

# Macroeconomic Risks and Agricultural Goods Markets

July/August 2022

Erik Norland

Senior Economist

# Investment Advice is Neither Given Nor Intended

**The research views expressed herein are those of the author and do not necessarily represent the views of CME Group or its affiliates.**

**All examples in this presentation are hypothetical interpretations of situations and are used for explanation purposes only.**

**This report and the information herein should not be considered investment advice or the results of actual market experience.**

# Disclaimer (Page One of Two)

Helping the World Advance: CME Group is comprised of four designated contract markets (DCMs), the Chicago Mercantile Exchange Inc ("CME"), the Chicago Board of Trade, Inc. ("CBOT"), the New York Mercantile Exchange, Inc. ("NYMEX"), and the Commodity Exchange, Inc. ("COMEX"). The Clearing Division of CME is a derivatives clearing organization ("DCO") for CME Group's DCMs.

This material/presentation provides an overview of and general information on the products and services that CME offers worldwide. Some of the products or services may not be offered or may be locally modified/adjusted for Japanese customers. The material/presentation is not intended for marketing or soliciting Japanese customers to trade or use any specific CME products or services.

Exchange traded derivatives and cleared over-the-counter ("OTC") derivatives are not suitable for all investors and involve the risk of loss. Exchange traded and OTC derivatives are leveraged instruments and because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money initially deposited. This communication does not (within the meaning of any applicable legislation) constitute a Prospectus or a public offering of securities; nor is it a recommendation to buy, sell or retain any specific investment or service.

The content in this communication has been compiled by CME Group for general purposes only and is not intended to provide, and should not be construed as advice. Although every attempt has been made to ensure the accuracy of the information within this communication as of the date of publication, CME Group assumes no responsibility for any errors or omissions and will not update it. Additionally, all examples and information in this communication are used for explanation purposes only and should not be considered investment advice or the results of actual market experience. Any information denoting past or historical performance is not indicative of future performance and no reliance shall be placed on such information. All matters pertaining to rules and specifications herein are made subject to and superseded by official CME, CBOT, NYMEX and COMEX rulebooks. Current rules should be consulted in all cases including matters relevant to contract specifications. CME Group does not represent that any material or information contained in this website is appropriate for use or permitted in any jurisdiction or country where such use or distribution would be contrary to any applicable law or regulation.

In Australia, each of Chicago Mercantile Exchange Inc. (ARBN 103 432 391), The Board of Trade of the City of Chicago Inc (ARBN 110 594 459), the New York Mercantile Exchange Inc (ARBN 113 929 436) and Commodity Exchange, Inc. (ARBN 622 016 193) is a registered foreign company in Australia and holds an Australian market licence.

In Hong Kong, CME Group is authorised by the Hong Kong Securities and Futures Commission (the "SFC") to provide Automated Trading Services ("ATS") to Hong Kong investors via its GLOBEX system, and its CME Clearing System under Part III of the Securities and Futures Ordinance (the "SFO").

In Japan, CME Inc. has a Foreign Clearing Organisation (FCO) license under the Financial Instruments and Exchange Act of Japan.

In Singapore, CME Inc., CBOT, NYMEX and COMEX are regulated as a recognized market operator and CME Inc. is regulated as a recognized clearing house under the Securities and Futures Act (Chapter 289) ("SFA"). Save as aforesaid, none of the CME Group entities are licensed to carry on regulated activities under the SFA or to provide financial advisory services under the Financial Advisers Act (Chapter 110) in Singapore.

# Disclaimer (Page Two of Two)

None of CME Group entities are registered or licensed to provide, nor does it purport to provide, financial services of any kind in some jurisdictions, including, but not limited to, India, Korea, Malaysia, New Zealand, People's Republic of China, Philippines, Taiwan, Thailand, and Vietnam and in any jurisdiction where CME Group is not authorized to do business or where such distribution would be contrary to the local laws and regulations.

In Hong Kong, this communication is intended to be distributed to professional investors only, as defined under the Securities and Futures Ordinance. The contents of this communication have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the information contained herein. If you are in any doubt about any of the contents of this communication, you should obtain independent professional advice. CME is not licensed to carry on business in dealing or advising on futures contracts under the Securities and Futures Ordinance in Hong Kong.

In Japan, this communication is for distribution solely to certain qualified sophisticated investors as defined in the Commodities Futures Act of Japan (Law No. 239 of 1950, as amended) and the related rules, as appropriate; other than that, the information contained in this communication is not directed at any person in Japan.

In the Republic of Korea, this communication is for distribution solely to "professional investors" (as defined in Article 9(5) of the Financial Investment Services and Capital Markets Act and related rules) in response to a request from such professional investors or through a licensed investment broker.

In Singapore, this communication and its contents have not been reviewed or approved by any regulatory authority in Singapore. The information within this communication has been compiled by CME Group for general purposes only and is not intended to provide, and should not be construed as, advice. It does not take into account your objectives, financial situation or needs, you should obtain appropriate professional advice before acting on or relying on the information set out in this communication. The information within this communication should not be considered as an offer, invitation or solicitation to buy or sell any futures, options contracts or any other financial products or services. CME Group assumes no responsibility for any errors or omissions. Additionally, all examples in this communication are hypothetical situations, used for explanation purposes only, and should not be considered investment advice or the results of actual market experience. This communication is for distribution in Singapore solely to persons holding a capital markets services licence for trading in futures contracts or exempt from such requirements.

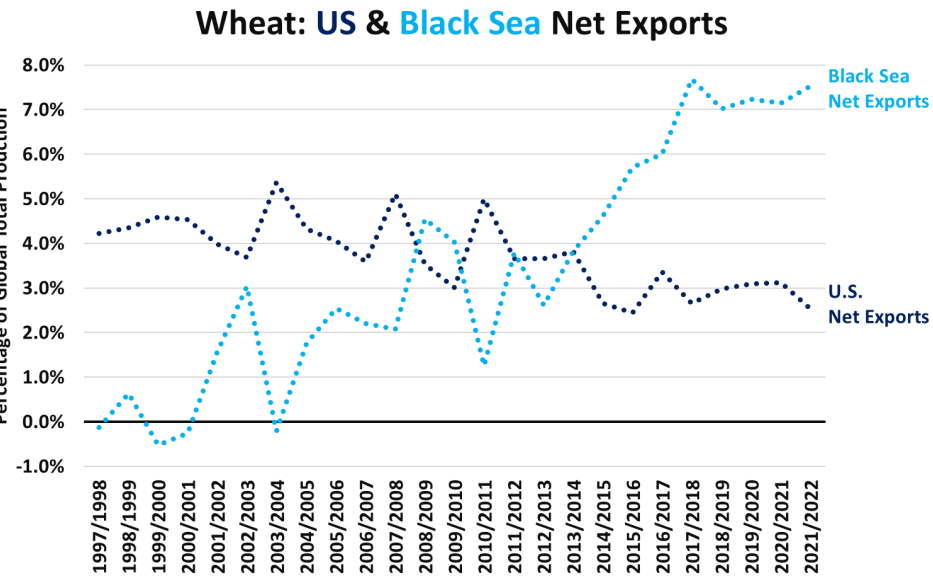
In these jurisdictions, this communication has not been reviewed or approved by any regulatory authority and access shall be at the liability of the user. Any trades undertaken in the aforesaid jurisdictions will be at the sole risk of the relevant investor and should always be made in compliance with the local laws and regulations applicable in such jurisdictions.

CME Group, the Globe Logo, CME, Globex, E-Mini, CME Direct, CME DataMine and Chicago Mercantile Exchange are trademarks of Chicago Mercantile Exchange Inc. CBOT and the Chicago Board of Trade are trademarks of the Board of Trade of the City of Chicago, Inc. NYMEX and ClearPort are trademarks of New York Mercantile Exchange, Inc. COMEX is a trademark of Commodity Exchange, Inc.

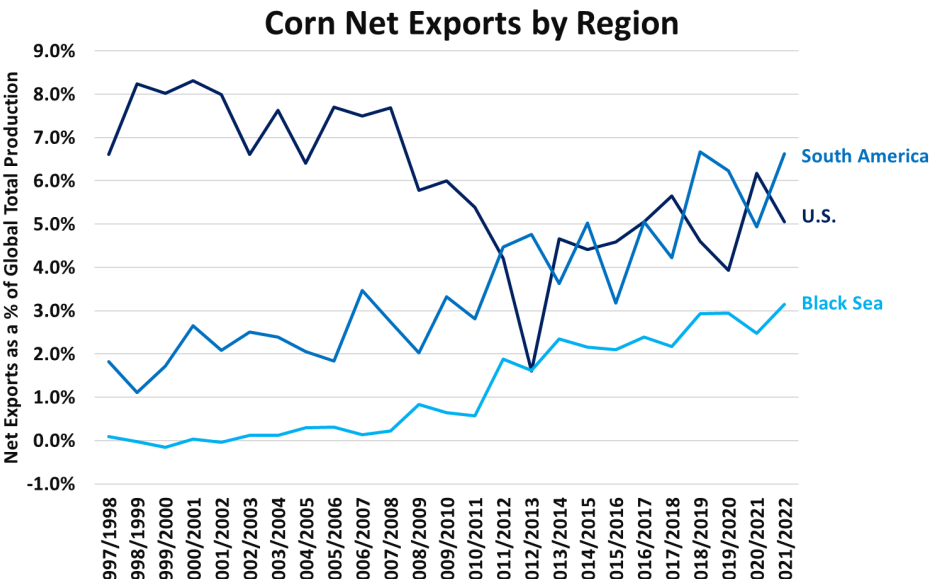
Copyright © 2022 CME Group Inc. All rights reserved.

Mailing Address: 20 South Wacker Drive, Chicago, Illinois 60606

# Russo-Ukrainian War Echoes Across Markets



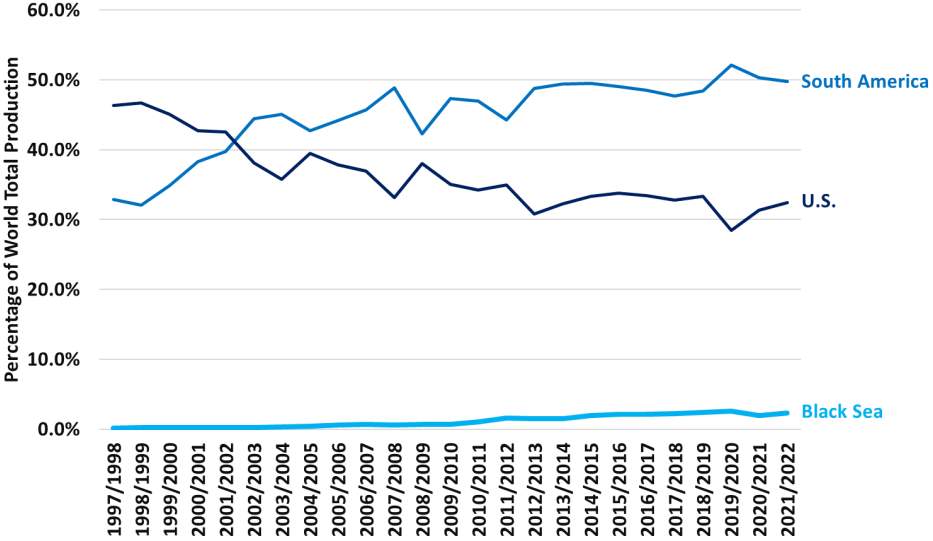
Source: WASDE Wheat Balance Sheet



Source: WASDE Wheat Balance Sheet

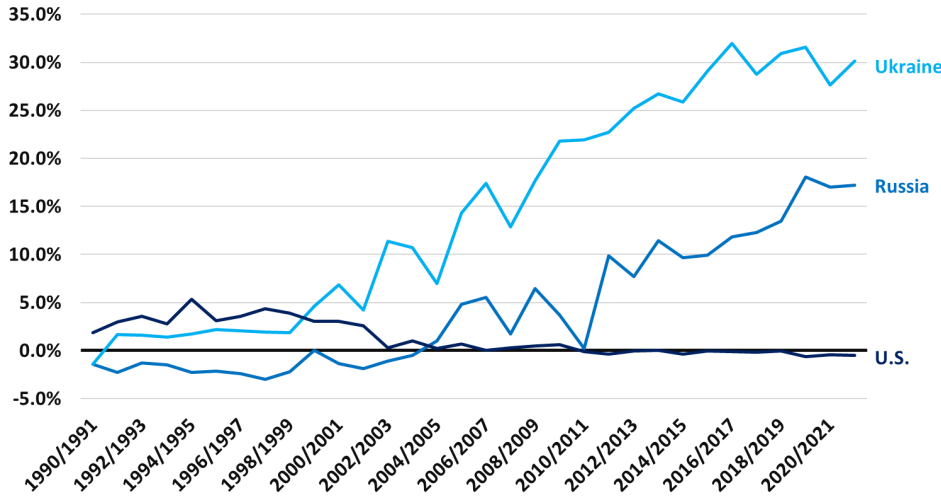
# Russo-Ukrainian War Echoes Across Markets

