



Metal Industry Indicators

Composite Indexes of Leading and Coincident Indicators of Selected Metal Industries for May and June—Summary Report

July 16, 2010

The **primary metals leading index** declined 3.8% in June to 142.6 from a revised 148.3 in May, and its 6-month smoothed growth rate fell to 2.4% from a revised 12.7% in May. The 6-month smoothed growth rate is a compound annual rate that measures the near-term trend. Usually a growth rate above +1.0% signals an increase in metals activity, and a growth rate below -1.0% indicates a downturn in activity. Although the primary metals leading index growth rate is still positive, this sharp decline is suggesting that the recovery in the U.S. metals industry has begun to be negatively affected by a slow domestic economy and problematic foreign economic conditions.

All four of the indicators that were available for the June index calculation decreased. A shorter average workweek in primary metals establishments contributed -1.5 percentage points to the overall decline in the leading index. The USGS metals price index growth rate sank into negative territory for the first month since last June, holding the leading index back 1.1 percentage points. A sizable decrease in the PMI contributed -0.8 percentage points. However, the PMI remains above the threshold that signals an increase in future domestic manufacturing activity. A decrease in the stock price index combining construction and farm machinery companies and industrial machinery companies contributed -0.5 percentage points. The June leading index should be considered preliminary because only four of its eight indicators were available, and the leading index will likely be revised when the other components are added next month.

Metals are key inputs in durable goods manufacturing and construction, which account for almost a quarter of gross domestic product final sales. Therefore, the primary metals leading index also gives early signals of major changes in activity for the overall U.S. economy (Chart 8).

The primary aluminum and the aluminum mill products indexes are suspended because of discontinued availability of industry-specific historical data. The USGS will continue to calculate the steel and copper composite indexes. These indexes are available through May. The steel leading index increased 0.3% in May. The M2 money supply growth rate climbed into positive territory in May and made the largest contribution to the steel leading index. A longer average workweek in iron and steel plants also helped to boost the steel index. However, the S&P stock price index for iron and steel companies is beginning to slide and offset some of the gains in other indicators in May. Although the steel leading index growth rate is still relatively high, it has decreased 2 consecutive months, which may be indicating that growth in U.S. steel industry activity could start to slow in the near term. The copper leading index declined 1.7% in May with four of its six indicators decreasing. A decline in the S&P stock price index for building products companies made the largest negative contribution. A slightly longer average workweek in nonferrous metals manufacturing

establishments except aluminum made the only sizable positive contribution and did not offset much of the decline in the other indicators. The copper leading index growth rate declined sharply, indicating that activity growth in the domestic copper industry could slow as well.

The **metals price leading index** decreased 3.0% to 109.4 in May, the latest month for which it is available, from a revised 112.8 in April. Its 6-month smoothed growth rate sank into negative territory, falling to -6.6% in May from a revised 0.8% in April. Three of its four indicators declined, and one increased slightly. The growth rate of the trade-weighted average exchange value of other major currencies against the U.S. dollar also fell into negative territory, and contributed -1.4 percentage points to the net decline in the leading index. The growth rate of the Organization for Economic Cooperation and Development (OECD) Total Leading Index decreased for the fifth consecutive month in May, contributing -1.2 percentage points to the leading index. A tighter yield spread between the U.S. 10-year Treasury Note and the federal funds rate contributed -0.4 percentage points. In contrast, an uptick in the growth rate of the inflation-adjusted value of new orders for U.S. nonferrous metal products rounded to a zero contribution in May. The metals price leading index signals major changes in the growth rate of nonferrous metal prices an average of 8 months in advance.

The growth rate of the inflation-adjusted value of U.S. nonferrous metal products inventories, which is an indicator of supply and usually moves inversely with the price of metals, increased to a 10-month high in May. This increase and the decrease in the metals price leading index growth rate are indicating further metals price declines in the near term.

The percent changes from April to May for the **metal industry coincident indexes**, which measure current economic activity, are shown below. May is the latest month for which these indexes are available.

Primary Metals	1.1%
Steel	1.5%
Copper	-0.1%

Tables 1, 3, 5, and 7 identify the indicators and, for the industry indexes, show the contributions of each indicator to its respective index.

The *Metal Industry Indicators* report is produced at the U.S. Geological Survey. For more information about these indexes and the *Metal Industry Indicators* monthly report, contact Gail James (703-648-4915), (e-mail, gjames@usgs.gov) at the U.S. Geological Survey.

The *Metal Industry Indicators* summary report with indexes for June and July is scheduled for release on the World Wide Web at 10:00 a.m. EDT, Friday, August 20.

