



October 28, 2022

Investment Outlook

Designing Emerging Investment Strategies

Jan van Eck, CEO



The Future From the Perspective of Macro Structuralist

- “Macro”—the financial markets reflect the real world (economics, politics, technology)
- “structuralist”—the number of players, their incentives, their liquidity, etc., matter
- What asset classes to include—don’t assume anything; recency bias is pervasive
- 80%+ of information is misleading, even prices are manipulated
- Manage your radar screen—being early is rewarded, but beware fads
- History can provide scenarios and conviction

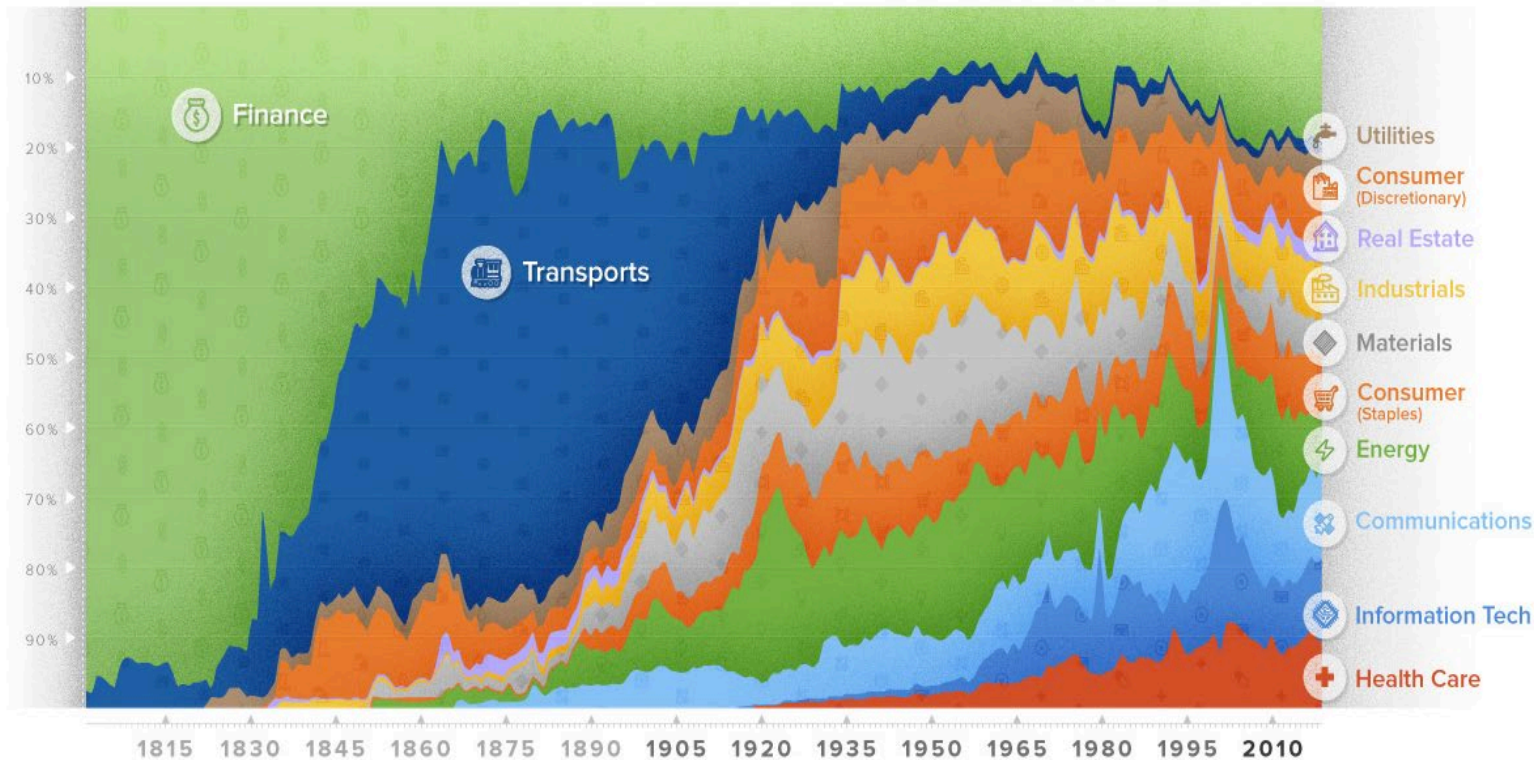
- Today's market structure and risks
 - New monetary regime
 - “inflation” and the 1970's
 - China and global growth

- Blockchain technology
 - How to Value/Invest
 - Liquid tokens

Railroads: A Lesson in Disruptive Technology

VISUALIZING 200 YEARS OF U.S. STOCK MARKET HISTORY

How sectors have changed in relative importance over the years



- Railroads attract capital and achieve capital appreciation
- Timing: Railroad stocks achieve most of appreciation before the cross-continental RR is even finished
- Consequences: other industries develop, enabled by the railroad—consumer, industrials, agriculture

Railroads: A Lesson in Disruptive Technology

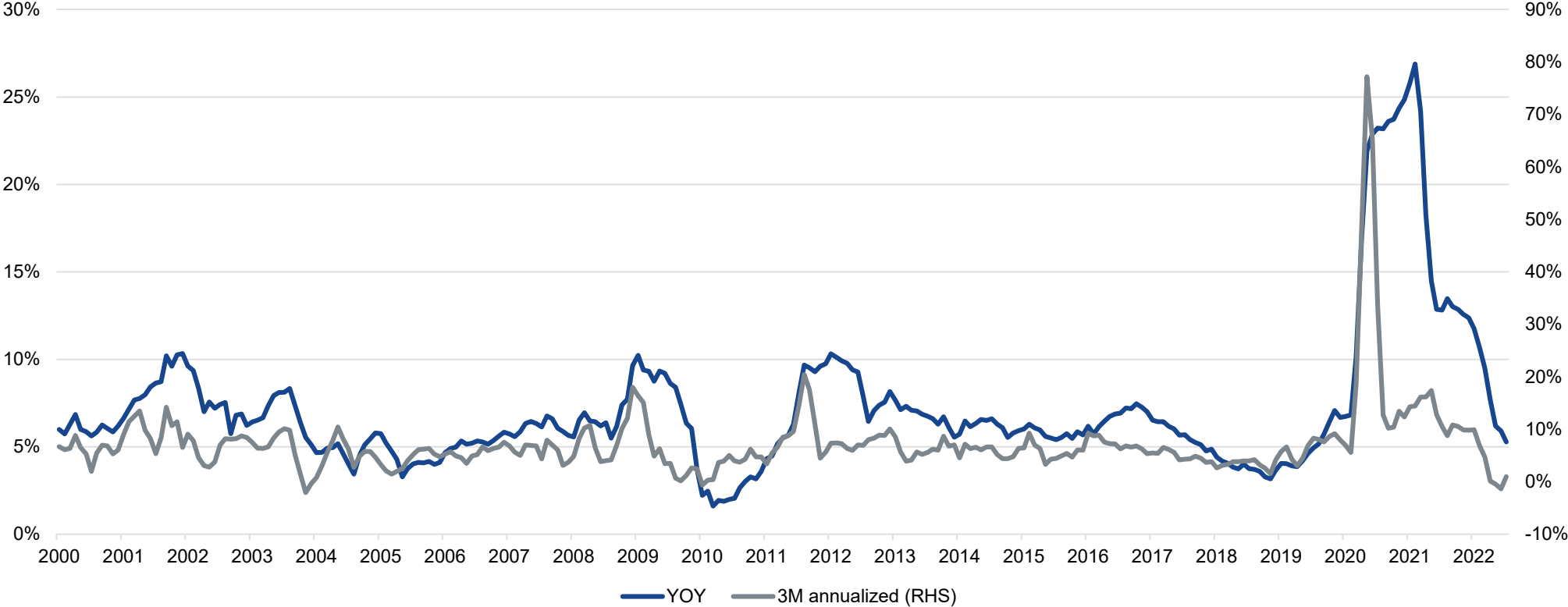


Railway share prices in Britain from 1830 to 1850.

Bubble Act was repealed in 1825; mania of the 1840's; In 1845, the Bank of England tightened monetary policy by raising interest rates, RR stocks peaked the next year; one-third of authorized RR's were never built

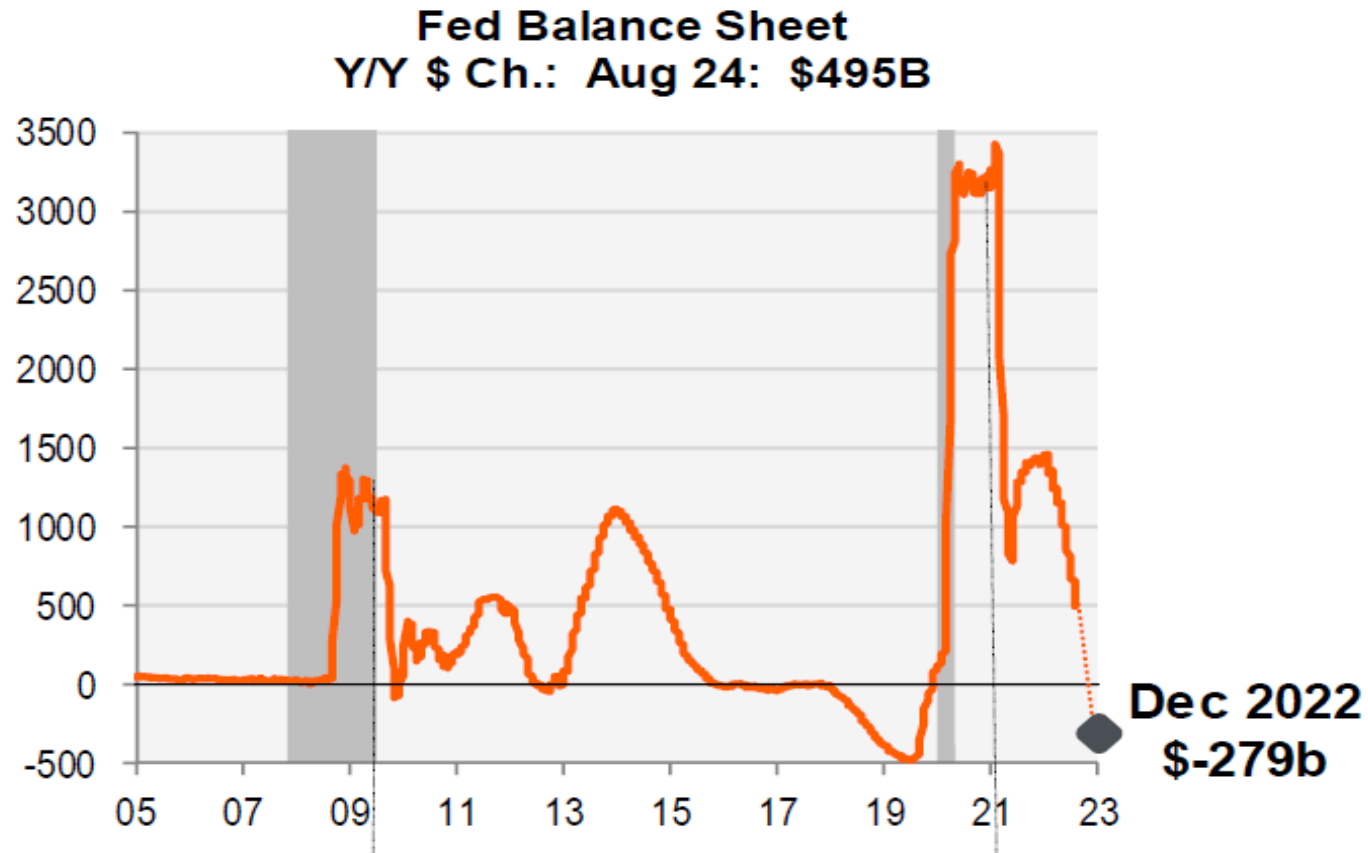
The Fed Has More Than Stopped “Printing Money”

U.S. M2 Growth



Source: Bloomberg. Data as of July 2022. M2 – Federal Reserve M2 Index; a measure of the money supply that includes cash, checking deposits, and easily convertible near money. Please see important disclosures and definitions at the end of the presentation.

QT: This is a Dangerous Neighborhood



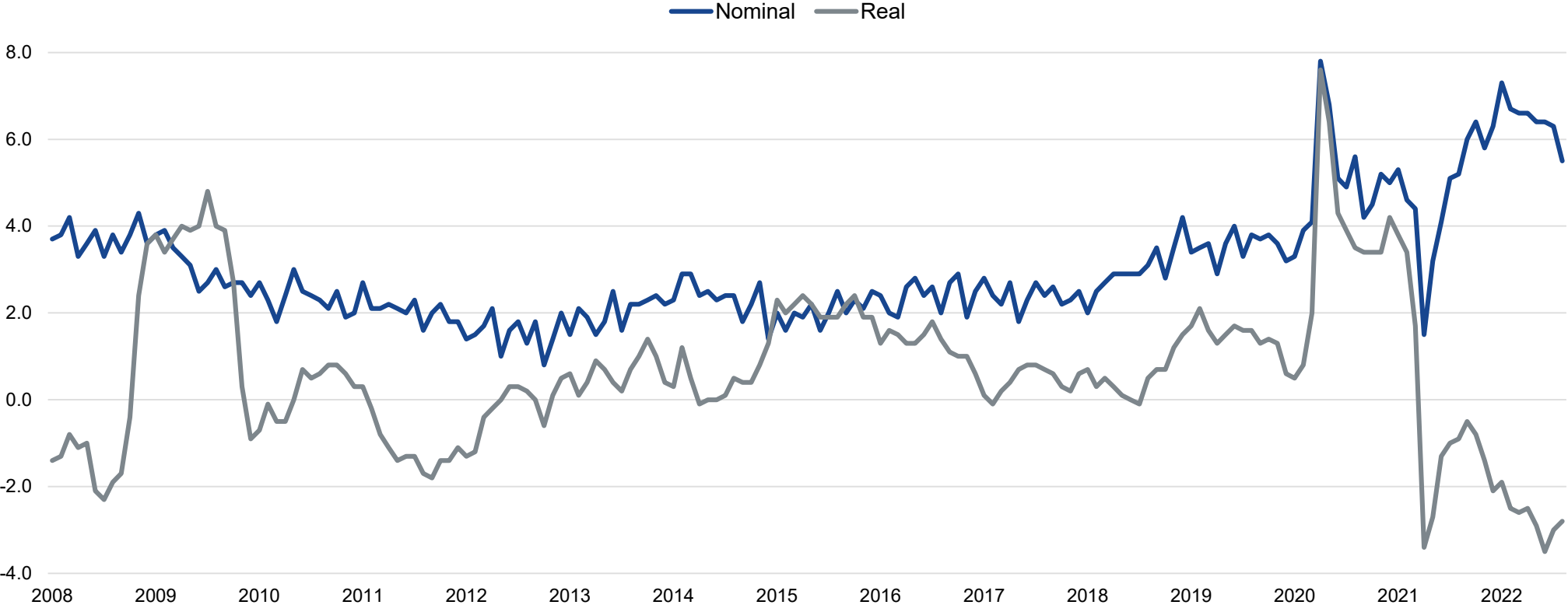
Source: Piper Sandler. Data as of August 2022. Quantitative tightening (QT) refers to monetary policies that contract, or reduce, the Federal Reserve System (Fed) balance sheet. This process is also known as balance sheet normalization. In other words, the Fed (or any central bank) shrinks its monetary reserves by either selling Treasuries (government bonds) or letting them mature and removing them from its cash balances. This removes liquidity, or money, from financial markets. It is the opposite of quantitative easing (QE). Please see important disclosures and definitions at the end of the presentation.

Falling Real Wages: Political Dissatisfaction and Inflation Pressure



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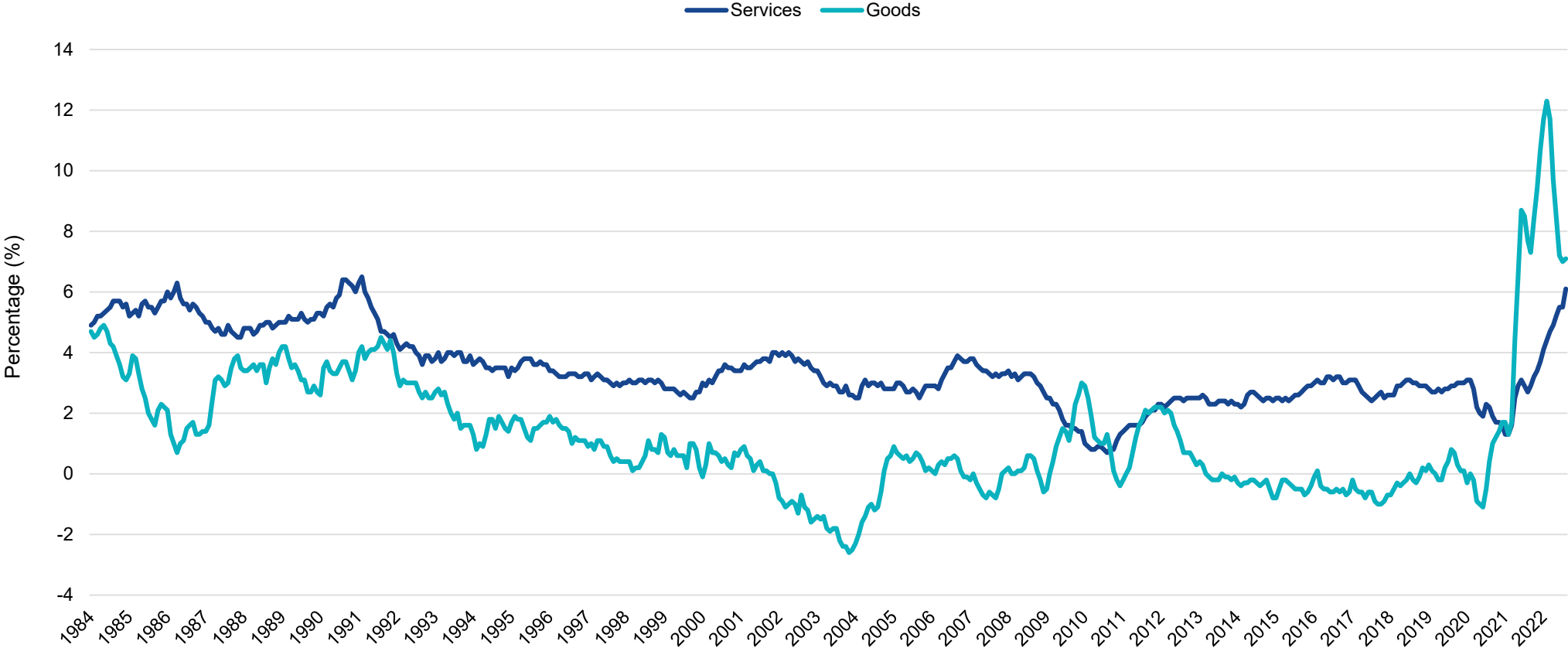
U.S. Average Hourly Earnings for Private Production and Nonsupervisory Workers (YoY% Change)



Source: Bureau of Labor Statistics. Production and related employees include working supervisors and all nonsupervisory employees (including group leaders and trainees). Nonsupervisory employees include those individuals in private, service-providing industries who are not above the working-supervisor level. Data as of August 2022. Please see important disclosures and definitions at the end of the presentation.

