

Metals Investor Forum

November 2019

Bracing for the End Time

In 2020 resource juniors become unsuitable for the entire Boomer Generation. Is the junior resource sector facing extinction?

Presented by John Kaiser

November 16, 2019

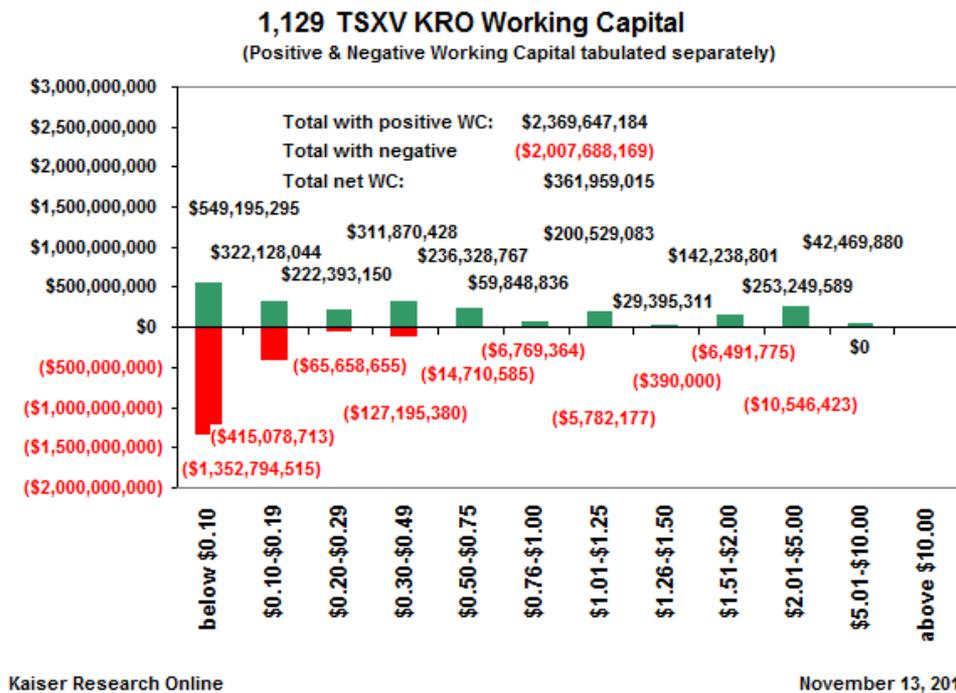
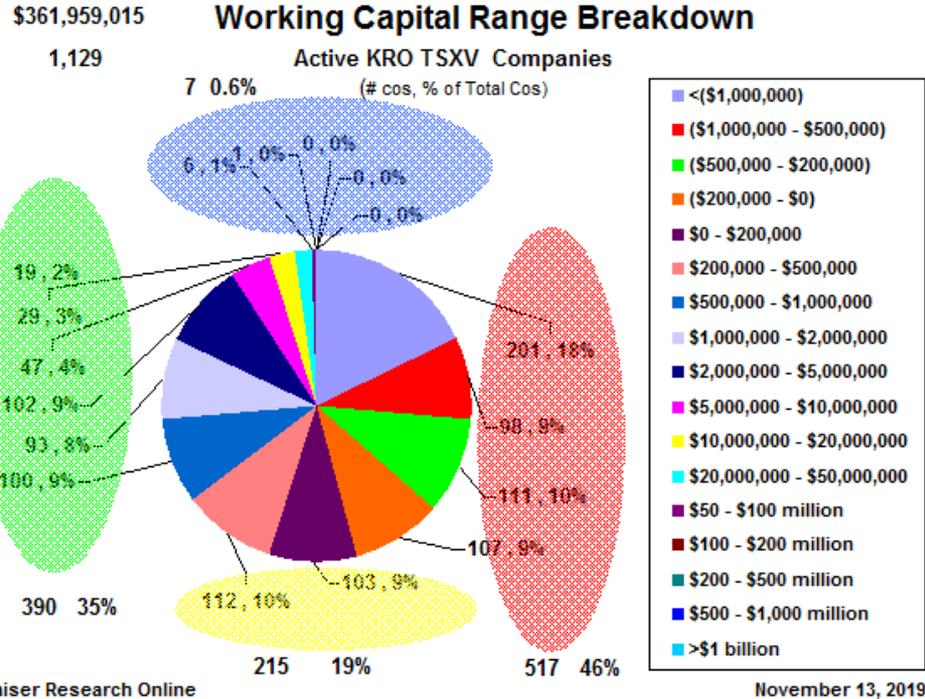
Vancouver, Canada

The Problem

- **By 2020 the youngest boomer has turned 55**
- **Canada's full service brokerage firms deem the purchase of resource juniors unsuitable for clients 55 and over**
- **They even refuse to accept unsolicited orders**
- **Boomers are now on their own with a discount broker if they still want to bet on resource juniors**
- **Independent research is a dying business**
- **Despite their familiarity with resource juniors boomers do not know how to quantify the size of the prize so as to place a rational bet**
- **Post boomers are not only equally ignorant about betting on resource juniors, but they tend to see mining as an evil to be avoided and even banned**
- **Post boomers understand only the momentum logic of the trend is my friend**
- **Until it isn't as is now the case with cannabis**
- **Post boomers are not likely to be accredited investors who can fund juniors directly**

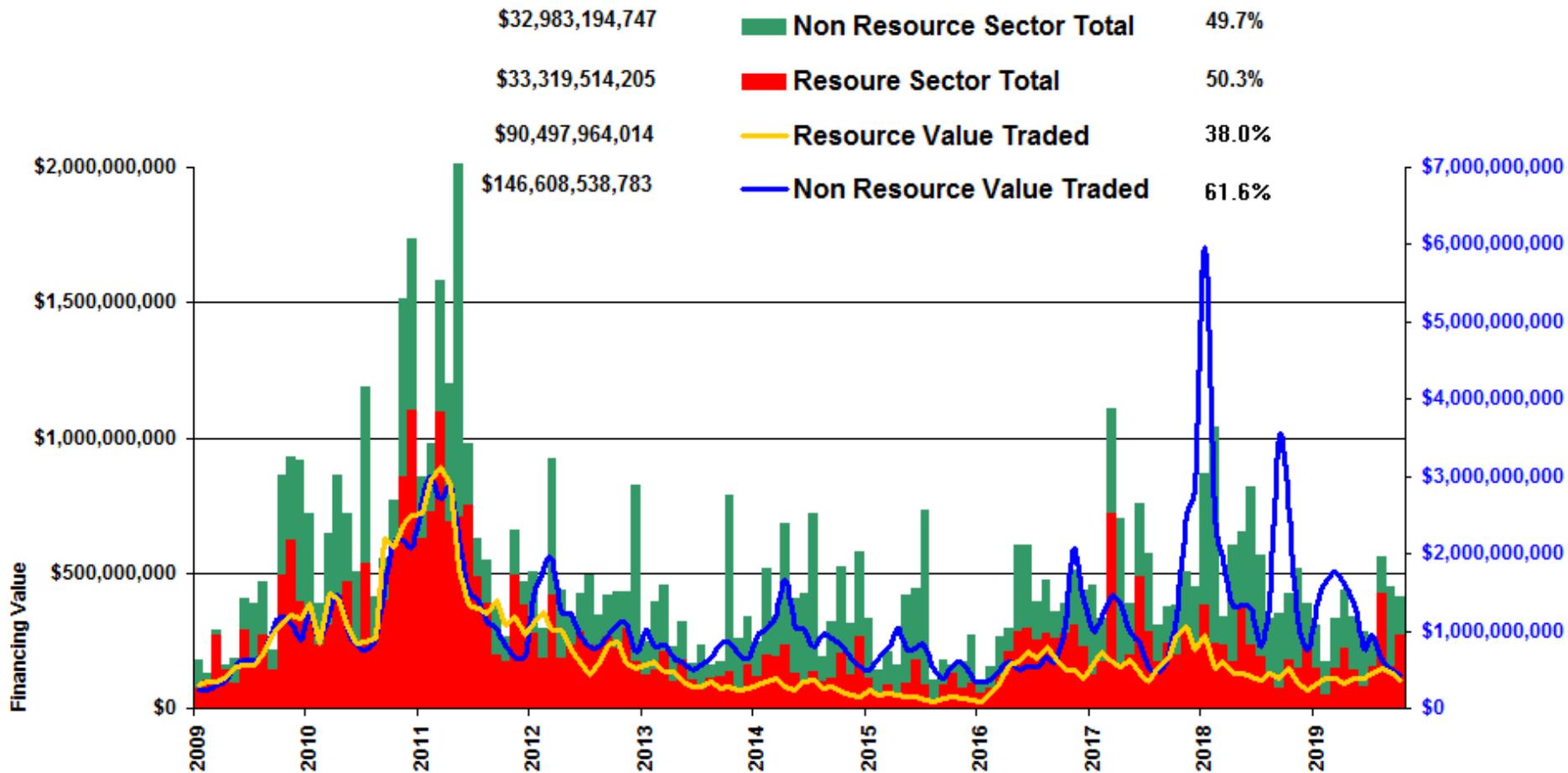
What can help the Boomers continue to play the resource junior game, empower the Post-Boomers to do so, and keep the resource junior eco-system alive?

