



Burgundy Book

A report on economic conditions in the Louisville zone

Third Quarter 2016

The Louisville zone of the Federal Reserve comprises southern Indiana and western Kentucky and a total population of approximately 3.4 million people, including the almost 1.3 million who live in the Louisville MSA.

Business Contacts in the Louisville Zone See Healthy Labor Demand and Upward Pressure on Wages

By Kevin L. Kliesen, *Business Economist and Research Officer*

Similar to three months earlier, an August survey of business contacts indicated that a majority expect local economic conditions in 2016 to be better than a year earlier.

Payroll employment growth exceeded the nation's growth in most areas of the Louisville zone in the second quarter. Employment growth was especially brisk in the Elizabethtown, Owensboro, and Louisville MSAs. Business contacts reported that the demand for labor is putting upward pressure on wages and salaries.

In the second quarter, the zone's unemployment rate averaged 4.7 percent, unchanged from the first quarter. The unemployment rate was below the national average in each of the zone's five MSAs.

Single-family building permits increased sharply in the second quarter in the Louisville, Clarksville, and Evansville MSAs, but fell modestly in Elizabethtown. Real estate contacts report vigorous construction activity in the industrial space, which may be partially attributable to the Ohio River Bridges Project.

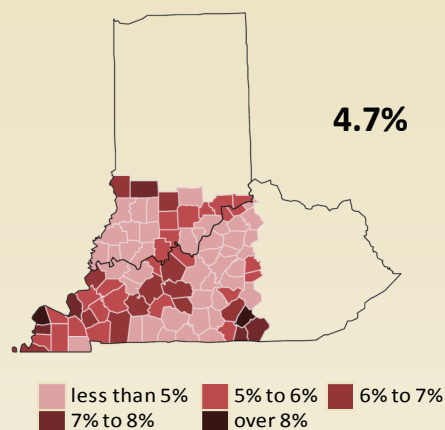
Per capita automotive debt balances in the zone continue to rise at rates that exceed the national rate. Real per capita personal income growth in Indiana and Kentucky was appreciably stronger than the national average in the first quarter.

A survey of bankers suggested that loan demand in the third quarter was unchanged from a year earlier; similar conditions are expected in the fourth quarter. Commercial bank asset quality at Indiana and Kentucky banks declined slightly in the second quarter.

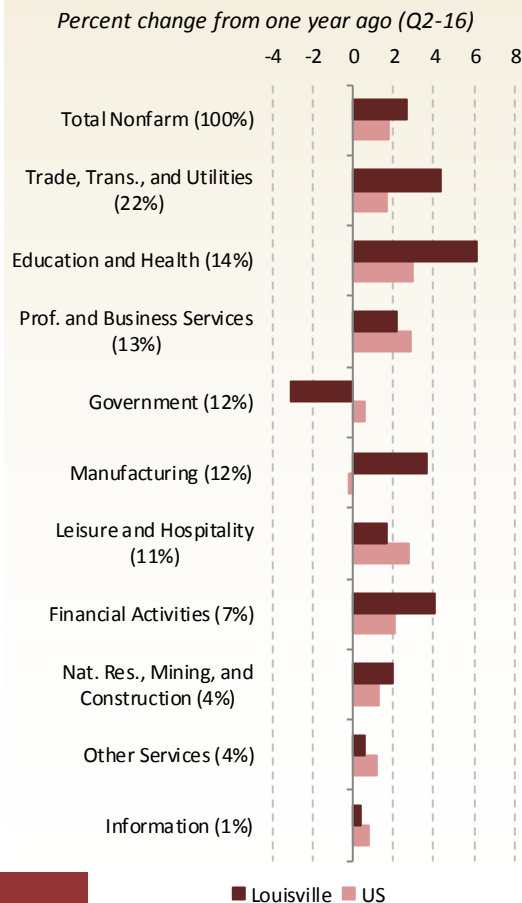
This year's corn crop in Kentucky is expected to be a bin buster, near the record high registered in 2014. Indiana's corn crop is projected to be the second largest on record.

Data Snapshot

County unemployment rates (SA, Q2-16)



Nonfarm payroll employment by industry



How to read this report

Unless otherwise noted, **city names** refer to the metropolitan statistical areas (MSAs), which are geographic areas that include cities and their surrounding suburbs, as defined by the Census Bureau.

