
Midstream Market Review & Outlook

GS ENERGY INFRASTRUCTURE & RENEWABLES TEAM

January 2022

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1

U.S. Midstream Sector Today

Midstream Performance Summary

Midstream returned nearly 40% in 2021, though it remains one of the few sectors yet to regain 2020 highs, despite strength in commodity prices & transformational business model improvements

PERFORMANCE SUMMARY AS OF DECEMBER 31, 2021

	Asset Class	Full Year 2021	4Q 2021	3Q 2021	2Q 2021	1Q 2021	% Revision to 2020 Highs
Energy Infra.	Midstream MLPs (AMZ Index)	39.9%	0.5%	-5.8%	21.2%	21.9%	27.5%
	Full Midstream (AMNA Index)	38.3%	-0.4%	-1.3%	16.4%	20.9%	12.4%
Other Income Oriented	REITs Index	41.3%	16.2%	0.2%	12.0%	8.3%	--
	Global Infrastructure Index	20.8%	7.7%	-0.8%	7.1%	5.5%	--
	Utilities Index	18.2%	13.5%	2.2%	-0.6%	2.5%	--
Broader Equities	Russell 1000 Value Index	25.1%	7.8%	-0.8%	5.2%	11.2%	--
	S&P 500 Index	28.7%	11.0%	0.6%	8.5%	6.2%	--
	Russell 1000 Growth Index	27.6%	11.6%	1.2%	11.9%	0.9%	--
Commodities	WTI Crude Oil Price	55.0%	0.9%	2.1%	24.2%	21.9%	--
	Brent Crude Oil Price	55.2%	3.9%	5.2%	19.8%	22.7%	--
	Natural Gas Price	53.5%	-34.2%	49.2%	49.4%	4.2%	--

Sources: Goldman Sachs Asset Management and Bloomberg. Data as of December 31, 2021. MLP: Master Limited Partnership. Midstream sector is defined through the Alerian MLP Index (AMZ) and the Alerian Midstream Energy Index (AMNA). The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. **Past performance does not guarantee future results, which may vary.**

U.S. Midstream Sector Today

Attractive yields supported by robust free-cash-flow (FCF) generation from oil & gas transportation that we believe will be needed to meet energy demand for decades to come

Key Takeaways

Higher oil & natural gas prices have supported significant midstream earnings growth.

- Midstream cash flows have inflected higher alongside increased throughput volume with estimates calling for 2022 EBITDA to be 17% higher than 2019 levels.

Midstream sector now generates substantial amounts of FCF.

- With 2022 FCF yields >11%, there's significant room to further de-leverage if needed, buyback stock, and/or grow dividends (potential for 3-5% annual growth).

The U.S. midstream sector remains one of the highest yielding equity sectors.¹

- The sector yields ~7%; five times that of the S&P 500, and two times greater than both the Utilities and REIT sectors; with yields underpinned by strong FCF generation.

The energy crisis in Europe demonstrated that hydrocarbons are still very important and concerns about the demise of oil & gas under the energy transition have been greatly exaggerated.

- Currently, global crude oil demand is around 100 MMbpd and is expected to reach 108 MMbpd by 2035 – even with significant adoption of electric vehicles.
- Coal-to-gas switching by top coal-fired power producers and the inclusion of natural gas in the “green” taxonomy, presents a very large opportunity for U.S. liquefied natural gas (LNG) market participants.

~7%

Current Yield for the
U.S. Midstream Sector

11%

Expected Free-Cash-Flow
Yield in 2022 & 2023

108

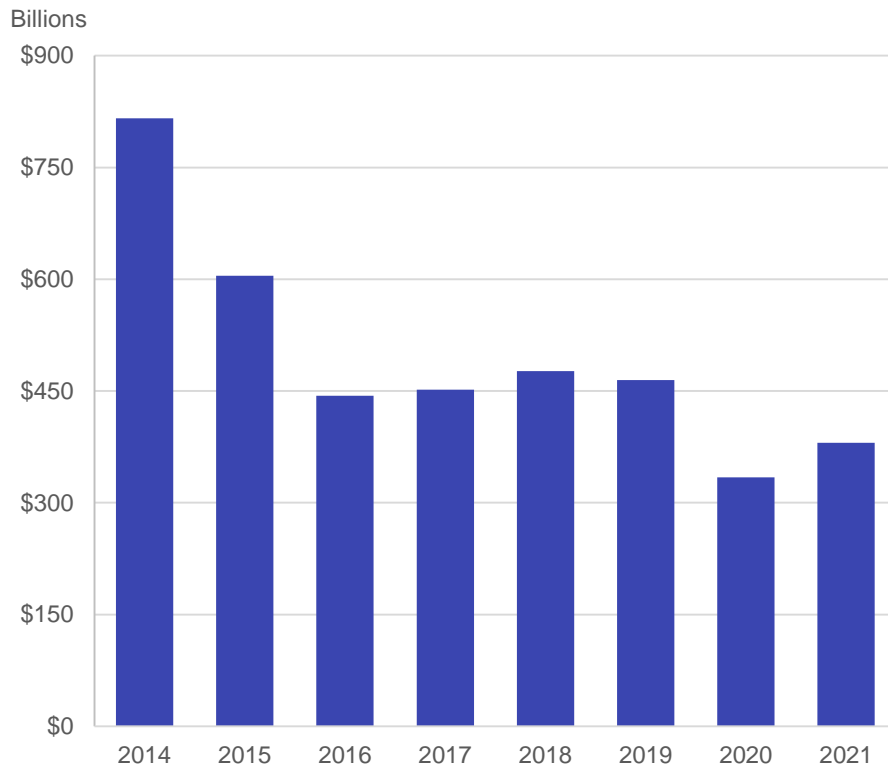
Million Barrels Per Day of
Expected Oil Demand
by 2035

Sources: Goldman Sachs Asset Management, Bloomberg, and Wells Fargo. Data as of December 31, 2021. ¹U.S. midstream sector yield is measured through the Alerian MLP Index (AMZ). Free-cash-flow: operating cash flow less capital expenditures (CAPEX). Free-cash-flow yield: free-cash-flow divided by equity value. MMbpd: Million barrels per day. Please see appendix & disclosures for additional information on asset classes. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. **Past performance does not guarantee future results, which may vary.**

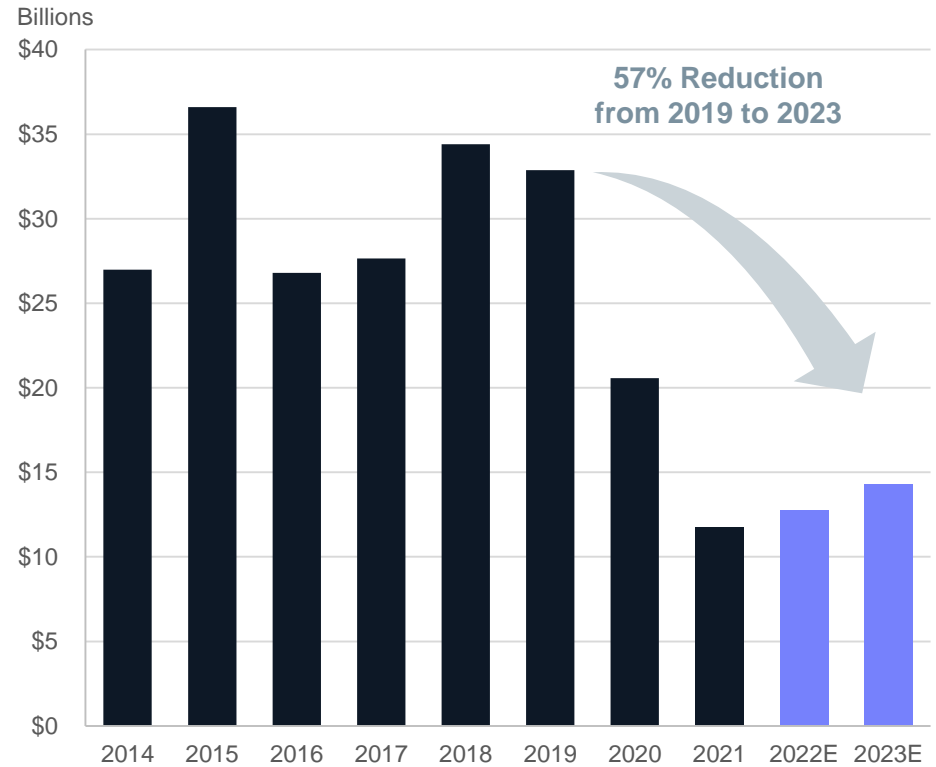
Capital Discipline Across the Oil & Gas Sector

COVID-19 and the resulting demand shock ushered in a new era of capital discipline across the energy value chain

GLOBAL CAPITAL SPENDING BY OIL & GAS PRODUCERS



CAPITAL SPENDING BY U.S. MIDSTREAM SECTOR

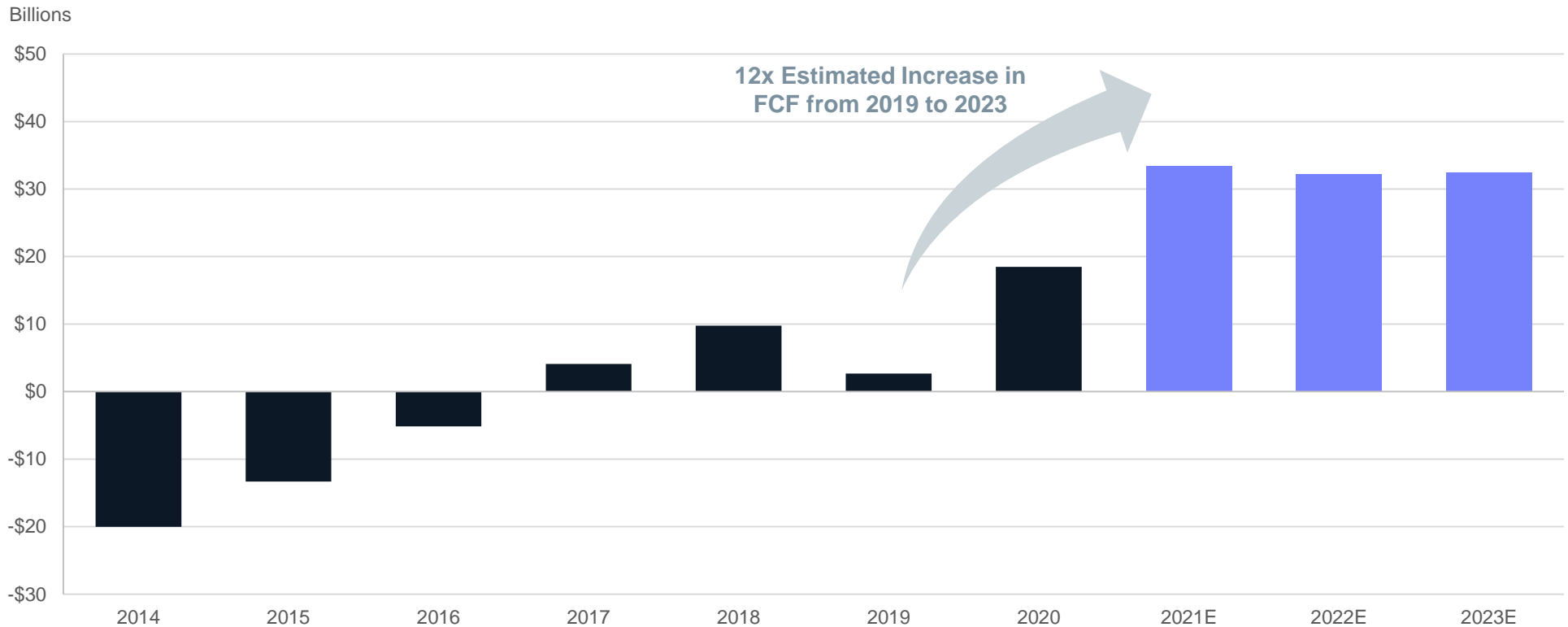


Sources: Goldman Sachs Asset Management, Bloomberg, and Wells Fargo. Data as of December 31, 2021. The U.S. Midstream sector is measured through the top 15 companies (by weight) in the Alerian US Midstream Energy Index (AMUS), excluding Equitrans Midstream Corp (ETRN) due to insufficient historical data. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

Robust Midstream Free-Cash-Flow Generation

U.S. midstream sector has delivered steady cash flows and sharply lower capital spending, which has driven improved FCF generation on relatively stable earnings power

