# Nonmetallic Mineral Products Industry Indexes

March 2013

This report analyzes and explains the U. S. Geological Survey's (USGS) monthly leading and coincident indexes for the nonmetallic mineral products industry (NAICS 327). This industry was classified as the stone, clay, glass, and concrete products industry (SIC 32) under the Standard Industrial Classification system, which has been replaced by the North American Industry Classification System. Henceforth, the industry will be referred to as the nonmetallic mineral products industry. This industry processes certain industrial minerals, minerals that are neither metals nor fuels, into useful products. More than 50 percent of the total value of these products is shipped to the highly cyclical construction industry. The indexes have been computed for each month back to 1948 and are available on the World Wide Web at: http://minerals.usgs.gov/minerals/pubs/imii/scghist.txt

### Analysis

The nonmetallic mineral products leading index increased 2.2% to 223.0 in February from a revised 218.3 in January, and its 6-month smoothed growth rate increased to 12.2% from a revised 9.3% in January. The 6-month smoothed growth rate is a compound annual rate that measures the near-term trend. A growth rate above +1.0% is usually a signal of future growth in industry activity, while a growth rate below -1.0% points to a decrease in activity.[1] The consistently rising leading index growth rate is indicating that the recovery in nonmetallic mineral products industry activity is likely to continue in the foreseeable future. Record low interest rates, rising employment, and low housing inventories continue to spur residential construction activity. Although nonresidential construction activity growth has slowed, residential construction activity is likely to buoy nonmetallic mineral products demand in 2013.

All four of the leading index components increased in February. A one-half hour longer average workweek in nonmetallic mineral products establishments in February made the largest contribution, 0.9 percentage points, to the overall gain in the leading index. The steadily rising S&P stock price index for building products companies continued to reach new recent highs. It contributed 0.6 percentage points. Similarly, the index for new housing permits reached a near 5-year high. It contributed 0.4 percentage points to the leading index. Inventories of new homes, reported by the Census Bureau, stand at a 4.4 month supply, which is well below normal inventory trends according to the National Association of Home Builders. This is fueling the demand for nonmetallic mineral products. A wider yield spread between the U.S. 10-year Treasury note and the Federal Reserve's federal funds rate contributed 0.1 percentage point (table 2).

The coincident index, which measures current industry activity, increased 2.0% to 125.5 in February from a revised 123.0 in January. Its 6-month smoothed growth rate increased to 6.7% in February from an upwardly revised 3.0% in January.

### Explanation

The USGS uses the same methodology for the nonmetallic mineral products indexes that it uses for the metal manufacturing indexes in the *Metal Industry Indicators*. This methodology consists of constructing and tracking, each month, two composite indexes of diverse economic indicators. The composite leading index for nonmetallic mineral products signals, several months in advance, major changes in current economic activity as measured by a composite coincident index. The construction of the leading and coincident indexes follows well-established procedures for the analysis of cyclical indicators that were developed at the National Bureau of Economic Research, the U.S. Department of Commerce, and the Center for International Business Cycle Research.

[1] The 6-month smoothed growth rate is a compound annual rate based on the ratio of the current month's index to its average level during the preceding 12 months.

### Coincident indicators

The indicators selected to represent current activity in the coincident index for the nonmetallic mineral products industry are industrial production, the value of shipments in 1982 dollars, and total employee hours worked. Previously, these indicators reflected activity in the stone, clay, glass, and concrete products industry (SIC 32). The source agencies for these data, the Bureau of Labor Statistics (BLS), U.S. Census Bureau, and the Federal Reserve Board have completed their conversions to the NAICS. These indicators now reflect activity in the nonmetallic mineral products industry (NAICS 327). According to BLS, approximately 99% of the employment in NAICS 327 was classified in SIC 32.

### Leading indicators

Leading indicators represent various economic activities that can point to near-term changes in industry activity. The following four indicators proved to be reliable at signaling major changes in economic activity in the nonmetallic mineral products industry: 1) average weekly hours worked in the nonmetallic mineral products industry; 2) an index of new private housing units authorized by building permits in the United States; 3) the Standard & Poor's stock price index for building products companies; and 4) the yield spread between the 10-year Treasury Note interest rate and the federal funds interest rate. The composite leading index constructed from these indicators turned before the coincident index at every trough and at 89% of the peaks. Although the leading index did not lead the coincident index at every peak, the average leads at troughs and peaks were 8.1 and 9.4 months, respectively, for an overall lead of 8.8 months.

