



Burgundy Book

A report on economic conditions in the Louisville zone

Fourth 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.

Current Economic Conditions Remain Strong, Business Optimism On the Rise

By Charles S. Gascon, *Regional Economist*

The outlook of business contacts has considerably improved relative to one year ago. Fifty-seven percent of contacts expect local economic conditions to be better or somewhat better in 2017 relative to 2016. This is a 10-percentage-point increase from one year ago, when contacts were asked about their outlook for 2016 relative to 2015.

Labor market conditions have remained strong. Payroll employment growth continued to exceed the nation's growth in most areas of the zone in the third quarter, and unemployment rates remain below the national rate in all the metropolitan areas. Business contacts generally expect continued employment growth into the first quarter of 2017.

Real estate conditions in the zone remain strong. While the pace home sales slowed in the third quarter, growth remains stronger than the national rate. Real estate contacts report strong demand, and house prices have continued to increase at a moderate pace.

Households financial positions generally improved. Per capita personal income growth slowed a bit; growth remains strong in Indiana and fairly modest in Kentucky. Mortgage debt growth contracted between the second and third quarters while credit card and auto loan growth increased.

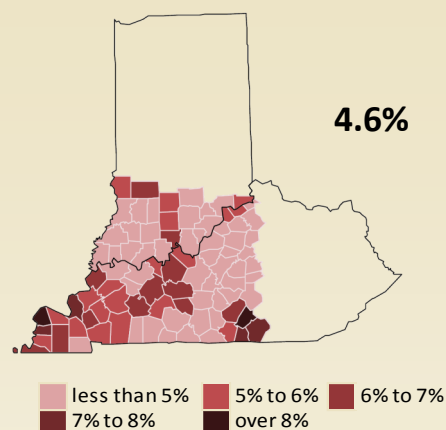
According to banking contacts, loan demand remained unchanged in the fourth quarter relative to the same time last year, a slowdown in business lending was offset by stronger demand for consumer loans.

Crop production estimates have changed considerably since our previous report, as Kentucky and Indiana corn production was marked lower while soybean production was marked up in both states.

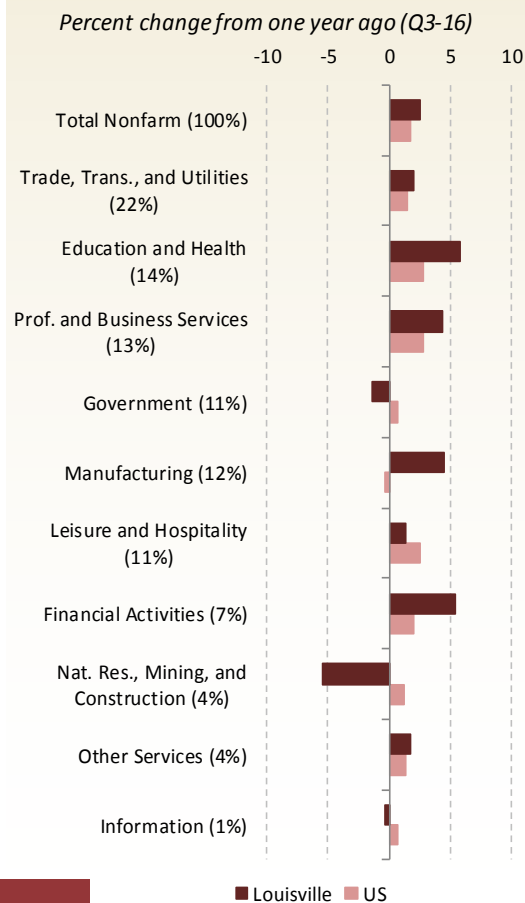
Note to readers: This will be the final Burgundy Book. Starting in 2017, zone-specific anecdotal information will be included in a supplement to the redesigned Beige Book. The Beige Book is released eight times per year, and the next release will be January 18. The regional economic data contained in the report is available in the St. Louis Fed's FRED database and may be accessed through the Eighth District Economy webpage: research.stlouisfed.org/regecon.

Data Snapshot

County unemployment rates (SA, Q3-16)



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 November 8 to November 16.

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.

Louisville Zone Labor Market Conditions Strong with Exception of Evansville

By Paul Morris, Research Associate

“The pressure to find, add, and retain workers in the Louisville area continues and is a significant contributor to the pressures on wages.”

