



Metal Industry Indicators

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

August 15, 2008

The **primary metals leading index** fell 2.8% to 147.7 in July from a revised 152.0 in June, and its 6-month smoothed growth rate sank to -4.0% in July from a revised 1.0% in June. 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. The deeply negative growth rate for the primary metals leading index is strongly indicating that slowdowns in the U.S. and other industrialized economies will continue to decrease metals demand in the near future. However, the metals demand from Asian economies, while not as robust as last year, will likely buoy U.S. primary metals industry activity growth some in the months directly ahead.

Three of the four indicators that were available for the July index calculation declined, and one increased. The declining stock price index combining construction and farm machinery companies and industrial machinery companies contributed -1.6 percentage points to the net decrease in the primary metals leading index. A one-half hour shorter average workweek in primary metals establishments brought the leading index down another 1.4 percentage point in July. The PMI decreased in July, but settled on the threshold that denotes that manufacturing activity could increase or decline in the near future. Its contribution rounded to -0.1 percentage points. In contrast, the JOC-ECRI metals price index growth rate contributed 0.1 percentage point. The July 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 June. The steel leading index decreased 0.7% in June, with five of its nine indicators declining. Sharp declines in the steel scrap price growth rate and the inflation-adjusted M2 money supply growth rate made the largest negative contributions to the steel leading index. Although,

the steel leading index growth rate is still positive, growth in U.S. steel industry activity could be slow in the near term. The copper leading index increased 0.8% in June, with four of its six indicators increasing. A jump in the index of new housing permits issued in June had the strongest positive pull on the copper leading index. A rebound in the price of copper and added new orders for nonferrous metal products also made strong positive contributions to the leading index. However, a pullback in overtime hours in copper, rolling, drawing, extruding, and alloying plants held the leading index back some. While the copper leading index growth rate rose, it is not yet suggesting sustained growth in the domestic copper industry in the near term.

The **metals price leading index** was revised to 105.9 in May, and it remained at that level in June. June is the latest month for which it is available. However, its 6-month smoothed growth rate edged up to -1.1% in June from a revised -1.2% in May. Two of its three available indicators made positive contributions to the leading index. The high growth rate of the inflation-adjusted value of new orders for U.S. nonferrous metal products made the largest positive contribution, 0.7 percentage points, to the leading index. The wider yield spread between the U.S. 10-year Treasury Note and the federal funds rate contributed 0.3 percentage points. In contrast, the growth rate of the trade-weighted average exchange value of other major currencies against the U.S. dollar decreased in June, contributing -0.9 percentage points to the leading index. The fourth component, the growth rate of the Economic Cycle Research Institute's (ECRI) 18-Country Long Leading Index, is only available through May. It moved slightly deeper into negative territory, indicating further decreases for some major global economies. The ECRI 18-Country Long Leading Index gauges future economic activity for major industrialized countries and signals changes in the growth of economic activity about 5 months in advance. 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 in June. It climbed above zero for the first time in 5 months. This, along with the slowdowns in the U.S. and other industrialized economies will put downward pressure on metals price growth. Notwithstanding, the metals demand in emerging economies could boost some metals price growth.

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

Primary Metals	0.8%
Steel	1.0%
Copper	0.6%

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 by the Minerals Information Team. 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 July and August is scheduled for release on the World Wide Web at 10:00 a.m. EDT, Friday, September 19.