Soybean Production by Region



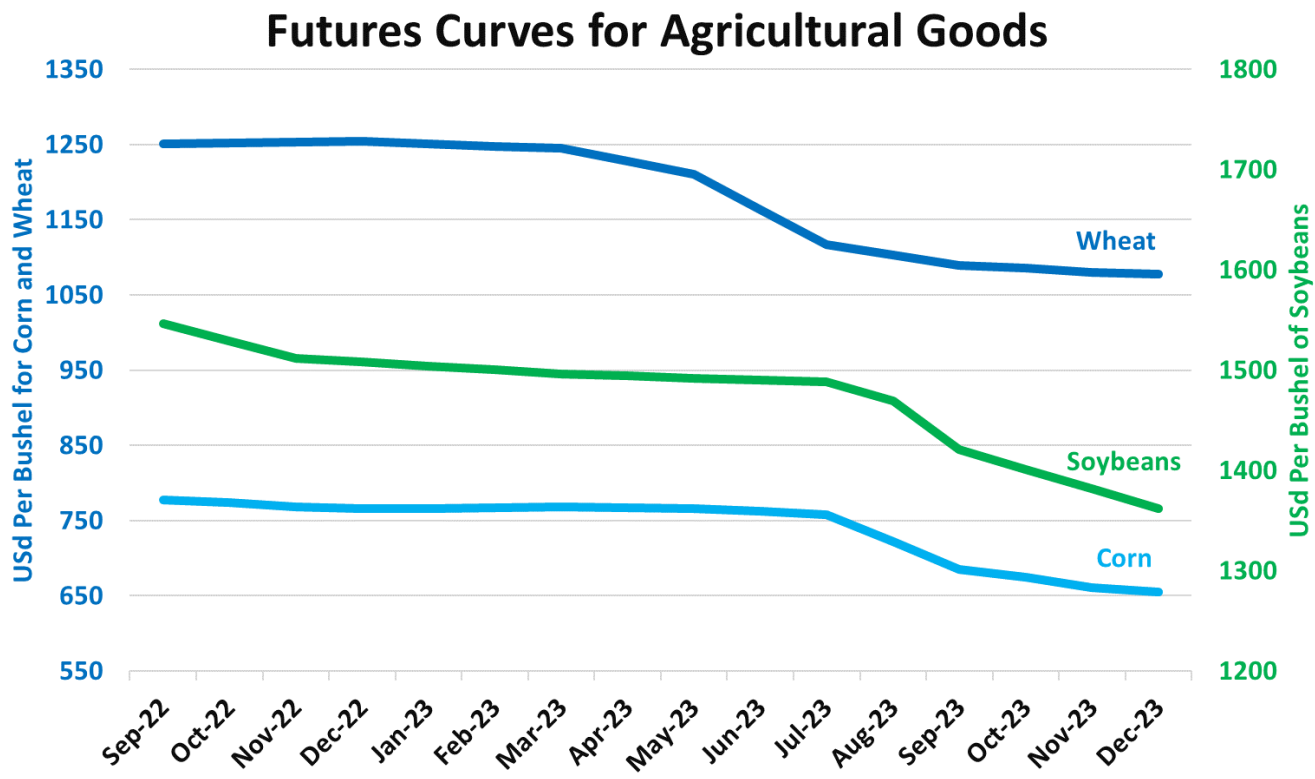
Source: WASDE Oilseeds, Soybean Balance Sheet

Sunflower Oil Net Exports as a % of Total Global Production



Source: WASDE Sunflower Oil Balance Sheet

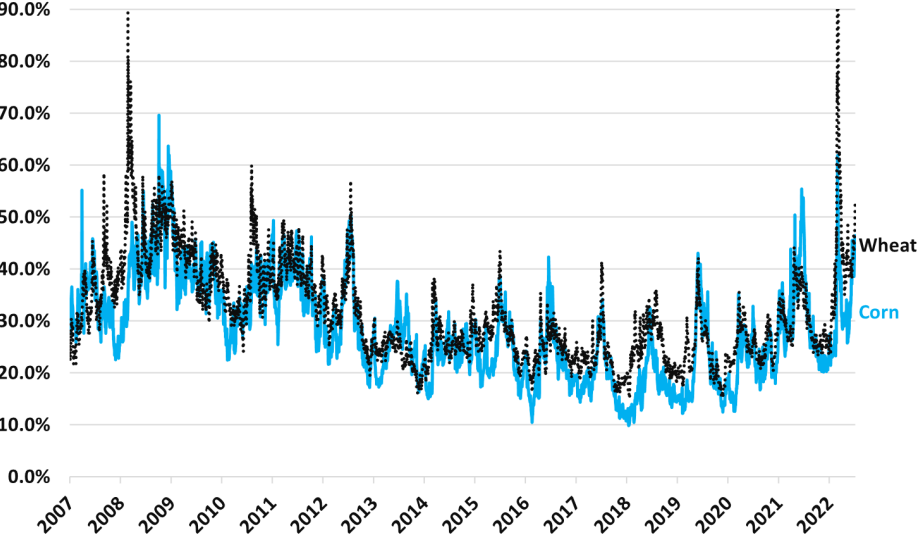
# Agricultural Goods Futures a Central Scenario of Lower Prices.



Source: Bloomberg Professional (C H2 ... C Z3, W H2 ... W Z3, S H2 ... S X3)

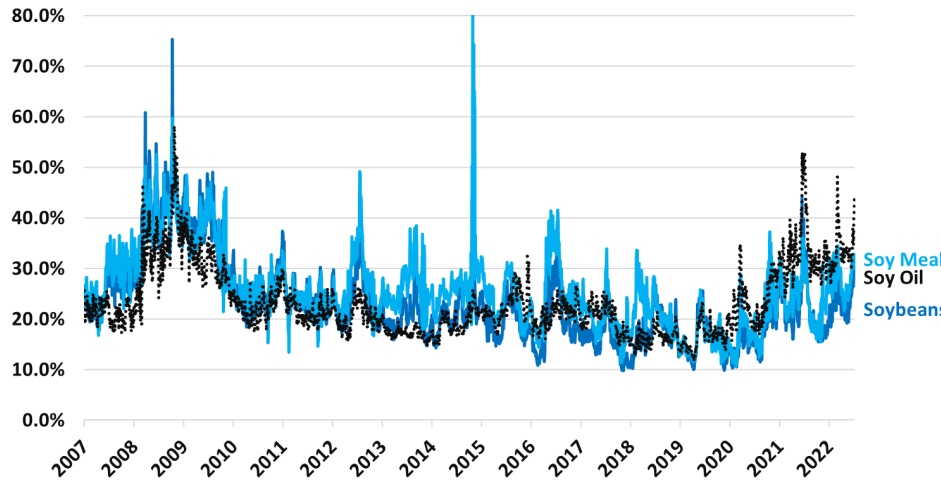
# Surrounding the Central Scenario of Lower Prices Traders Price a Great Deal of Upside and Downside Risk

Corn and Wheat 30D ATM Implied Volatility



Source: QuikStrike (OZC\_30 ATM and OZW\_30 ATM)

Soybeans, Soy Oil and Soy Meal Implied Volatility 30 Day ATM Options

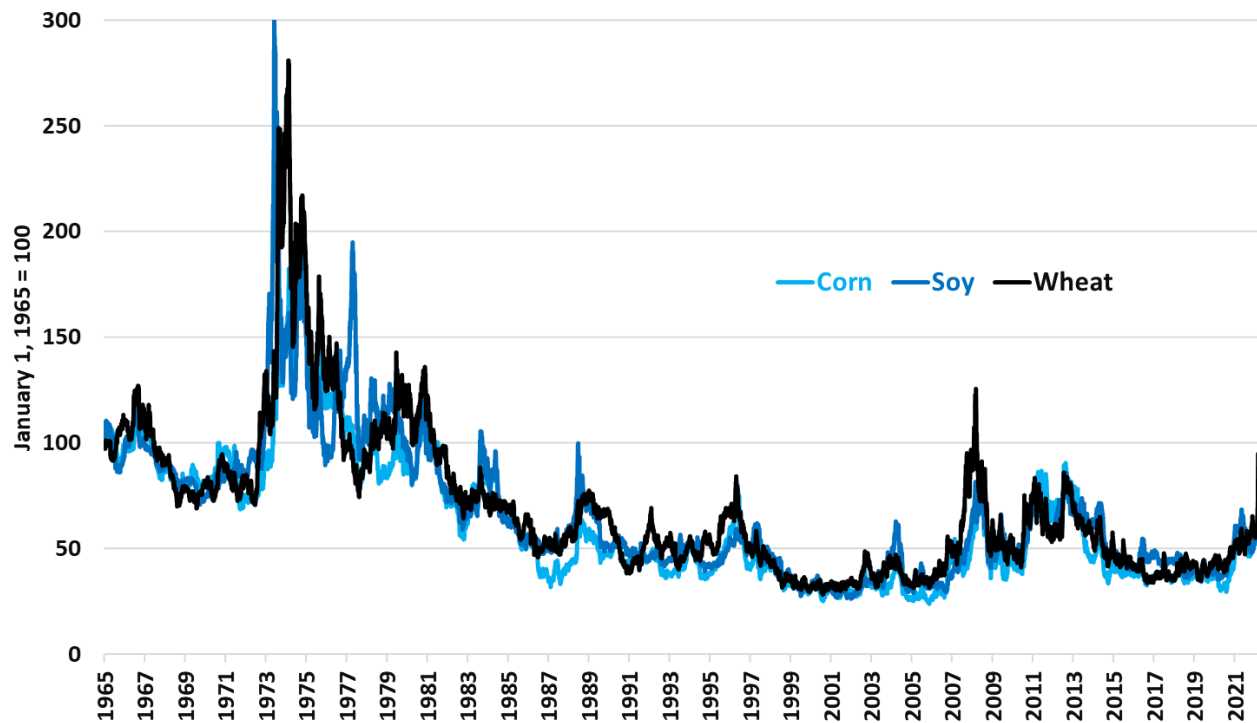


Source: Quikstrike: — Soybeans OZS\_30 — Soymeal OZM\_30 ..... Soybean Oil OZL\_30



# Is Inflation Good for Agricultural Goods Prices?

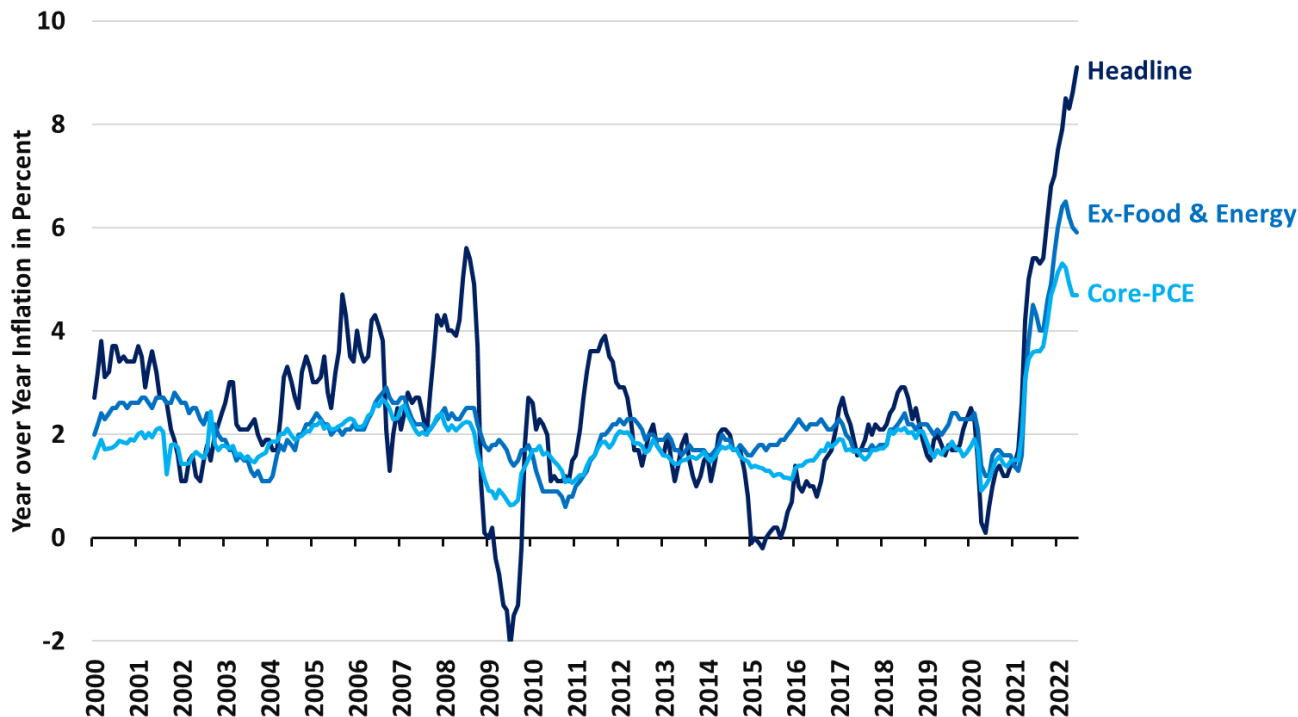
## Inflation Adjusted Agricultural Spot Prices



