

Kopernik Global Investors presents **The Antidote to Correlation Webinar**



**Managing Geopolitical Risk in a
Global Portfolio, Including Views
on Current Events**
April 2022



Kopernik
Global Investors, LLC



IMPORTANT INFORMATION

The information presented herein is proprietary to Kopernik Global Investors, LLC. This material is approved for a presentation to authorized individuals only and, accordingly, this material is not to be reproduced in whole or in part or used for any purpose except as authorized by Kopernik Global Investors, LLC. This material is for informational purposes only and should not be regarded as a recommendation or an offer to buy or sell any product or service to which this information may relate.

The securities discussed in this webinar should not be considered recommendations to purchase or sell a particular security. Kopernik Global Investors, LLC has positions, long or short, through client separate accounts or pooled investment vehicles that are discussed throughout this presentation. It should not be assumed that securities bought or sold in the future will be profitable, will equal the performance of securities in this portfolio, or will attain the upside potential as described herein. Current and future portfolio holdings are subject to risk.

Please consider all risks carefully before investing. The investment strategies managed by Kopernik are subject to certain risks such as market, investment style, interest rate, deflation, and illiquidity risk. Investments in small and mid-capitalization companies also involve greater risk and portfolio price volatility than investments in larger capitalization stocks. Investing in non-U.S. markets, including emerging and frontier markets, involves certain additional risks, including potential currency fluctuations and controls, restrictions on foreign investments, less governmental supervision and regulation, less liquidity, less disclosure, and the potential for market volatility, expropriation, confiscatory taxation, and social, economic and political instability. Investments in energy and natural resources companies are especially affected by developments in the commodities markets, the supply of and demand for specific resources, raw materials, products and services, the price of oil and gas, exploration and production spending, government regulation, economic conditions, international political developments, energy conservation efforts and the success of exploration projects. There can be no assurances that investment objectives will be achieved.

The U.S. government and many other countries have imposed economic sanctions on certain Russian individuals and Russian corporate and banking entities. Kopernik continues to monitor such sanctions and are taking necessary actions to ensure compliance with applicable sanctions, laws, and regulations.

Countries worldwide have experienced outbreaks of infectious illnesses and may be subject to other public health threats, infectious illnesses, diseases or similar issues in the future. Any spread of an infectious illness, public health threat or similar issue could reduce consumer demand or economic output, result in market closures, travel restrictions or quarantines, and generally have a significant impact on the economies of the affected country and other countries with which it does business, which in turn could adversely affect investments in that country and other affected countries.

The Global Industry Classification Standard ("GICS") was developed by and is the exclusive property and a service mark of MSCI Inc. ("MSCI") and Standard & Poor's, a division of The McGraw-Hill Companies, Inc. ("S&P") and is licensed for use by Kopernik Global Investors, LLC. Neither MSCI, S&P nor any third party involved in making or compiling the GICS or any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability, and fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P, any of their affiliates or any third party involved in making or compiling the GICS or any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

Kopernik Global Investors, LLC is an investment adviser registered under the Investment Advisers Act of 1940, as amended.

This webinar, as of April 7, 2022 is descriptive of how the Kopernik team manages the investment strategies offered by Kopernik. There is no guarantee that any strategy's investment performance objectives will be achieved. This profile is not legally binding on Kopernik Global Investors, LLC or its affiliates.



Alissa Corcoran, CFA

Deputy CIO, Director of Research & Analyst

Alissa Corcoran is Deputy CIO, Director of Research and an analyst covering health care at Kopernik. She has been in the investment industry since 2012 and joined Kopernik as an analyst in 2013. She became Director of Research in 2019. Earlier in her career, she held positions at Vinik Asset Management, a genetics lab, and various non-profit organizations.

Alissa has a Bachelor of Science in biochemistry from Bates College and earned her MBA from the University of Southern California's Marshall School of Business. She has received the Chartered Financial Analyst designation.



Todd Tosti, CFA

Analyst

Todd Tosti is an analyst covering industrials for Kopernik. He has been in the investment industry since 2009 and joined Kopernik in 2016. Earlier in his career, he worked at BlackRock Advisors in London.

Todd has a bachelor of science in economics from Boston College and an MBA from Columbia Business School. He has received the Chartered Financial Analyst designation.



David Iben, CFA

Chief Investment Officer and Lead Portfolio Manager

David Iben is the Chief Investment Officer of Kopernik Global Investors and is the sole Portfolio Manager of the Kopernik Global All-Cap strategy, Lead Portfolio Manager of the Kopernik Global Unconstrained strategy, Co-Portfolio Manager of the Kopernik Global Long-Term Opportunities strategy and Co-Portfolio Manager of the Kopernik International strategies. He is the Managing Member, Founder and Chairman of the Board of Governors of Kopernik Global Investors.

Dave earned his bachelor's degree from University of California, Davis, and his MBA from the University of Southern California Marshall School of Business. He has received the Chartered Financial Analyst designation and is a member of CFA Institute and CFA Society of Tampa Bay.



OUR MESSAGE TODAY

- We condemn the violence in Ukraine
- We cannot prevent war. We focus on that which is within our circle of influence
- We will discuss our views on:
 - Investing in emerging markets
 - Defining and managing investment risk
 - The importance of independent thought, especially during emotional times
 - The moral issues of global investing
 - Our investments in Russia

BERKSHIRE HATHAWAY MEETING, 2007



source: www.mrss.com



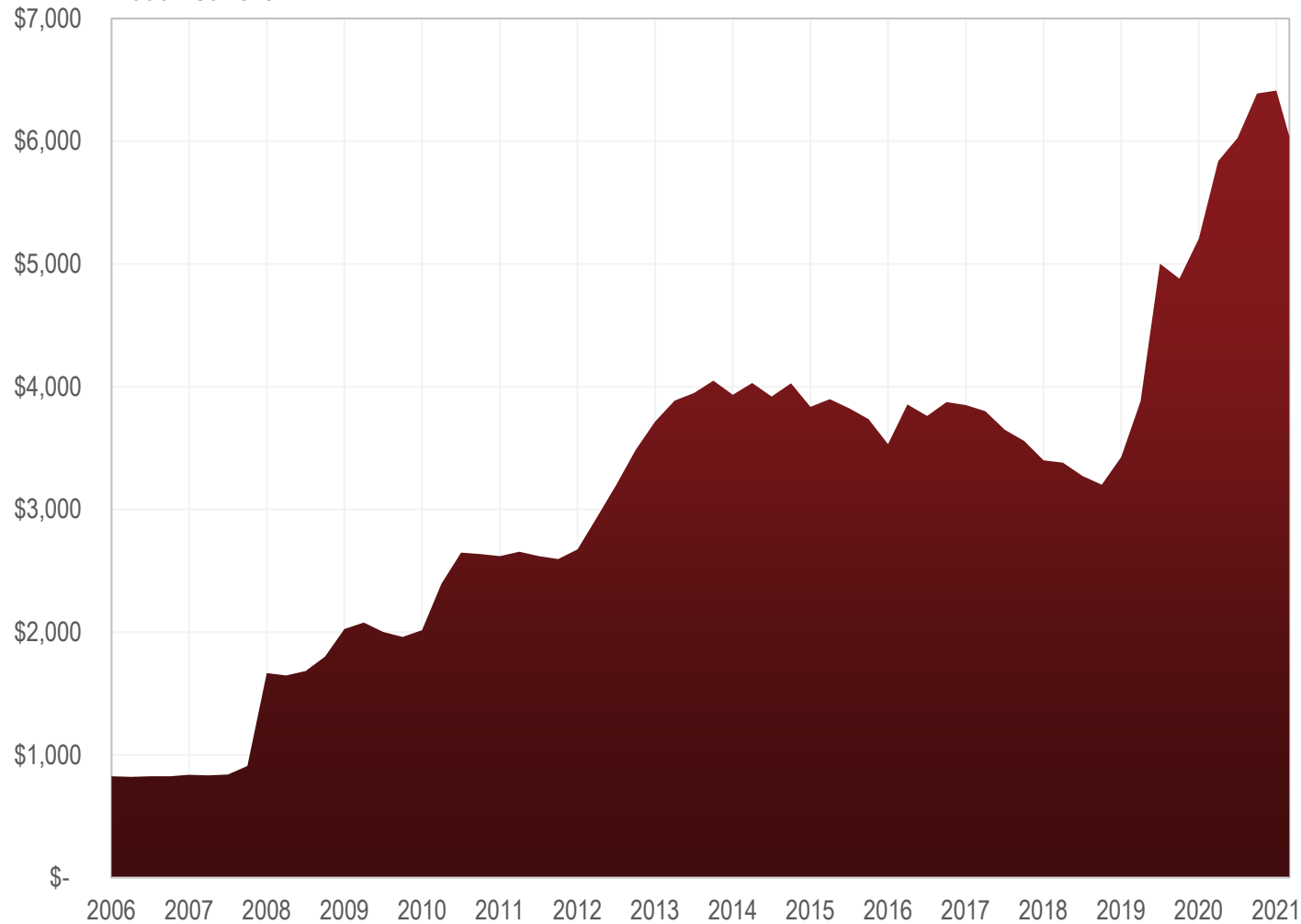
source: www.cnbc.com

THE EROSION OF PURCHASING POWER

Source: Bloomberg

US Monetary Base

2006 - Current



First Trust Natural Gas ETF

2020 - Current





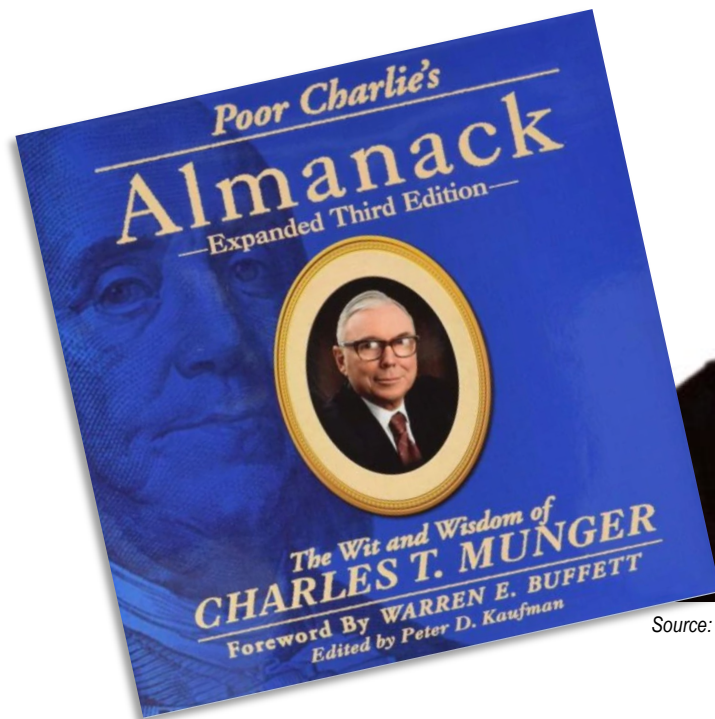
KOPERNIK'S MISSION STATEMENT

Mission: To manage the highest quality investment portfolios. We view this as the likely long-term product of a superior philosophy, quality people, and a value enhancing process and culture.