Services Inflation is Raging

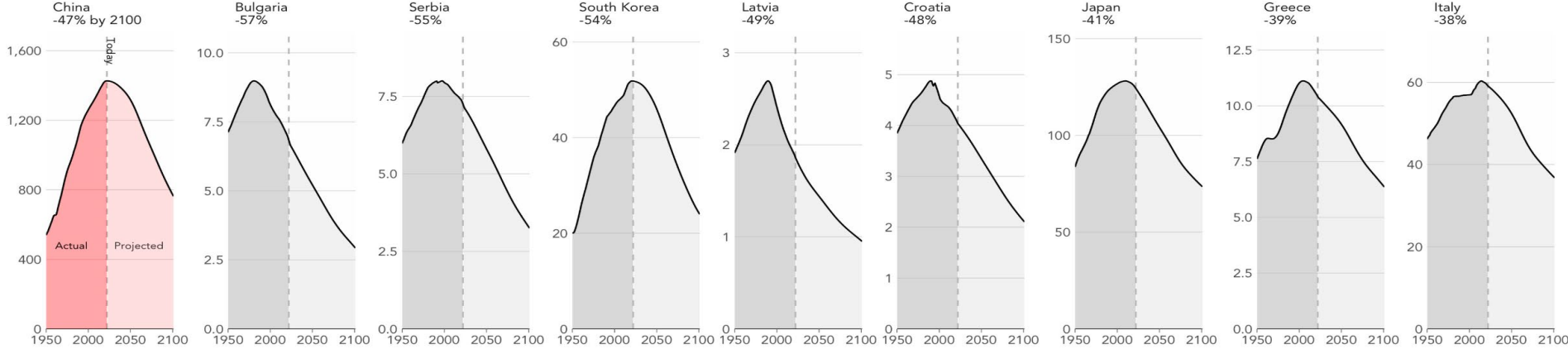
U.S. Core CPI – Goods and Services



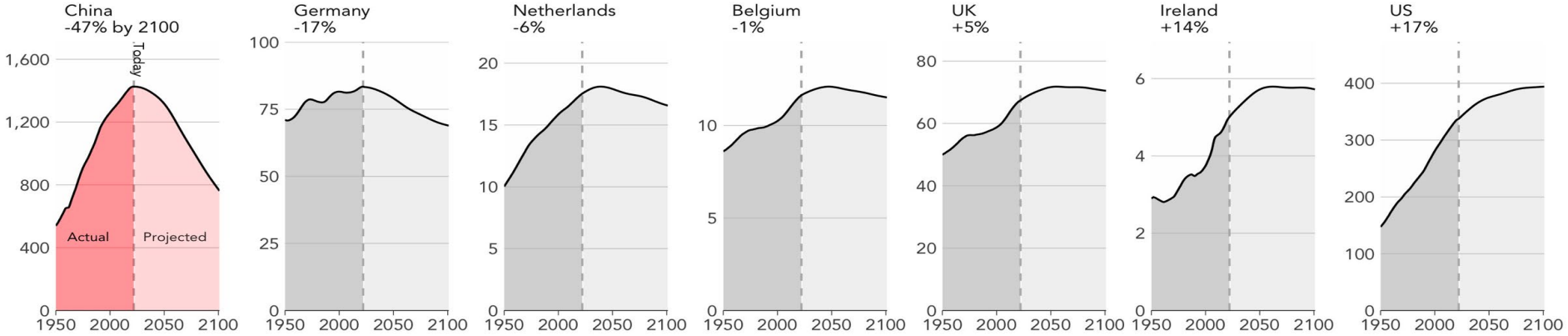
Source: Bureau of Labor Statistics. Data as of August 2022. The "Consumer Price Index for All Urban Consumers: All Items Less Food & Energy" is an aggregate of prices paid by urban consumers for a typical basket of goods, excluding food and energy. This measurement, known as "Core CPI," is widely used by economists because food and energy have very volatile prices. Please see important disclosures and definitions at the end of the presentation.

Peak Population: One of the Global Growth Pressures

UN population projections (millions)



UN population projections (millions)



Source: UN Population Division. *2022 World Population Prospects*. Please see important disclosures and definitions at the end of the presentation.

Global Recession Will Hurt Profits

2023 S&P 500 EPS Estimates

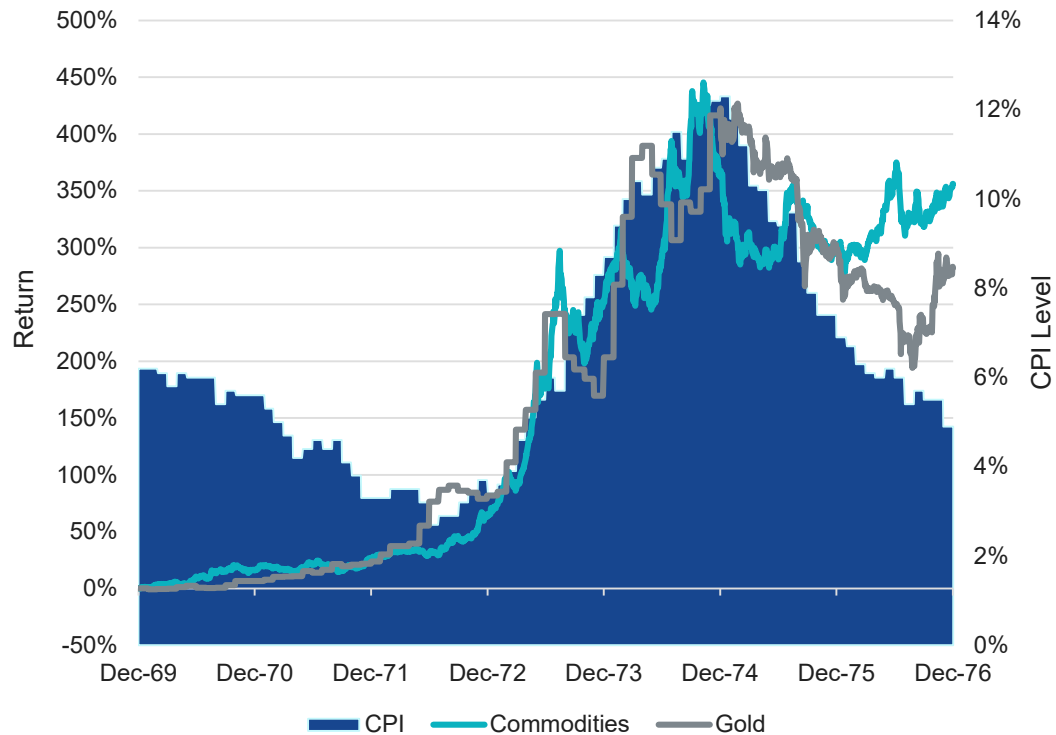


Source: FactSet. Data as of September 2022. EPS = Earnings per Share. Earnings per share (EPS) is a company's net profit divided by the number of common shares it has outstanding. EPS indicates how much money a company makes for each share of its stock and is a widely used metric for estimating corporate value. Please see important disclosures and definitions at the end of the presentation.

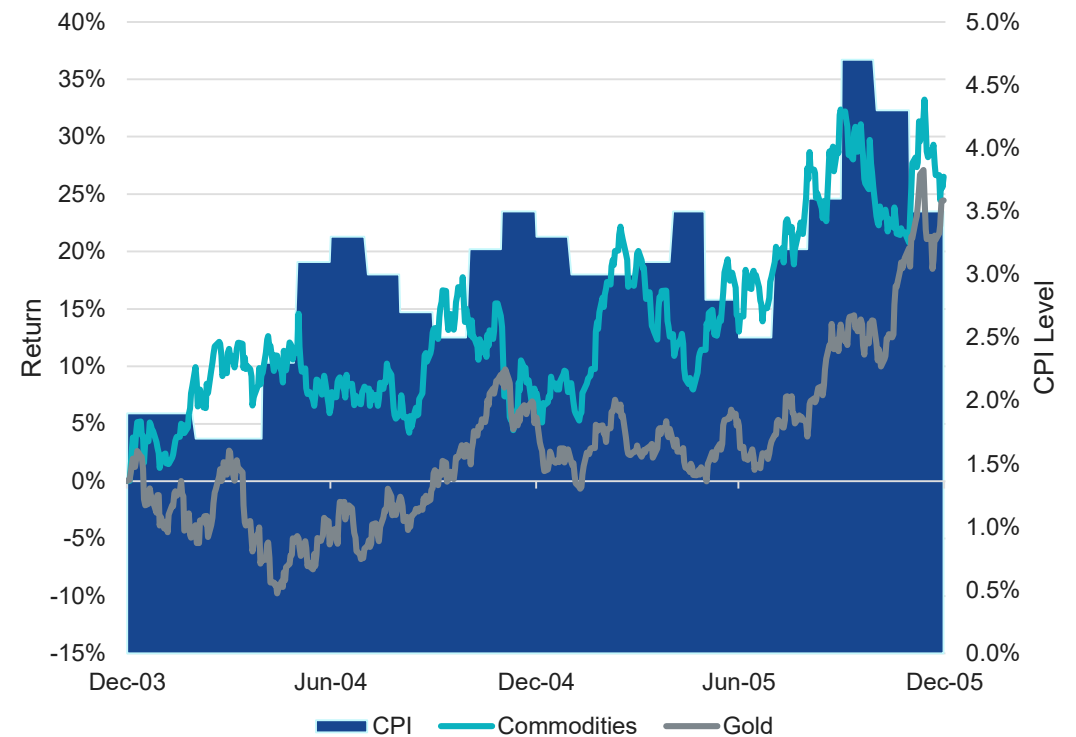
Prior Inflation Cycles – What Powell is Fighting

Gold either kept pace or lagged in the first half of the last two high inflation regimes

1st Half of the 1970s High Inflation Regime



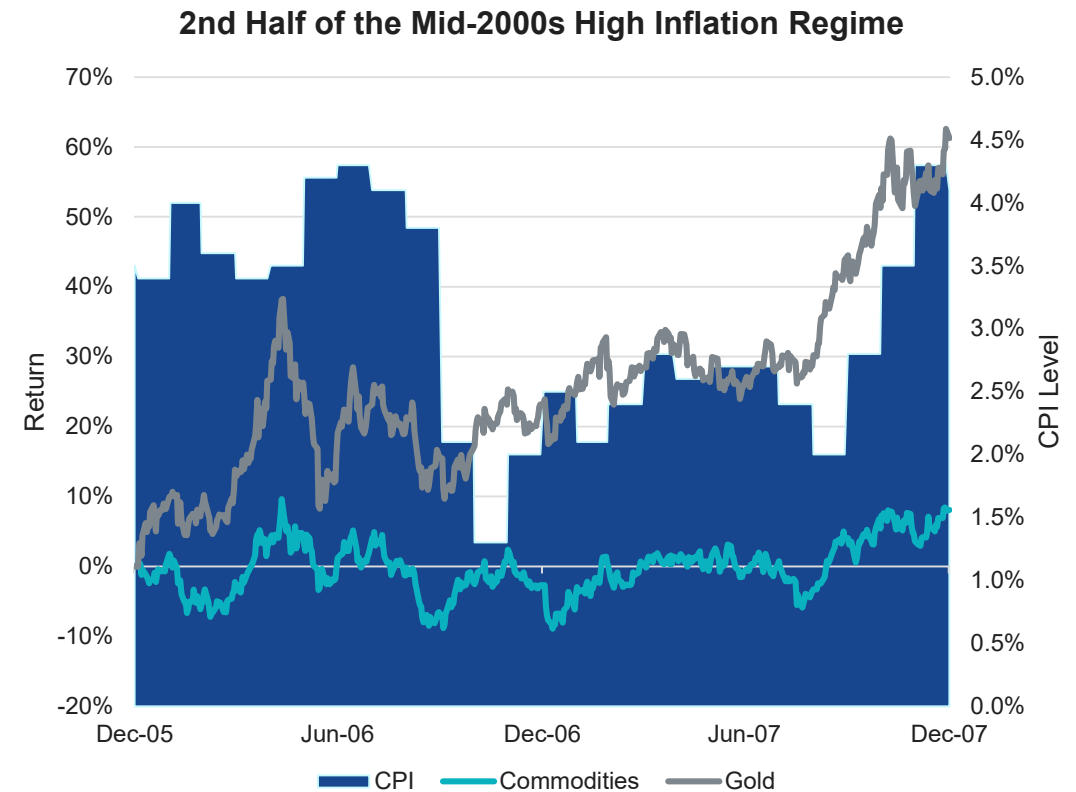
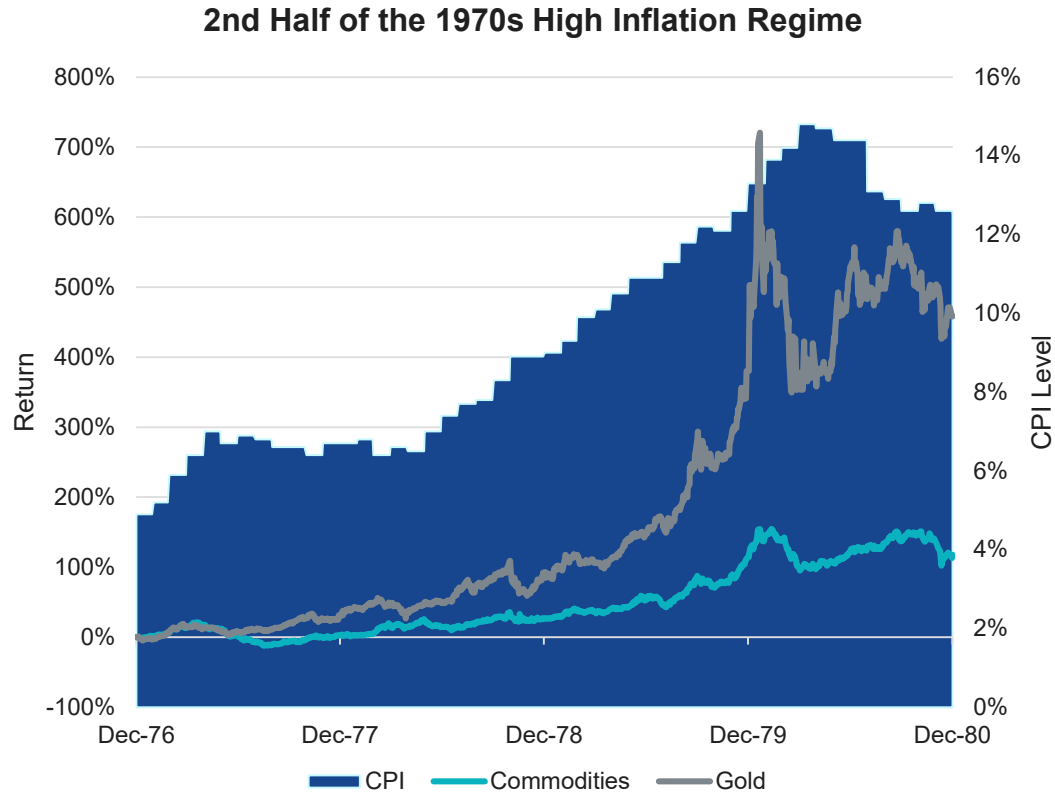
1st Half of the Mid-2000s High Inflation Regime



Source: Bloomberg. **CPI** – US Consumer Price Index Urban Consumers YoY NSA; **Commodities** – Bloomberg Commodity Index; **Gold** – Gold spot price in U.S. dollars per troy ounce. See important disclosures and index definitions at the end of presentation. **Past performance is not indicative of future results.**

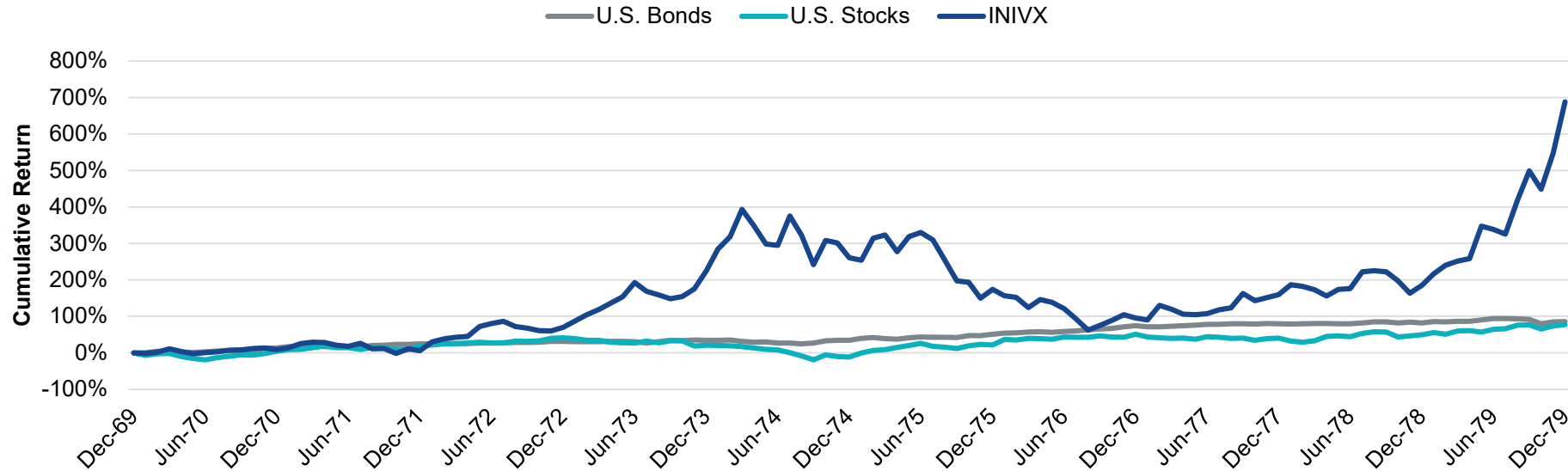
Gold: The Second Half Team

Gold significantly outperformed in the second half of the last two high inflation regimes



Source: Bloomberg. **CPI** – US Consumer Price Index Urban Consumers YoY NSA; **Commodities** – Bloomberg Commodity Index; **Gold** – Gold spot price in U.S. dollars per troy ounce. See important disclosures and index definitions at the end of presentation. **Past performance is not indicative of future results.**

The 1970s – If the Fed Wavers



Average Annual Total Returns (%) as of June 30, 2022	1 Yr	3 Yr	5 Yr	10 Yr
Class A: NAV (Inception 02/10/56)	-21.98	3.39	3.04	-2.60
Class A: Maximum 5.75% load	-26.46	1.37	1.83	-3.17

EXPENSES: Class A: Gross 1.34% and Net 1.34%; Expenses are capped contractually through 05/01/23 at 1.45% for Class A. Caps excluding acquired fund fees and expenses, interest, trading, dividends, and interest payments of securities sold short, taxes, and extraordinary expenses.