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**

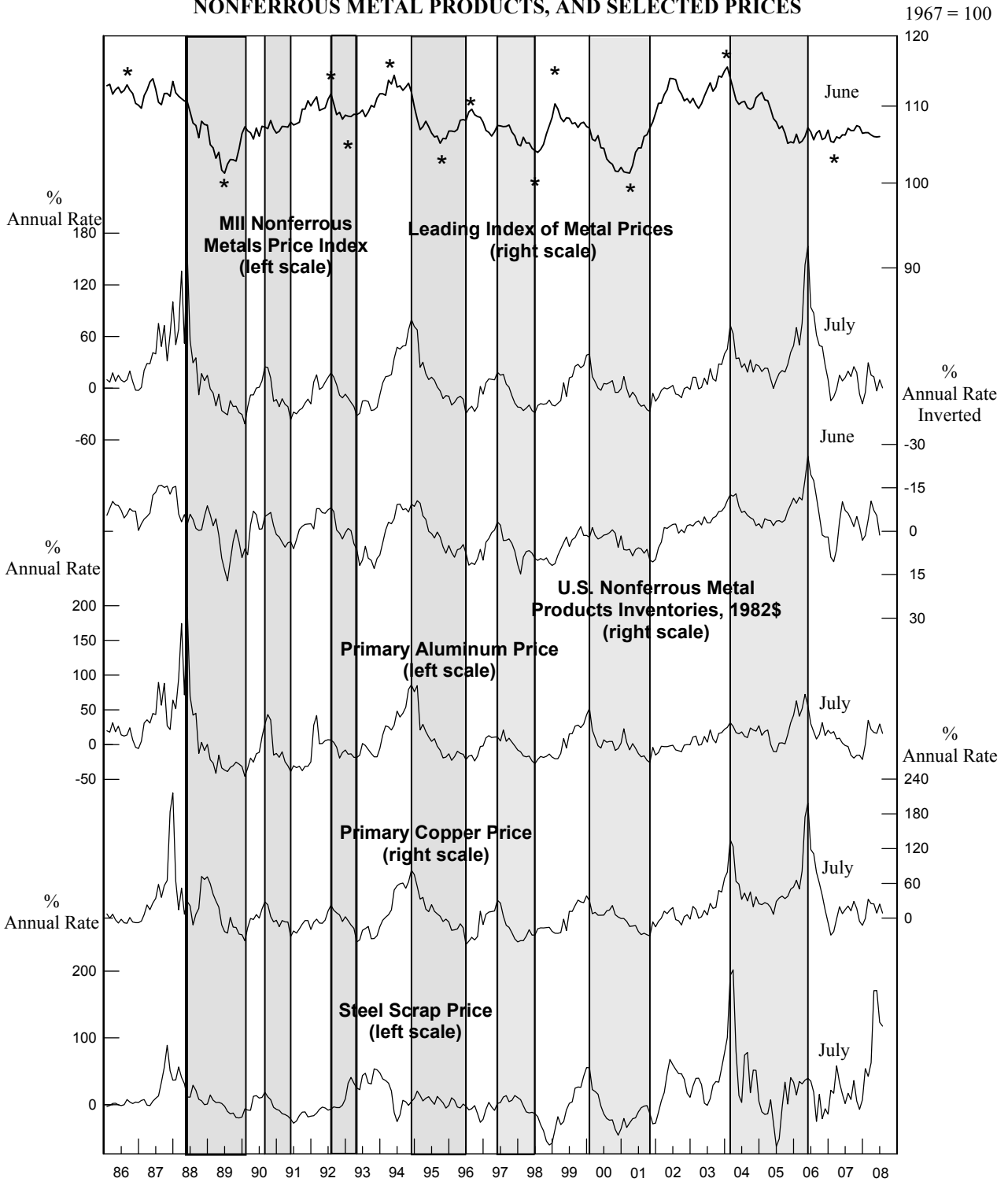
	Leading Index of Metal Prices (1967=100)	Six-Month Smoothed Growth Rates				
		MII Nonferrous Metals Price Index	U.S. Nonferrous Metal Products Inventories (1982\$)	Primary Aluminum	Primary Copper	Steel Scrap
2007						
June	106.1	12.3	-7.2	-1.4	14.7	1.8
July	107.0	19.9	-6.2	-2.8	20.9	17.4
August	106.7	13.6	-4.1	-15.4	12.4	7.7
September	106.7	25.1	-1.6	-19.4	28.9	36.2
October	107.4r	18.2	-5.1	-15.5	16.3	5.6
November	107.2r	-6.6	-1.7	-15.3	-5.7	-6.8
December	106.4r	-18.1	3.1	-21.4	-12.6	7.4
2008						
January	106.4r	-4.8	1.5	0.3	-0.9	54.1
February	106.4r	29.6	-4.0r	34.9	32.5	42.5
March	106.1r	15.1	-10.4	21.6	25.1	62.7
April	105.9	13.2	-7.2	17.6	24.6	170.9
May	105.9r	-3.2	-5.4r	16.2	8.7	171.1
June	105.9	9.7	1.3	29.7	24.2	123.6
July	NA	0.4	NA	16.1	8.7	117.7