Statistics for the Louisville zone are based on data availability and are calculated as weighted averages of either the 88 counties in the zone or the five MSAs. As of 2012, approximately 60 percent of the zone's labor force was located in an MSA. Specifically: 39 percent in Louisville, 11 percent in Evansville, 4 percent in Bowling Green, 4 percent in Owensboro, and 3 percent in Elizabethtown; 40 percent of the zone's labor force was located in non-metropolitan areas.

Arrows in the tables are used to identify significant trends in the data. The direction of the arrow indicates the sign (up/down) and the color indicates the economic significance (green = good, red = poor). Arrows appear only when the change from the previous quarter is greater than 1 standard deviation. For example, the standard deviation of the change in the U.S. unemployment rate is 0.4 percent. If the U.S. unemployment rate declined from 8.4 percent to 8.2 percent, no arrow would appear; but if it declined from 8.4 percent to 7.9 percent, a green down arrow would appear in the table.

Selected **variable definitions** are located in the appendix.

Selected quotes from business contacts are generally verbatim, but some are lightly edited to improve readability.

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Join Our Panel of Business Contacts

The anecdotal information in this report was provided by our panel of business contacts, who were surveyed between August 9 to August 23.

If you're interested in becoming a member of our panel, follow this link to complete a trial survey:

<http://research.stlouisfed.org/outlooksurvey>

or email us at beigebook@stls.frb.org.

Views expressed do not necessarily reflect official positions of the Federal Reserve System.

Education and Health Services Surging in Louisville

By Paul Morris, *Research Associate*

“Hiring qualified professionals is very challenging.”

—Louisville area wholesale trade contact

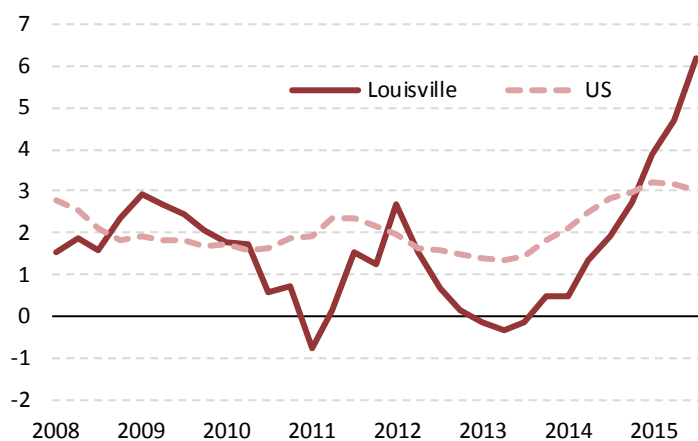
“Employment issues continue. Unfortunately, we still find it difficult to find plant and technical workers.”

—Evansville area technology manufacturing contact

- Labor market conditions across the zone were strong: The unemployment rate in each of the five MSAs was below the national rate, and employment growth exceeded the national average in four of the five MSAs.
- Performance in the goods-producing sector was strong, as job growth exceeded that of the nation in four of the five MSAs. Service-sector growth remained positive but more mixed, with the strongest growth in Louisville and Elizabethtown, modest growth in Owensboro and Bowling Green, and negative growth in Evansville.
- The fastest-growing sector in Louisville was education and health services, with employment up 6.2 percent from one year ago (see figure). Preliminary statewide data from the first quarter suggest this growth rate could be revised down closer to the national average.
- Louisville-area contacts in construction, manufacturing, and wholesale trade reported difficulty in filling vacant positions, citing either a shortage of applicants or candidates lacking the necessary skills.
- Anecdotal evidence suggests that the demand for labor continued to put upward pressure on wages: Nearly 80 percent of Louisville contacts reported that wages were slightly higher or higher than they were a year ago, and over 70 percent of contacts expect wages to continue to move higher in the fourth quarter.

Education and health growth accelerates in Louisville

Education and health employment growth, Percent change from year ago



Source: BLS.

