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CME Group

Gold for Stock and Bond Investors

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Gold for stock and bond investors Overlaying inflation protection with futures & options

by Tariq Dennison

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Image credit: MS Office Stock Photo

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About Tariq Dennison TEP

- Independent Advisor Managing Accounts on the IBKR platform
 - US Advisor: GFM Asset Management LLC
 - HK Advisor: GFM Group Limited
- In the market since 1998
 - Commerzbank (NY, London, Frankfurt)
 - Bear Stearns (NY)
 - J.P. Morgan (NY)
 - Canadian Imperial Bank of Commerce
 - Societe Generale (HK)
- Masters in Financial Engineering
 - University of California at Berkeley
- Lecturer at ESSEC Singapore
 - Fixed Income
 - Alternative Assets
- Focus on US-Asia corridor
- Author "Invest Outside the Box"





Gold Fundamentals

- Why gold has value
 - Supply types & geography
 - Demand types & geography
- Gold vs inflation
- The curve that pushes gold prices up and down
- Big idea: "Return stacking" aka "Overlay"

Examples

- Gold & Silver, for centuries
- Oil since 1901
 - 10 Jan 1901 = Spindletop in Texas
- Spices, 1453-1947
 - 1453 = Fall of Constantinople
 - 1947 = Indian Independence
- Sugar, 1493-1806
 - 1493 = Columbus brings sugar cane
 - 1806 = Britain blockades Napoleon, Europe switches to sugar beets
- Expect more metals with the rise of EVs...



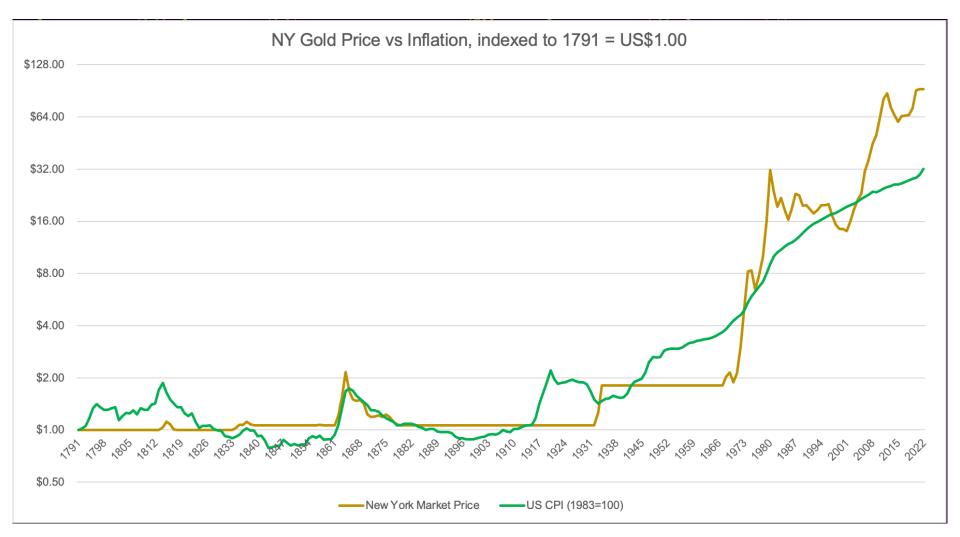


What is gold, and why consider buying it?

- Element 79, relatively chemically & industrially inert
- Costs to store it, without yield
- Compared with land / real estate, gold is:
 - Fungible: one ounce interchangeable with another
 - Portable: high value / transport cost ratio
 - Divisible: usable in coins and value accounting
- Limited and expensive <u>supply</u> makes it attractive as a relatively stable store of relative value, but <u>only if</u> buyers (<u>demand</u>) think it does!
- Important to note: Gold comes with risks and potential downsides, including as storage and security costs, lack of cash flow or dividends, and potential price volatility.



Gold vs US Inflation Since 1791

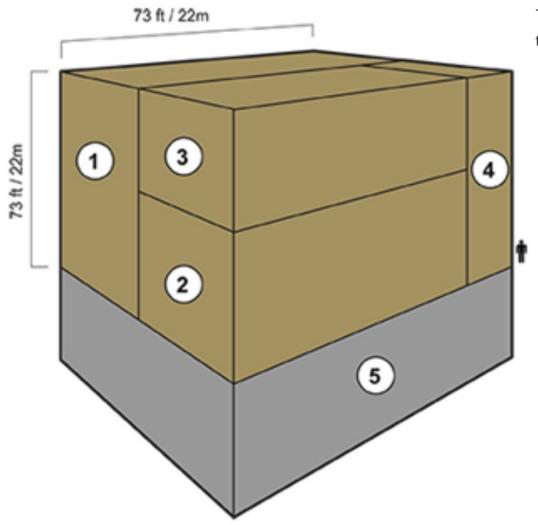


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Source: https://www.measuringworth.com/datasets/gold/result.php