Table 1.
**Leading Index of Metal Prices and Growth Rates of the Nonferrous Metals Price Index,
Inventories of Nonferrous Metal Products, and Selected Metal Prices**

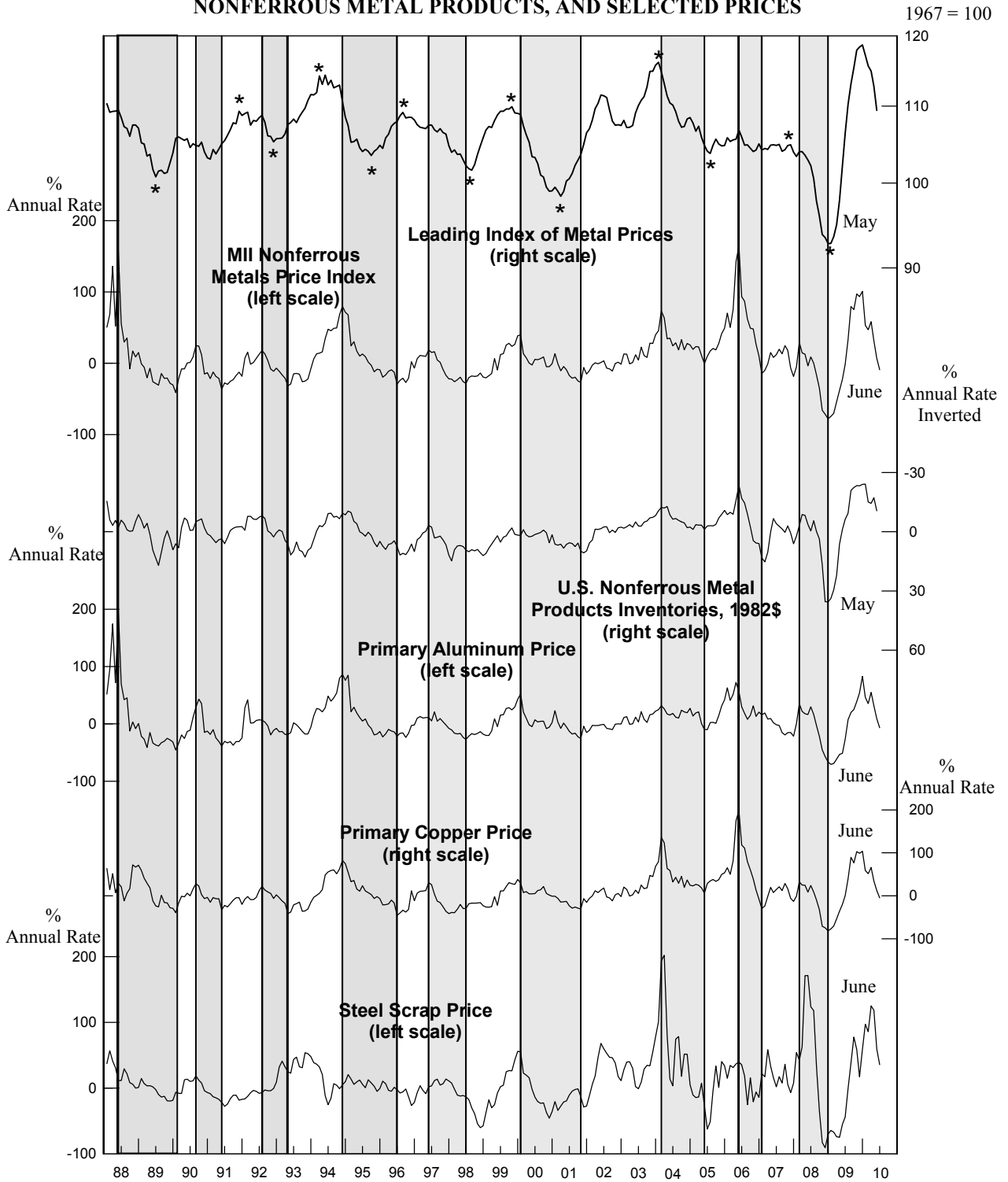
	Six-Month Smoothed Growth Rates					
	Leading Index of Metal Prices (1967=100)	MII Nonferrous Metals Price Index	U.S. Nonferrous Metal Products Inventories (1982\$)	Primary Aluminum	Primary Copper	Steel Scrap
2009						
May	102.1	-22.6	-1.2	-51.2	-19.8	-55.1
June	106.3	-1.6	-6.3	-26.9	0.2	-44.0
July	110.2r	33.3	-9.4	7.2	39.7	-0.7
August	113.1r	79.3	-20.9	19.8	89.7	38.1
September	115.4r	75.2	-22.4	25.2	77.0	77.4
October	117.9r	97.3	-23.3	38.8	102.8	58.6
November	118.4r	93.4	-23.3	54.2	98.9	17.2
December	118.7r	100.8	-24.0	82.9	103.5	58.8
2010						
January	117.2r	53.2	-24.1r	46.2	59.0	96.9
February	115.6r	46.9	-15.1r	35.3	51.7	85.8
March	114.9r	58.2	-14.4r	55.0	66.0	125.1
April	112.8r	31.5	-17.2r	31.7	34.6	118.1
May	109.4	6.9	-10.6	9.0	12.3	59.6
June	NA	-9.2	NA	-6.7	-4.7	35.7

