FEDERAL RESERVE BANK OF KANSAS CITY / WINTER 2025

TEN

SHOULD I STAY OR SHOULD I GO?

Compared with the 1990s, fewer young college graduates choosing to move out of state

SURGING ENERGY DEMAND | CHILDCARE AND THE LABOR MARKET | NEW OKC BRANCH LEADER

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TEN

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FEATURES

30

SHOULD I STAY OR SHOULD I GO?
Compared with the 1990s, young college graduates in recent years have been less likely to move across state lines.

12

NEW LEADER SELECTED FOR KC FED'S OKC BRANCH
Senior Economist Cortney Cowley was appointed branch executive, succeeding Senior Vice President Chad Wilkerson, who is retiring.

16

CHILDCARE DILEMMA FOR U.S. WORKERS
Problems attaining affordable, quality childcare have been weighing on workers' engagement in the labor force.

19

MEETING RISING ENERGY DEMAND
The 2024 Energy and the Economy conference explored current and future challenges for the power industry.

ON THE COVER » *University of Colorado Denver graduate Anirmend Battulga. Photo by Carl Bower, design by Casey McKinley*

Outlook for monetary policy: How far and how fast?

(Kansas City Fed President and CEO Jeff Schmid delivered these remarks in October 2024 to members of the Chartered Financial Analysts Society of Kansas City.)

At its meeting in September, the Federal Open Market Committee (FOMC) lowered its policy interest rate by one-half percentage point to a range between 4¾% and 5%. This was the first change in the policy rate in over a year and came about five years after the Fed last started a rate-cutting cycle. But a lot has happened in those five years. After gradually lowering rates in the second half of 2019, the Fed quickly dropped rates to zero with the outbreak of the pandemic. Only two years later, with inflation on its way to a multi-decade high, the Fed embarked on the fastest tightening cycle of the modern era, pushing up rates 525 basis points over the course of a year-and-a-half. In the context of these outsized moves, one may wonder what the future holds now that monetary policy has reached a new inflection point.

My hope is for what I might call a more normalized cycle. A cycle where the Fed engages in modest adjustments to policy to keep the economy on an even keel of steady growth, stable prices, and full employment. Absent any major shocks, I am optimistic that we can achieve such a cycle, but I believe it will take a cautious and gradual approach to policy. While I support dialing back the restrictiveness of policy, my preference would be to avoid outsized moves, especially given uncertainty over the eventual destination of policy and my desire to avoid contributing to financial market volatility. In the remainder of my remarks, I will first discuss why now is the right time to start lowering rates. Then I will turn to how low rates might go and how quickly they should get there.

How we got here

In my view, it only became appropriate to lower the policy rate after inflation convincingly appeared to be on a persistent path towards the Fed's 2% objective. Since 2022, inflation has been the main plotline in the monetary policy narrative, and understandably so as prices surged at a pace not seen since the 1980s. More recently, we have seen considerable progress in returning inflation to the Fed's objective, with prices increasing 2.2% in the year ending in August. I would not be comfortable lowering the policy rate if I were not reasonably confident that inflation was heading in the right direction.

There are a couple of factors that have considerably improved the outlook for inflation in recent months.

First, the pandemic-related disruptions that led to the initial burst of inflation now appear to be largely behind us. This is especially true for the price of goods. It was a jump in goods prices that provided much of the initial impetus for the surge in inflation, but that impulse has been absent for over a year now. In fact, over the past 12 months, goods prices have declined almost 1%.

The fading of goods inflation reflects developments in both supply and demand. During the pandemic, the supply of goods was lowered by production disruptions and logistical snarls. At the same time, demand for goods surged as homebound consumers shifted spending away from services. This imbalance between low supply and high demand led to rapid price increases. However more recently, supply chains have recovered, the mix between goods and services consumption has returned to pre-pandemic patterns, and goods prices are no longer a source of inflation.

A second factor increasing my confidence that the easing of inflation will persist is the loosening of the labor market. The pandemic led to severe disruptions in the labor market, contributing to historic tightness, and increasing pressure on labor-intensive services prices. More recently, the labor market has cooled. The vacancy ratio has fallen to about one posting per available worker from a historic high of two postings per available worker at the height of labor market tightness in 2022. We have also seen the unemployment rate creep up to 4.1% from 3.4% at the start of last year.

While the loosening of the labor market has led to some concern that the economy is on shaky ground, my read is that we are seeing a normalization rather than a significant deterioration of conditions. It might not be surprising that a historically tight labor market would be followed by a period of relatively slack hiring. When markets were tight and workers were quitting positions at a record pace, employers made every effort to retain existing workers and hire new workers, fearful that they would be caught short-handed. Now that employers are confident in their ability to fill open positions, they are no longer hoarding labor, easing retention efforts, and likely turning back the dial a bit on the aggressiveness of their hiring. All of this will at least temporarily slacken the labor market as employers make these adjustments.