Gold SUPPLY by sector, visualized



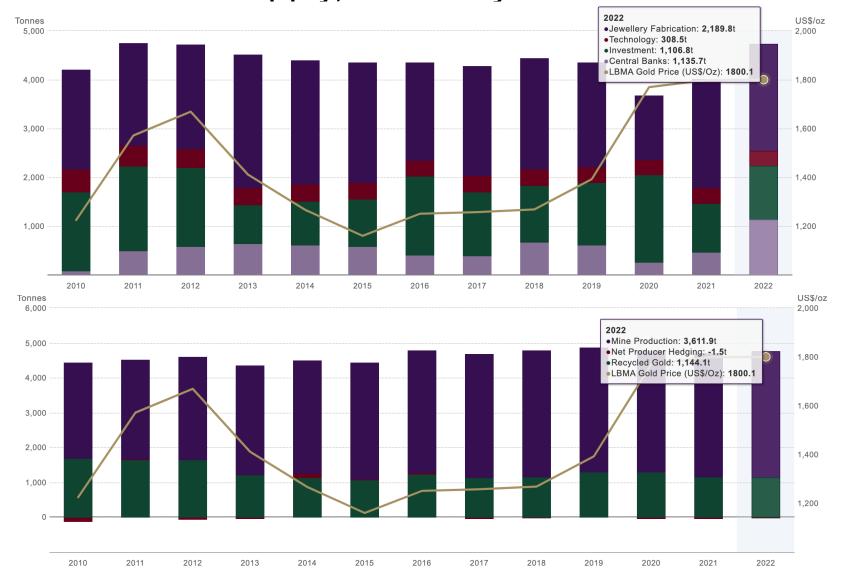
Total above-ground stocks (end-2022): 208,874 tonnes

- 1. **Jewellery** ~95,547t, 46%
- 2. Bars and coins (including gold backed ETFs) ~46,517t, 22%
- 3. Central banks ~35,715t, 17%
- 4. Other ~31,096t, 15%
- 5. Proven reserves ~52,000t

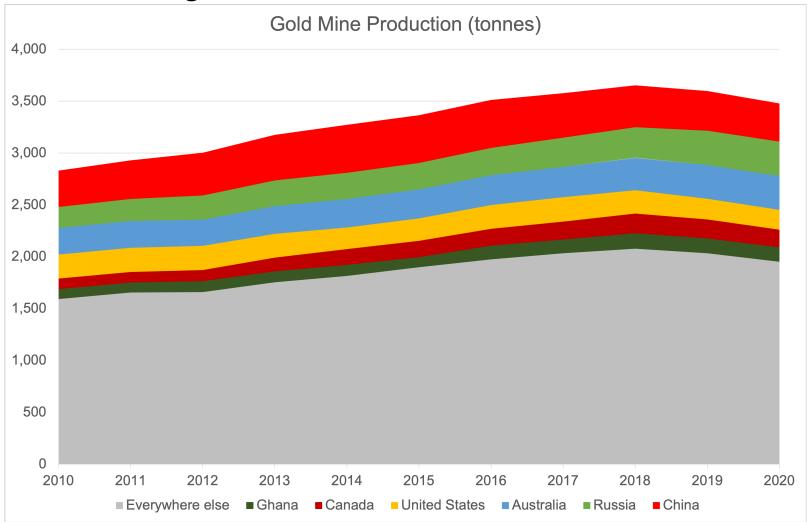
Source: https://www.gold.org/about-gold/gold-supply/gold-mining/how-much-gold



Mines ~75% of Supply, Jewellery ~50% of Demand



Where those gold mines are...

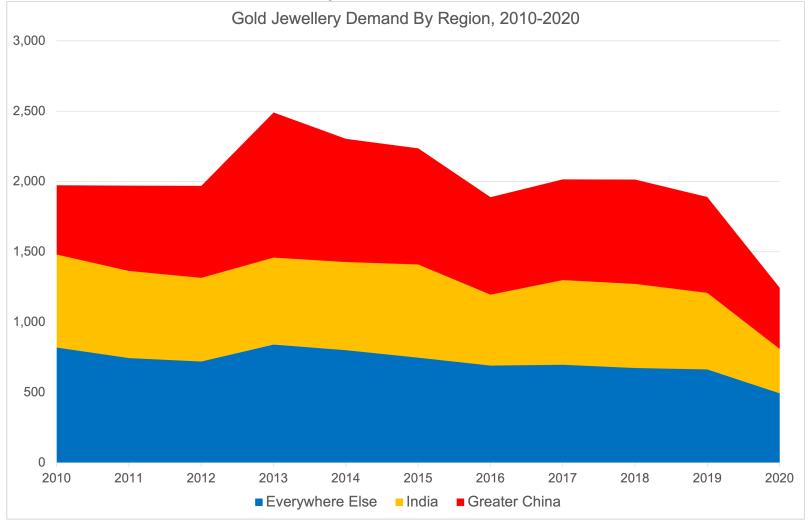


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Source: https://www.gold.org/goldhub/data/gold-production-by-country