Financial Health of the Junior Resource Sector (Bottom-Fishers Beware!)



Based on last filed financials of trading TSXV resource listings

Monthly Value of TSXV Financings 2009-2019

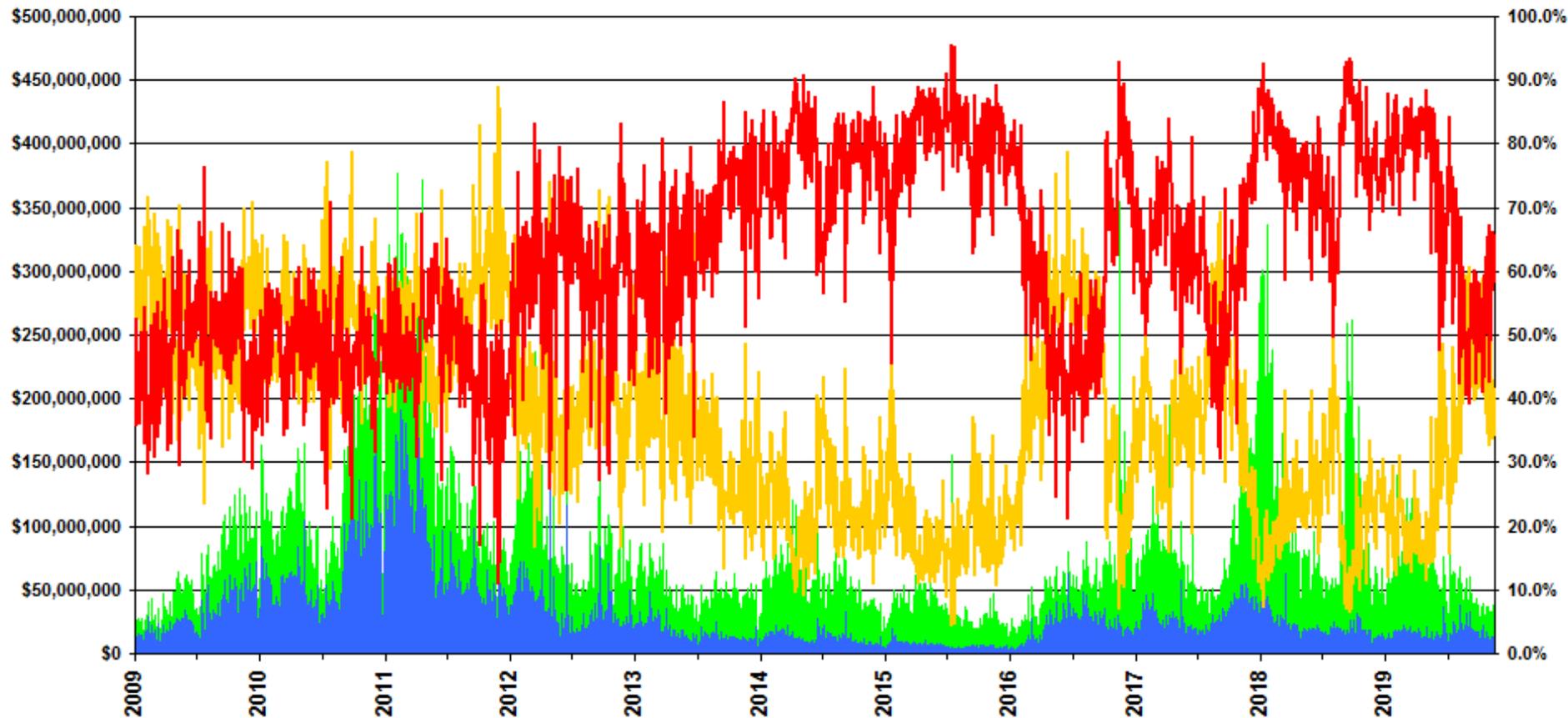




Daily TSXV Resource Sector Value Traded

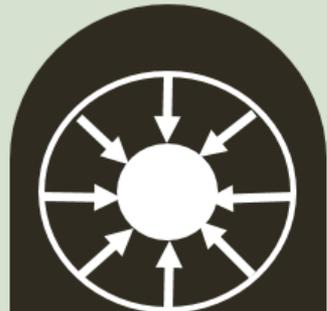
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- Non-Resource Traded Value
- TSXV Resource Sector Traded Value
- Non-Resource TSXV Traded Value %
- Resource Sector Traded Value %

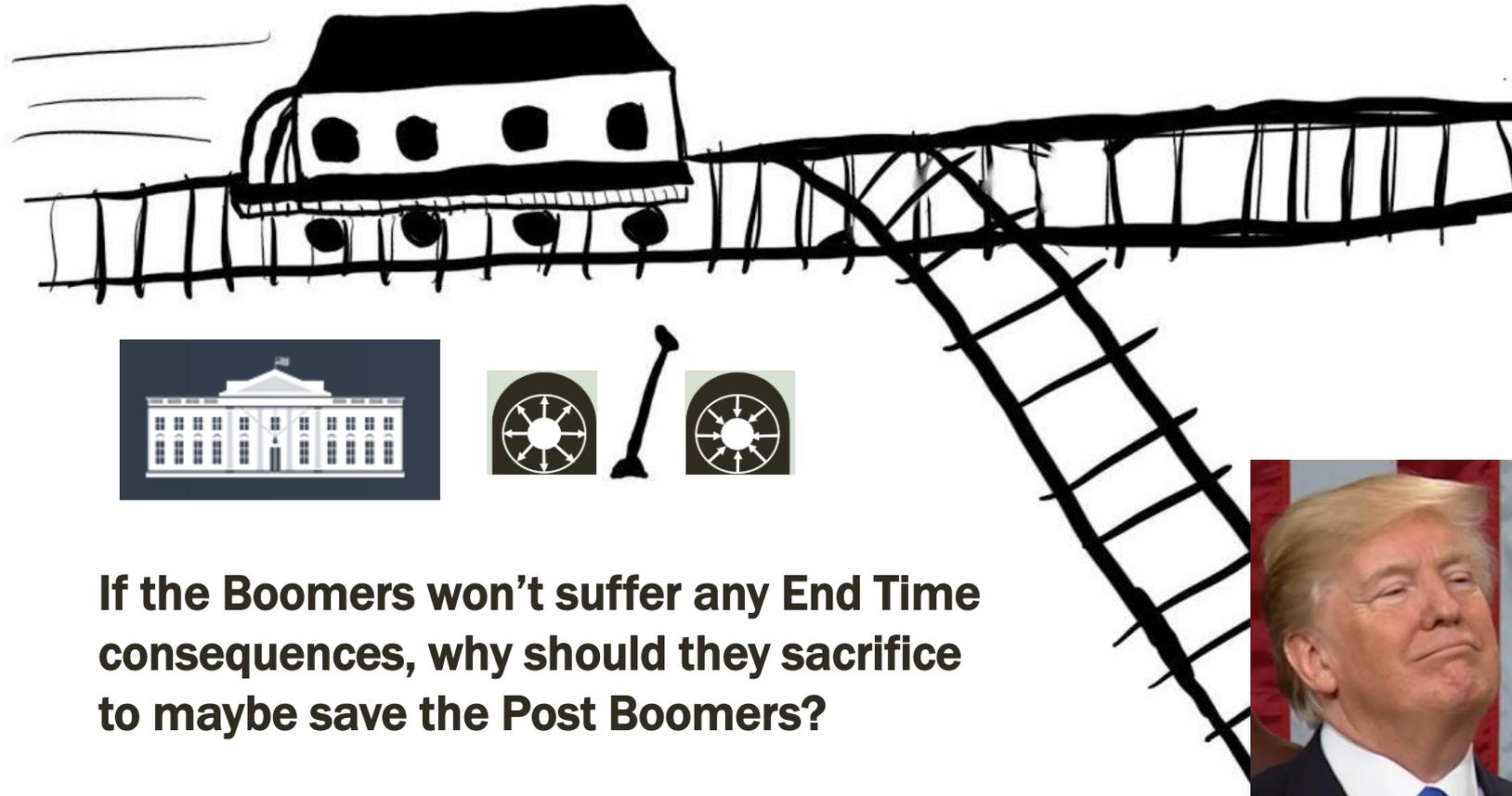


For whom is the light at the end of the tunnel growing or shrinking?

- **Retirees: 1945 and earlier (Greatest Generation)**
- **Boomers: 1946-1964 (Me Generation)**
- **Generation X: 1965-1979**
- **Millennials: 1980-1996**
- **Generation Z: 1997 plus**



The Tragedy of the Climate Change Problem



If the Boomers won't suffer any End Time consequences, why should they sacrifice to maybe save the Post Boomers?

