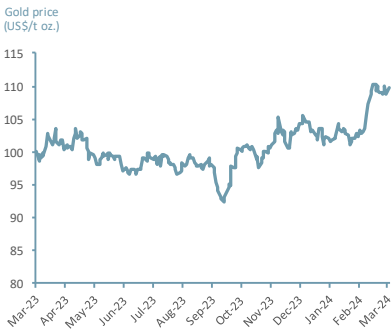


THEMATIC

TARGET \$2,400

52 wk Hi/Lo

\$2,077 / \$1,811



Monday, 25 March 2024

Precious Metal Prices (25/03/2024)

Gold (USD/oz) 2,171.83

Silver (USD/oz) 24.89

Platinum (USD/oz) 904.90

Palladium (USD/oz) 987.31

Rhodium (USD/oz) 4,300.00

Mining Sector Research

New York NYMEX

ACF Mining Team

+44 20 7419 7928

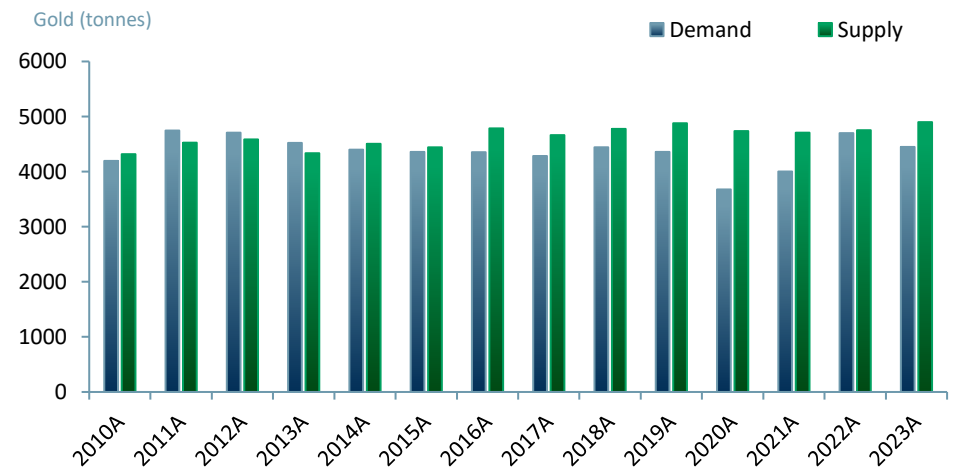
extractives@acfequityresearch.com

Gold (Au) Market – Supply Leakages

Gold 12m Price – Target \$2,400/t oz.

Our 12m gold price target is \$2,400/t oz. up 9% or \$200 from our previous \$2,200 12m price target, achieved with days to spare! Our hypothesis is that Central Banks will continue to buy above recent averages as they did in 2023, that ETFs anticipating lower interest rates and a weaker USD will move back to gold and that other market participants are anticipating these activities, taking positions and driving the price upwards. In turn mine supply should rise but with a lag effect. We also propose that gold supply is leaking from the formal market into the informal market and its return faces extended lags, thereby tightening the market. We propose a leakage mechanism below.

- Expected interest rate cuts will support gold price in 2024;
- Gold demand driven by CB and professional investor buying;
- Geopolitical and climate risk drive portable value buying (jewellery);
- Gold supply driven by increased mine production & recycling.



Sources: ACF Equity Research Graphics; World Gold Council.

Investment Case

Gold prices jumped 13% in YE23A. We expect the prices to be range bound early in our 12m forecast period Mar 2024 – Mar 2025.

The Fed to begin cutting interest rates during YE24.

A weakened USD means more \$s are required to buy a troy ounce of gold – a higher price.

The USD may not weaken on reduced interest rates if the US economy proves to be the most resilient global economy this year after reduced growth rate expectations for China.

Central Bank gold buying in 2024 may be less intense than activity in 2023. Nevertheless, we expect the renewed interest from CBs in gold buying to continue through 2024 and to remain higher than it has done for several years prior to 2023.

In 2024 monetary policy is the key gold driver – any signals of accelerated rate cutting could trigger a significant rally in the gold price. Escalating expectations for geopolitical tensions (war) or climate shock (surprise catastrophes and droughts) concerns could trigger a gold price rally independently of monetary policy.

In our previous gold thematic our 12m forecast (23 Mar 2023 to 22 Mar 2024) for the gold price was a rise of approximately 11.2% to \$2,200/t oz.. We expected central bank policy designed to combat inflation to reach an evident peak by 3Q23. It took a little longer, and though our gold price target was hit, it happened later in our 12m forecast period than we originally thought likely. **Our new 12m price target is \$2,400/t oz. or +9%.** Whilst we appreciate that the gold price may remain range bound in the early part of the year, we expect gold price rally triggers that will come into play during the next 12 months.

Data from the World Gold Council suggests that gold supply exceeded gold demand in 2023 by 0.3%. Ordinarily this should lead to a softer gold price. However, we continue to be of the view that geopolitical instability and climate event expectations are increasing demand for gold as a portable store of value via jewellery. According to IMF data, jewellery accounted for 47.9% of 2023A gold demand. According to the World Gold Council jewellery accounted for 45.4% of 2023A above ground gold stocks.

Supply leakage hypothesis – Part of our investment thesis is that gold supply is leaking out of the formal market and into the informal market. Once circulating in the informal market there is a significant lag before this gold returns to the formal market.