... versus where the buyers are



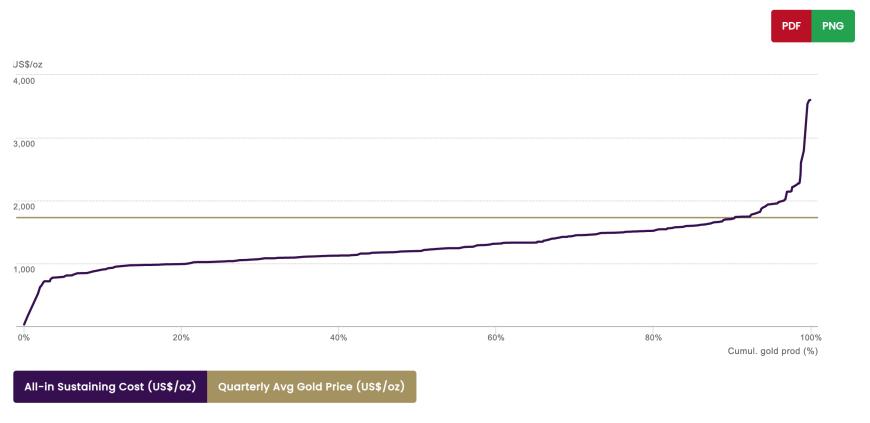
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Source: https://www.gold.org/goldhub/research/gold-demand-trends/gold-demand-trends-q3-2021



The All-In Supply Cost (AISC) Curve

Visualizing the price impact of incremental supply and demand Q3'22 AISC curve



Data as of 30 September, 2022

Sources: Metals Focus Gold Mine Cost Service; Disclaimer

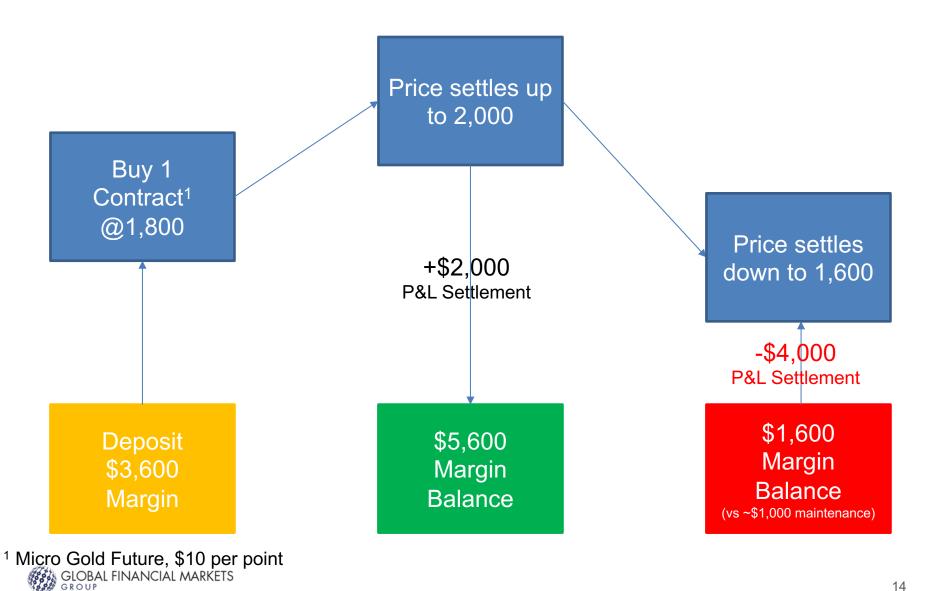
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GFM ASSET MANAGEMENT Source: https://www.gold.org/goldhub/data/aisc-gold