- Philosophy: Doing a solid job of appraising businesses enables us to take advantage of market inefficiencies, which in turn, allows us to realize superior investment returns over the long term.
- People: We employ people who possess a high level of integrity and have faith and conviction in our philosophy. They have the passion, aptitude, a positive attitude, curiosity, conceptual understanding, and team orientation required to contribute to our process and fit into our culture.
- Process: We consistently apply bottom-up, fundamental research in a creative, yet diligent, manner that adheres to our “value as a prerequisite” approach. Risk management is taken very seriously using an approach that is absolute (vs. relative), viewed on a portfolio basis (vs. a single security basis) and focuses on minimizing the risk of permanent loss of purchasing power (vs. career risk).
- Culture: We have a culture that puts client needs ahead of short-term pressures and perceptions, and the desire to minimize our workflow and business risk. We intend to remain small and focused. We are committed to investment in our people and to effective teamwork.

“The safest way to get what you want is to deserve what you want.
Deliver to the world what you would buy if you were on the other end.”

—Charlie Munger



Source: Google





WHAT DOES IT MEAN TO BE AN EQUITY INVESTOR?



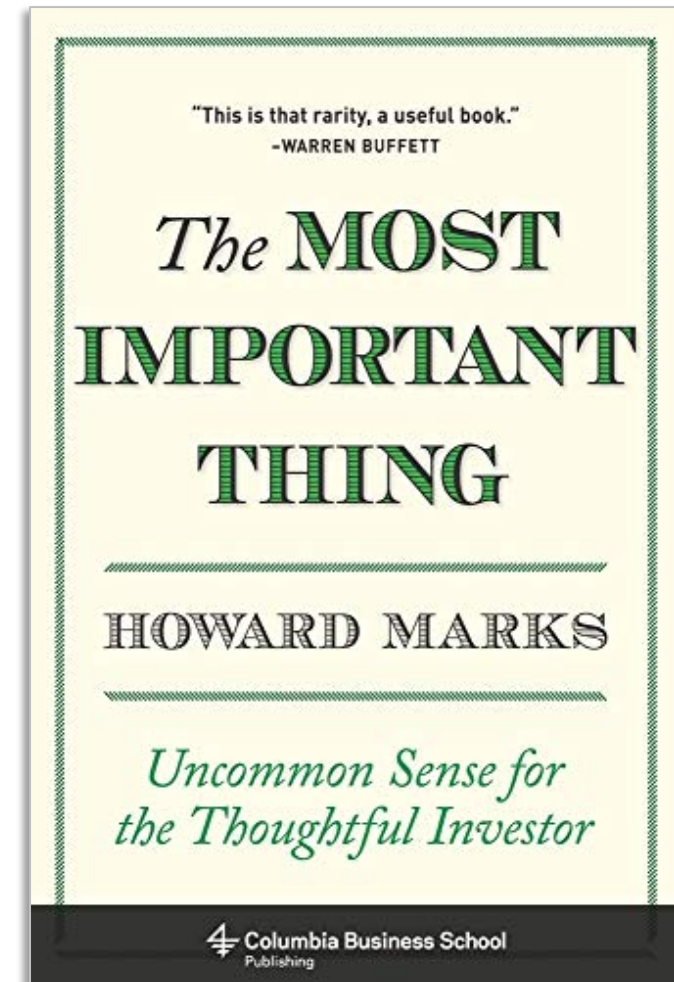
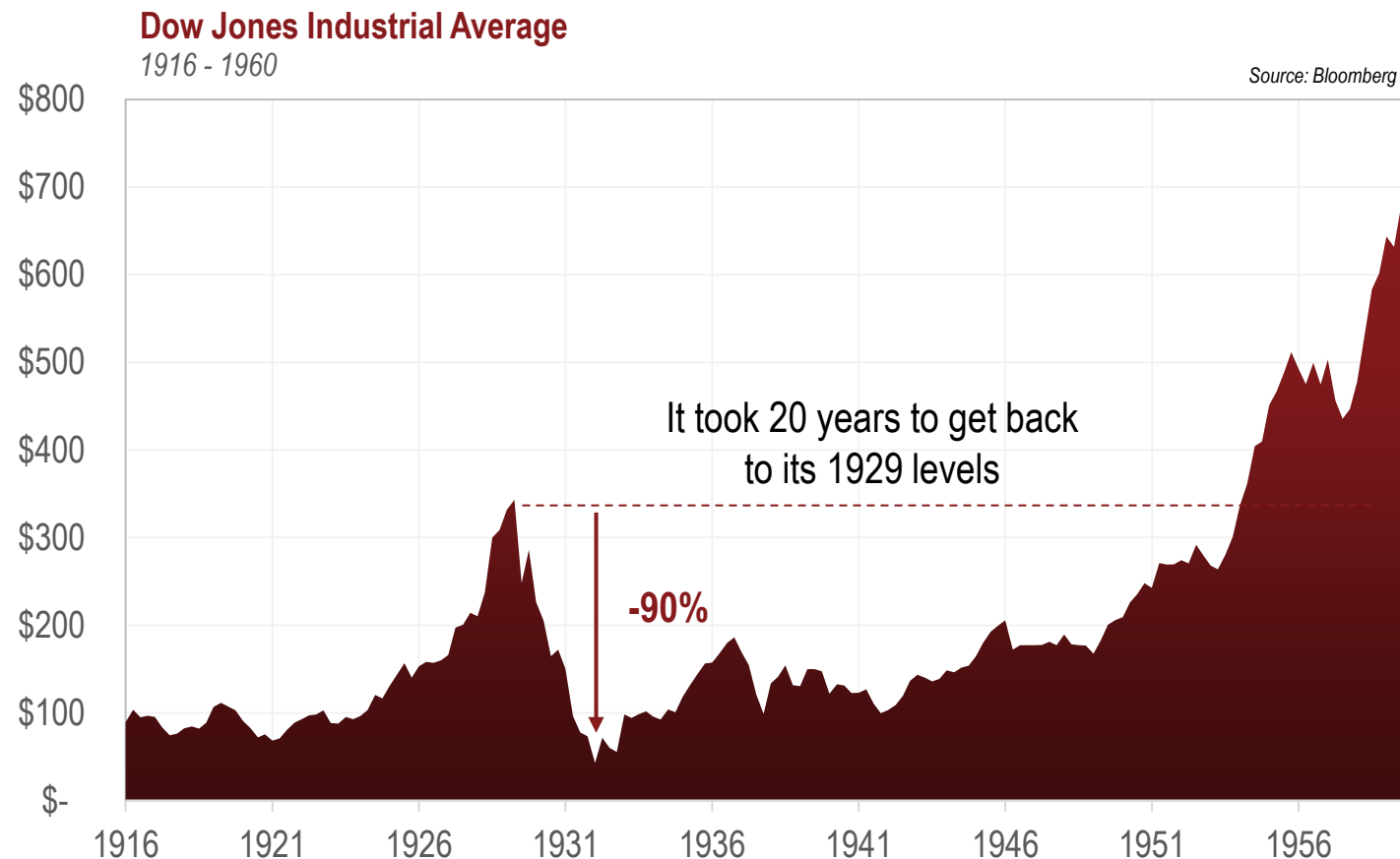
Source: Alamy.com



Source: Google

WHAT IS RISK? PERMANENT LOSS OF PURCHASING POWER. PRICE MATTERS

“The greatest risk doesn’t come from low quality or high volatility. It comes from paying prices that are too high” – Howard Marks



Source: Google



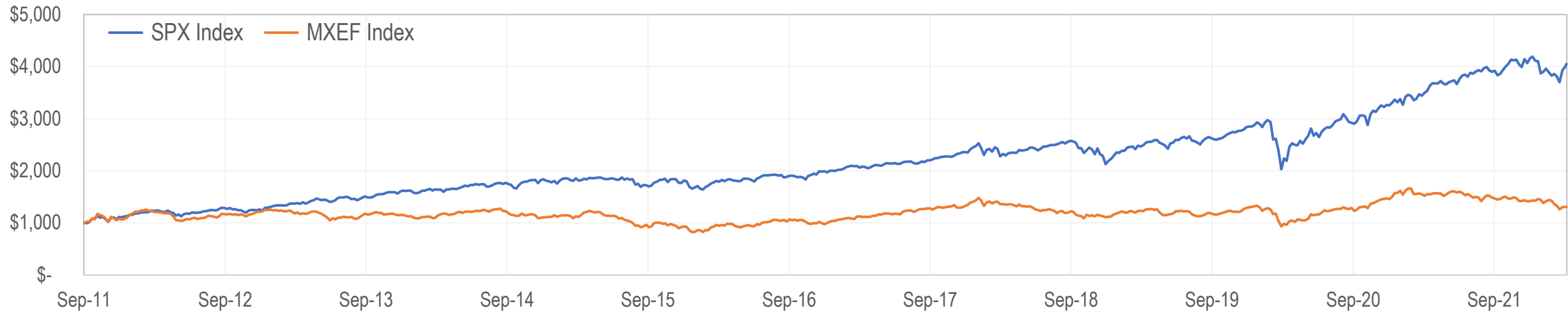
RETURNS (%) DURING PERIODS OF HEIGHTENED MARKET RISK

Date	Percent Drop	Years until previous high recovered
1972 – Nifty Fifty	-45%	3 (flat for 10 years)
1987 – Black Monday	-35%	2
2000 – NASDAQ Tech Bubble	-72%	15
2007 - Global Financial Crisis	-53%	4
2020 – Covid-19	-35%	<1 (7 months)

Source: Bloomberg

VALUATIONS ACROSS REGIONS as of 3/31/2022

Source: Bloomberg



	Price to Earnings	Price to Tangible Book	Price to Cash Flow	Dividend Yield
United States (SPDR S&P500 ETF)	23.27	5.37	16.56	1.75%
Emerging Markets (iShares MSCI EM ETF)	13.26	2.62	8.29	2.81%
Russia (VanEck Vectors Russia ETF)	3.35	1.86	1.72	11.18%

On Friday, March 4, 2022, VanEck Vectors Russia ETF trading was halted.

MISPERCEIVED RISK CAN BE A BEAUTIFUL THING

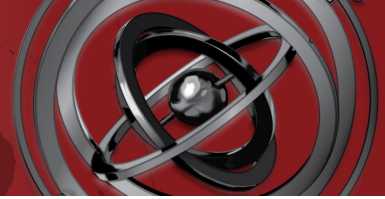


Source: Time Magazine

COMPELLING DISCOUNTS: EM vs. U.S.