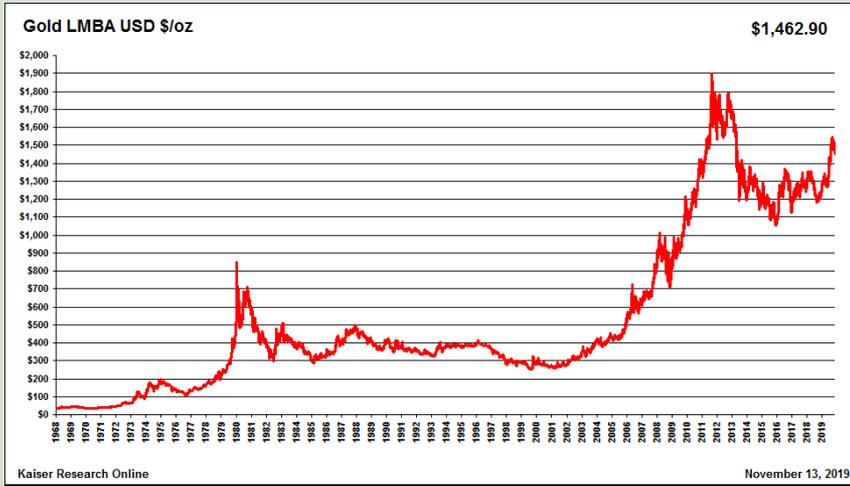
Light-Weighting: a solution that hurts nobody

Niobium and Scandium are the alloy champions that make steel and aluminum stronger and thus lighter, the key to reducing the energy consumption of anything that moves: cars, boats, trains, planes.

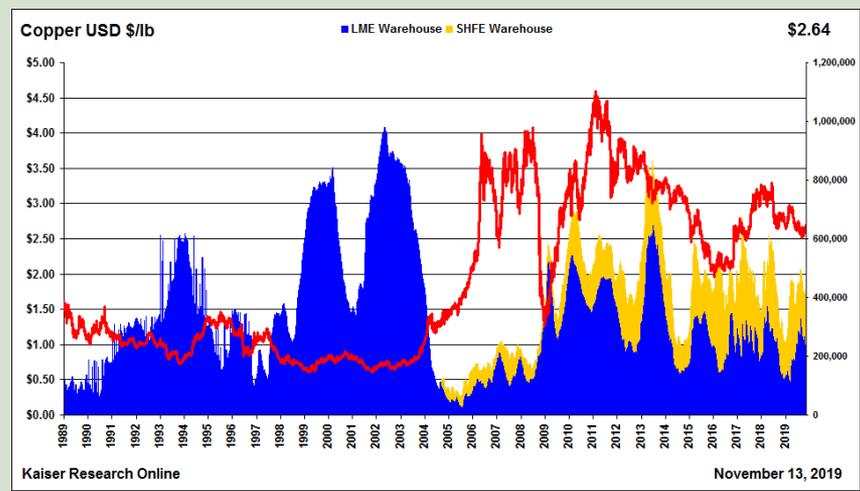


A resource sector story Post Boomers can embrace!

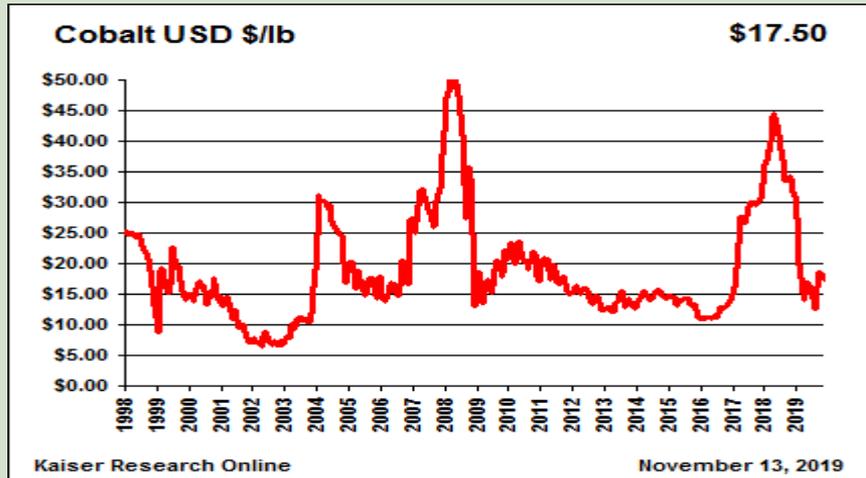
Gold: a proxy for inflation or uncertainty



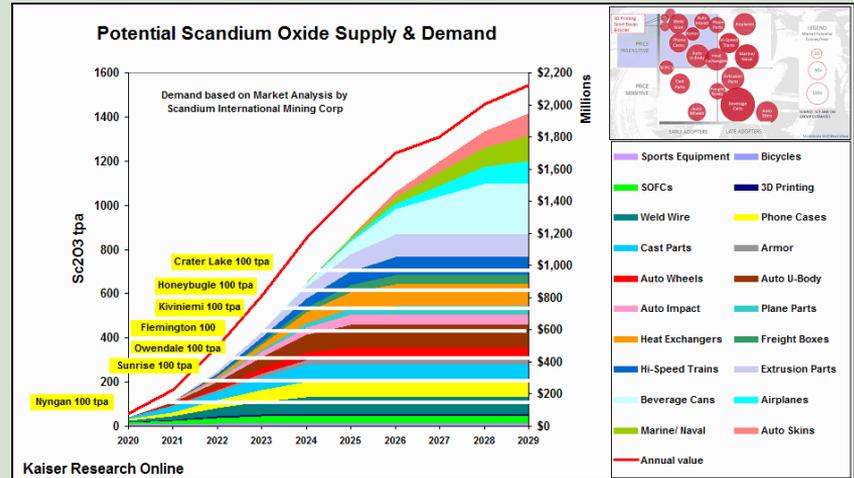
Copper: a proxy for macro-economics



Cobalt: a proxy for new demand & supply disruption



Scandium: a winner take all dynamic?

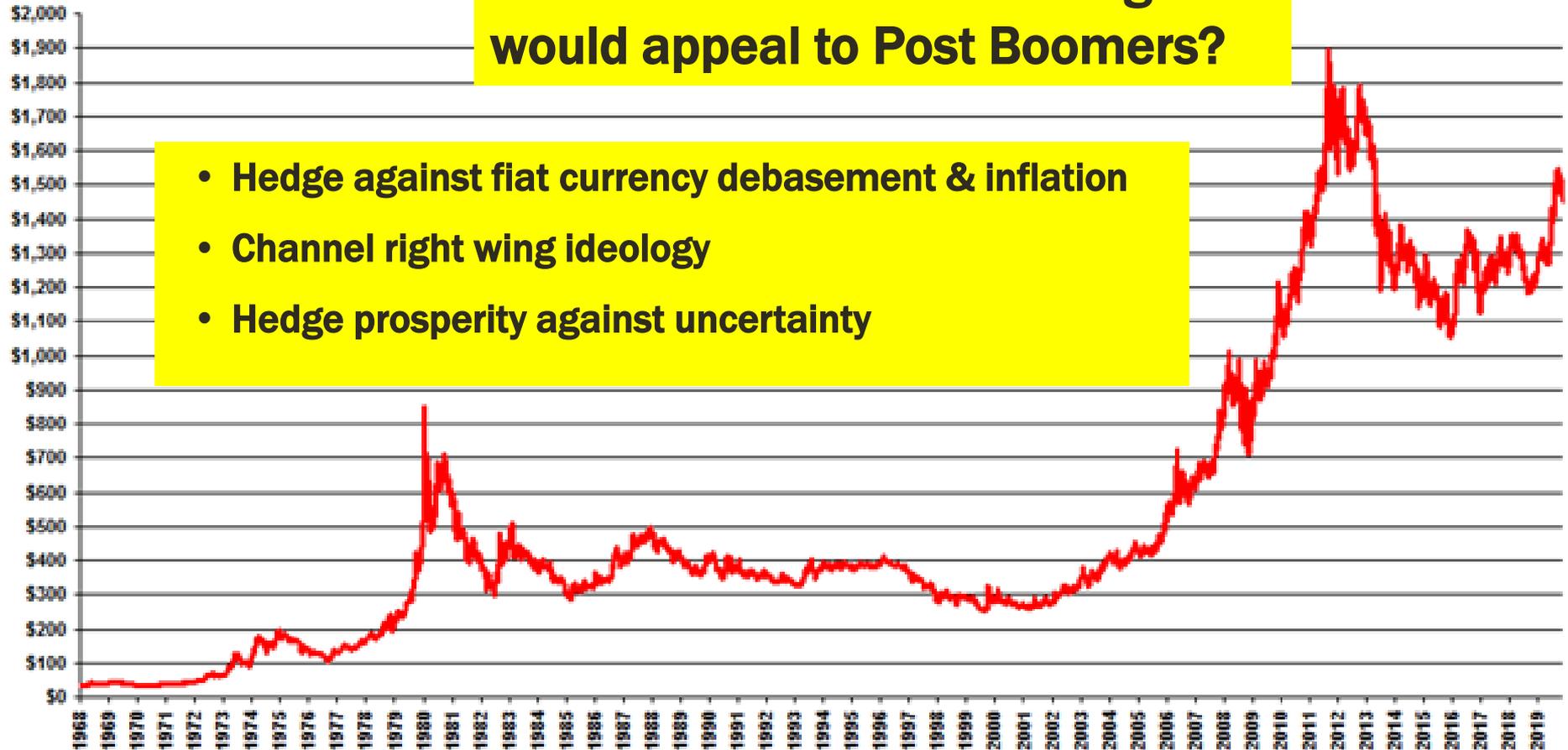


Gold LMBA USD \$/oz

\$1,462.90

Which of these reasons for gold would appeal to Post Boomers?