Source: Bloomberg Professional ([C 1](#), [S 1](#), W1 and CPI INDX)

# Inflation: Why Is It Happening and Will It Subside?

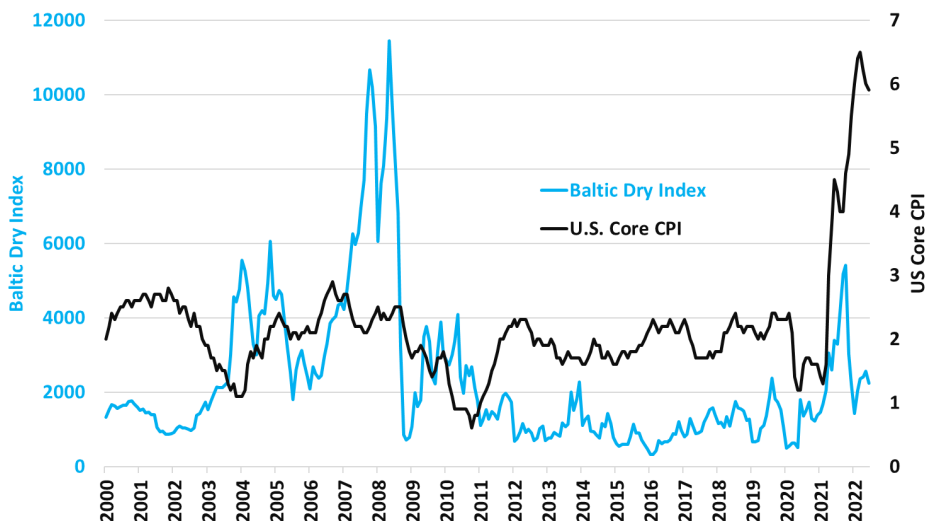
## U.S. CPI: Headline, Ex-Food & Energy & Core PCE



Source: Bloomberg Professional (CPI YOY, CPI XYOY and PCE CYOY)

# Inflation Is Often Blamed on Supply Chain Challenges But Supply Chain Breakdown May Be a Symptom and Not the Real Cause.

## Baltic Dry Index and U.S. Core CPI



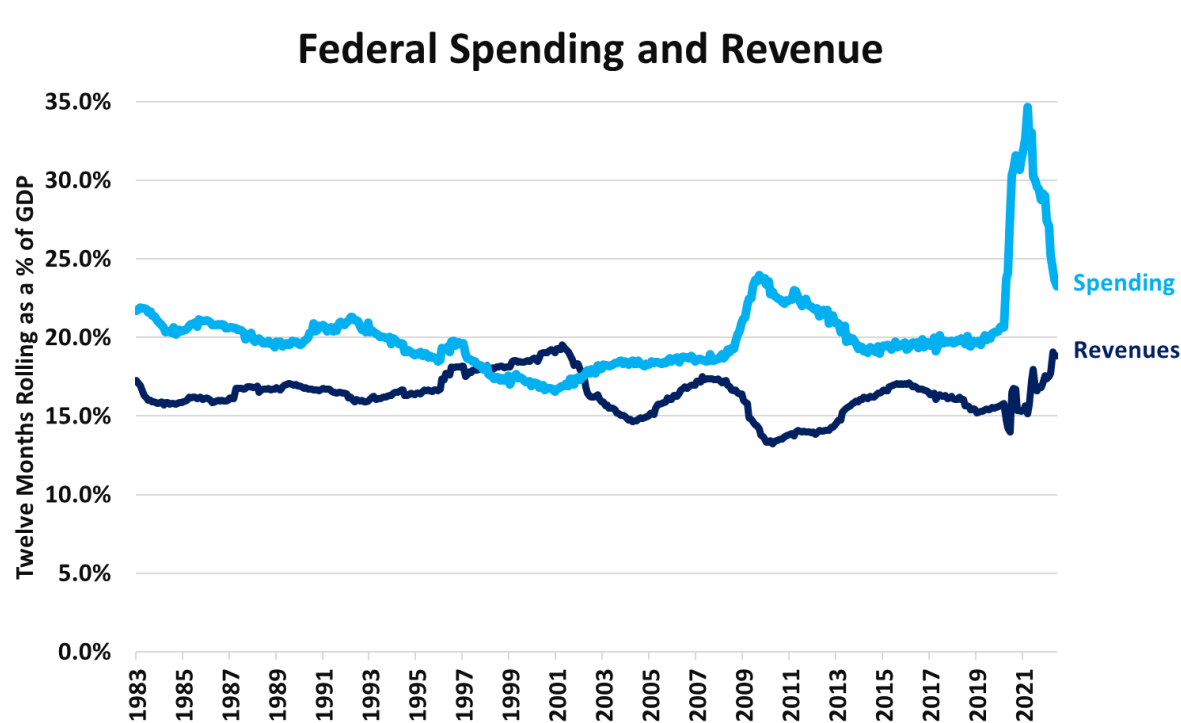
Source: Bloomberg Professional (BDI and CPI XYOY)

## Shipping Costs Between China and the U.S.



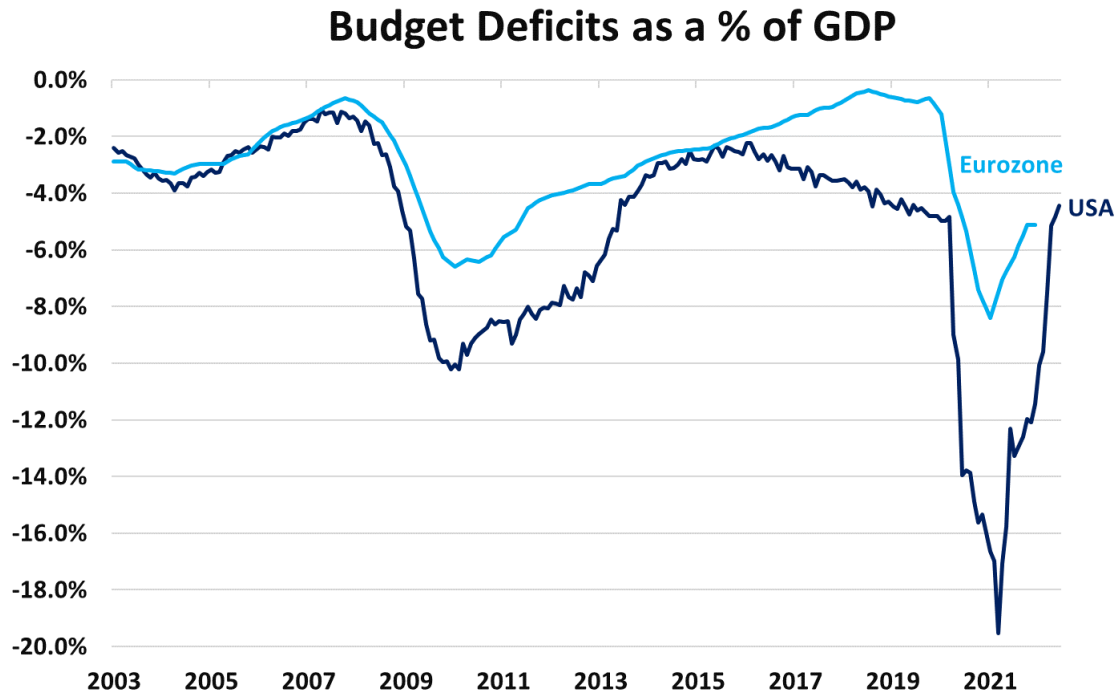
Source: Bloomberg Professional (WCIDLASH and WDCISHLA)

# Pandemic: Government Spending Rose from 21% to 35% of GDP But It Peaked In March 2021 and Has Fallen to 23% of GDP.



Source: Bloomberg Professional (FFSTCORP, FFSTIND, FFSTEMPL, FFSTEXC, FFSTEST, FFSTCUST, FFSTOTHR, GDP CUR\$, FDSSD), CME Group Economic Research Calculations

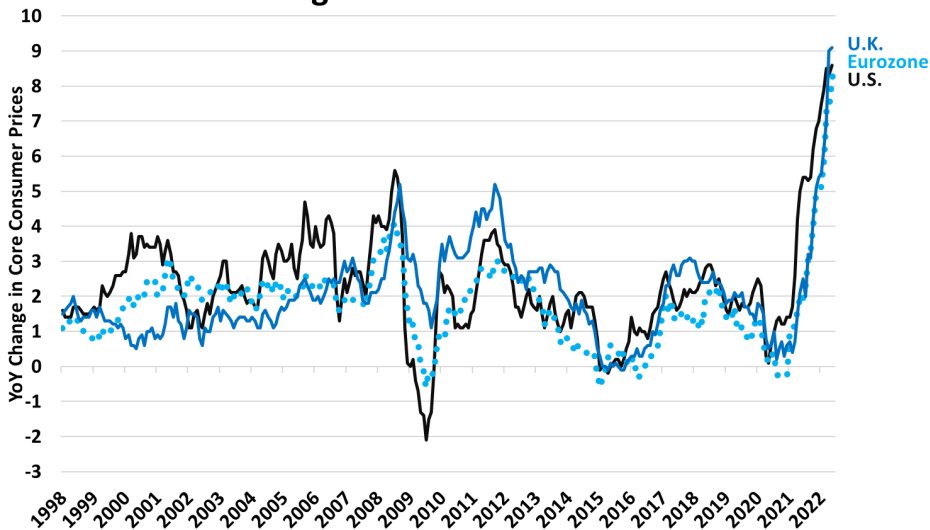
# Budget Deficits in the U.S. Grew Much Larger Than in Europe Hitting Nearly 20% of GDP By March 2021. Its Now Down to 4.4%.



Source: Bloomberg Professional (EHBBEU, EHBBD, EUGDPE, ECOXEAS, FDDSSD, GDP CUR\$),  
CME Group Economic Research Calculations

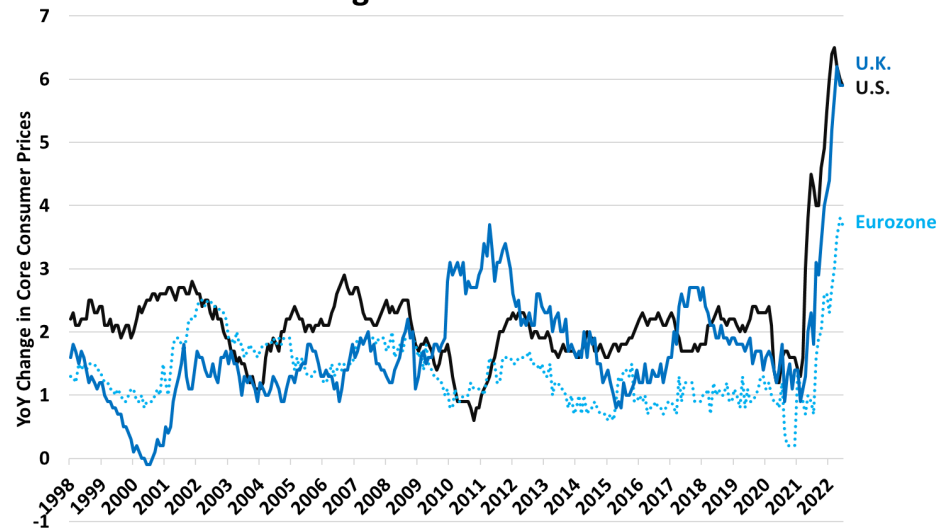
# Europe's Headline Inflation Rates Are Just As Bad as the U.S. But Core Inflation Is Much Lower in the Eurozone. In Short, the U.S. Is Having More of a Demand Shock, Europe More of a Supply Shock.

