

## Gold - Key Facts

- Gold, chemical element atomic number 79, symbol Au, found in its purest form.
- Gold is imperishable (chemically inert), hence why it is used for jewellery and coin/bar form as a store of value.
- Gold is primarily found as nuggets, its crustal abundance is ~0.001-0.006 ppm. Economic deposits are rarer.
- Gold mining is capital intensive – it takes ~10-20 years from exploration to a product that can be refined.
- Gold is either sold now (at the current price) or sold while it is still in the ground (i.e. as a hedge).
- Gold is traded on public futures/contracts exchanges, e.g. COMEX, SHFE, SGE, commonly without physical delivery.
- ESG is a driver for gold recycling vs. gold mining, and supply is est. to increase in YE2024E.
- ACF expects the gold price to rise within its new forecasted range (est. 03/24) of \$2,200 - \$2,400 / t oz.

## Gold - Value Chain

- Mining & Extraction:** Mineral Prospect assays, width and length. Mineral Resources (tonnage + grade) via 3D technology. Process = exploration, drilling, blasting, ore processing. incl. microbial leaching.
- Processing & Refining:** Once the raw gold is extracted, it is processed and refined. Smelters refine the gold, removing all impurities and then shape it into bars or other forms for trade.
- Logistics & Transportation:** Gold is transported across countries and continents – moving from mines to processing plants, railway networks and operating ports. This step is facilitated by traders and exporters.
- Trading & Distribution:** Traders handle the finished raw material. Component manufacturers create the final product. Manufacturers create gold items, e.g. jewellery, investment-grade bars and coins.
- End Users:** Gold shipped to investors, central bank vaults, jewellery buyers and industrial applications. Institutional investors commonly hold electronic contracts rather than physical gold.

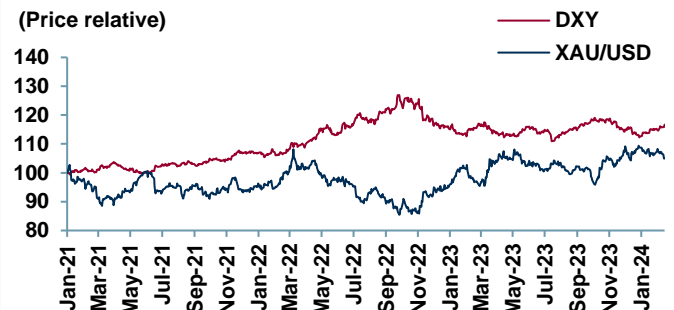
## Gold Mining Methods

- Open-pit:** Surface mining technique that involves removal of large quantities of soils and rock to access gold deposits beneath the surface.
- Underground:** Accessing gold deposits below the Earth's surface via shaft, adit, cut-and-fill, room and pillar mining, and sublevel stoping.
- Placer:** Gold is extracted from alluvial deposits (loose sediments) via gold panning, hydraulic mining and gold dredging.

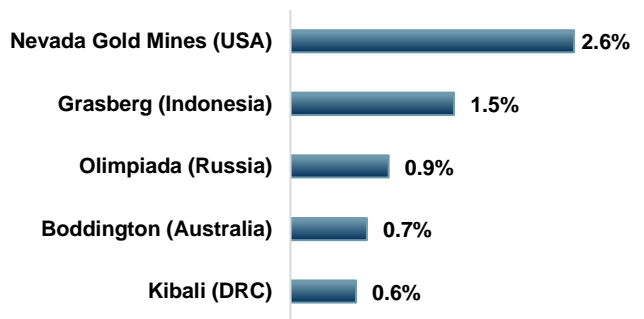
## Applications of Gold

- Central Bank buying:** CBs continue to increase their gold stocks as markets and economic uncertainties persist (and increase).
- Jewellery:** As economies contract, and war forces migration, demand for gold increases despite rising prices, expanding economies can dampen demand.
- Technology:** Gold is an inert efficient electrical conductor hence its use in electronics, e.g. GPS, mobile phone, automotive computers.
- Investment ETFs:** Increasing gold prices cause collective ETFs to grow, higher interest rates cause ETFs to reduce holdings.

## US Dollar Index vs. Gold Spot Jan 2021 – Feb 2024

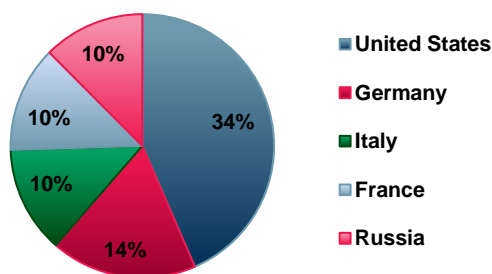


## Top 5 Gold Mines by Production (% global – k/t/toz)



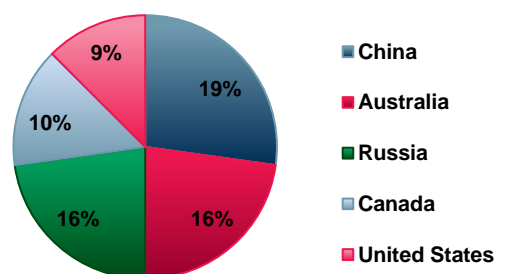
Source: World Gold Council, 2022.

## Top 5 Countries - Gold Reserves (tonnes)



Source: World Gold Council, 2023.

## Top 5 Countries - Gold Production (tonnes)



Source: US Geological Survey, 2023.