- Hedge against fiat currency debasement & inflation
- Channel right wing ideology
- Hedge prosperity against uncertainty



Trends in Global Gold Production 1845-2018

■ Annual Global Production
 — Annual Avg Gold Price
 — \$35 gold CPI adjusted from 1934 onwards

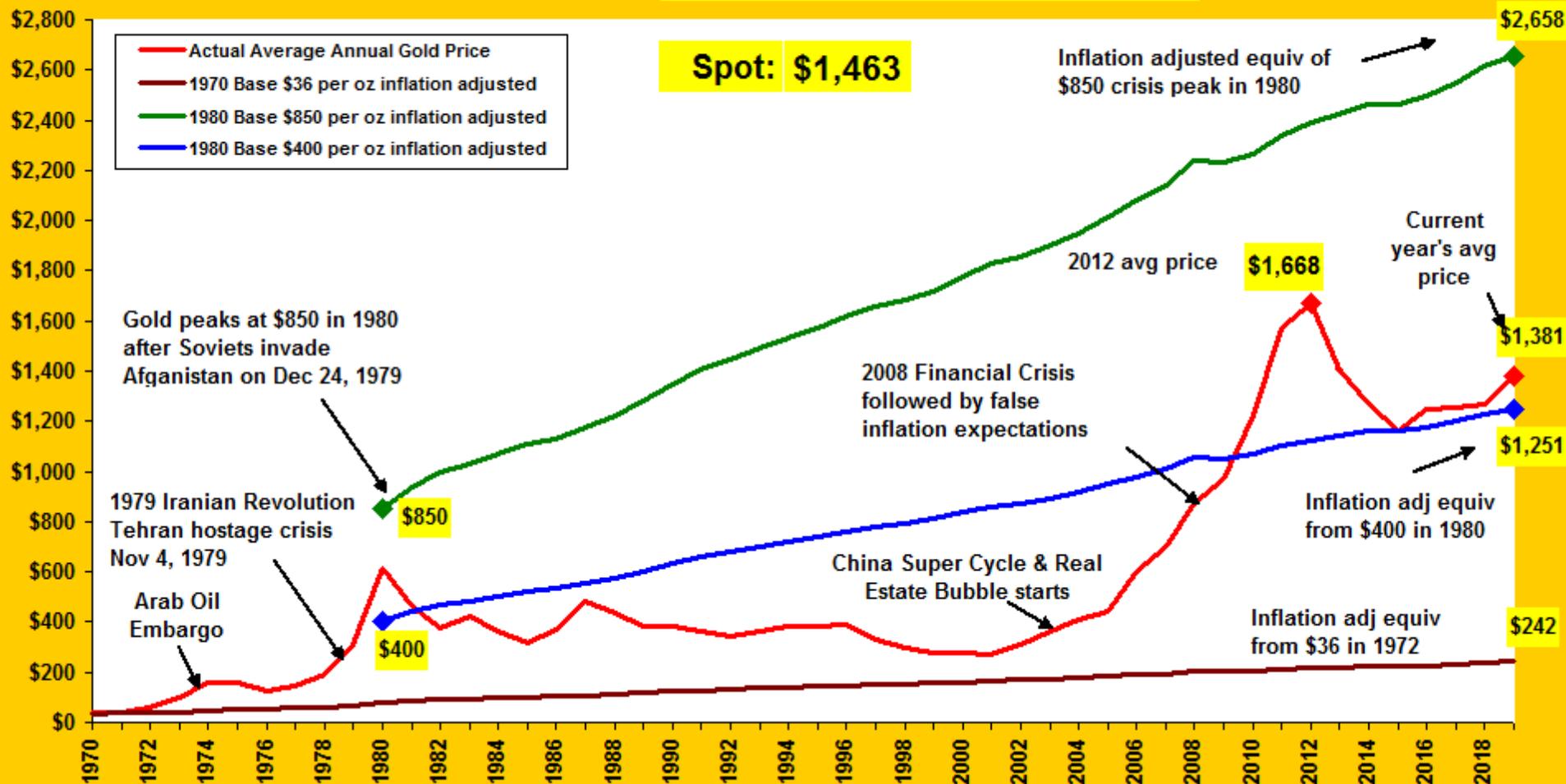


Gold in Perspective

Real Price Gain
(Spot vs \$400 base in 1980 adjusted by CPI)

17%

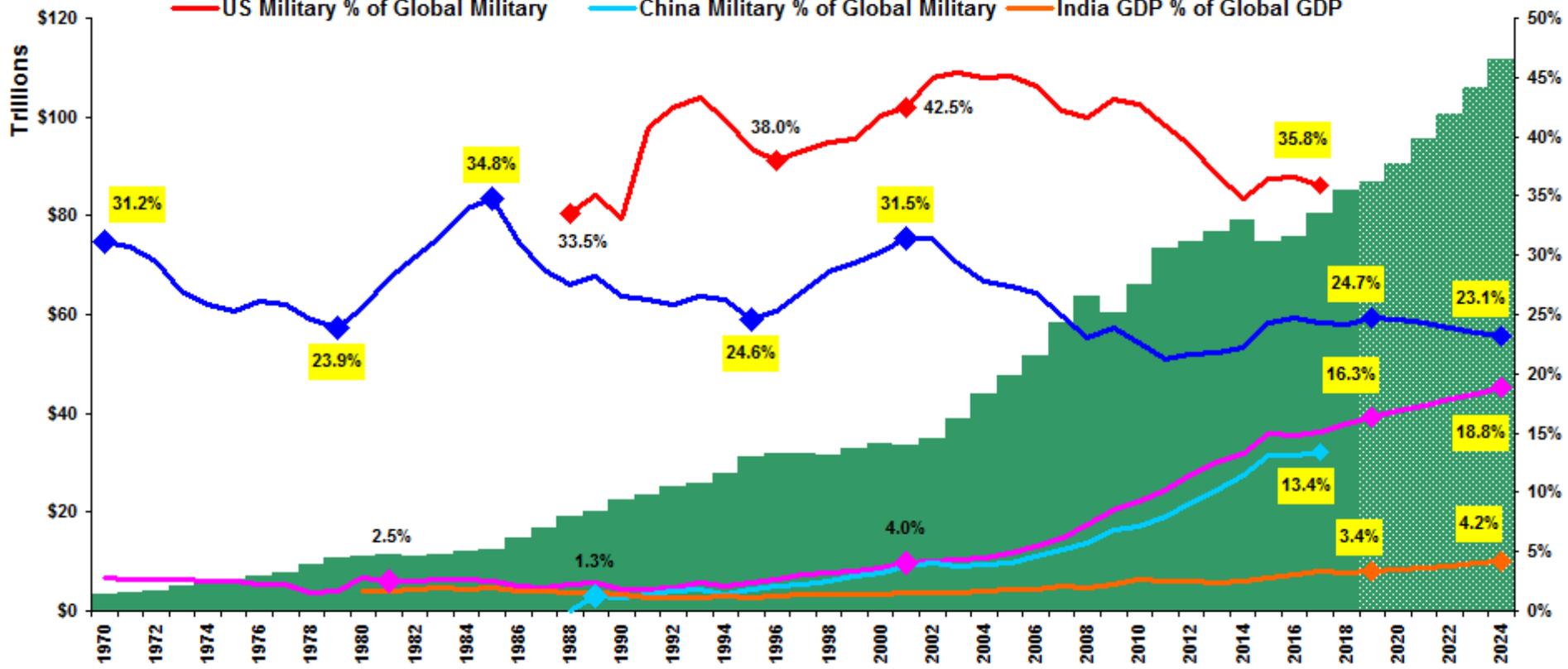
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US & China Relative Percentage of Global GDP & Military Spending

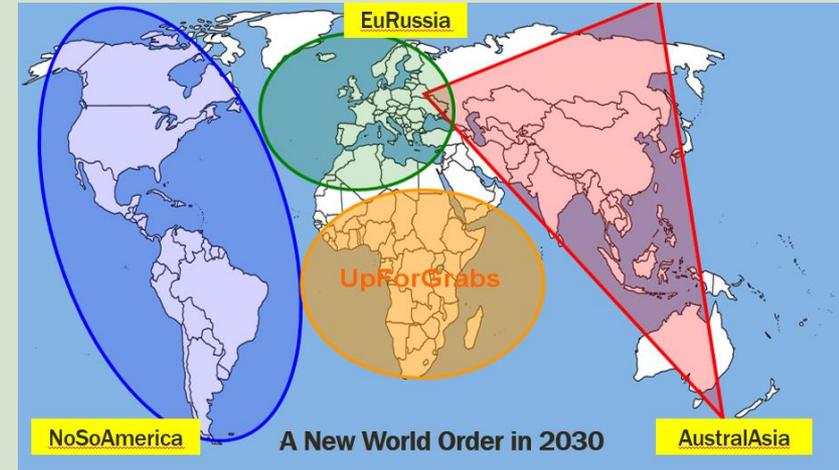
(2019-2024 GDP estimates by IMF)

■ Global GDP - Nominal IMF
 — US GDP % of Global GDP
 — China GDP % of Global GDP
— US Military % of Global Military
 — China Military % of Global Military
 — India GDP % of Global GDP



Key trends shaping the future

- Showdown between China and America with a risk of fragmenting globalized trade
- Populist backlash against free trade and winner take all libertarianism
- Thug culture and the rising popularity of authoritarianism
- America First policies & isolationism
- Extreme polarization of Americans
- Hyper-Surveillance and Everything is Fake
- Negative yielding debt instruments
- Is any of this reversible?