## YoY Change in Headline Consumer Prices



Source: Bloomberg Professional (CPI XYOY, [UKHCA91Q](#) and [CPXEMUY](#))

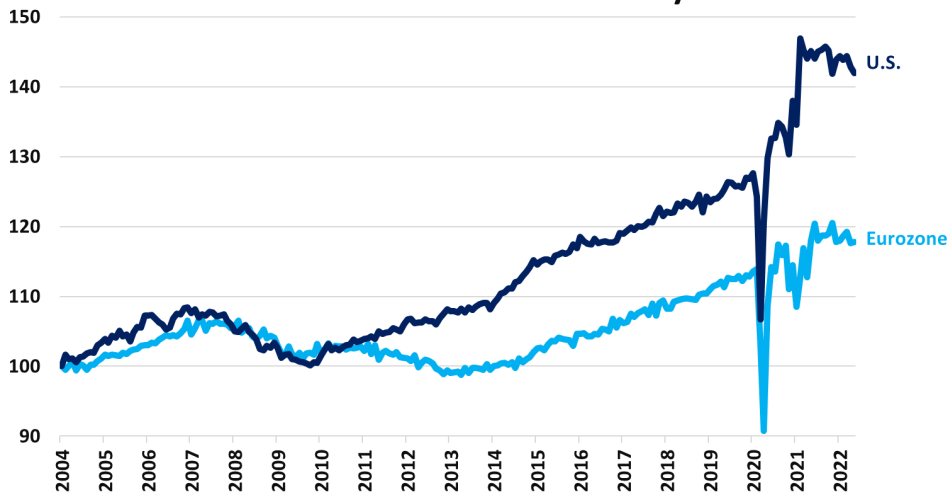
## YoY Change in Core Consumer Prices



Source: Bloomberg Professional (CPI XYOY, [UKHCA91Q](#) and [CPXEMUY](#))

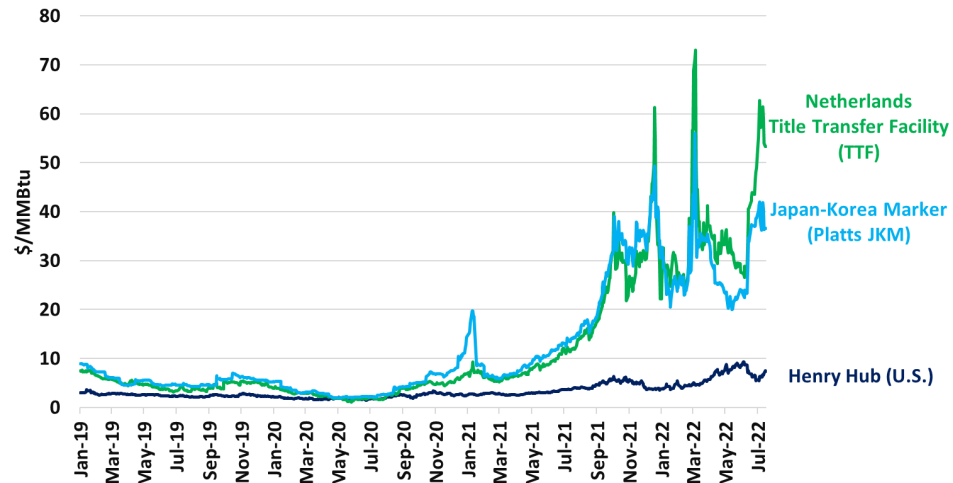
# Explosive Growth in U.S. Budget Deficits Fuelled Outsized Growth in U.S. Consumer Spending. Meanwhile, Europe Has Been Hit by an Natural Gas-Related Energy Shock That Isn't Happening As Much in the U.S.

U.S. Inflation Adjusted Retail Sales ex-Autos and Gas versus Eurozone Retail Sales by Volume



Bloomberg Professional (RSTAXXG, CPI INDX and [RSSAEMU](#))

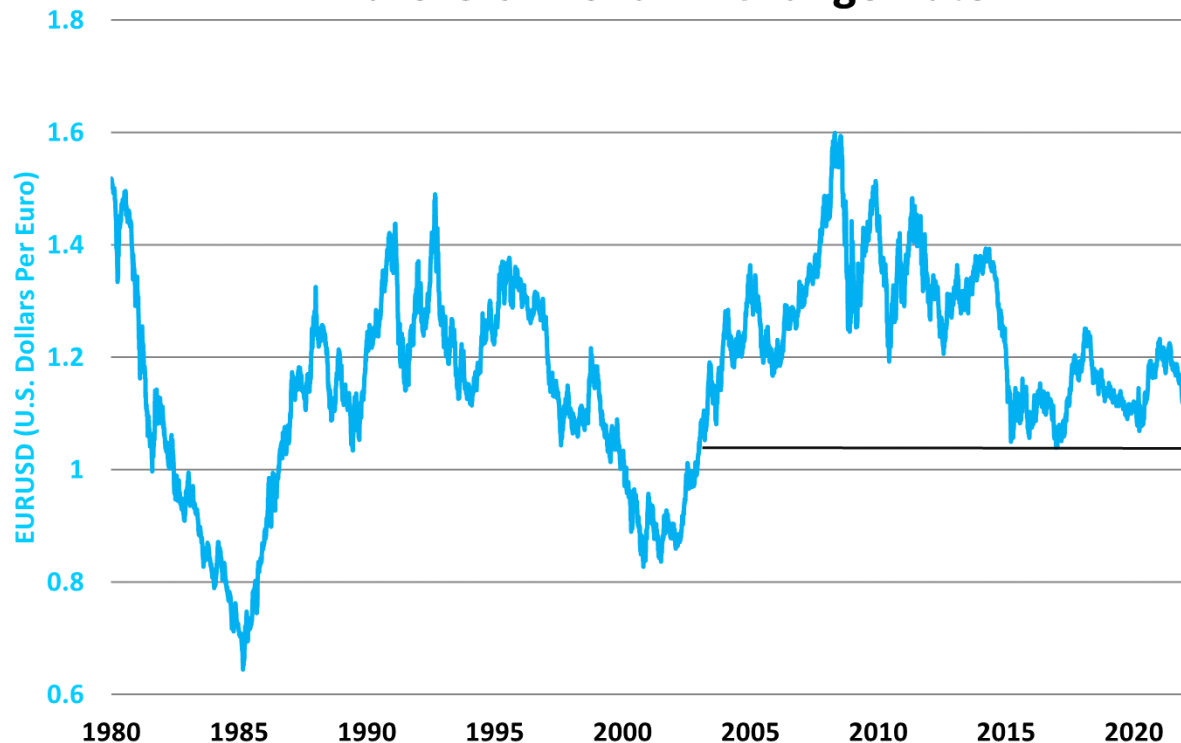
Henry Hub, Platts JKM, and TTF Front Month Futures Prices



Source: Bloomberg ([NG1](#), [TTFG1MON](#), [JKL1](#))

# EURUSD Cracked Through Support This Morning

## Euro-U.S. Dollar Exchange Rate

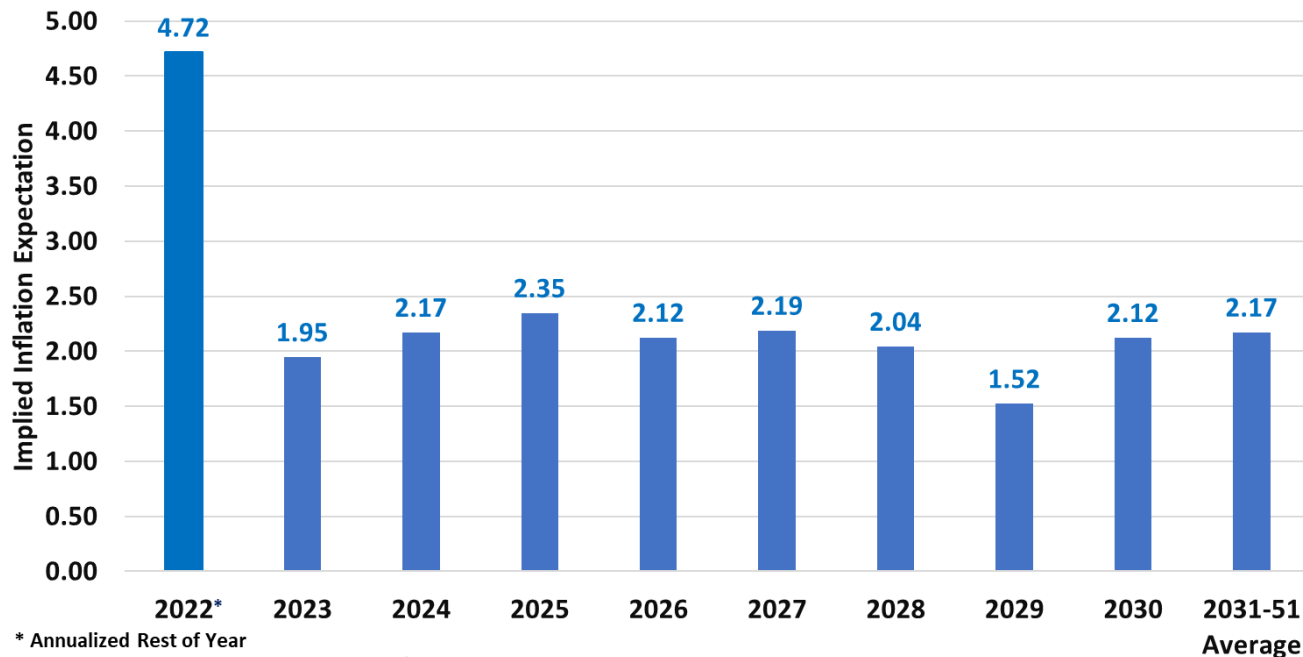


Source: Bloomberg (EUR), Pre-1999 Bloomberg uses the European Currency Unit



# Will Inflation Persist? Bond Investors Don't Seem to Think So...

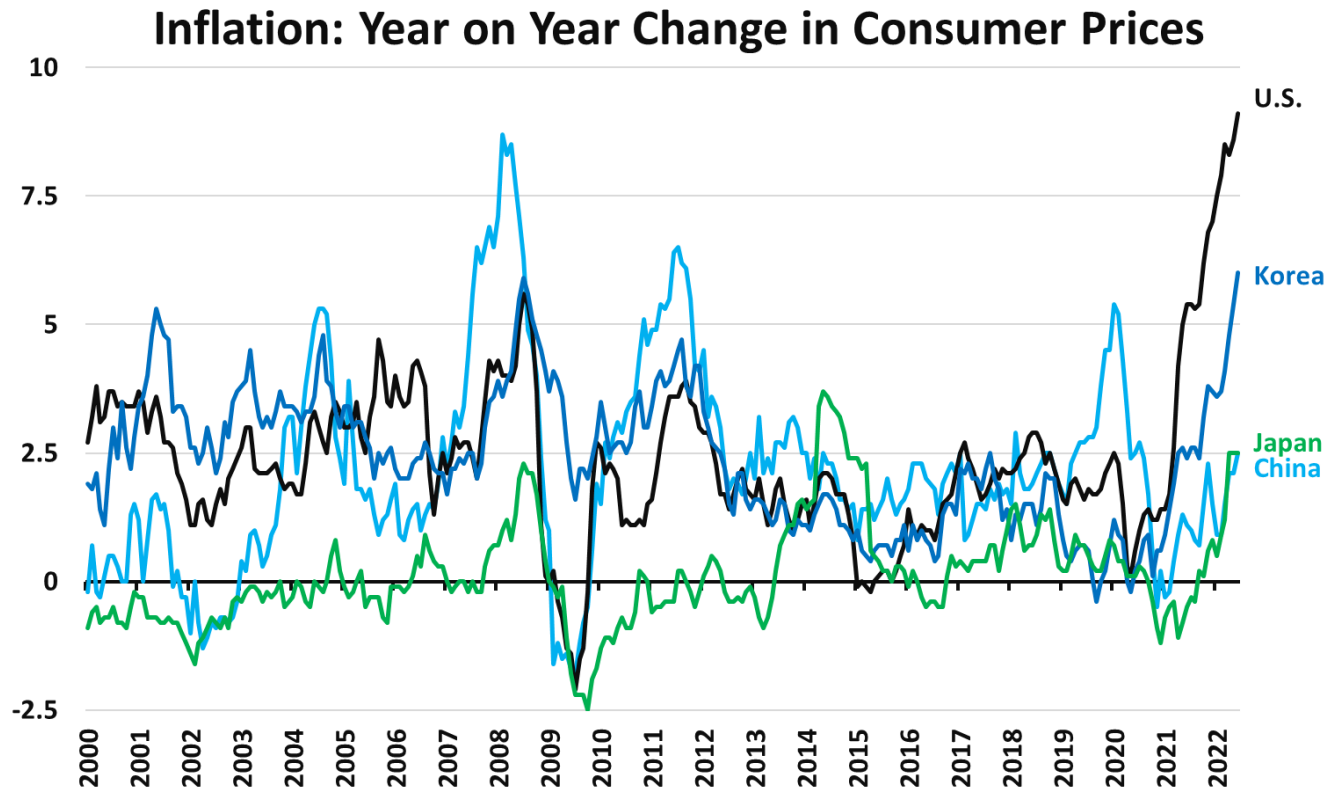
## Anticipated Inflation By Year From Break-Even (Standard U.S. Treasuries Yields - TIPS Yields)