—Louisville area business contact

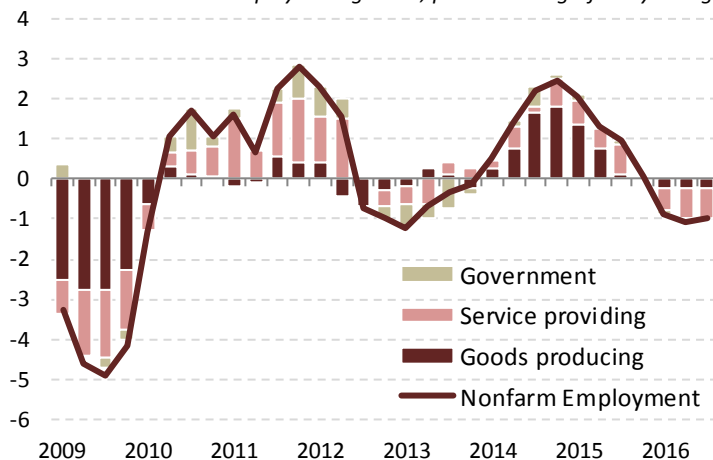
“We have been having difficulties hiring qualified employees as they are in such high demand.”

—Louisville area information technology contact

- Labor market conditions have remained strong since the third quarter. Unemployment rates in each of the five MSAs remained below the national rate, and employment growth exceeded the national rate in every MSA but Evansville. In addition, half of business contacts surveyed reported that fourth quarter employment has been higher or slightly higher than it was a year ago.
- Performance in the goods-producing sector was generally strong. Despite exceeding the national rate in every MSA but Evansville, growth did slow in Louisville, Evansville, and Elizabethtown relative to the pace experienced a year ago.
- Service-sector performance remained strong, with the strongest growth in Louisville, Elizabethtown, and Owensboro and moderate growth in Bowling Green. Evansville continued to see negative growth in both the goods-producing and service-providing sectors for the third consecutive quarter (see figure).
- Anecdotal evidence suggests that the labor market remains tight, as Louisville-area contacts in manufacturing, transportation, and information technology continue to report difficulties hiring qualified employees. About two-thirds of contacts surveyed reported that wages have been higher or slightly higher in the fourth quarter than the same period a year ago.

Evansville employment growth continues to dip

Sector contributions to employment growth, percent change from year ago



Source: BLS

	Louisville	Evansville	Bowling Green	Elizabethtown	Owensboro	US
Unemployment rate (Q3-16) (%)	4.2	4.3	4.1	4.5	4.3	4.9
Nonfarm employment (Q3-16)	2.5	-0.9	1.9	3.6	2.5	1.7
Goods-producing sector	1.8	-1.1	4.8	3.7	2.7	0.2
Private service-providing sector	3.3	-1.1	1.8	3.0	3.0	2.2
Government sector	-1.5 ▲	0.2	-1.1	4.6	0.0	0.7

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 Remains Strong in Louisville

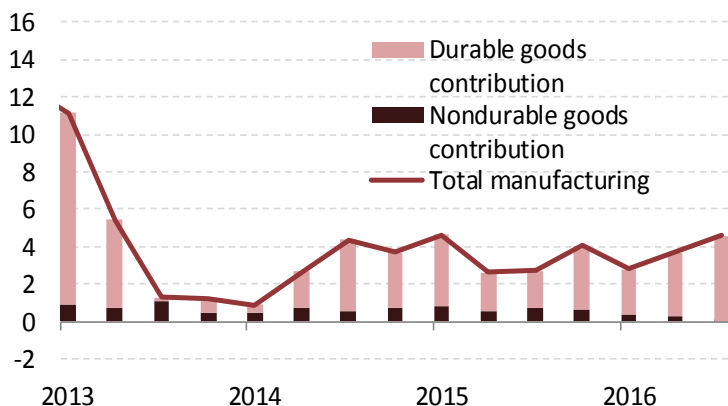
By Daniel Eubanks, Senior Research Associate

“We’ve seen increased demand for HVAC products.”
 – Southern Indiana manufacturer

- Manufacturing employment continued to grow at a strong pace in the Louisville MSA even as manufacturing employment decreased nationwide. Employment in the sector increased by 4.6 percent year-over-year in the third quarter, compared with 3.7 percent last quarter and 2.8 percent two quarters ago. The durable goods sector drove almost all of the employment growth (see figure).
- In Kentucky, growth in the durable goods sector offset the decline in the nondurable goods sector. However, the durable goods sector grew more slowly than in the previous quarter, while the pace of job losses accelerated in the nondurable goods sector. Overall, manufacturing employment increased slightly.
- Manufacturing exports from Kentucky increased even as total manufacturing exports from the U.S. decreased. The increase was driven almost entirely by increased exports of transportation equipment.
- Employment growth in the transportation sector slowed across the Louisville zone. In the Louisville MSA, the pace of transportation sector job growth has decreased for eight consecutive quarters and is now at its slowest pace since 2013. Growth also slowed in Kentucky, Indiana, and in the nation overall.