NA: Not available r: Revised

Note: The components of the Leading Index of Metal Prices are the spread between the U.S. 10-year Treasury Note and the federal funds rate, and the 6-month smoothed growth rates of the deflated value of new orders for nonferrous metal products, the Organization for Economic Cooperation and Development (OECD) Total Leading Index, and the reciprocal of the trade-weighted average exchange value of the U.S. dollar against other major currencies. The Metal Industry Indicators (MII) Nonferrous Metals Price Index measures changes in end-of-the-month prices for primary aluminum, copper, lead, and zinc traded on the London Metal Exchange (LME). The steel scrap price used is the price of No. 1 heavy melting. Inventories consist of the deflated value of finished goods, work in progress, and raw materials for U.S.-produced nonferrous metal products (NAICS 3313, 3314, & 335929). Six-month smoothed growth rates are based on the ratio of the current month's index or price to its average over the preceding 12 months, expressed at a compound annual rate.

Sources: U.S. Geological Survey (USGS); American Metal Market (AMM); the London Metal Exchange (LME); U.S. Census Bureau; the Organization for Economic Cooperation and Development (OECD); and Federal Reserve Board.

CHART 1.
LEADING INDEX OF METAL PRICES AND GROWTH RATES
OF NONFERROUS METALS PRICE INDEX, INVENTORIES OF
NONFERROUS METAL PRODUCTS, AND SELECTED PRICES



Shaded areas are downturns in the nonferrous metals price index growth rate. Asterisks (*) are peaks and troughs in the economic activity reflected by the leading index of metal prices. Scale for nonferrous metal products inventories is inverted.

Table 2.
The Primary Metals Industry Indexes and Growth Rates

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
2009				
July	131.3r	-1.8r	84.6r	-15.9r
August	135.2r	5.9r	85.8r	-10.3r
September	136.6r	9.6r	86.1r	-6.6r
October	138.4r	13.1r	87.0r	-1.7r
November	141.8r	17.9r	89.9r	6.8r
December	144.6r	20.6r	92.2r	13.3r
2010				
January	144.7r	18.4r	92.6r	14.2r
February	144.5r	15.9r	94.0r	16.8r
March	147.3r	17.4r	96.3r	20.8r
April	148.1r	15.4r	96.9r	19.5r
May	148.3r	12.7r	98.0	19.3
June	142.6	2.4	NA	NA

NA: Not available **r:** Revised

Note: Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

Table 3.
The Contribution of Each Primary Metals Index Component to the Percent Change in the Index from the Previous Month

Leading Index	May	June
1. Average weekly hours, primary metals (NAICS 331)	0.4r	-1.5
2. Weighted S&P stock price index, machinery, construction and farm and industrial (December 30, 1994 = 100)	-0.3r	-0.5
3. Ratio of price to unit labor cost (NAICS 331)	0.2	NA
4. USGS metals price index growth rate	-0.7r	-1.1
5. New orders, primary metal products, (NAICS 331 & 335929) 1982\$	0.0	NA
6. Index of new private housing units authorized by permit	-0.3	NA
7. Growth rate of U.S. M2 money supply, 2005\$	0.9	NA
8. PMI	-0.1r	-0.8
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	0.1r	-3.9
Coincident Index	April	May
1. Industrial production index, primary metals (NAICS 331)	0.0r	0.3
2. Total employee hours, primary metals (NAICS 331)	1.1r	0.8
3. Value of shipments, primary metals products, (NAICS 331 & 335929) 1982\$	-0.7	-0.1
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	0.5r	1.1