\* Annualized Rest of Year

Source: Bloomberg Professional (T Govt and TII Govt, TIPS and Nominal with January and February Maturities), CME Economic Research Calculations

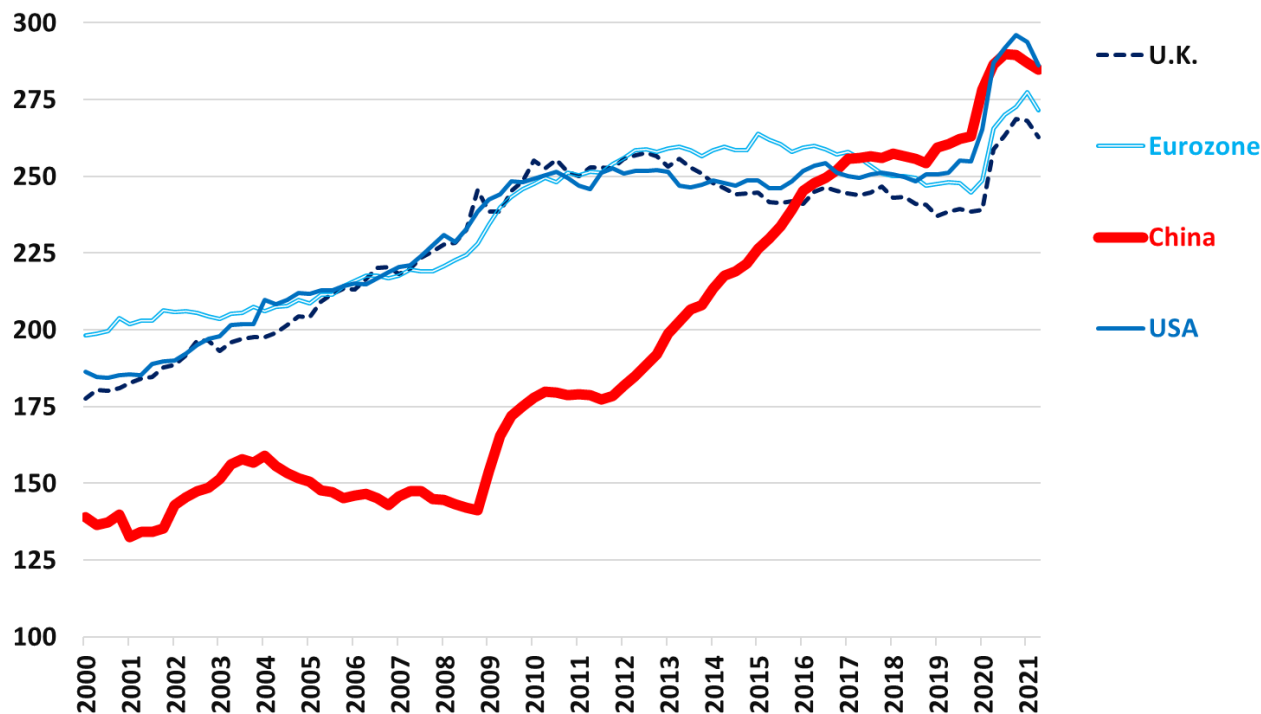
# Asian Inflation Rates Haven't Risen As Much Despite Weak Currencies.



Source: Bloomberg Professional (CPI YOY, [KOCPIYOY](#), [JNCPIYOY](#) and [CNCPIYOY](#))

# China's Debt Levels Exceed Those of E.U. & U.S. Relative to GDP

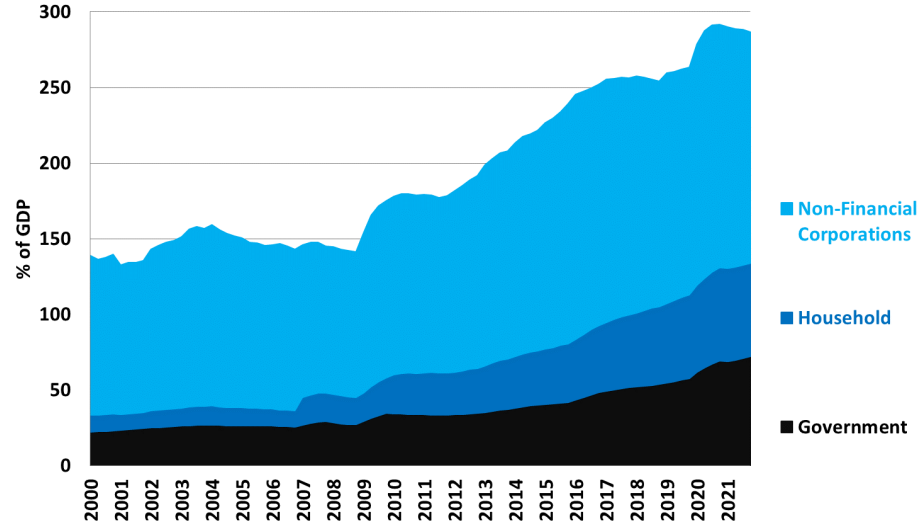
## Public + Private Sector Debt to GDP Ratio



Source: Bank for International Settlements (BIS), <http://www.bis.org/statistics/totcredit.htm>

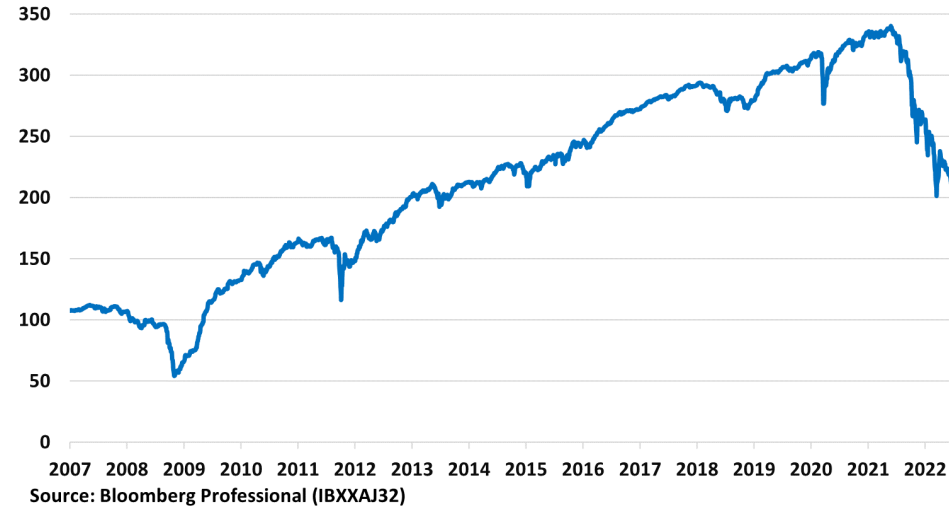
# China Represents a Major Downside Risk for Inflation: It Has Extremely High Levels of Corporate Debt and Collapsing High Yield Bond Prices.

## Chinese Debt



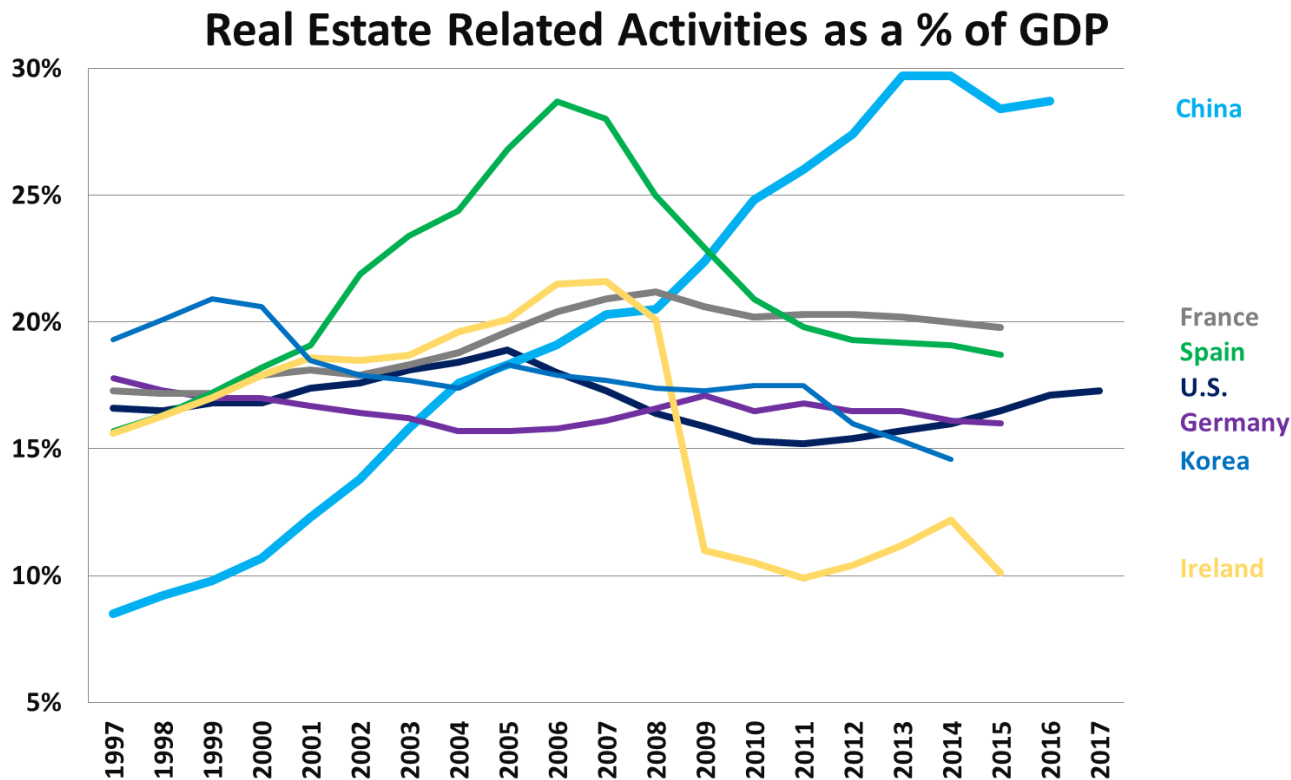
Source: Bank for International Settlements (BIS), <http://www.bis.org/statistics/totcredit.htm>

## Markit iBoxx USD China High Yield Total Return Index



Source: Bloomberg Professional (IBXXAJ32)

# China's Real Estate-Related Activity Was Close to 30% of GDP



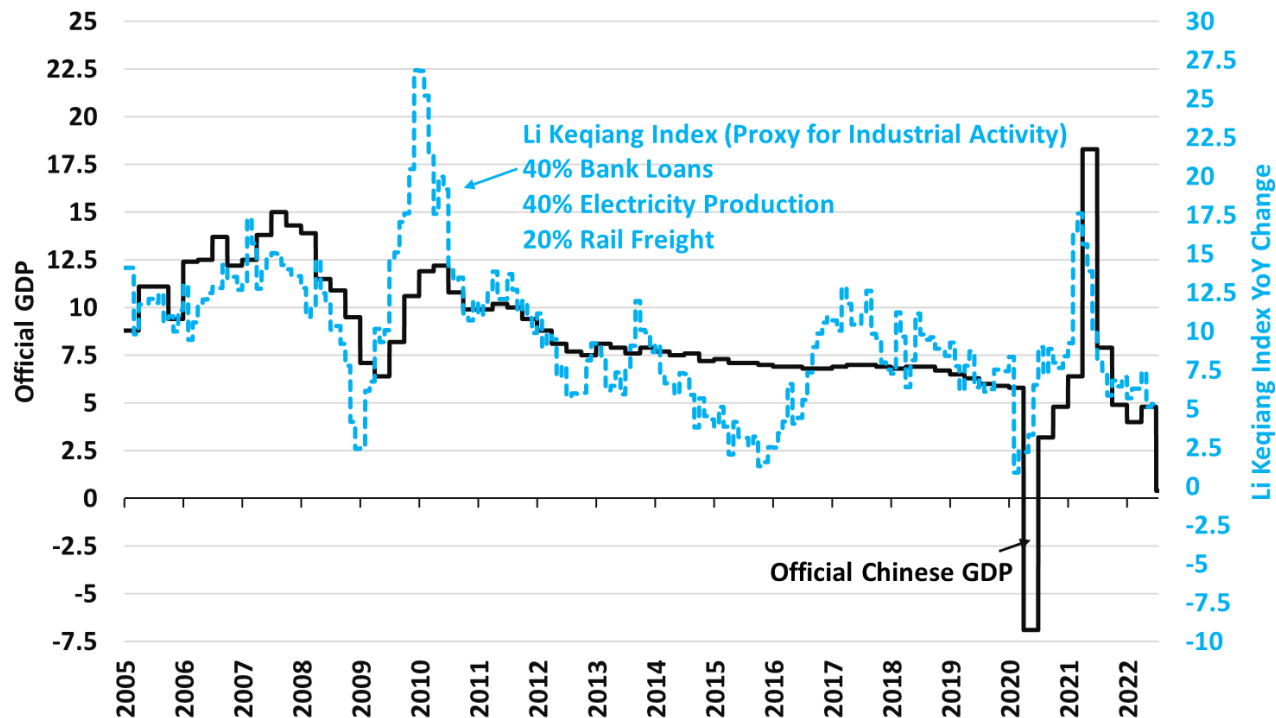
Source: Rogoff and Yang, "China and the World Economy", Harvard University 2021