Our theorised mechanism is that geopolitical and climate event risks have set into expectations and that this is increasing the purchase of jewellery as portable wealth, largely via the formal market. However, at the point of a geopolitical event such as war, or a climate event such as drought, this gold enters the informal market as a medium of exchange used to access informal but organised mass migration routes.

Our hypothesis is that once in the informal market, jewellery related gold continues to be used as a ‘currency’ between informal participants and or is smelted to hide its provenance before gradual slow release back into the formal economy at a rate designed to avoid the attention of authorities. We propose that the cash receipts may then find their way into bitcoin or similar currencies.

Even if only partly correct. the marginal pricing impact of our supply leakage thesis, given the IMF’s 2023A 0.3% oversupply estimate, could be significant, even if only partly true. In addition, leakage out of the formal supply market into the informal market would be opaque and therefore is unlikely to be captured by miners planning output schedules, without a lag effect.

Geopolitics and climate change - A sense in markets of rising global geopolitical tension and climate shocks typically leads to risk-off sentiment, which supports gold demand (safe-haven asset).

Central Bank buying - Globally, central banks added 1,135.7t in 2023A, surpassing the 1,000-tonne mark in purchases for the second consecutive year (World Gold Council). According to the WGC, central bank buying in 2024E will be less than in 2023A but will remain in excess of the longer-term average, which should provide support to the gold price.

US Federal interest rate – Current US Federal interest rate target range is 5.25-5.5%. The Federal Reserve has already indicated that the hiking cycle is over and that rate cuts will happen in 2024 but remains uncommitted as to when the cuts will begin. Nevertheless, the beginning of the Fed cutting cycle will result in bond yields contracting, which should be a positive for gold. Lower interest rates tend to make non-interest-bearing assets like gold, more attractive.

US economic strength - In contrast, a strong US economy will be a negative for the gold price as this suggests interest rates may (though not necessarily) stay higher for longer, promoting a stronger USD. The shorter-term gold price outlook generally hinges on monetary policy trajectories. A strong US economy may also raise investor appetite for risk and so driving asset reallocation towards equities and corporate bonds rather than gold.

Catalysts

Positives: Mild recession; Dovish Central Bank Policy; Weakening US Dollar; Central Bank buying, Gold ETF buying; Rising war and climate risk expectations and informal migration waves.

Negatives: Low inflation; Increased consumer spending; High interest rates.

Gold (Au) Market

Ductile, malleable, corrosion resistant, imperishable and lustrous.

Chemical introduction - Gold is a chemical element with the symbol Au and the atomic number 79. Gold has several qualities that have made it valuable and attractive throughout history. It is highly malleable, ductile, corrosion resistant and found in nature in a relatively pure form. It is not only rare, but also visually pleasing because of its yellow lustre. It is imperishable and is therefore largely used for jewellery or in coin or bar form as a store of value.

Store of value, medium of exchange, reserve asset.

Store of value introduction - Gold's unique qualities have made it universally accepted as an exchange for goods and services. Gold also played a key role in the monetary system. The Gold Standard was the basis for the international monetary system from the 1870s to the early 1920s where the value of a currency was pegged to gold. Within the Bretton Woods System the US dollar was established as the dominant currency with the dollar converting to gold at a fixed price of \$35/oz..

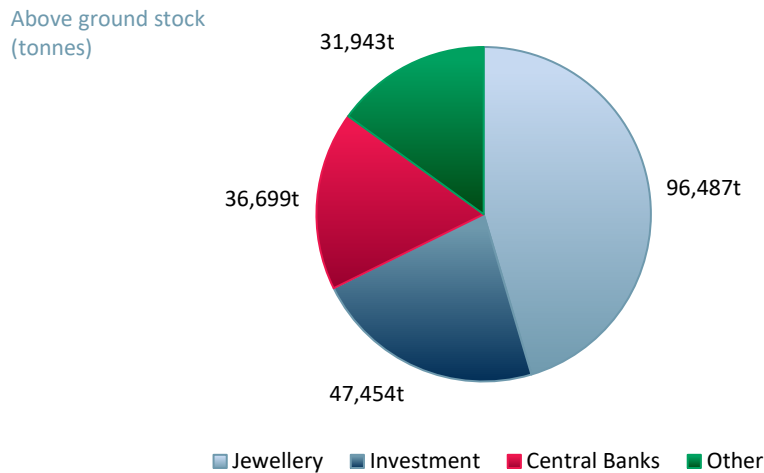
In this system, the value of currency was pegged to gold. The gold standard was in prevalence until it was stopped by President Nixon in 1971. Although gold's official role in the international monetary system had come to an end by the 1970s, the metal remains an important reserve asset. ~45% of all the world's gold is held by governments and central banks for this purpose.

Crustal abundance and economic deposits in nature are rare.

Geological abundance introduction - Gold is very rare in nature, crustal abundance is estimated at ~0.001-0.006 ppm. Crustal abundance is a relative guide, what is important in practice from a mining perspective is economic concentration, this is also rare. Gold is primarily found as nuggets or grains in rocks, in veins and in alluvial deposits (silt, sand, clay and gravel). Up to 20% of the gold mined annually is extracted as a by-product primarily from copper and nickel. At YE23 the total above ground stocks of gold were estimated at 212,582 tonnes (7.5 bn oz.), (World Gold Council). The largest portion (96,487t or 46%) is estimated to be in the form of jewellery.

20% of gold mined annually is a by-product of copper and nickel production.

Exhibit 1: Above ground gold stock 2023A



Sources: ACF Equity Research Graphics; World Gold Council.