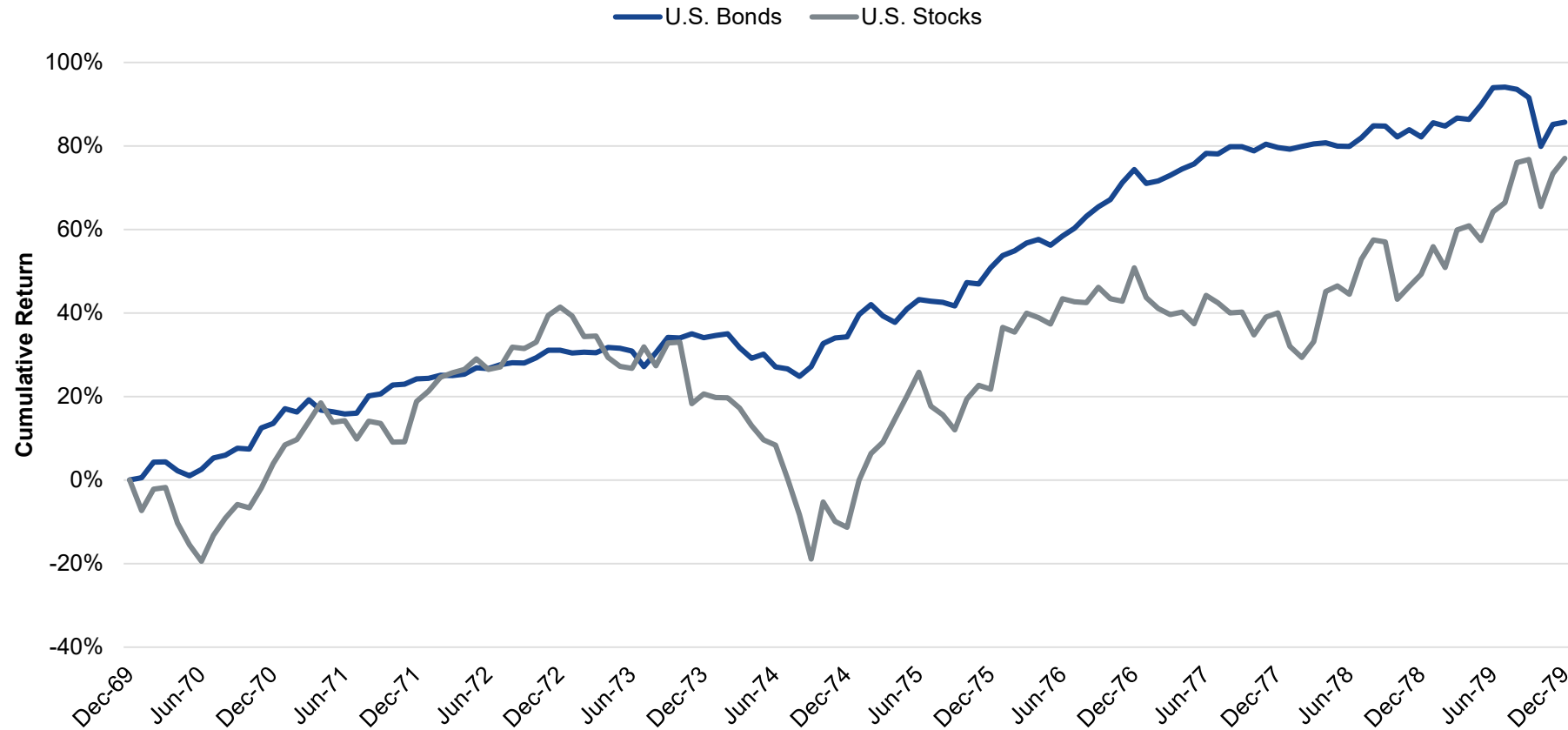
Source: VanEck, FactSet. Data as of June 30, 2022.

The performance data quoted represents past performance. Past performance is not a guarantee of future results. Performance may be lower or higher than performance data quoted. Performance as of most recent month-end can be found on www.vaneck.com.

The "Net Asset Value" (NAV) of a Fund is determined at the close of each business day, and represents the dollar value of one share of the fund; it is calculated by taking the total assets of the fund, subtracting total liabilities, and dividing by the total number of shares outstanding. Investors should not expect to buy or sell shares at NAV.

Source: VanEck, FactSet, CRSP. Past performance is not indicative of future results. "U.S. Stocks" represented by the S&P 500 Total Return Index. "U.S. Bonds" represented by Bloomberg Barclays U.S. Aggregate Bond Total Return Index from March 1976 to December 1979, Bloomberg Barclays U.S. Aggregate Government/Credit Total Return Index from March 1973 to February 1976 and a blend of returns of Ibbotson SBBI bond indices (25% U.S. Intermediate-Term Government Bond Total Return Index, 25% U.S. Long-Term Corporate Bond Index, 25% U.S. Long-Term Government Bond Total Return Index, and 25% U.S. 30-Day Treasury Bill Total Return Index) from January 1970 to February 1973.

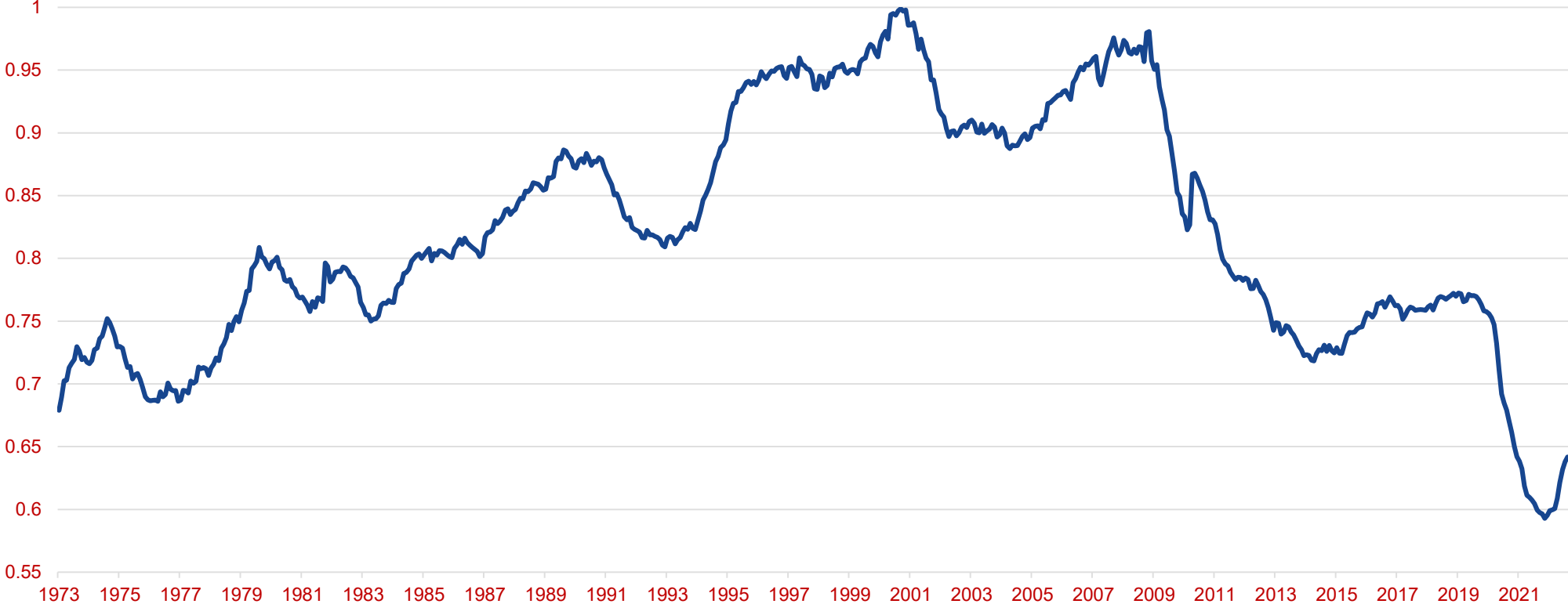
The 1970s Without Commodities and Gold



Source: VanEck, FactSet, CRSP. Past performance is not indicative of future results. "U.S. Stocks" represented by the S&P 500 Total Return Index. "U.S. Bonds" represented by Bloomberg Barclays U.S. Aggregate Bond Total Return Index from March 1976 to December 1979, Bloomberg Barclays U.S. Aggregate Government/Credit Total Return Index from March 1973 to February 1976 and a blend of returns of Ibbotson SBBI bond indices (25% U.S. Intermediate-Term Government Bond Total Return Index, 25% U.S. Long-Term Corporate Bond Index, 25% U.S. Long-Term Government Bond Total Return Index, and 25% U.S. 30-Day Treasury Bill Total Return Index) from January 1970 to February 1973. **Past performance is not indicative of future results.**

Regulation Reduced the Banks' Loan Book

U.S. Commercial Banks Loan-to-Deposit Ratio



Source: Board of Governors of Federal Reserve System. Data as of August 2022. The loan-to-deposit ratio is used to assess a bank's liquidity by comparing a bank's total loans to its total deposits for the same period. To calculate the loan-to-deposit ratio, divide a bank's total amount of loans by the total amount of deposits for the same period. Please see important disclosures and definitions at the end of the presentation.

Spreads are Normal

U.S. High-Yield Corporate Bond Spreads (Bloomberg US Corporate High Yield Average OAS)



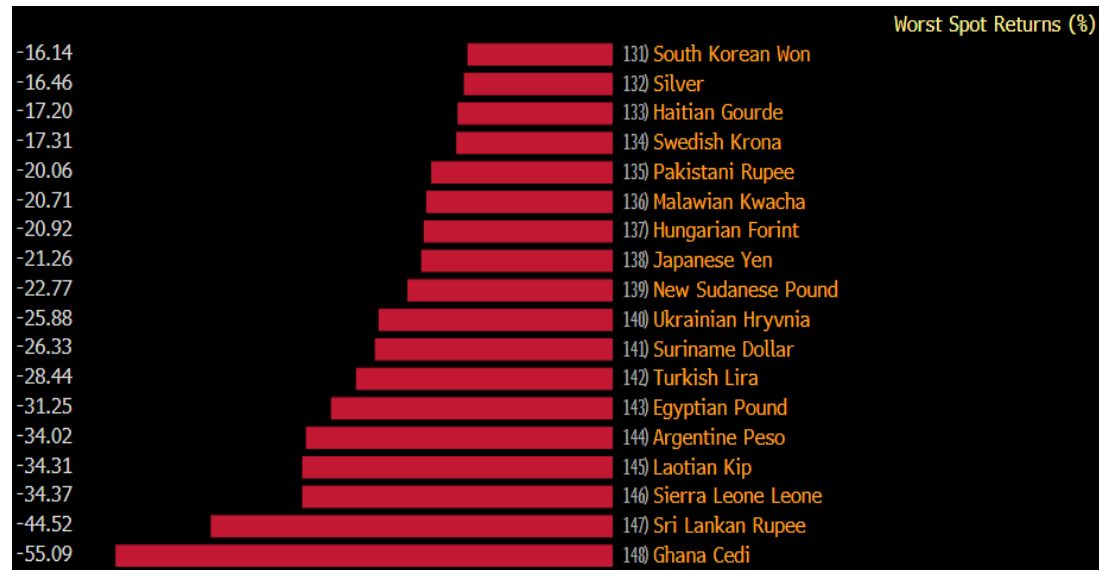
Source: Bloomberg. Data as of August 2022. The Bloomberg Barclays US Corporate High Yield Bond Index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below. The option-adjusted spread (OAS) is the measurement of the spread of a fixed-income security rate and the risk-free rate of return, which is then adjusted to take into account an embedded option. Please see important disclosures and definitions at the end of the presentation. **Past performance is not indicative of future results.**

Digital Assets: Why Do We Care?

- 1. Only 13% of people are born in a country with a stable, open financial system. (Arguably, “open” financial systems are getting more closed: Russian reserves seized, Canadian Truckers donations seized, PayPal new terms of service etc).**
- 2. Blockchain is most democratizing technology since the microcomputer: it combines memetic attraction with trust in code rather than legacy institutions.**
- 3. Digital assets are already challenging gold, the database/information technology industry, financial services which are large percentages of the S&P 500.**
- 4. Tokens allow founders to create their own economic model. Customers, creators, and vendors can be paid in tokens (revenue share).**
- 5. Risks: the relational database was not an investable trend, web 2 companies like Meta incorporate crypto, or incumbents use regulations to kill crypto.**

Why Do We Need Bitcoin?

YTD FX Returns vs. USD



Junta weaponises digital banking transition to starve resistance funding

OCTOBER 7, 2022



Resistance fighters say ramped-up financial surveillance has made it harder to fund their struggle, as new central bank rules separate ordinary people and business owners from their money.

By FRONTIER

AMERICAN NEWS Oct 2, 2022

'We own the science': UN rep announces Google partnership during World Economic Forum 'disinformation' panel

"We're becoming much more proactive. We own the science, and we think that the world should know it," the UN's Melissa Fleming said during the "Sustainable Development Impact Meetings."

PREMIUM UK

PayPal Shuts Down Free Speech Union and The Daily Sceptic Accounts

By [Owen Evans](#) | September 21, 2022 Updated: September 23, 2022

Print

October 3, 10:47 The situation with cryptocurrency in Russia

The Ministry of Finance plans to allow international settlements in cryptocurrencies for any industries

According to Ivan Chebeskov, Director of the Department of Financial Policy of the Ministry, the main differences between the positions of the Ministry of Finance and the Central Bank are that the Ministry "advocates the creation in Russia of a full-fledged infrastructure for the turnover of digital currencies"

Tremendous Returns in Bitcoin As It Matures

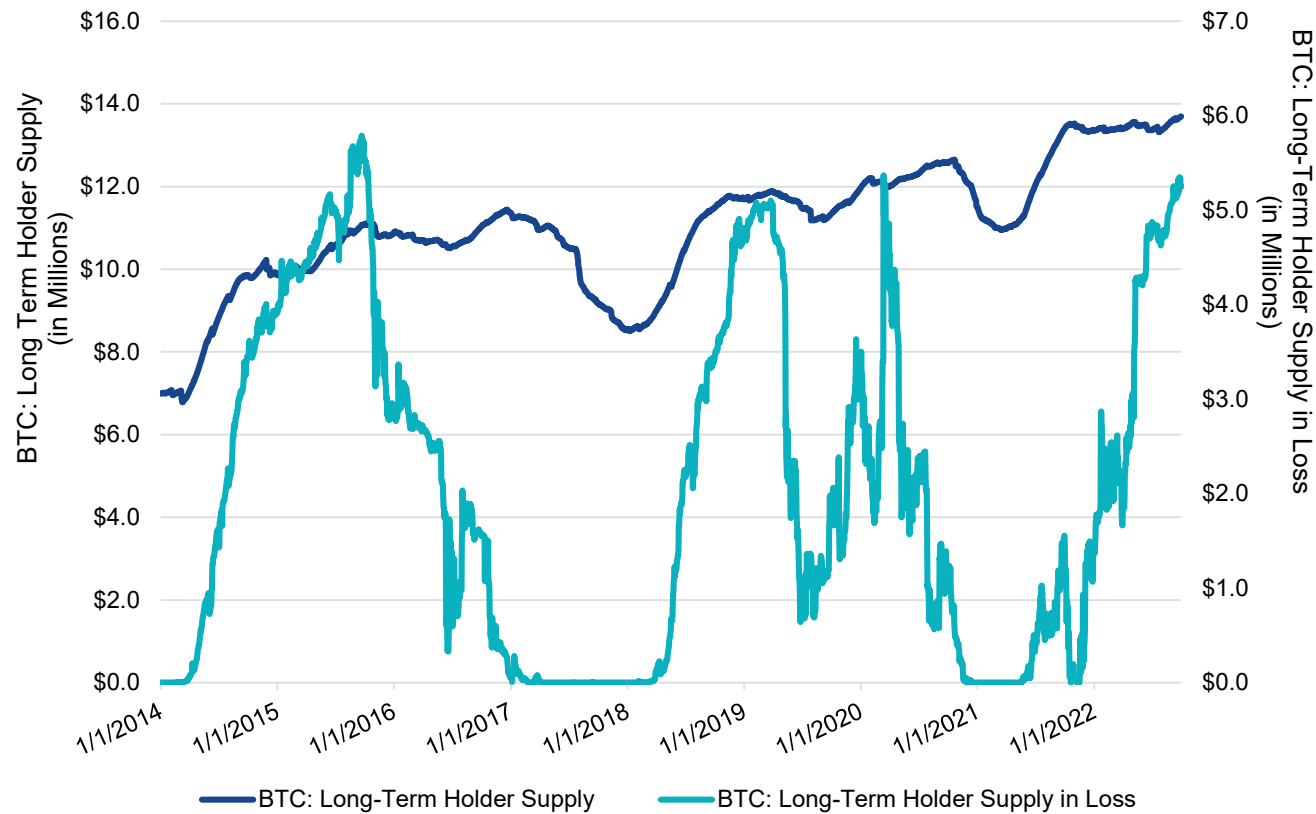


- Bitcoin 1.0 (2011 to 2017) proof of technology, huge volatility
- Bitcoin 2.0 (2017 to 2021) adopted by millions, still volatile; proof of principle in 2021
- Bitcoin 3.0 (2021 to ___) tests of China ban, ESG shutdowns, new all-time highs, beginning of institutional adoption. Smaller drawdown (50%)?
- Bitcoin 4.0 additional investment, continued political certainty
- Bitcoin 5.0 final phase, half the market cap of gold, less volatile, adopted by institutions

Source: Morningstar. Data as of 12/31/2021. Investors cannot invest directly in an index. Please see index descriptions at the end of the presentation. Past performance is no guarantee of future results. MVIS CryptoCompare Digital Assets 25 Index is a modified market cap-weighted index which tracks the performance of the 25 largest and most liquid digital assets. MVIS CryptoCompare Ethereum Index covers the performance of a digital assets portfolio which invests in Ethereum. MVIS CryptoCompare Bitcoin Index measures the performance of a digital assets portfolio which invests in Bitcoin.