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 Economic Cycle Research Institute's 18-Country Long 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 Economic Cycle Research Institute, Inc. (ECRI); 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

	<u>Leading Index</u>		<u>Coincident Index</u>	
	<u>(1977 = 100)</u>	<u>Growth Rate</u>	<u>(1977 = 100)</u>	<u>Growth Rate</u>
2007				
August	152.3	-0.1r	105.4	0.2
September	150.7r	-2.1r	105.2	0.1
October	150.8r	-2.1r	105.8	1.3
November	149.1r	-3.9r	106.2	1.9
December	147.8r	-5.4r	106.2	1.7
2008				
January	148.2r	-4.5r	107.1	3.0
February	149.8r	-2.4r	106.7	1.9
March	151.9r	0.3	106.7	1.6r
April	152.7r	1.5r	105.9r	0.1r
May	152.0r	0.8r	104.4r	-2.7r
June	152.0r	1.0r	105.2	-1.2
July	147.7	-4.0	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		June	July
1. Average weekly hours, primary metals (NAICS 331)		0.3r	-1.4
2. Weighted S&P stock price index, machinery, construction and farm and industrial (December 30, 1994 = 100)		-0.3r	-1.6
3. Ratio of price to unit labor cost (NAICS 331)		0.7	NA
4. JOC-ECRI metals price index growth rate		-0.8r	0.1
5. New orders, primary metal products, (NAICS 331 & 335929) 1982\$		0.1	NA
6. Index of new private housing units authorized by permit		0.8	NA
7. Growth rate of U.S. M2 money supply, 2000\$		-1.0	NA
8. PMI		0.1r	-0.1
Trend adjustment		0.0	0.0
Percent change (except for rounding differences)		-0.1r	-3.0
Coincident Index		May	June
1. Industrial production index, primary metals (NAICS 331)		-0.5r	0.5
2. Total employee hours, primary metals (NAICS 331)		-0.5r	0.2
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)		-1.6r	0.7

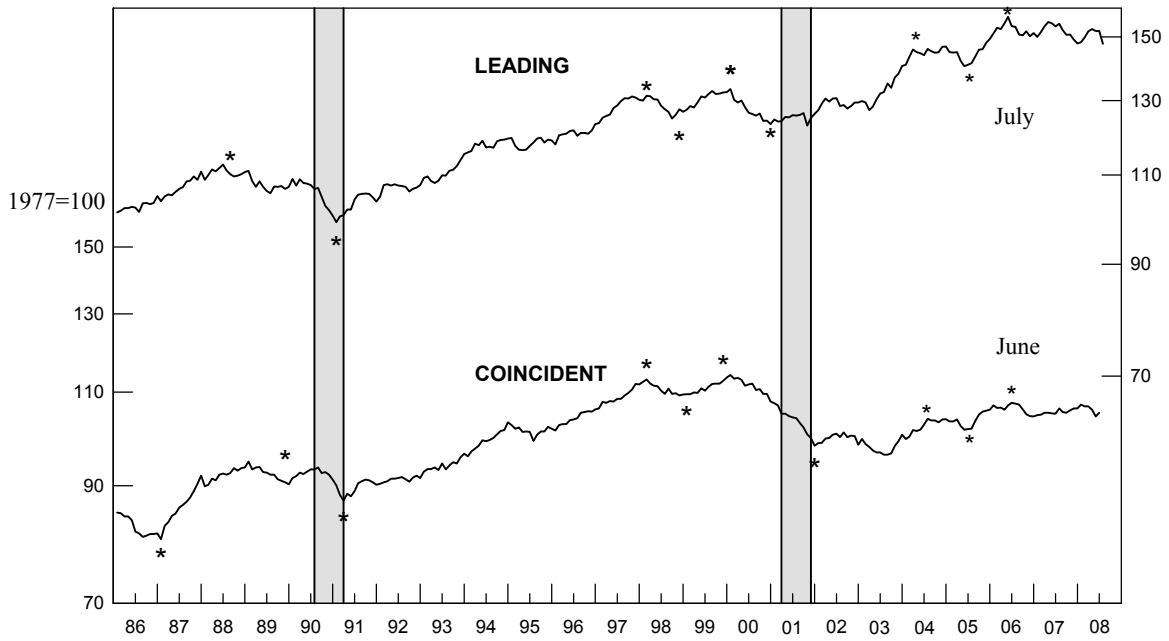
Sources: Leading: 1, Bureau of Labor Statistics; 2, Standard & Poor's and U.S. Geological Survey; 3, U.S. Geological Survey; 4, Journal of Commerce and Economic Cycle Research Institute, Inc.; 5, U.S. Census Bureau and U.S. Geological Survey; 6, U.S. Census Bureau and U.S. Geological Survey; 7, Federal 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.