Durable goods sector drives manufacturing employment growth in Louisville

Percent change from one year ago



Source: BLS

	Louisville	Kentucky	Indiana	US
Transportation employment (Q3-16)	1.3	2.8	2.3	0.9
Manufacturing employment (Q3-16)	4.6	0.9	-0.9	-0.4
Durable goods	6.8	3.2	-2.2	-1.1
Nondurable goods	0.1	-3.3	2.4	0.8
Manufacturing exports (Q3-16)	--	12.4	-1.3	-3.7

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.

Office Vacancy Rates Tick Up; Construction Activity Remains Strong

By Joseph McGillicuddy, Senior Research Associate

“Homebuyer demand remains very strong. However the amount of acceptable inventory remains low.”

—Louisville real estate contact

“Speculative industrial warehouse construction is approaching record levels for the Louisville Metro.”

—Louisville real estate contact

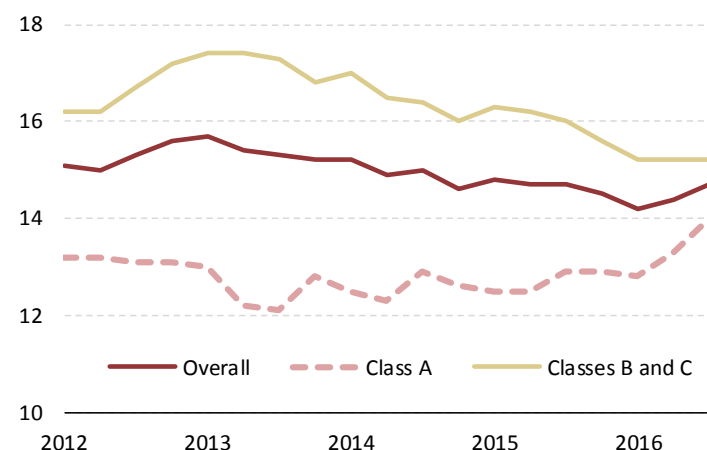
“Industrial speculative construction is on-going with leasing activity staying constant.”

—Louisville real estate contact

- Louisville home sales growth has declined slightly since the previous quarter, but outpaced the national rate. Local contacts continued to report strong demand but indicated that sales have been hampered by limited inventory.
- House prices continued to increase in all four major MSAs within the zone but at rates below the national average. Still, the Louisville metro area experienced relatively robust growth of around 5 percent for a third consecutive quarter.
- The Louisville office vacancy rate has ticked up in the past two quarters after declining for most of the past four years. This increase can be attributed to a large jump in the vacancy rate for Class A office properties, the result of new inventory coming online (see figure).
- Louisville construction activity strengthened in the third quarter. Local contacts reported seeing an increase in speculative building for a variety of property types. The amount of industrial space under construction remained nearly double that of a year ago.

Louisville Class A office vacancy rates tick up

Percent



Source: Reis.com.

Non-residential market (Louisville, Q3-16)	Apartment	Office	Retail	Industrial
Vacancy rate (%)	4.8	14.7	8.6 ▼	6.2
Asking rent	3.1 ▼	0.9	3.3	0.5
Percent change from one year ago				

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

Residential market (Q3-16)	Louisville	Clarksville	Elizabethtown	Evansville	US
CoreLogic Home Price Index	4.8	0.9	1.9	3.9	5.8
Single-family building permits	19.8	10.9	-0.4	8.9	8.3
New and existing home sales	7.7	--	--	--	4.1

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.

Households Reduce Their Mortgage Debt After a Year of Expanding Their Balances

By Rodrigo Guerrero, *Research Associate*

“Gas prices and interest rates, which continue to be lower than expected, as well as new model launches had a positive impact on sales, exceeding our initial projections.”