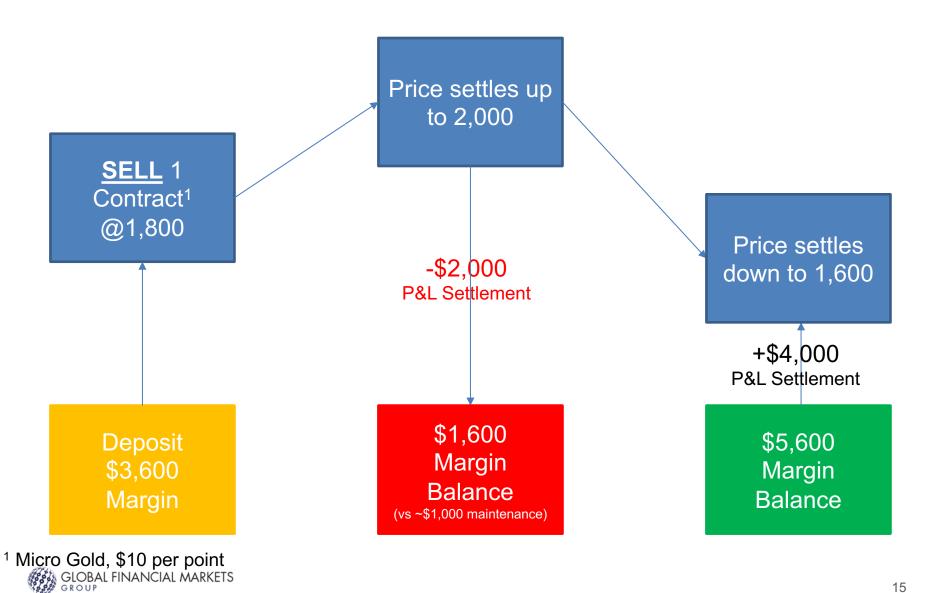
Big Concept: "Stacking" or "Overlaying" Gold on top of your stocks or bonds



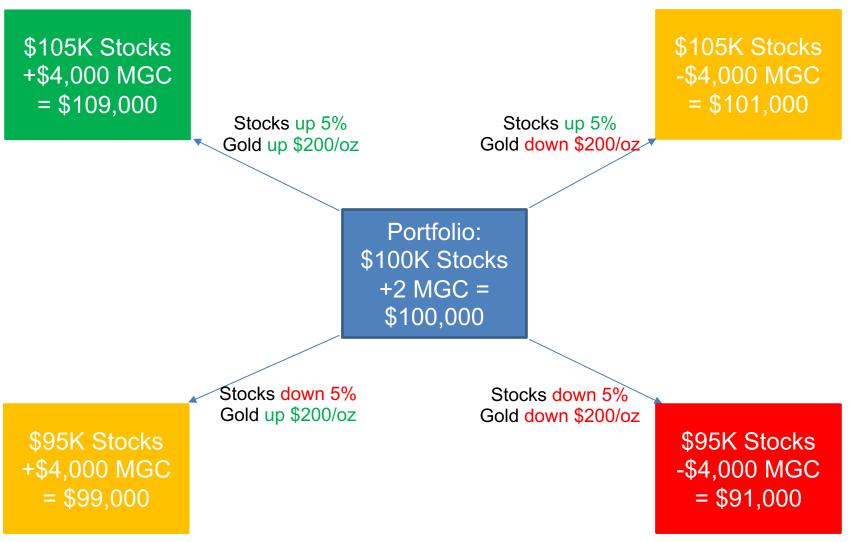
Refresher: How Futures Work



Futures make selling short as easy as going long



How "Return Stacking" Works



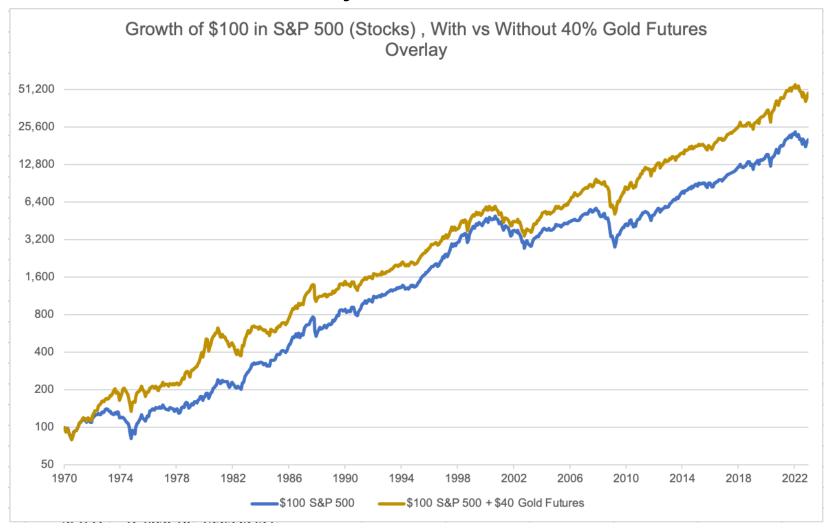


Different ways of doing this "return stacking"

