



Market Review and Outlook for 2020

Tom Brady, Executive Director J.P. Morgan Center for
Commodities at the UC – Denver Business School



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Agenda



- » Quick Introduction
- » Market Review & Outlook
 - » Economic expansion continues
 - » Dollar strength persists
 - » Recession...not likely
 - » Inflation remains low
 - » Oil market and price outlook
 - » “Food for Thought”
 - » Some Conclusions
- » Overview of the J.P. Morgan Commodity Center

Tom Brady: brief introduction

» **2019 - Present**

- » Exec. Dir. J.P. Morgan Commodity Center, U of Colorado Denver
- » Founder, Brady Commodity Advisors

» **2007 – 2019: Newmont Mining**

- » Chief Economist
- » Strategic Planning, Investor Relations, Treasury

» **1998 – 2007: Energy / Oil & Gas**

- » Risk Capital Advisors & Arthur Andersen

» **1996 – 1998: Newmont Mining**

- » Corp. Development

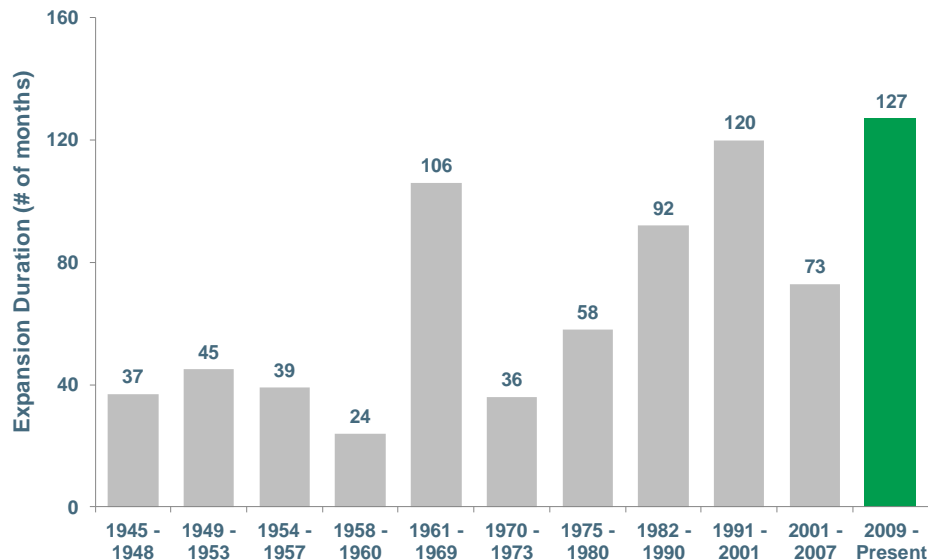
» **1996 Ph.D. in Mineral Economics from Colo. School of Mines**

- » JPM Commodity Research Desk



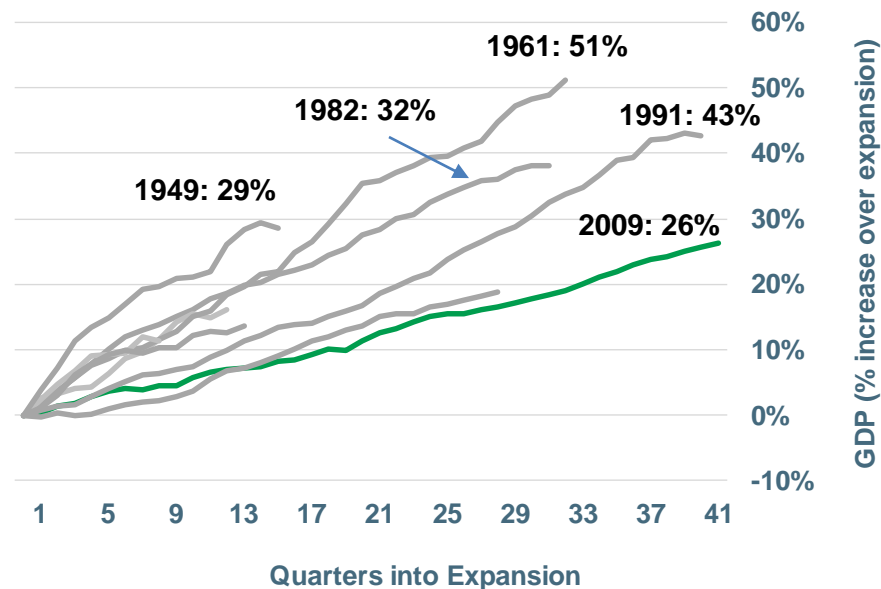
U.S. Economic Expansion

U.S. economic expansion continues



Source: Bloomberg

Current expansion longest, but slowest



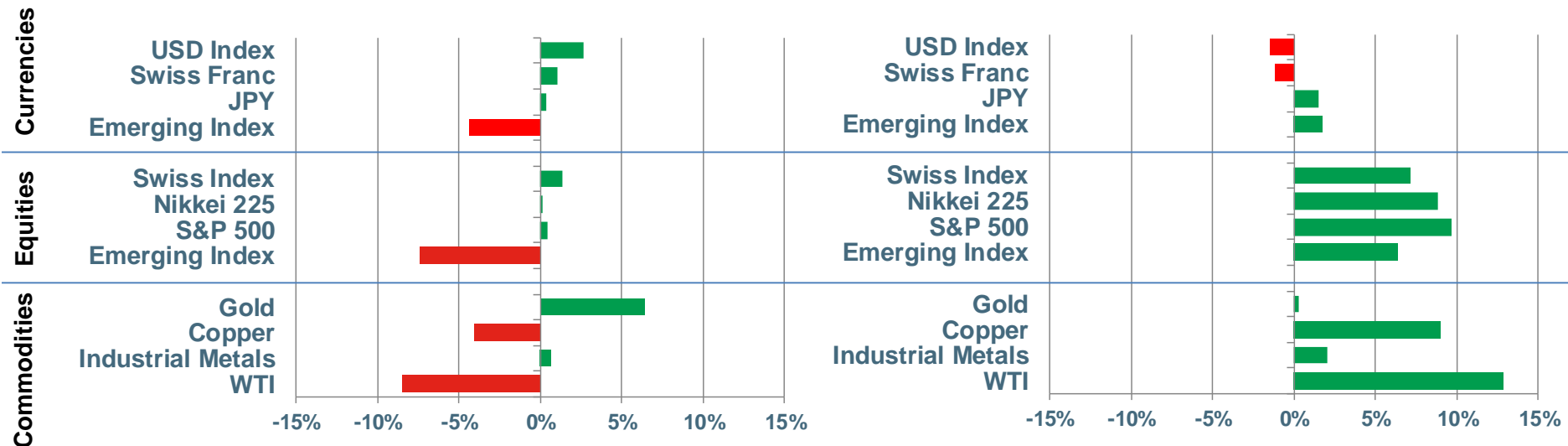
- » Current expansion is the longest in U.S. history ~10.5 years
- » Current expansion has been the slowest in terms of overall growth, avg. ~2.1%/year (~2.6% in 2001 expansion; 3.5% in 1991, 4.3% in 1981)
 - » Aging population (baby boomer retirement); diminishing returns of tech innovation and drug innovation



“Cautious Optimism” returned to markets in Q4 2019

Q3 2019 – “Safe Havens Dominate”

Q4 2019 – “Cautious Optimism”



Source: Bloomberg

- » In Q3, safe haven currencies appreciated (US\$, Swiss Franc & Yen)
 - » Equities in the US, Switzerland and Japan posted marginal, positive gains.
 - » Gold prices climb ~7%
- » In Q4, cautious risk taking returns, strong increases in global equities as well as with oil and copper/industrial metal (but gold still up ~3%)

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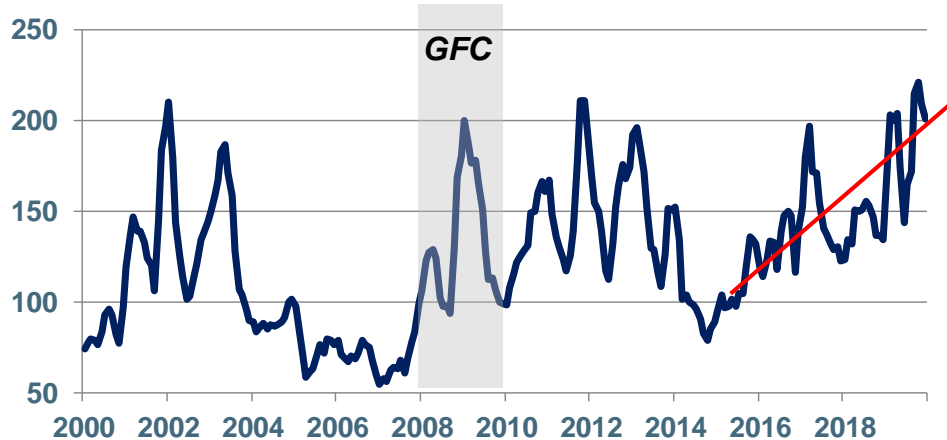