U.S. MIDSTREAM SECTOR FREE-CASH-FLOW PROJECTIONS

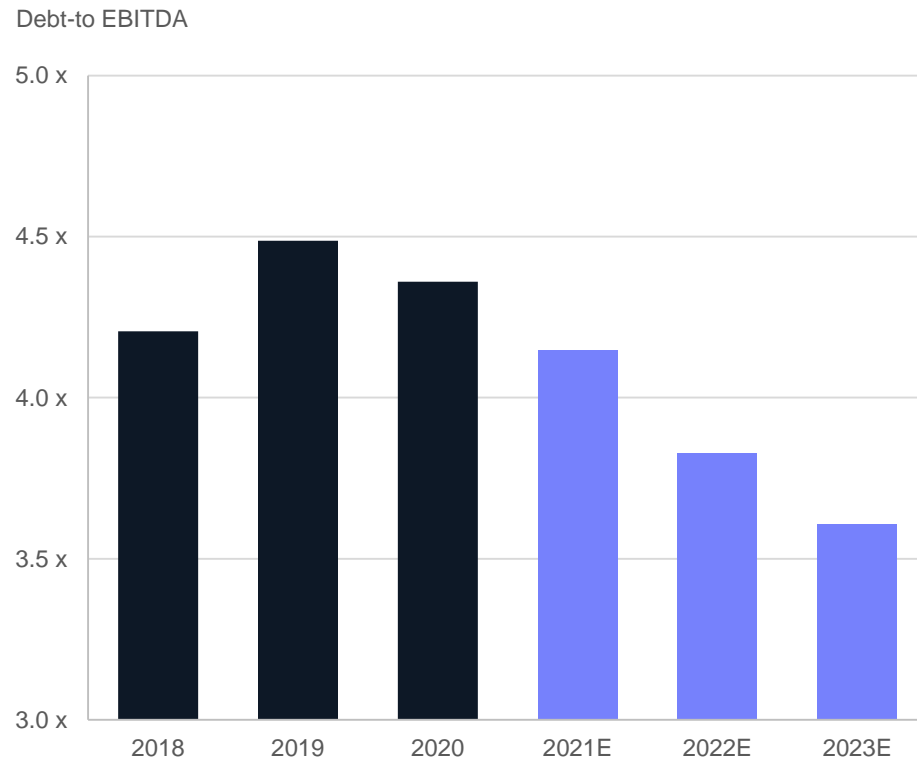


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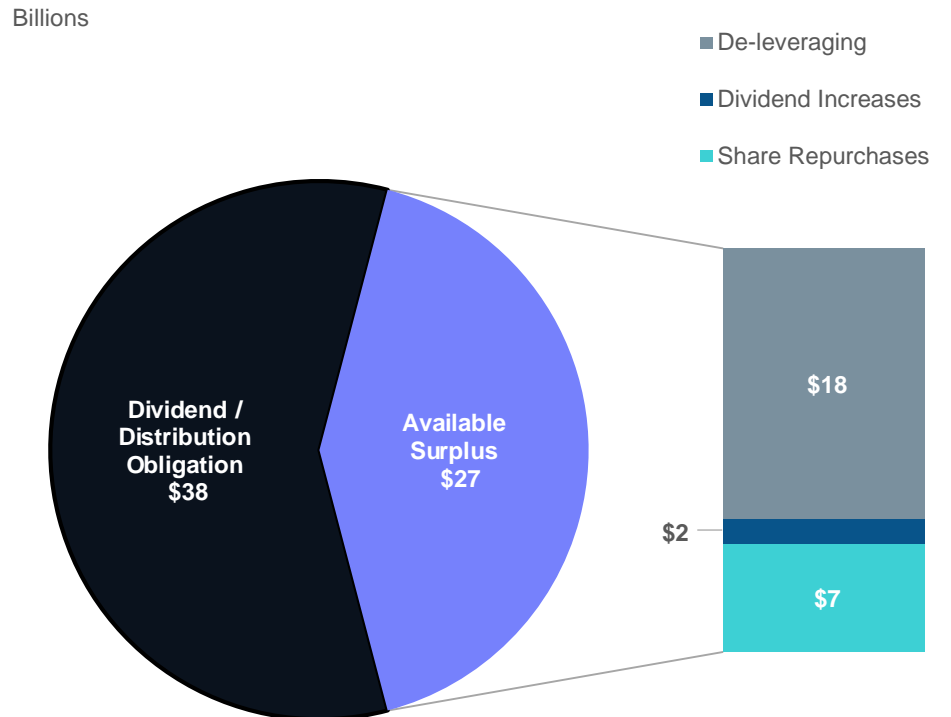
De-Leveraging & Shareholder Returns Are Top Priorities

Robust FCF generation has enabled rapid de-leveraging while leaving plenty of room to drive further shareholder returns via dividend growth and share repurchases

U.S. MIDSTREAM SECTOR AVERAGE LEVERAGE



ESTIMATED ALLOCATION OF FCF IN 2022 + 2023

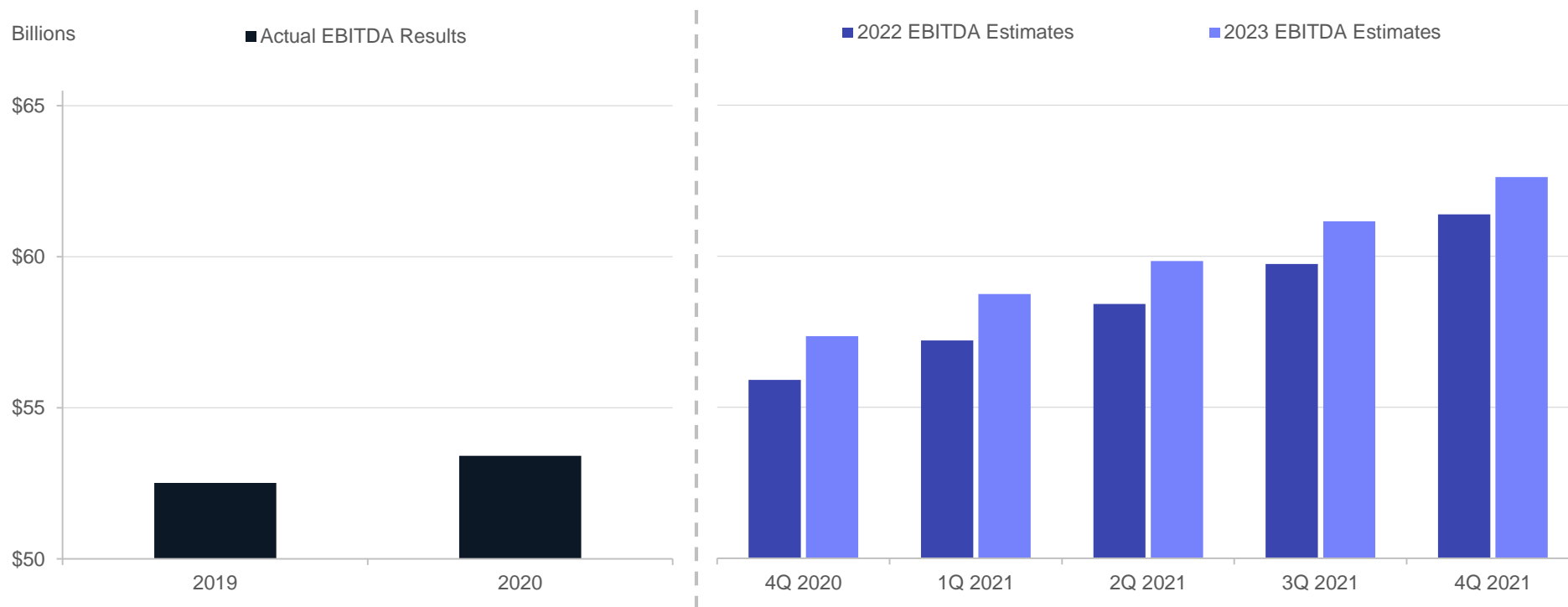


Sources: Goldman Sachs Asset Management and Wells Fargo. Data as of December 31, 2021. The U.S. Midstream sector is measured through the top 15 companies (by weight) in the Alerian US Midstream Energy Index (AMUS), excluding Equitrans Midstream Corp (ETRN) due to insufficient historical data. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

EBITDA Estimates Continue to be Revised Higher

Despite a challenging operating environment from COVID-19, midstream earnings proved resilient in 2020, and 2022 EBITDA projections are now actually higher than they were in 2019

2019 / 2020 ACTUAL MIDSTREAM EBITDA RESULTS & CHANGE IN 2022 / 2023 EBITDA EXPECTATIONS



Currently, 2022 EBITDA estimates reflect 17% growth from 2019 actual EBITDA results. Interestingly, if you were to look at 2022 EBITDA estimates at the end of 2019, before the COVID-19 pandemic, those estimates are 2% below current 2022 projections.

While EBITDA estimates have grown and fundamentals have improved, the sector is still **trading ~20% below 2019 levels.**

Sources: Goldman Sachs Asset Management and Bloomberg. Data as of December 31, 2021. The U.S. Midstream sector is measured through the top 15 companies (by weight) in the Alerian US Midstream Energy Index (AMUS), excluding Equitrans Midstream Corp (ETRN) due to insufficient historical data. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

Resumption of Dividend Growth

We expect a 3-5% increase in dividends during 2022, with strong visibility for upside in the years ahead – this may prove to be a meaningful catalyst for midstream equity price performance

DIVIDENDS OVER TIME (TOP 15 AMUS INDEX CONSTITUENTS)

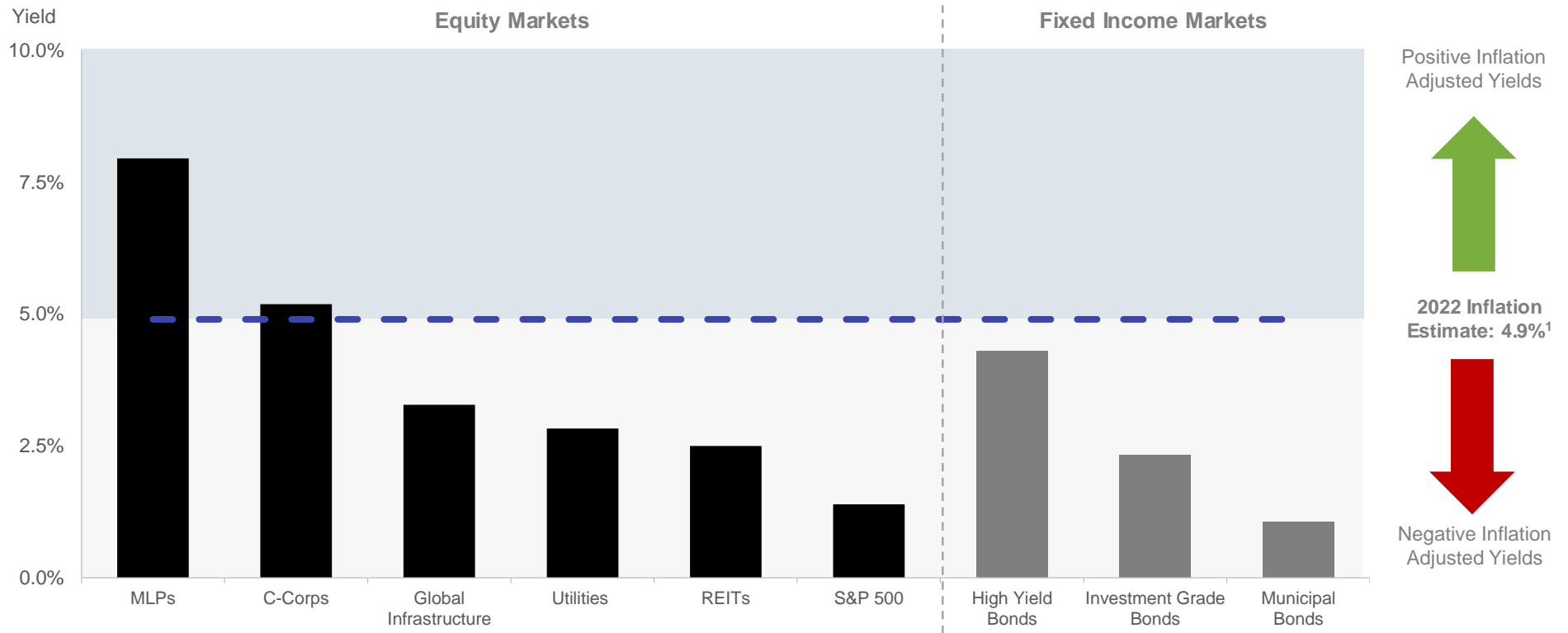
Ticker	Company	Index Weight	4Q 2021 DPS	4Q 2022 Expected DPS	1-Yr Forward Growth
EPD	Enterprise Products Partners LP	10.4%	\$0.450	\$0.480	6.7%
LNG	Cheniere Energy Inc	9.9%	\$0.330	\$0.338	2.5%
KMI	Kinder Morgan Inc	9.9%	\$0.270	\$0.275	1.9%
WMB	Williams Cos Inc/The	9.8%	\$0.410	\$0.425	3.7%
ET	Energy Transfer LP	9.6%	\$0.152	\$0.183	19.7%
OKE	ONEOK Inc	9.5%	\$0.935	\$0.935	0.0%
TRGP	Targa Resources Corp	6.7%	\$0.100	\$0.350	250.0%
MPLX	MPLX LP	6.2%	\$0.705	\$0.723	2.5%
MMP	Magellan Midstream Partners LP	5.6%	\$1.038	\$1.048	1.0%
WES	Western Midstream Partners LP	2.6%	\$0.323	\$0.344	6.5%
PAA	Plains All American Pipeline LP	2.4%	\$0.180	\$0.190	5.6%
ETRN	Equitrans Midstream Corp	2.4%	\$0.150	\$0.150	0.0%
AM	Antero Midstream Corp	1.9%	\$0.225	\$0.225	0.0%
PSXP	Phillips 66 Partners LP	1.5%	\$0.875	\$0.875	0.0%
DCP	DCP Midstream LP	1.4%	\$0.390	\$0.400	2.6%
Average		89.9%	\$6.533	\$6.940	3.7%*
Weighted Average		–	–	–	4.7%*

