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Predicting Commodities

Figure 1.

CRB RAW INDUSTRIALS SPOT PRICE INDEX*
(1967=100, ratio scale)

* Weekly from January 9, 1951 to May 26, 1981, then daily. Includes copper scrap, lead scrap, steel scrap, tin, zinc, burlap, cotton, print cloth, wool tops, hides, rosin, rubber, and tallow.
Note: Shaded areas denote recessions according to the National Bureau of Economic Research.
Source: Commodity Research Bureau.

Figure 2.

CRB RAW INDUSTRIALS SPOT PRICE INDEX*
(1967=100, daily)

* Includes copper scrap, lead scrap, steel scrap, tin, zinc, burlap, cotton, print cloth, wool tops, hides, rosin, rubber, and tallow.
Note: C = China joined World Trade Organization on December 11, 2001.
Source: Commodity Research Bureau.
Figure 3.

CHINA INDUSTRIAL PRODUCTION*
(2005=100, sa)

* Value added basis.
Source: China National Bureau of Statistics and Haver Analytics.

Figure 4.

CHINA REAL GDP & INDUSTRIAL PRODUCTION
(yearly percent change)

* Value added basis.
Source: Haver Analytics.
China Industrial Production* (yearly percent change)

CRB Raw Industrials Spot Price Index**
(1967=100)

* Value added basis.
** Includes hides, tallow, copper scrap, lead scrap, steel scrap, zinc, tin, burlap, cotton, print cloth, wool tops, rosin, rubber, hogs, steers, lard, butter, soybean oil, cocoa, corn, Kansas City wheat, Minneapolis wheat, and sugar.
Source: Commodity Research Bureau and Haver Analytics.

China Industrial Production* (yearly percent change)

Copper Futures Price**
(cents per pound)

* Value added basis.
** Nearby futures contract.
Source: Haver Analytics.
Figure 7.

**CHINA REQUIRED RESERVE RATIO**
(percentage)

Required Reserve Ratio
- Red: Large Depository Institutions
- Blue: Small/Medium Depository Institutions

Source: People’s Bank of China.

Figure 8.

**CHINA M2 & BANK LOANS**
(yearly percent change in yuan)

- Blue: M2
- Red: Bank Loans

Source: People’s Bank of China.
Figure 9.

BALTIC DRY INDEX
(1/4/85=100, daily)

Source: The Baltic Exchange.

Figure 10.

INDUSTRIALS COMMODITY PRICE INDEX & COPPER PRICE
(daily)

* Includes copper scrap, lead scrap, steel scrap, tin, zinc, burlap, cotton, print cloth, wool tops, hides, rosin, rubber, and tallow.

** Nearby futures contract.

Source: Commodity Research Bureau and Haver Analytics.
Figure 11.

BOOM-BUST BAROMETER* & BUSINESS CYCLE
(four-week average, ratio scale)

* Weekly average of CRB raw industrials spot price index divided by initial unemployment claims, showing four-week average.
Note: Shaded areas denote recessions according to the National Bureau of Economic Research.

Figure 12.

BOOM BUST BAROMETER* & BEAR MARKETS IN STOCKS
(four-week average, ratio scale)

* Weekly average of CRB raw industrials spot price index divided by initial unemployment claims, four-week average, showing four-week average.
Note: Shaded red areas denote S&P 500 bear market declines of 20% or more. Yellow areas show bull markets.
Figure 13.

S&P 500 INDEX & BOOM-BUST BAROMETER

S&P 500 Index
Boom-Bust Barometer*

* CRB raw industrials spot price index (weekly average) divided by weekly initial unemployment claims, showing four-week moving average.

Figure 14.

S&P 500 FORWARD EARNINGS & BOOM-BUST BAROMETER
(weekly)

S&P 500 Forward Earnings*
Boom-Bust Barometer**

* Time-weighted average of consensus estimates for the current year and next year.
** CRB raw industrials spot price index (weekly average) divided by weekly initial unemployment claims, showing four-week moving average.
Source: Commodity Research Bureau, Bureau of Labor Statistics, and Thomson Reuters I/B/E/S.
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Figure 15.