- Hold stocks and/or bonds, buy gold futures
- Hold stocks and/or bonds, sell puts on gold (see options section later)
- Hold gold ETF, buy stock index and/or bond futures
- Hold cash, buy all stock, bond, and gold exposure via futures
- Hold physical gold, deposit margin at IBKR to maintain stock and bond exposure via futures



Pro-forma 40% Overlay on S&P 500 Since 1970

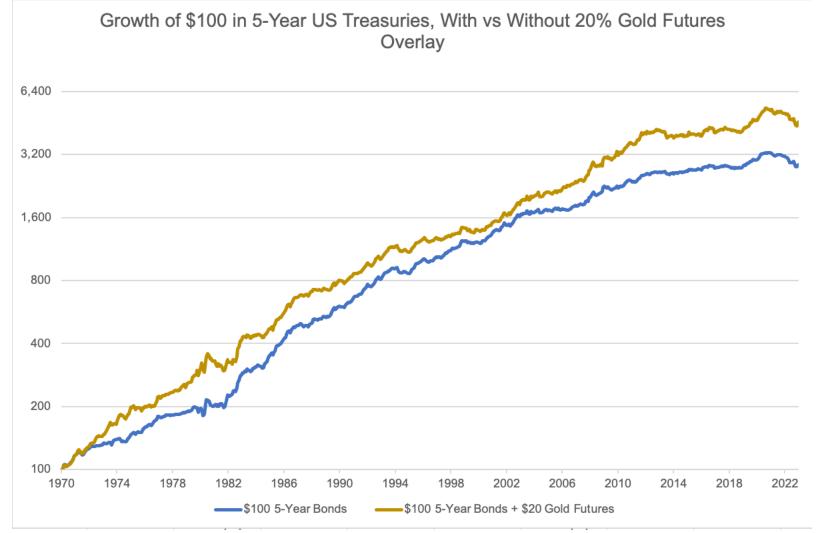


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Source: Dimensional Fund Advisors, Author's Calculations



Pro-forma 20% Overlay on 5-Year Bonds Since 1970

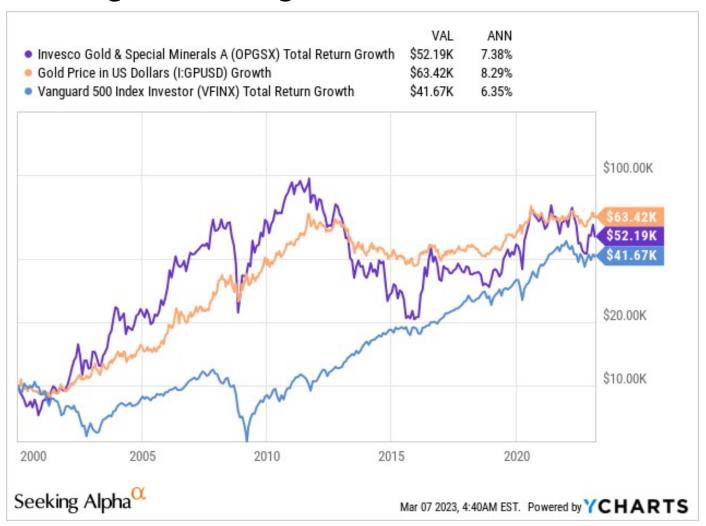


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Source: Dimensional Fund Advisors, Author's Calculations



What about gold mining stocks? Since 2000:

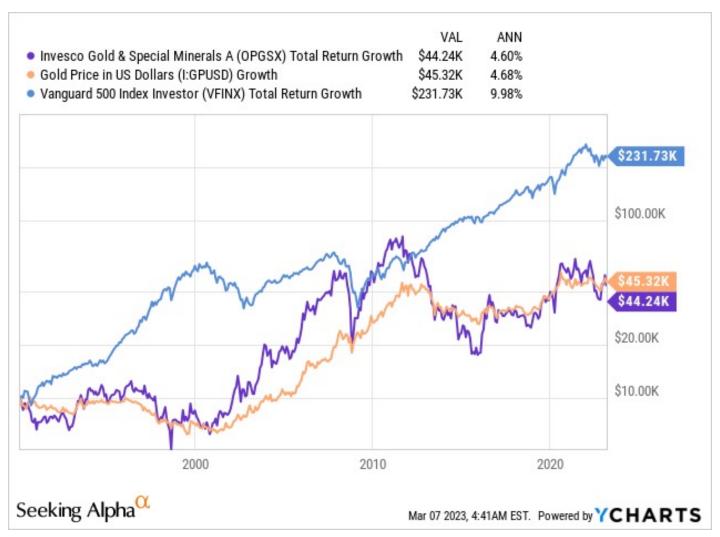


Source: Ycharts

Mining risks: Investing in gold mining stocks comes with additional risks, such as operational risks at the mine, regulatory risks, and exploration risks.