Sources: Goldman Sachs Asset Management and Bloomberg. Data as of December 31, 2021. The U.S. Midstream sector is measured through the top 15 companies (by weight) in the Alerian US Midstream Energy Index (AMUS). *Average and weighted average calculations exclude TRGP, which cut its dividend over 90% due to the pandemic and is now resuming growth. Expected distribution per share (DPS) are estimates of hypothetical financials derived from fundamental analysis. There can be no assurance that these returns can be achieved. Actual returns are likely to vary. Please see additional disclosures. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities. Please see additional disclosures at the end of this presentation. **Past performance does not guarantee future results, which may vary.**

Midstream Remains One of The Highest Yielding Sectors

The sector yields around 7% underpinned by strong FCF; five times that of the S&P 500, and more than two times greater than both the Utilities and REIT sectors

INCOME-ORIENTED ASSET CLASS YIELDS



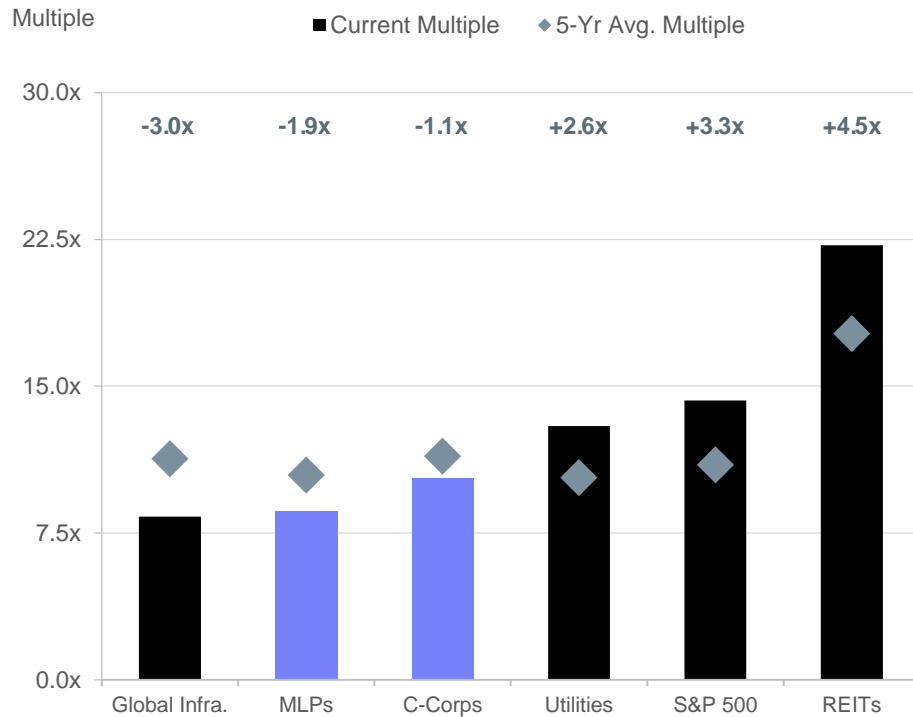
Looking at current yields across income-oriented asset classes, midstream is the only sector offering a positive inflation adjusted yield, which may be a significant catalyst for increased fund flows with midstream being the high yielding alternative allocation.

Sources: Goldman Sachs Asset Management, Goldman Sachs Global Investment Research (GIR), Bloomberg, and Wells Fargo. Data as of December 31, 2021. ¹2022 inflation estimate provided by Goldman Sachs Investment Research; latest views as of January 19, 2022. MLPs are represented by the Alerian MLP (AMZ) Index. C-Corps are represented by the C-Corp structured companies in the Alerian Midstream Energy Index (AMNA). The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. **Past performance does not guarantee future results, which may vary.**

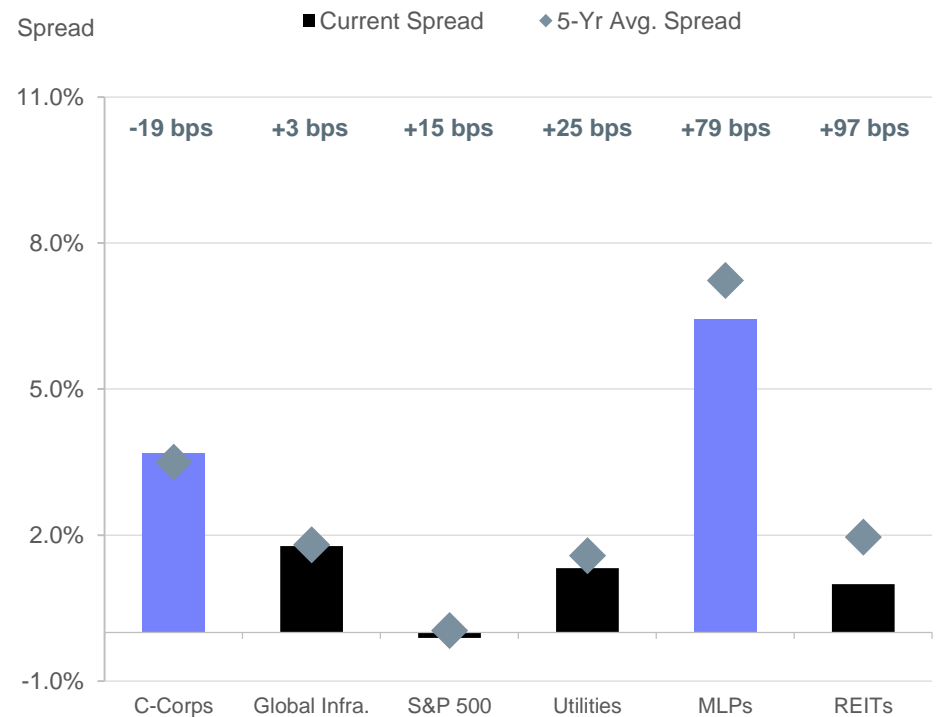
Midstream Valuations Continue to Screen Cheap

The midstream sector is one of the few asset classes trading at a valuation discount relative to historic levels

EV/EBITDA VALUATIONS



YIELD SPREADS VS. U.S. 10 YEAR TREASURY

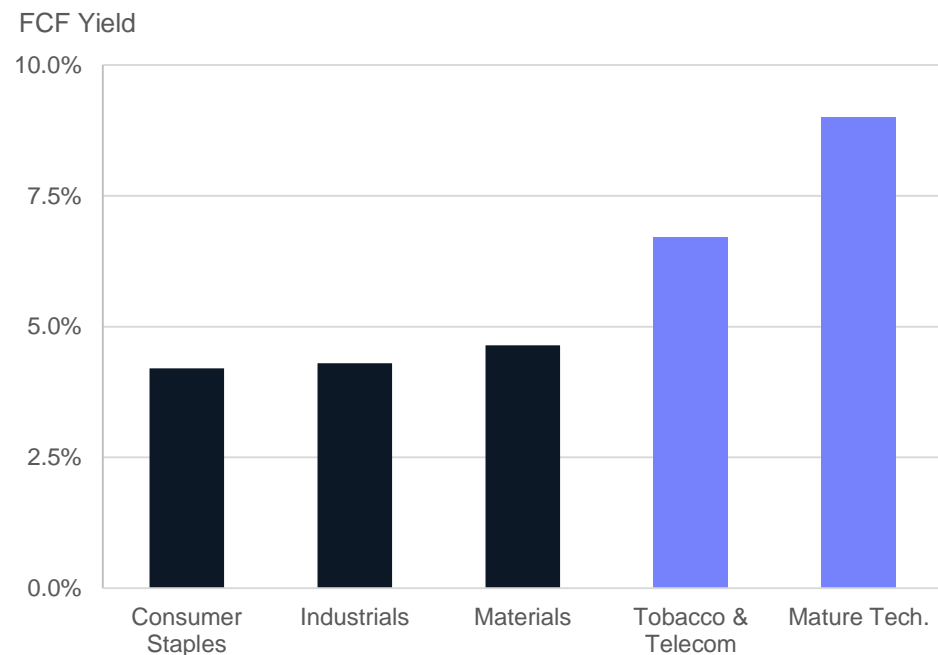


Sources: Goldman Sachs Asset Management, Bloomberg, and Wells Fargo. Data as of December 31, 2021. MLPs are represented by the Alerian MLP (AMZ) Index. C-Corps are represented by the C-Corp structured companies in the Alerian Midstream Energy Index (AMNA). **Past performance does not guarantee future results, which may vary.**

Free-Cash-Flow Valuations

We believe the sector's pivot to FCF generation warrants the inclusion of FCF valuation measures in addition to traditional EV/EBITDA and yield spread methodologies

5-YEAR HISTORICAL FREE-CASH-FLOW YIELDS



AMZ INDEX LEVELS AT VARIOUS FCF YIELD SCENARIOS

FCF Yield Scenario	Current → Implied AMZ Index Level	AMZ Index Price Upside
8.9%	179 → 230	+28.4%
7.8%	179 → 262	+46.5%
6.7%	179 → 305	+70.6%

While not perfect, in our view, the Tobacco & Telecom and Mature Technology sectors appear to be the best approximation for energy infrastructure as it relates to maturity of business, leverage metrics, capital intensity, and growth potential.

Since 2015, Tobacco & Telecom and Mature Technology stocks have traded with an average FCF yield of 6.7% and 8.9%, respectively. Applying these FCF yields to the midstream sector could imply **~30-70% price upside from current levels**.

Sources: Goldman Sachs Asset Management and Bloomberg. Data as of December 31, 2021. Tobacco & Telecom FCF yields include: MO, PM, BATS, T, VZ, and TMUS; list based on the largest and most representative companies within their respective sectors. Please see Appendix & Disclosures for more information. These examples are for illustrative purposes only and are not actual results. If any assumptions used do not prove to be true, results may vary substantially. **Past performance does not guarantee future results, which may vary.**

Potential Energy & Midstream Catalysts

Midstream cash flows have inflected higher and we believe the sector will continue to perform well in 2022 and beyond alongside the global recovery and inflationary landscape

Potential Catalysts

Continued Strength in Crude Oil Prices:

- Crude oil demand has recovered to pre-pandemic levels and global supply remains orderly with OPEC+ exhibiting strong discipline and U.S. producers remaining focused on FCF – together this supports 2022 WTI price forecasts of \$87-97/bbl.¹

Relative Beneficiary of Higher Inflation:

- Midstream businesses operate largely fee-based models with the vast majority of them having Consumer Price Index (CPI) and Producer Price Index (PPI) escalators integrated into tariff-setting mechanisms, providing an inflationary hedge.

Significant FCF Generation – Resumption of Dividend Growth:

- Management teams are prioritizing capital return to shareholders, including the resumption of dividend growth, which we estimate to be a 3-5% increase in 2022, with strong visibility for upside in the years ahead.

Attractive Valuations:

- Midstream equities remain one of the few sectors that have not recovered to pre-pandemic levels with EV/EBITDA multiples and FCF yield metrics trading well below historic levels and also cheaply relative to other income-oriented asset classes.

Potential Beneficiary of Fund Flows:

- Midstream, along with other value-oriented equities, may be the beneficiaries of increased fund flows from a broad investor rotation from growth to value stocks in 2022.

Potential Risks to the Sector

- COVID-19 related restrictions, adverse U.S. tax policy changes, a breakdown in the OPEC+ agreement, and/or lack of discipline from U.S. shale producers.