	Louisville	Evansville	Bowling Green	Elizabethtown	Owensboro	US
Unemployment rate (Q2-16) (%)	4.4	4.5	4.3	4.6	4.6	4.9
Nonfarm employment (Q2-16)	2.7	-1.1	1.9	3.7	2.6	1.8
Goods-producing sector	3.2	-1.0	5.6	5.1 ▼	4.5 ▲	0.3
Private service-providing sector	3.6	-1.2	1.1	3.4	2.9	2.3
Government sector	-3.1	-1.0	0.5	3.5 ▲	-1.4	0.6

Note: Unless otherwise noted, values are percent change from one year ago. Arrows indicate a significant (± 1 standard deviation) change from the previous quarter. See appendix for notes and sources.

Manufacturing and Transportation Conditions Are Mixed in the Louisville Zone

By Daniel Eubanks, Senior Research Associate

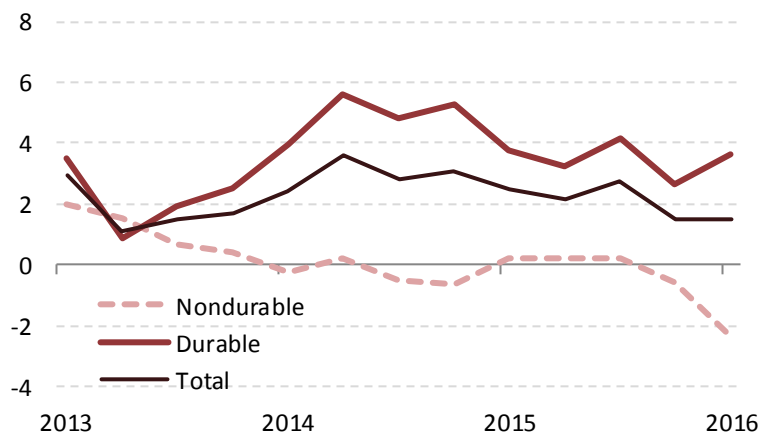
“The automotive sector is slowing down and the market for our product is becoming more competitive.”
 – Southern Indiana manufacturer

“In our rail transportation business, sales have trended down the first 6 months due to lower coal and oil shipments by all Class I railroads.”
 – Louisville area transportation executive

- Employment growth in the manufacturing sector was mixed. In the Louisville MSA, growth accelerated from 2.8 percent to 3.7 percent. In Kentucky, growth was unchanged at 1.5 percent. In Indiana, growth was slightly negative at -0.2 percent. In the U.S. overall, manufacturing declined for the first time since the third quarter of 2010.
- In the nondurable goods manufacturing sector, which includes food and beverage products, wood products, and paper products, employment in Kentucky was 2.3 percent below its level one year ago, the second consecutive quarter of decline and the largest year-over-year decrease in the sector in the past five years. In the Louisville MSA, growth in nondurable goods employment slowed but remained positive. In contrast, growth in the sector accelerated in Indiana and nondurable goods employment in the state has returned to 2008 levels.
- Manufacturing exports from Kentucky increased by 6.3 percent from one year ago, despite a decline in manufacturing exports from the U.S. overall. Statewide growth was driven by increased exports of transportation equipment and chemical products.
- Employment growth in the transportation sector continued to slow in the Louisville MSA: Contacts in rail transportation reported that sales are down as a result of reduced shipments of energy products (see quote).

Nondurable goods employment sharply declines in KY

Percent change from one year ago



Source: BLS

	Louisville	Kentucky	Indiana	US
Transportation employment (Q2-16)	2.6	3.4	3.0	1.2
Manufacturing employment (Q2-16)	3.7	1.5	-0.2	-0.3
Durable goods	5.1	3.7	-1.2	-1.0
Nondurable goods	0.9	-2.3 ▼	2.4	0.9
Manufacturing exports (Q2-16)	--	6.3	-0.2	-6.0

Note: Values are percent change from one year ago. Arrows indicate a significant (± 1 standard deviation) change from the previous quarter; see appendix for notes and sources.

Residential Market Remains Strong; Industrial Construction Picks Up

By Joseph McGillicuddy, Senior Research Associate

“Sales fell short of expectations due to a lack of inventory.”

— Louisville real estate contact

“Single-family home demand is strong on the buying side but supply is low.”