As of 4/4/2022

Source: Bloomberg



Energy	Enterprise Value/Barrel	Railroads	Price to Book (P/B)	Utilities	Price to Book (P/B)
Gazprom	\$0.91	Guangshen	0.27	RusHydro	0.45
Exxon	\$21.65	Union Pacific	12.04	Dow Jones Utilities Index (UTIL)	2.05



Technology	Market Cap/Search User	Agriculture	EV/Acre
Yandex	\$54	First Resources	\$4,605
Baidu	\$68	Golden Agri	\$3,290
Google	\$452	Iowa Farmland	\$15,909



Telecom	EV/Subscriber	Price to Earnings
KT	0.39	6.00
Verizon	2.75	9.70





RISKS OF INVESTING IN EMS

Rule of Law, and property rights

Varying forms of Government corruption

Poor infrastructure, including power, water, roads

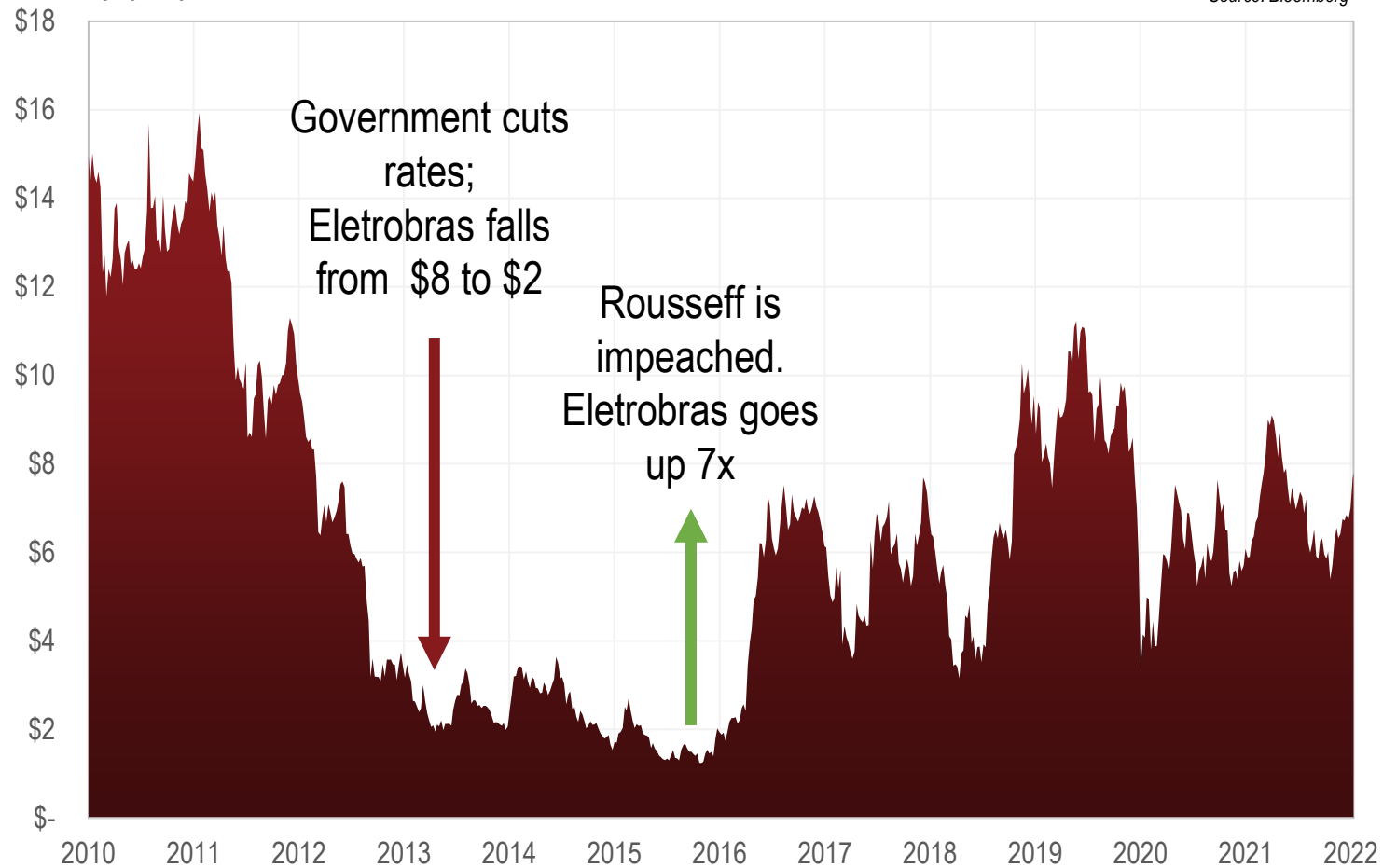
Education of labor force, etc

GEOPOLITICS CREATED BARGAINS IN CARBON-FREE ELECTRICITY

Eletrobras

2010 - 2022

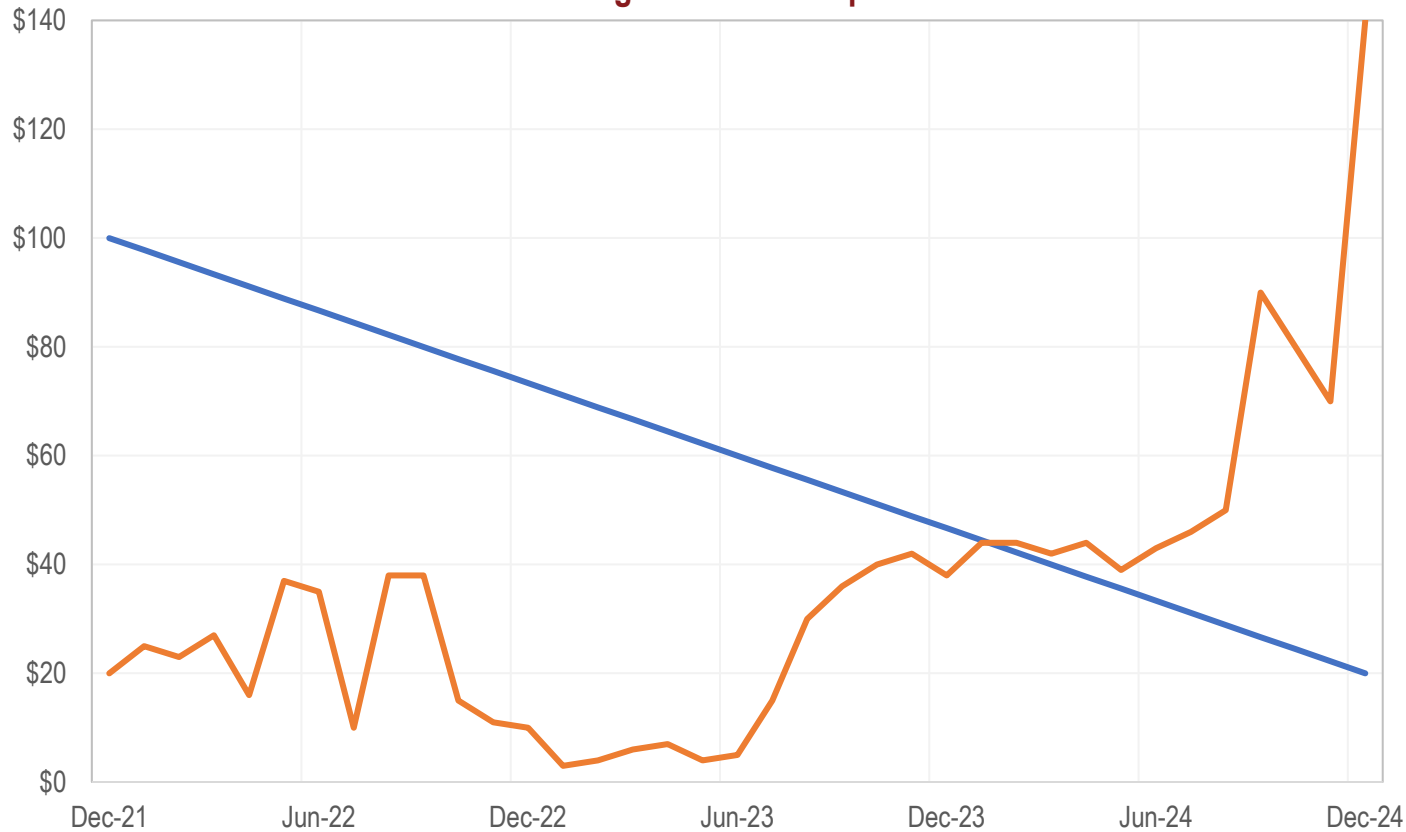
Source: Bloomberg



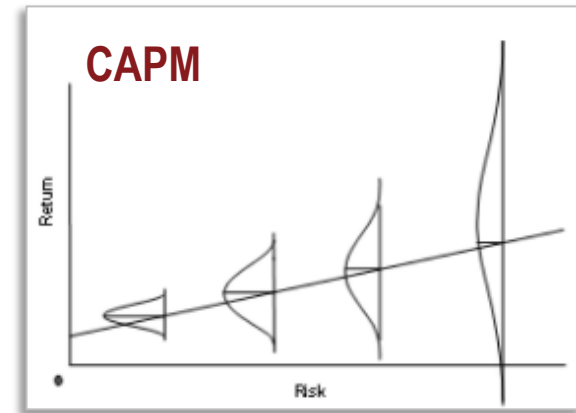
Source: Wikimedia Commons

“THERE’S NO SUCH THING AS A ~~GAMBLING~~ VOLATILITY
PROBLEM. JUST A LOSING PROBLEM.”