Sources: Goldman Sachs Asset Management, Bloomberg, and Wells Fargo. Data as of December 31, 2021. ¹WTI price forecasts provided by Goldman Sachs Global Investment Research (GIR). Free-cash-flow: operating cash flow less capital expenditures (CAPEX). Free-cash-flow yield: free-cash-flow divided by equity value. Please see appendix & disclosures for additional information on asset classes. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. Goldman Sachs does not provide accounting, tax or legal advice. Please see additional disclosures at the end of this presentation. **Past performance does not guarantee future results, which may vary.**

2

Inflationary Backdrop

Oil & Gas Stocks Have Historically Outperformed

Coordinated “easy-money” policy, record fiscal stimulus, and supply chain issues have caused a significant spike in inflation – an environment where oil & gas stocks may show relative strength

U.S. CONSUMER PRICE INDEX (CPI) URBAN CONSUMERS

Price Increase



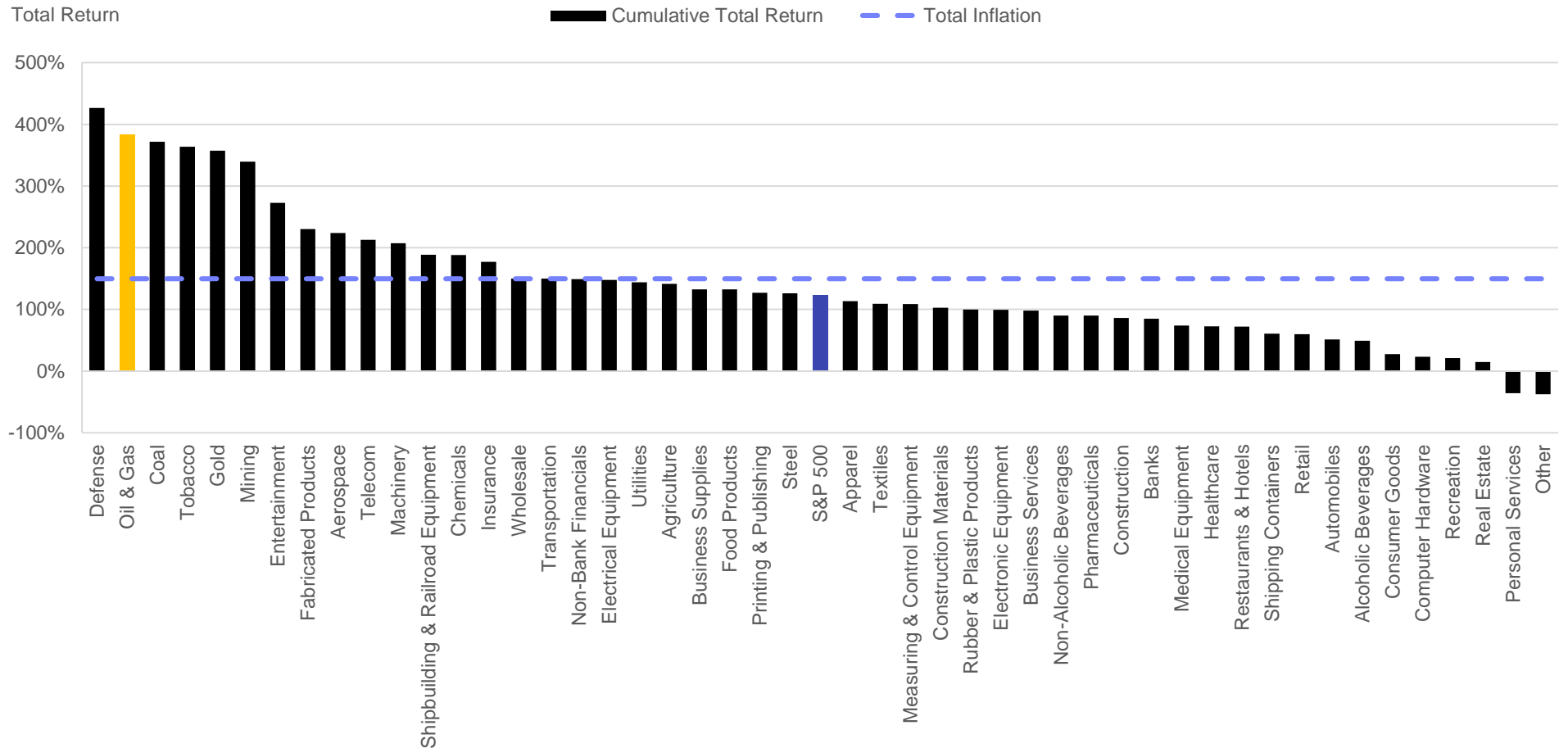
Inflationary Period ¹	Oil & Gas Sector Return	S&P 500 Index Return	Oil & Gas Sector Outperformance
1969- 1981	+383%	+120%	+263%
1987-1990	+80%	+57%	+23%
2003-2008	+145%	+15%	+130%

Sources: Goldman Sachs Asset Management, Bloomberg, and Professor Kenneth French and the Tuck School of Business at Dartmouth College. Data as of December 31, 2021. Inflationary years defined through consecutive periods of sustained inflation over 2%. **Past performance does not guarantee future results, which may vary.**

Yield Proxy Sectors Have Also Historically Outperformed

From 1969 to 1981 – a period of significant inflation – yield proxy sectors (i.e. Tobacco & Telecom), along with oil & gas stocks, also significantly outperformed vs. inflation and the broader market

TOTAL RETURNS BY SECTOR (1969-1981)



Sources: Goldman Sachs Asset Management, Bloomberg, and Professor Kenneth French and the Tuck School of Business at Dartmouth College. Data as of December 31, 2021. **Past performance does not guarantee future results, which may vary.**

Rising Inflation & the Midstream Sector

Inflation escalation clauses and fixed cost structures may boost operating margins for midstream companies

Potential Investment Case for the Midstream Sector

We believe the midstream sector is poised to fare better during an inflationary environment given:

- Inflation escalators integrated into tariff-setting mechanisms.
- Largely fixed cost structures that may potentially provide operating leverage and improved operating margins.
- Linked to the oil & gas sector, which historically outperformed during inflationary periods.
- Attractive dividend yields that may have room to grow and keep pace, or exceed, inflation.

Type of Asset	Potential Inflation Mitigants
Refined Petroleum Product Pipelines	Tariffs linked to Producers Price Index (PPI + 0.78%)
Gathering & Processing	Contracts include Consumer Price Index (CPI) escalators
Natural Gas Pipelines (FERC-Regulated)	Tariffs established via rate cases using cost-of-service methodology – allows for return on & of capital + expense pass-through

Sources: Goldman Sachs Asset Management and public company filings. Data as of December 31, 2021. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

Notable Quotes from Midstream Management Teams

In recent earnings calls, several management teams have addressed the inflationary environment and what it may mean for their businesses

Notable Quotes from Midstream Management Teams

*“...our refined products sales follow the FERC indexation methodology that is linked to the change in PPI. We have historically changed the rates in these less competitive markets consistent with the index and most likely will do so again on July 1st, next year.” – **Magellan Midstream Partners LP; November 2, 2021.***

*“...similar to a lot of our peers, we have escalators across our contracts, both in G&P and also in logistics and transportation. So, we would expect going forward that we're in that beneficiary of inflation. And so, that's part of what would be a potential tailwind for us next year..” – **Targa Resources Corp; November 4, 2021.***

*“Along these lines, we also have contracted our business over the years to be protected from inflationary environment. And we see additional upside potential in our G&P businesses due to contract terms, that adjust our rate for inflation.” – **Williams Companies Inc; November 2, 2021.***

*“...on inflation I want to say over 90% of our revenues have some sort of escalation mechanism and they are which are benchmarked to various indices. So we feel like we have pretty good protection from inflation.” – **Enterprise Products Partners LP; November 2, 2021.***

*“...approximately 70% of our operating costs are related to people, power and integrity spending. To date, we have not seen pricing pressure on our cost structure at nearly the same level as the PPI increase.” – **Magellan Midstream Partners LP; November 2, 2021.***

*“...you ask a question there about kind of inflators on our contracts, in our NGL segment and our G&P segment, the vast majority of our contracts do have escalators on the fee rate. So we're covered as we think about inflation and other things like that. So those contracts are covered.” – **ONEOK, Inc; November 3, 2021.***

Sources: Goldman Sachs Asset Management and public company earnings transcripts. Data as of December 31, 2021. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities.

3

Commodity Backdrop

Energy Commodity Prices

Commodity prices have continued to move higher as economic activity rebounds and supply struggles to keep pace with demand

FRONT-MONTH WTI



EUROPEAN NATURAL GAS



NEWCASTLE COAL



U.S. NATURAL GAS



Sources: Goldman Sachs Asset Management and Bloomberg. Data as of December 31, 2021. Past performance does not guarantee future results, which may vary.

U.S. Oil Demand is Now Above Pre-Pandemic Levels

A strong rebound in economic activity has allowed U.S. crude oil demand to post readings above pre-pandemic levels with expectations for continued growth in years to come

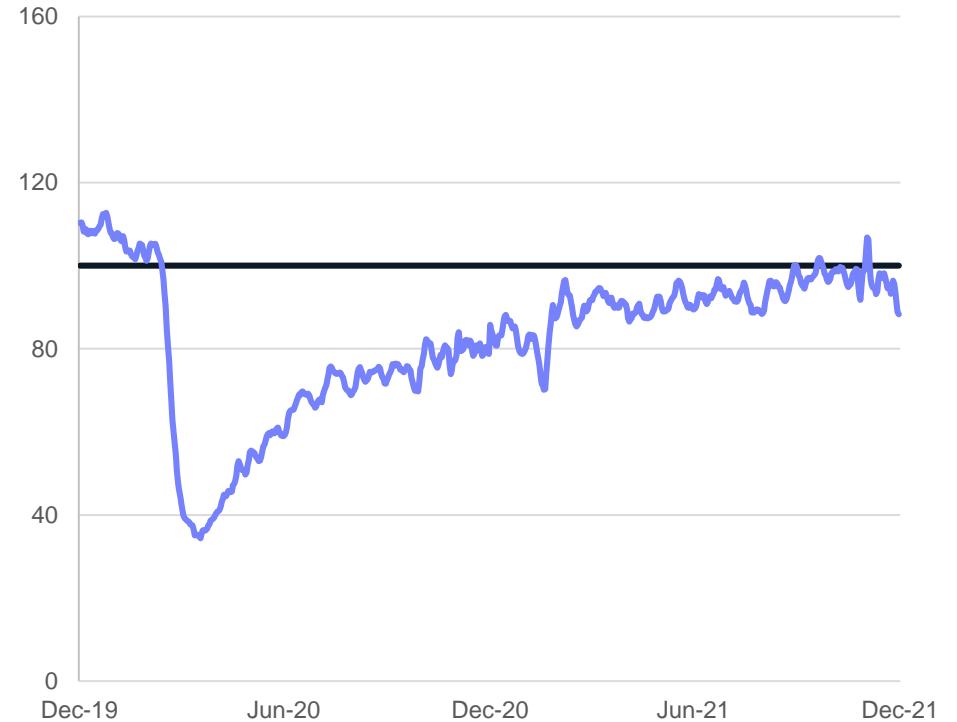
U.S. CRUDE OIL DEMAND

% Change vs. 2019



GLOBAL FLIGHT TRACKER (NORMALIZED VS. 2019)

Total Flights (Thousands)