Bitcoin: A Community of HODLers

BTC Long-Term Holder Supply vs. Long-term Holder Supply in Loss (12/31/2013-9/30/2022)



Post-Halving Bull Markets:

Period	Duration	Appreciation
2012-2013	365 days	8200%
2016-2017	500 days	3200%
2020-2021	550 days	600%

Peak-to-trough Bear Markets:

Period	Duration	Appreciation
2014-2015	400 days	-84%
2018-2019	350 days	-82%
2022	355 days	-75%

Source: Glassnode as of 9/30/22, HODL is a Bitcoin meme that stands for "hold on for dear life". Past performance is not a guarantee of future results. Not a recommendation to buy or sell any of the names mentioned herein.

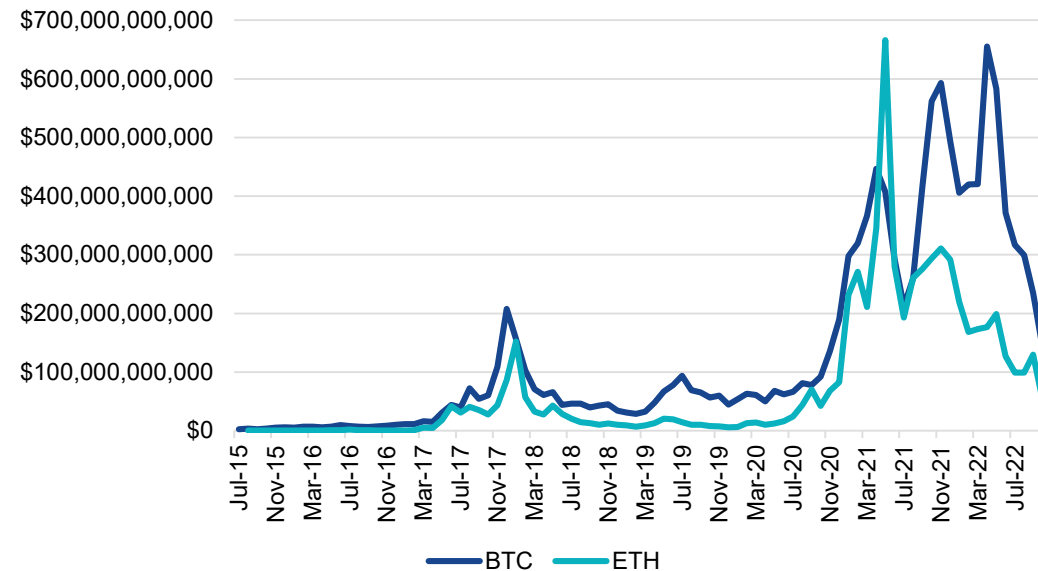
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Comparing Crypto Networks to Other Financial Networks

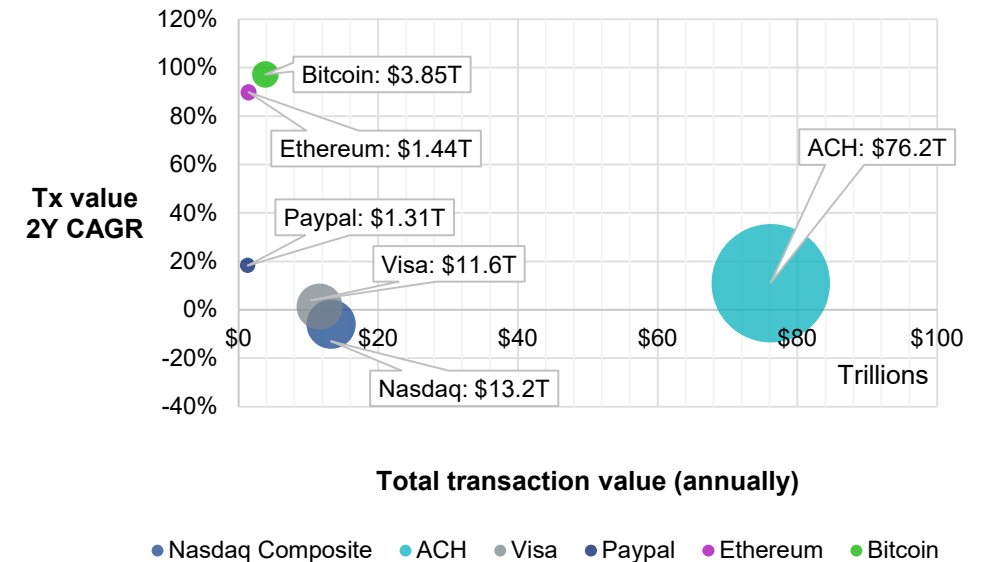
Approximately \$5 trillion was sent across the Bitcoin network in 2021; 2022 is annualizing at \$4.6 trillion despite the BTC price drawdown

BTC & ETH networks are both larger than PYPL and growing much faster

Monthly Transfer Volume



Annual Network Transaction Value (bubbles represent size of network)

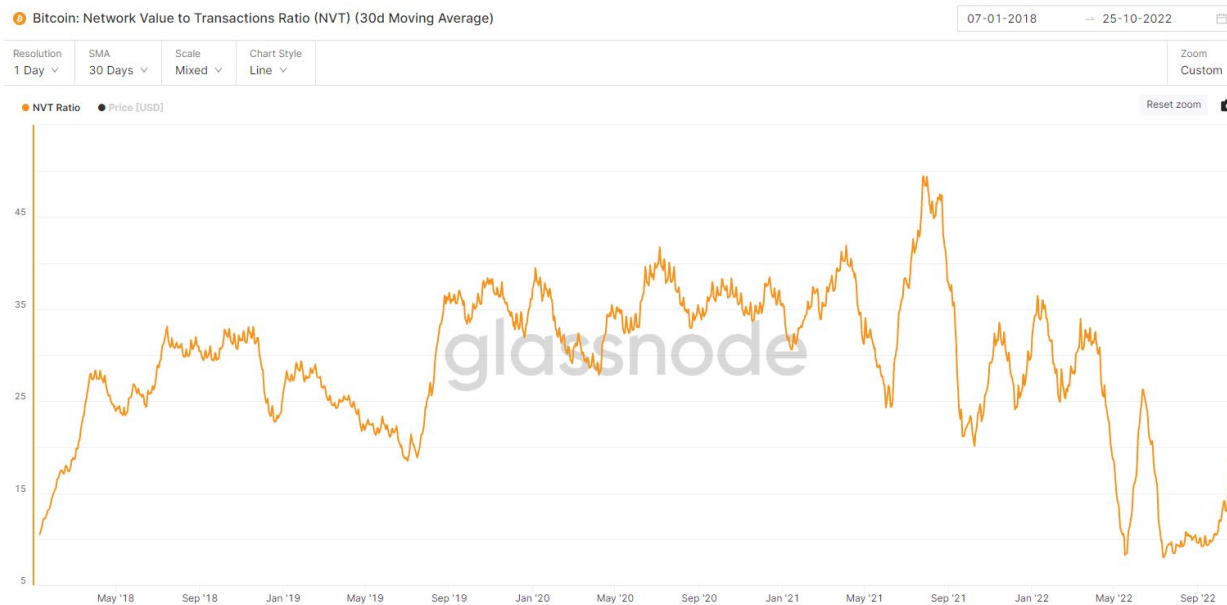


Sources: Glassnode (left chart); Visa, Nacha.org, NasdaqTrader.com, Coinmetrics, VanEck estimates as of September, 2021 (right chart). Past performance is not a guarantee of future results. Please see important disclosures and index descriptions at the end of this presentation.

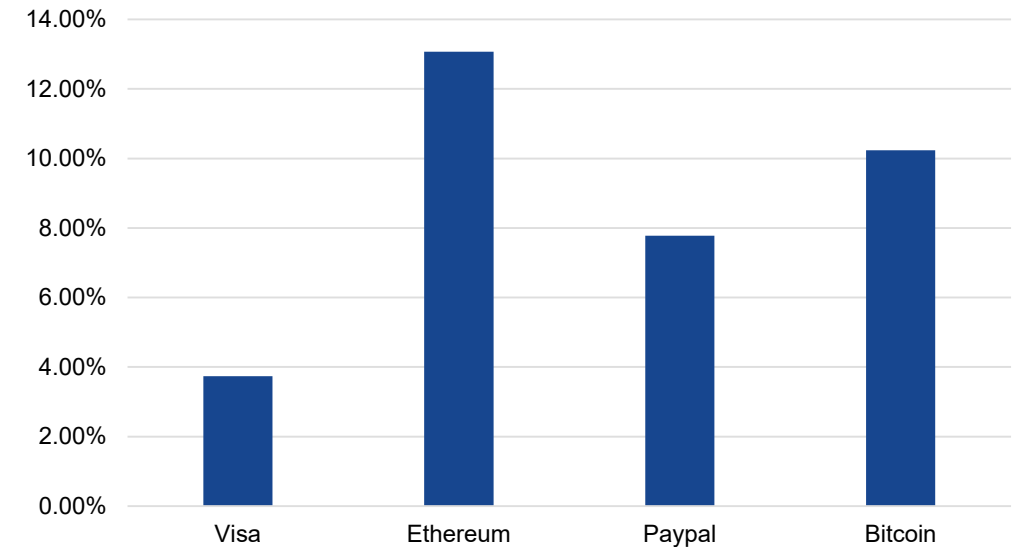
Valuing Crypto Against Other Networks: Market Cap

- As ratio of transaction value, BTC & ETH look cheap vs. their own history; a little expensive vs legacy networks, but with better growth prospects

Bitcoin: Network Value to Transactions Ratio (NVT) (30d moving average)



Market Cap as % of Annual Network tx Value



Sources: Glassnode (left chart); Paypal, Visa, Nacha.org, NasdaqTrader.com, Coinmetrics, VanEck estimates as of 2021 (right chart). Tx represents transactions. Past performance is not a guarantee of future results. Please see important disclosures and index descriptions at the end of this presentation.

Seven Types of tokens

Note, these categories are not mutually exclusive, which adds to complexity

Code	Asset	Type of Token	Details
HST	Helium Security Token	Security	Sold via registered sale, holders receive 34% of all HNT mining rewards
BNB	Binance Coin	Revenue-based token	A token whose value may directly relate to the development of a network, for example by denominating payment for services in the native token, and/or by using the revenues earned for services to buy back and burn the native token
HNT	Helium	Utility token	Users can redeem a pre-determined quantity of product or service (eg HNT is the medium of exchange for data credits).
USDT	Tether	Asset-backed token	Functions as a claim on an underlying assets (may or may not be a security)
AAVE	Aave	Governance token	Gives holders input on key aspects of the project including roadmap, economics, development costs, treasury management, etc
TBD	MercadoCoin	Rewards token	Like airline points, represents value for use where accepted by vendors (but generally not accepted as collateral in DeFi)
DOGE	Dogecoin	Meme token	A token with no particular value proposition other than crowd popularity (which may have business optionality in the future, if a governance framework can be agreed)

Sour

“Centralized” token exchange



SBF @SBF_FTX · Oct 25
that time of the week

ftx.com/ftt

NOT INVESTMENT ADVICE

BBO USD TWAP

Amount 126700 FTT ≈ 2896615.40 USD

25% 50% 75% 100%

100.02%

Days 0 Hours 6 Minutes 0

1 HOUR 12 HOURS 1 DAY 7 DAYS

Margin Randomize size Hybrid execution

HIDE ADVANCED FIELDS

Max Spread 2 %

Max individual order size 2000 FTT

Max distance through book 1 %

Pause above price 35 USD

243 104 585

Sources: Messari, VanEck. Data as of 9/30/2021. ETH revenues = 2021 VanEck estimated miner revenues (transaction fees + block rewards) of \$18b. Past performance is no guarantee of future results.

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Chart of FTT (FTX's token)



- FTX has ~10% global market share of spot crypto trading
- 1/3 of all FTX fees are used to repurchase FTT tokens (capped supply)
- FTT holders receive discounted trading fees, collateralized lending, access to backstop liquidity fund, better allocations on initial coin offerings.

	Today	FTT Down 2025	Base 2025	Up 2030
Terminal Year		2025	2025	2030
Revenue (m)	802	541	4,934	38,872
FCF (burn) (m)	216	146	1,331	10,483
Price	24	9	189	1,064
Return		-62%	8x	44x

FTT model

Global Markets TAM (market cap)	2020	2021	2022	2023	2024	2025
Global Equities	107,000	124,000	117,000	117,000	117,000	117,000
Global Fixed Income	105,250	122,797	126,865	126,865	126,865	126,865
Global Sports Betting	173	195	231	231	231	231
Total (ex-Crypto)	212,423	246,992	244,096	244,096	244,096	244,096
Crypto Market Cap (bn)	774	2,189	1,003	2,163	3,661	4,882
Crypto as a % of Global Asset Class TAM	0.36%	0.89%	0.41%	0.89%	1.50%	2.00%
Spot Crypto CEX Trading Volume (bn)	1,804	14,637	8,209	13,807	22,545	28,961
Spot Crypto DEX Trading Volume (bn)	109	1,479	1,109	2,418	4,916	7,653
Total Crypto Spot Trading Volume	1,913	16,116	9,318	16,225	27,461	36,614
Crypto Trading Volume / Market Cap	2.5x	7.4x	9.3x	7.5x	7.5x	7.5x
Centralized Exchange Share (%)	94%	91%	88%	85%	82%	79%
Decentralized Exchange Share (%)	6%	9%	12%	15%	18%	21%
Futures/Perps Crypto CEX Trading Volume (bn)	11,886	47,382	29,200	48,324	78,907	101,365
Futures Trading Volume / Spot Trading Volume	6.6x	3.2x	3.6x	3.5x	3.5x	3.5x
FTX Spot Market Share of CEX	1.2%	4.0%	7.1%	10%	13%	16%
FTX Futures Market Share of CEX	3.5%	7.5%	8.5%	10%	12%	14%
FTX Spot Volume (bn)	23	590	585	1,398.77	2,960	4,672
FTX Futures Volume (bn)	416	3,554	2,482	4,832.36	9,469	14,191
Total Volume (bn)	439	4,144	3,067	6,231	12,429	18,863
FTX Revenue (m)	85	919	802	1,630	3,251	4,934
Take Rate (%)	0.02%	0.02%	0.03%	0.03%	0.03%	0.03%
YoY Growth %		981%	-13%	103%	99%	52%
FTX Burn	22	248	216	440	877	1,331
% of Revenue Burned	26%	27%	27%	27%	27%	27%

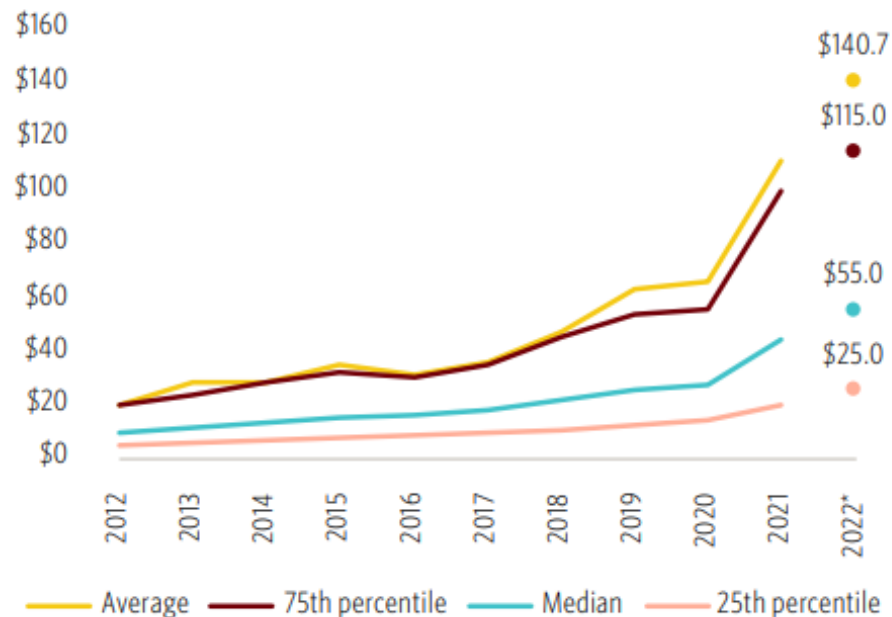
- 23% discount rate
- Tax all earnings at 15%
- Assume terminal valuation of 2.5% FCF yield

FTT Fully Diluted Market Cap	1,050	13,650	10,500
FTT Multiple	47x	55x	49x
FTT '25 FCF	1,331		
Multiple	40.0x		
Implied FCF Yield %	2.5%		
FTT Market Value	53,225		
FTT Current Total Supply	330		
FTT Price	28		
Burn between now - 2025	49		
FTT Supply in 2025	281		
FTT Price Target	189		
Return v Current Px	6.8x		

Why tokens now?

Valuations of private/VC is still too high

Range of US early-stage VC pre-money valuations (\$M)

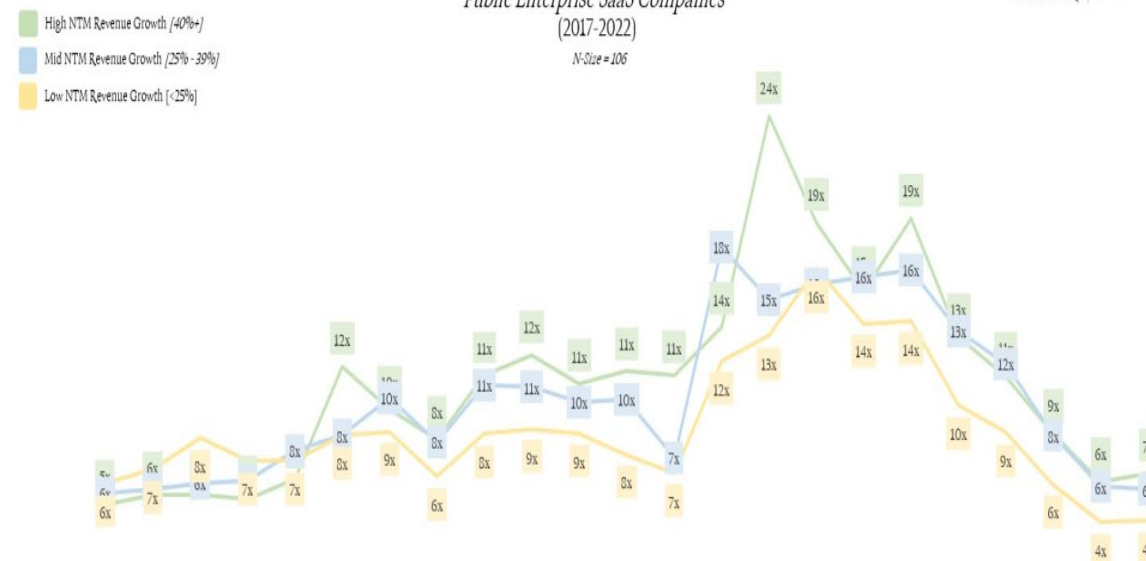


PitchBook-NVCA Venture Monitor
*As of September 30, 2022

Tokens are more like SaaS stocks: the average peak-to-trough decline of the top 20 tokens by market cap is 88%!