**A 3 Year Hypothetical:
Zero Vol and a Loss vs. High Vol and Exceptional Returns**



Source: Kopernik Global Investors

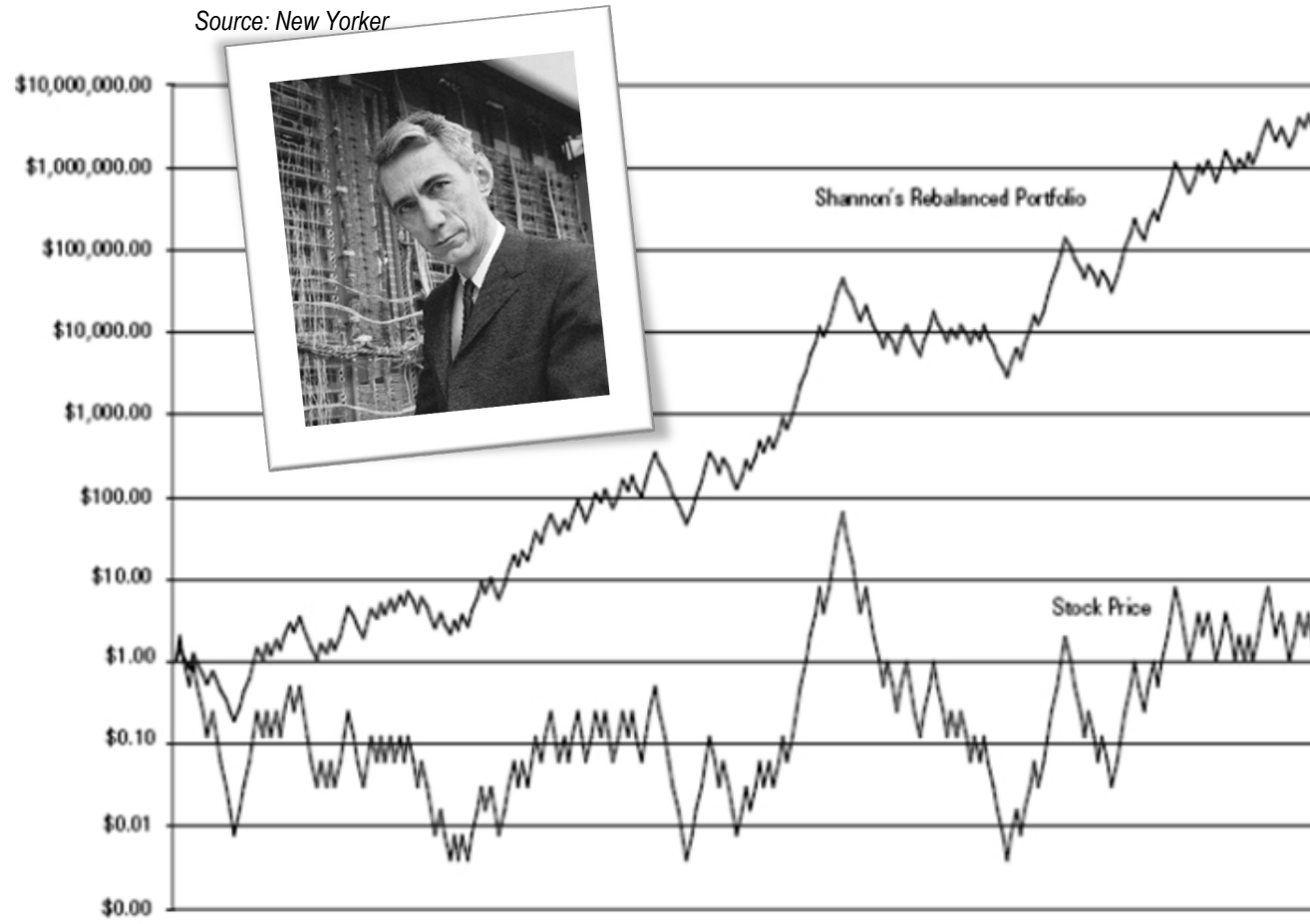


Source: Barrons.com

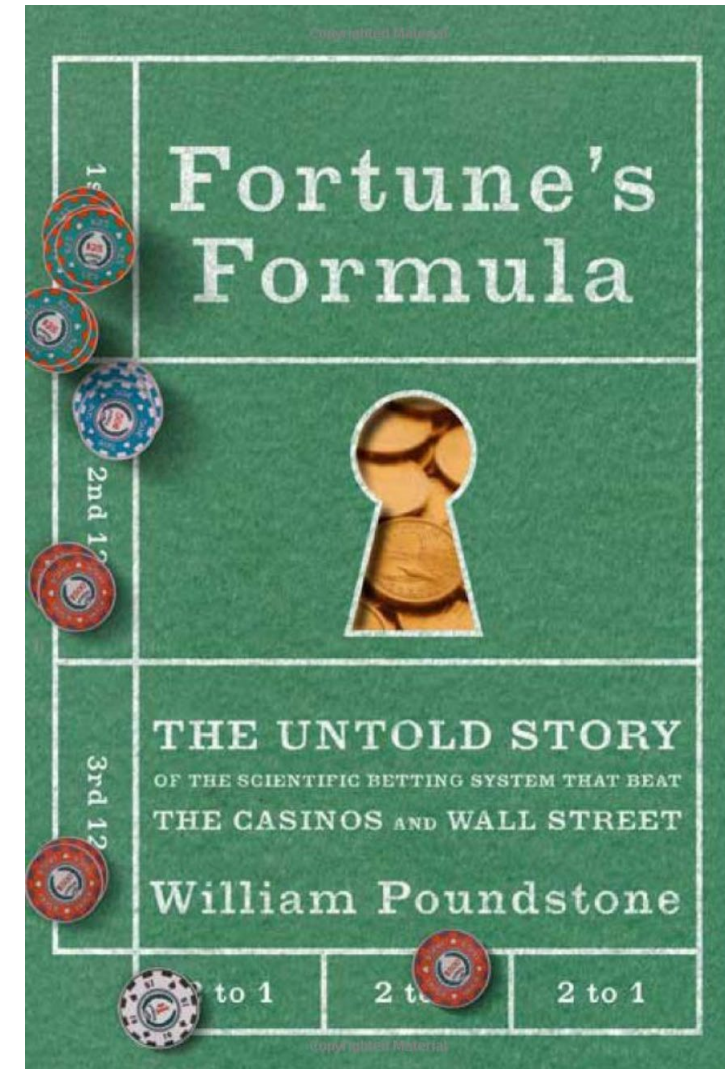
VOLATILITY IS OPPORTUNITY, NOT RISK

Source: Google

Source: New Yorker



Source: Fortune's Formula

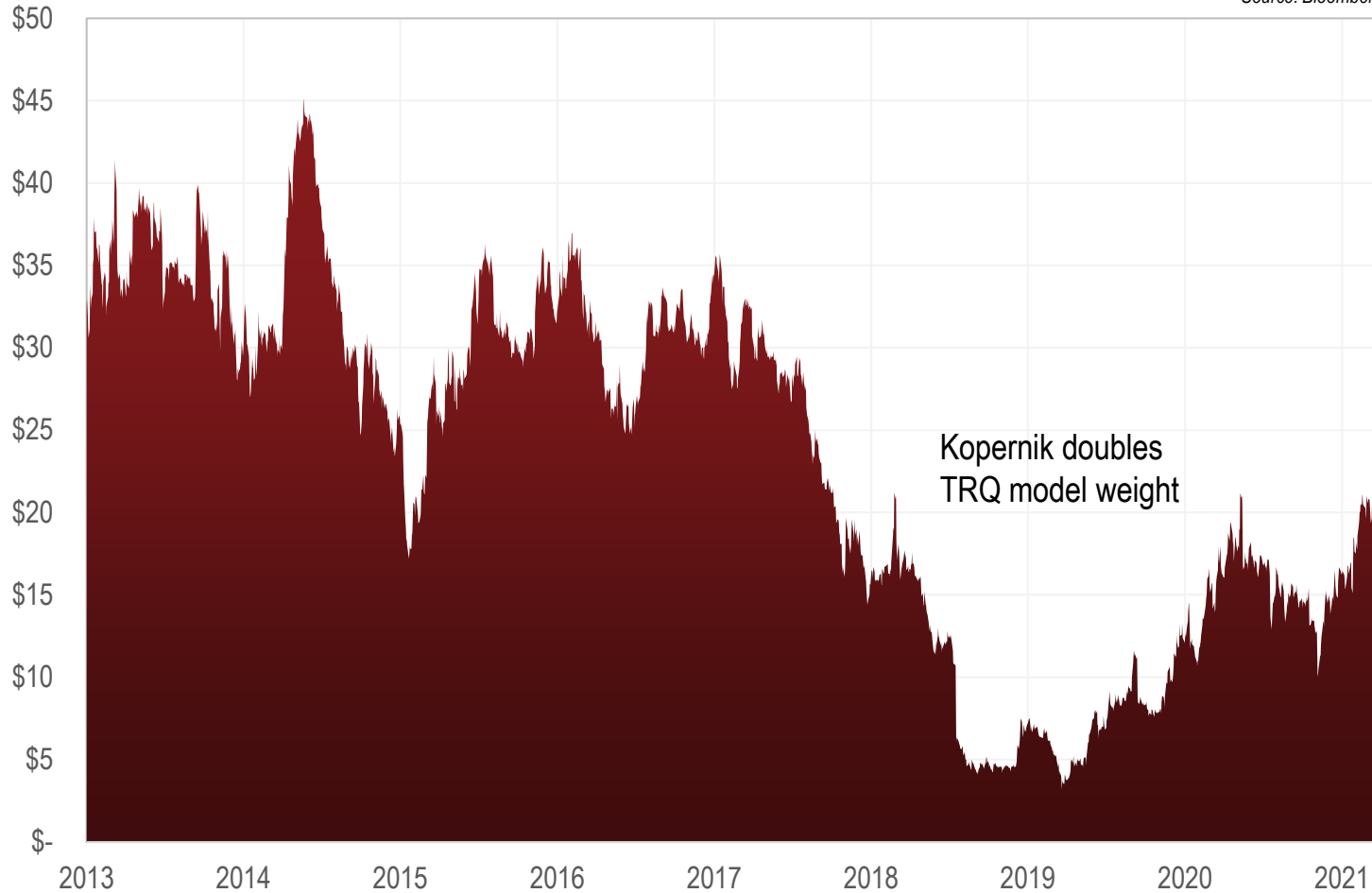


TURQUOISE HILL SHARE PRICE IS FLAT, KOPERNIK HAS POSITIVE RETURNS