Since 1990:

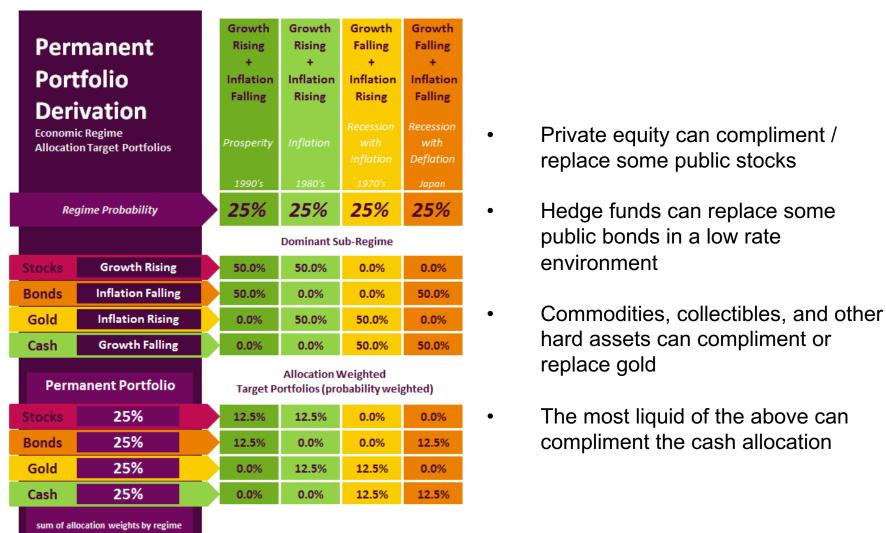


Mining risks: Investing in gold mining stocks comes with additional risks, such as operational risks at the mine, regulatory risks, and exploration risks.



Source: Ycharts

Rather, consider gold's role in "The Permanent Portfolio"



Source: https://cssanalytics.wordpress.com/2012/11/01/permanent-portfolio-derivation-and-historical-performance/
Based on Harry Browne's "Fail Safe Investing"



Micro gold futures & big gold options on IBKR TWS



"Big" Gold (GC) vs Micro Gold (MGC) on IBKR TWS

LAST CHANGE

GC ∞ Apr26'23 @COMEX

MGC ∞ Apr26'23 @COMEX

* 1817.20 -7.70 -0.42%

* 1817.40 -7.50 -0.41%

© ⊕ DESCRIPTION File Configure

Stock Description ————————————————————————————————————		Stock Description ————————————————————————————————————				
Gold		E-Micro Gold	<u> </u>			
Security Type	FUT	Security Type	FUT			
Underlying	GC IND	Underlying	MGC IND			
Contract Month	APR23	Contract Month	APR23			
Expiration Date	APR 26 '23	Expiration Date	APR 26 '23			
Last Trading Date	APR 26 '23 13:30 EST	Last Trading Date	APR 26 '23 13:30 EST			
Currency	USD	Currency	USD			
Multiplier	100	Multiplier	10			
Exchange	COMEX	Exchange	COMEX			
Trading Class	GC	Trading Class	MGC			
Symbol	GCJ3	Symbol	MGCJ3			
Product Type	Metal	Product Type	Metal			
Settlement Method	Physical Delivery	Settlement Method	Physical Delivery			
Physical Delivery	Not permitted at Interactive Brok	Physical Delivery	Not permitted at Interactive Brokers			
Trading Schedule: February 28, 2023 Calendar		Trading Schedule: February 28, 2023 <u>Calendar</u>				
	09:30 - 17:00 (22:30 - 06:00 your t	_	09:30 - 17:00 (22:30 - 06:00 your time)			
	18:00* - 17:00 (07:00 - 06:00 your		18:00* - 17:00 (07:00 - 06:00 your time)			
Exchange Time Zone	US/Eastern	Exchange Time Zone	US/Eastern			
* Times in italics are on the calendary		* Times in italics are on the calendar date preceding trade date				
	ar date preceding trade date		•			
Margin Information ————————————————————————————————————		Margin Information				
Margin Requirements Per Contract More		Margin Requirements Per Contract More				
	92.58 USD	Initial 116	9.26 USD			
Maintenance 935	4.06 USD	Maintenance 935	3.41 USD			
Any stock, options or fu	utures symbols displayed are for illus	trative purposes only and	are not intended to portray recommendations.			