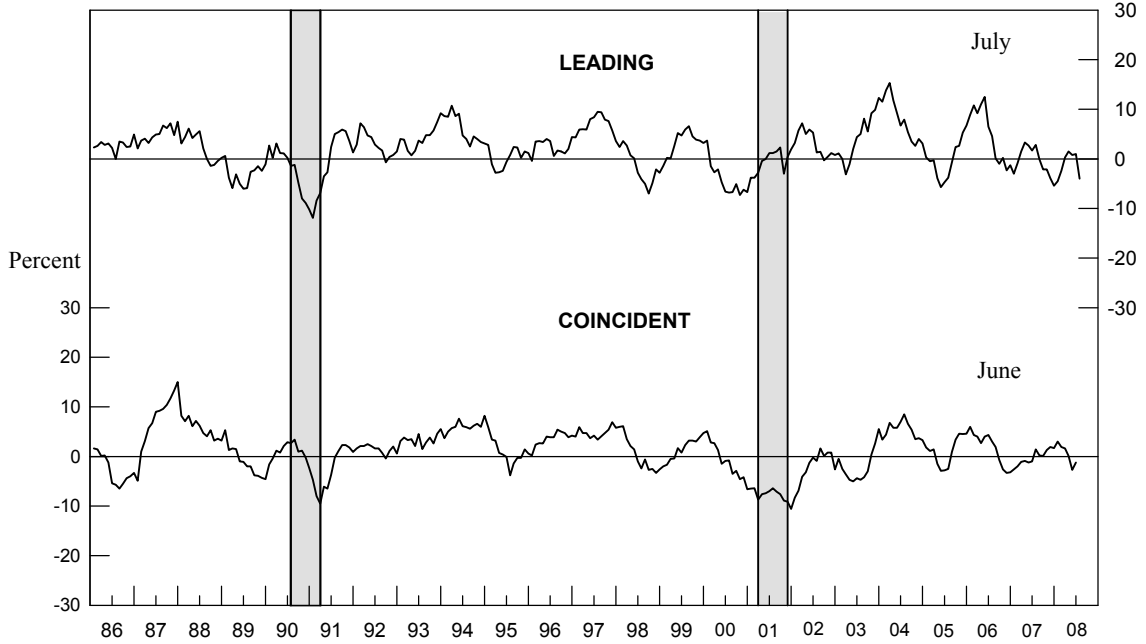
PRIMARY METALS: LEADING AND COINCIDENT INDEXES, 1986-2008 1977=100



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, 1986-2008 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
2007				
July	118.9r	-1.1r	102.2	2.4
August	118.2r	-2.0r	102.1	1.9
September	118.4r	-1.8r	101.5	0.9
October	118.4r	-1.8r	102.6	2.8
November	118.3r	-2.0r	104.2	5.4
December	116.1r	-5.5r	103.8	3.9
2008				
January	116.1r	-5.0r	103.0	1.7
February	117.3r	-2.9r	103.9	3.1
March	119.2	0.4r	103.9	2.7
April	119.8	1.6r	102.7	0.0
May	121.3r	4.7	100.8r	-3.4r
June	120.5	3.3	101.8	-1.5

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	May	June
1. Average weekly hours, iron and steel mills (NAICS 3311 & 3312)	-0.2	0.4
2. New orders, iron and steel mills (NAICS 3311 & 3312), 1982\$	-0.5	0.1
3. Shipments of household appliances, 1982\$	0.0	-0.3
4. S&P stock price index, steel companies	0.5	-0.1
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)	2.1	-0.6
7. Index of new private housing units authorized by permit	0.0	0.7
8. Growth rate of U.S. M2 money supply, 2000\$	-0.6r	-0.9
9. PMI	0.1	0.1
Trend adjustment	0.0	0.0
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Percent change (except for rounding differences)	1.3r	-0.8
Coincident Index		
1. Industrial production index, iron and steel products (NAICS 3311 & 3312)	-0.4r	0.5
2. Value of shipments, iron and steel mills (NAICS 3311 & 3312), 1982\$	-1.0r	0.0
3. Total employee hours, iron and steel mills (NAICS 3311 & 3312)	-0.5r	0.4
Trend adjustment	0.1	0.1
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Percent change (except for rounding differences)	-1.8r	1.0