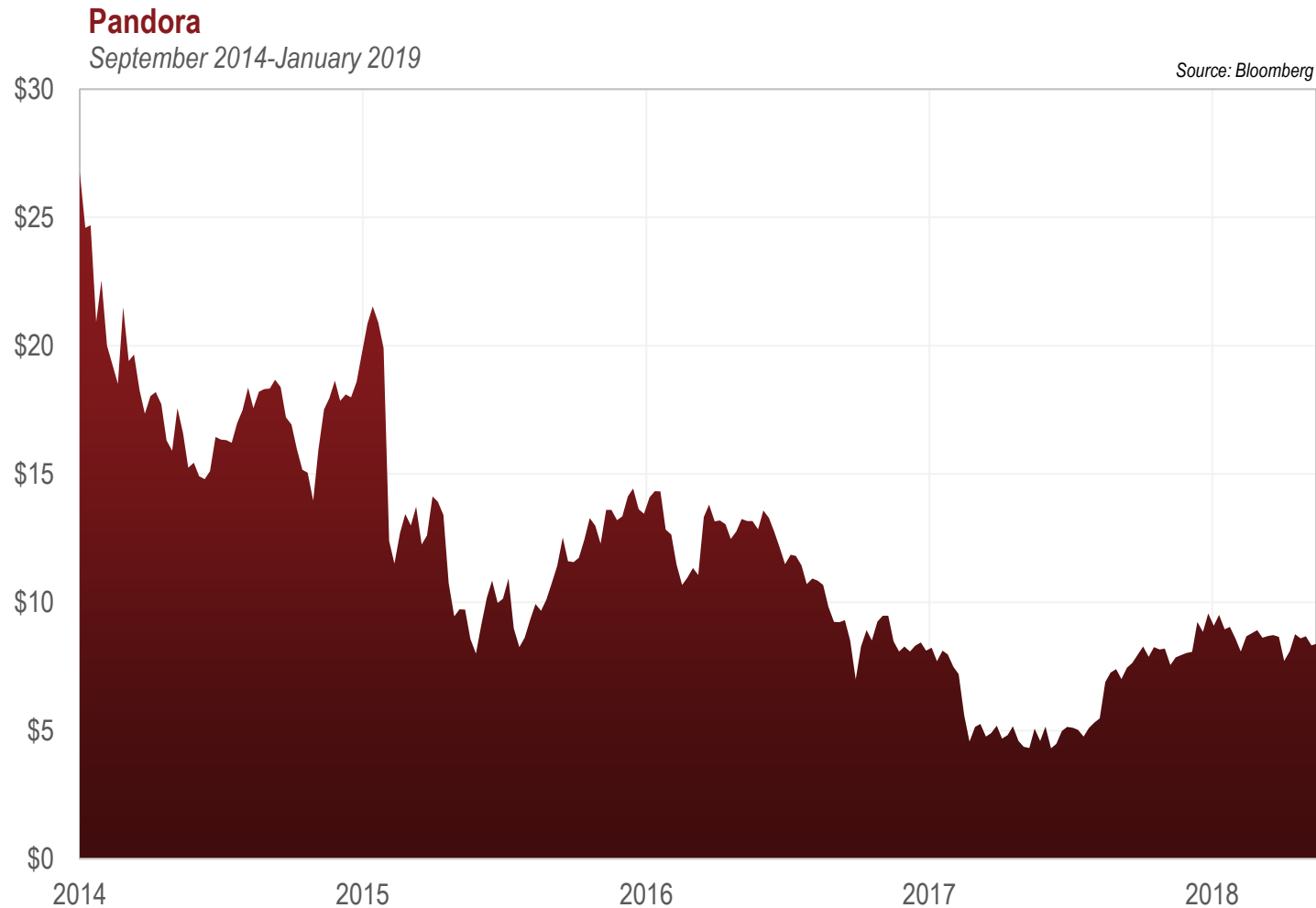
Turquoise Hill

December 2013-Present

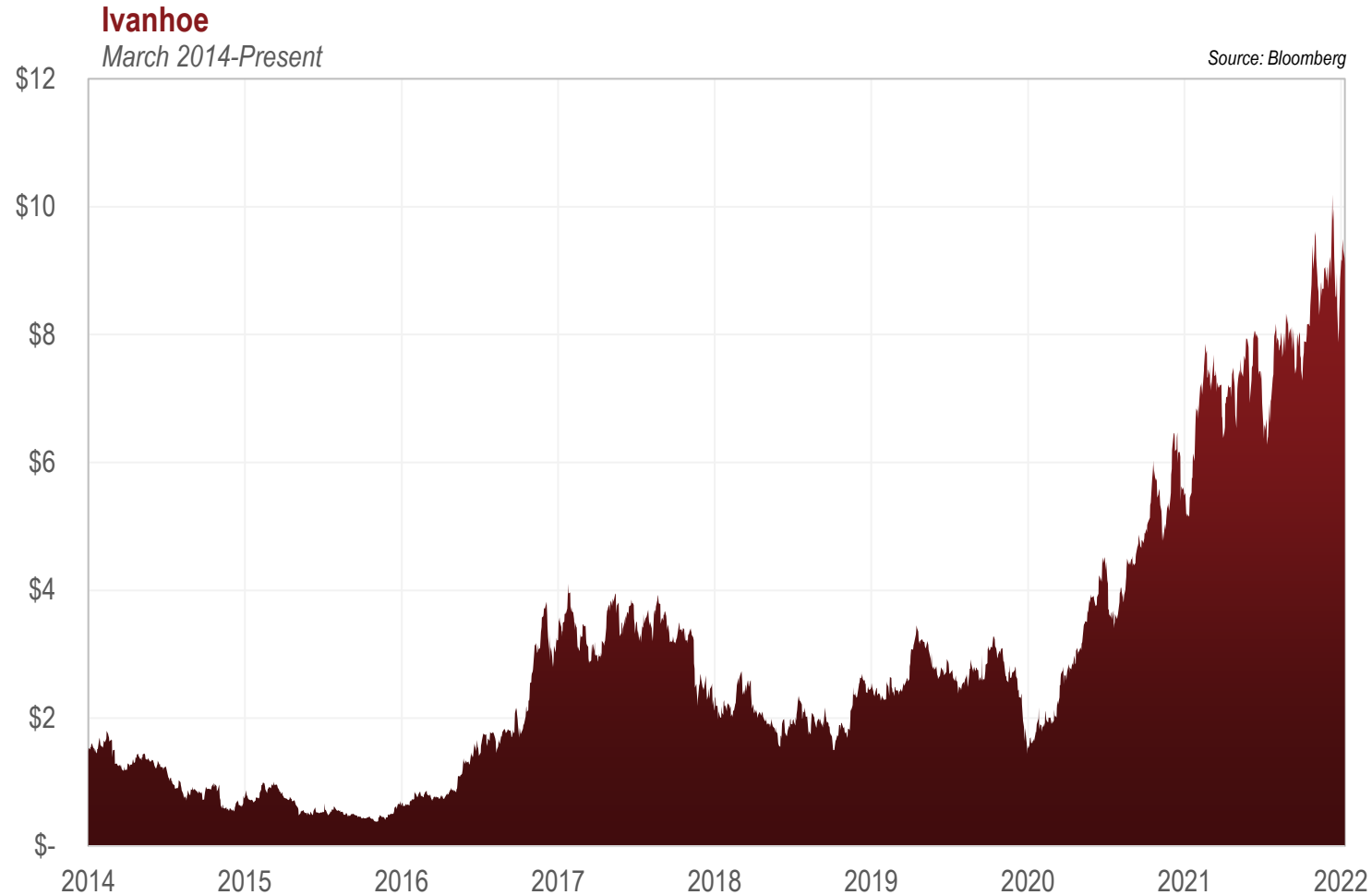
Source: Bloomberg



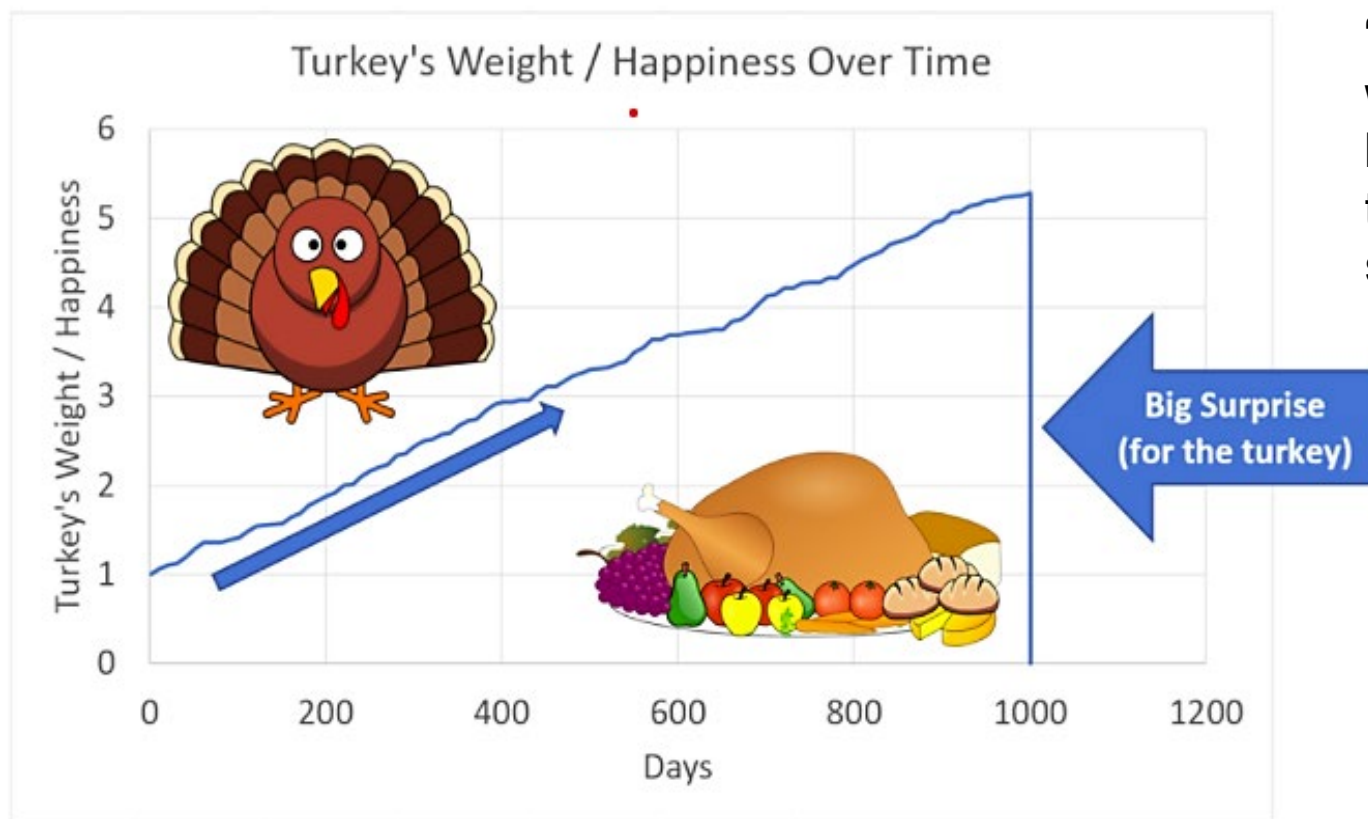
PANDORA STOCK FELL DURING KOPERNIK HOLDING PERIOD, YET WE MADE MONEY



IVANHOE IS UP SIGNIFICANTLY. VOLATILITY ENHANCED RETURNS.



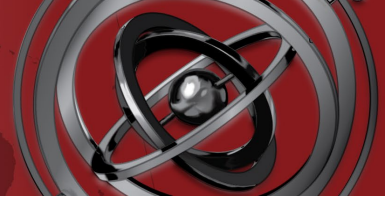
HOW CAN INVESTORS QUANTIFY RISK?