Deposit identification for gold production is a 10-20-year timeframe, much of which is legislation related (e.g., permitting and licensing).

Gold mining is extremely capital intensive and time consuming. Before any gold can be extracted, significant exploration and development needs to take place. On average, it takes between 10-20 years before a mine is ready to produce material that can be refined.

When bringing mined gold to market, mining companies have two options:

- 1) sell newly mined gold now (at the current price); or
- 2) sell gold which has not yet been mined (i.e., still in the ground) now (i.e. as a hedge).

Gold hedging is a key economic tool for mining companies.

Gold hedging is the process by which mining companies forward-sell future mine production at a contractually specified gold price. In this way the mining company is guaranteed to receive a predictable future price for its gold when it is produced, regardless of the prevailing gold price at that time.

There are many exchanges globally which allow trading of futures as well as forward contracts. The most important are:

Gold futures are traded on various international exchanges.

- COMEX: The New York commodity futures exchange that was merged with the NY Mercantile Exchange NYMEX and is now operated by CME (Chicago Mercantile Group).
- SHFE: Shanghai Futures Market Exchange
- SGE: Shanghai Gold Exchange
- TOCOM: Tokyo Commodity Exchange
- MCX: Multi Commodity Exchange of India Ltd.
- DGCX: Dubai Gold & Commodities Exchange
- Borsa Istanbul

Exhibit 2: Global exchanges trading gold futures contracts

Exchange	Country	Currency	Unit	Minimum price tick (local currency)	Minimum price tick (US \$/oz)
MCX	India	INR	Gram	1.00	0.38
TOCOM	Japan	JPY	Gram	1.00	0.22
COMEX	US	USD	Ounce	0.10	0.10
DGCX	U.A.E.	USD	Ounce	0.10	0.10
SHFE	China	CNY	Gram	0.02	0.09
Borsa Istanbul	Turkey	USD	Ounce	0.05	0.05
SGE	China	CNY	Gram	0.01	0.04

Sources: ACF Equity Research Graphics; exchange websites; mycurrencytransfer.com

Notes: Tick size to refers to the amount a price of a trading instrument can move up or down on an exchange.

Gold Supply

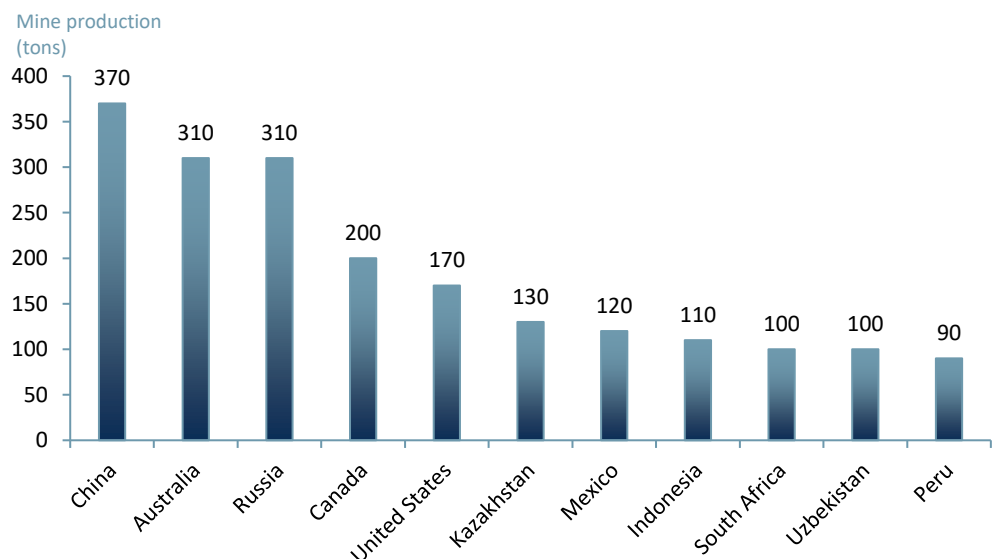
WGC and USGS suggest that 25-30% of gold supply is from recycled gold rather than mined gold (70-75% of supply).

Mine production reached its highest volume in 2023A since peaking in 2018A.

Gold supply is driven by mine production and scrap disposals (recycling). Mine production (totally supply) globally in 2023A rose by 19.6 tonnes (t) or 0.5% y/y. Recycled gold rose by 97.2 tonnes or 8.5% y/y (World Gold Council). Sources of recycled gold are dominated by jewellery, electronics and coins and bars.

Mine Production - In 2023A mine production was 3,644t, up 1% y/y - the highest level since the record of 3,656t in 2018A (World Gold Council). The world's top three gold producing countries in 2023A were China at 370t, Australia and Russia both at 310t. Canada and the US come in at 4th and 5th, respectively (exhibit 3), according to the preliminary data released by the US Geological Survey (USGS, 2024).