S&P 500 SECTORS PRICE INDEXES DURING BULL MARKET OF 2002-2007
(percent change since October 9, 2002)

- Consumer Discretionary (78.3)
- Consumer Staples (40.4)
- Energy (242.2)
- Financials (92.6)
- Health Care (41.4)
- Industrials (125.9)
- Information Technology (145.4)
- Materials (162.3)
- Telecommunications Services (117.8)
- Utilities (172.1)

Source: Standard & Poor’s.

Figure 16.

MSCI SHARE PRICE INDEXES DURING BULL MARKET OF 2003-2007
(percent change in US dollars since October 9, 2002)

- EM* (386.0)
- EMU** (223.7)
- Japan (113.6)
- UK (130.7)
- US (103.8)

* EM = Emerging Markets.  ** EMU = European Monetary Union.
Source: MSCI.
**Predicting Commodities**

*Includes copper scrap, lead scrap, steel scrap, tin, zinc, burlap, cotton, print cloth, wool tops, hides, rosin, rubber, and tallow.*

Source: MSCI and Commodity Research Bureau.

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*Includes Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey, and United Arab Emirates.*

**Includes copper scrap, lead scrap, steel scrap, tin, burlap, cotton, print cloth, wool tops, hides, rosin, rubber, and tallow.*

Source: MSCI and Commodity Research Bureau.
Figure 19. S&P 500 MATERIALS & INDUSTRIALS COMMODITY PRICE INDEX (daily)

S&P 500 Materials Index (as a ratio of S&P 500 Index)
CRB Raw Industrials Spot Price Index* (1967=100)

*yardeni.com

* Includes copper scrap, lead scrap, steel scrap, tin, zinc, burlap, cotton, print cloth, wool tops, hides, rosin, rubber, and tallow.
Source: Standard & Poor’s and Commodity Research Bureau.

Figure 20. S&P 500 ENERGY & BRENT CRUDE OIL PRICE (daily)

S&P 500 Energy Index (as a ratio of S&P 500 Index)
Brent Crude Oil Futures Price* (dollars per barrel)

*yardeni.com

* Nearby futures price.
Source: Standard & Poor’s and the Financial Times.
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Figure 21.
CRUDE OIL PRODUCTION: WORLD
(million barrels per day, ratio scale)

Note: Shaded areas denote recessions according to the National Bureau of Economic Research.
Source: Energy Information Administration.

Figure 22.
CRUDE OIL PRODUCTION: WORLD
(yearly percent change)

Note: Shaded areas denote recessions according to the National Bureau of Economic Research.
Source: Energy Information Administration.
Figure 23.

WEST TEXAS INTERMEDIATE CRUDE OIL PRICE
(dollars per barrel)*

Note: Shaded areas denote recessions according to the National Bureau of Economic Research.
Source: Haver Analytics.

Figure 24.

CONSUMER PRICE INDEX: GASOLINE
(1982-84 = 100, ratio scale)

Note: Shaded areas denote recessions according to the National Bureau of Economic Research.
Figure 25. CRUDE OIL PRODUCTION: SAUDI ARABIA
(million barrels a day)

Source: Energy Information Administration.

Figure 26. CRUDE OIL PRODUCTION: IRAN & IRAQ
(million barrels per day)

Source: Energy Information Administration.
CRUDE OIL PRODUCTION: OPEC & NON-OPEC
(million barrels per day, ratio scale)

Source: Energy Information Administration.

CRUDE OIL PRODUCTION: OPEC
(as a percent of total world)

Source: Energy Information Administration.
Figure 29.

CRUDE OIL PRODUCTION: UNITED STATES
(million barrels per day)

Source: Energy Information Administration.

Figure 30.

CRUDE OIL: ACTIVE US RIG COUNT & FIELD PRODUCTION
(weekly)

Rig Count
(units)

Production
(million barrels per day, nsa)

Source: Baker Hughes Inc. and US Department of Energy.
Figure 31.

**US GASOLINE DEMAND & VEHICLE MILES TRAVELED**

Gasoline Usage
(million barrels per day, 52-wa)

Vehicle Miles Traveled
(trillion miles, 12-month sum)

Source: US Department of Energy.

Figure 32.

**GASOLINE FUEL EFFICIENCY IN THE US***

(average miles per gallon)

* Vehicle miles traveled (billion miles, 12-month sum) divided by Gasoline usage (billion barrels per day, 52-wa)

Source: US Department of Energy.
Figure 33.