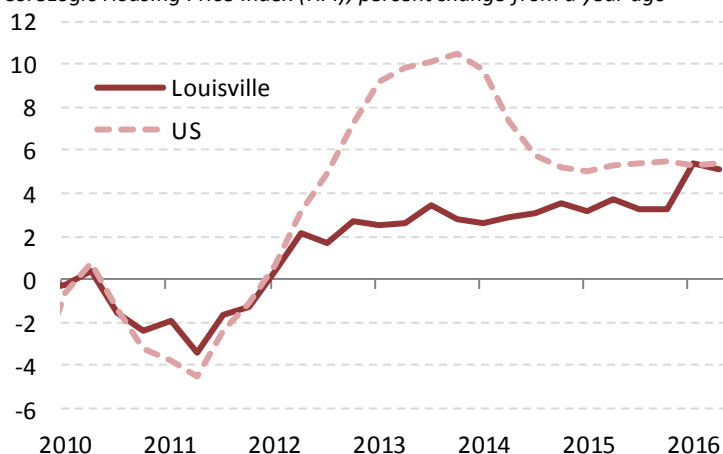
— Louisville real estate contact

“Speculative industrial development has grown significantly.”

— Louisville real estate contact

House price growth converges with that of the nation

CoreLogic Housing Price Index (HPI), percent change from a year ago



Source: CoreLogic.

- Growth in Louisville home sales declined significantly during the second quarter but continued to outpace that of the nation. Several Louisville real estate contacts reported that sales have fallen short of expectations recently as a result of limited inventory of existing homes for sale.
- The growth rate of Louisville house prices has converged with that of the nation over the past two quarters. The two rates followed similar paths after the Great Recession but diverged in 2012 when U.S. house prices saw a significant increase in growth compared with Louisville (see figure). In the other major MSAs, house prices either increased modestly or remained flat.
- The Louisville retail market tightened in the second quarter, as the vacancy rate saw a moderate decrease and asking rents continued to increase steadily.
- The amount of industrial space under construction in the second quarter is nearly double that of a year ago, and several Louisville real estate contacts have reported an increase in industrial speculative development. Some of this increase in construction may be due to the expected completion of the Ohio River Bridges Project at the end of the year, which will open up new industrial opportunities on both sides of the river.

Non-residential market (Louisville, Q2-16)	Apartment	Office	Retail	Industrial
Vacancy rate (%)	5.0	14.6	9.1 ▼	5.4
Asking rent	3.7	0.7	3.7	-0.5
<i>Percent change from one year ago</i>				

Note: Apartment, office, and retail values are from Reis.com. Industrial values are estimates from Cushman & Wakefield.

Residential market (Q2-16)	Louisville	Clarksville	Elizabethtown	Evansville	US
CoreLogic Home Price Index	5.1	0.2	0.2	3.6	5.4
Single-family building permits	21.6	27.6 ▼	-1.2	16.7	10.1
New and existing home sales	9.9 ▼	--	--	--	5.3

Note: Sales and permits data are year-to-date percent change. Prices are percent change from one year ago. Arrows indicate a significant (±1 standard deviation) change from the previous quarter. See appendix for notes and sources.

Zone Debt Balances Continue To Rise and at a Faster Pace

By Rodrigo Guerrero, *Research Associate*

“While I believe the market has peaked, I do not necessarily agree there will be a huge downturn.”

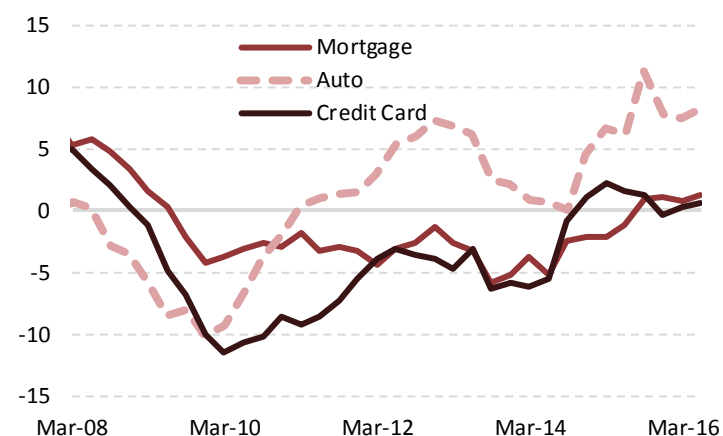
—Louisville auto dealer

“Public retailers are pulling back on expansion plans. The retail recovery has matured.”