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Source: Interactive Brokers, 28 Feb 2023

Sample Micro Gold Trade







Trading gold via futures

- Only need to fund margin
- Long leverage financing rate built in
- Short position as easy as long position
- What you see is what you pay
- Need to "roll" every contract expiry

... vs an ETF

- Need to fund in full
- Margin loan (interest) to leverage long position
- Need to borrow shares to short
- Expense ratio charges gold reserves over time
- Can buy and hold "forever"



Full-size gold (GC) also has options...

© ⊕ ⊕ GC ∞	Apr26'23 @	COME	x▼ PUT/CALLs (Side I	oy Side) ▼						<mark>1815.20</mark> -9.70 (-0.	53%) ? (〕 ♀ ℰ ⋄ ▼	
APR / JUN OG 100 56 DAYS	MAY / OC 10 86 D	G 0 FOP la	100 st trading day is MAY 25 '2		TA	BBED VIEW	▼ PUT/C/	ALL ▼	All STRI	KES▼ COMEX▼ TRA	ADING CLAS		
			lying FUT contract is JUN 28			STRIKE				PUTS		IV: 13.7%	
OPTN O VOL	LUMEBID S		BID x ASK	DELTA AS			OPTN O V	OLUME B		BID x ASK		SK SI	
23		2	• 87.70 x 88.40 •	0.725	1	1765	30		59	• 21.60 x 22.10 •	-0.280	64	
28		2	• 84.20 x 84.90 •	0.711	1	1770	52		53	• 23.10 x 23.50 •	-0.294	6	
226		2	• 80.80 x 81.50 •	0.697	1	1775	353		58	• 24.60 x 25.10 •	-0.309	62	
2		1	• 77.50 x 78.20 •	0.682	1	1780	198		66	• 26.20 x 26.70 •	-0.324	17	
2		1	• 74.30 x 74.90 •	0.667	1	1785	12		54	• 27.90 x 28.40 •	-0.339	17	
11		1	• 71.10 x 71.80 •	0.651	1	1790	59		54	• 29.70 x 30.30 •	-0.354	17	
1.60%	2	1	• 68.00 x 68.70 •	0.636	1	1795	21	170	46	• 31.60 x 32.20 •	-0.370	17	
1.68K	2	1	• 65.00 x 65.70 •	0.620	6	1800	3.80K	179	39	• 33.70 x 34.00 •	-0.386	1	
18		3	• 62.10 x 62.80 •	0.604	3	1805	39		59	• 35.60 x 36.20 •	-0.402	17	
46		19	• 59.30 x 60.00 •	0.588	19	1810	348	1	38	• 37.80 x 38.30 •	-0.419	11	
20		25	• 56.60 x 57.30 •	0.571	30	1815	40	1	44	• 40.00 x 40.60 •	-0.435	17	
60		31	• 54.00 x 54.70 •	0.555	41	1820	568		56	• 42.30 x 42.90 •	-0.451	17	
243		35	• 51.50 x 52.10 •	0.538	45	1825	7.37K	2	38	• 44.80 x 45.40 •	-0.468	17	
69	7	37	• 49.00 x 49.70 •	0.522	47	1830	847	2	38	• 47.30 x 47.80 •	-0.484	11	
100	7 2	5	• 46.70 x 47.30 •	0.506	48	1835	95		38	• 49.90 x 50.40 •	-0.501	11	
108	2	43 7	• 44.40 x 45.00 •	0.489	48	1840	82 50		38	• 52.50 x 53.10 •	-0.517	11	
137	1	7	• 42.30 x 42.80 •	0.473	48 16	1845	3.00K	11	36	• 55.30 x 55.90 •	-0.534	17	
5.07K 10		43	• 40.20 x 40.70 •	0.457	16 48	1850 1855	3.00K 205	1.1	33 29	• 58.20 x 58.70 •	-0.550	11 34	
1.72K		43 7	* 38.10 x 38.70 * * 36.20 x 36.80 *	0.441 0.426	48 68	1860	205 1.45K		29	• 61.10 x 61.80 • • 64.10 x 64.80 •	-0.566 -0.581	28	
		7			68 48				23 16				
113	4	7	• 34.40 x 34.90 •	0.410		1865	116			• 67.20 x 67.90 •	-0.597	21	
569	4	/	• 32.60 x 33.10 •	0.395	49	1870	659		1	• 70.40 x 71.10 •	-0.613	6 😓	
OFF Strat	OFF Strategy Builder												