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, 1986-2008

1977=100

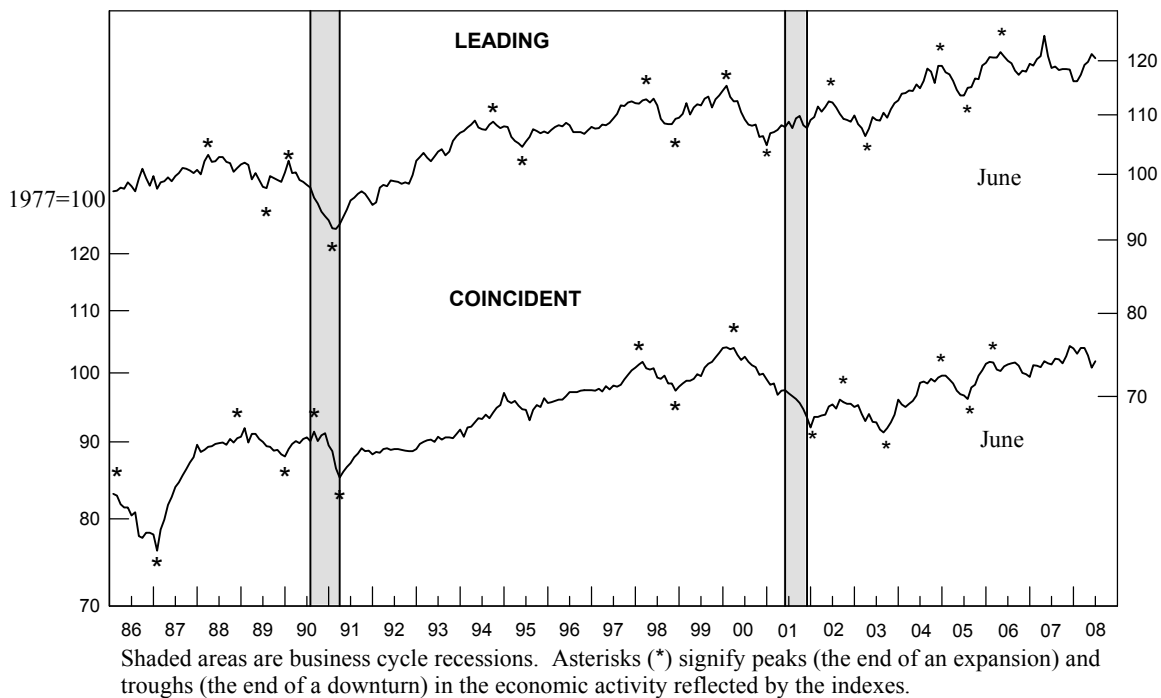
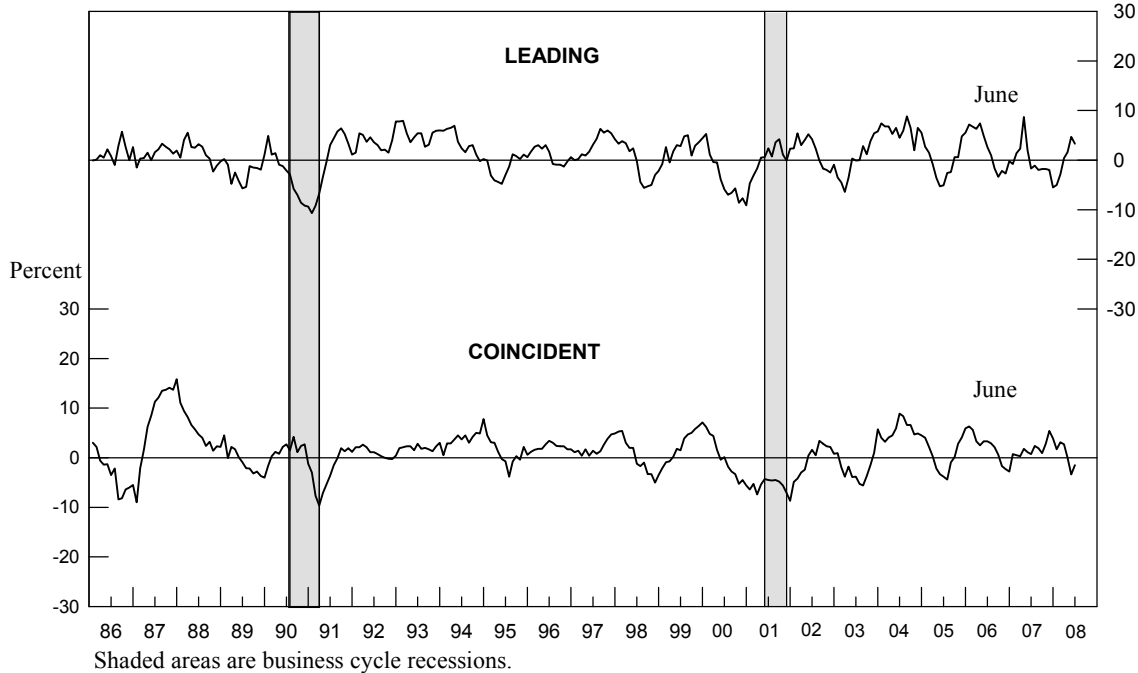