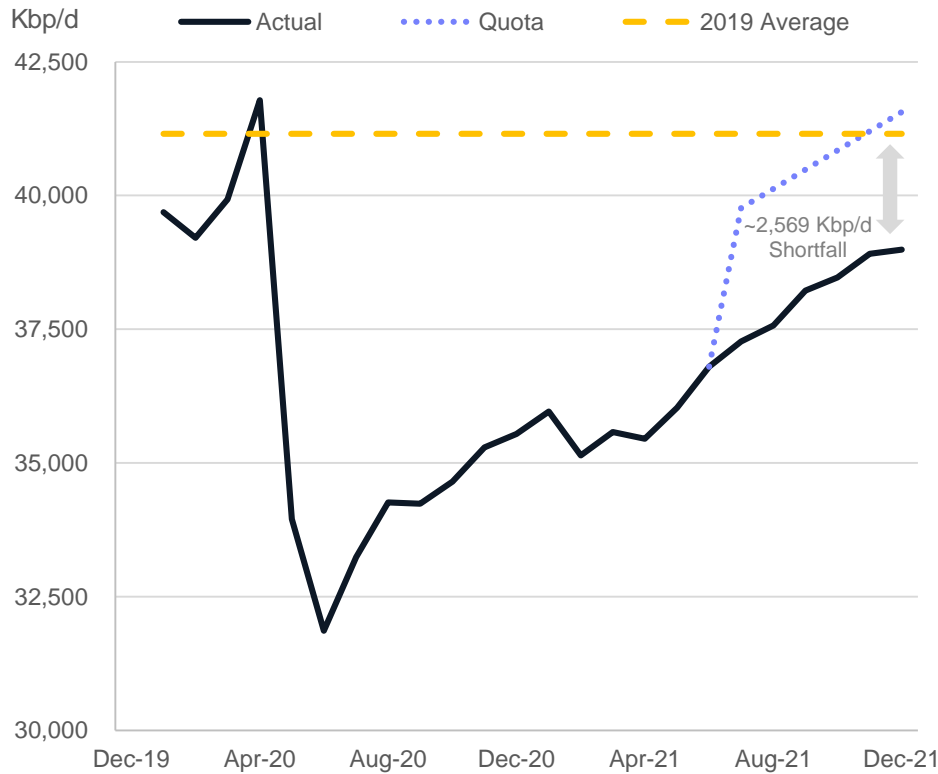


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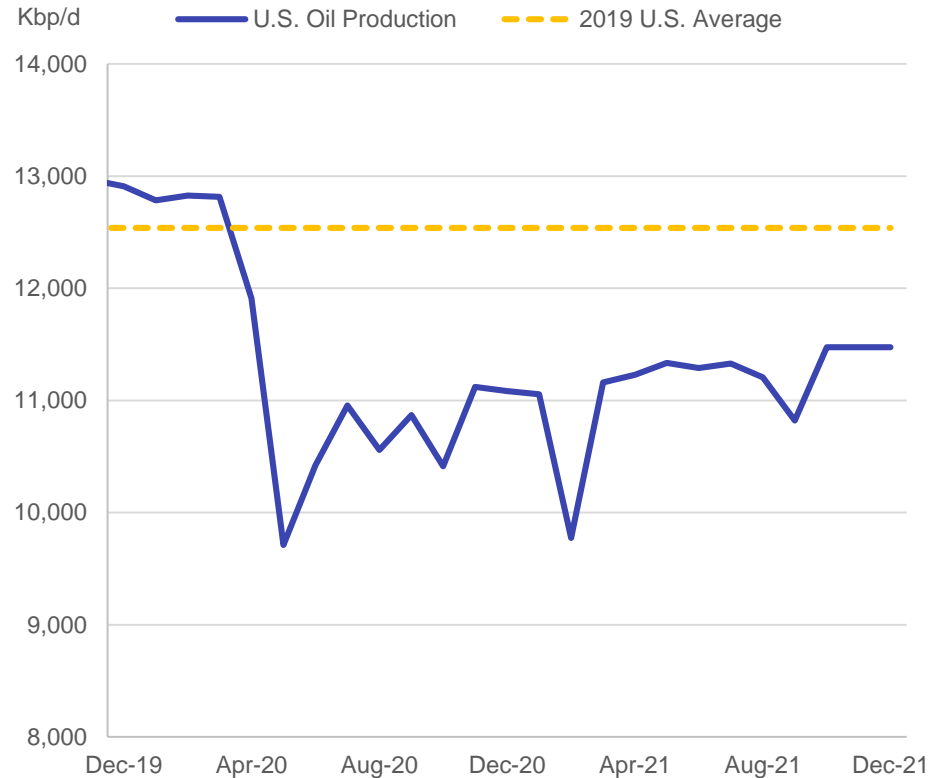
Orderly Global Oil Production

OPEC+ and U.S. have shown discipline in returning production to the market, which, in the face of improved demand, has led to meaningful draws in crude oil inventories and commodity price strength

OPEC + RUSSIA CRUDE OIL PRODUCTION



U.S. CRUDE OIL PRODUCTION



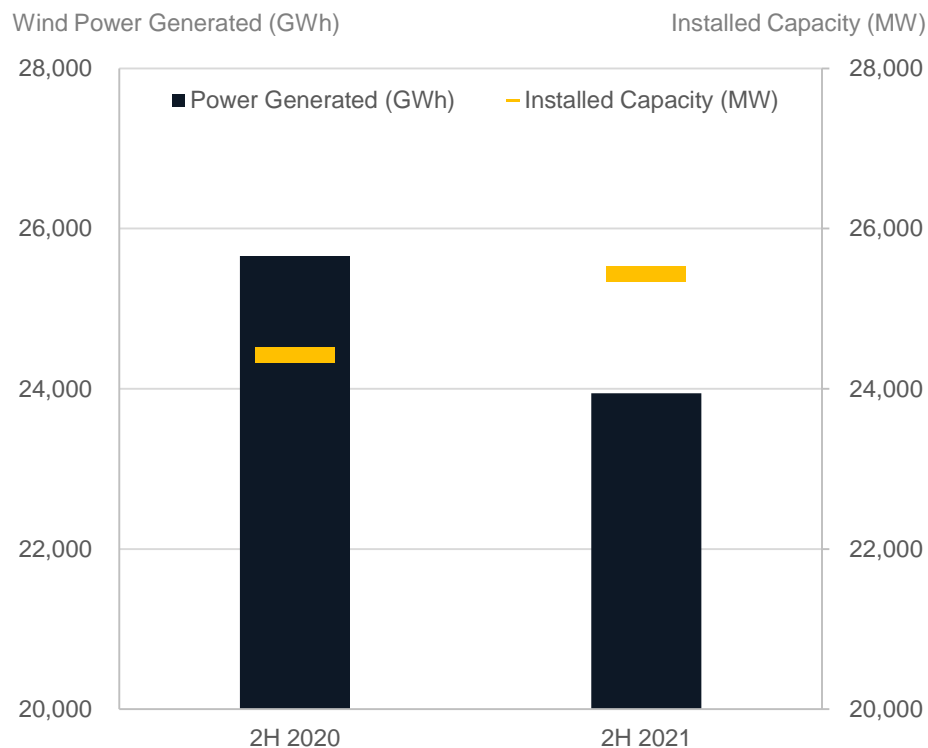
Effective July 2021, OPEC+ started to pursue a policy to gradually raise output (400 kbp/d, per month), though, several members have proved unable to meet quotas, which may suggest spare capacity is more limited than some may believe.

Sources: Goldman Sachs Asset Management, OPEC+, and Bloomberg. Data as of December 31, 2021. OPEC+: Organization of the Petroleum Exporting Countries + Russia. Kbp/d: Thousands of barrels per day. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

Low Wind Output in Europe

Weak wind output in Europe increased the use of coal and natural gas-fired power generation, ultimately raising prices for both commodities

UK WIND POWER GENERATION



GERMANY WIND POWER GENERATION



Europe continued to increase wind capacity and retire traditional fossil fuels in 2021, which failed to result in higher output. However, as can be seen in the statistics for the UK and Germany above; the lower capacity factors demonstrate the need for natural gas generation as baseload capacity in order to avoid power shortages and price surges.

Political & Other Factors Impacting Energy Markets

Energy markets are also being impacted by several other factors such as import bans, project delays, inclement weather, and asset damage

Political Factors

- China imposed a ban on import of Australian (Newcastle) Coal starting late-2020.
- Russia-EU spat has delayed gas shipments on Nord Stream 2 pipeline.
- Potential early nuclear power plant retirements in Germany.

Other Factors

- Cold weather in major population centers drove global natural gas demand higher which caused a spike in the commodity price, specifically in European markets.
- Heavy rains in China and India have affected domestic coal output.
- Damage to the 2 GW France-UK IFA Connector has affected power supplies from France to the UK.

Commodity Price Outlook

We believe that current supply/demand dynamics favor continued strength in commodity prices, the duration of this market will be dependent upon a number of factors

Key Takeaways

Commodity prices have rallied for a host of reasons:

- Recovery in economic activity, orderly production from OPEC+ and U.S., low inventories, and unexpected weather patterns.
- Political and other factors such as import bans, project delays, inclement weather, and asset damage.

The above factors have resulted in commodity prices inflecting higher as supply struggles to keep pace with demand.

- Longer-term, it's unclear if this upward price pressure will continue, though crude oil prices in the \$87-97/bbl range seem realistic based upon current supply/demand factors and lack of global oil & gas investment over the last decade.
- We believe prices in the long-run will be largely dependent upon OPEC+ and U.S. shale production, as well as how aggressively countries, companies, and investors decide to pursue decarbonization goals.
- As many experts have highlighted, the transition from fossil fuels to renewables should keep a gradual pace as the world is still inherently reliant upon fossil fuels as the primary source of energy, and will likely be for decades.

In our view; there is an over-reliance on intermittent sources of power (e.g. wind) as well as on single large suppliers of key sources of energy.

We believe energy security requires diversification of supply sources and fuel types, with hydrocarbons playing a critical role in the global energy mix, for decades to come.

Source: Goldman Sachs Asset Management. Data as of December 31, 2021. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

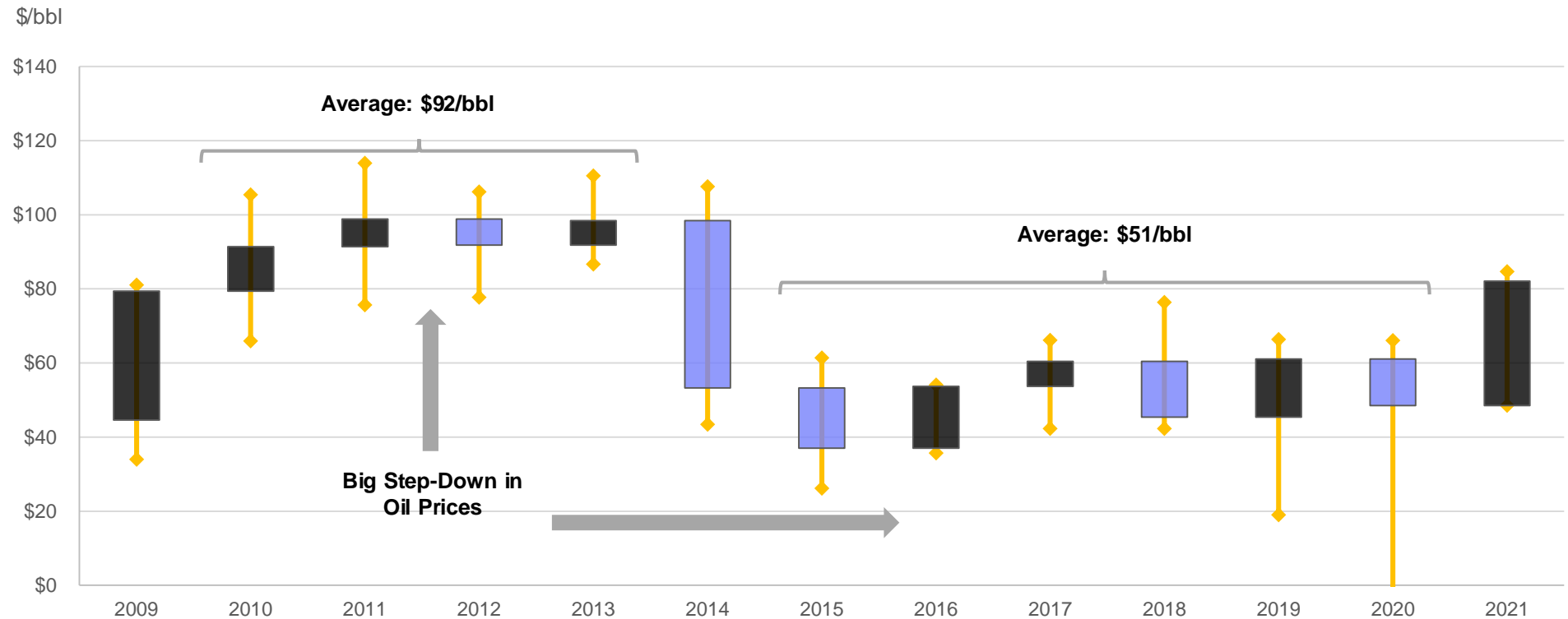
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Oil Equities vs. Commodity Prices

WTI Crude Oil Price Performance History

Since 2009, WTI prices have been categorized in periods of prolonged strength and weakness; we believe any evaluation of performance for oil equities must be made in this context

WTI CRUDE OIL PRICE HISTORY (2009 – PRESENT)



Oil averaged \$92/bbl between 2010-2014 as robust demand coming out of the Global Financial Crisis supported oil prices. From 2015-2020, an OPEC led market share war, resulted in a prolonged period of depressed pricing with WTI averaging \$51/bbl.

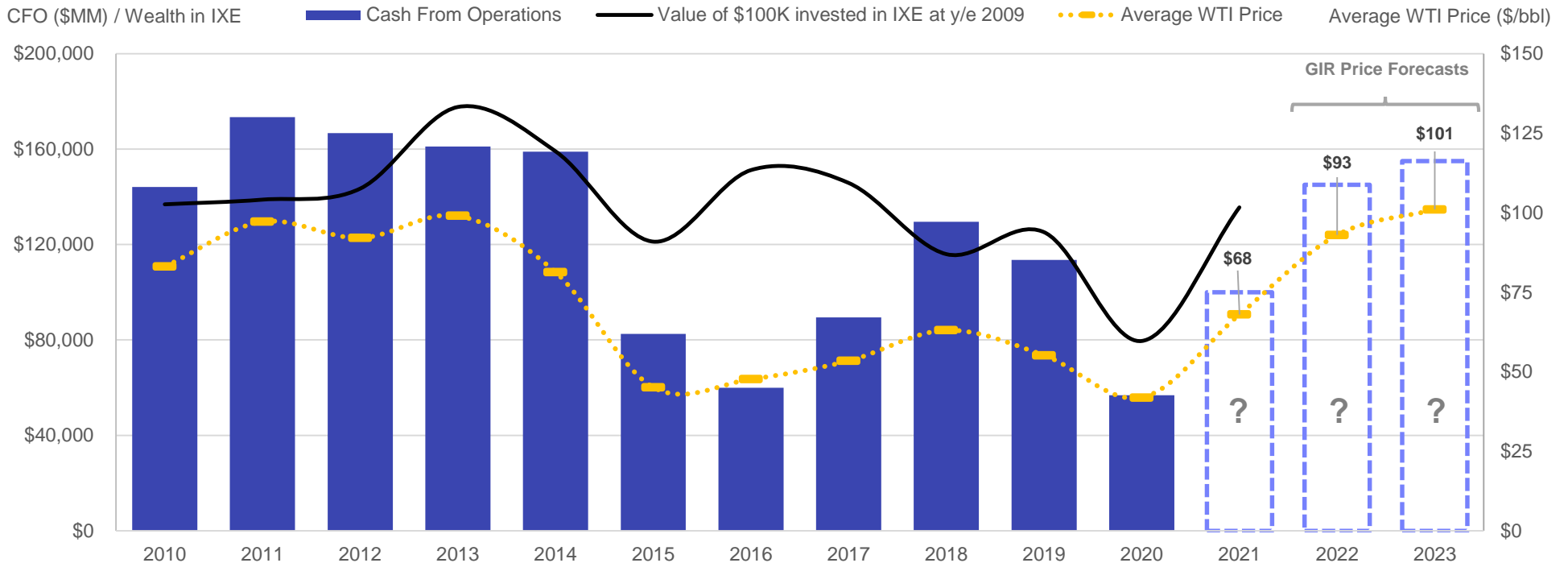
We believe that we have now entered a price environment similar to that of 2010-2014 based on current supply/demand dynamics – this has proved true in equity price performance during the fourth quarter of 2021.