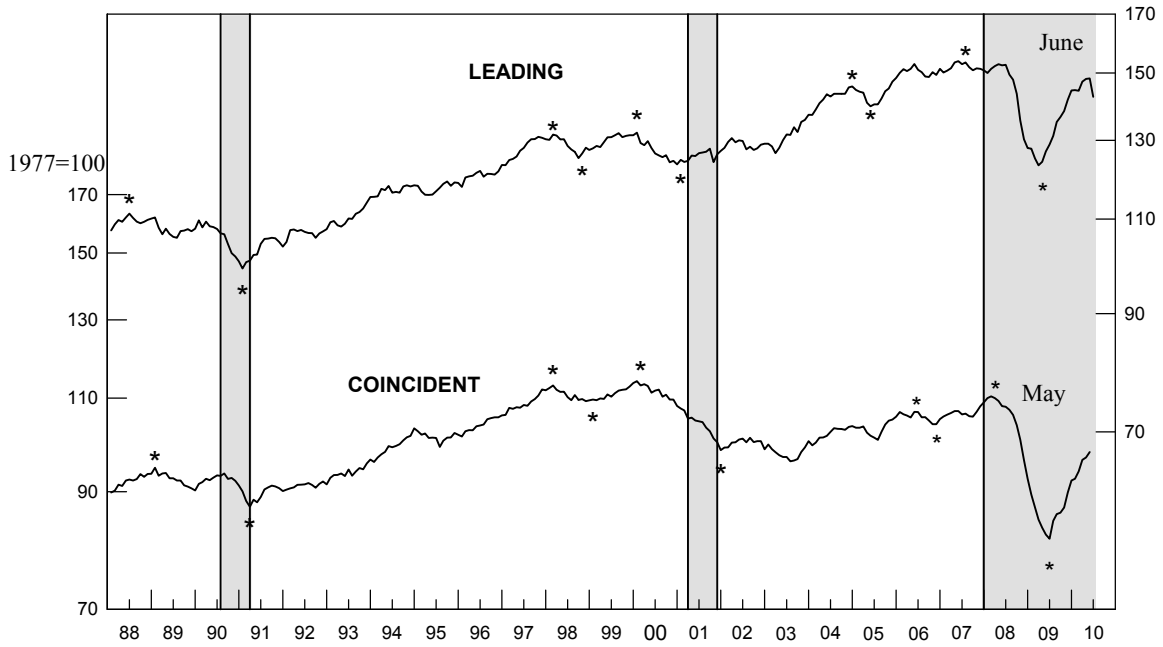
Sources: Leading: 1, Bureau of Labor Statistics; 2, Standard & Poor's and U.S. Geological Survey; 3, U.S. Geological Survey; 4, Journal of Commerce and U.S. Geological Survey; 5, U.S. Census Bureau and U.S. Geological Survey; 6, U.S. Census Bureau and U.S. Geological Survey; 7, Federal Reserve Board, Conference Board, and U.S. Geological Survey; and 8, Institute for Supply Management. Coincident: 1, Federal Reserve Board; 2, Bureau of Labor Statistics and U.S. Geological Survey; 3, U.S. Census Bureau and U.S. Geological Survey. All series are seasonally adjusted, except 2, 3, and 4 of the leading index.

NA: Not available **r:** Revised

Note: A component's contribution, shown in Tables 3, 5, 7, and 9, measures its effect, in percentage points, on the percent change in the index. Each month, the sum of the contributions plus the trend adjustment equals (except for rounding differences) the index's percent change from the previous month.

CHART 2.

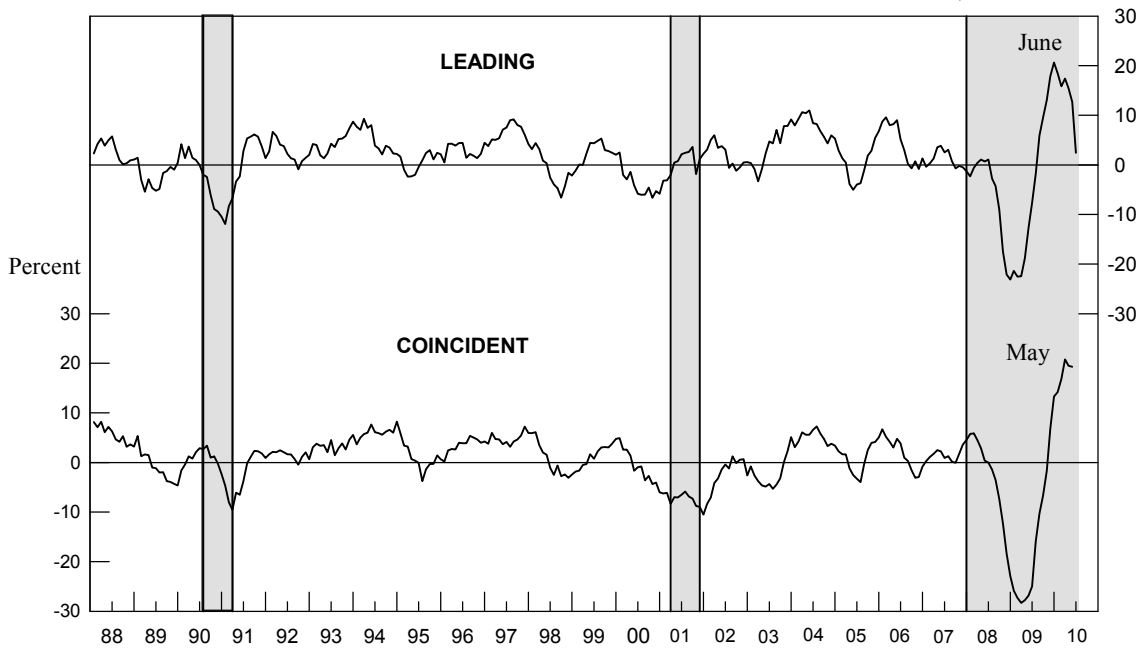
PRIMARY METALS: LEADING AND COINCIDENT INDEXES, 1988-2010 1977=100



Shaded areas are business cycle recessions. Asterisks (*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

CHART 3.

PRIMARY METALS: LEADING AND COINCIDENT GROWTH RATES, 1988-2010 Percent



Shaded areas are business cycle recessions.