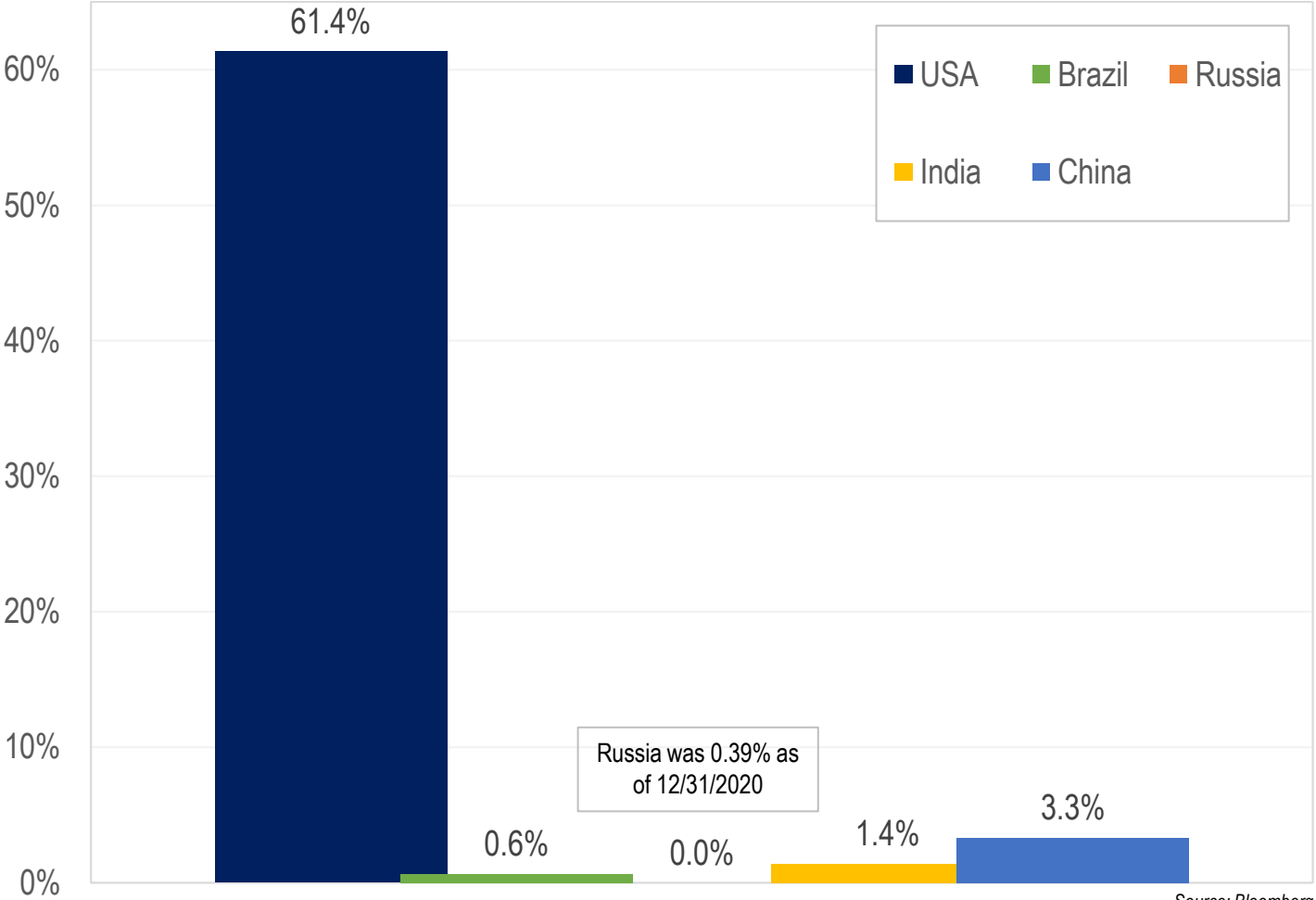
Source: Crowdwise

“Consider a turkey that is fed every day. Every single feeding will firm up the bird’s belief that it is the general rule of life to be fed every day by friendly members of the human race. On the afternoon of the Wednesday before Thanksgiving, something **unexpected** will happen to the turkey”

– Nassim Taleb, *Black Swan*



2022 USA/BRIC Allocations Within The MSCI ACWI Benchmark as of March 31, 2022



Source: Bloomberg

Kopernik Global All-Cap Strategy Guideline Maximums (at purchase)	
Issuer	5%
Industry	25%
Sector	30%
Country	35%
Emerging markets	50%

“Given a 10% chance of a 100 times payoff,
you should take that bet every time.”
–Jeff Bezos



Source: Google



Source: Google





VALUATIONS BECOME ATTRACTIVE WHEN GEOPOLITICS LOOK DICEY

“Establishing and maintaining an
unconventional investment profile
requires acceptance of
uncomfortably idiosyncratic
portfolios which frequently
appear downright imprudent in
the eyes of conventional wisdom”

-David Swenson

GOVERNMENT SOURCES OF FUNDS

- Income tax
- Sales Tax
- Import Duties
- Wealth transfers
- Appropriation of assets
- Eminent domain
- Concessions
- Royalties
- Asset Sales
- Permitting
- Licensing
- Other Regulatory

“Nothing is certain in life except death and taxes.”



By permission of Chip Bok and Creators Syndicate, Inc.



GOVERNMENT USES OF FUNDS

- Social services
- Infrastructure
- Defense
- Education
- Healthcare
- Scientific research
- Subsidies
- Cronyism
- Largesse
- Theft



Source: Google



EXTRACTION BUSINESSES ARE COMMON TARGETS FOR GOVERNMENTS

State Lawmakers Push to Scale Back Fossil Fuel Subsidies

Source: New York Focus

Kazakh president says mining companies must pay higher taxes

Source: Reuters

Zambia says open to dialogue with miners over tax increases

Source: Reuters

Governments Want to Cash In on Miners' Ballooning Profits

Source: Wall Street Journal

After decades-long fight, Nevada lawmakers raise mining tax

Source: AP

EU Set To Back Windfall Tax On Energy Firms

Source: OilPrice

Peruvian miners face potential tax hikes

Source: Mining Technology

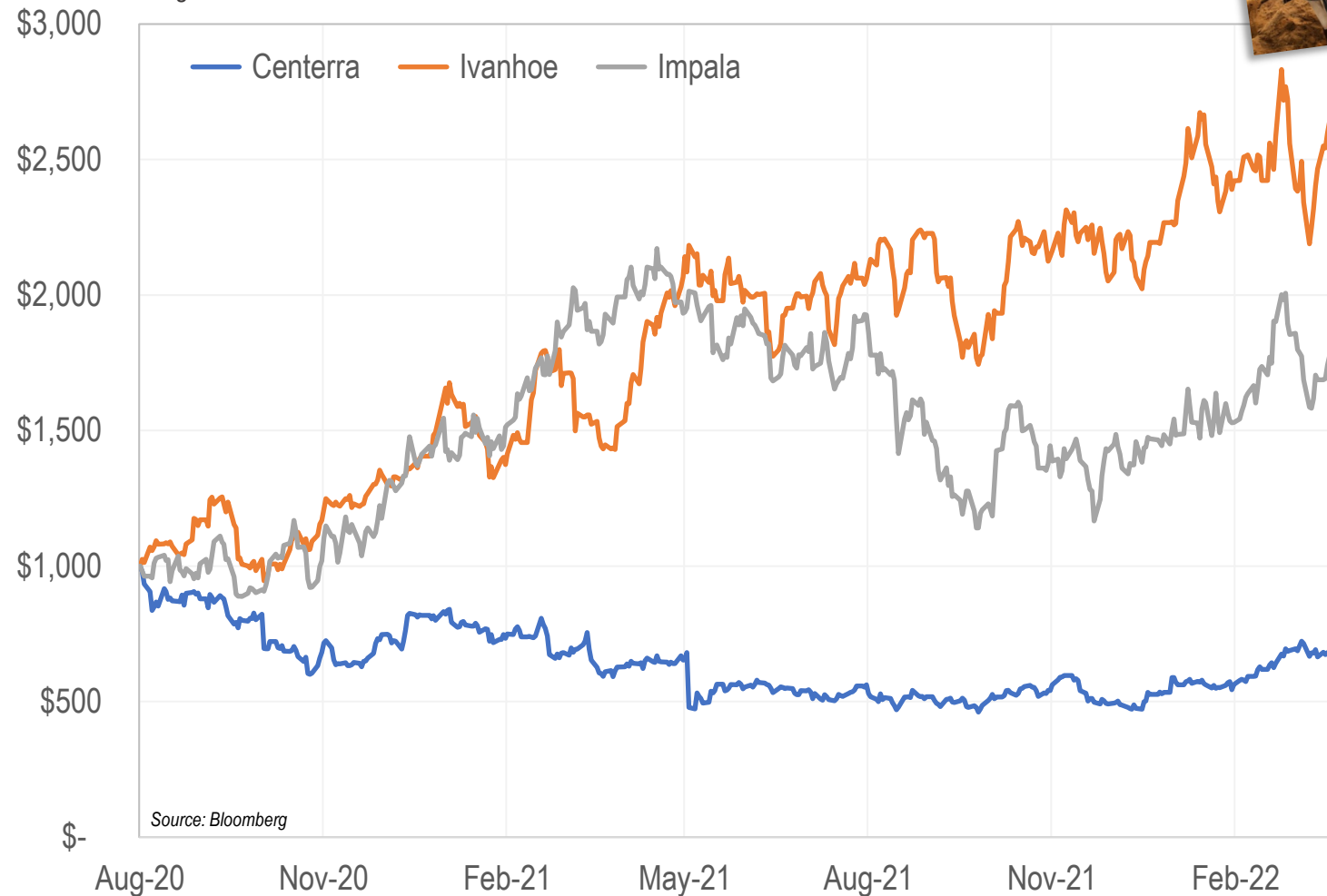
Israel to impose carbon tax, starting with fossil fuels