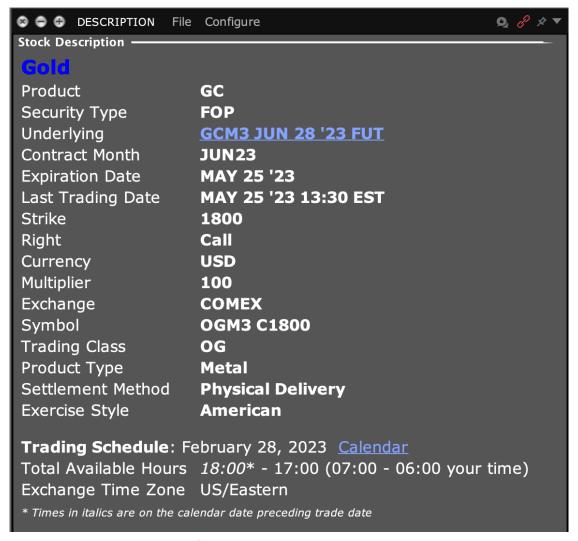
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Source: Interactive Brokers, 28 Feb 2023

Description of an 1800 strike call on GC

This one was quoted at \$6,600/contract



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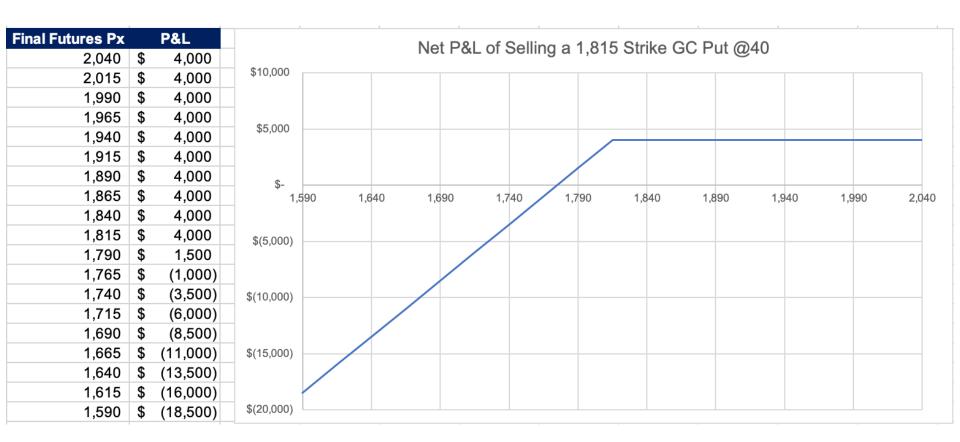
Sample payoff diagram of buying that call option



Source: Author's calculation



Another option example: selling (aka "writing") a put



Source: Author's calculation



If you expect gold to fall (or want to hedge), you could instead buy this put

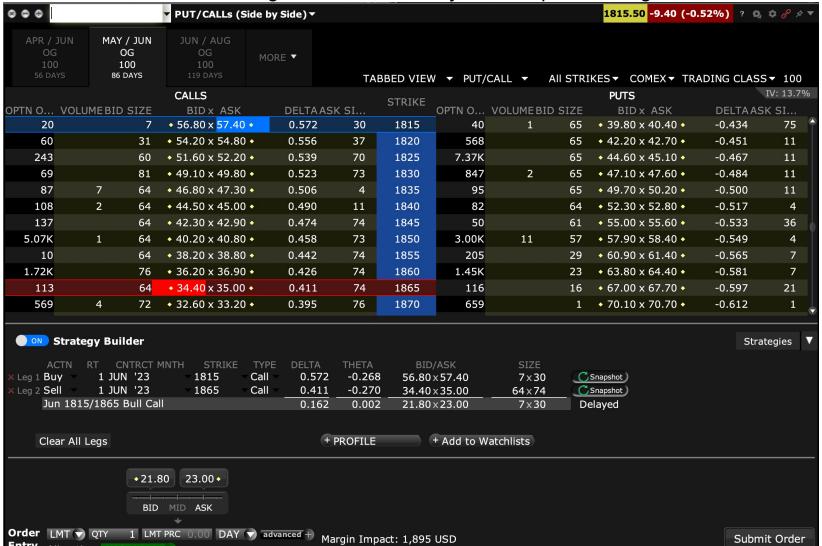


Source: Author's calculation



Using strategy builder to build a call spread on gold

This one costs \$2,300, all lost if gold <\$1,815 in May, \$5,000 paid out if gold >\$1,865





Gold vs Bitcoin

- "Scarcity as a Service"
- Only one element 79, only 21 million Bitcoin
- Supply curve related to the cost of "mining"
- Demand not related to usage
- Bitcoin is a digital asset with a much shorter track record that is subject to greater volatility and regulatory uncertainty.
- More on Crypto in another presentation...



Questions?

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