Sources: Goldman Sachs Asset Management and Bloomberg. Data as of December 31, 2021. Bbl: Barrel of oil. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

Relationship Between Oil Equities & Commodity Prices

Despite high oil prices between 2010-2014, it wasn't until 2013 that IXE started to materially outperform WTI; IXE continued to outperform WTI in 2014 & 2015 even as oil prices collapsed 50%

WTI PRICES, UPSTREAM CASH FLOW FROM OPERATIONS (CFO), AND INVESTMENT VALUE OF IXE INDEX



While IXE lagged crude oil prices for most of 2021, we have seen performance start to catch up in recent months, which we believe is a result of investors accounting for “structurally” higher oil prices, and as a result, higher earnings expectations.

Sources: Goldman Sachs Asset Management, Goldman Sachs Global Investment Research (GIR), and Bloomberg. Data as of December 31, 2021. IXE Index tracks the price return of the index, does not include dividend distributions. GROWTH OF \$100,000: A graphical measurement of a portfolio's gross return that simulates the performance of an initial investment of \$100,000 over the given time period. The example provided does not reflect the deduction of investment advisory fees and expenses which would reduce an investor's return. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. **Past performance does not guarantee future results, which may vary.**

Have Oil Equity Prices “Caught Up” to Commodity Prices?

Over the past years, oil equities trailed oil price performance in initial stages of the commodity’s rise, but then outperformed as higher prices and earnings became embedded in investor expectations

Key Takeaways

Oil prices have a direct impact on cash flows at upstream operators.

- We believe prolonged low (or high) prices take time to be embedded in expectations but once they do, they become hard to change.
- Prolonged low oil prices during the 2015-2020 resulted in a material deterioration of cash flows among upstream companies, causing a bearish shift in investor expectations about future earnings power and then a deterioration in valuation.
- Midstream sector earnings, while not directly affected by swings in oil prices, suffered from industry overcapacity, poor capital allocation decisions, and guilt by association.

GIR expects WTI to be in the \$87-97/bbl range during 2022 and over \$100/bbl in 2023 – supporting upstream oil and gas cash flows which we believe should commensurately inflect higher in the coming two years.

- If past is prologue (which appears to be the case in the Q4 2021 and YTD 2022) the IXE Index may start outpacing spot oil prices if investors start “embedding” higher realized earnings into valuation models.

Source: Goldman Sachs Asset Management and Goldman Sachs Global Investment Research (GIR). Data as of December 31, 2021. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. GSAM leverages the resources of Goldman Sachs & Co. LLC subject to legal, internal and regulatory restrictions. **Past performance does not guarantee future results, which may vary.**

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Addressing Common Misconceptions

Concerns That Oil Demand Has Peaked

Many major “think-tanks” and media-outlets have suggested that oil & gas demand is “going away” in near-term at the hands of decarbonization initiatives and electric vehicle adoption

Important Demand Drivers

The majority of the world’s population (63%) **consumes less than 4.0 barrels of oil per person**, annually.

For context, the developed world (U.S. Europe, Japan, etc.) **consume 10-21 barrels of oil per person**, annually.

World population expected to grow to 8.8 billion by 2035 vs. 7.6 billion in 2019.

Rising prosperity in China & India, has the potential to spur rising oil demand for years to come.

Electric Vehicles (EVs)

While we agree that EVs will displace internal combustion engines (ICE) in developed markets – **it will take time**.

Given the low share of Battery EVs in the overall fleet (sub-1.0% in the U.S.), **even after 15 years of 35% annual growth**, EVs are expected to **make up just about 30% of the overall fleet by 2035**.

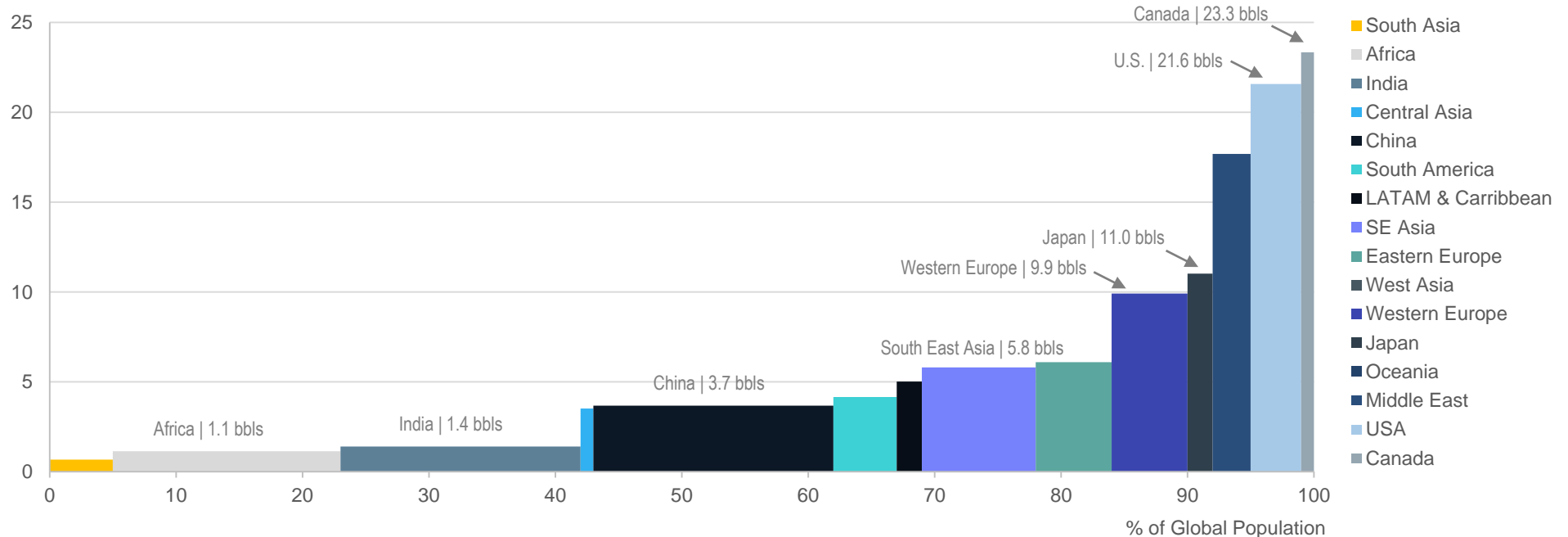
Higher up-front cost of EVs, as well as low levels of electrification in key demand centers, implies that EVs are likely to be more of a **developed market phenomenon**.

Addressing Peak Oil Demand Concerns

It's important to highlight that the majority of the world's population (63%) have annual per capita oil consumption of less than 4 barrels

PER CAPITA OIL CONSUMPTION

Barrels Per Year



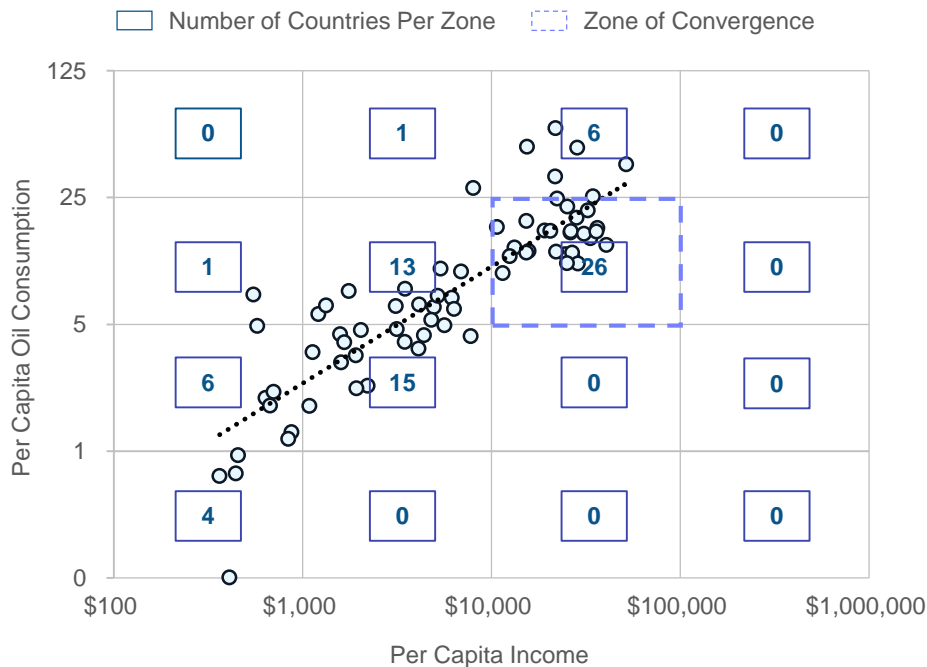
As a point of reference, on an annual basis, Western Europe consumes **9.9 barrels** of oil per person, while the U.S. consumes **21.6 barrels** per person, and Japan consumes **11.0 barrels** per person.

In our view, peak oil proponents have yet to offer credible pathways to sustained improvements in prosperity without simultaneous increases in energy consumption.

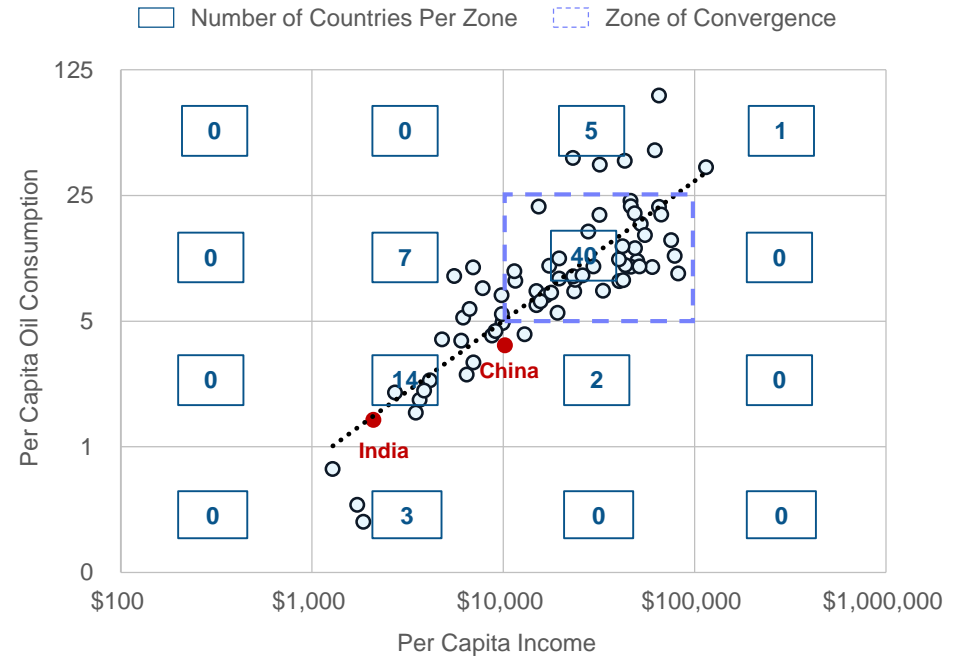
Oil Consumption & Rising Prosperity

Rising prosperity globally has historically driven oil demand, a trend which we believe will continue to rise global oil consumption levels going forward

INCOME AND OIL CONSUMPTION (1999)



INCOME AND OIL CONSUMPTION (2019)



From 1999-2019, the number of countries with per capita income <\$1,000/year **fell from 11 to 0**, while the \$10,000-\$100,000/year bucket **rose from 32 to 47**. At the same time, the number of countries with per capita oil consumption between 5-25 bbls per year **rose from 40 to 47**.