Median NTM Forward Revenue Multiple Over Time
Public Enterprise SaaS Companies¹
(2017-2022)
N-Size = 106

ICONIQ | Growth



	2017				2018				2019				2020				2021				2022		
IPO Count	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
	1	3	-	3	3	6	-	2	-	4	5	2	-	1	9	3	6	17	15	9	-	-	-

Source: PwC/Del

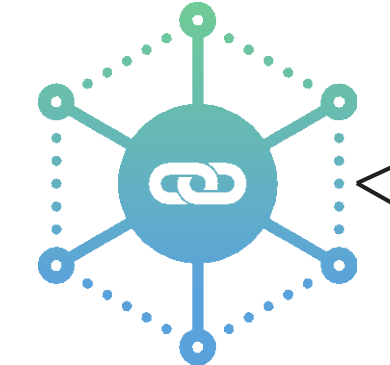
Source: Pitchbok, Iconiq, VanEck. Not a recommendation to buy/sell any of the names mentioned herein.



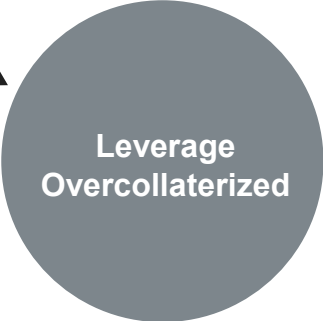
Bank Balance Sheet

- Loans cause all the trouble:
 - Too concentrated in one industry
 - Illiquid
 - Need a lender of last resort

**Traditional
Stablecoins 100%**



**24 Hour Objective Data
(Oracles)**



Crypto is Collateralized

- Risk
 - Volatility
 - Hacks
 - No lender of last resort
 - Visibility of stops
 - Collateralization amounts different—race to exit

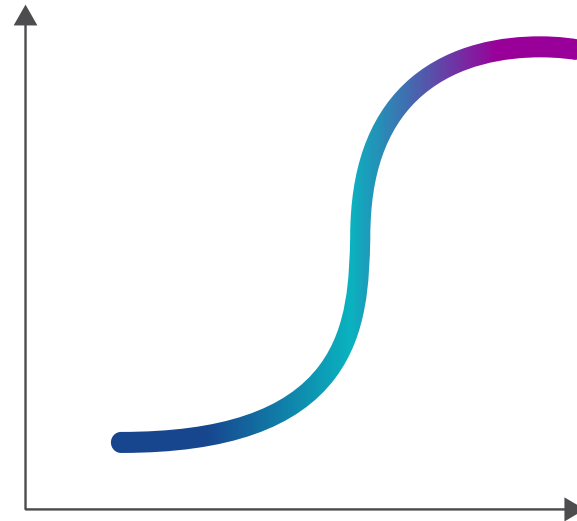
- Today's market structure and risks
 - New monetary regime
 - “inflation” and the 1970's
 - China and global growth

- Blockchain technology
 - How to Value/Invest
 - Liquid tokens

VanEck[®]

Appendix

Not sure what this slide is



Has a product or service been built?

What are sales?

Does the project provide a service that people will pay for?

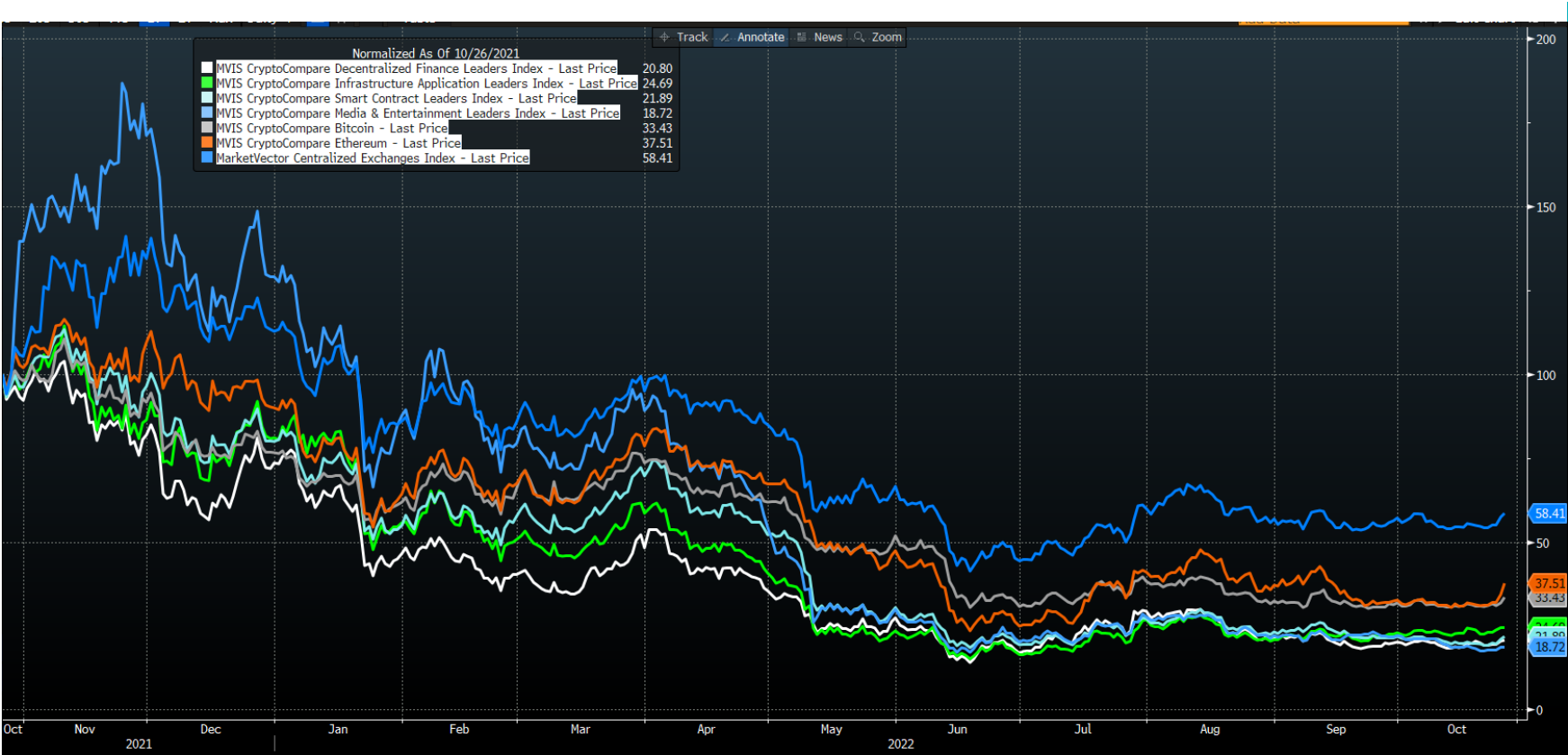
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Crypto: Sector Performance Last 12 Months

Centralized exchanges > Ethereum > Bitcoin > Layer 1s > Infrastructure > Metaverse

Last 1 year digital assets sectors:



- Centralized Exchanges -32%
- Ethereum -62%
- Bitcoin -66%
- Smart Contracts +78%
- Infrastructure Apps -75%
- Metaverse -81%
- DeFi -79%

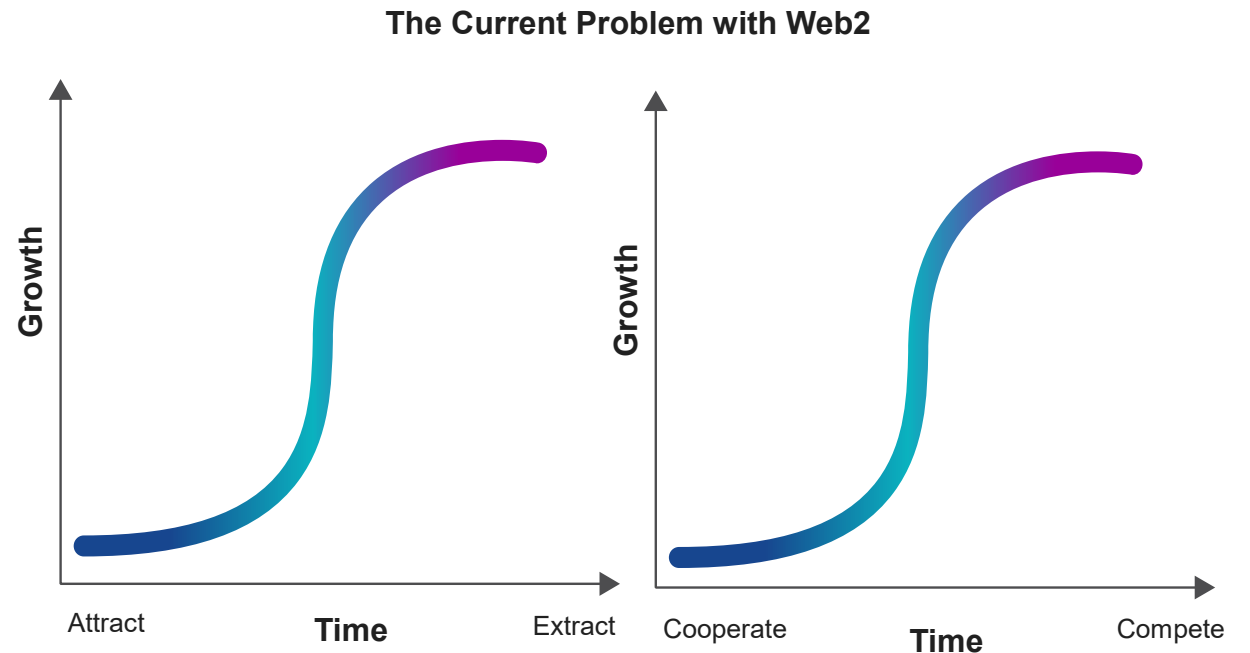
Sources: Bloomberg, MVIS, as of 4/12/22

Web3 projects can create fee income for stakeholders

Web3 solves the key problems created by web2

- As centralized web2 platforms scale and reach a plateau of adoption, they must extract data from their users and cannibalize competitors to keep growing (Microsoft vs. Netscape, Google vs. Yelp, Facebook vs. Zynga)
- Web3 has the potential to build upon the modern functionality of web2
- In web3, data ownership, control and economic empowerment will return to individuals with the help of blockchain technology

	Web1	Web2	Web3
Interact	Read	Read-Write	Read-Write-Own
Medium	Static Text	Interactive Content	Virtual Economics
Organization	Companies	Platforms	Networks
Infrastructure	Personal Computers	Cloud & Mobile	Blockchain Cloud
Control	Decentralized	Centralized	Decentralized

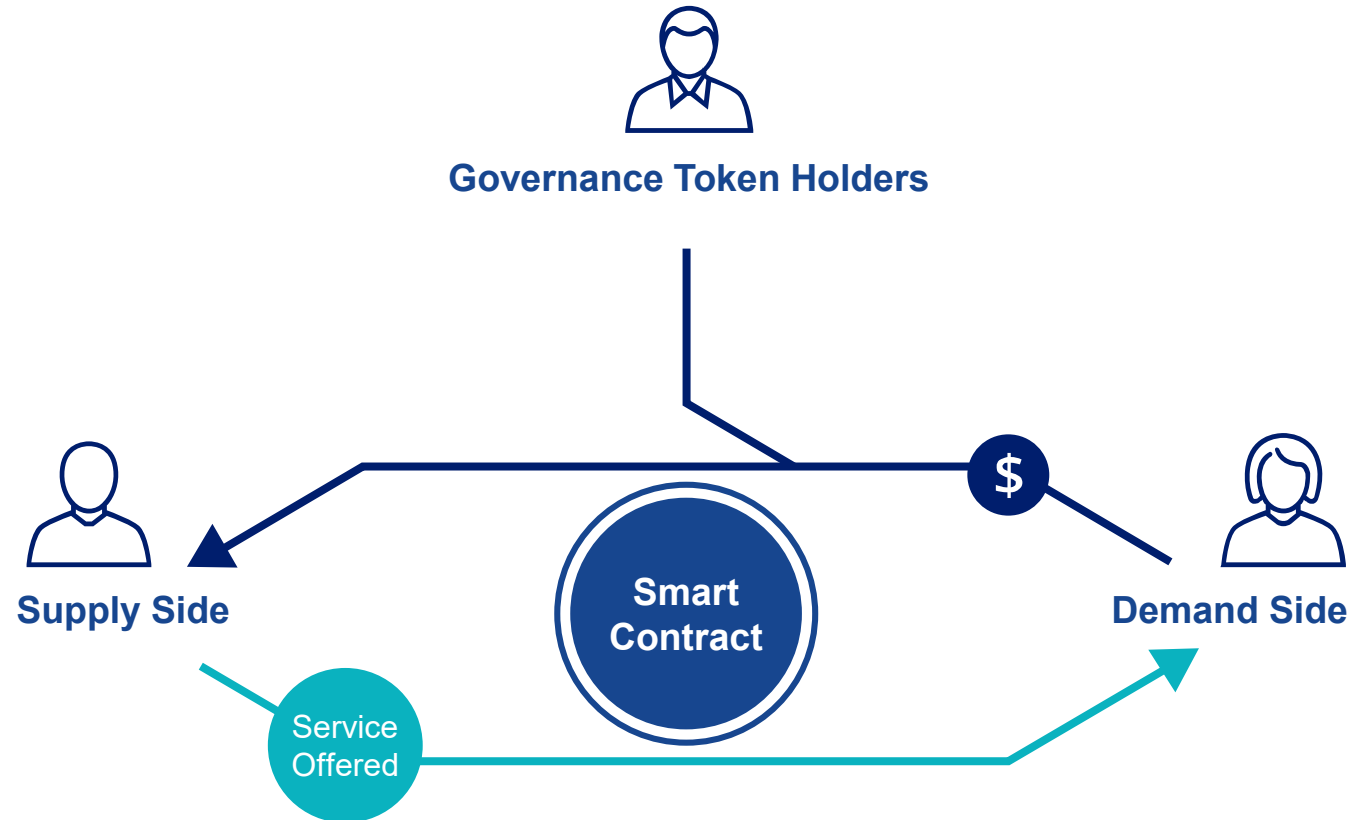


Source: A16z, VanEck. Not a recommendation to buy/sell any of the names mentioned herein.

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Typical Business Model for a Web3 Application

The token looks a lot like a traditional cash flow businesses



Similar, but different:

- Tokens can be valued using cash flow based valuation frameworks
- Similar to web2 businesses, web3 applications rely on network effects
- However, unlike in a web2 business, increasing adoption results in a more liquid and secure project
- Changes to the project are determined by governance token holders.

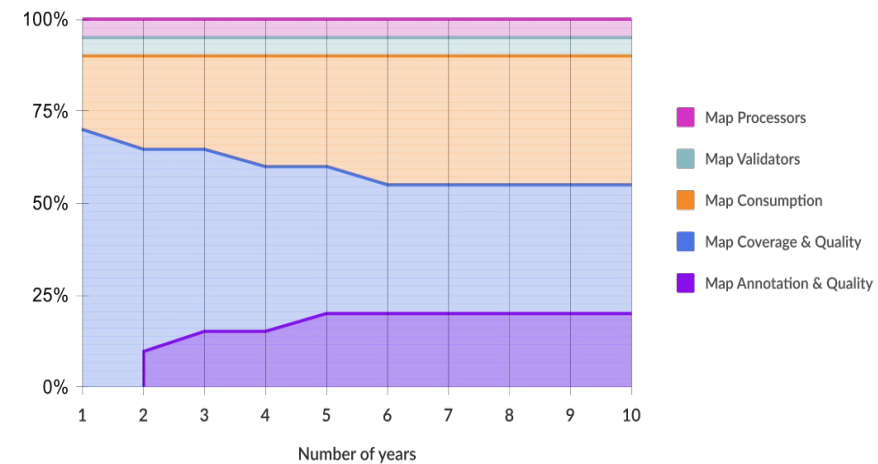
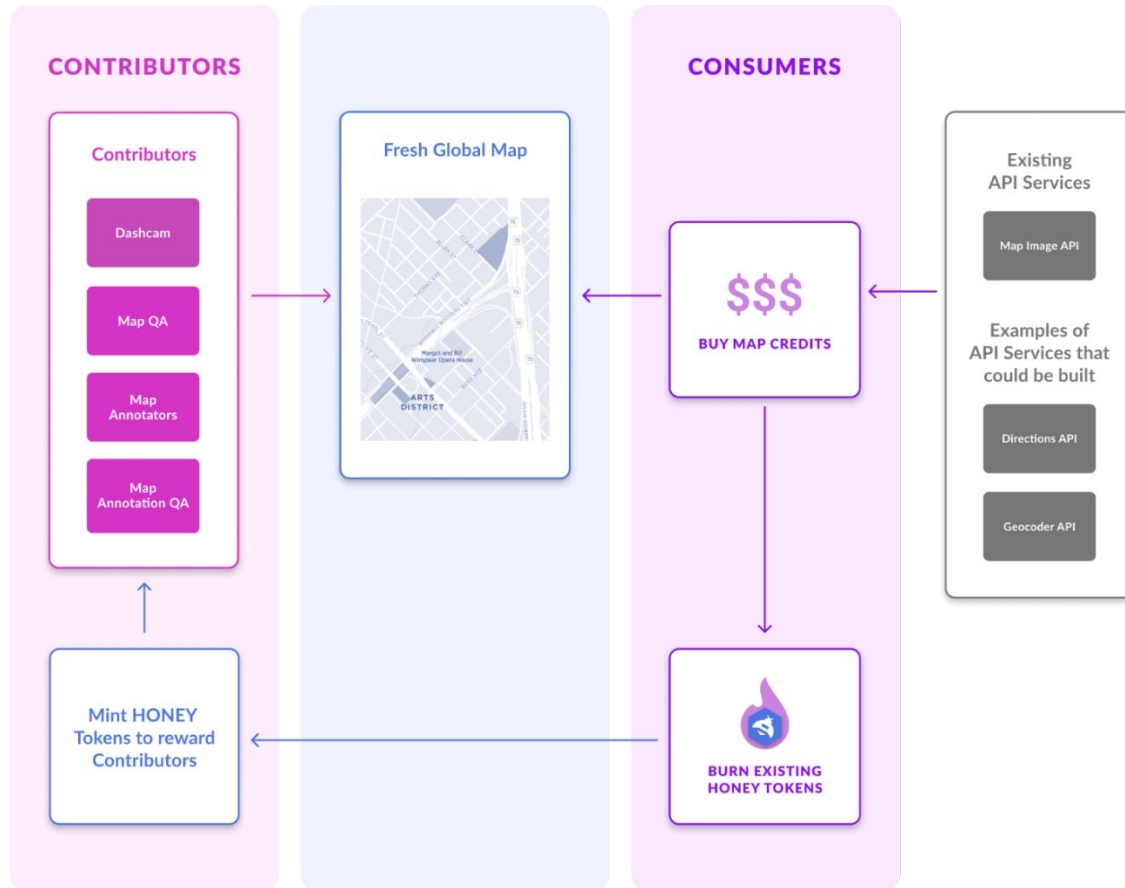
What are tokens?