—Northwest Kentucky business contact

Mortgage, auto, and credit card debt growth rates increase

Percent change in debt balances from one year ago



Source: FRBNY Consumer Credit Panel and Equifax.

- Zone mortgage debt growth increased compared with the previous quarter, to nearly double the U.S. rate. Meanwhile, the mortgage delinquency rate continues to fall, though at a slower pace than the U.S. average.
- Reports from auto dealers halfway through the third quarter were mixed, with some reporting slightly higher year-over-year sales and others reporting sales fell short of expectations. Auto debt growth ticked up in the second quarter after decelerating for two consecutive quarters (see figure) and is now higher than the U.S. rate.
- The zone’s credit card debt growth rate is slightly positive and a percentage point lower than the nation’s. The credit card delinquency rate has decreased relative to the first quarter in the zone, Indiana, Kentucky, and the U.S. as a whole.
- Real income per capita growth increased in Indiana, and continues to be above the national rate. Growth slowed in Kentucky but remained above the national rate as well.

	Louisville Zone	Indiana	Kentucky	US
Per capita personal income (Q1-16)	--	3.4	3.5	2.6
Per capita debt balances (Q2-16)				
Mortgage	1.3	0.9	0.5	0.7
Credit card	0.6	1.3	1.8	1.6
Auto loan	8.2	7.3	8.4	7.7
90+ day delinquency rates (Q2-16) (%)				
Mortgage	1.2	1.3 ▼	1.2	1.5
Credit card	5.9	5.7	6.2	7.1
Auto loan	3.1	3.7	3.5	3.2

Note: Unless otherwise noted, values are percent change from one year ago. Arrows indicate a significant (± 1 standard deviation) change from the previous quarter. See appendix for notes and sources.

Banking Conditions Mixed in Louisville Zone

By Michelle Neely, *Economist*, and Evan Karson, *Research Associate*

“Lower grain prices are holding down farmers from increasing borrowing and purchasing new equipment.”

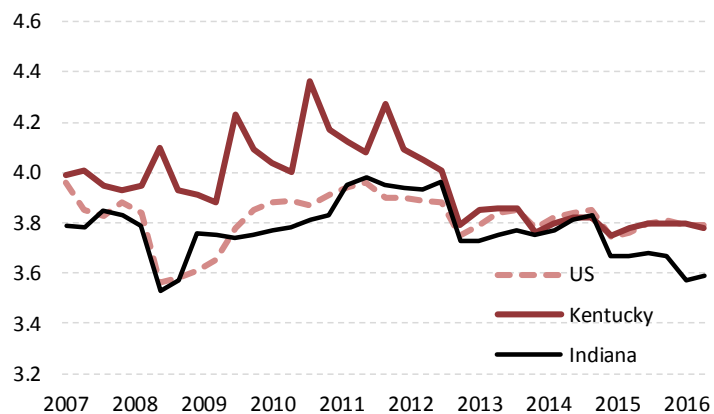
— Southwest Indiana banker

“The potential movement of interest rates continues to push mortgage lending. Borrowers are still seeing lower rates as an opportunity to purchase or re-finance.”

— Louisville banker

Net interest margins at Indiana banks remain below peers

Net interest margin at commercial banks, percent



Source: FRED.

- Surveyed bankers indicated that loan demand in the Louisville zone was largely unchanged in the third quarter compared with year-ago levels. Respondents anticipate that loan demand will also be unchanged in the fourth quarter relative to 2015:Q4.
- According to survey respondents, demand for auto loans was slightly weaker in the third quarter compared with the same time last year. Bankers predict that demand for auto loans will also remain lower in the fourth quarter of 2016 than it was a year ago.
- Return on average assets for banks was largely unchanged in the second quarter, decreasing by 3 basis points at banks in Kentucky and increasing by 2 basis points at banks in Indiana. The average net interest margin was stable at Kentucky banks, showing no change from its year-ago level.
- The ratio of nonperforming loans to total loans (NPTL) at banks in Kentucky and Indiana rose slightly in the second quarter. Coverage ratios fell by an average of 8 percentage points at Kentucky banks and 12 percentage points at Indiana banks. Nevertheless, on average, banks in both states have more than a dollar reserved for each dollar of nonperforming loans.
- Survey respondents indicated that delinquencies were unchanged across all loan categories in the third quarter. More than half of bankers surveyed predict that commercial and industrial loan delinquencies will be higher in the fourth quarter relative to 2015:Q4.