The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

**Table 4.
The Steel Industry Indexes and Growth Rates**

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
2009				
June	103.0r	-5.3r	83.9r	-20.3r
July	102.4r	-3.8r	86.1r	-13.5r
August	105.3r	3.5r	87.7r	-7.6r
September	102.7r	0.2r	87.7r	-4.9r
October	105.2r	5.6r	91.0r	4.5r
November	106.1r	7.2r	92.5r	9.5r
December	107.5r	8.9r	94.1r	13.7r
2010				
January	107.8r	8.6r	95.4r	16.3r
February	108.3r	8.5r	96.0r	16.5r
March	111.1	12.6r	97.8r	18.9r
April	111.3r	11.2r	97.5r	15.9r
May	111.6	9.9	99.0	16.7

r: Revised

Note: Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

**Table 5.
The Contribution of Each Steel Index Component to the Percent Change
in the Index from the Previous Month**

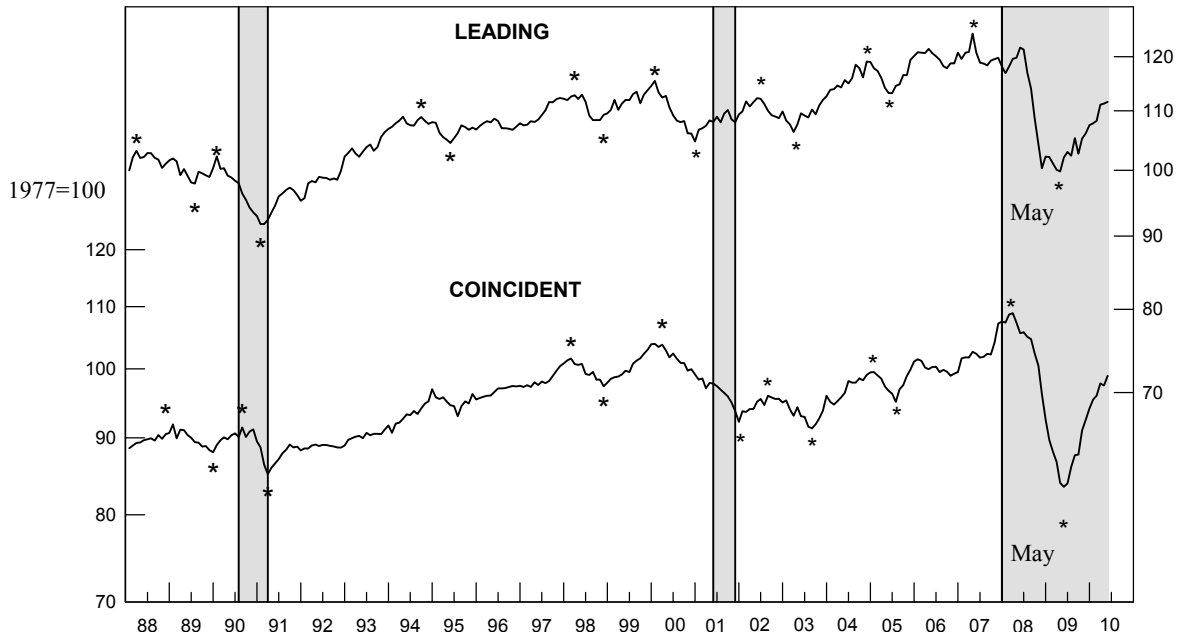
Leading Index	April	May
1. Average weekly hours, iron and steel mills (NAICS 3311 & 3312)	0.1	0.6
2. New orders, iron and steel mills (NAICS 3311 & 3312), 1982\$	-0.1r	0.1
3. Shipments of household appliances, 1982\$	0.1	-0.1
4. S&P stock price index, steel companies	0.2	-0.7
5. Retail sales of U.S. passenger cars and light trucks (units)	-0.1	0.2
6. Growth rate of the price of steel scrap (#1 heavy melting, \$/ton)	0.8	-0.3
7. Index of new private housing units authorized by permit	-0.5	-0.3
8. Growth rate of U.S. M2 money supply, 2005\$	-0.3	0.9
9. PMI	0.1	-0.1
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	0.3r	0.3
Coincident Index		
1. Industrial production index, iron and steel products (NAICS 3311 & 3312)	-0.2	0.3
2. Value of shipments, iron and steel mills (NAICS 3311 & 3312), 1982\$	-0.6	0.2
3. Total employee hours, iron and steel mills (NAICS 3311 & 3312)	0.3	0.9
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	-0.4	1.5

Sources: Leading: 1, Bureau of Labor Statistics; 2, U.S. Census Bureau and U.S. Geological Survey; 3, U.S. Census Bureau and U.S. Geological Survey; 4, Standard & Poor's; 5, U.S. Bureau of Economic Analysis and American Automobile Manufacturers Association; 6, Journal of Commerce and U.S. Geological Survey; 7, U.S. Census Bureau and U.S. Geological Survey; 8, Federal Reserve Board, Conference Board, and U.S. Geological Survey; and 9, Institute for Supply Management. Coincident: 1, Federal Reserve Board; 2, U.S. Census Bureau and U.S. Geological Survey; 3, Bureau of Labor Statistics and U.S. Geological Survey. All series are seasonally adjusted, except 4 and 6 of the leading index.