Some common characteristics among crypto tokens

- Tokens are multi-purpose assets
- Like stocks, they are a capital formation tool
- While stocks only offer ownership, tokens are programmed to have some combination of utility, property, and governance rights
- This gives the token holders the ability to decide how the cash flow being generated is then allocated or distributed
- Often, this utility is designed to accelerate customer acquisition, loyalty and engagement
- Well-designed tokens blur the lines between owner and customer
- One interesting nuance about the token markets vs traditional markets is how quickly something becomes liquid and tradeable. In the traditional markets, the time from a seed round to an IPO is ~6 years. In Web3 (crypto) markets, most projects have an “exit” via a token within 2 years from the seed round.
- As a result, most tokens are early-stage assets by traditional adoption metrics. This early token exits are a feature, not a bug. As Packy McCormick says, “Web3 is the internet owned by the builders and users, orchestrated with tokens”. To achieve this vision, these tokens need to be distributed early to all network participants. Well-designed tokens act as an accelerant for a network’s adoption by aligning incentives across various network participants.

Real World Use of Smart Contract Technology

Hivemapper can disintermediate Google streetview by bootstrapping a user-owned network



Source: Hivemapper as of September 2022..

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Resource Investing Favors A Long-Term Approach

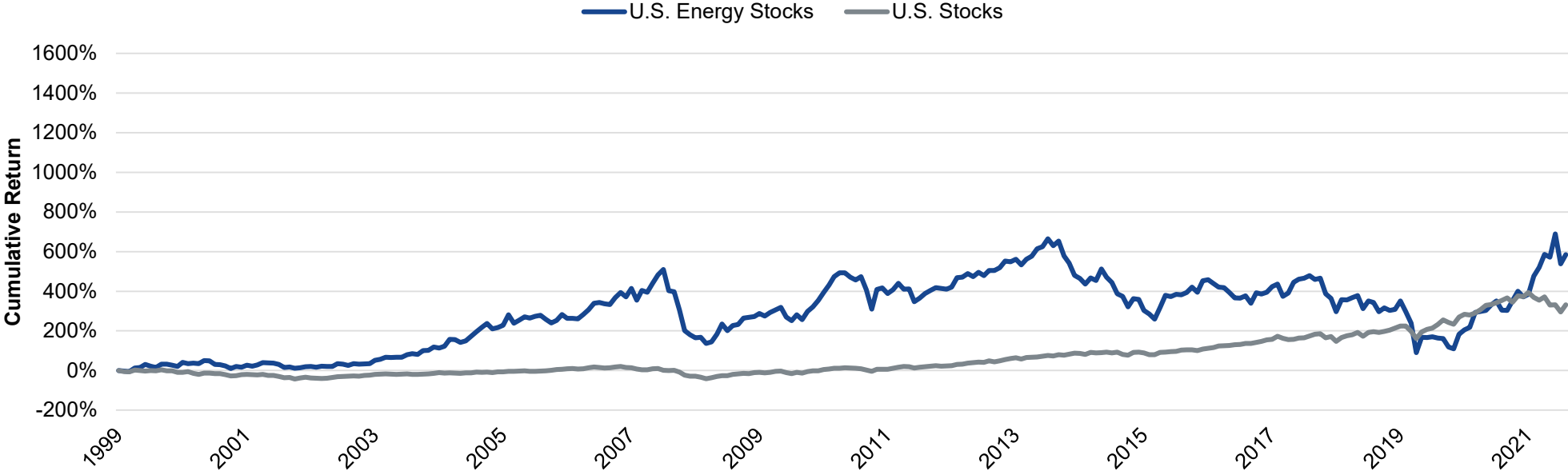


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Investing In Resource Equities Requires Patience

- Investors who have remained committed to the resource equity space, in spite of the volatility, have benefitted over the long-run
- Adding to exposure in periods where valuations are at their most attractive should—in theory—further support this approach

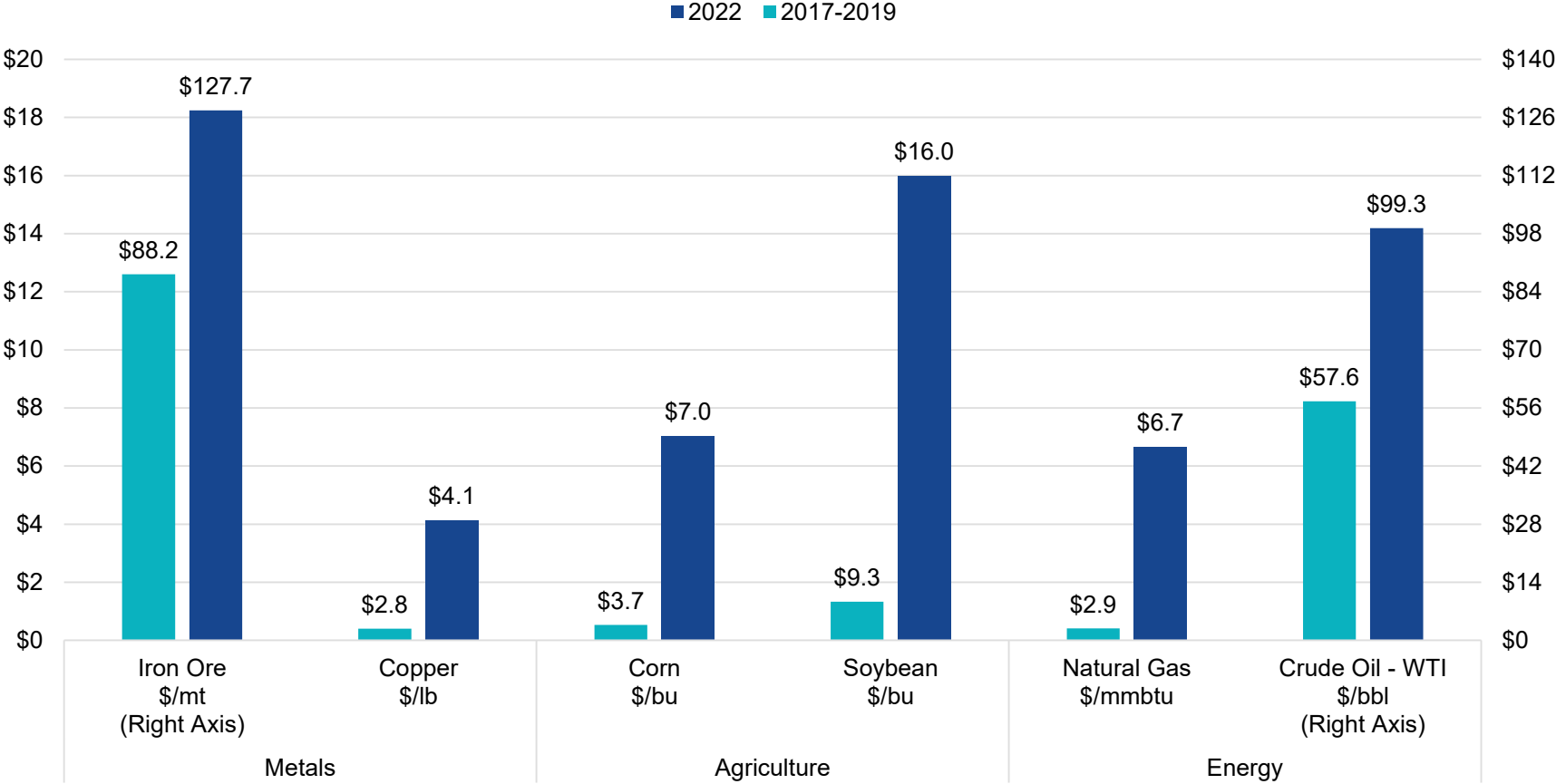
U.S. Energy Stocks vs. U.S. Stocks



Source: Bloomberg, FactSet. Data as of July 2022. For illustrative purposes only. One cannot invest in an index. U.S. Energy Stocks represented by the S&P Equal Weight Energy Sector TR Index. U.S. Stocks represented by the S&P 500 TR Index. *Provided as of first-availability of index data. Definitions and disclosures included on the last page of this presentation. **Past performance is not indicative of future results.**

Commodity Prices Remain Remarkably Resilient

Average Commodity Prices – 2017 to 2019 vs. 2022

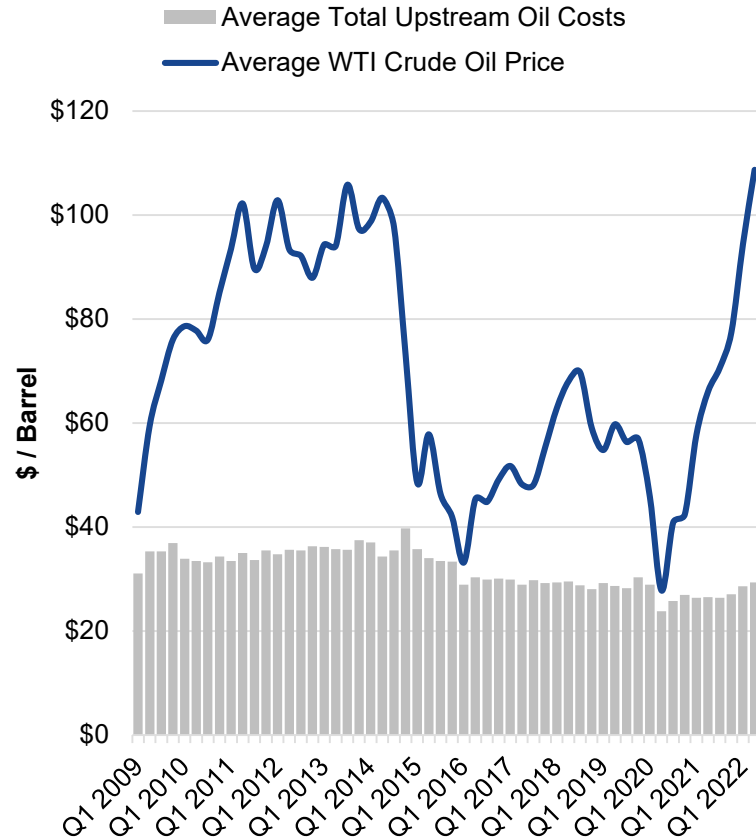


- While prices have come down off their recent highs, they still remain elevated relative to the years leading up to the global pandemic

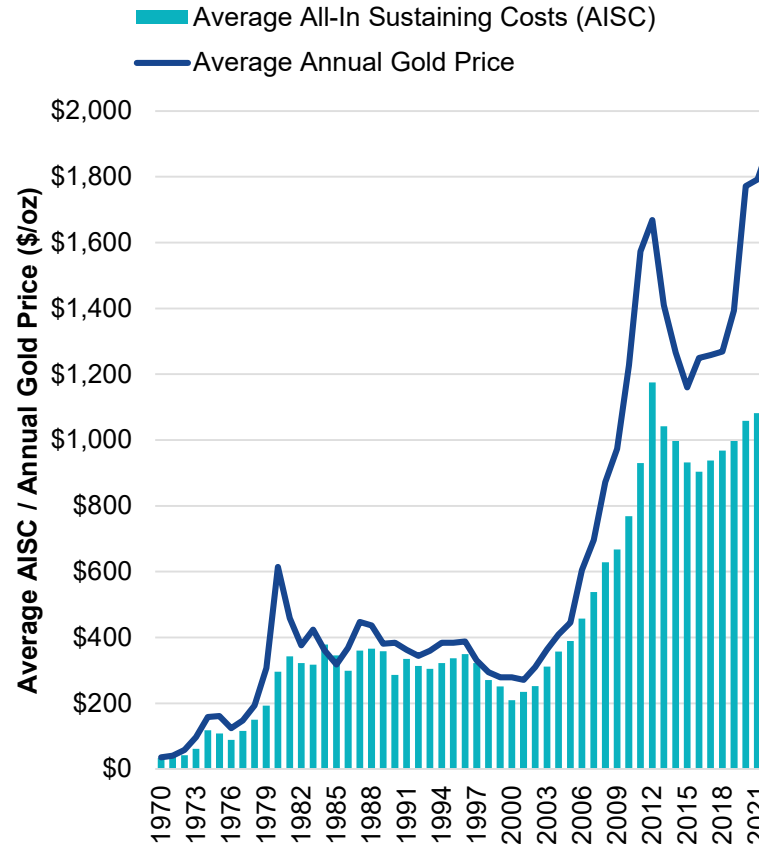
Source: FactSet. Data as of August 2022. Definitions and disclosures included on the last page of this presentation. **Past performance is not indicative of future results.**

Plenty Of Margin Despite Persistent Cost Inflation

Upstream Oil Costs vs. Avg. WTI Crude Oil Price



Gold Miner All-In Sustaining Costs vs. Gold Price

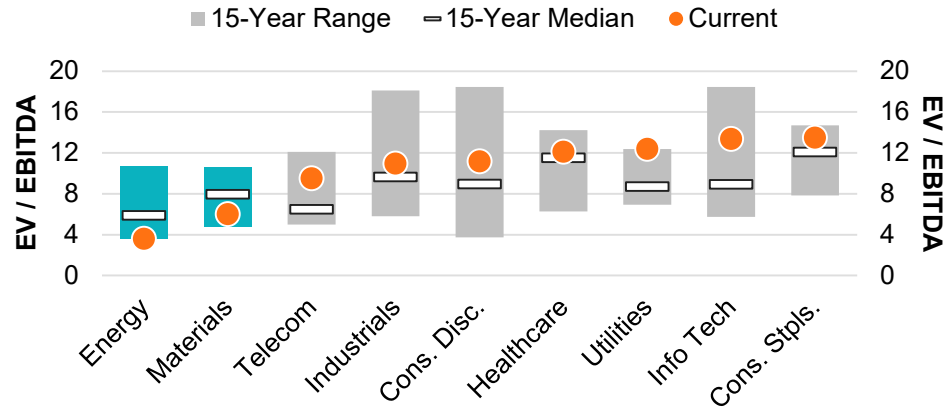


- Recent cost inflation has not substantially impacted margins as commodity prices remain high.
- Companies also continue to announce record free cash flow.

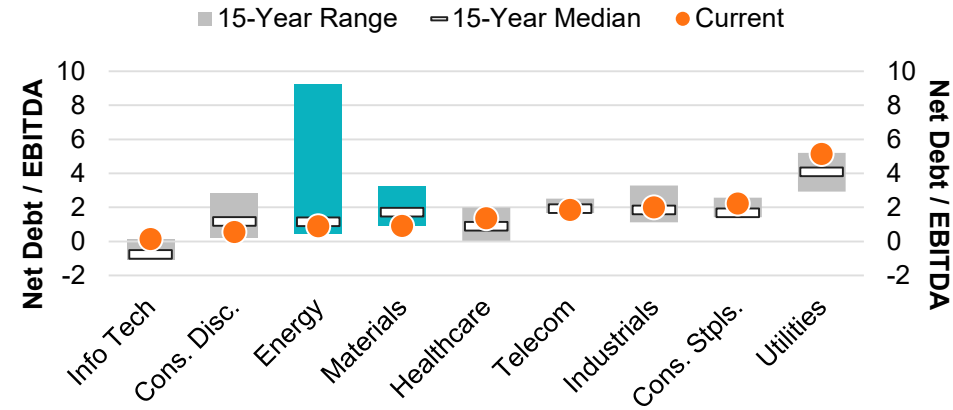
Source: Bernstein (left); Scotiabank (right). Data as of June 2022. One cannot invest in an index. WTI (West Texas Intermediate) is a specific grade of crude oil and one of the main three benchmarks in oil pricing, along with Brent and Dubai Crude is the underlying commodity of the New York Mercantile Exchange's (NYMEX) oil futures contract. Upstream oil and gas production is conducted by companies who identify, extract, or produce raw materials. Gold Miners = NYSE Arca Gold Miners Index. Definitions and disclosures included on the last page of this presentation. **Past performance is not indicative of future results.**

Global Resources: Attractive Nearly Any Way You Slice It

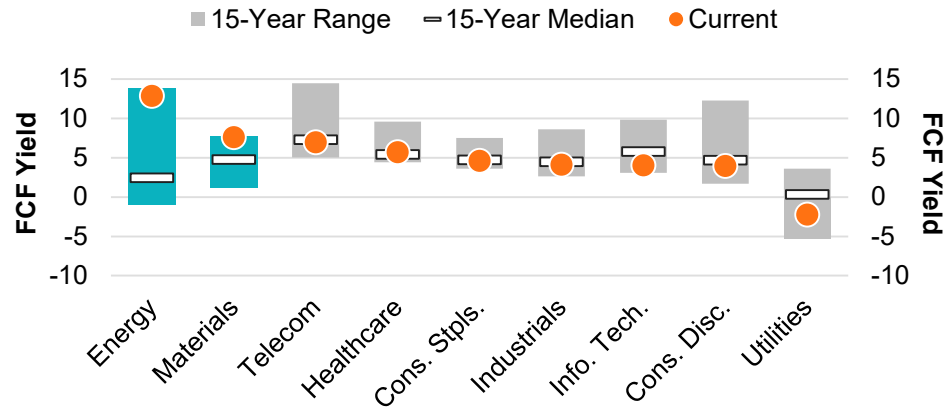
EV / EBITDA



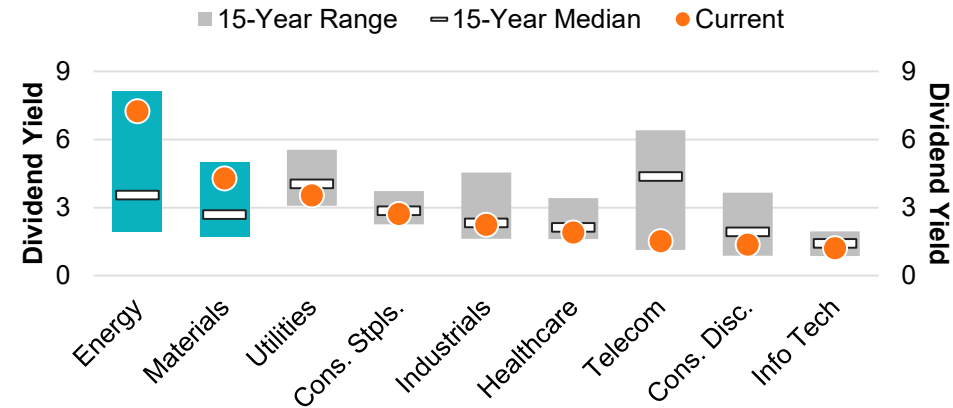
Net Debt / EBITDA



Free Cash Flow Yield (%)