Exhibit 3: **Top ten gold producer countries 2023A**

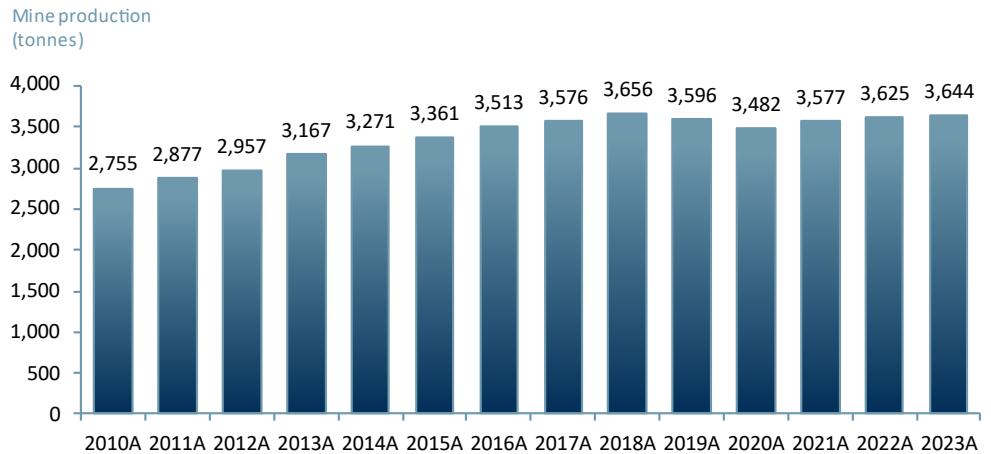


Sources: ACF Equity Research Graphics; US Geological Survey.

Supply growth is forecast to rise in 2024E and 2025E, driven by increased mine production, but will it be enough if our supply leakage hypothesis is even partially correct. Oversupply was just 0.3% in 2023A (WGC).

World gold supply is forecast to stabilise around 4,800t in 2024E and 2025E (Australian Government Department of Industry, Science, Energy and Resources – DISER). Supply will be propelled by increased mine production, which is forecast to increase by 1.4% p.a. on average by 2025E to 3,780t.

Exhibit 4: Mine production 2010A-2023A



Sources: ACF Equity Research Analysis; World Gold Council.

ESG (e.g., carbon neutral targets) is a driver for gold recycling vs. gold mining. Recycled gold <1/20th carbon footprint of mined gold.

Gold recycling supply remains well below the record levels seen in 2009A.

We expect underlying recycling gold supply to continue to grow in 2024E.

Recycled Gold -In 2023A recycled gold supply was up 9% y/y to 1,237.3t (vs. 1,140.1t in 2022A) on the back of higher gold prices (World Gold Council). The recycled supply is highly sensitive to increases in gold prices as consumers typically look to cash in when prices rise. It is worth noting that the recycled gold supply in 2023A remained ~ 30% below the record levels seen in 2009A.

Recycled gold supply is expected to increase in 2024E in light of a strong gold price and a weakened global economy. A weaker US dollar will also be a factor in driving the gold price up, which in turn will drive demand for less-expensive-to-produce recycled gold.

Recycled gold is also gaining traction because of climate change concerns – recycled gold is viewed as more ethical and sustainable than mined gold. The carbon footprint of 1 kilogram (kg) of gold (35.3 oz. equivalent) is less than one-twentieth of that of traditional mining (Royal Society of Chemistry).

Gold Demand

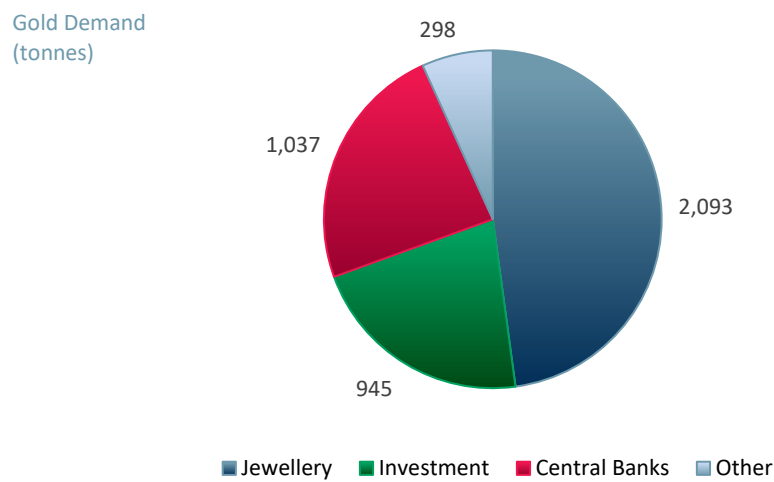
Gold acts as an investment hedge during times of economic uncertainty.

Demand is driven by central bank buying, jewellery, technology and investment ETFs.

Gold and other precious metals act as an investment hedge during times of economic uncertainty. Rising recession expectations coupled with geopolitical tensions and elevated inflation, are likely to lure investors to gold. This was evident in 2023A, which delivered a solid gain in gold prices driven by demand growth.

The main factors driving the demand for this precious metal include central bank buying, jewellery, technology and investment ETFs (exhibit 5).

Exhibit 5: **Top drivers of gold demand 2023A**



We expect more of the same in 2024E with additional emphasis on portable wealth buying.

Sources: ACF Equity Research Graphics; IMF.

Central bank buying trend to persist in 2024E (if slightly subdued vs. 2023A).

Central bank buying - Central banks (CBs) around the world continue to increase their gold stocks as markets and economic uncertainties persist. In 2023A central bank buying surpassed the 1,000t mark for the second consecutive year. This emphasises the robust recent demand for gold from central banks.

Buying by central banks reached 1,037t in 2023A. At end Dec 2023 there was a total of ~35,927t in central bank reserves, which is ~17% of all the gold ever mined ~212,582t as of 2023A (World Gold Council, Feb24).

Central bank buying registers a strong year in 2023A.