r: Revised

CHART 4.
STEEL: LEADING AND COINCIDENT INDEXES, 1988-2010

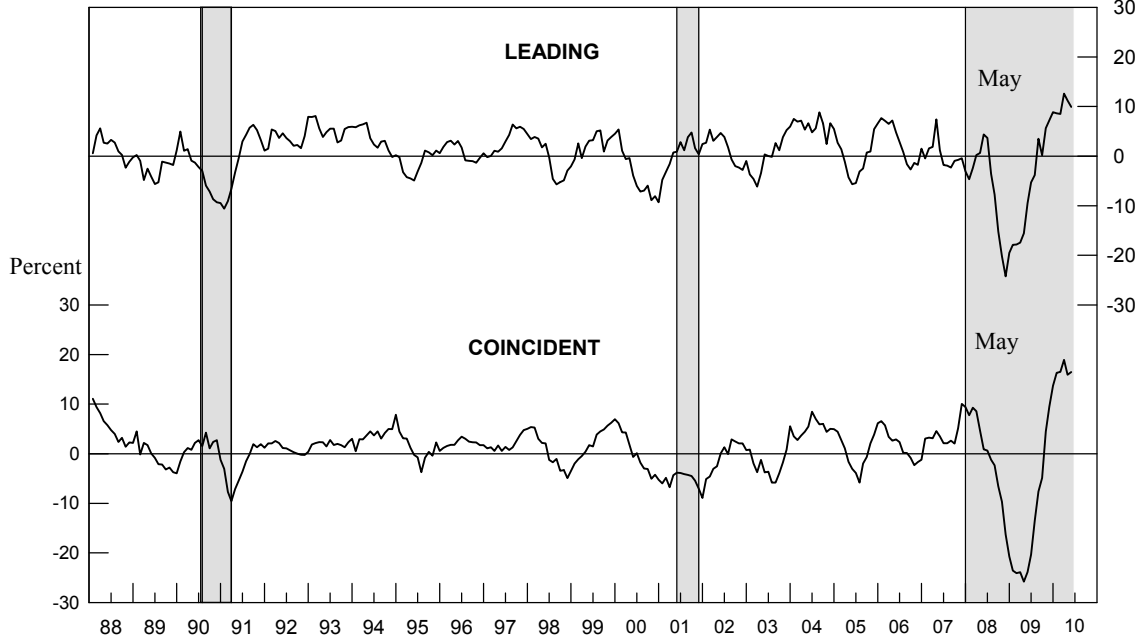
1977=100



Shaded areas are business cycle recessions. Asterisks (*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

CHART 5.
STEEL: LEADING AND COINCIDENT GROWTH RATES, 1988-2010

Percent



Shaded areas are business cycle recessions.

The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

Table 6.
The Copper Industry Indexes and Growth Rates

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
2009				
June	110.0r	-4.9r	84.4r	-22.0r
July	113.0r	2.0r	86.6r	-15.8r
August	117.6r	10.9r	89.8r	-7.7r
September	117.4r	11.1r	90.7r	-4.1r
October	115.9r	9.1r	88.8	-5.9r
November	122.1r	19.8r	94.6r	8.3r
December	123.2r	19.7r	93.1r	5.8r
2010				
January	120.4r	12.2r	91.9r	3.9r
February	121.1r	11.8r	91.5	4.0r
March	124.1r	14.6r	95.3	12.1r
April	124.0	11.8r	96.5r	13.9r
May	121.9	6.0	96.4	12.0

r: Revised

Note: Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

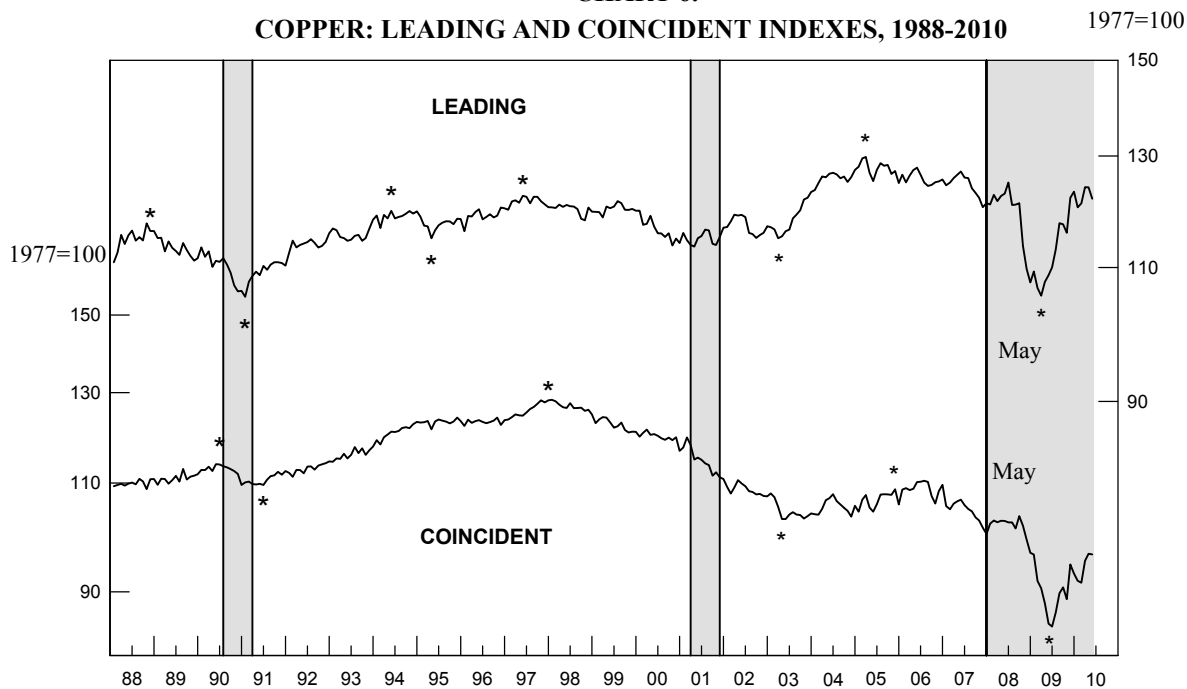
Table 7.
The Contribution of Each Copper Index Component to the Percent Change in the Index from the Previous Month