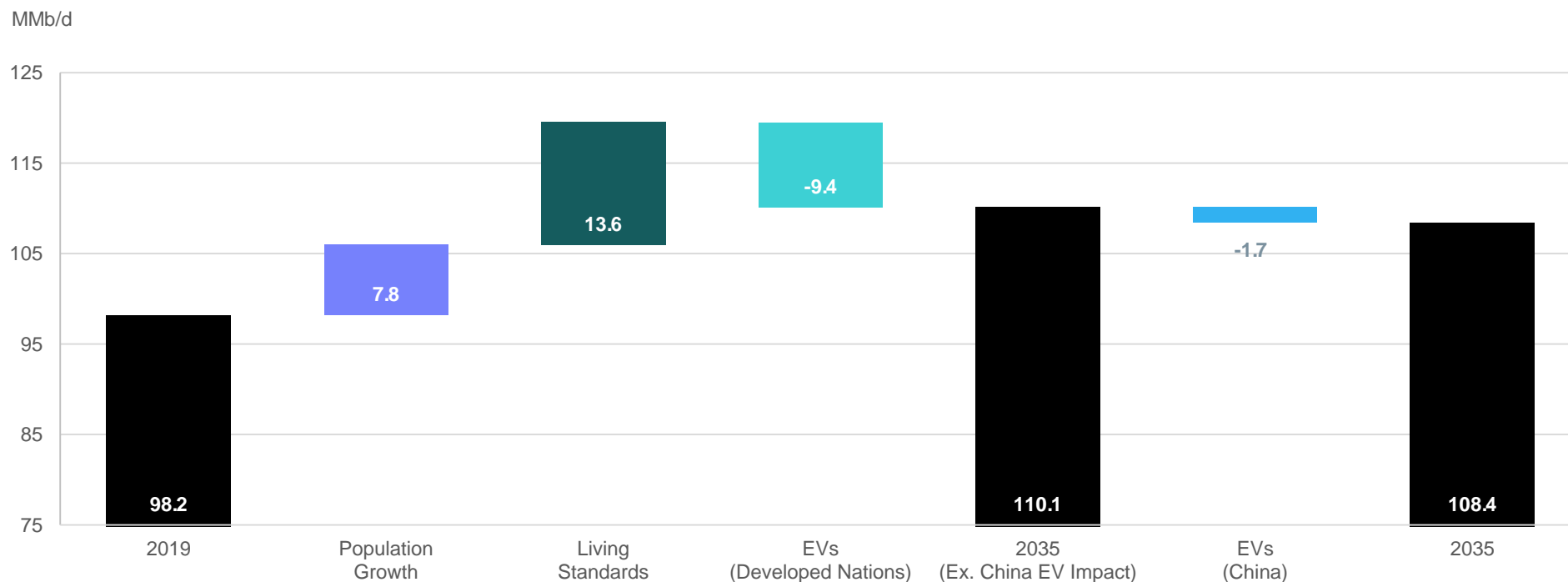
The Zone of Convergence (ZoC) has 40 countries vs. only 26 in 1999, which we expect to continue to grow. It's important to note that China and India are well outside the ZoC and we believe that rising prosperity in these two economies **will spur oil demand for many years to come**.

Sources: Goldman Sachs Asset Management and BP Statistical Review. Latest data available as of December 31, 2021. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

Our Oil Demand Outlook

We do not see any near term peak oil demand concerns and expect global oil demand to hit 108 million barrels per day by 2035 – approximately 12% above 2019 levels

2035 CRUDE OIL DEMAND BRIDGE



We expect growing world population and rising per capita income to drive oil demand higher by ~21 MMb/d while EV usage in developed markets displaces ~9 MMb/d of demand and EV adoption in China could result in an additional ~1.7 MMb/d of declines.

Sources: Goldman Sachs Asset Management, OPEC+, International Energy Agency (IEA) and BP Statistical Review. Latest data available as of December 31, 2021. MMb/d: Millions of barrels per day. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

Natural Gas's Role in Decarbonization

Many regard Germany as the beacon to follow to reduce green-house-gas (GHG) emissions through renewables – though natural gas has proven to be another potentially viable solution

Germany Case Study

Between 2004 and 2019, the US kept fossil-based power roughly flat vs. ~15% reduction in Germany.

Germany generated nearly 28% power from wind and solar vs. less than 10% in the U.S. in 2019.

Despite higher fossil-based generation, the U.S. achieved greater GHG reductions than Germany.

Both France and U.S. kept the contribution of Nuclear power consistent over the 2004-2019 timeframe.

Germany has allowed closure of over half of all its nuclear power generation since 2004 – a process that was further accelerated by the Fukushima disaster in Japan during 2011.

Over the next two years, virtually all of Germany's nuclear power plants will be retired and will likely be replaced by gas-fired power generation with natural gas sourced from Russia's Nord Stream 2 pipeline.

U.S. Energy Market Comparison

Between 2004 and 2019, the United States:

- Lowered per capita GHG emissions by 24%.
- Lowered the GHG intensity of the economy (CO2 per \$Million of GDP) by 52%.
- Achieved 57% per capita income growth.
- Delivered 20% more per capita income growth than Germany.
- Experienced a power price increase that was 30% lower than Germany.

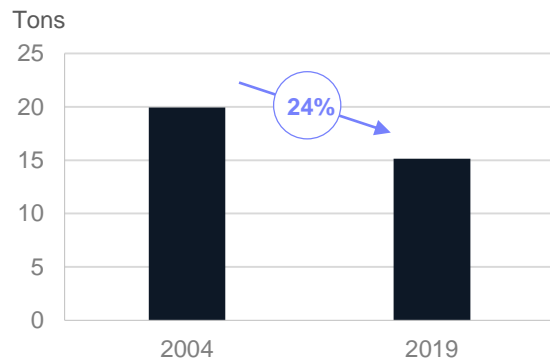
These reductions in GHG emissions were accomplished primarily by reducing the power generated from coal by 53% and maintaining nuclear generation at nearly 20% of total generation.

This was achieved at the same time U.S. shale was rapidly developing, and natural gas production almost doubled.

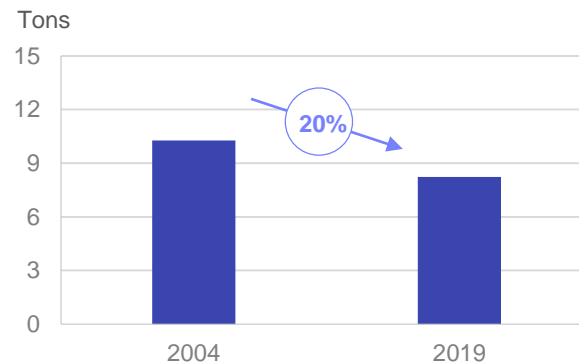
Wind & Solar Are Not the Only Ways to Reduce GHG

From 2004 to 2019, the U.S. was able to reduce per capita CO2 emissions at a faster pace than Germany despite keeping fossil fuel based power flat vs. a 15% reduction in Germany

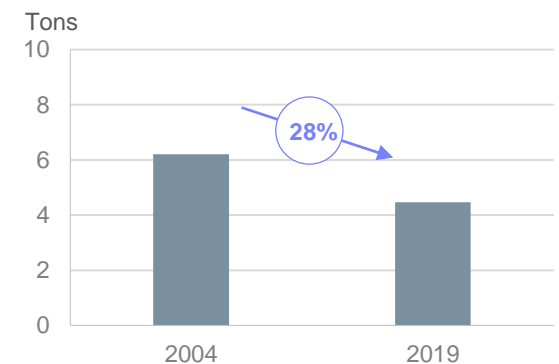
U.S. PER CAPITA CO2 EMISSIONS



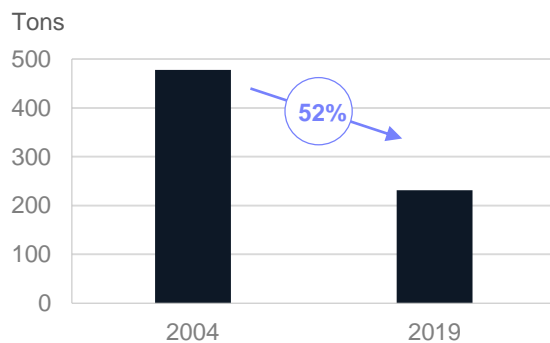
GERMANY PER CAPITA CO2 EMISSIONS



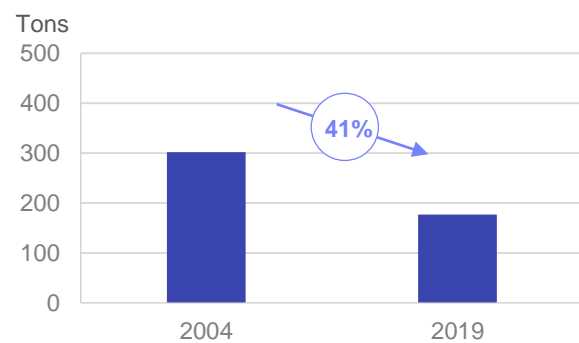
FRANCE PER CAPITA CO2 EMISSIONS



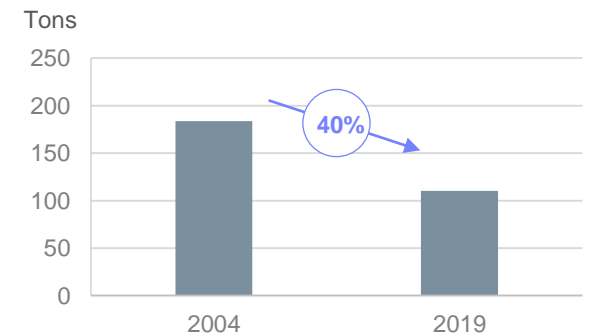
U.S. CO2 EMISSIONS PER \$1 MM GDP



GERMANY CO2 EMISSIONS PER \$1 MM GDP



FRANCE CO2 EMISSIONS PER \$1 MM GDP

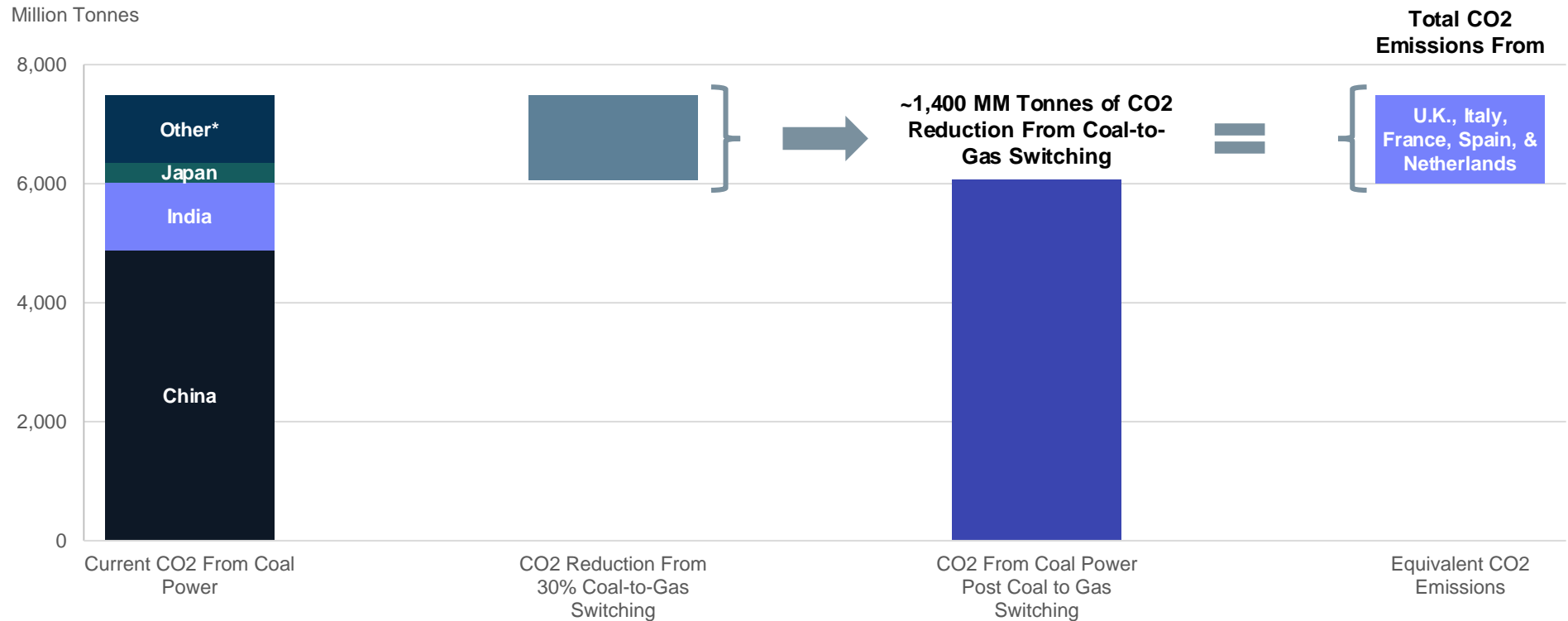


Despite **higher fossil-based generation** and lower wind & solar generation, the **U.S. achieved more meaningful GHG reductions** when compared to that of Germany over the same period.