The majority of gold buying originates from central banks in emerging markets, many of which have consistently engaged in buying activities in recent years. China was the largest gold buyer in 2023A with 225t of purchases. This was followed by Poland with 130t of purchases and Singapore with 77t of purchases.

Central bank buying is led by emerging markets, a reversal from the earlier trend of buying led by developed markets.

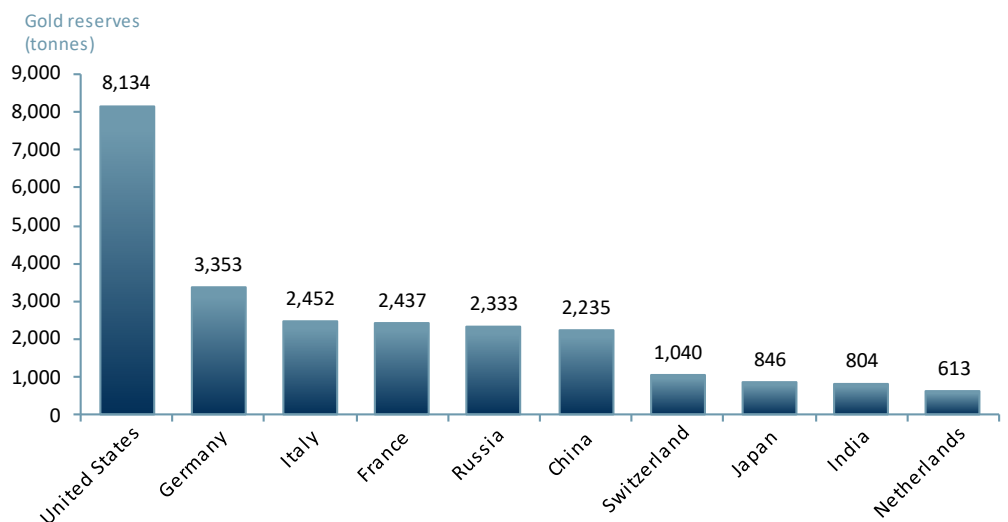
As economies remain uncertain and central banks need to diversify their reserve assets, gold remains an attractive alternative.

Rising geopolitical uncertainty and climate change is driving economic uncertainty making gold a more attractive asset.

Because gold is a finite physical commodity it is a natural hedge against inflation compared to cash, of which more can be created at the press of a button by central banks.

Gold is a natural inflation hedge.

Exhibit 6: Top 10 gold reserve holding countries 4Q23A



Sources: ACF Equity Research Graphics; World Gold Council.

Jewellery demand remained resilient in YE23A vs. YE22A despite increase in gold prices. We expect jewellery demand to increase during YE24E due to rising geopolitical risk and climate change expectations.

Jewellery - Global gold jewellery demand remained resilient in 2023A despite record gold prices. Jewellery consumption was up in 2023A to 2,092.6t, vs. 2,088.9t in 2022A, a growth of 0.18% y/y. China was the main contributor to growth with ~10% y/y increase in volumes to 630.2t in 2023A. India was relatively muted with a 6% y/y decline to 562.3t impacted by gold price strength. We expect jewellery buying in the formal gold market to grow more strongly in 2024 due to raised expectations of global instability leading to war and climate change shocks and awareness. These raised expectations will drive demand for portable wealth (jewellery) permitting access to informal but organised migration routes at short notice.

Technological uses for gold are increasing - underlying technological demand remains on the increase. However, technology sector gold consumption YE23A fell 4% y/y due to weaker consumer spending on electronics.

Technology - The demand for gold in technology (including electronics and industrial applications) fell by 4% y/y to 297.8t in 2023A. Lower consumer electronics demand weighed on the overall volumes amid a challenging economic environment. However, the sector saw some recovery in the latter part of the year, particularly 4Q23A. Gold demand in electronics sector rose 14% y/y to 66t in 4Q23A, the best quarter registered in 2023. It is important to note that the electronics sector accounts for ~81% of gold used in technology (World Gold Council).

The chemical and physical properties of gold as an efficient electrical conductor promote its use in electronics (e.g. GPS, cell phones et al) and automotive applications, i.e., automotive computers.

Gold ETF outflows decreased during YE23A.

Investment ETFs - Investment demand in 2023A suffered as ETFs reduced their holdings as interest rates rose and central banks remained hawkish. Global gold ETFs saw outflows of 244t (US\$15bn) during 2023A. Collective ETF gold holdings grew 6% y/y to US\$214.4bn by the end of 2023A due to a 15% increase in gold prices (World Gold Council). We expect ETF gold buying to continue to increase in 2024E.

Gold Price Outlook

Gold prices increased in 2023A due to geopolitical tensions and central bank buying.

We estimate that prices will continue to increase in 2024E, our 12m price target (Mar 2023 to Mar 2024 is \$2,400/t oz..

US Fed signals interest rate cuts in 2024, but timing is uncertain.

Rate cuts lead to decreased bond yields, making gold a more attractive asset class.

USD expected to weaken in 2024.

Jewellery consumer demand as a portable wealth is increasing.

ACF's position is that gold prices will increase over our 12m price target period Mar 2024E to 2024E.

Gold price – The gold price underwent a significant increase in 2023A, rising above \$2,000/t oz. by year end. This was driven by central bank buying and heightened geopolitical tensions from the ongoing conflicts between Israel–Hamas and Russia–Ukraine. We anticipate a period of short-term price stability early in our new 12m forecast (Mar 2024 to Mar 2025). We expect an overall upward trajectory in the gold price during our 12m forecast period, rising around 9% to our target price of \$2,400/t oz.. We assess the key drivers are expectations of interest rate cuts by the Federal Reserve and our supply leakage hypothesis underpinned by portable wealth (jewellery) buying.