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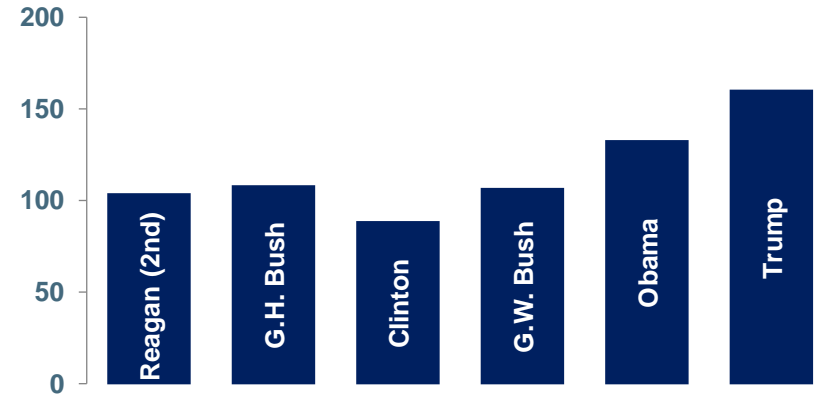
Uncertainty, trending higher

U.S. Economic Policy Uncertainty Index



Source: Bloomberg

Uncertainty higher under Trump

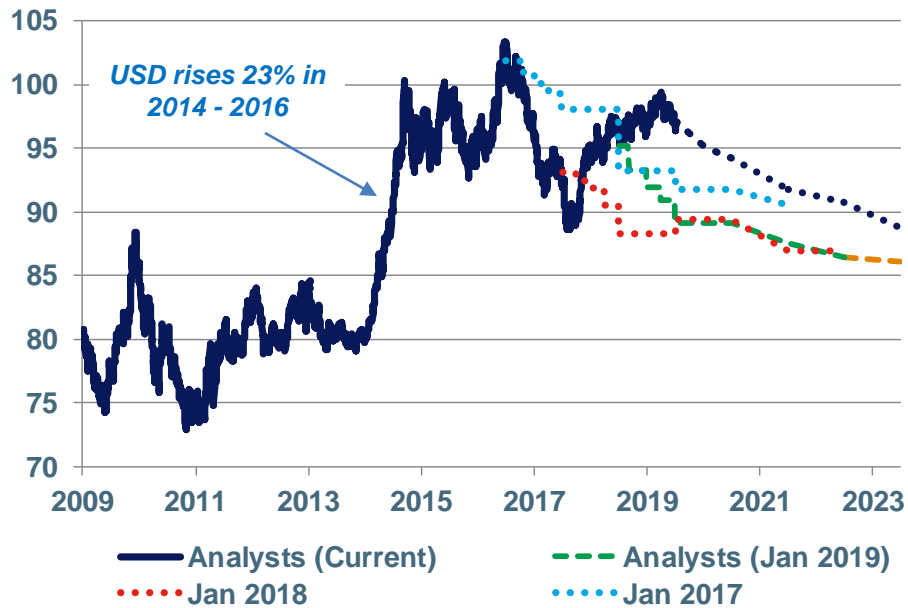


- » Trade war with China, impeachment inquiry, have led to a strong upward trend in the index under Trump
- » Uncertainty has trended upward...even under the longest economic expansion in U.S. history



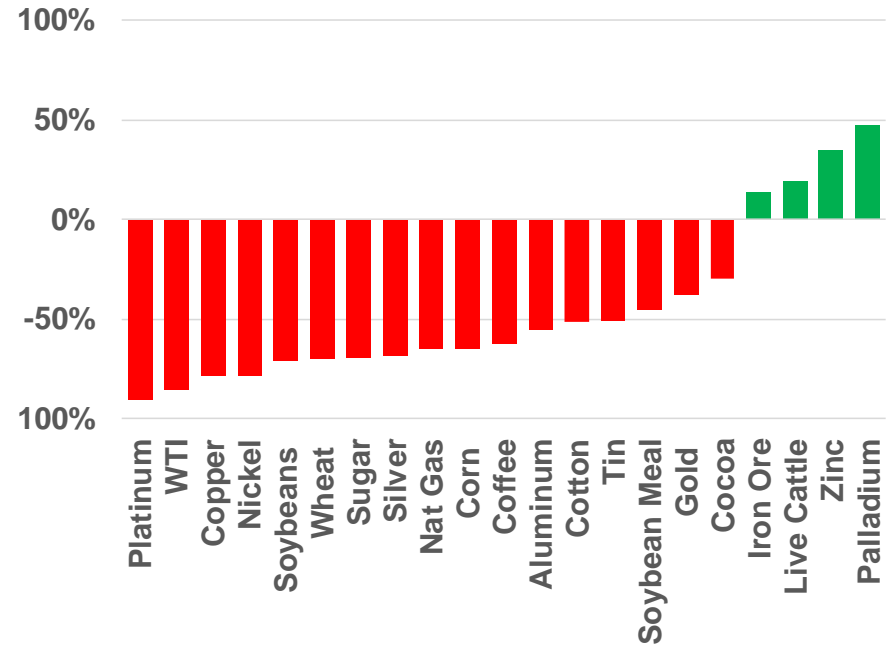
U.S. Dollar remains relatively strong

Dollar strength...despite expectations



Source: Bloomberg

Commodities negatively correlated w US dollar



Daily price correlation (2000 onward); Source: Bloomberg

- » Analysts (again) anticipating U.S. dollar to depreciate
- » USD increases ~25% from July 2014 – Jan 2016
 - » Commodity prices declining (particularly oil), FED raising i-rates vs. peers
- » Commodities generally have a negative relationship with dollar

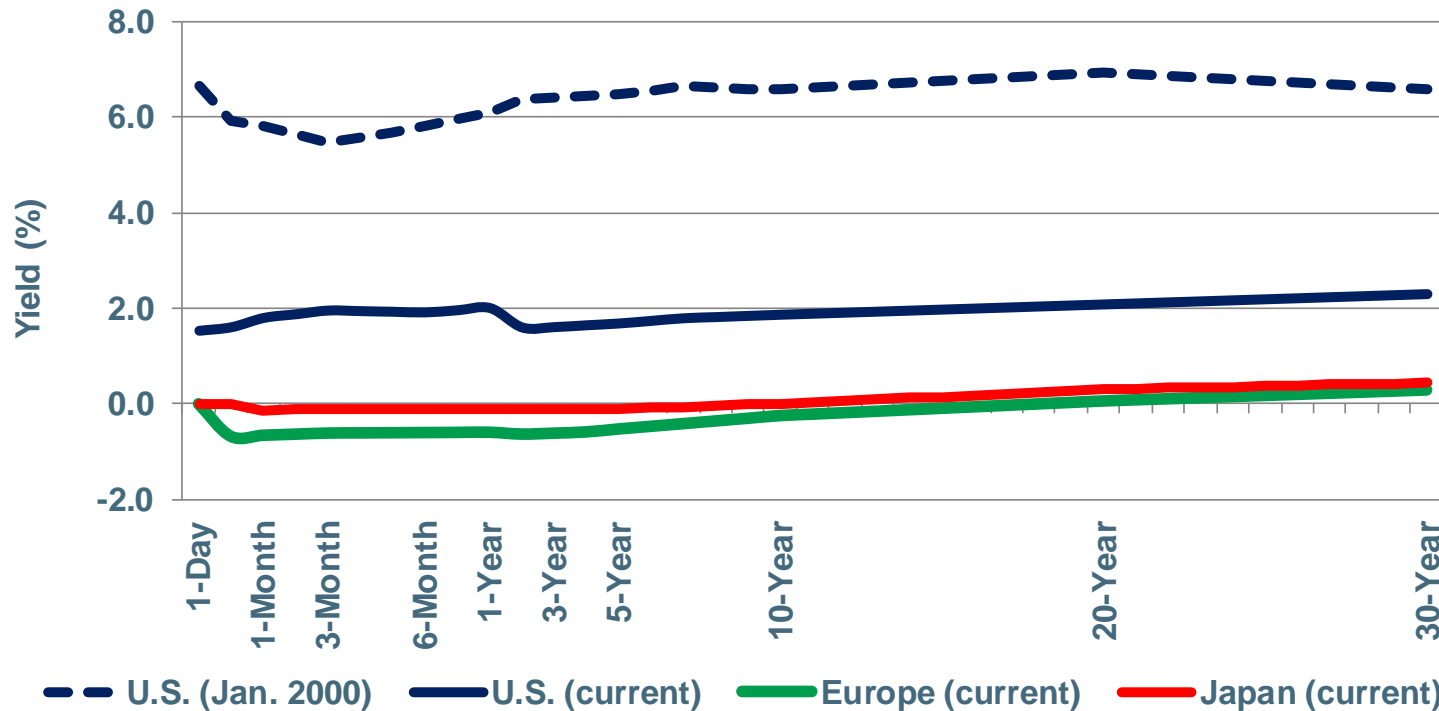


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Bond yields in U.S. supporting dollar

While low, yields in the U.S. remain relatively higher than global peers



- » In 2000, yields on the U.S. Treasuries longer than 3-years > 6%
- » Current yields near record lows (10yr: ~1.9%, 30yr: ~2.1%).
 - » But yields remain higher than key global peers
- » Euro yields slightly positive on 30yr⁸ (negative on shorter durations)