CHART 5.
STEEL: LEADING AND COINCIDENT GROWTH RATES, 1986-2008

Percent



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
2007				
July	127.9	2.5	106.6	2.0
August	125.8	-0.7	104.4	-1.2
September	124.3	-2.7	103.6	-1.9
October	124.6	-2.2	103.5	-1.8
November	123.2	-4.2	102.2	-4.3
December	124.2	-2.7	101.3	-5.5
2008				
January	122.6	-4.8	102.2	-3.2
February	124.9	-1.2	103.2	-1.2
March	124.2	-2.0	104.6	1.2
April	124.1	-1.9	104.4	0.9
May	125.3r	0.2r	105.0r	2.1
June	126.3	2.1	105.6	3.2

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.

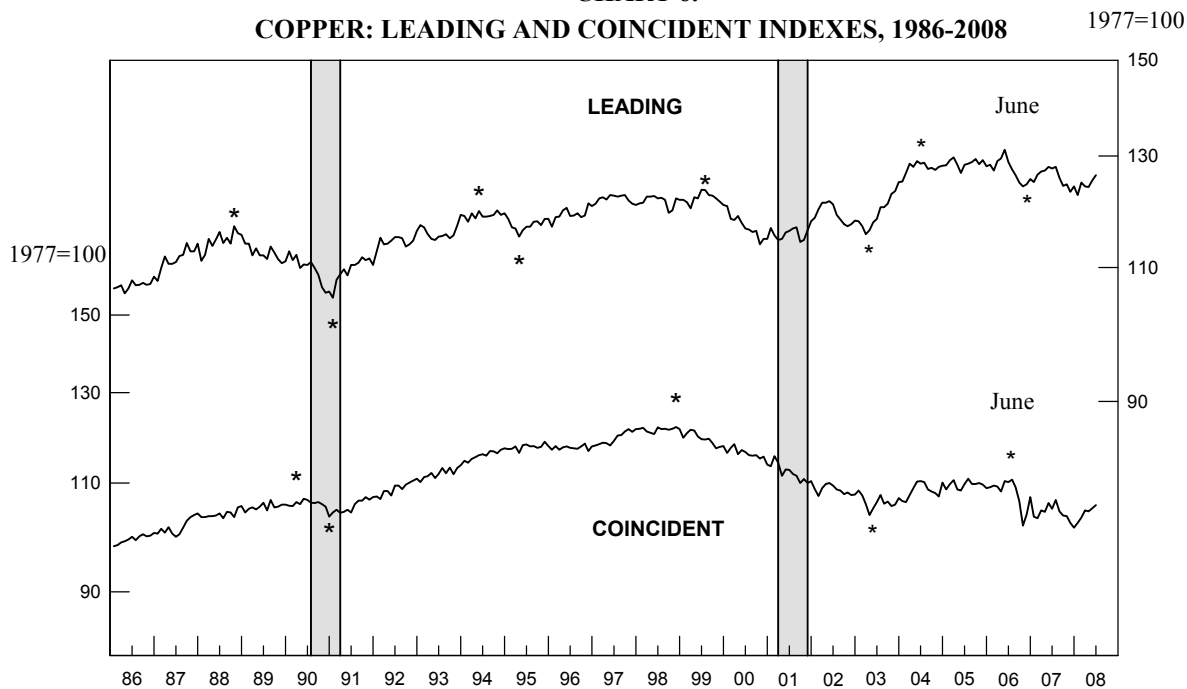
Table 7.
The Contribution of Each Copper Index Component to the Percent Change in the Index from the Previous Month