# The Chinese Currency Remains Might Be Overvalued and Could Be Set for a Major Drop



# China Represents (Mostly) A Downside Risk for Inflation

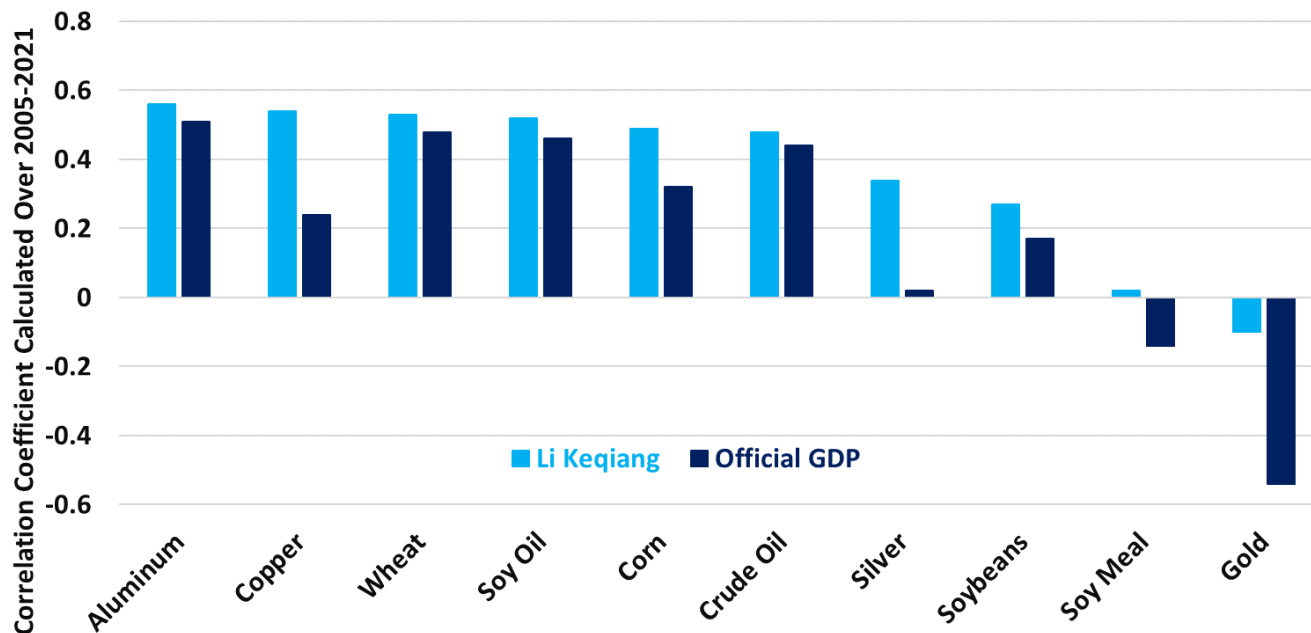
## China's Official GDP and The Li Keqiang Index



Source: Bloomberg Professional (CNGDPYOY and [CLKQINDX](#))

# Commodities Closely Follow Li Keqiang Index

Correlation: **Li Keqiang Index** and **Official GDP YoY Change**  
and the Level of Commodity Prices One Year Later

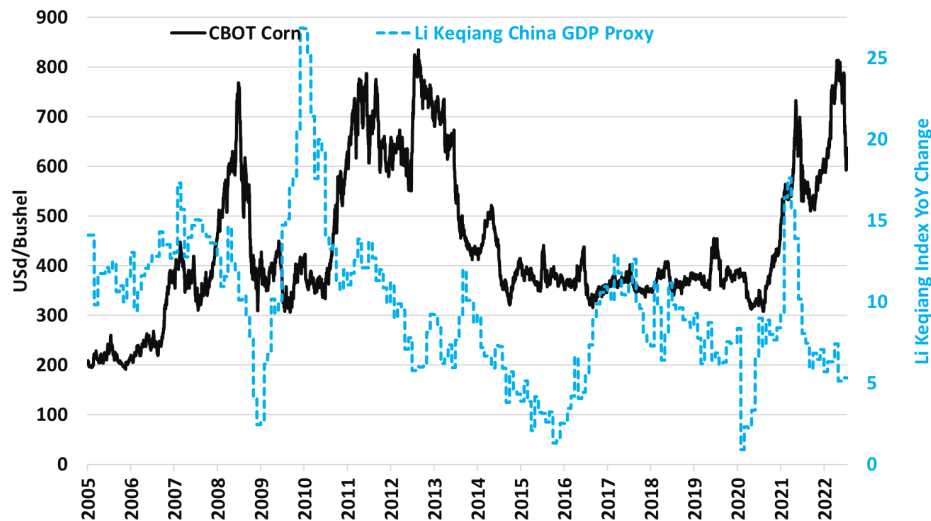


Source: Bloomberg Professional (ALE1, LA1, HG1, W 1, BO1, SI1, C 1, CL1, SI1, S 1, SM1 and GC1, CLKQINDX, CNGPDY0Y), CME Economic Research Calculations



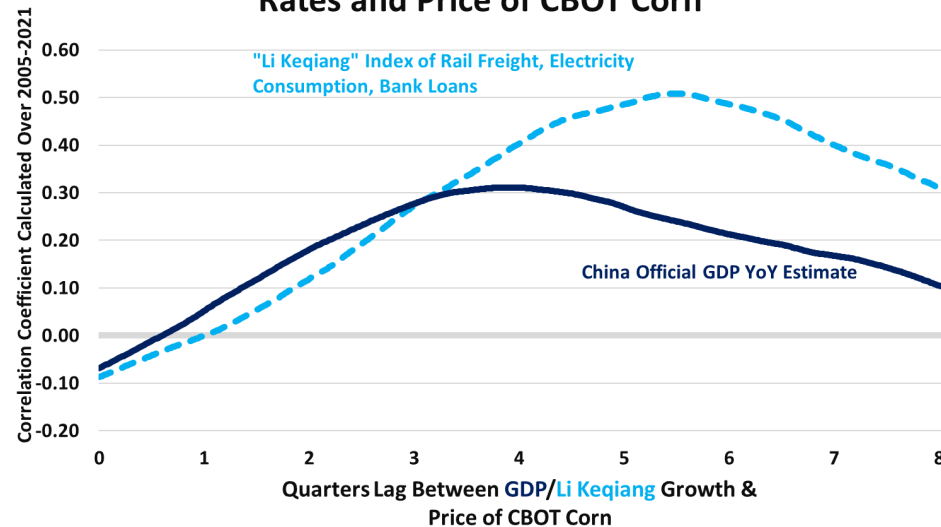
# Corn Lags Li Keqiang By 15-18 Months

## CBOT Corn and YoY Change in Li Keqiang Index



Source: Bloomberg Professional (C 1 and [CLKQINDX](#))

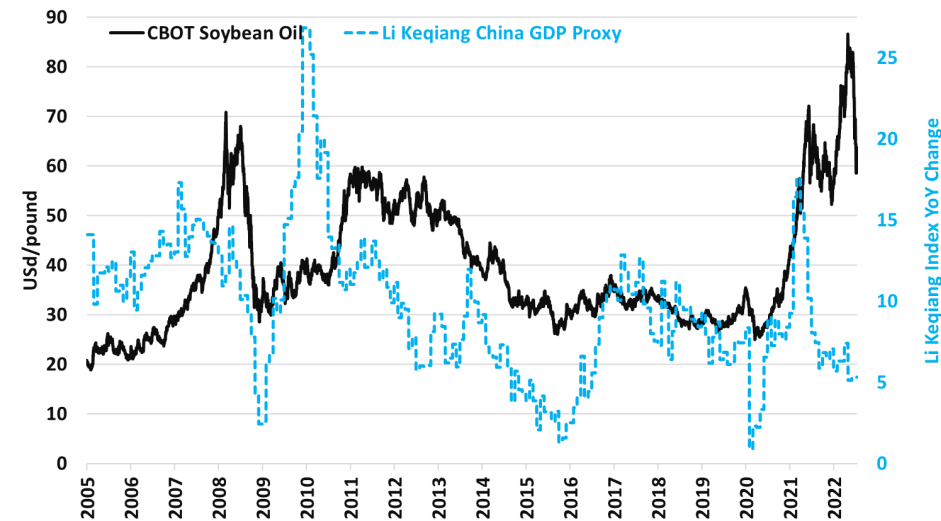
## Correlation between GDP & "Li Keqiang" Growth Rates and Price of CBOT Corn



Source: Bloomberg Professional (C 1, [CNGDPYOY](#) and [CLKQINDX](#)), CME Economic Research Calculations

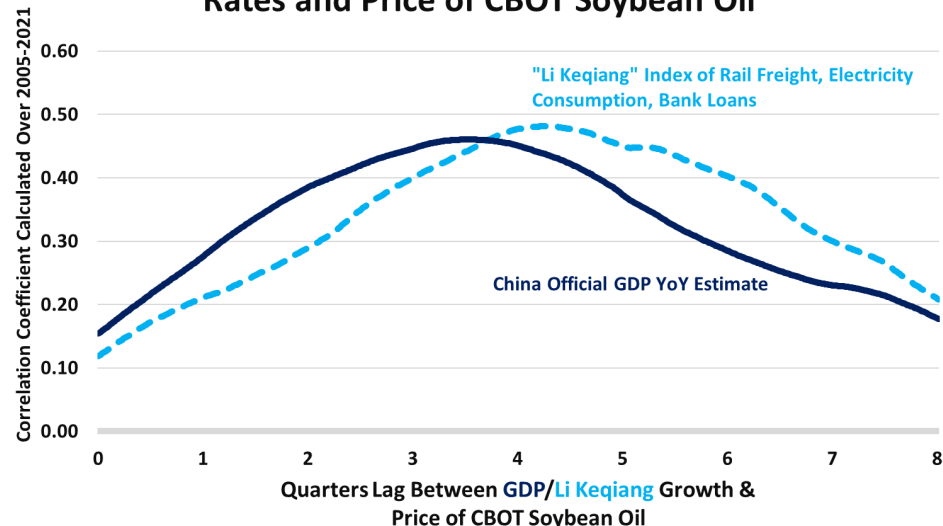
# Soy Oil Lags Li Keqiang By 12-15 Months

## CBOT Soy Oil and YoY Change in Li Keqiang Index



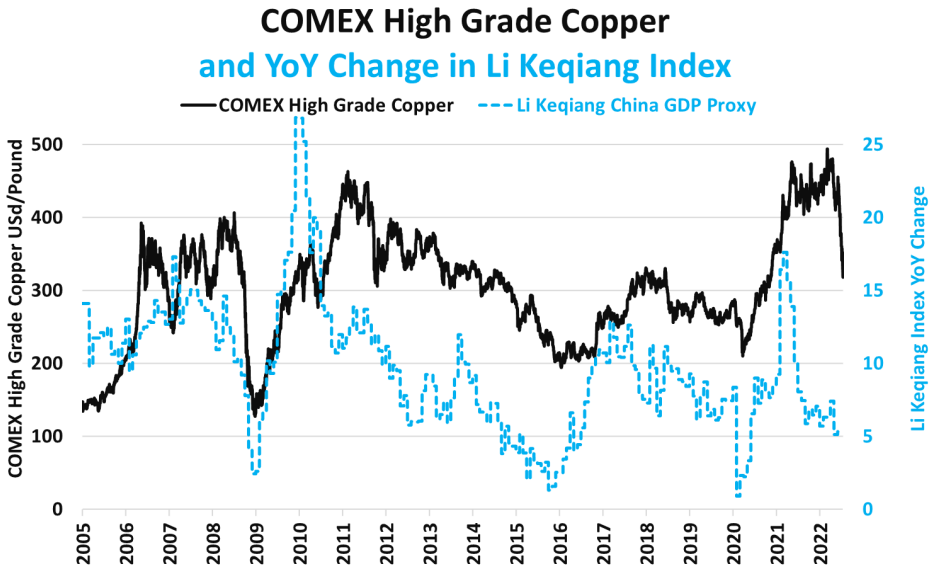
Source: Bloomberg Professional (BO1 and [CLKQINDX](#))