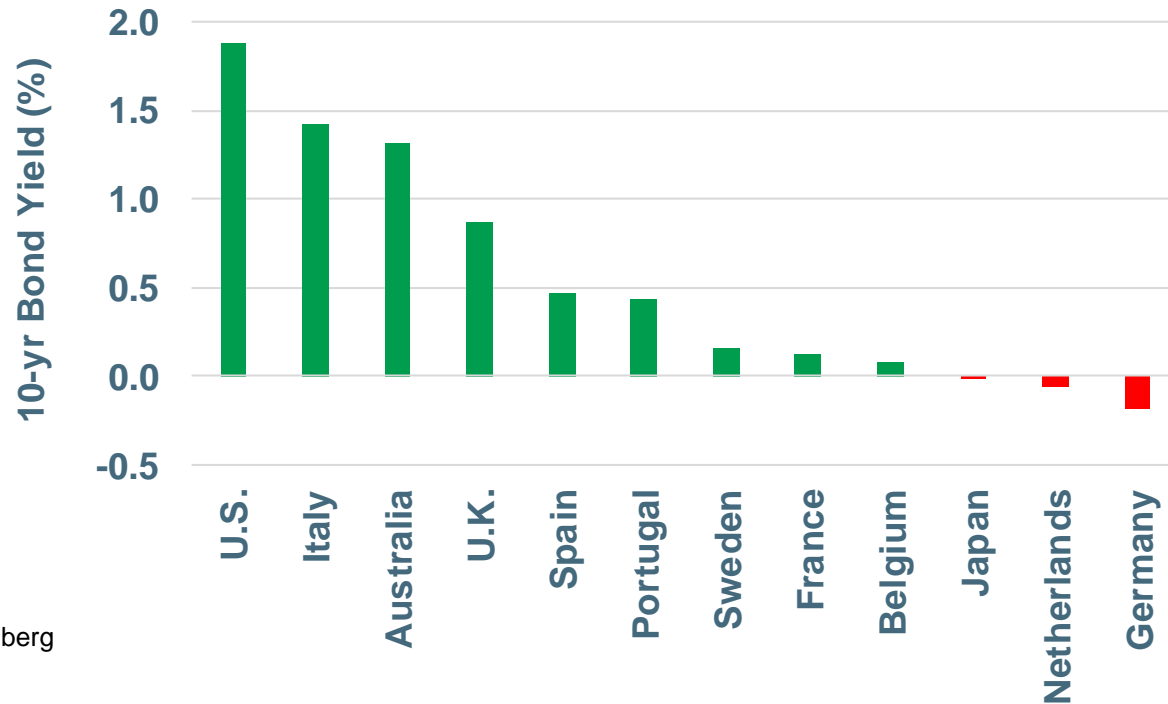


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Bond yields in U.S. attractive to global investors

10-year Government Bond yield comparison



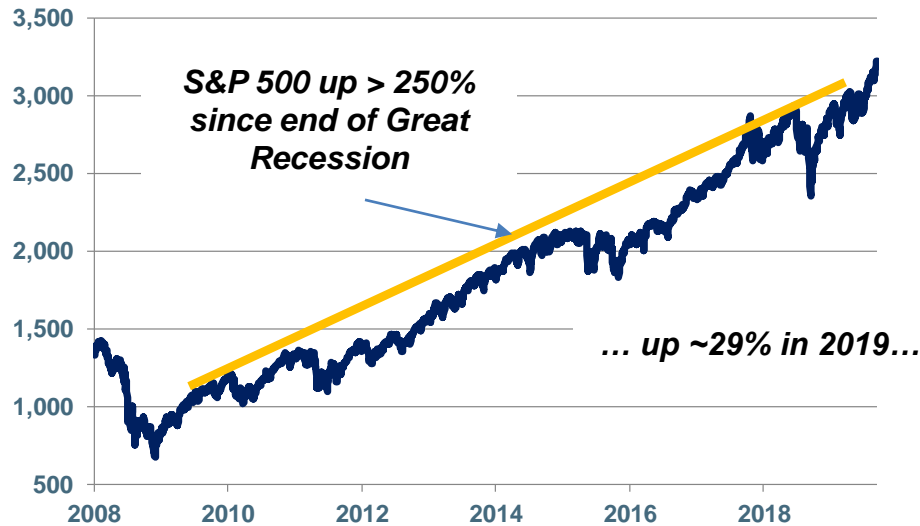
Source: Bloomberg

- » Yield on the U.S. 10yr is ~1.9%, historically very low, however this remains significantly higher than key markets abroad.
- » 10yr yields in Japan and through most of Europe remain negative (or very close to 0%)

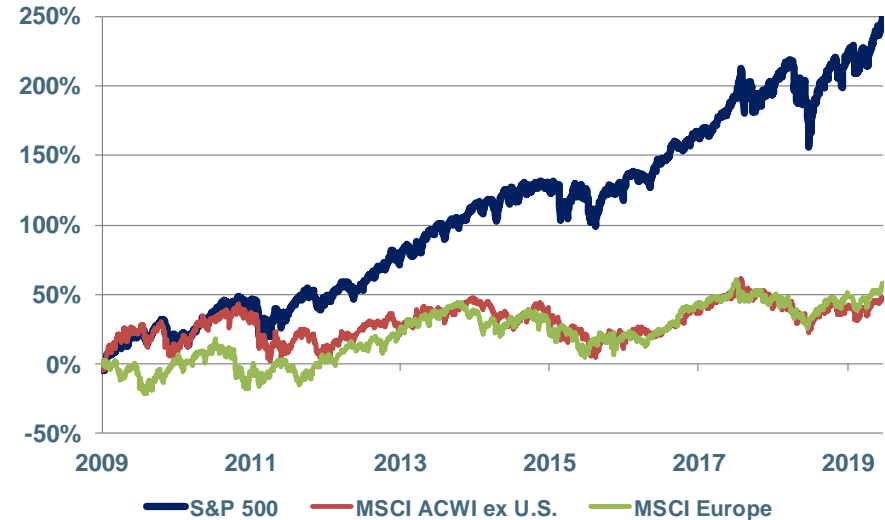


U.S. equities supporting dollar as well

U.S. Equity run up continues...



...and outpaces global equities



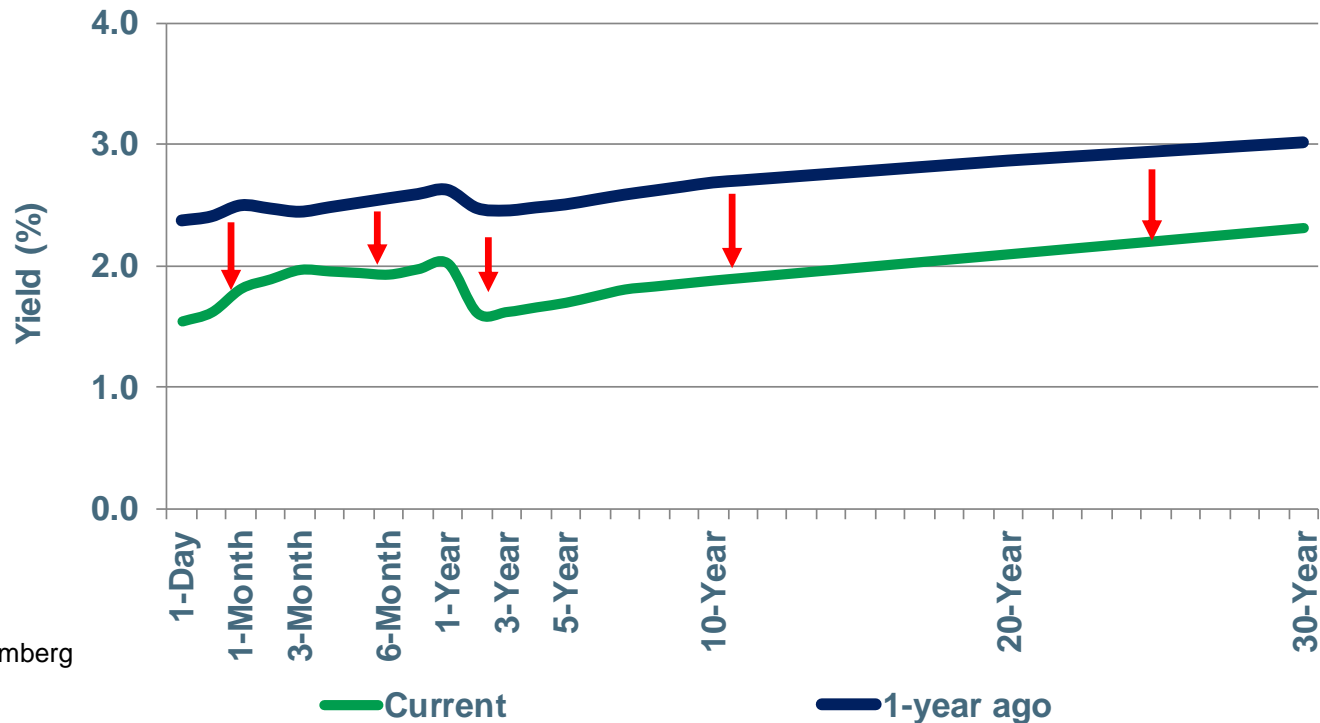
Source: Bloomberg

- » S&P 500 up over 250% since end of Great Recession in 2009
 - » Up nearly 30% last year
- » MSCI ACWI and Europe indices up ~50% since 2009



...but the yield curve inverted in 2019...