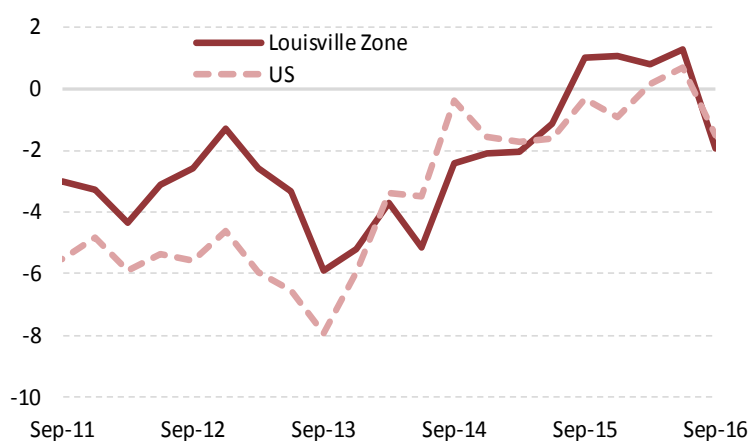
—Louisville auto dealer

“The market is slowing down for auto sales.”

—Northwest Kentucky auto dealer

Mortgage debt balances fall in the zone and the nation

Percent change from one year ago



Source: FRBNY Consumer Credit Panel and Equifax.

- The mortgage debt growth rate dropped by over 3 percentage points, with households reducing their balances for the first time since the second quarter of 2015. This decline is consistent with the national trend (see figure). Meanwhile, mortgage delinquency rates remained largely unchanged and close to the national rate.
- Reports from auto dealers on sales halfway through the fourth quarter were mixed, with some reporting slightly lower year-over-year sales and others indicating that sales exceeded expectations. Though still elevated and slightly above the national rate, auto debt growth decelerated in the third quarter. Auto delinquency rates in the zone remained largely unchanged and slightly below the national rate.
- The credit card debt growth rate was slightly positive and over a percentage point lower than the national rate. Credit card delinquency rates in the zone, Indiana, and Kentucky remained below the national rate.
- Real per capita income growth decreased in Indiana, Kentucky, and the U.S. as a whole. While Kentucky's rate continued to be above the national rate, Indiana's rate remained below it.

	Louisville Zone	Indiana	Kentucky	US
Per capita personal income (Q2-16)	--	2.0	1.1	1.4
Per capita debt balances (Q3-16)				
Mortgage	-1.9 ▼	-1.3 ▼	-2.0 ▼	-1.5 ▼
Credit card	0.3	1.1	1.6	1.7
Auto loan	6.6	6.2	6.6	6.2
90+ day delinquency rates (Q3-16) (%)				
Mortgage	1.3	1.3	1.3	1.4
Credit card	5.8	5.6	6.1	7.0
Auto loan	3.1	3.7	3.6	3.4

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.

Future releases of these data are available in *The Quarterly Debt Monitor*. See appendix for a link to the report.

Consumer Borrowing Growth Offsets Slowing Commercial Lending in Louisville

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

“Low mortgage rates have caused an increase in new construction loans for housing, giving us a good opportunity to expand our construction-to-permanent offerings.”

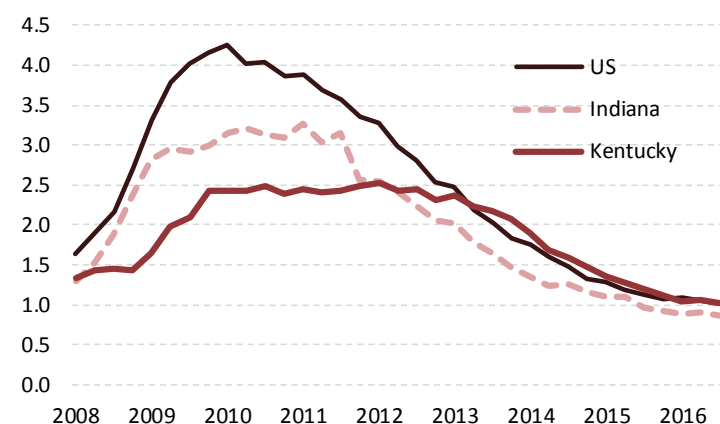
— Southwest Indiana banker

“Uncertainty about the stability of local industry and declines in gross revenues from agricultural production are hampering overall lending.”

— Louisville banker

Asset quality improves across Louisville zone

Nonperforming loan ratio at commercial banks, percent



Source: FRED.