The US Federal Reserve has signalled that interest rate hikes will cease in 2024 and rate cuts are on the horizon. However, the timing of cuts is still undetermined. The initiation of the Fed's cutting cycle is expected to lead to a decrease in bond yields, a development that would likely be favourable for gold. Gold does not have a dividend, yield, or coupon and typically falls out of favour in a rising yield environment. Rising bond yields are traditionally negative for gold, raising the opportunity costs of holding the precious metal, which is a non-yielding asset.

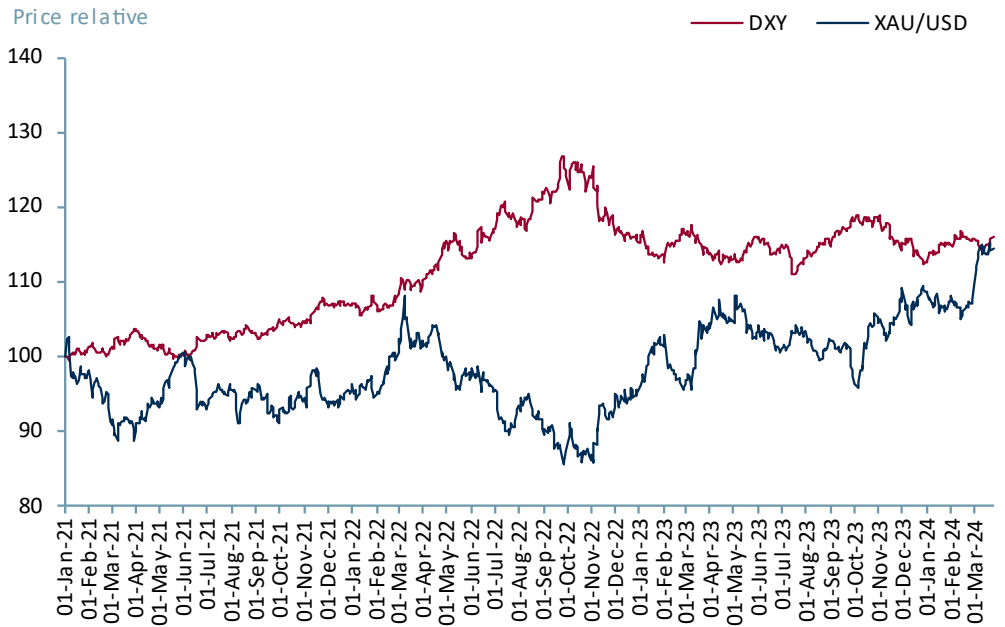
Amidst the impending interest rate decline and receding inflation, we expect the dollar to weaken in 2024, which should again be positive for gold. A rapid implementation of rate cuts could expedite the decline of the currency. Geopolitical factors will also have a significant influence on the dollar - international tensions, particularly in the Middle East and the changing dynamics within BRICS nations (Brazil, Russia, India, China, and South Africa) are anticipated to have an impact on the global currency markets.

Current geopolitical tensions and climate events advocate for gold as a valuable hedge against economic and market fluctuations, manifesting in increasing consumer demand for jewellery as a portable wealth in times of political uncertainty and forced 'mass' migration risk along informal routes.

Though our position is that gold prices will increase approximately 9% to \$2,400/t oz. in 2024E, there are risks to our underlying assumptions. A strong global economy could shore-up business confidence and consumer spending, which will benefit risk-assets and decrease demand for gold assets, which is likely to cause the gold price to decrease. Our supply leakage hypothesis has no data to support it. The oversupply data for 2023 of 0.3% from the WGC could be in the range of statistical error.

Exhibit 7: Gold price relative to US Dollar Jan 2021–Mar 2024

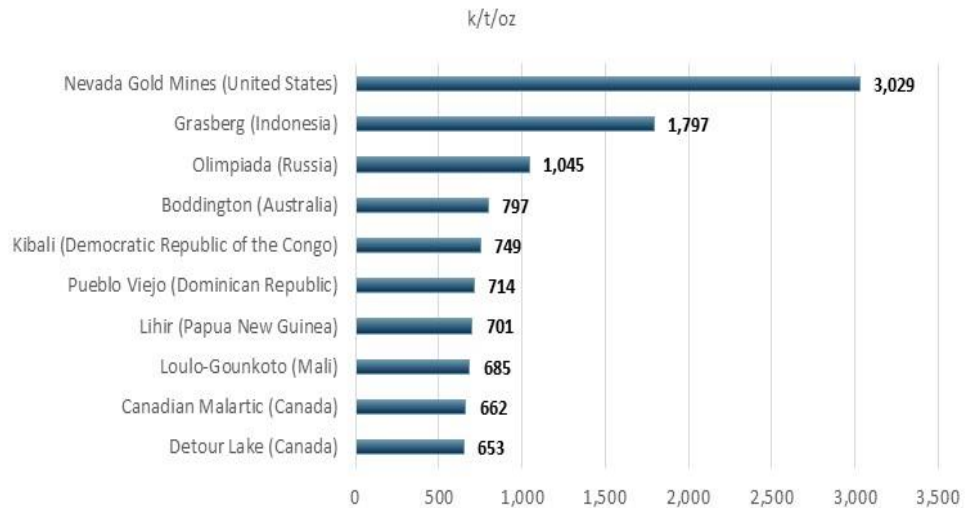
The chart indicates that the gold price is driven by the US dollar. A weaker dollar typically leads to higher gold prices and vice versa.