Yields on the 3 month > 10 year



Source: Bloomberg

- » Yield curves are typically upward sloping
 - » Investors require higher interest rates for holding longer-term bonds than those with shorter durations
- » Inverted yields “suggests” the long-term outlook for the economy is poor

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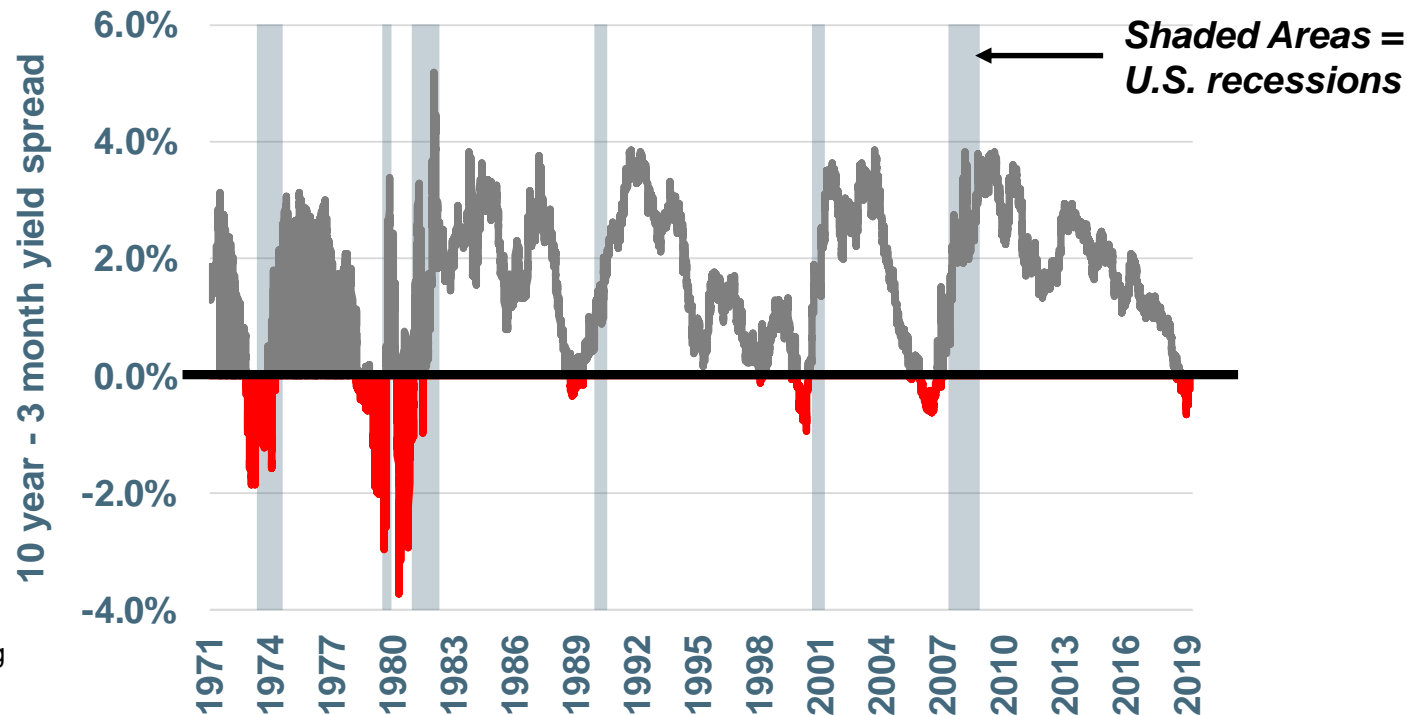


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Inverted curves have predated recessions

U.S. Yield Curve inversion and subsequent recessions



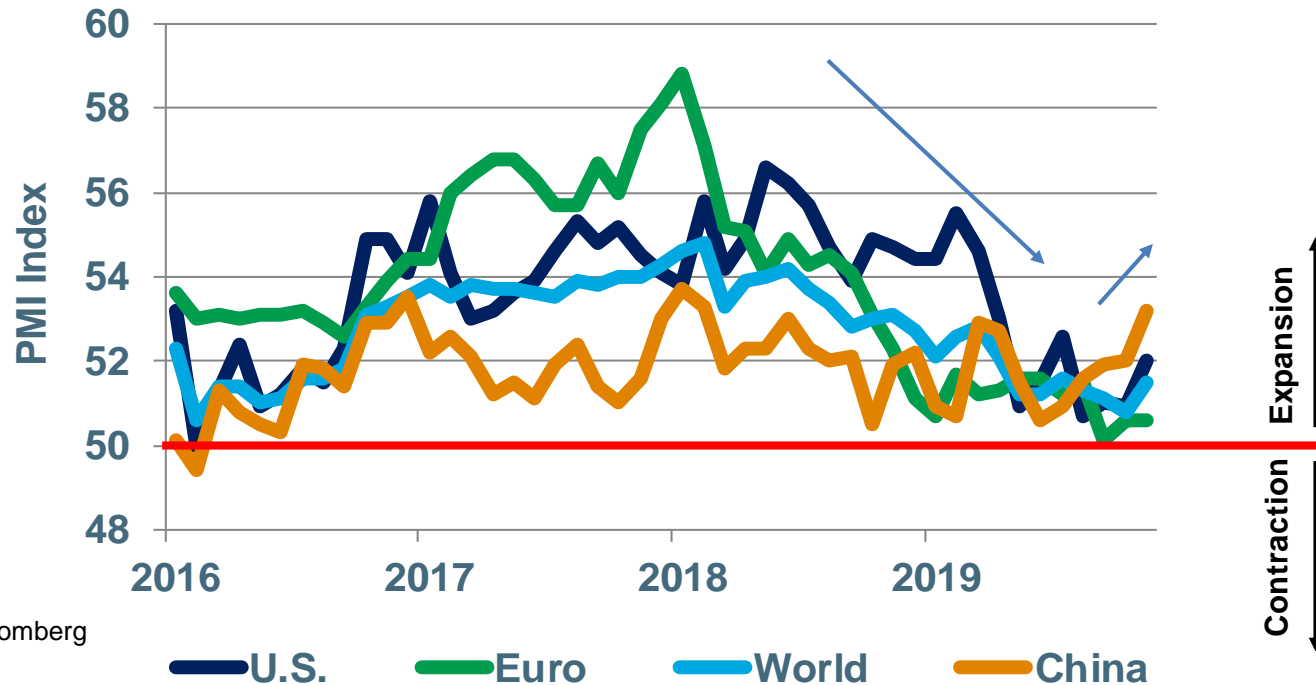
Source: Bloomberg

- » Since end of Bretton Woods, majority of time 10yr yield > 3m, implying a normal upward sloping yield curve (grey lines)
- » Inverted curve episodes (red line) have preceded each of the last 6 recessions