Why are Boomers shunning gold?

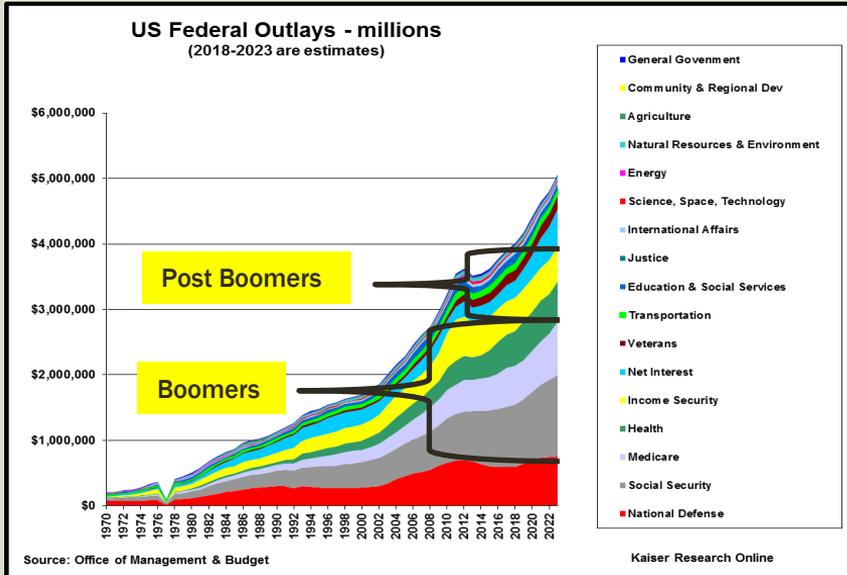
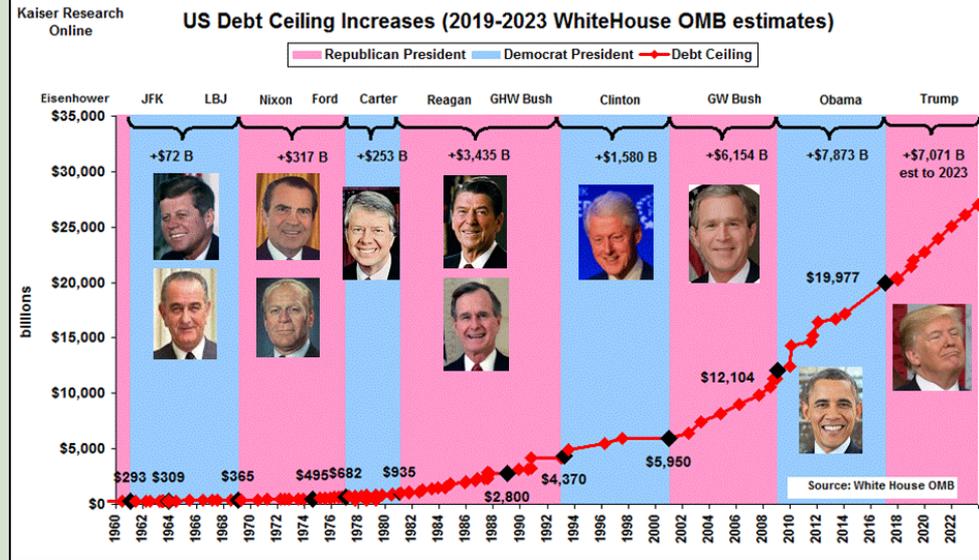
The traditional gold bug audience for Juniors is conflicted.

A thumbs up for gold is a thumbs down for Trump!

But what about the liberals who have shunned gold? Who can say for sure Trump will not win a second term?

And what if Elizabeth Warren is the next president? Is she going to reverse Trump's debt trajectory?

Gold is no longer political – It is an uncertainty hedge for everybody.



Nothing I say makes any difference. Maybe I and the majority of voters who did not vote for him should buy gold.

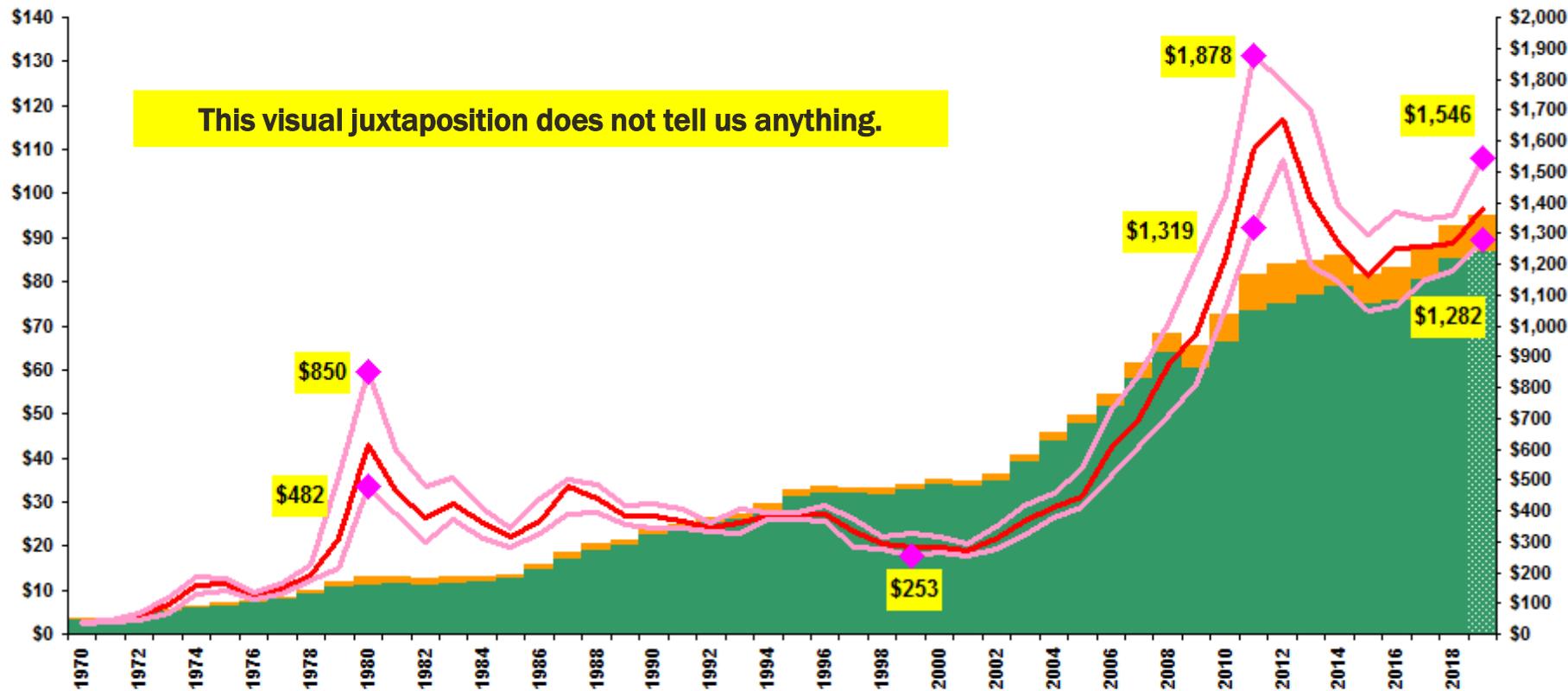
Everything I say He does. Is there a way I can buy gold without Him and the base knowing?