## Correlation between GDP & "Li Keqiang" Growth Rates and Price of CBOT Soybean Oil

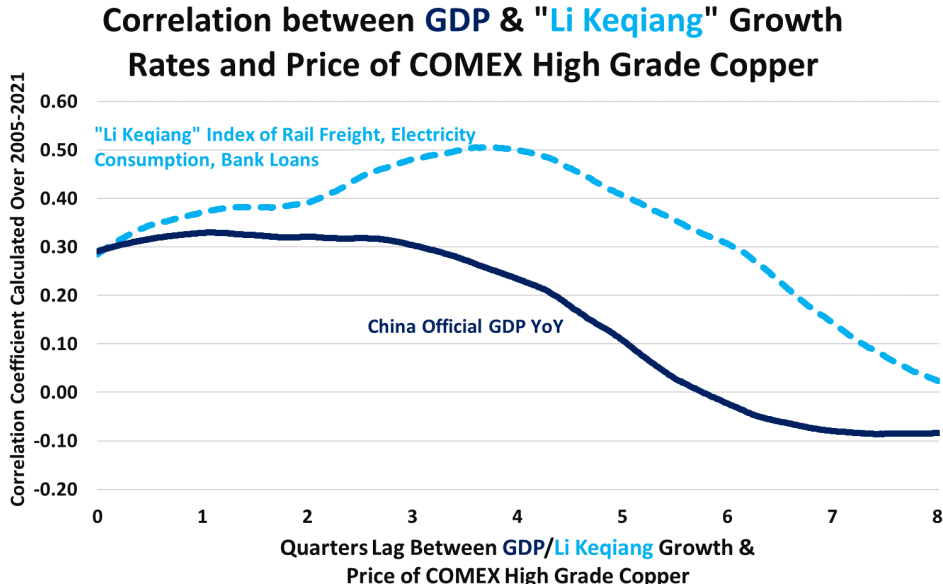


Source: Bloomberg Professional (BO1, [CNGDPYOY](#) and [CLKQINDX](#)), CME Economic Research Calculations

# Copper Often Does What China Does with a Lag Of About One Year.



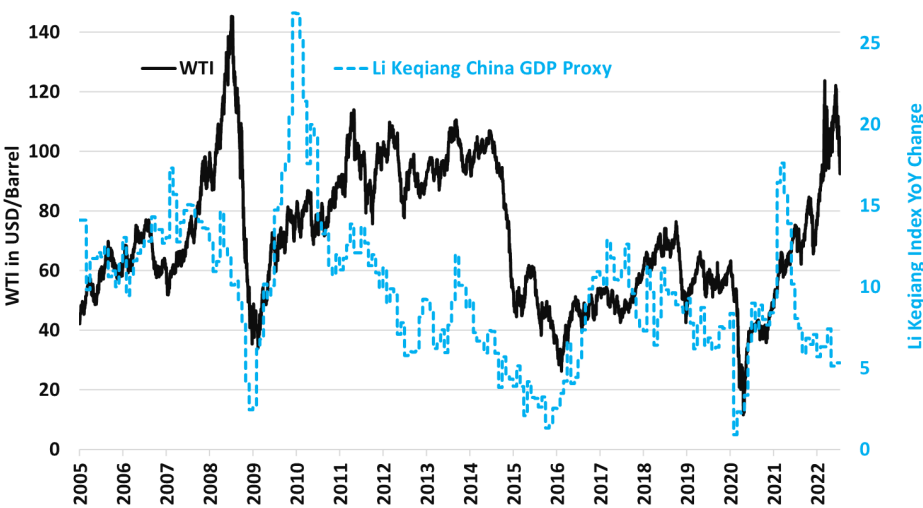
Source: Bloomberg Professional (HG1 and CLKQINDX)



Source: Bloomberg Professional (HG1, CNGDPYOY and CLKQINDX)

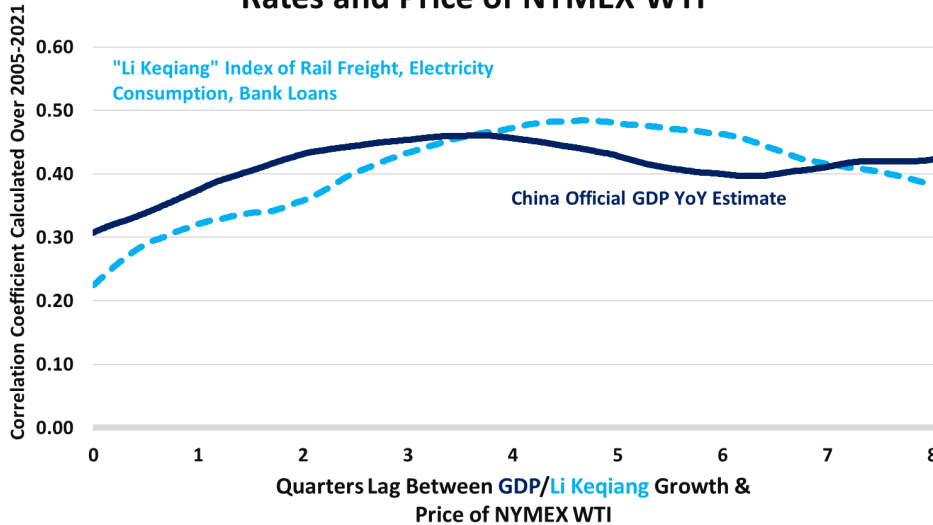
# Crude Oil Prices Also Follow Chinese Growth

WTI and YoY Change in Li Keqiang Index



Source: Bloomberg Professional (CL1 and CLKQINDX)

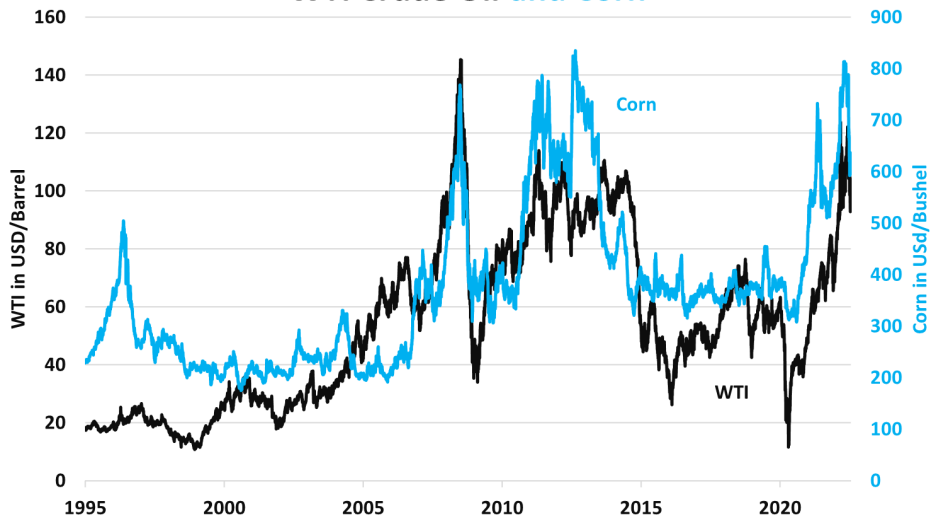
Correlation between GDP & "Li Keqiang" Growth Rates and Price of NYMEX WTI



Source: Bloomberg Professional (CL1, CNGDPYOY and CLKQINDX), CME Economic Research Calculations

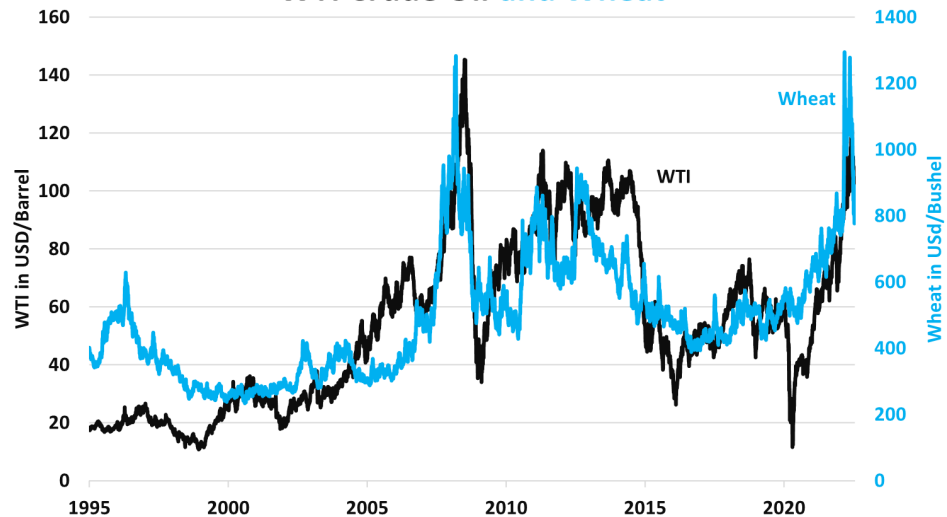
# Ags and Energy Track Closely

## WTI Crude Oil and Corn



Source: Bloomberg Professional (CL1 and C1)

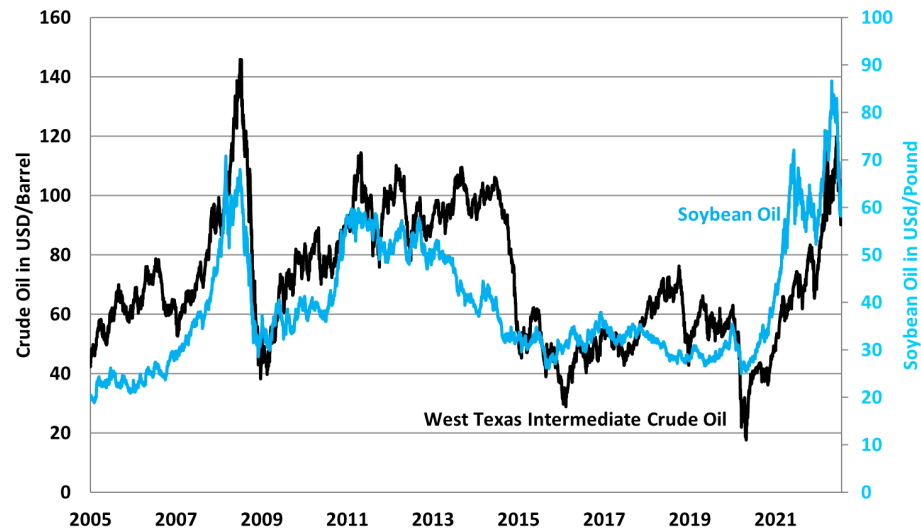
## WTI Crude Oil and Wheat



Source: Bloomberg Professional (CL1 and W1)

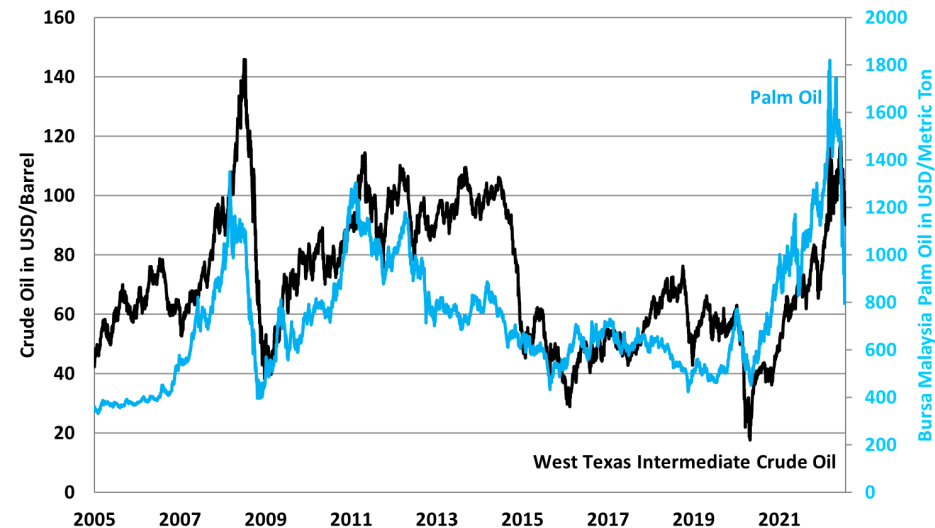
# Do Vegetable Oils Lead Crude Oil Prices

## West Texas Intermediate Crude & Soybean Oil



Source: Bloomberg (CL2 and BO1)