...but other indicators are less clear...manufacturing

Key market manufacturing indices have recently rebounded, expansion continues



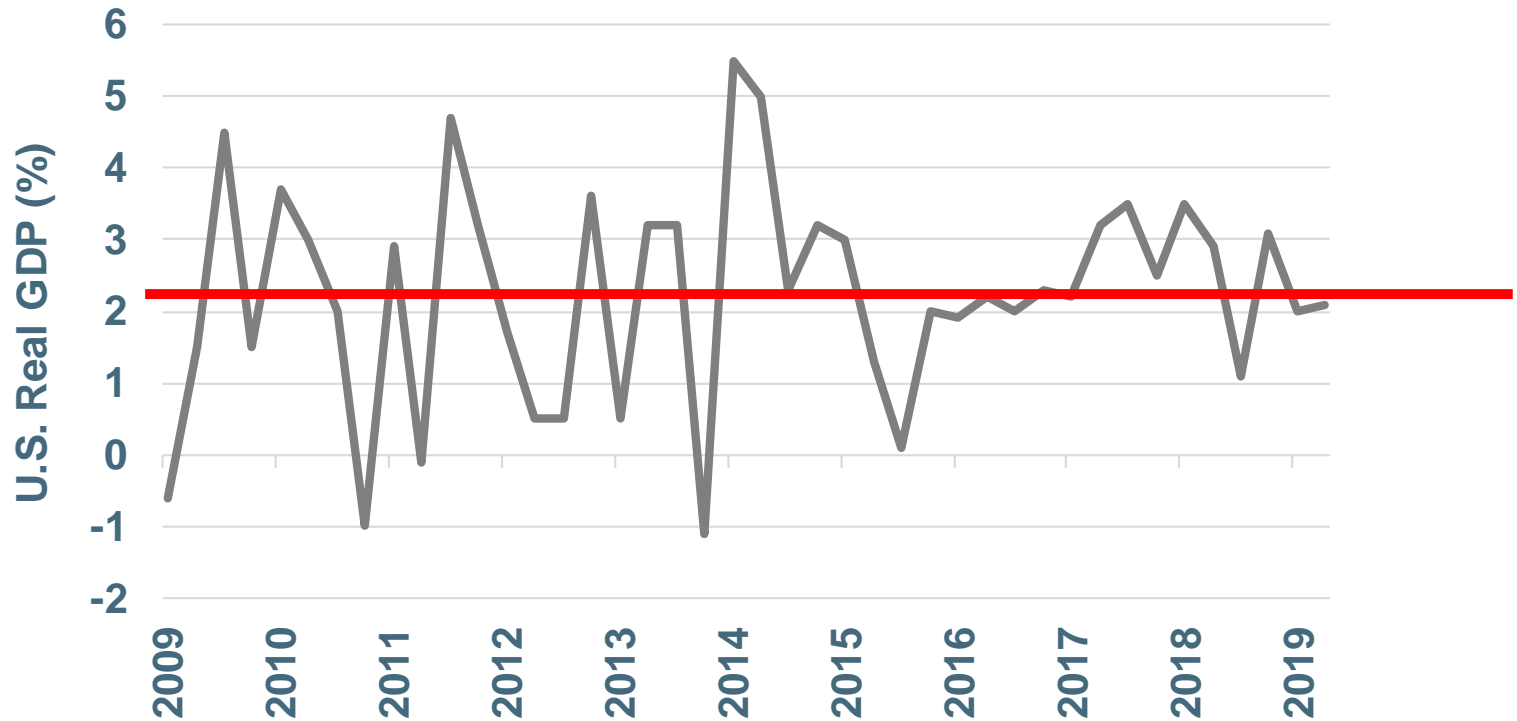
Source: Bloomberg

» While key market PMIs have trended downward since 2018, these remain in expansion territories



...but other indicators are less clear...economic growth

U.S. GDP down in Q2 2019 but still near post-recession average



Source: St. Louis Fed. Q-o-Q % change, seasonally adjusted annual rate (SAAR)

- » Slowing U.S. gross domestic product (GDP) growth has also gathered headlines in 2019
- » However, current levels are very near the post recession quarterly average (~2.3%) and slightly rebounded in Q3 2019



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...but other indicators are less clear...confidence

Divergence between U.S. Consumers and CEOs on Econ Outlook



Sources: Conference Board and Business Round Table

- » U.S. consumers are still optimistic and near-term expectations for labor and market conditions remain relatively high
- » However, CEOs are increasingly pessimistic on near-term outlook for hiring, capital investment and expectations for sales

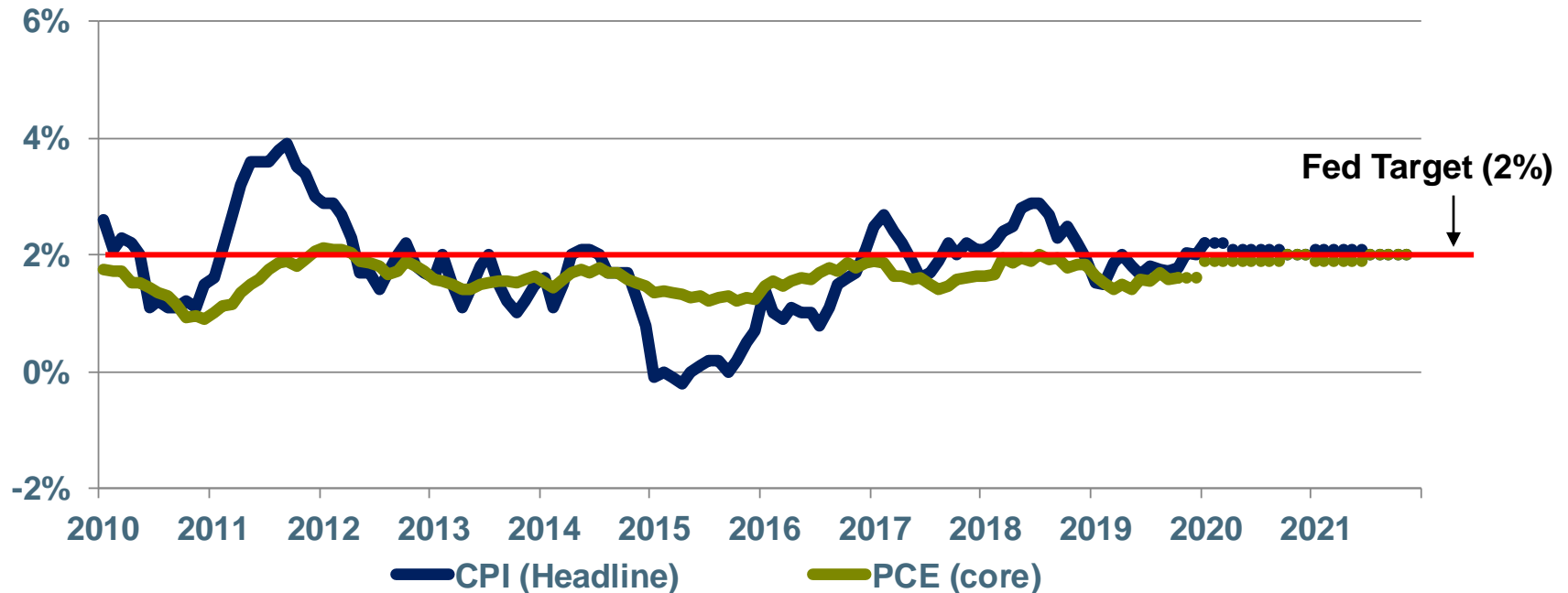


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...but other indicators are less clear...inflation

U.S. Inflation remains muted



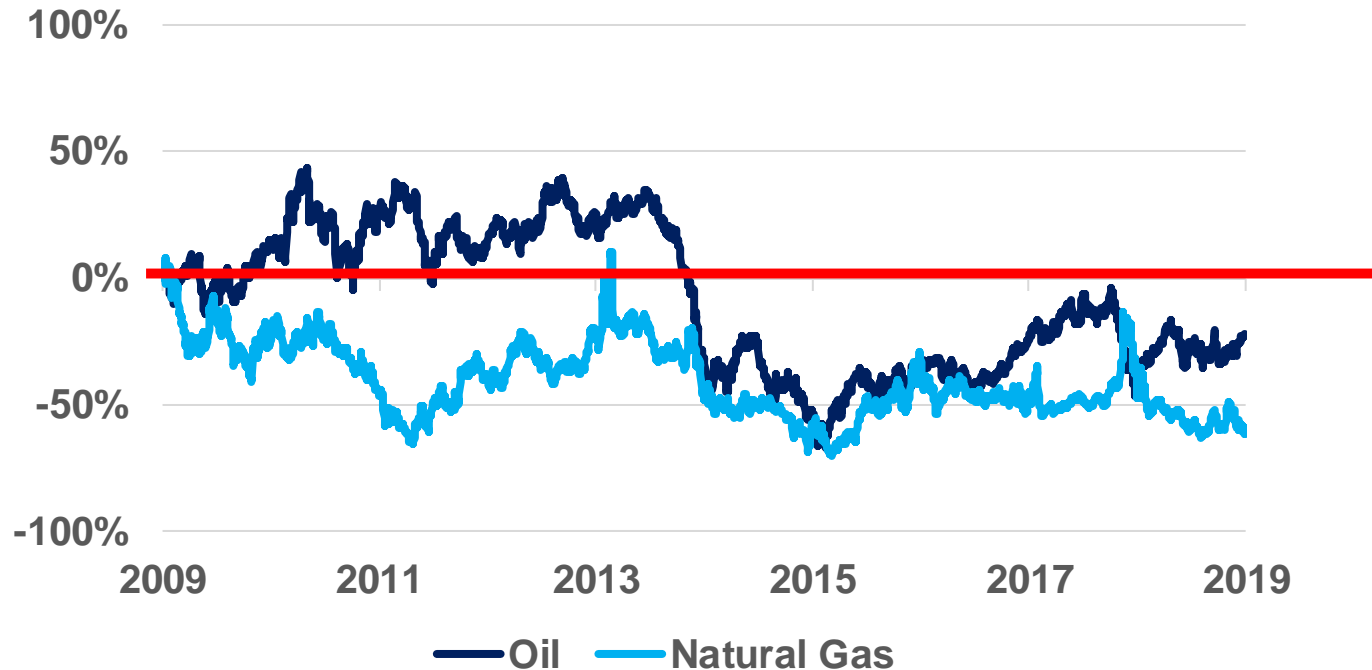
Sources: Bloomberg

- » Fed preferred measure, personal consumption expenditure (PCE) currently at ~1.6%...below Fed target of 2.0%
- » Core PCE has not sustained readings over 2% since height of Housing Bubble