Relationship between Global GDP and Value of Existing Gold Stock

(2019 onwards GDP & Mine Supply estimated)

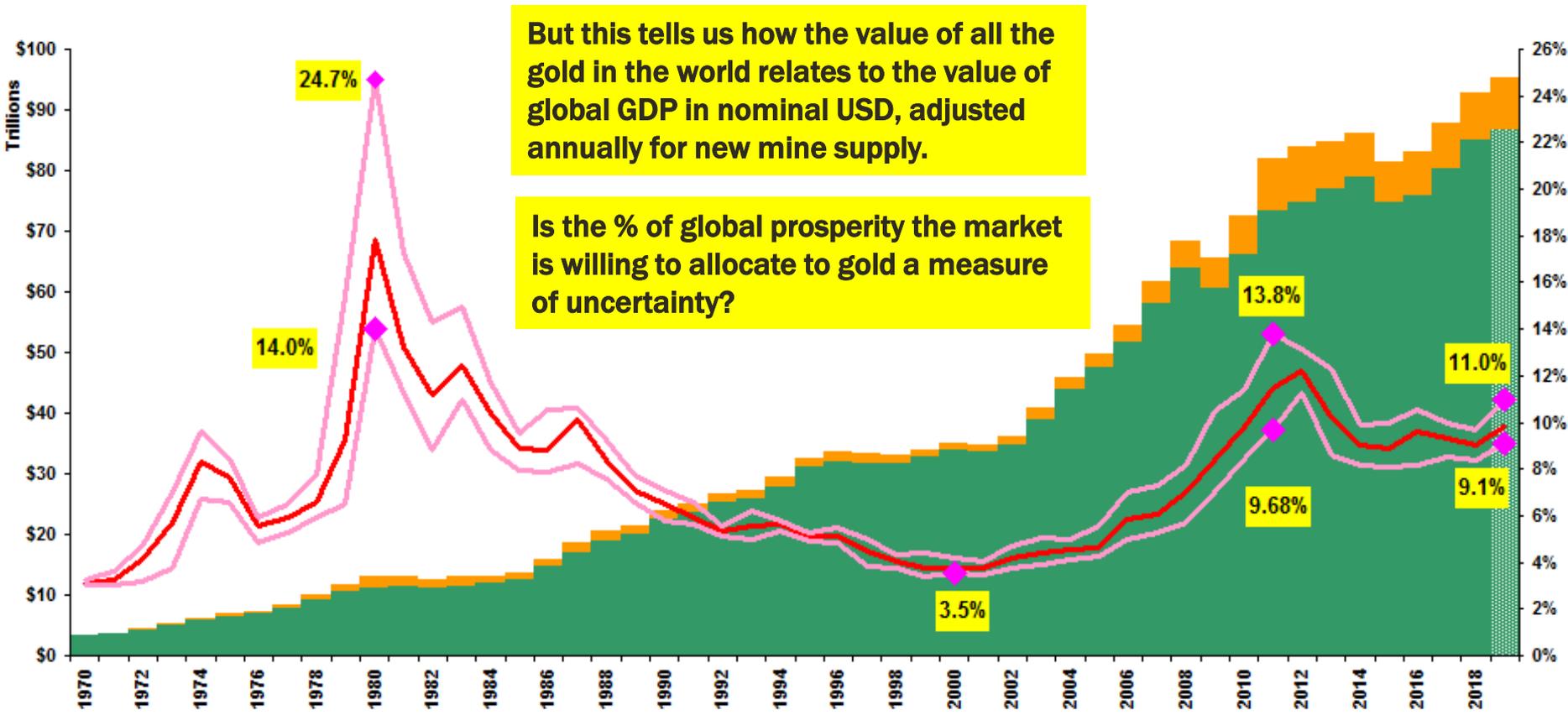
Global GDP Value of Gold Stock Average Gold Price Yearly Hi-Lo Range



Relationship between Global GDP and Value of Existing Gold Stock

(2019 onwards GDP & Mine Supply estimated)

Global GDP Value of Gold Stock Gold Stock Value as % of GDP Gold % of GDP Hi-Lo Range



But this tells us how the value of all the gold in the world relates to the value of global GDP in nominal USD, adjusted annually for new mine supply.

Is the % of global prosperity the market is willing to allocate to gold a measure of uncertainty?

Past Peak & Bottom Based Bubble & Bear Limits for Gold

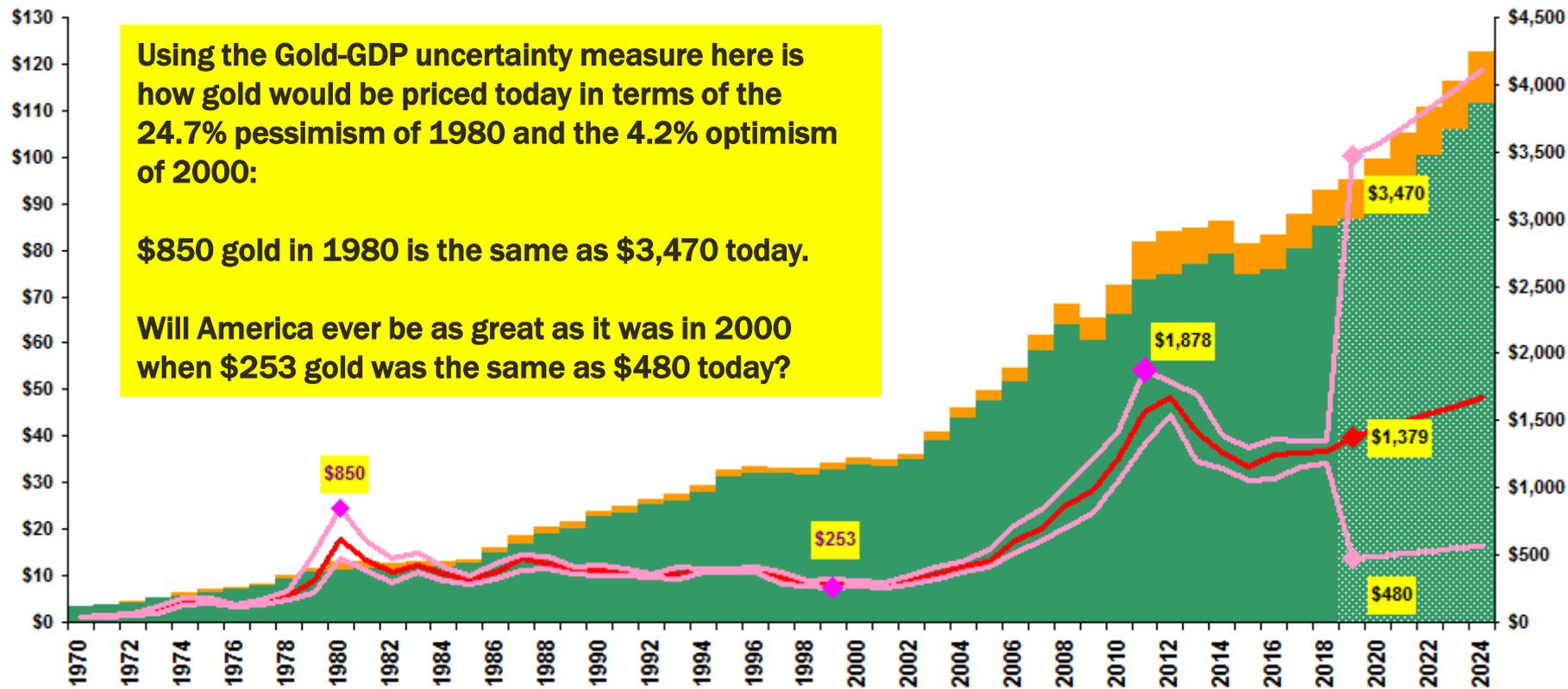
(2019 onwards GDP & Mine Supply estimated)