Source: Times of Israel

DIVERSIFICATION MITIGATES RISK

Centerra, Ivanhoe, and Impala

August 2020-Present



Source: Google

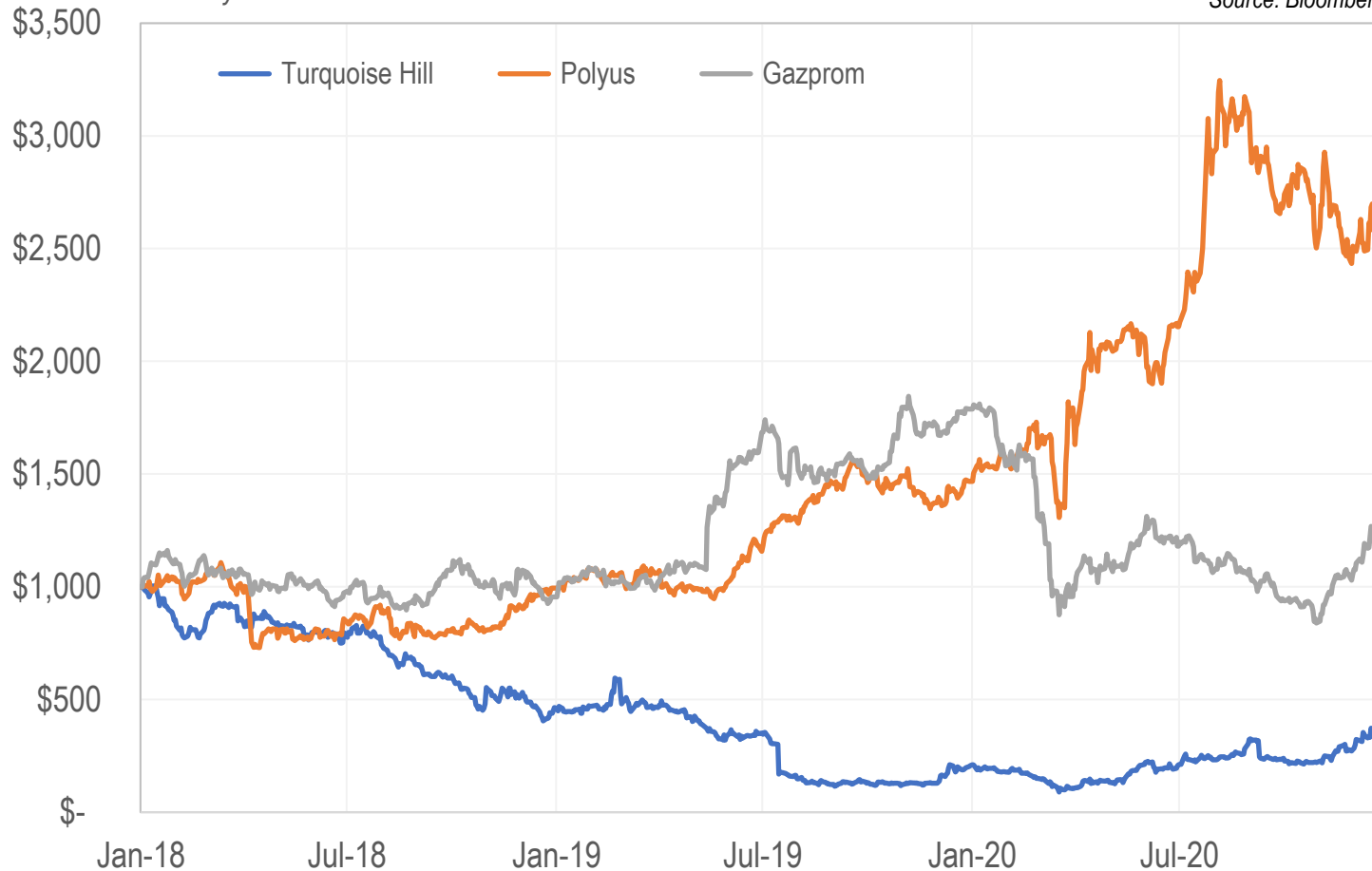


DIVERSIFICATION MITIGATES RISK

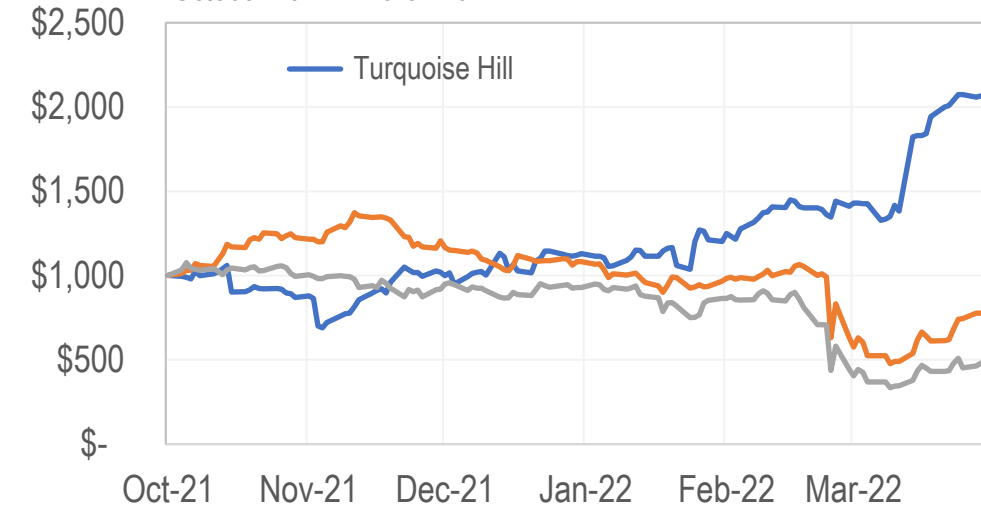
Turquoise Hill vs Polyus vs Gazprom

January 2018 - December 2020

Source: Bloomberg



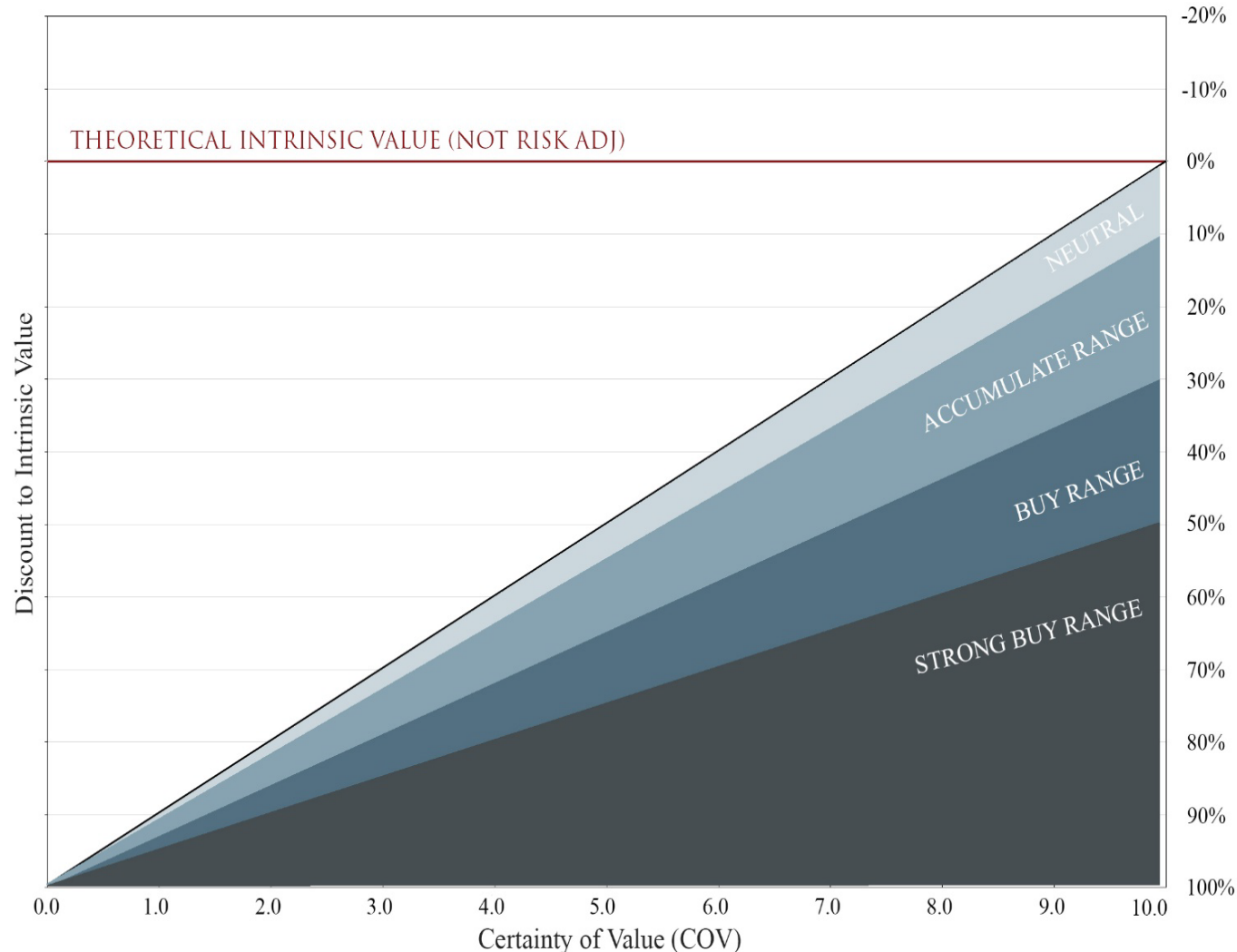
October 2021 – March 2022



Source: Bloomberg

ADHERING TO A PROVEN INVESTMENT PROCESS

DISCOUNT TO INTRINSIC VALUE VS. CERTAINTY OF VALUE (COV)

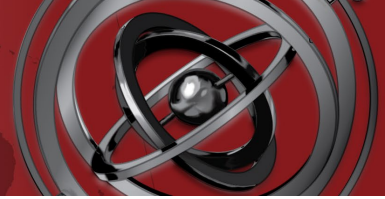


RISK ADJUSTING

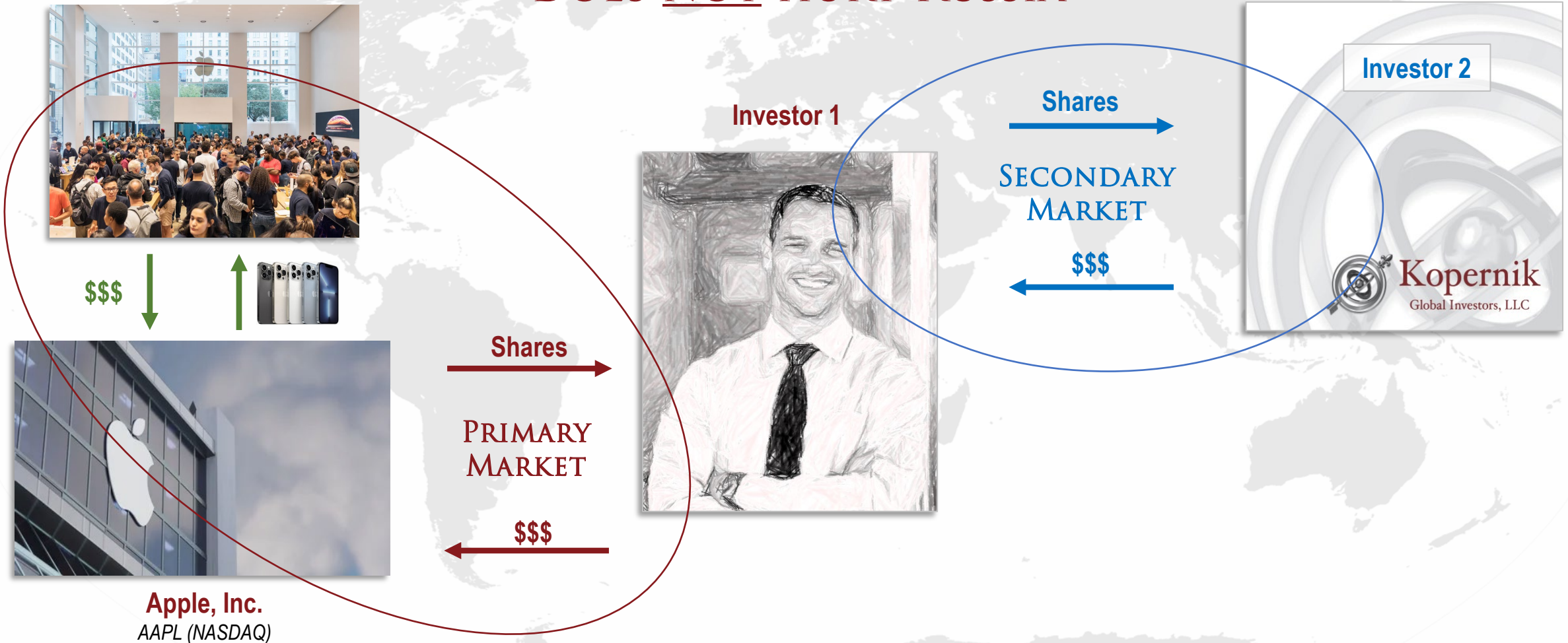
Certainty of Value (COV) is a risk adjustment tool Kopernik utilizes to quantify the margin of safety we demand to invest in a company's security.