Commodities have generally been deflationary

Oil and Natural Gas



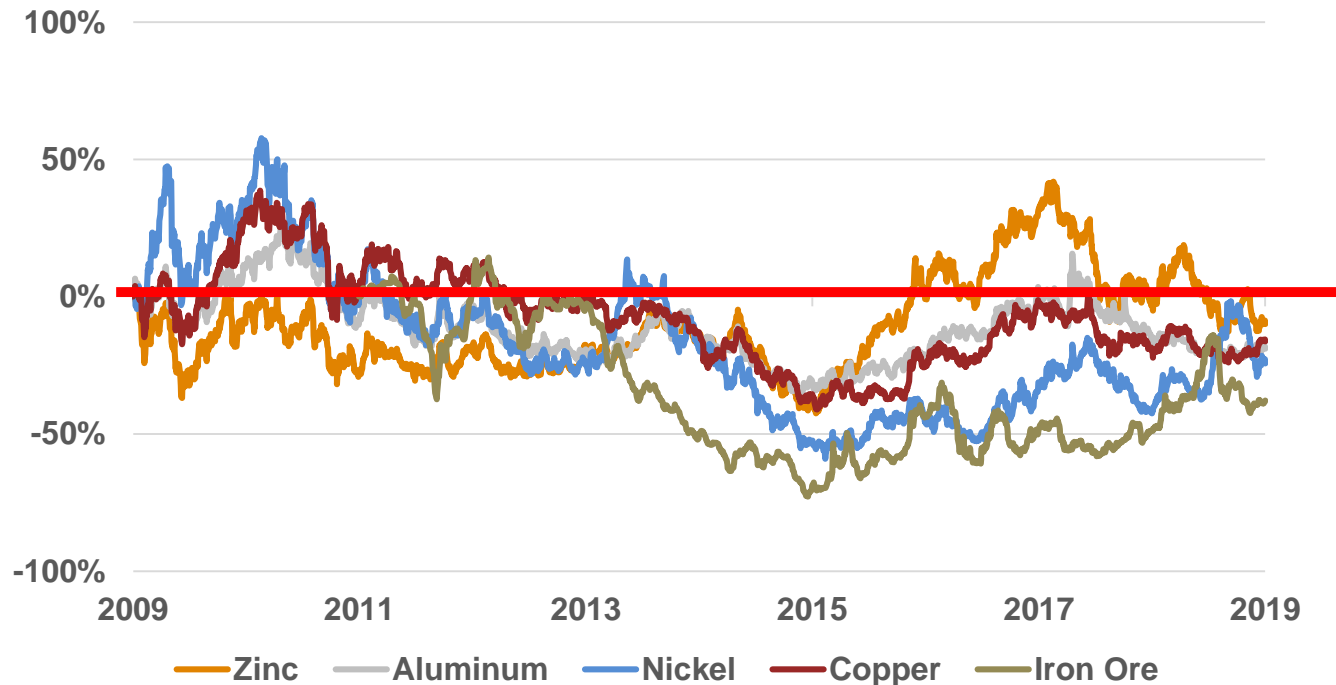
Sources: Bloomberg

- » WTI oil prices are 25% lower at the end of the decade compared to 2010
- » Natural gas prices are over 60% lower



Commodities have generally been deflationary

Base Metals and Iron Ore



Sources: Bloomberg

- » China comprises 40 to over 50% of global demand for most base metals and iron ore
- » Demand growth is moderating as the Chinese economy transitions to more consumption vs. investment¹⁸

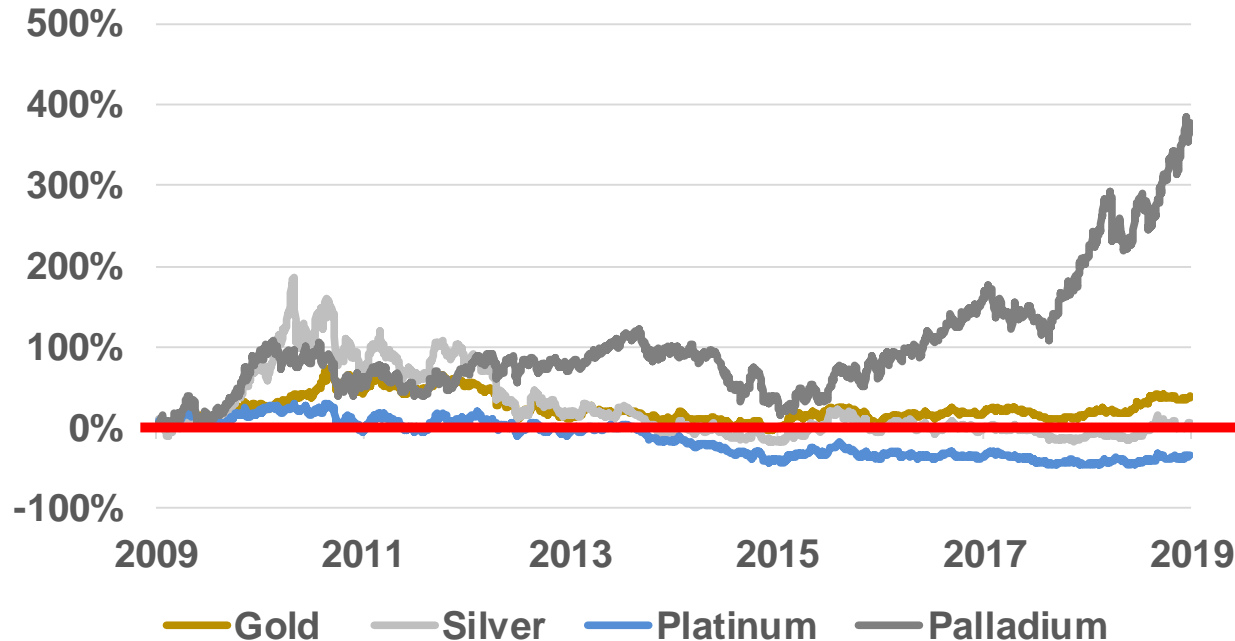


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Commodities have generally been deflationary

Precious Metals



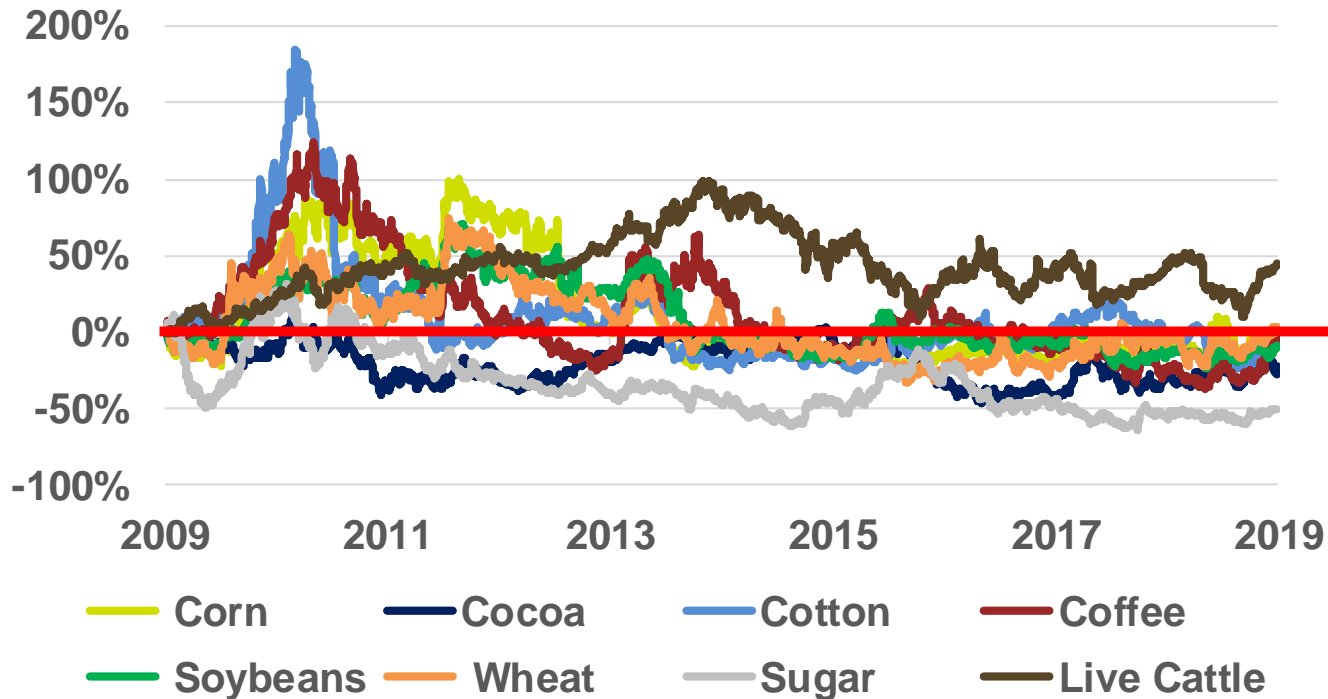
Sources: Bloomberg

- » Gold prices ~35% higher at end of decade compared to the beginning
- » Palladium prices have risen because mine supply is not keeping up with demand (2019 was 8th year of supply deficit)