- According to banking contacts, overall loan demand across the Louisville zone remained unchanged in the fourth quarter relative to year-ago levels. A slowdown in lending to businesses offset an increase in demand for consumer loans, according to contacts. However, expectations among zone bankers are that commercial and industrial loan (C&I) demand will rise in the first quarter of 2017 on a year-over-year basis.
- Contacts indicated that, in the fourth quarter, the creditworthiness of applicants for C&I loans weakened slightly compared with last year. However, credit standards for loan approvals in the fourth quarter remained stable relative to year-ago levels across all loan categories and are not expected to waver in the first quarter of 2017, according to survey respondents.
- Compared with year-ago levels, return on average assets (ROA) in the third quarter declined slightly at banks in Indiana due in part to a 10-basis-point drop in the average net interest margin (NIM). ROA at Kentucky banks rose 5 basis points from its year-ago level, while NIM remained unchanged over the same period.
- Asset quality in the zone improved slightly during the third quarter relative the previous quarter. The ratio of nonperforming loans to total loans fell 4 basis points at Kentucky banks and 5 basis points at Indiana banks, which was consistent with national trends.

Banking performance (Q3-16)	Kentucky	Indiana	8th District	US Peer Banks
Return on average assets	1.07	1.05	1.12	1.09
Net interest margin	3.78	3.58	3.70	3.80
Nonperforming loans / total loans	1.03	0.86	0.94	1.01
Loan loss reserve coverage ratio	119.42	131.40	121.28	123.76

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

Soybean Yields at Record Levels; Agricultural Land Value Growth Slowing

By Jonas C. Crews, *Research Associate*

“Yields are excellent and the weather was good. All the extra grain means more stock, which means crop prices stay low.”

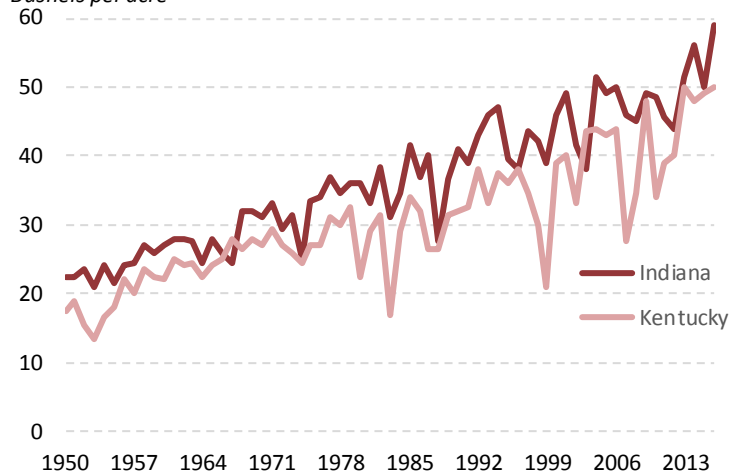
—Kentucky agricultural goods producer

“We could see farmland prices falling if things stay the way they are.”

—Kentucky agricultural goods producer

Indiana and Kentucky soybean yields at record levels

Bushels per acre



Source: USDA-NASS.

- The zone’s crop production estimates vary significantly from expectations reported in the previous report. The estimated changes in Kentucky and Indiana corn production from last year were each more than 10 percentage points below expectations.
- In contrast, Kentucky and Indiana soybean production growth were 4 percentage points and 8 percentage points higher than expectations, respectively. The change is a result of yield estimates that are significantly better than expectations. In particular, the estimated Kentucky soybean yield is equal to the state record, while the Indiana yield estimate is three bushels higher than the state record (see figure).
- Strong yields are helping create another year of large U.S. grain supply, which contacts note will keep prices low heading into the next crop season. With crop prices remaining low, agricultural land price growth is slowing in the zone, and contacts believe that farmland prices could decline if the crop price environment does not improve soon.
- Declines continue for zone coal production and related employment in mining and logging. However, year-over-year, Kentucky coal production declined significantly more slowly in the third quarter than in the second quarter (see table).

	Indiana	Kentucky	US
Natural resources (Q3-16)			
Mining and logging employment	-9.5	-18.9	-14.9
Coal production	-17.1	-20.3 ▲	-13.8 ▲
Estimated production (2016)			
Corn	16.5	-0.5	11.9
Cotton	--	--	25.4 ▲
Rice	--	--	22.1 ▲
Sorghum	--	--	-22.6
Soybean	21.9	0.9	11.0

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.

See *The Quarterly Debt Monitor* for future releases

<https://www.stlouisfed.org/publications/quarterly-debt-monitor>

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 and yield estimates.