4

Potential for inflation...or deflation

Economic recovery may come in various shapes

COVID-19 has had a devastating effect on the global economy

Expectations for a swift V-shaped recovery are morphing into a slower U-shaped or, more likely, W-shaped recovery

Uncertainty levels will remain high and will likely have a long-lasting impact on portfolio performance



Source: WGC, Gold mid-year outlook 2020, July 2020
<https://www.gold.org/goldhub/research/gold-outlook-2020-mid-year>

QaurumSM valuation tool

Powered by the Gold Valuation Framework

Utilises third party independent macroeconomic forecasts

Estimates expected demand and supply based on user's selection

Calculates implied long-term gold returns

QaurumSM [kwar-uh m]

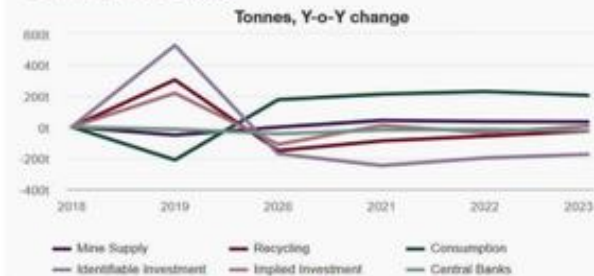
'Q' for quantitative + 'Aurum' - Latin for gold

1 Select an independently constructed macroeconomic scenario*

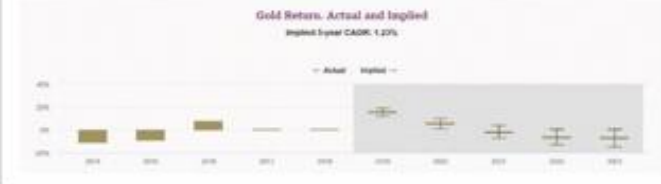
Stagnation US recession Trade war escalation China slow-down

2 View how demand, supply and ultimately gold's performance may be influenced by these macroeconomic scenarios

Demand and Supply



3 Use this insights to optimise your gold allocation



* The hypothetical scenarios included in this brochure are for reference only. The actual scenarios available on Goldhub.com will be updated periodically to reflect pertinent macroeconomic developments.

Goldhub.com

Data

- Power your investment decisions with best-in-class data sets

Research

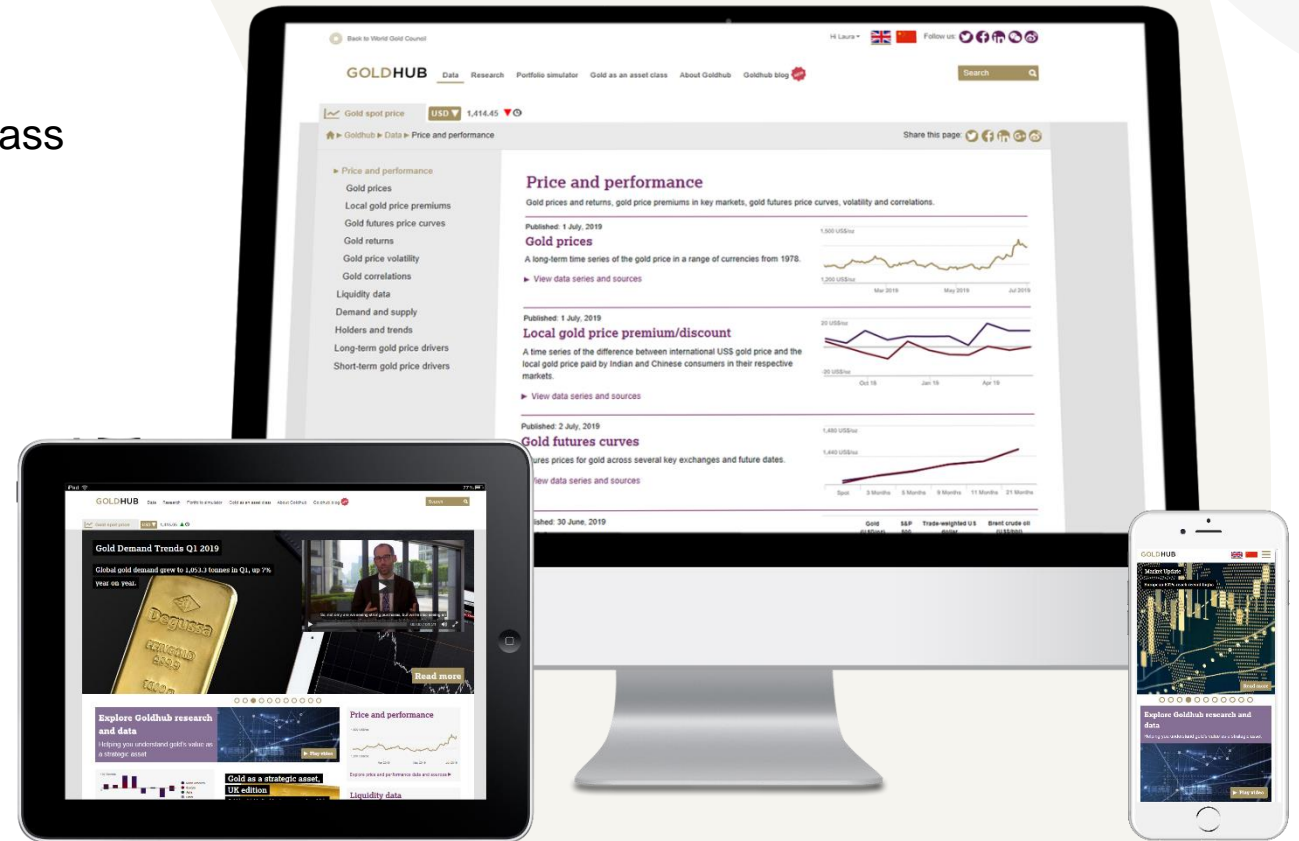
- Access to a wealth of material on the role and performance of gold

Tools

- Visualise and build your own analyses with interactive tools

Authority

- Goldhub draws on the World Gold Council's authority on gold



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