Commodities have generally been deflationary

Agricultural



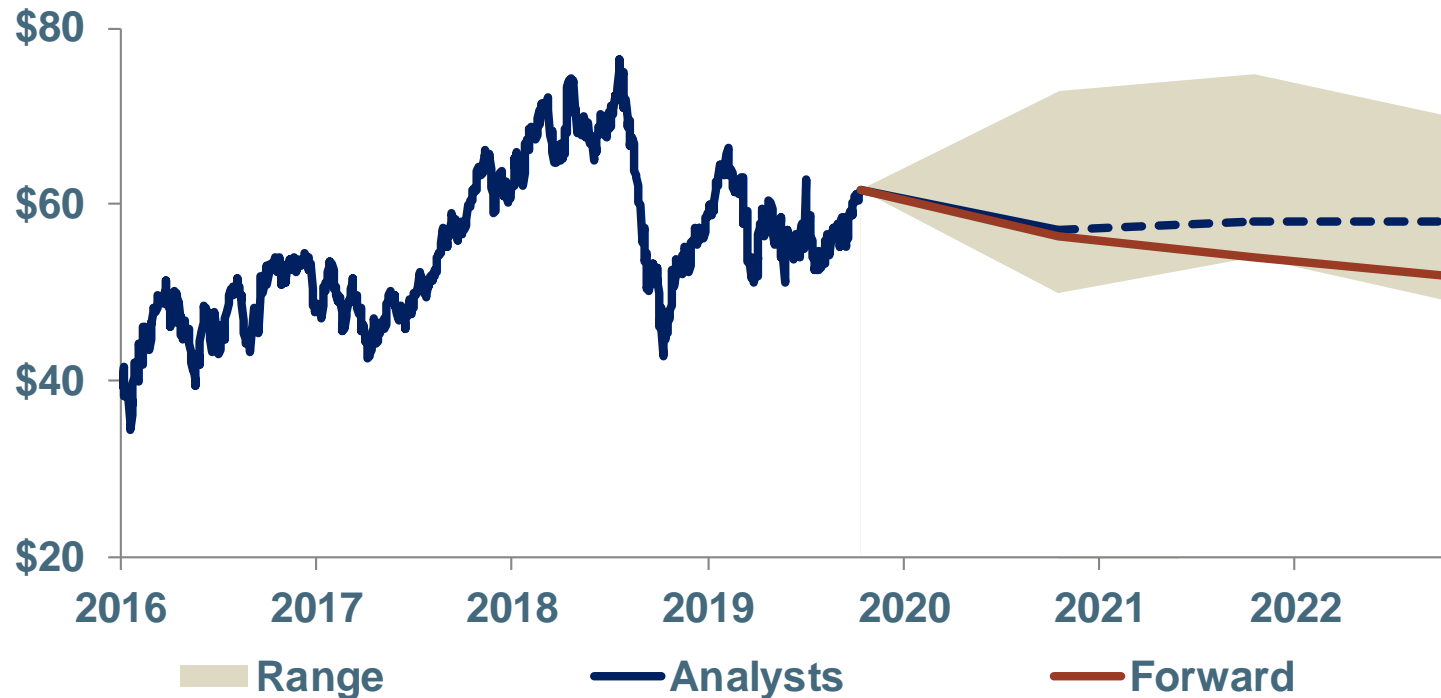
Sources: Bloomberg

» With exception of cattle, prices for agricultural commodities generally declined over the decade



WTI prices expect to be in the ~\$58/bbl by Q4 2020

Oil prices and expectations



Sources: Bloomberg

- » Analysts consensus currently anticipates WTI prices to average ~\$57/bbl in 2020 and ~\$58/bbl through 2022
 - » JPM expects prices to average ~\$55/bbl in 2020
 - » Goldman Sachs expects prices to average ~\$58/bbl in 2020

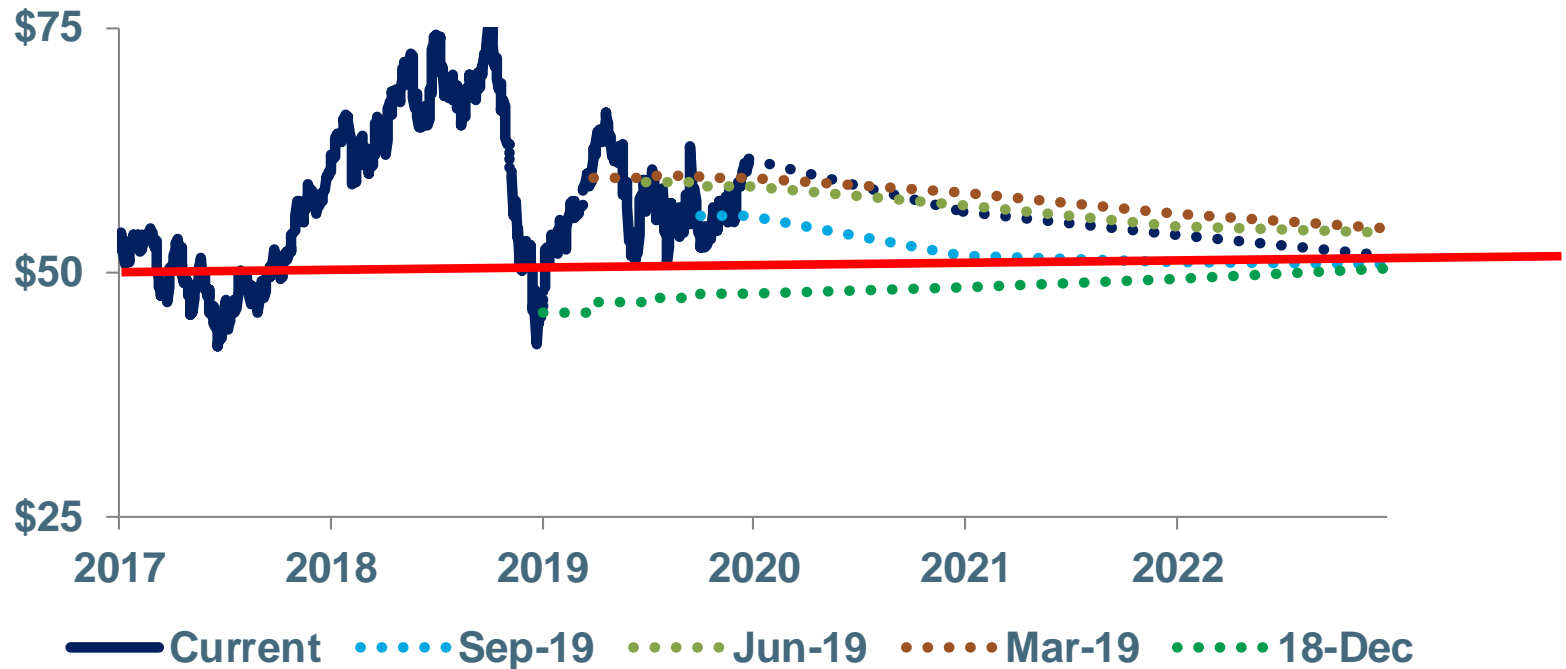


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Forward prices migrating in the \$50 - \$55/bbl range

WTI Forward Price Curves



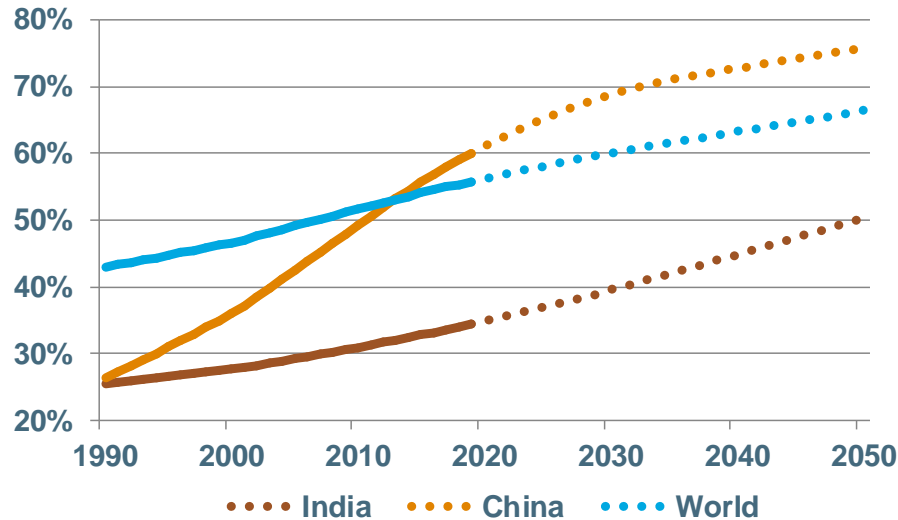
Sources: Bloomberg

- » Over last 12 months, forward prices have moved from contango to backwardation
- » Regardless, forward market anticipate prices in the \$50 - \$55/bbl range in 2022