Sources: ACF Equity Research Estimates, Investing.com.

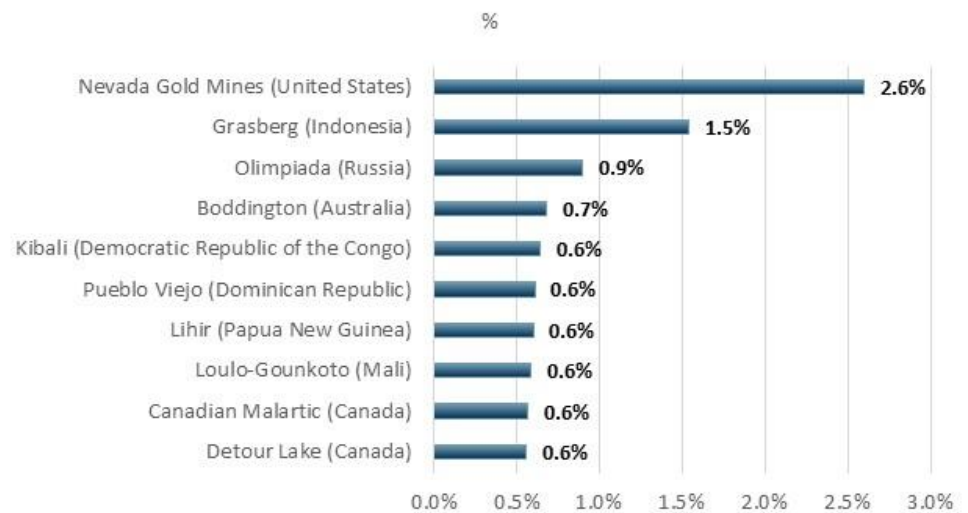
Top Gold Production Companies

Exhibit 8: Top 10 producing mines in '000s troy ounces (t oz.) 2022A



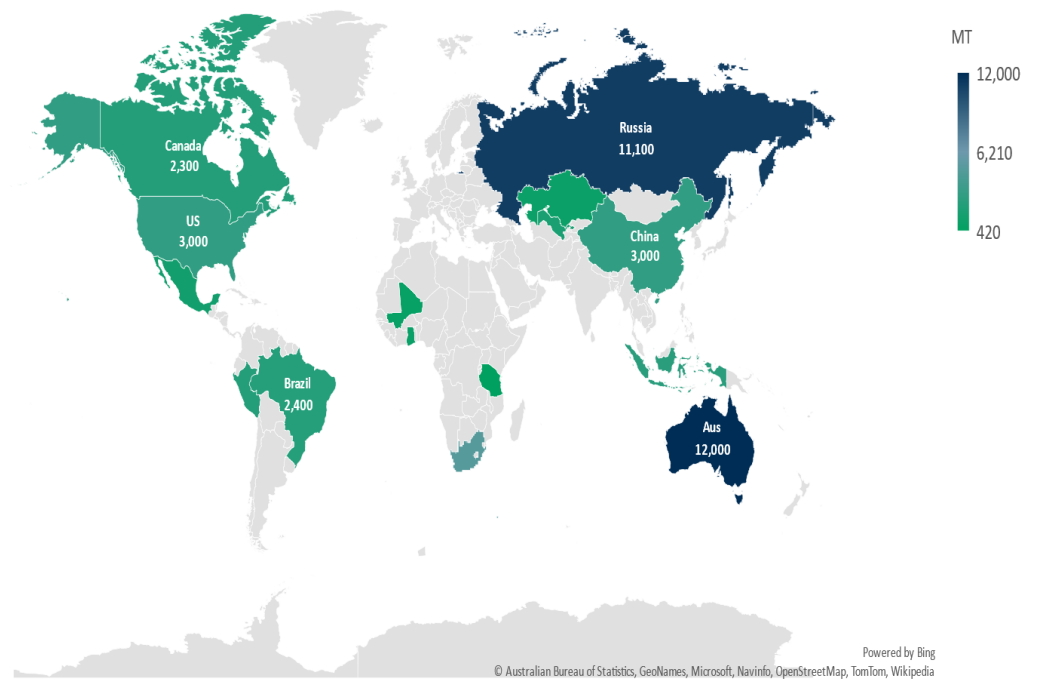
Sources: ACF Equity Research Graphics; World Gold Council; Investing News Network.

Exhibit 9: Global production % share of top 10 gold mines 2022A



Sources: ACF Equity Research Graphics; World Gold Council; Investing News Network.

Exhibit 10: Leading mine reserves (MT) by country 2023A



Sources: ACF Equity Research Graphics; USGS.