This report was produced at the U.S. Geological Survey (USGS) by the National Minerals Information Center. For more information about these indexes, contact Gail James (703-648-4915), e-mail (gjames@usgs.gov).

The USGS also produces *Mineral Industry Surveys* (MIS) or *Minerals Yearbook* chapters for most industrial minerals important to the U.S. economy. These include MIS for Cement, Clays, Crushed Stone, Dimension Stone, and Construction Sand and Gravel. Information on how to access these reports is available on the World Wide Web at: http://minerals.usgs.gov/minerals/pubs

**Tables and charts follow.**

## Table 1.
## The Nonmetallic Mineral Products Industry Indexes and Growth Rates

| | Leading Index | | Coincident Index | |
|---|---|---|---|---|
| | (1977 = 100) | Growth Rate | (1977 = 100) | Growth Rate |
| **2012** | | | | |
| March | 206.2 | 6.6 | 122.1r | 1.9 |
| April | 204.9 | 5.0 | 122.1r | 1.5 |
| May | 206.2 | 6.0 | 120.8r | -0.7r |
| June | 205.9 | 5.6 | 120.3r | -1.4r |
| July | 206.6 | 5.9 | 119.4r | -2.9r |
| August | 205.5 | 4.4 | 118.9r | -3.4r |
| September | 210.9 | 8.6 | 119.2r | -2.6r |
| October | 211.2 | 7.3 | 119.6r | -1.8r |
| November | 214.2 | 8.8 | 121.1r | 0.7r |
| December | 218.2r | 10.9r | 123.8r | 4.7r |
| **2013** | | | | |
| January | 218.3r | 9.3r | 123.0r | 3.0r |
| February | 223.0 | 12.2 | 125.5 | 6.7 |

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 2.
## The Contribution of Nonmetallic Mineral Products Index Component to the Percent Change in the Index from the Previous Month

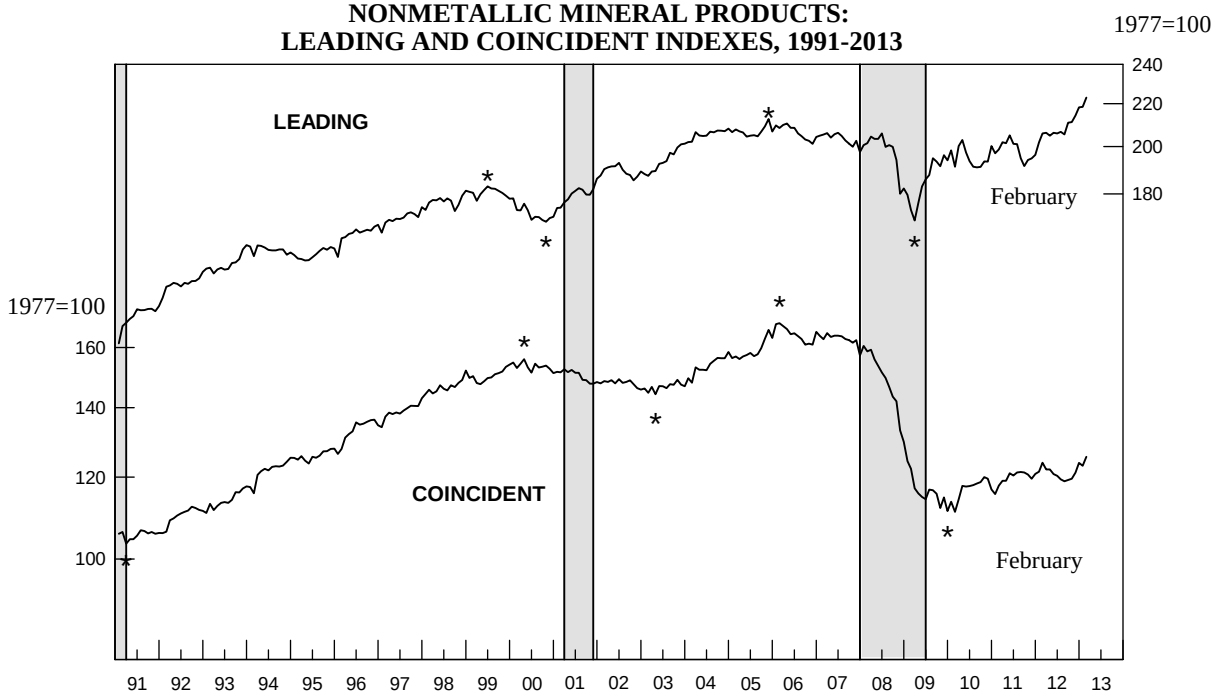
| **Leading Index** | **January** | **February** |
|---|---|---|
| 1. Average weekly hours, nonmetallic mineral products (NAICS 327) | -1.0 | 0.9 |
| 2. Index of new private housing units authorized by permits | 0.0r | 0.4 |
| 3. S&P stock price index, building products companies | 0.8 | 0.6 |
| 4. Spread between the U.S. 10-year Treasury Note and the federal funds rate | 0.2 | 0.1 |
| Trend adjustment | 0.1 | 0.1 |
| Percent change (except for rounding differences) | 0.1r | 2.1 |
| **Coincident Index** | | |
| 1. Industrial production index, nonmetallic mineral products (NAICS 327) | -0.1r | 0.7 |
| 2. Total employee hours, nonmetallic mineral products (NAICS 327) | -0.6r | 1.1 |
| 3. Shipments of nonmetallic mineral products (NAICS 327) | -0.1 | NA |
| Trend adjustment | 0.1 | 0.1 |
| Percent change (except for rounding differences) | -0.7r | 1.9 |