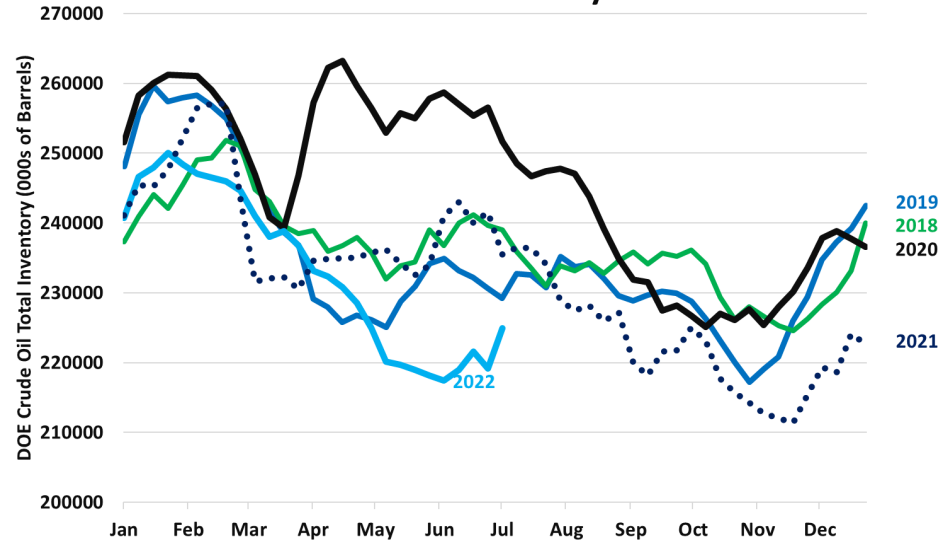
## West Texas Intermediate Crude & Palm Oil



Source: Bloomberg (CL1, KO1 and MYRUSD for conversion to \$s)

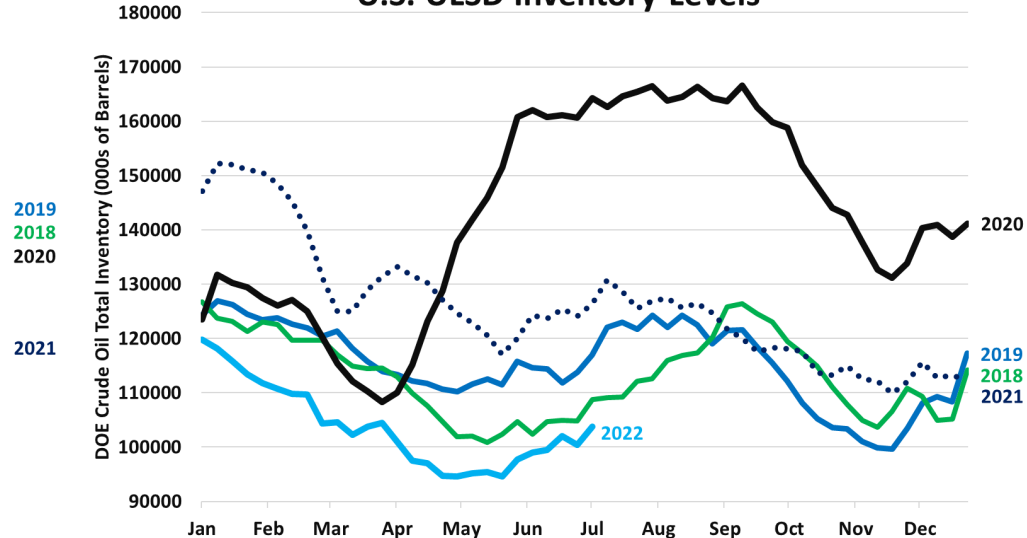
# U.S. Gasoline Inventories Have Begun Rising At A Time of Year When They Normally Decline

## U.S. Gasoline Inventory Levels



Source: Bloomberg Professional, DOESREFM

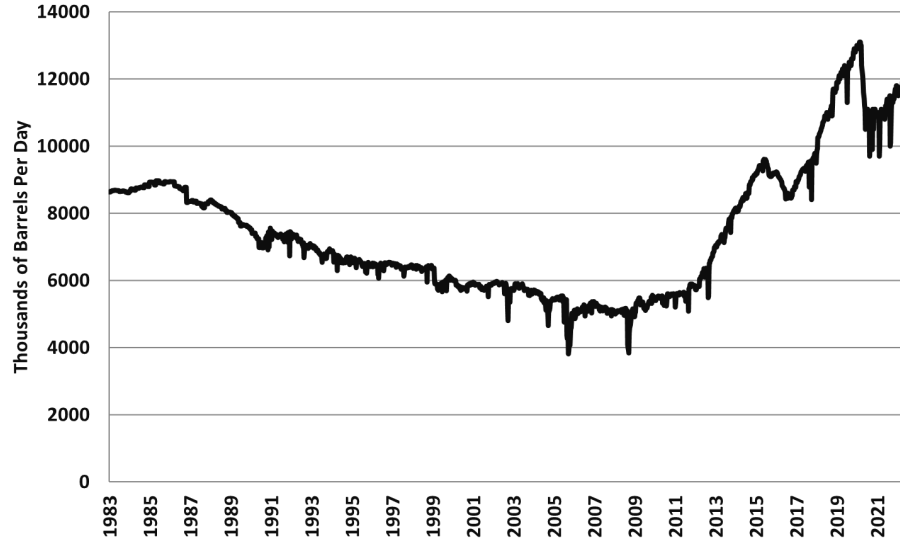
## U.S. ULSD Inventory Levels



Source: Bloomberg Professional, DOESDL15

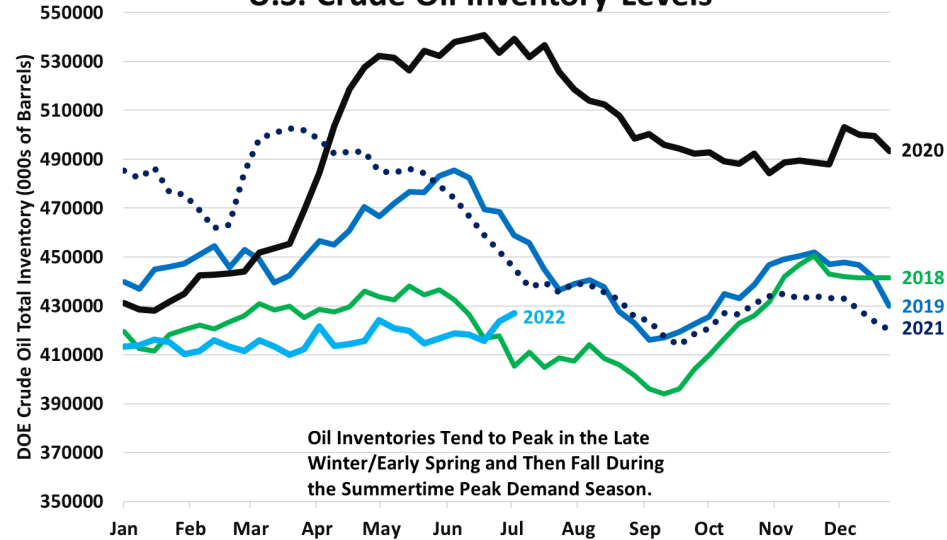
# Crude Oil Inventories Have Been Rising At a Time of Year When They Normally Decline. Production is Recovering.

## U.S. Crude Oil Production



Source: Bloomberg Professional, EIA (DOETCRUD)

## U.S. Crude Oil Inventory Levels



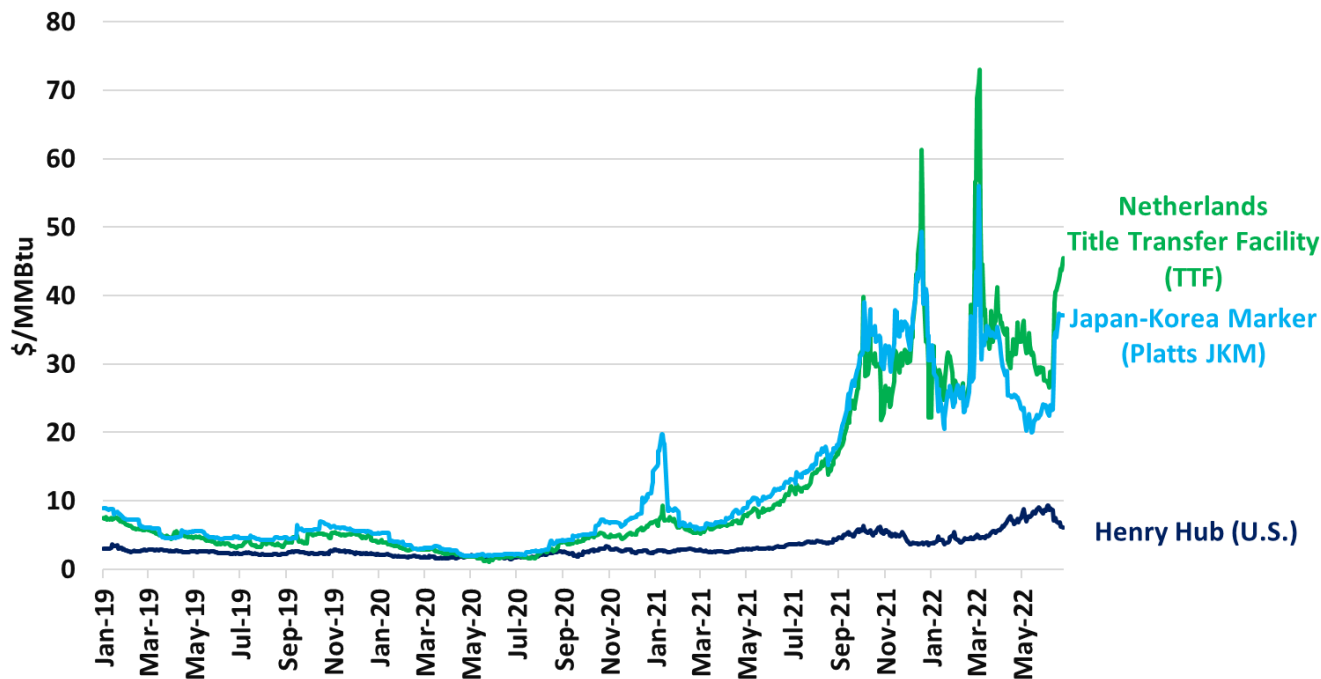
Oil Inventories Tend to Peak in the Late Winter/Early Spring and Then Fall During the Summertime Peak Demand Season.

Source: Bloomberg Professional, DOESCRUD



# Nat. Gas Prices Are Soaring Against in Europe, Japan & Korea

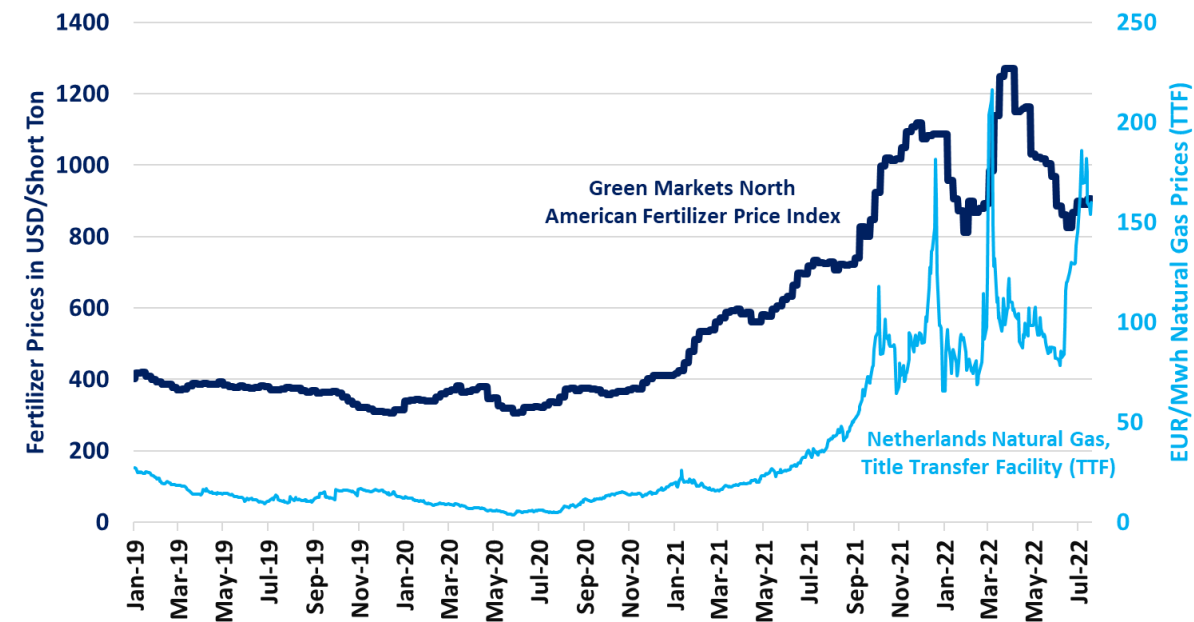
## Henry Hub, Platts JKM, and TTF Front Month Futures Prices



Source: Bloomberg (NG1, TTFG1MON, JKL1)

# Higher Eurasian Natural Gas Prices Have Helped to Send Fertilizer Prices Higher Worldwide.

## North American Fertilizer and European Natural Gas Prices



Source: Bloomberg (GCFPNPKI, [TTFG1MON](#))

# Thank you