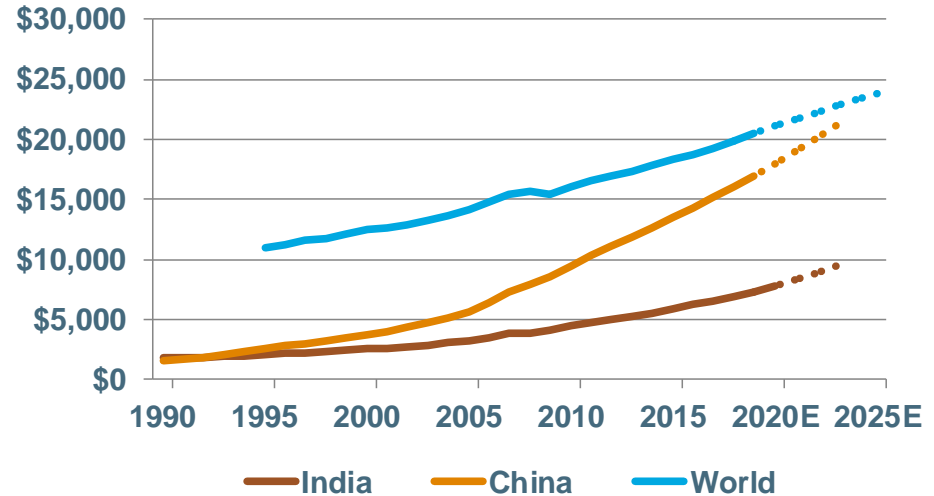
Food for thought: urbanization & personal wealth

Urbanization expected to progress



Source: UN projections

Per capita wealth also trending upward



Source: IMF World Economic Outlook

- » Current urbanization in China slightly under 60%
 - » Expected to climb toward OECD average of ~80% by mid-century
 - » Urbanization in India currently ~30%, to climb over 50% next 30 years
- » Per capita wealth trending up in India and China and Globally
 - » Per capita income in the U.S. = ~\$60K; China = ~\$17K, India = ~\$7K

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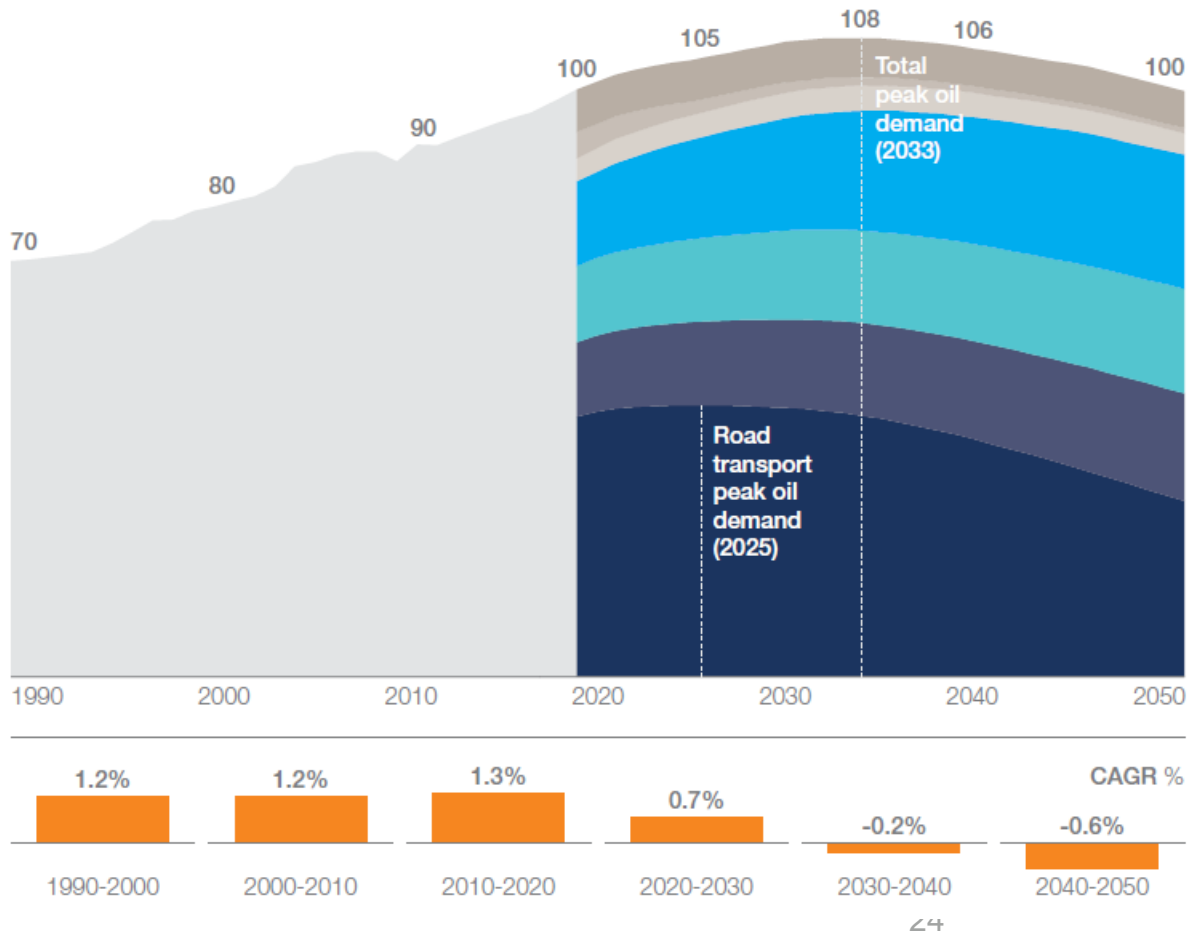
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Food for thought: oil demand in 2050 = ~2020 levels

Global oil demand to peak ~108Mbpd in early 2030s

Global oil demand by sector

MMb/d Buildings Power Other Chemicals Other industry Other transport Road transport



Source: McKinsey Energy Insights, Global Energy Perspectives, Jan. 2020

- » Global demand has grown at >1% annually over last 3 years
 - » 0.7%/year over coming decade
- » Increased adoption of EVs (demand for transportation to peak in 2025)
- » 2050 demand expected to be ~100Mbpd



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Food for thought: some conclusions

1. U.S. dollar to remain relatively strong
2. Low likelihood of a recession in the U.S. in 2020
 - » Post WWII, 9 of 11 recessions resulted from aggressive tightening by Fed in response to rising wage/price inflation
 - » Fed to have a neutral stance, inflation remains muted
 - » Excessive valuations (late 1990s) or real estate imbalances (2000s)
 - » S&P 500 PE ratio has trended higher (~24) but well below late 1990s (>35)
 - » Oil price shocks (Arab embargo 1973; Iran/Iraq war 1980)
 - » U.S. net oil imports -389kbpd (vs. ~13.5mbpd in 2006)
3. Cautious optimism with investors to persist
4. Long-term demand for commodities supported by urbanization and increasing wealth trends



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J.P. Morgan Center for Commodities



Mining: Wide array and significant amounts of gold, coal, gypsum, limestone, silver, molybdenum, soda ash and sodium bicarbonate and aggregates (e.g., sand, gravel, crushed stone).

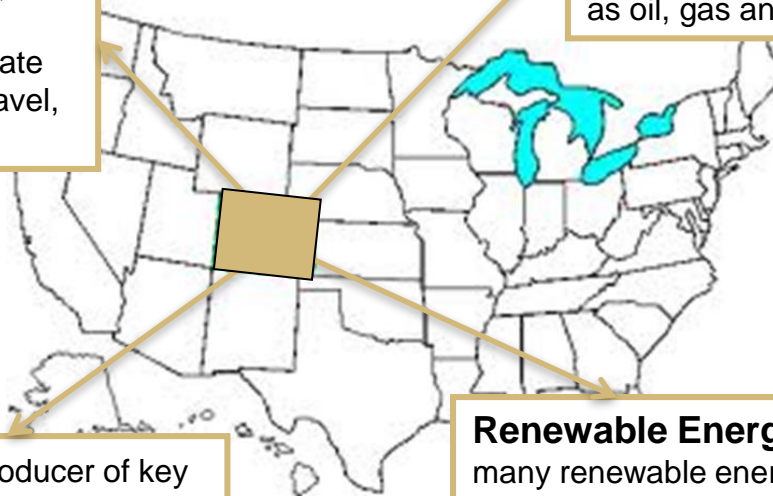


Energy: Rich in natural traditional resources, such as oil, gas and coal.



Agriculture: Large producer of key agricultural products, including cattle, sheep, hogs, poultry, millet, dairy, eggs, hay, corn for grain and produce.

Considered the “epicenter” of the organics product industry.



Balanced
Energy
Economy



Renewable Energy: Leader in many renewable energy sources, including wind, solar, biomass and thermal.

One of the nation’s strongest high-tech bases complemented by the presence of NREL.



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The University of Colorado Denver

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- » Over 14,000 students in 8 schools and colleges.
- » Major contributor to the state's economy: \$700 million annually in direct impact.
- » Diversity: 57% new freshman are students of color
- » CU Denver awards more master's degrees than any other Colorado public institution.
- » Over 107,000 alumni with 76% remaining in Colorado.
- » Sponsored research awards top \$20 million



Contacts

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