Dividend Yield (%)

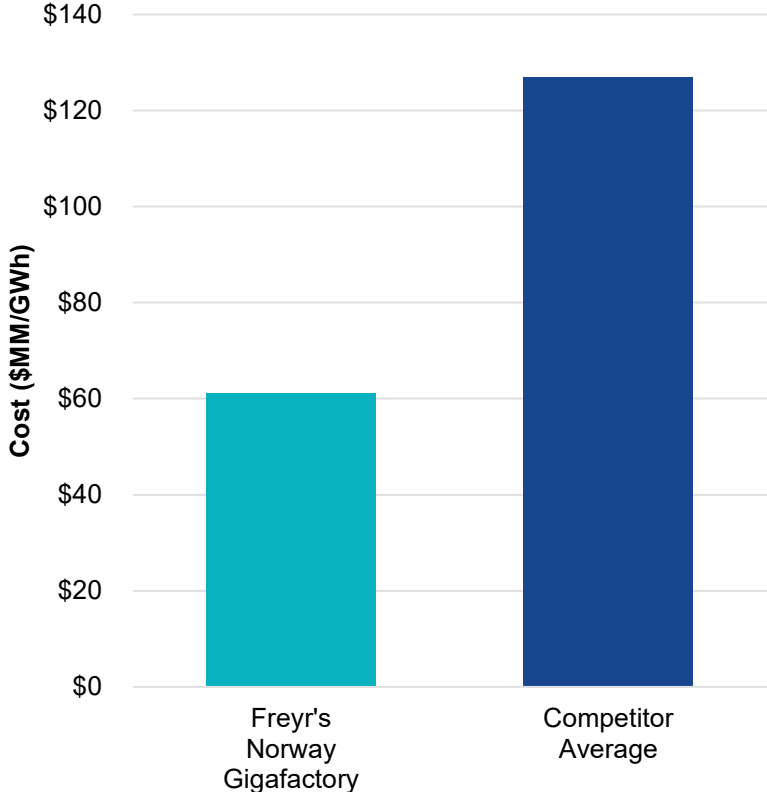


Source: Bloomberg. Data as of August 2022. Energy, Materials, Utilities, Telecom, Healthcare, Consumer Staples, Consumer Discretionary, Industrials and Information Technology represented by respective sector-level indices of the S&P Global 1200 Index (note: Financials and Real Estate sectors excluded due to historical data availability). Definitions and disclosures included on the last page of this presentation. **Past performance is not indicative of future results.**

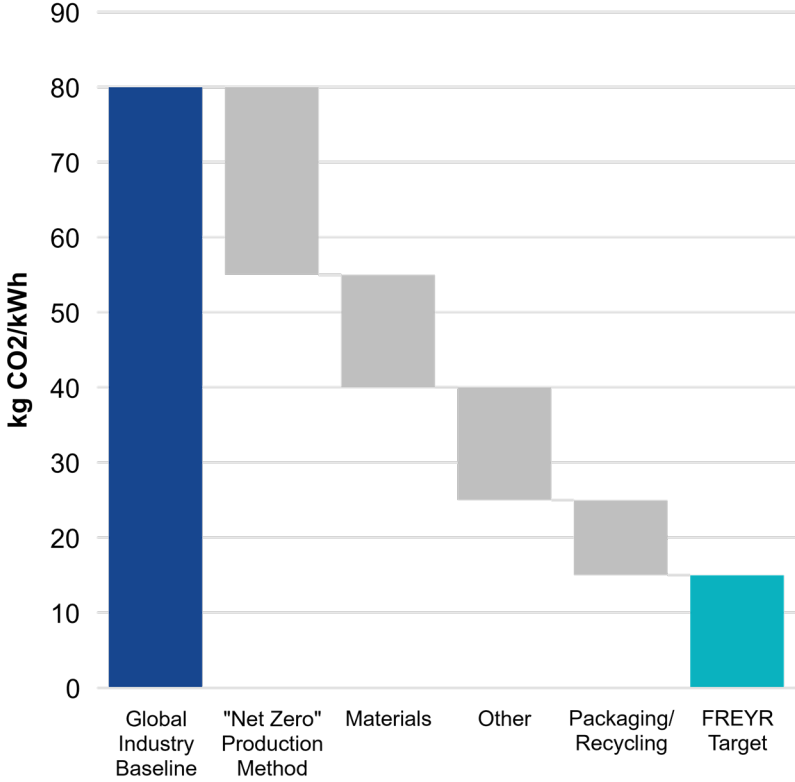
Freyr: A Lean, Green, Battery-Making Machine

Norwegian battery manufacturer using 100% renewables and a novel manufacturing process to produce batteries for industrial and EV applications

Most Efficient Battery Factory In Europe



Significantly Lower Carbon Footprint



Why Freyr?

- Harnessing tomorrow's power sustainably in less time and with lower cost and carbon footprint compared to the conventional processes
- Licensing a technology from MIT, production process time cut by 66% from 15 steps to 5
- Expanding operations into the U.S., benefitting significantly from the Inflation Reduction Act tax credits
- Zero exposure in most major resource indices

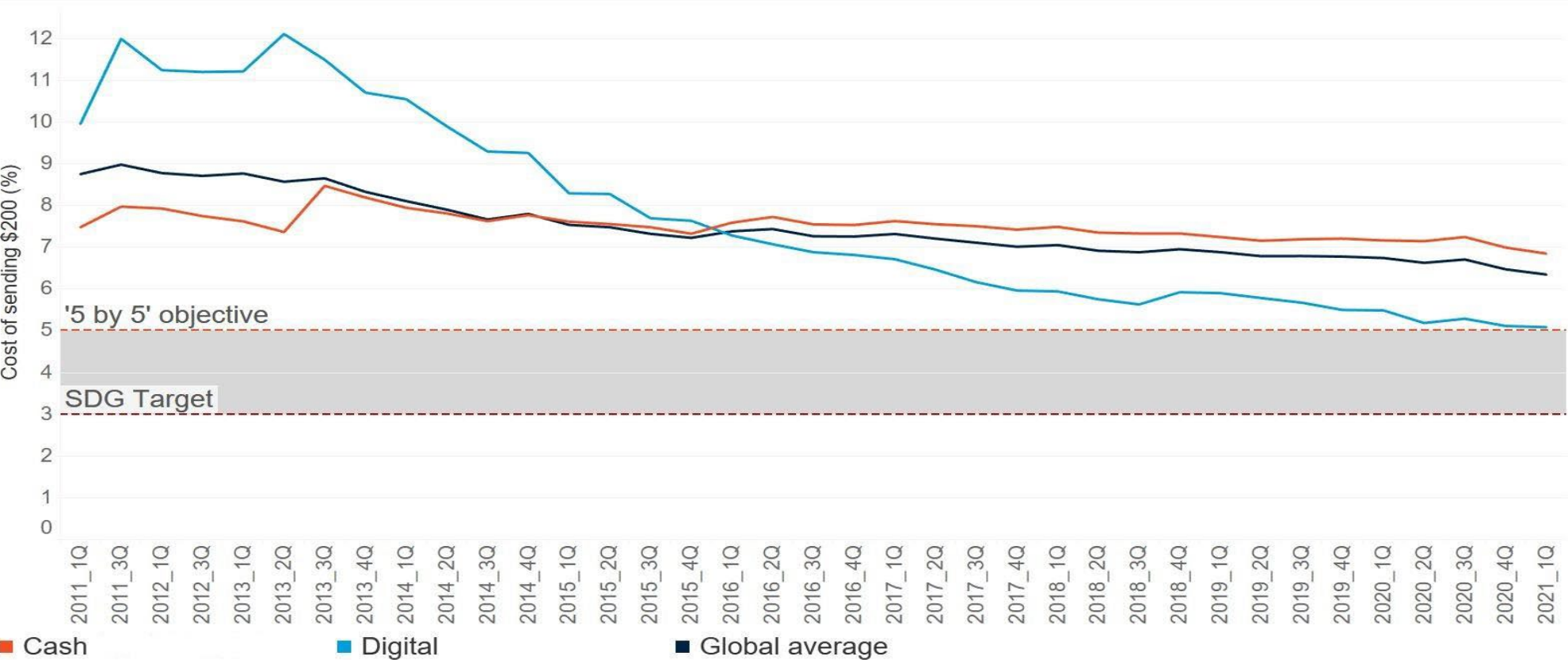
Source: Freyr. Definitions and disclosures included on the last page of this presentation. **Past performance is not indicative of future results.**

Crypto and Fintech are Driving Down Costs



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Trends in the global cost of sending \$200 in remittances

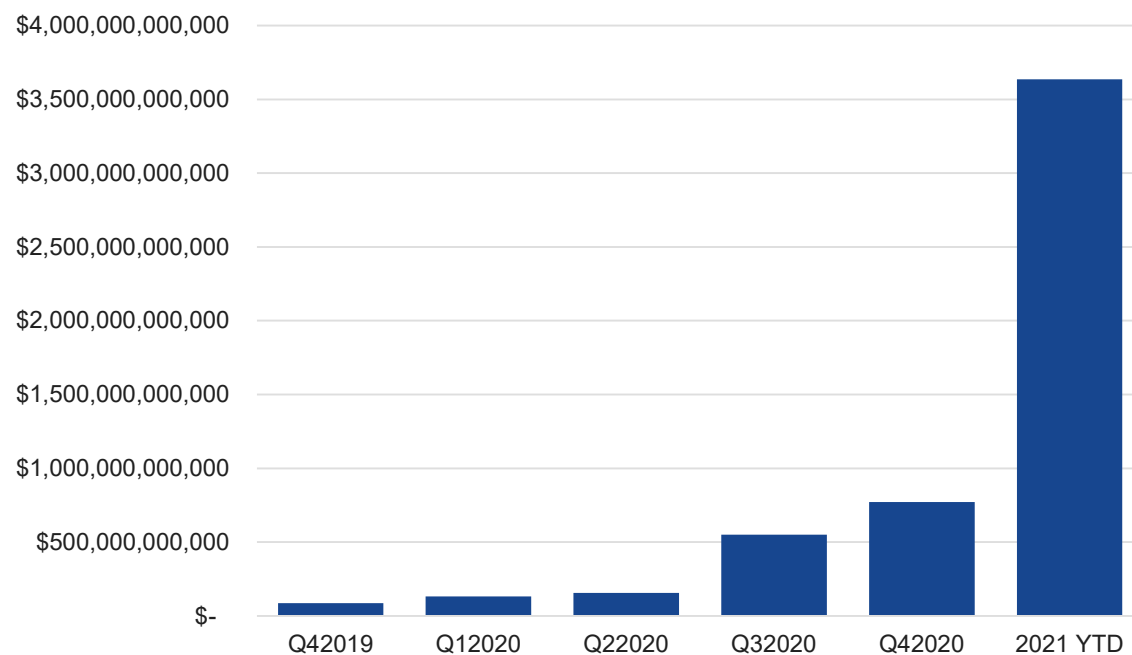


Source: The World Bank. '5 by 5' objective is a term that was adopted by the G8 in 2009 and refers to the reduction of the global average total cost of migrant remittances by 5 percentage points in 5 years. SDG refers to the Sustainable Development Goals, which are a collection of 17 interlinked global goals designed to be a "blueprint to achieve a better and more sustainable future for all". The 5% Cost Barrier is G8 and G20 commitment to reduce the Global Average Total Cost of sending \$200 to 5%. Please see important disclosures and definitions at the end of the presentation. **Past performance is not indicative of future results.**

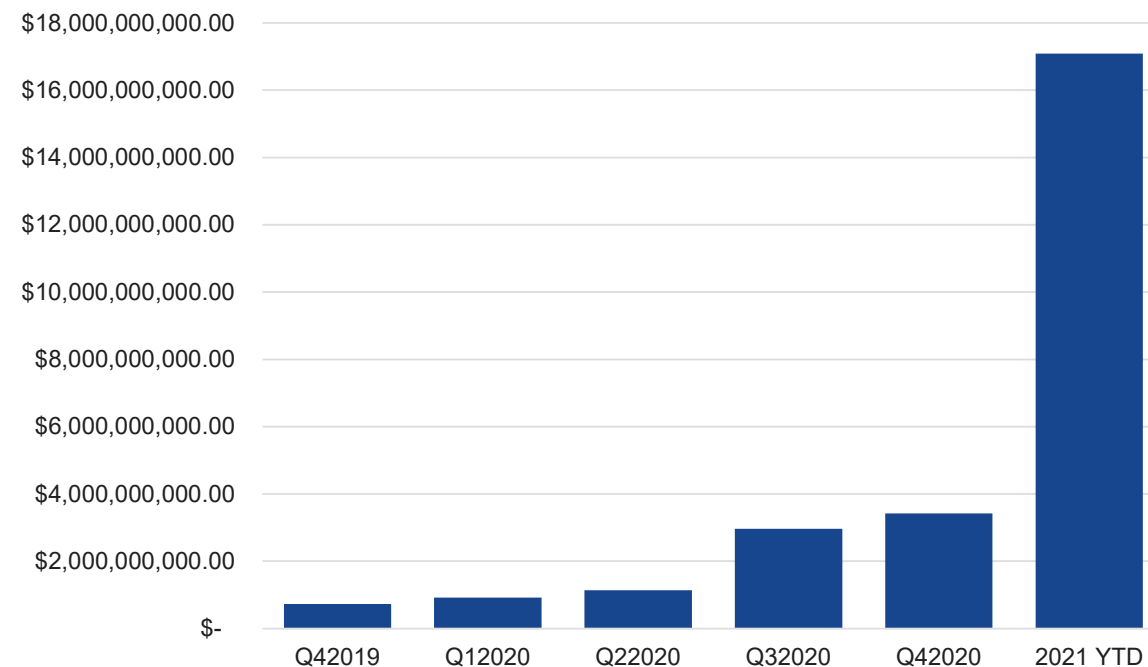
Explosion in Smart Contract Software Usage – \$3.5 Trillion!

Ethereum’s transaction value and revenues have ballooned

Total value of transactions on Ethereum network (annualized)



Ethereum revenues (annualized)



Sources: Messari, VanEck. Data as of 9/30/2021. ETH revenues = 2021 VanEck estimated miner revenues (transaction fees + block rewards) of \$18b. Past performance is no guarantee of future results. Please see important disclosures and definitions at the end of the presentation. **Past performance is not indicative of future results.**

2022 Predictions

Best guesses

- Smart contract software, such as Ethereum and Solana, continue to grow
- “Cross-protocol” development continues
- NFT hits mainstream culture with millions of users, sports ticketing, loyalty points and esports emerges as next major use case; Web 3.0
- Crypto businesses continue to go public – Etoro, more miners, more payment companies
- Long-shot guess: a “moonshot effort” succeeds; e.g., gathering identities by scanning eyeballs to create “identity” tokens controlled by individuals but usable by governments when allowed

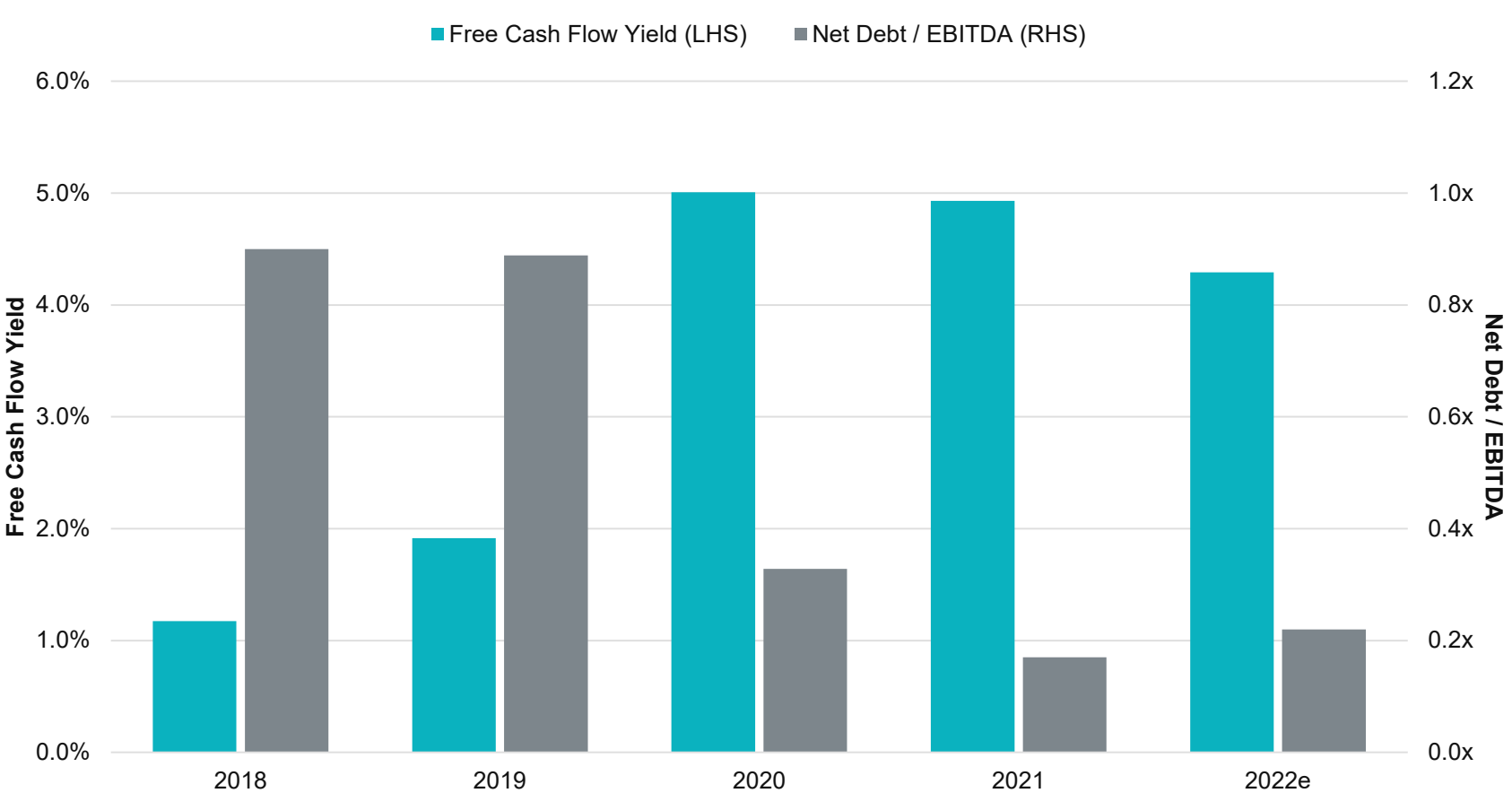


Miners Have Fundamentally Transformed Their Businesses



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Gold Miner Free Cash Flow Yield and Net Debt/EBITDA*