	May	June
Leading Index		
1. Average weekly overtime hours, copper rolling, drawing, extruding, and alloying (NAICS 33142)	1.3r	-0.8
2. New orders, nonferrous metal products, (NAICS 3313, 3314, & 335929) 1982\$	-0.1r	0.4
3. S&P stock price index, building products companies	-0.2	-0.5
4. LME spot price of primary copper	-0.4	0.4
5. Index of new private housing units authorized by permit	0.0	1.0
6. Spread between the U.S. 10-year Treasury Note and the federal funds rate	0.4	0.2
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	1.0r	0.7
Coincident Index		
1. Industrial production index, primary smelting and refining of copper (NAICS 331411)	-0.3	0.3
2. Total employee hours, copper rolling, drawing, extruding, and alloying (NAICS 33142)	0.9	0.1
3. Copper refiners' shipments (short tons)	NA	NA
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	0.7	0.5

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.

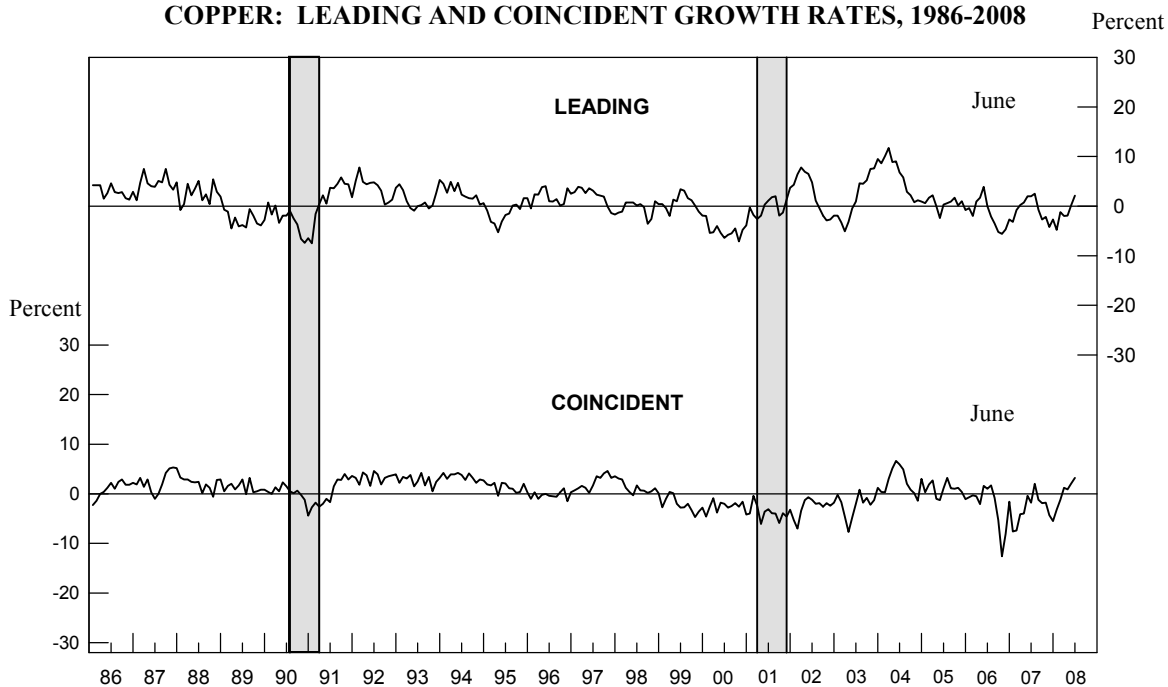
r: Revised NA: Not available

CHART 6.
COPPER: LEADING AND COINCIDENT INDEXES, 1986-2008



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.