Global GDP

Value of Gold Stock

Average Gold Price

Yearly Hi-Lo Range

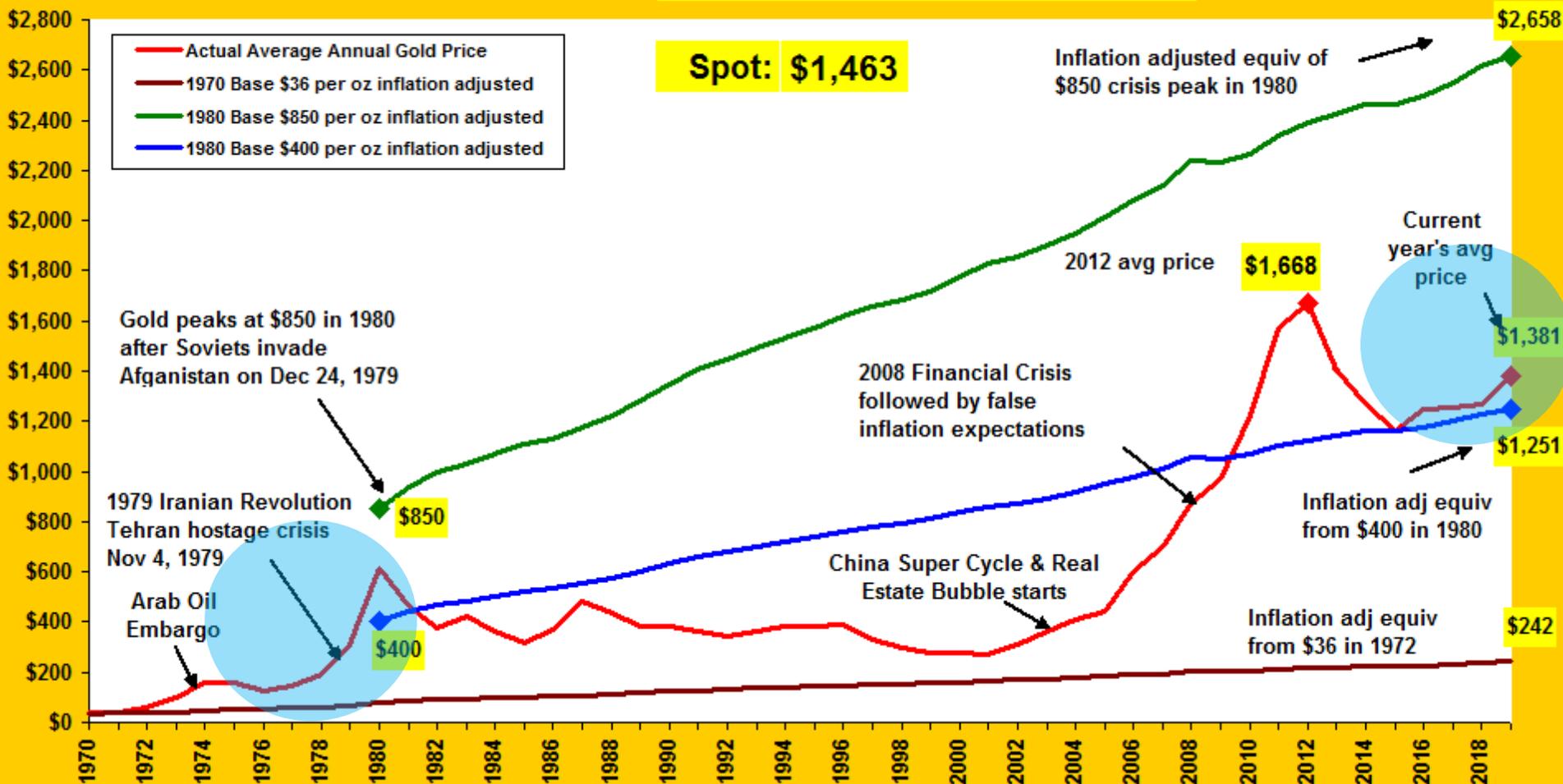


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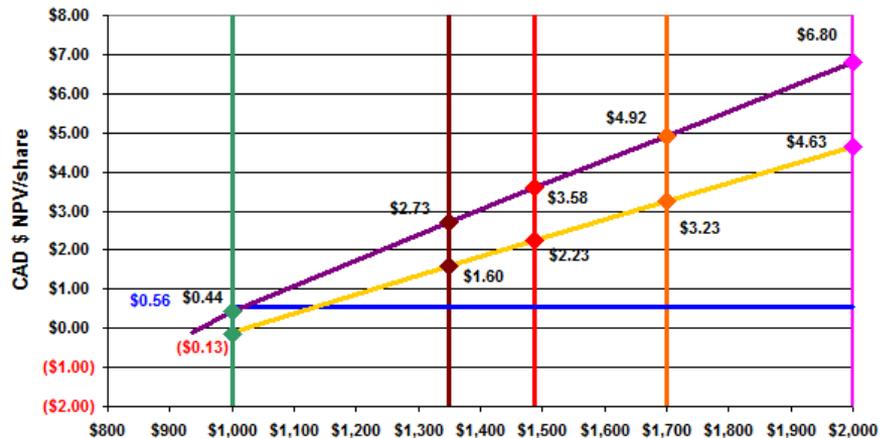
November 13, 2019



A gold double may be boring, but it offers big leverage for gold juniors

A move by gold from \$1,500 to \$2,000 is only a 33% gain. Why should Post Boomers care? But if it happens as a result of the market hedging uncertainty without inflation, the leverage for undeveloped gold projects is huge. In this example the market is pricing a stock at \$0.56 because at \$1,500 gold the project does not clear a key CapEx hurdle. But at \$2,000 gold it very much does so and the fair price range would be \$4.63-\$6.80 for a gain of 700% to 1,100%. Post cannabis bubble this will be of interest to millennials, and even boomers, the last of home turns 55 in 2020.

An uncertainty driven repricing of gold into the \$2,000 to \$3,000 range would have a profound impact on gold juniors with marginal deposits that are abruptly in the money, and for exploration plays because it reduces the cutoff grade for what counts as a discovery. Can it happen?



Resource Project Valuation: Discounted Cash Flow Model (DCF) Curse or Saving Grace for the Resource Juniors?

$$\sum_{n=1}^m \frac{\text{Annual Cash Flow}}{(1 + \text{Discount Rate})^n} - \text{Capital Cost} = \text{Net Present Value}$$

n = year of cash
m = mine life (years)

	Annual Revenue
less	Operating Costs
=	Pre-Tax Cash Flow
less	Taxes
=	After Tax Cash Flow

Note: if n=0 then the capital cost can be included as an initial negative value in the cash flow series because anything to the power of 0 =1. VBA functions start with n-1.

Rational Speculation Model – Uncertainty Ladder for Metal Projects

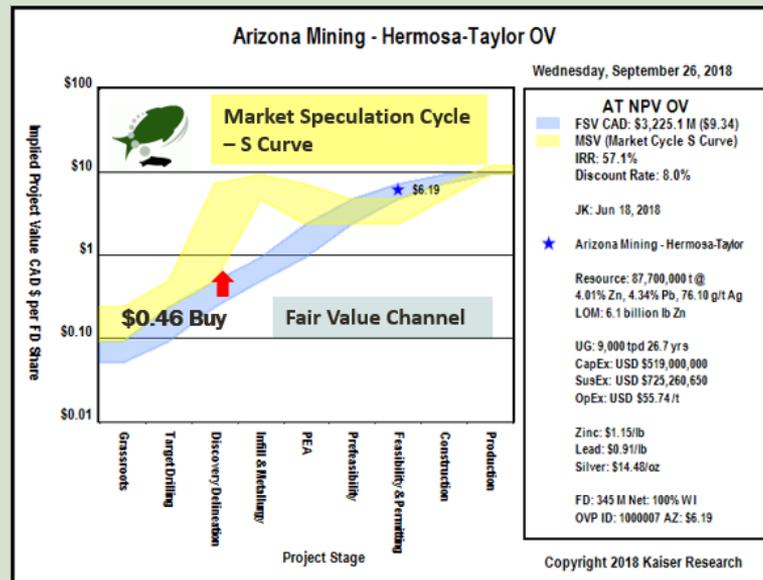
Exploration Cycle Stages	Success Probability		Outcome Target Fair Value Channels (\$ Millions)		
	Certainty	Leverage	\$100	\$500	\$2,000
1 Grassroots	0.5-1%	100-200	<\$1	\$2.5-5	\$10-20
2 Target Drilling	1-2.5%	40-100	\$1-2.5	\$5-12.5	\$20-50
3 Discovery Delineation	2.5-5%	20-40	\$2.5-5	\$12.5-25	\$50-100
4 Infill Drilling & Metallurgy	5-10%	10-20	\$5-10	\$25-50	\$100-200
5 PEA	10-25%	4-10	\$10-25	\$50-125	\$200-500
6 Feasibility	25-50%	2-4	\$25-50	\$125-250	\$500-1,000
7 Permitting, Feasibility, Marketing &	50-75%	1.3-2	\$50-75	\$250-375	\$1,000-1,500
8 Construction	75-100%	1	\$75-100	\$375-500	\$1,500-2,000
9 Production	100%		\$100	\$500	\$2,000

Note: the fair value range in each exploration stage row for each outcome target column is calculated by multiplying the target value by the success chance. ie stage 4 target \$500: 0.05 x \$500 = \$25, 0.1 x \$500 = \$50

Economic Geology: the Size of the Prize

Key Concepts

- Discounted Cash Flow Model
- Fair Value: Certainty times Prize
- Uncertainty Ladder for Resource Projects



Why do people speculate, or should we say “gamble”?

To make lots of money – and why do they think they will?

- they feel lucky
- they feel smarter than others – ahead of the curve
- they feel they have an inside edge
- they feel they have worked harder than others to identify the best bet
- They feel the trend is their friend

To be entertained

- experiencing the adrenaline rush of being right
- the pleasure of the quest
- the perception that one is influencing the outcome
- participating in an ongoing discourse

In what way does the junior resource sector feed any of this?

Selling the Story: Push versus Pull

Push Marketing

- Old school broker as network hub
- Investor Relations firms
- Presentation lunches
- Conferences - presentations
- Mass broadcast – mail, email & Twitter blasts
- Online Media Hubs: BNN, INN, Kitco
- Newsletter writers – sponsored, bribed, independent
- Social Media – ad placement
- Social Media – influencers

Pull Marketing

- Conference – exhibit booths
- Stock Forums – Stockhouse, Hot Copper, CEO.ca
- Private Clubs
- Corporate Web Site
- One on One engagement

How do you achieve “stickiness” in the form of a longer term shareholder betting on a fundamental outcome rather than a short term move?

The Share Collective

Currently an expensive outcome visualization tool, but imagine what it could be!

Plan Notes

the underground portion of the Cortez Hills deposit which despite its depth is oxidized. The costs are borrowed from Barrick's reporting. The deposit tonnage and grade are entirely arbitrary since the target is under gravel cover. It is intended as a "what if" scenario for a project on which exploration drilling began in October 2018 consisting of an initial 6 scout holes on a 1,000 m spaced grid over a gold-in-groundwater anomaly with Carlin pathfinder element support.