	April	May
Leading Index		
1. Average weekly hours, nonferrous metals except aluminum (NAICS 3314)	0.6	0.3
2. New orders, nonferrous metal products, (NAICS 3313, 3314, & 335929) 1982\$	-0.4	0.1
3. S&P stock price index, building products companies	0.8	-1.0
4. LME spot price of primary copper	-0.3	-0.3
5. Index of new private housing units authorized by permit	-0.7	-0.4
6. Spread between the U.S. 10-year Treasury Note and the federal funds rate	0.1	-0.3
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	0.1	-1.6
Coincident Index		
1. Industrial production index, primary smelting and refining of copper (NAICS 331411)	0.2r	0.0
2. Total employee hours, nonferrous metals except aluminum (NAICS 3314)	1.0r	-0.2
3. Copper refiners' shipments (short tons)	NA	NA
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	1.3	-0.1

Sources: Leading: 1, Bureau of Labor Statistics; 2, U.S. Census Bureau and U.S. Geological Survey; 3, Standard & Poor's; 4, London Metal Exchange; 5, U.S. Census Bureau and U.S. Geological Survey; 6, Federal Reserve Board and U.S. Geological Survey. Coincident: 1, Federal Reserve Board; 2, Bureau of Labor Statistics; 3, American Bureau of Metal Statistics, Inc. and U.S. Geological Survey. All series are seasonally adjusted, except 3, 4, and 6 of the leading index.

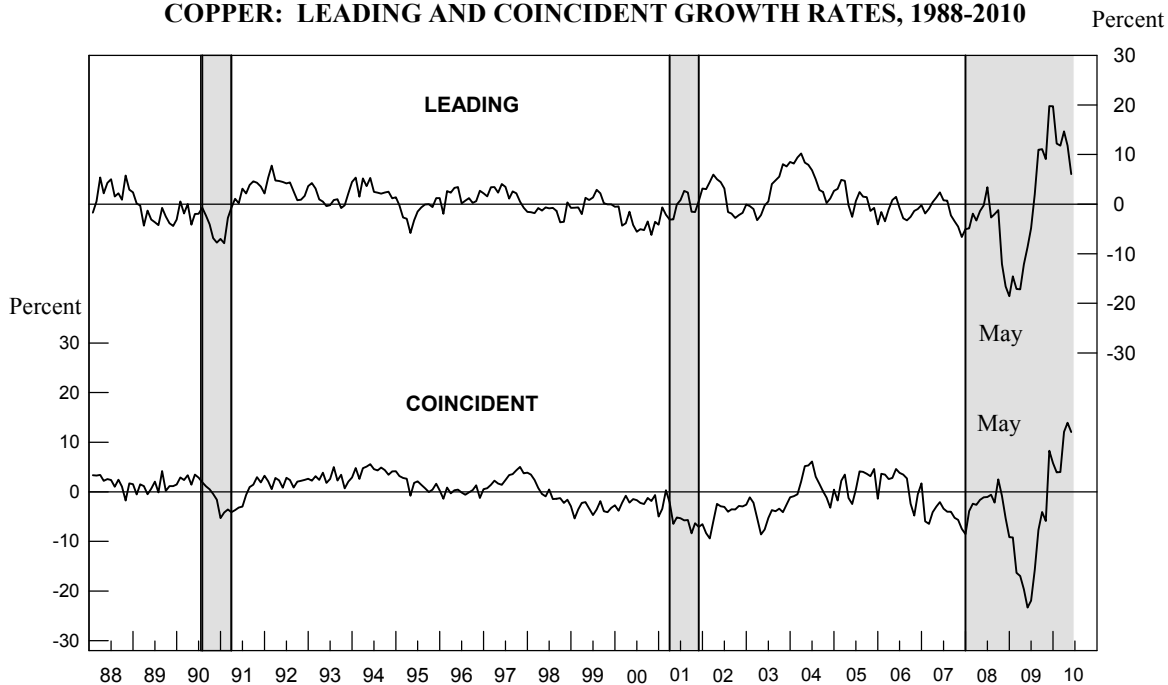
r: Revised NA: Not available

CHART 6.
COPPER: LEADING AND COINCIDENT INDEXES, 1988-2010



Shaded areas are business cycle recessions. Asterisks (*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