Banking performance (Q2-16)	Kentucky	Indiana	8th District	US Peer Banks
Return on average assets	1.06	1.03	1.10	1.07
Net interest margin	3.78	3.59	3.69	3.79
Nonperforming loans / total loans	1.07	0.91	0.97	1.05
Loan loss reserve coverage ratio	115.89	125.27	121.65	121.90

Note: Values are percentage points. Arrows indicate a significant (± 1 standard deviation) change from the previous quarter. See appendix for notes and sources.

Strong Yields May Push Corn Production Levels to New Records

By Jonas C. Crews, *Research Associate*

“Corn could be a huge crop this year.”

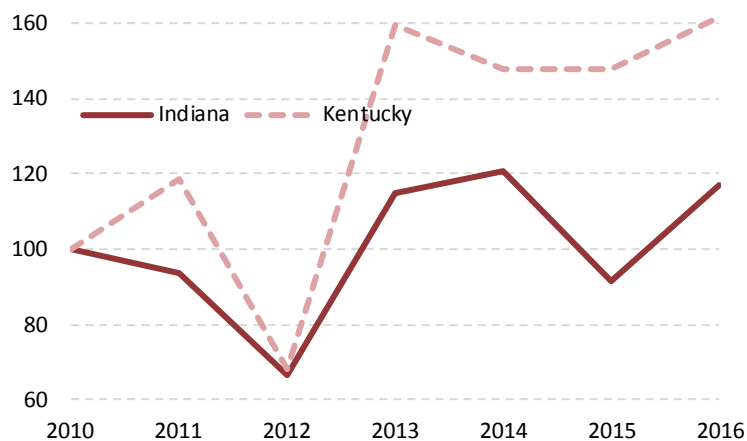
—Kentucky contact

“A mining equipment supplier reports that sales are down 25 percent from last year.”

—Indiana contact

Corn production expected to be near historic 2014 levels

Index of bushels, 2010=100



Source: USDA-NASS.

- Production is expected to increase for both of Indiana’s major crops, while Kentucky’s two biggest crops are projected to go in different directions. All three cases of expected production increases in the zone are much more attributable to yield improvements than added acreage. Specifically, all of the forecasted significant increase in Indiana corn production is attributable to a projected yield increase. Meanwhile, the expected fall in Kentucky soybean production is a result of an expected yield decline that will, if realized, negate a small acreage increase for the crop.
- The projected corn production levels will be historically large if they come to fruition. Indiana will possibly experience its second-largest recorded crop, with only the 2014 yield greater than the expectation for this year. Meanwhile, Kentucky production is projected to be the largest in recorded history (see figure and first quote).
- The zone, which is the largest mining zone in the District, continues to experience large declines in both coal production and mining employment. Contacts are reporting that firms are continuing to downsize and that, accordingly, related capital spending remains extremely low (see second quote). They also note that there is little evidence that the downward trend will reverse.

	Indiana	Kentucky	US
Natural resources (Q2-16)			
Mining and logging employment	-10.7	-19.1	-16.0
Coal production	-30.0	-35.9	-27.2
Estimated production (2016)			
Corn	27.6 ▲	9.5	11.4
Cotton	--	--	23.2 ▲
Rice	--	--	27.0 ▲
Sorghum	--	--	-20.5
Soybean	13.6	-3.1	3.3

Note: Values are percent change from one year ago. Arrows indicate a significant (± 1 standard deviation) change from the previous quarter or year. See appendix for notes and sources.

Cover Page

Sources

Bureau of Labor Statistics

Unemployment rate, nonfarm payroll employment.

Labor Markets

Table Sources

Bureau of Labor Statistics

Unemployment rate. Nonfarm employment and contributions by sector.