Coal-to-Gas Switching May Present a Large Opportunity

We estimate that coal-to-gas switching represents a 30-40 Bcf/d potential opportunity for natural gas / LNG exporting nations; to put this in context, total global trade in LNG averaged only 47 Bcf/d in 2020

COAL-TO-GAS SWITCHING CO2 EMISSIONS BRIDGE



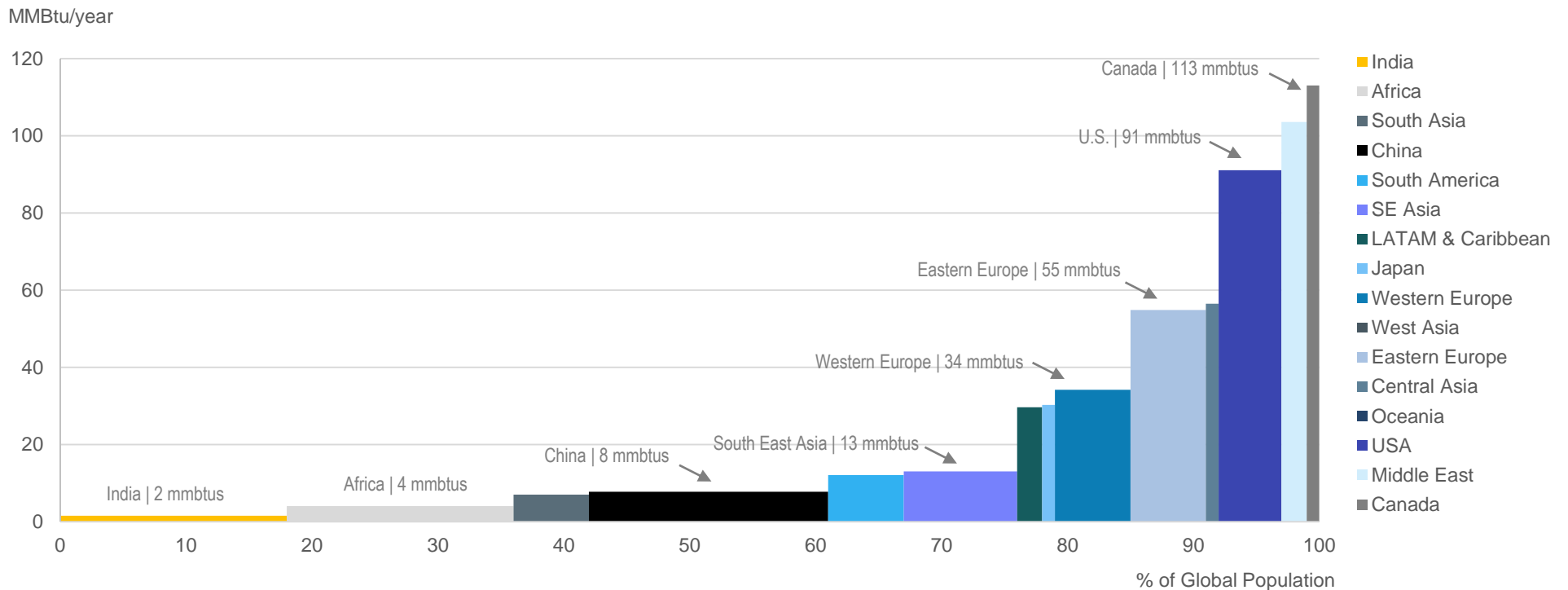
If largest coal-fired power producing countries **switched 30% of generation from coal to natural gas**, reduction would be equivalent to UK, Italy, France, Spain & Netherlands all eliminating **100% of their CO2 emissions**.

Sources: Goldman Sachs Asset Management and BP Statistical Review. Latest data available as of December 31, 2021. Bcf/d: Billions of cubic feet per day. LNG: Liquefied natural gas. These examples are for illustrative purposes only and are not actual results. If any assumptions used do not prove to be true, results may vary substantially. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

Natural Gas & LNG May Present A Global GHG Solution

U.S. experience shows that coal-to-gas switching can be a powerful and cost-effective way to reduce CO2 emissions

PER CAPITA CONSUMPTION OF NATURAL GAS



Countries such as China, India, Japan, Indonesia, South Korea, & Vietnam generate, on average, **over 50% of electricity from coal**. Low natural gas usage in these countries presents a potentially **interesting opportunity for natural gas exporting nations**.

Sources: Goldman Sachs Asset Management and BP Statistical Review. Latest data available as of December 31, 2021. Mmbtu/year: Metric million British thermal units per year.

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Appendix & Disclosures

General Definitions

It is not possible to invest directly in an unmanaged index.

Midstream: Midstream investments include both Master Limited Partnership (MLP) and C-Corporation (C-Corp) structured companies that are engaged in the treatment, gathering, compression, processing, transportation, transmission, fractionation, storage and terminalling of natural gas, natural gas liquids, crude oil, refined products or coal. Midstream companies may also operate ancillary businesses including marketing of energy products and logistical services.

Upstream: exploration & production companies (E&Ps); generally engaged in the exploration, recovery, development and production of crude oil, natural gas and natural gas liquids.

MLPs Only – Alerian MLP Total Return Index (AMZ) – the leading gauge of energy Master Limited Partnerships (MLPs). The float-adjusted, capitalization-weighted index, whose constituents represent approximately 85% of total float-adjusted market capitalization, is disseminated real-time on a price-return basis (AMZ) and on a total-return basis (AMZX). “Alerian MLP Index”, “Alerian MLP Total Return Index”, “AMZ” and “AMZX” are trademarks of Alerian and their use is granted under a license from Alerian or “Source: Alerian”.

MLPs + C-Corps – Alerian Midstream Energy Index (AMNAX) – a broad-based composite of North American energy infrastructure companies. The capped, float-adjusted, capitalization-weighted index, whose constituents earn the majority of their cash flow from midstream activities involving energy commodities, is disseminated real-time on a price-return basis (AMNA) and on a total-return basis (AMNAX).

Broad Energy Equities – Energy Select Sector Index (IXE) – a modified market capitalization-based index intended to track the movements of companies that are components of the S&P 500 and are involved in the development or production of energy products.

Clean Energy Infrastructure – 50% Eagle North America Renewables Infrastructure Gross Index (RENEWNAT), 35% Indxx Yieldco and Renewable Energy Income Net Index (IYLCOREC) & 15% Eagle Global Renewables Infrastructure Gross Index (RENEWTR).

RENEWNAT Index – The Eagle North American Renewables Infrastructure Index provides a benchmark that is designed to track the performance of renewables infrastructure or renewables related infrastructure assets, primarily wind, solar, hydro, biomass, and electric transmission lines. Constituents are companies whose stocks trade in either the USA and Canada, though assets owned by these companies can have a global reach. The index is a capped, float-adjusted, capitalization-weighted index developed by Eagle Global Advisors, and disseminated real-time on a price-return basis (RENEWNA) and on a total-return basis (RENEWNAT).

YIELDCO INDEX – a Net Total Return Index designed to track the performance of income-paying renewable energy companies (RECs) and companies categorized as YieldCos listed in Developed and Emerging Markets.

RENEWTR Index – The Eagle Global Renewables Infrastructure Index provides a benchmark that is designed to track the performance of renewables infrastructure or renewables-related infrastructure assets, primarily wind, solar, hydro, biomass, and electric transmission lines. Constituents are companies whose stocks trade globally in OECD countries. The index is a capped, float-adjusted, capitalization-weighted index developed by Eagle Global Advisors, and disseminated real-time on a price-return basis (RENEW) and on a total-return basis (RENEWTR).

Global Infrastructure – Dow Jones Brookfield Global Infrastructure (DJBGI) – Global index of companies with >70% of cash flows derived from infrastructure lines of business. Components must be domiciled in a country with a liquid listing & must pass screens for minimum float market cap and trading volume. The index is float market cap weighted. Calculated in USD.

Utilities – PHLX Utility Sector Index (UTY) – a market capitalization-weighted index composed of geographically diverse public utility stocks.

Real Estate Investment Trusts (REITS) – FTSE/NAREIT North America Index – gauges the performance of companies that develop and own real estate in North America.

General Definitions

10 Year Treasury – BofA Merrill Lynch US Treasuries (10Y) Index – an unmanaged index that tracks the performance of the three most recently issued 10-year US Treasury notes.

Tobacco & Telecom: Altria Group Inc (MO), Phillip Morris International Inc (PM), British American Tobacco PLC (BATS), AT&T Inc. (T), Verizon Communications Inc. (VZ), and T-Mobile USA Inc. (TMUS).

Natural Gas – NG1 Contract – tracks the one month forward natural gas futures trading in units of 10,000 million British thermal units (mmBtu). The price is based on delivery at the Henry Hub in Louisiana.

WTI Crude Oil – CL1 Contract – tracks the one month forward WTI crude oil futures contracts that trade in units of 1,000 barrels, and the delivery point is Cushing, Oklahoma, which is also accessible to the international spot markets via pipelines.

Brent Crude Oil – CO1 Contract – tracks the one month forward price of Brent crude oil. Current pipeline export quality Brent blend as supplied at Sullom Voe. ICE Brent Futures is a deliverable contract based on EFP delivery with an option to cash settle.

Real Asset Classes: Real assets are often defined as physical or tangible assets that tend to provide a “real return,” often linked to inflation. This definition encompasses a wide range of potential investments, including real estate, infrastructure, timberlands, agrilands, commodities, precious metals, and natural resources.

Stocks: Stock investments are subject to market risk, which means that the value of the securities may go up or down in response to the prospects of individual companies, particular sectors and/or general economic conditions.

Bonds: Fixed income investing involves interest rate risk. When interest rates rise, bond prices generally fall.

High Yield: Below investment grade (high yield) bonds are more at risk of default and are subject to liquidity risk.

Free Cash Flow (FCF): Operating Cash flow less Capital Expenditures (CAPEX). Free cash flow is the cash a company produces through its operations, less the cost of expenditures on assets. In other words, free cash flow (FCF) is the cash left over after a company pays for its operating expenses and capital expenditures.

Capital Expenditures (CAPEX): Funds used by a company to acquire, upgrade, and maintain physical assets such as property, buildings, an industrial plant, technology, or equipment.

EV/EBITDA: Enterprise Value (EV) divided by earnings before interest, taxes, depreciation, and amortization (EBITDA). EV is calculated as follows: Market Capitalization + Preferred Shares + Minority Interest + Debt – Total Cash.

CAGR: Compound annual growth rate is a business and investing specific term for the geometric progression ratio that provides a constant rate of return over the time period.

Volatility: a statistical measure of the dispersion of returns for a given security or market index.

Share Buyback: Issuer buys back its own outstanding shares to reduce the number of shares available on the open market

OPEC+: Organization of Petroleum Exporting Countries, and Russia.

Spread: A spread is the difference between two numbers, usually between two types of yields such as the yield of a security above a 10 year treasury bill.

Basis point (BPS): refers to a common unit of measure for interest rates and other percentages in finance. One basis point is equal to 1/100th of 1%, or 0.01%, or 0.0001, and is used to denote the percentage change in a financial instrument.

Correlation: is a measure of the amount to which two investments vary relative to each other.

General Definitions

Views are as of January 19, 2022, unless noted otherwise and are subject to change in the future.

Master Limited Partnerships ("MLPs") may be generally less liquid than other publicly traded securities and as such can be more volatile and involve higher risk. Investments in securities of an MLP involve risks that differ from investments in common stocks, including risks related limited control and limited rights to vote on matters affecting the MLP, risks related to potential conflicts of interest between the MLP and the MLP's general partner, cash flow risks, dilution risks and risks related to the general partner's right to require unit holders to sell their common units at an undesirable time or price. MLPs are also generally considered interest-rate sensitive investments. During periods of interest rate volatility, these investments may not provide attractive returns.

Investments in MLPs are subject to certain risks, including risks related to limited control and limited rights to vote, potential conflicts of interest, cash flow risks, dilution risks, limited liquidity and risks related to the general partner's right to force sales at undesirable times or prices.

MLPs may also involve substantially different tax treatment than other equity-type investments, and such tax treatment could be disadvantageous to certain types of investors, such as retirement plans, mutual funds, charitable accounts, foreign investors, retirement accounts or charitable entities. In addition, investments in MLPs may trigger state tax reporting requirements. Generally, a master limited partnership ("MLP") is treated as a partnership for Federal income tax purposes. Therefore, investors in an MLP may be subject to certain taxes in addition to Federal income taxes, including state and local income taxes imposed by the various jurisdictions in which the MLP conducts business or owns property. In addition, certain tax-exempt investors in an MLP, such as tax-exempt foundations and charitable lead trusts, may incur unrelated business taxable income ("UBTI") with respect to their investment. UBTI may result in increased Federal, and possibly state and local, tax costs, and may also result in additional filing requirements for tax exempt investors. Non-US investors may be subject to US taxation on a net income basis and have US filing obligations as a result of investing in MLPs. The tax reporting information for MLPs generally is provided to investors on an annual IRS Schedule K-1, rather than an IRS Form 1099. To the extent the Schedule K-1 is delivered after April 15, you may be required to request an extension to file your tax returns.

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