CHART 7.
COPPER: LEADING AND COINCIDENT GROWTH RATES, 1988-2010

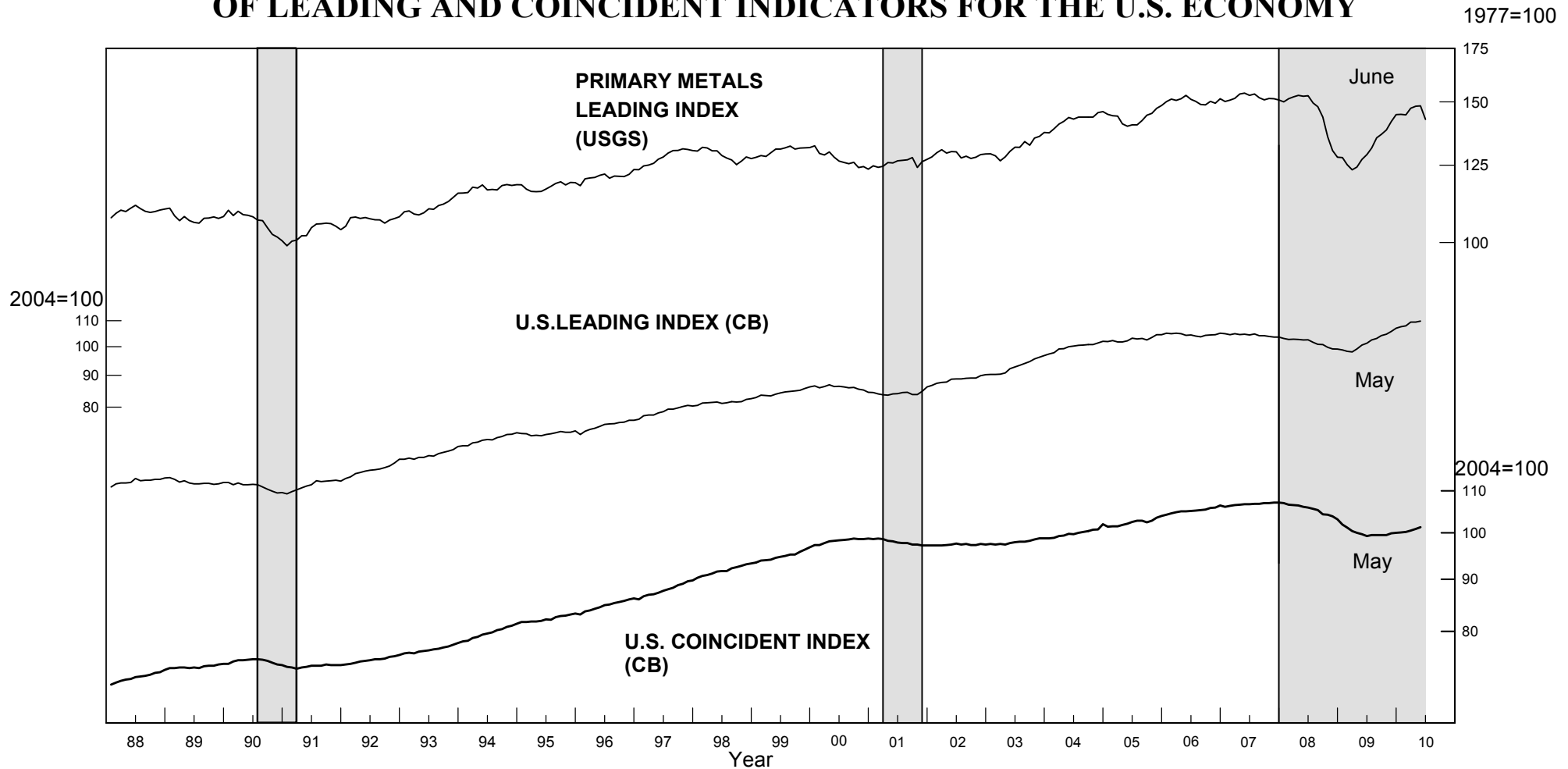


Shaded areas are business cycle recessions.

The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

Chart 8.

**PRIMARY METALS LEADING INDEX AND COMPOSITE INDEXES
OF LEADING AND COINCIDENT INDICATORS FOR THE U.S. ECONOMY**



Shaded areas are business cycle recessions.

Sources: U.S. Geological Survey (USGS) and Conference Board (CB).

July 2010