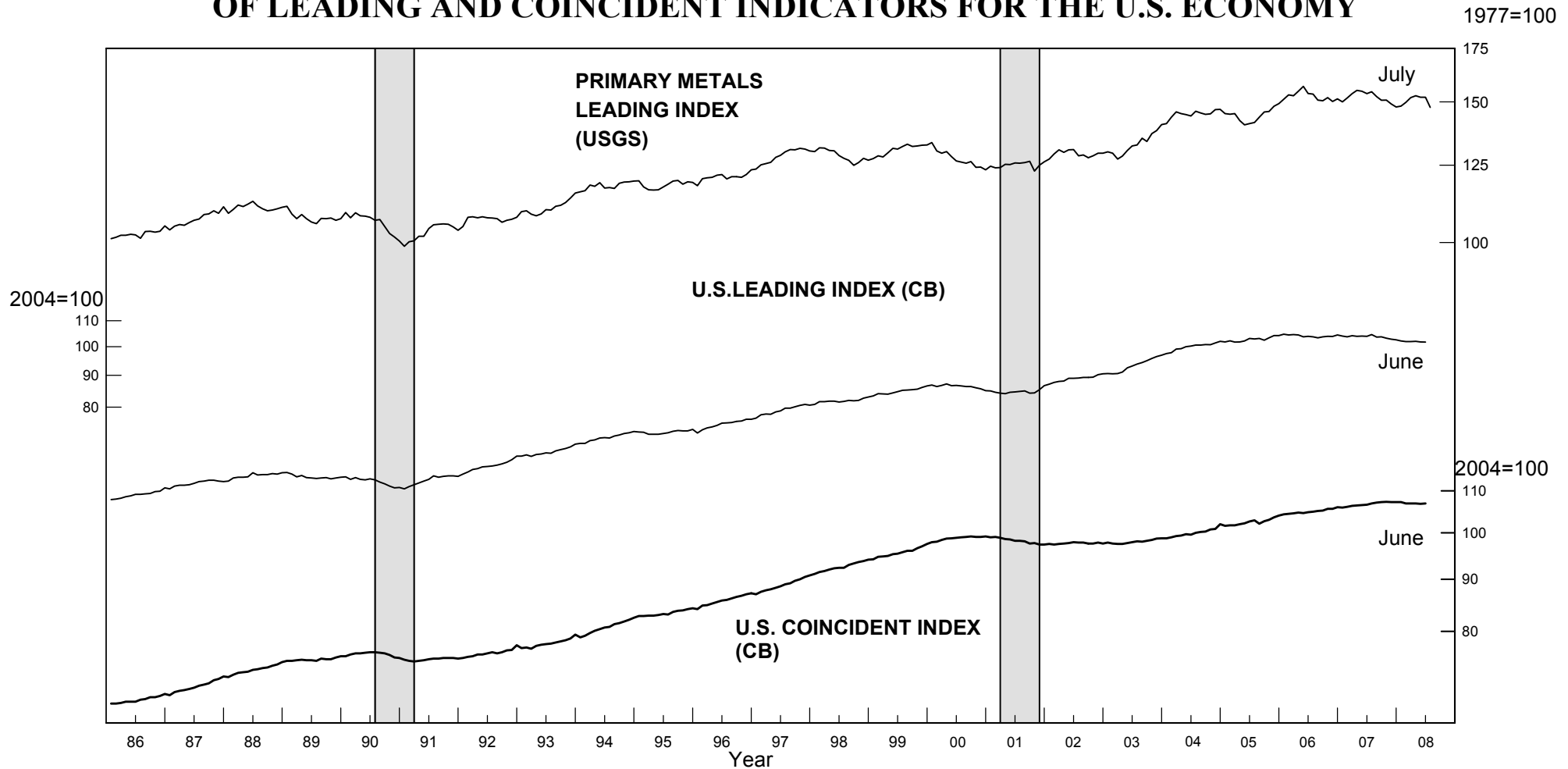
CHART 7.
COPPER: LEADING AND COINCIDENT GROWTH RATES, 1986-2008



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).

August 2008