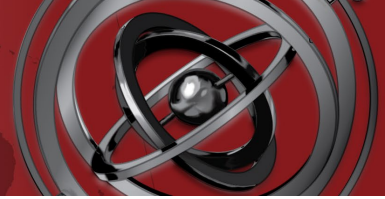
- Identify key specific risk factors and assign a weight to each risk factor
- Assign a score to each risk factor (0 = extremely risky and 10 = riskless)
- Calculate the composite COV score, the product of each risk factor times the risk factor's weighting
- The final step is to calculate the Risk Adjusted Intrinsic Value (RAIV), derived as a product of Theoretical Value times COV

This is shown visually on a Discount to Intrinsic Value vs. COV Matrix (adjacent).



SELLING SHARES ON THE SECONDARY MARKET DOES NOT HURT RUSSIA





ORDINARY CITIZENS ARE DIFFERENT FROM THEIR GOVERNMENTS



Americans Protesting the Vietnam War

Source: The New Yorker

Staring down tanks in Tiananmen Square, 1989

Source: History.com



French Protests Against the Algerian War, 1961

Source: Middle East Monitor



The Spanish Protesting Military Strikes on Syria, 2015

Source: The Local ES



Russians Protest the War in Ukraine, 2022

Source: The Atlantic

Greeks Protest in Support of Kurds, 2016

Source: Getty Images



RUSHYDRO PROVIDES CHEAP, CLEAN ELECTRICITY



RusHydro



Source: Google

Source: Bloomberg

RusHydro 4/6/2022	
Price/Book	0.5
Price/ Replacement Value	0.1
Dividend Yield	6.8%
Price/Earnings	8.1

LSR/ETALON REPLACE OLD SOVIET HOUSING BLOCKS WITH MODERN APARTMENTS



As of 4/6/2022	Price to Earnings	Price to Book	Dividend Yield
LSR	3.1	0.5	14.3%
Etalon	1.0	0.1	13.1%

Source: Bloomberg

Source: Google

SBERBANK PROVIDES BANKING SERVICES TO 100 MILLION PEOPLE



Source: Google

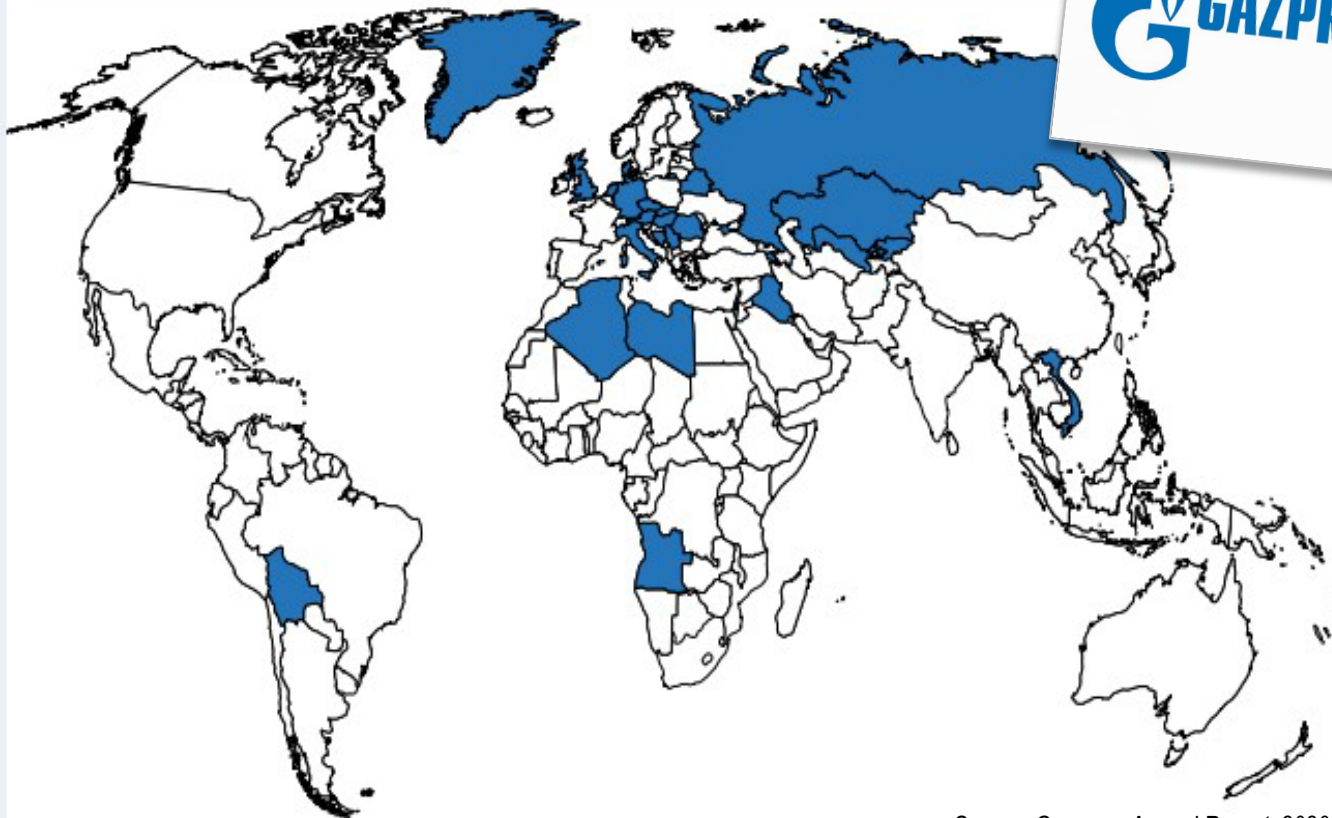
Sberbank 4/6/2022

Price/Book	0.6
Price/Earnings	2.6
Dividend Yield	13.2%

Source: Bloomberg

GAZPROM HELPS SUPPLY 25 COUNTRIES WITH FUEL FOR HEATING AND COOKING

Gazprom Group's Operating Geography



Source: Gazprom Annual Report, 2020

Gazprom 4/4/2022

Price/Book	0.4
Enterprise Value/Barrel of Oil Equivalent	0.9
Price/Earnings	3.0
Dividend Yield	5.2%

Source: Bloomberg



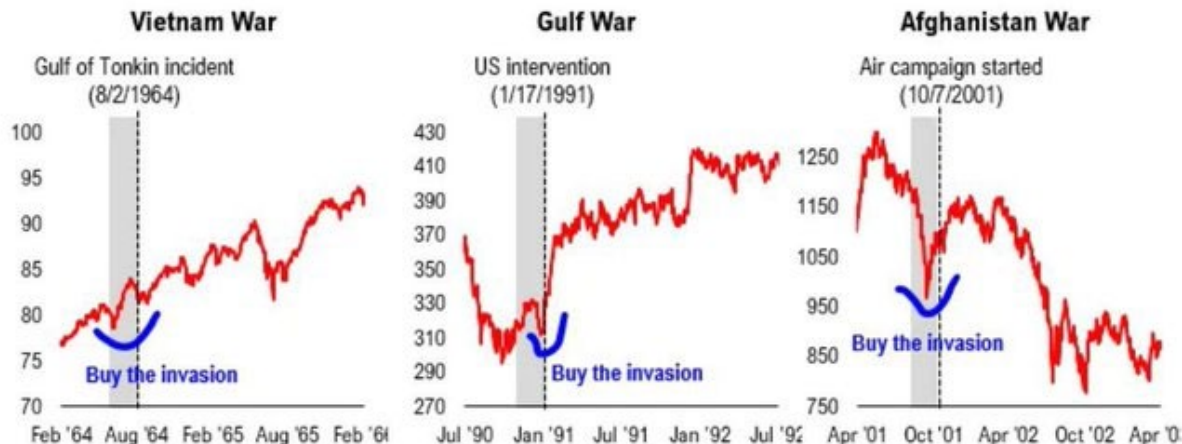
A SELECTION OF GLOBAL CONFLICTS OVER THE LAST 100 YEARS

Spanish Civil War
World War II
Vietnam War
Korean War
Gulf Wars 1 and 2
Global War on Terror
Rwandan Genocide
Yugoslav War
NATO Bombing of Serbia

Soviet Invasion of
Afghanistan
U.S. Invasion of Afghanistan
Iran-Iraq War
South Sudanese Civil War
Lebanese Civil War
Israel-Palestine Conflict
Falklands War

*Birth control, Ho Chi Minh, Richard Nixon back again
Moonshot, Woodstock, Watergate, punk rock
Begin, Reagan, Palestine, terror on the airline
Ayatollah's in Iran, Russians in Afghanistan
"Wheel of Fortune", Sally Ride, heavy metal suicide
Foreign debts, homeless vets, AIDS, crack, Bernie Goetz
Hypodermics on the shore, China's under martial law
Rock and roller, cola wars, I can't take it anymore
We didn't start the fire
It was always burning, since the world's been turning
We didn't start the fire
But when we are gone
It will still burn on, and on, and on, and on, and on, and on, and on, and on, and
on
-Billy Joel, "We Didn't Start the Fire"*

VALUATIONS BECOME ATTRACTIVE WHEN GEOPOLITICS LOOK DICEY



“Be fearful when others are greedy,
and greedy when others are fearful.”

—Warren Buffett

“People are always asking me where is the outlook good,
but that’s the wrong question. The right question is, where is
the outlook most miserable?”

—John Templeton



Russia <small>Source: Bloomberg</small>	As of 4/6/2022
Price to Earnings	4x
Price to Book	0.75x
Dividend Yield	11%

Source: Bank of America

Q&A



If you can keep your head when all about you
Are losing theirs and blaming it on you;
Yours is the Earth and everything that's in it
-Rudyard Kipling