**BRENT CRUDE OIL PRICE & INDUSTRIALS COMMODITY PRICE INDEX**

CRB Raw Industrials Spot Price Index

Brent Crude Oil Futures Price

(dollars per barrel)

*yardeni.com*

* Includes copper scrap, lead scrap, steel scrap, tin, zinc, burlap, cotton, print cloth, wool tops, hides, rosin, rubber, and tallow.

** Nearby futures price.

Source: Commodity Research Bureau and Haver Analytics.

Figure 34.

**FUTURES PRICES**

Brent Crude Futures Price

(dollars per barrel)

Copper Futures Price

(cents per pound)

*yardeni.com*

* Nearby futures price.

Source: Haver Analytics.
Predicting Commodities

Figure 35.

**WORLD CRUDE OIL REVENUES & OUTLAYS**
(trillion dollars, annual rate, ratio scale)

Crude Oil Revenues & Outlays

Note: West Texas Intermediate Spot Price from 1975 TO 1984, Brent Crude oil price thereafter.
Source: Energy Intelligence Administration.

* Monthly crude oil production (in mbd) times 365 days times dollar price of a barrel of Brent crude oil.

Figure 36.

**US CRUDE OIL REVENUES & OUTLAYS**
(billion dollars, annualized, ratio scale)

United States
- Crude Oil Outlays*
- Petroleum Refineries Shipments (saar)

* Monthly crude oil production (in mbd) multiplied by 365 days and the price of a barrel of West Texas Intermediate crude oil.
Source: Energy Intelligence Administration.
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Figure 37.
S&P GSCI SOYBEANS INDEX
(December 31, 1969=100)

Source: Standard & Poor’s.

Figure 38.
US CONSUMER PRICE INDEX: FOOD
(1982-84 = 100, ratio scale)

Figure 39. WORLD: POPULATION & PROJECTIONS (billions)


Figure 40. WORLD: POPULATION & PROJECTIONS (yearly percent change)

Figure 41.

WORLD: FERTILITY RATE
(children per woman)

- Estimates (through 2019)
- Projections (2020 through 2095)


Figure 42.

WORLD: URBAN POPULATION & PROJECTIONS
(as a percent of total population)

- Estimates (through 2019)
- Projections (2020 through 2050)

Figure 43.

GOLD PRICE* (dollars per ounce, ratio scale)


Figure 44.

GOLD PRICE* / CPI

* Cash price, London gold bullion, PM Fix.
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**Figure 45.**
GOLD PRICE & FED'S MAJOR TRADE-WEIGHTED DOLLAR INDEX

Gold Price*
(dollars per ounce)

Nominal FRB Advanced
Foreign Economies Trade-Weighted
Dollar Index**
(January 2006=100)

* Cash price, London gold bullion, PM Fix.
** Countries included in the Advanced Foreign Economies (AFE) index: Australia, Canada, Euro Area, Japan, Sweden, Switzerland, and the United Kingdom.

**Figure 46.**
GOLD PRICE & INDUSTRIALS COMMODITY PRICE INDEX
(weekly)

Gold Price*
(dollars per ounce)

CRB Raw Industrials
Spot Price Index**
(1967=100)

* Cash price London gold bullion, PM Fix.
** Includes copper scrap, lead scrap, steel scrap, tin, zinc, burlap, cotton, print cloth, wood tops, hides, rosin, rubber, and tallow.
**Predicting Commodities**

**Figure 47.**

GOLD CASH PRICE
(dollars per troy ounce, daily)

- 200-day moving average
- **D** = On July 26, 2012, ECB President Mario Draghi pledged to do "whatever it takes" to defend the euro.
- **A** = On April 4, 2013, Bank of Japan implemented "Abenomics" monetary policy.

**Figure 48.**

GOLD PRICE & 10-YEAR TIPS YIELD
(daily)

- **Cash price.** London gold bullion, PM Fix.
- **10-Year TIPS Yield** (percent, inverted scale)
Figure 49.

**S&P GOLDMAN SACHS COMMODITY INDEX**
(nearby futures price, daily)

Source: Standard & Poor’s and Haver Analytics.

Figure 50.

**S&P GOLDMAN SACHS COMMODITY INDEX & OIL PRICE**
(daily)

Goldman Sachs Commodity Index
(nearby futures price)

West Texas Intermediate Crude Oil Price Index
(dollars per barrel)

Source: Standard & Poor’s and Haver Analytics.
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