- Gold miners are making a strong case for value investors right now
- A persistent focus on debt reduction and free cash flow generation has fundamentally transformed how these companies look on both an absolute and relative valuation perspective

Source: FactSet, VanEck. Data as of June 2022 **"Gold Miners" = NYSE Arca Gold Miners Index. Index descriptions provided in the disclosures at the end of this presentation. **Past performance is not indicative of future results.**

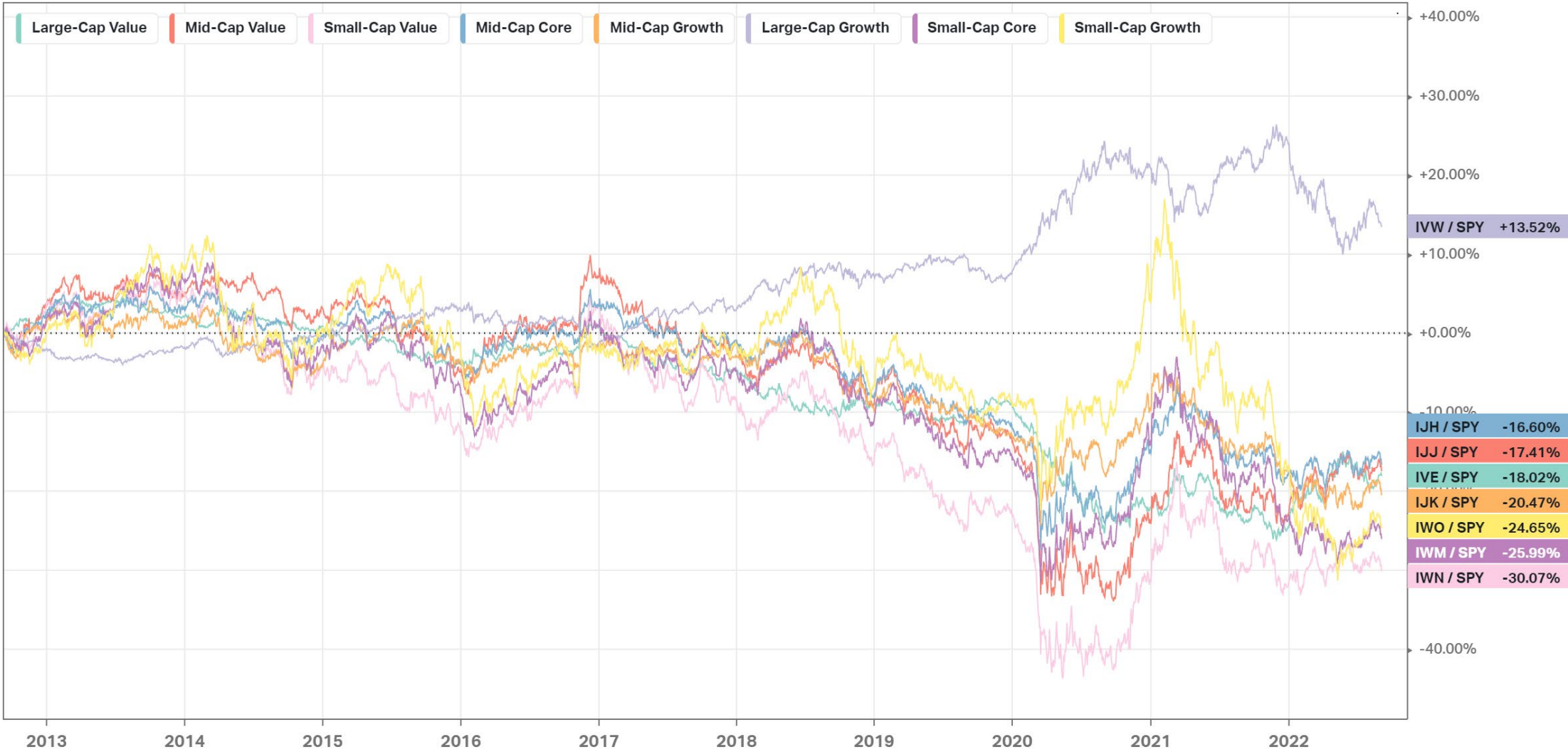


Definitions and Disclosures

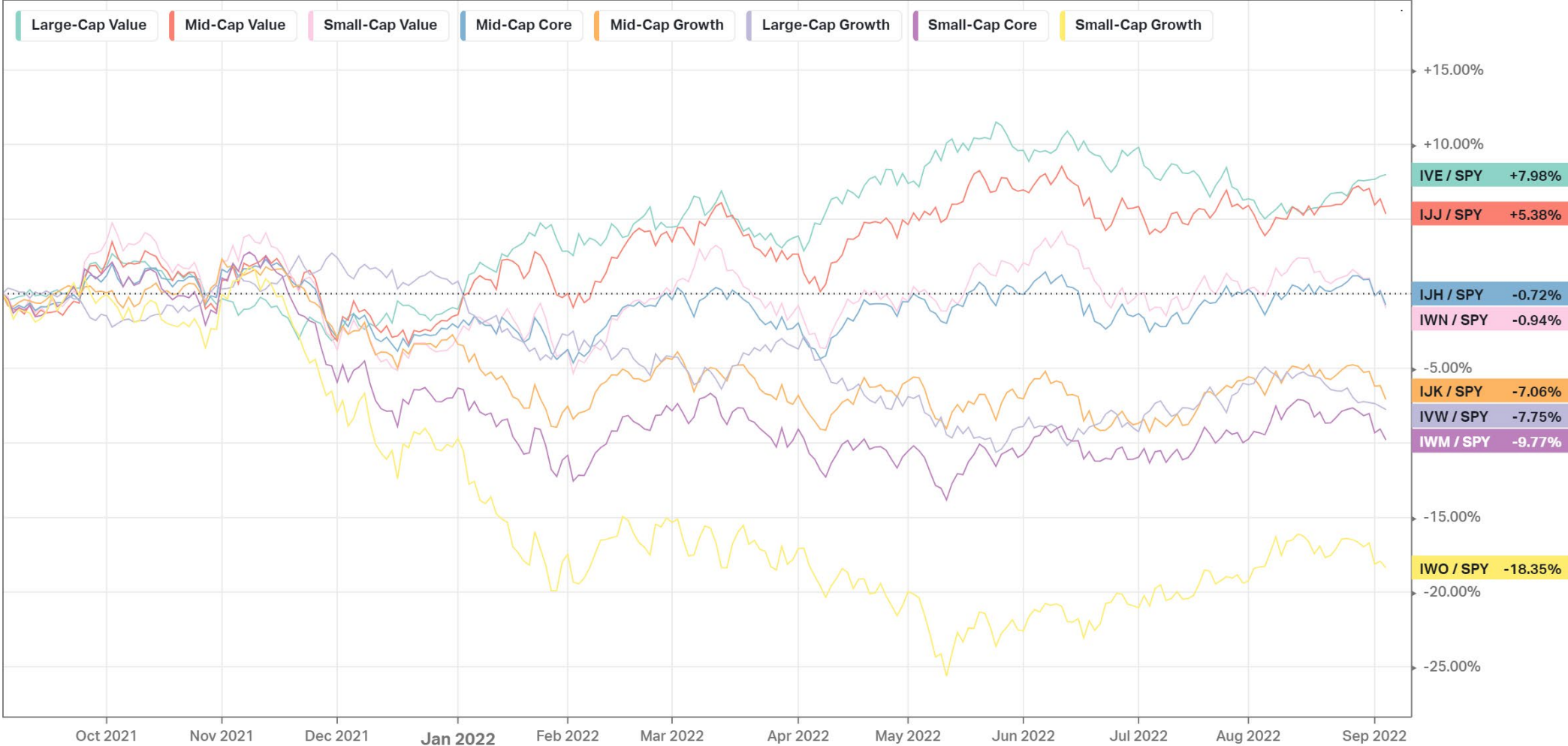
Large-Cap Growth Stands Out



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YTD Factors



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Index Descriptions and Definitions

CPI – US CPI Urban Consumers YoY NSA Index measures US consumer prices (CPI) as a measure of prices paid by consumers for a market basket of consumer goods and services. The yearly (or monthly) growth rates represent the inflation rate. Shelter, the service the housing units provide, is the relevant consumption item for the CPI. The cost of shelter for renter-occupied housing is rent. For an owner-occupied unit, the cost of shelter is the implicit rent that owner occupants would have to pay if they were renting their homes.

Core CPI/PCE – a measure of inflation excluding food and energy. “Core” PCE number is what the Federal Reserve uses to set its inflation target.

PPI - The Producer Price Index (PPI) is a family of indexes that measures the average change over time in selling prices received by domestic producers of goods and services.

Commodities – Bloomberg Commodity Index is made up of 23 exchange-traded futures on physical commodities, representing 21 commodities which are weighted to account for economic significance and market liquidity.

Gold – Gold spot price in U.S. dollars per troy ounce.

Gold Miners - The NYSE Arca Gold Miners (GDMNTR) Index (the "Index") is a Net Total Return modified market capitalization weighted index comprised of publicly traded companies primarily involved in the mining of gold and silver in locations around the world.

The **S&P 500 Index** tracks the stock performance of 500 large companies listed on exchanges in the United States. It is one of the most commonly followed equity indices.

The **S&P Global 1200 Index** is a free-float weighted stock market index of global equities from Standard & Poor's. The index was launched on Sep 30, 1999 and covers 31 countries and approximately 70 percent of global stock market capitalization.

The **S&P Equal Weight Index Energy Index** is an unmanaged equal weighted version of the S&P 500 Energy Index that consists of the common stocks of the following industries: oil and gas exploration, production, marketing, refining and/or transportation and energy equipment and services industries that comprise the Energy sector of the S&P 500 Index.

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Fixed Income – Bloomberg Barclays U.S. Aggregate Bond Index is a broad-based benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency). U.S. Generic Government 10-Year Treasury yield assuming a constant 7 year duration to approximate a generic U.S. Government Treasury return. Ibbotson SBBI U.S. Intermediate Government Bond Index is an unweighted index that measures the performance of U.S. Treasury and U.S. Government Agency bonds with maturities between four and seven years. Ibbotson SBBI U.S. Long-Term Corporate Bond Index is an unweighted index that measures the performance of U.S. corporate bonds with maturities of seven years or longer.

Natural Resources – S&P Global Natural Resources Index includes 90 of the largest Externally-traded companies in natural resources and commodities businesses that meet specific investability requirements, offering investors diversified and investable equity exposure across 3 primary commodity-related sectors: agribusiness, energy, and metals & mining.

Free Cash Flow is equal to Cash from Operations minus Capital Expenditures. FCF represents the amount of cash generated by a business, after accounting for reinvestment in non-current capital assets by the company.

Earnings before interest, taxes, depreciation, and amortization (**EBITDA**) is a metric that measures a company's overall financial performance. It is generally used to compare the financial health of companies.

Enterprise Value (EV) is the total value of a company, defined in terms of its financing. It includes both the current share price (market capitalization) and the cost to pay off debt (net debt, or debt minus cash).

Index Descriptions and Definitions

Index returns assume reinvestment of all income and do not reflect any management fees or brokerage expenses associated with fund returns. Returns for actual fund investors may differ from what is shown because of differences in timing, the amount invested and fees and expenses. You cannot invest directly in an index.

MVIS Global Digital Assets Equity Index: intends to track the largest and most liquid companies in the digital assets segment.

Digital Transformation Company: companies (i) that operate digital asset exchanges, operate payment gateways (i.e., a merchant service that authorizes direct payments processing for businesses), engage in and/or assist with the digital asset mining operations, provide software services, equipment and technology or services to digital asset operations, operate digital asset infrastructure businesses, or facilitate commerce with the use of digital assets (these items are collectively referred to herein as “digital asset projects”) and/or (ii) that own a material amount of digital assets or otherwise generate revenues related to digital asset projects.

Stablecoin: cryptocurrencies where the price is designed to be pegged to a cryptocurrency, fiat money, or to exchange-traded commodities

Digital Asset: anything that exists in a digital format and comes with the right to use. Data that do not possess that right are not considered assets

HODLER: crypto investors who buy and hold their positions regardless of price

Decentralized Application: computer applications that run on a distributed computing system.

Blockchain: a decentralized, distributed, and oftentimes public, digital ledger consisting of records called blocks that is used to record transactions across many computers so that any involved block cannot be altered retroactively, without the alteration of all subsequent blocks.

Cryptocurrency: digital or virtual currency that is secured by cryptography, which makes it nearly impossible to counterfeit or double-spend. Many cryptocurrencies are decentralized networks based on blockchain technology—a distributed ledger enforced by a disparate network of computers.

Non-Fungible Token (NFT): A digital file whose unique identity and ownership are verified on a blockchain.

Internet of Things: the network of physical objects—“things” or objects—that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the Internet

Pure-play digital asset company: as determined by the index provider, companies which (i) generate at least 50% of its revenues from digital assets projects; (ii) generate at least 50% of its revenues from projects that, when developed, have the potential to generate at least 50% of their revenues from the digital assets industry; and/or (iii) have at least 50% of its assets invested in direct digital asset holdings or digital asset projects.

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Cryptocurrency is a digital representation of value that functions as a medium of exchange, a unit of account, or a store of value, but it does not have legal tender status. Cryptocurrencies are sometimes exchanged for U.S. dollars or other currencies around the world, but they are not generally backed or supported by any government or central bank. **Their value is completely derived by market forces of supply and demand, and they are more volatile than traditional currencies. The value of cryptocurrency may be derived from the continued willingness of market participants to exchange fiat currency for cryptocurrency, which may result in the potential for permanent and total loss of value of a particular cryptocurrency should the market for that cryptocurrency disappear.** Cryptocurrencies are not covered by either FDIC or SIPC insurance.

Investing in cryptocurrencies comes with a number of risks, including volatile market price swings or flash crashes, market manipulation, and cybersecurity risks. In addition, cryptocurrency markets and exchanges are not regulated with the same controls or customer protections available in equity, option, futures, or foreign exchange investing. There is no assurance that a person who accepts a cryptocurrency as payment today will continue to do so in the future.

The features, functions, characteristics, operation, use and other properties of the specific cryptocurrency may be complex, technical, or difficult to understand or evaluate. The cryptocurrency may be vulnerable to attacks on the security, integrity or operation, including attacks using computing power sufficient to overwhelm the normal operation of the cryptocurrency's blockchain or other underlying technology. Some cryptocurrency transactions will be deemed to be made when recorded on a public ledger, which is not necessarily the date or time that a transaction may have been initiated.

- Investors must have the financial ability, sophistication and willingness to bear the risks of an investment and a potential total loss of their entire investment in cryptocurrency.
- An investment in cryptocurrency is not suitable or desirable for all investors.
- Cryptocurrency has limited operating history or performance.
- Fees and expenses associated with a cryptocurrency investment may be substantial.

There may be risks posed by the lack of regulation for cryptocurrencies and any future regulatory developments could affect the viability and expansion of the use of cryptocurrencies. Investors should conduct extensive research before investing in cryptocurrencies. Past performance is not a guarantee of future results.

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Information provided by Van Eck is not intended to be, nor should it be construed as financial, tax or legal advice. It is not a recommendation to buy or sell an interest in cryptocurrencies.

The Gold strategy is subject to the risks associated with concentrating its assets in the gold industry, which can be significantly affected by international economic, monetary and political developments. The strategy's overall portfolio may decline in value due to developments specific to the gold industry. The strategy investments in foreign securities involve risks related to adverse political and economic developments unique to a country or a region, currency fluctuations or controls, and the possibility of arbitrary action by foreign governments, or political, economic or social instability. The strategy is subject to risks associated with investments in Canadian issuers, commodities and commodity-linked derivatives, commodities and commodity-linked derivatives tax, gold-mining industry, derivatives, emerging market securities, foreign currency transactions, foreign securities, other investment companies, management, market, non-diversification, operational, regulatory, small- and medium-capitalization companies and subsidiary risks.

Global resource investments are subject to risks associated with real estate, precious metals, natural resources and commodities and events related to these industries, foreign investments, illiquidity, credit, interest rate fluctuations, inflation, leverage, and non-diversification.

There are inherent risks with equity investing. These risks include, but are not limited to stock market, manager, or investment style. Stock markets tend to move in cycles, with periods of rising prices and periods of falling prices.

There are inherent risks with fixed income investing. These risks may include interest rate, call, credit, market, inflation, government policy, liquidity, or junk bond. *When interest rates rise, bond prices fall.* This risk is heightened with investments in longer duration fixed-income securities and during periods when prevailing interest rates are low or negative.

Investments in commodities can be very volatile and direct investment in these markets can be very risky, especially for inexperienced investors.

Sustainable Investing Considerations: Sustainable investing strategies aim to consider and in some instances integrate the analysis of environmental, social and governance (ESG) factors into the investment process and portfolio. Strategies across geographies and styles approach ESG analysis and incorporate the findings in a variety of ways. Incorporating ESG factors or Sustainable Investing considerations may inhibit the portfolio manager's ability to participate in certain investment opportunities that otherwise would be consistent with its investment objective and other principal investment strategies.

ESG integration is the practice of incorporating material environmental, social and governance (ESG) information or insights alongside traditional measures into the investment decision process to improve long term financial outcomes of portfolios. **Unless otherwise stated within an active investment strategy's investment objective, inclusion of this statement does not imply that an active investment strategy has an ESG-aligned investment objective, but rather describes how ESG information may be integrated into the overall investment process.**

All investing is subject to risk, including the possible loss of the money you invest. As with any investment strategy, there is no guarantee that investment objectives will be met and investors may lose money. Diversification does not ensure a profit or protect against a loss in a declining market. Past performance is no guarantee of future performance.

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