Financial Outcome

Annual	
Discount Rate (Calc)	8.0%
NPV (Calc)	\$1,964,553,392 USD
IRR (Calc)	85.0%
Exchange Rate Used	1 USD = 1.30 CAD
Diluted Stock	96,648,701
Current Stock Price	\$0.385 CAD
NPV Based Future Stock Price (Calc)	\$26.41 CAD
Potential Stock Price Gain (Calc)	6,760%

Project Stage

Project Stage	Fair Project Value Range	Fair Stock Price Range
Grassroots	\$9.82 - \$19.6 M USD	\$0.130 - \$0.265
Target Drilling	\$19.6 - \$49.1 M USD	\$0.265 - \$0.660
Discovery Delineation	\$49.1 - \$98.2 M USD	\$0.660 - \$1.32
Infill & Metallurgy	\$98.2 - \$196 M USD	\$1.32 - \$2.64
PEA	\$196 - \$491 M USD	\$2.64 - \$6.60
Prefeasibility	\$491 - \$982 M USD	\$6.60 - \$13.2
Permitting & Feasibility	\$982 - \$1.45 B USD	\$13.2 - \$19.5
Construction	\$1.45 - \$1.96 B USD	\$19.5 - \$26.4
Production	\$1.96 B USD	\$26.4 CAD

Mine Info Assumptions

Mine Info Assumptions	Annual	Life of Mine
Mine Life		16.12
Mining Rate tpd = 1,700		
Strip Ratio = 0		
Mined Ore (tonnes)	620,500	10,000,000

Mineral Revenue (Gold)

Mineral Revenue (Gold)	Annual	Life of Mine
Gold (Spot Price)	Grade = 20 g/t Recovery = 90% Payable = 99% Spot Price = 1,229.95 \$/oz	

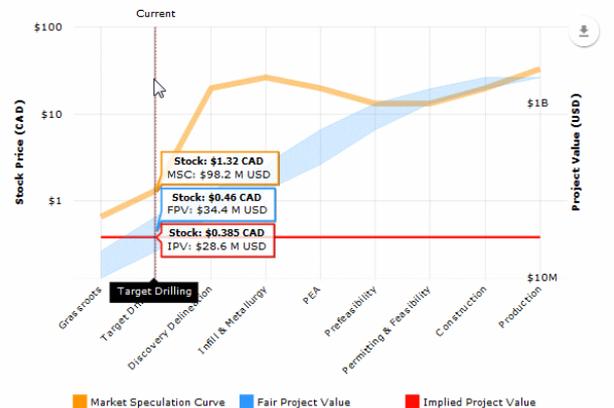
Recoverable Metal (Calc)

Recoverable Metal (Calc)	359,095 oz	5,787,180 oz
Payable Metal (Calc)	355,504 oz	5,729,308 oz
Metal Net Value (Calc)	\$437,251,621	\$7,046,762,621
Metal Concentrate Tonnage (Calc)	0	0
Metal Concentrate Transport Cost (Calc)	\$0	\$0

Risk Factor

Risk Factor	Risk Level	Risk Weighting
Environmental Risk	Low	1.0
Social Risk	Very Low	0.5
Title Risk	Very Low	0.5
Tax Risk	Low	1.0
Geopolitical Risk	Very Low	0.5
Infrastructure Risk	Very Low	0.5
Technical Risk	Very Low	1.0
Management Risk	Low	1.5
Financial Risk	High	1.5
Discount Rate (Calc)		8.0%

Current Stock Price	Net Interest	NPV Based Future Stock Price	Difference	Potential Stock Price Gain
\$0.385 CAD	100%	\$26.4 CAD	\$26.015 CAD	+ 6,759.88%



Outcome Visualisation NPV	IRR	Discount Rate
\$1,964,553,392 USD	85.0%	8.0%

Revenue + Costs	Per Tonne	Annual	Life of Mine
Capital Expenditure			\$300,000,000
Gross Payable Revenue (Calc)		\$437,251,621	\$7,046,762,621
Smelter/Transport Costs (Calc)		\$0	\$0
Royalties (Calc)	0%	\$0	\$0
Net Payable Revenue (Calc)		\$437,251,621	\$7,046,762,621
Mining Cost (Rock)	\$120		
Mining Cost (Ore)	\$120	\$74,460,000	\$1,200,000,000
Processing Cost	\$25	\$15,512,500	\$250,000,000
Other Cost	\$5	\$3,102,500	\$50,000,000
Total Mining Cost (Calc)	\$150		
Sustaining Cost		\$6,205,000	\$100,000,000
Total Operating Cost (Calc)		\$99,280,000	\$1,600,000,000
Pre-Tax Cash Flow (Calc)		\$337,971,621	\$5,446,762,621
Taxes (Calc)		83,032,721	1,338,158,281
Tax Rate	26%		
After-Tax Cash Flow (Calc)		\$254,938,899	\$4,108,604,339

Notes

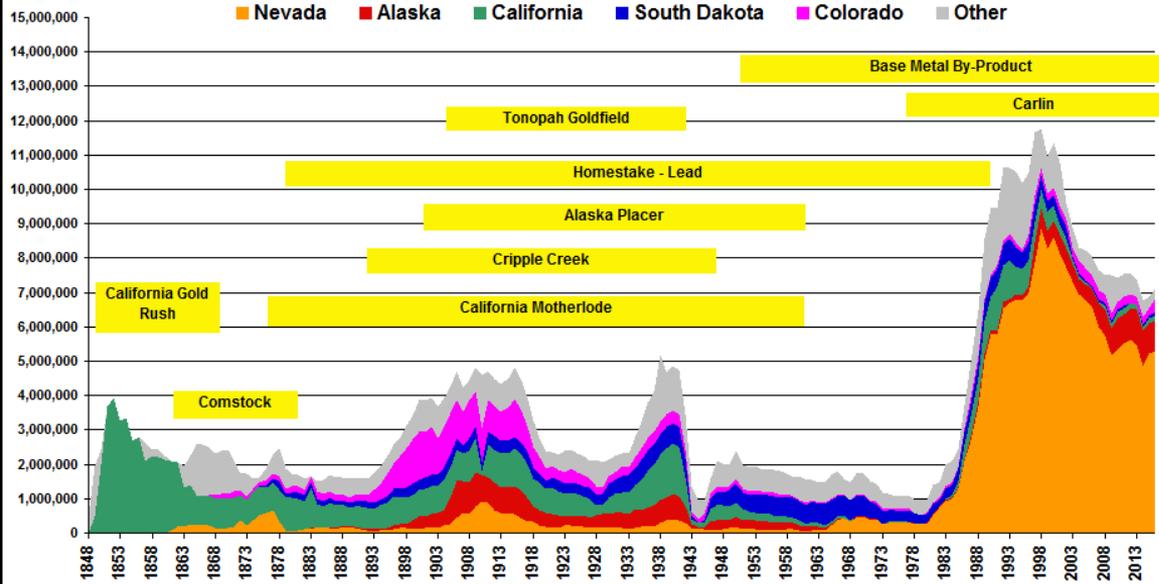
Mine Info Comments	
Processing Cost Notes	Assumes oxide ore.
Social Risk Notes	Only ranching activity nearby.
Title Risk Notes	Acquired by staking based on proprietary data collected by the company.
Tax Rate Notes	Federal 21%, Nevada state 5%.
Royalties Notes	No royalties, acquired by staking.
Technical Risk Notes	The assumption is that the orebody is oxidized and thus will not pose any metallurgical challenges.
Financial Risk Notes	This may be exaggerated because if a deposit like this is found there will be no lack of capital to develop. The risks with how much exploration is needed to find the deposit and delineate it.

Size of the Prize enabled Speculation that empowers both Boomers and Post Boomers is the key to saving the junior resource sector.



KaiserResearch.com AZ - TSX - Daily - CAD \$6.19 Copyright 2018 Kaiser Research

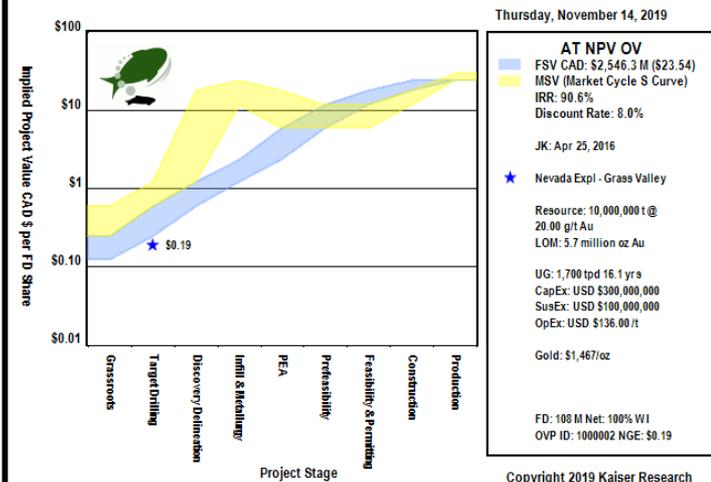
US Gold Production (oz) 1848-2016



Source: USGS

Kaiser Research Online

Nevada Expl - Grass Valley Outcome Visualization



Kaiser Research Online

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Moraga, CA, 94556, USA

**Annual KRO Individual
Membership: USD \$450**

**Annual KRO Multi-User
Corporate Membership:
USD \$1,000**

The deadline for locking up these rates is December 31, 2019.