Exhibit 11: Top 10 gold mine operators and owners 2022A

Tkrs	Largest gold mines worldwide as of 2022, by production volume (in ounces)	Operators	Owner 1	Owner 2	k/t/oz	% Global Prdctn
ABX	Nevada Gold Mines (United States)	Barrick	Barrick	Newmont	3,029	2.6%
ABX	Pueblo Viejo (Dominican Republic)	Barrick	Barrick	Newmont	714	0.6%
AU	Kibali (Democratic Republic of the Congo)	Barrick	Barrick	AngloGold Ashanti	749	0.6%
NEM	Boddington (Australia)	Newmont	Newmont		797	0.7%
Barrick + Newmont Sub-totals					5,289	4.5%
FCX	Grasberg (Indonesia)	PT Freeport Indonesia	Freeport-McMoRan		1,797	1.5%
Prvt	Olimpiada (Russia)	Polyus	Polyus		1,045	0.9%
NCM	Lihir (Papua New Guinea)	Newcrest Mining	Newcrest Mining		701	0.6%
ABX	Loulo-Gounkoto (Mali)	Barrick	Barrick	State of Mali	685	0.6%
AUY/AEM	Canadian Malartic (Canada)	Canadian Malartic	Yamana Gold	Agnico Eagle	662	0.6%
AEM	Detour Lake (Canada)	Agnico Eagle	Agnico Eagle		715	0.6%
Others Sub-totals					5,605	4.8%
Totals					10,894	9.3%

Sources: ACF Equity Research Estimates; Visual Capitalist; Company reports.

Exhibit 12: 5 equity investments in the top 10 gold mines

TTM Metrics / Company Name	Market	Tkr	MCAP US\$(m)	EV US\$(m)	FCF US\$(m)	Revs US\$(m)	GM%	MCAP / REVS	EV / EBITDA	EV / FCF	FCF M%
Freeport-McMoran	XNYS	FCX	53,344	68,625	-1,072	22,855	40.8%	2.33x	8.20x	N/M	N/M
Newmont	XNYS	NEM	37,019	39,889	709	11,055	34.4%	3.35x	10.60x	56.26x	1.8%
Barrick Gold	TSX	ABX	24,735	34,002	829	11,397	30.4%	2.17x	6.20x	41.02x	7.3%
Agnico Eagle	XTSE	AEM	22,528	24,271	529	6,255	55.4%	3.60x	7.90x	45.88x	8.5%
Anglogold Ashanti	XNYS	AU	7,034	8,441	-154	4,532	22.4%	1.55x	5.90x	N/M	N/M
Average							36.68%	2.60x	7.76x	47.72x	5.84%
Median							34.40%	2.33x	7.90x	45.88x	7.27%

Glossary

Alluvial Deposits	The soils deposited in riverbeds are known as alluvial deposits.
Au	Refers to the periodic symbol for Gold.
Bretton Woods System	A system of established rules for commercial and financial relations among the US, Canada, Australia, Japan and Western European countries created after the Bretton Woods Agreement.
By-product	A secondary metal or mineral product recovered in the milling process.
CME	Chicago Mercantile Exchange Group – The largest global financial derivatives exchange.
COMEX	The Commodity Exchange Inc. - Primary futures and options markets for trading metals: gold, silver, copper and aluminium.
DGCX	Dubai Gold & Commodities Exchange – Financial and commodity derivatives exchange.
DISER	Department of Industry, Science, Energy and Resources – Australian government department responsible for efforts to drive economic growth, productivity and competitiveness.
ETF	Exchange Traded Funds - A type of investment fund traded on stock exchanges.
Forward Contract	The sale or purchase of a commodity for delivery at a specified future date.
Hedging	Taking a buy or sell position in a futures market opposite to a position held in the cash market to minimize the risk of financial loss from an adverse price change.
LBMA	London Bullion Market Association – An international trade association representing the global Over The Counter (OTC) bullion market and is a global authority on precious metal.
MCX	Multi Commodity Exchange of India Ltd. – India’s largest commodity derivatives exchange.
Nugget	A small mass of precious metal, found free in nature.

NYMEX	New York Mercantile Exchange – Commodity futures exchange owned by CME.
SGE	Shanghai Gold Exchange – Non-profit self-regulatory organisation for the trading of gold, silver, platinum and other precious metals.
SHFE	Shanghai Futures Exchange – Metals, energy and chemical commodity products exchange.
TOCOM	Tokyo Commodity Exchange – Japan’s largest commodity futures exchange.

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Notes [Intentionally Blank]

Check the Independence of Research

As a result of MiFID II and the unbundling of commissions in the UK and Europe and various comparable unbundling legislation originating in the US, over time, the payment models for research have changed. This also means that nano to mid-cap and even some larger cap companies can no longer obtain research via their broker or investment banking relationship as it is no longer commercially viable to do so.

Investment (equity) research has always been a business and, as such, has always been paid for. Over its evolution since the 1920s investment research has been paid for using a variety of models. Since the 1950s investment research has been paid for after production and publication either via trading commissions, transaction fees (money raising, IPO, M&A etc.), via stock payments, opaque retainer structures or cross subsidisation - investment research paid for in these ways is subject to opaque high levels of bias and is recognised as such and now legislated against by US, UK and EU regulators.

We recommend readers in any market or geography request the following checks are carried out and answered as indicated below in order to obtain investment research that is as independent and with as few biases as possible:

Is the research MIFID II compliant	YES	<input checked="" type="checkbox"/>
Is the research provided by a broker and paid for after it has been produced.	NO	<input checked="" type="checkbox"/>
Is the research potentially cross subsidised by other investment banking services.	NO	<input checked="" type="checkbox"/>
Is the research potentially or actually paid for in shares or other financial instruments.	NO	<input checked="" type="checkbox"/>
Has the research been paid for in advance of production via cleared funds.	YES	<input checked="" type="checkbox"/>

I, Christopher Nicholson, hereby confirm that ACF Equity Research Ltd.'s investment research products conform to the above five [5] checks.

Christopher Nicholson
 Managing Director
 Head of Research
 ACF Equity Research Ltd

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