Notes

Goods-producing sector comprises the manufacturing and natural resources, mining, and construction sectors.

Private service-providing sector includes the following sectors: Trade, Transportation, and Utilities; Information; Financial Activities; Professional and Business Services; Education and Health Services; Leisure and Hospitality; and Other Services.

Unemployment rate data are seasonally adjusted.

Average hourly earnings are in current dollars.

Manufacturing and Transportation

Table Sources

Bureau of Labor Statistics

Transportation employment: includes transportation and warehousing industries.

Manufacturing employment: total, durable, and nondurable goods.

World Institute for Strategic Economic Research

Manufacturing exports: dollar value.

Notes

Transportation employment in Louisville covers transportation, warehousing, and utility industries. About 90 percent of the reported jobs are contributed by transportation and warehousing industries.

Manufacturing exports are defined as the total dollar amount of exports by the manufacturing industries.

Durable goods manufacturing sector is defined by the Bureau of Labor Statistics as industries with a NAICS classification code of 321 (Wood Product Manufacturing); 327 (Nonmetallic Mineral Product Manufacturing); 331 (Primary Metal Manufacturing); 332 (Fabricated Metal Product Manufacturing); 333 (Machinery Manufacturing); 334 (Computer and Electronic Product Manufacturing); 335 (Electrical Equipment, Appliance, and Component Manufacturing); 336 (Transportation Equipment Manufacturing); 337 (Furniture and Related Product Manufacturing); and 339 (Misc. Manufacturing).

Nondurable goods manufacturing sector is defined by the Bureau of Labor Statistics as industries with a NAICS classification code of 311 (Food Manufacturing); 312 (Beverage and Tobacco Product Manufac-

turing); 313 (Textile Mills); 314 (Textile Product Mills); 315 (Apparel Manufacturing); 316 (Leather and Allied Product Manufacturing); 322 (Paper Manufacturing); 323 (Printing and Related Support Activities); 324 (Petroleum and Coal Products Manufacturing); 325 (Chemical Manufacturing); and 326 (Plastics and Rubber Products Manufacturing).

Real Estate and Construction

Table Sources

CoreLogic

Home price index, including distressed sales.

Census Bureau

Year-to-date single-family building permits.

Greater Louisville Association of Realtors

Year-to-date new and existing home sales.

Notes

Asking rent is the publicized asking rent price. Data are in current dollars.

Vacancy rate is the percentage of total inventory physically vacant as of the survey date, including direct vacant and sublease space.

New and existing home sales consists of single-family home sales.

Household Sector

Table Sources

Equifax based on authors' calculations

All figures are based on a 5 percent sample of individual credit reports. Balances are geographic averages of various debt categories. The mortgage category includes first mortgages and home equity installment loans, but home equity lines of credit are omitted. Auto loans include those financed by finance company or bank loans. Credit cards are revolving accounts at banks, bankcard companies, national credit card companies, credit unions, and savings and loan associations.

Haver Analytics

Per capita income.

Notes

Delinquency rates are calculated as the percentage of payments past due by more than 90 days, weighted by the dollar value of the loan.

Banking and Finance

Table Sources

Federal Financial Institutions Examination Council

Return on average assets: USL15ROA. Net interest margin: USL15NIM. Nonperforming loans: USL15NPTL. Loan loss reserve/Total loans: USL15LLRTL. Net loan losses/Average total loans: USL15LSTL.

Note: The data available in the table can be found in FRED.

Notes

Loan loss provisions are expenses banks set aside as an allowance for bad loans.

Nonperforming loans are those loans managers classify as 90 days or more past due or nonaccrual, which means they are more likely to default.

Loan loss coverage ratio is loan loss reserves divided by nonperforming loans.

US peer banks are those commercial banks with assets of less than \$15 billion.

Due to the seasonal nature of bank return on average assets and net interest margin, the **arrows** in the table denote significant changes from one year ago.

Agriculture and Natural Resources

Sources

Energy Information Administration (EIA)

Coal production. Note: Production trends identified in report may be inconsistent with previous reports due to data revisions.

Bureau of Labor Statistics (BLS)

Mining and logging employment.

United States Department of Agriculture (USDA)

Production estimates.