**Sources:** Leading: 1, Bureau of Labor Statistics; 2, U.S. Census Bureau and U.S. Geological Survey; 3, Standard & Poor's; 4, Federal Reserve Board, Conference Board, and U.S. Geological Survey. 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 3 of the leading index.

r: Revised NA: Not available

**Chart 1.**

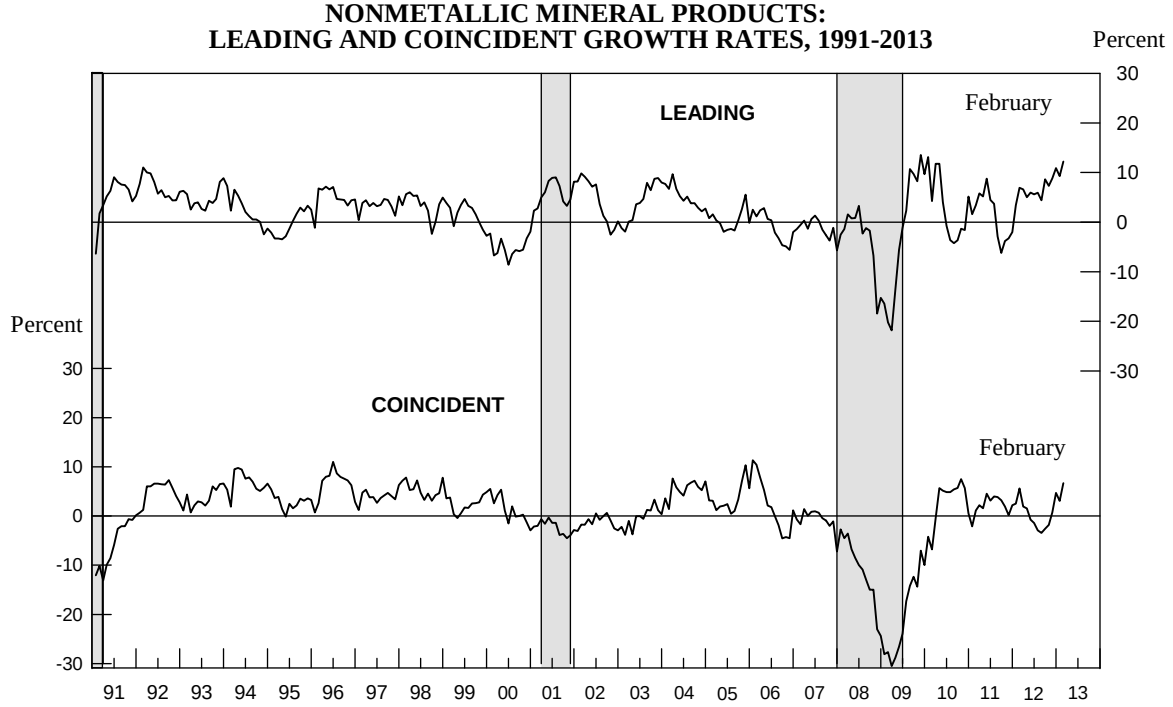
**NONMETALLIC MINERAL PRODUCTS:**
**LEADING AND COINCIDENT INDEXES, 1991-2013**




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. More than 50% of the value of shipments of nonmetallic mineral products is used in the construction industry.

**Chart 2.**

**NONMETALLIC MINERAL PRODUCTS:**
**LEADING AND COINCIDENT GROWTH RATES, 1991-2013**




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.