With a variety of data sources and many different ways to view the labor market, I find it helpful to reference the Kansas City Fed's Labor Market Conditions Indicators (LMCI) for an overall view of the health of the labor market. The LMCI combines 24 separate labor market data series into two easy-to-interpret indexes. Recently the LMCI has been trending down, suggesting a loosening, but it remains above its historical average, suggesting the overall labor market remains quite healthy.

Adjusting rates: How low and how fast?

With the data suggesting inflation is heading in the right direction, there is a compelling argument that the policy interest rate should come down. Less certain is how low rates should go and how quickly adjustments need to occur.

Starting with the first question of how low interest rates will go, there is ample evidence that the current stance of monetary policy, and the level of interest rates, is restrictive, but less evidence that it is very restrictive. Growth remains strong and the economy has shown continued momentum. Real GDP increased 3% in the second quarter and appears to be poised to increase a similar amount in the third quarter. Not bad, considering growth averaged a little over 2% in the decade before the pandemic when interest rates were far lower.

The economy has been supported by strong consumer

In November, President Jeff Schmid spoke in Dallas at the ninth Energy and the Economy annual conference, hosted by the Kansas City and Dallas Reserve Banks. Read about the conference on page19. *Photo courtesy of the Federal Reserve Bank of Dallas*

spending, which in turn has been supported by growing labor income and relatively healthy household balance sheets in the aggregate. Of course, not all household balance sheets are healthy, and the aggregate numbers mask all the differences across actual households. But to summarize, if the economy does not appear to be very restricted, then it seems unlikely that monetary policy is all that restrictive.

It is my belief that interest rates could settle well above the levels we saw in the decade before the pandemic. There are several reasons why this may be true. One favorable, and some may say optimistic, scenario is that continued strong productivity gains boost economic growth, strengthen investment and support consumption. Such a combination would increase the demand for investable savings and hence push up interest rates.

A less favorable scenario, and one I discussed at length in a speech in May, is that the tremendous increase in government debt coming out of the pandemic, not just in the United States but around the world, maintains upward pressure on interest rates across the economy.

However, there are some long-run structural factors that likely contributed to the low level of interest rates before the pandemic, and these factors have not gone away. In particular, demographic trends point to aging populations in the United States and around the world. As older populations age into retirement, they tend to work less, which reduces demand for physical capital and investment, depressing interest rates. Older populations also save more, particularly in fixed-income assets, which can further push down interest rates. Though it is hard to know which of these factors will dominate—productivity, debt, or demographics—we must be open to the possibility that interest rates will settle higher than we observed before the pandemic.

Now let's turn to the question of timing. If the Fed is to further lower interest rates, at what pace should it be done? Given the uncertainties I just outlined about our eventual destination, a cautious and deliberate course of action seems appropriate. Lowering rates in a gradual fashion would provide time to observe the economy's reaction to our interest rate adjustments and give us the space to assess at what level interest rates are neither restricting nor boosting the economy.

A cautious approach will also work to minimize the Fed's contribution to financial market volatility. Outsized policy moves can provoke outsized financial market reactions to data surprises. The data are messy and subject to large revisions as we have seen in recent months.

Our policy must be linked to the flow of data, but we should avoid putting too much weight on any single data point. As policymakers we should be flexible, but being nimble can come with a price. Reacting quickly builds expectations of further quick reactions. This widens the scope for financial market expectations to diverge from the intent of the Committee, potentially contributing to heightened financial market volatility. Already, we have seen large swings in Treasury yields over the past few months as markets assess and reassess the potential course of policy interest rates.

The impact on the balance sheet

Volatile interest rates could potentially complicate another aspect of Fed policy, which is our work to decrease the size of our balance sheet. Following a tremendous expansion during the pandemic, the Fed has been shrinking its balance sheet since the middle of 2022. My preference is to shrink the balance sheet as much as possible while remaining consistent with the Fed's current operating framework. While a larger balance sheet lowers the risk of sharp movements in money market interest rates, maintaining a large balance sheet is not without costs. I am focused on three costs in my preference for a relatively aggressive approach to balance sheet reduction.

First, a large balance sheet weighs on longer-term yields, depressing the price of duration in financial markets and potentially leading to distortions in the allocation of credit. It is my view that one factor contributing to the flatness of the yield curve is the large size and elevated duration of our balance sheet. The long-term health of the traditional banking industry, which is well-represented in my Federal Reserve district, requires a positive slope to the yield curve. A smaller balance sheet concentrated in shorter duration securities would lessen our impact on the slope of the yield curve. Recent research from the Kansas City Fed reviews some of the considerations around the eventual composition of the Fed's balance sheet.

Second, a large balance sheet increases the Fed's footprint in financial markets, potentially diminishing and weakening other mechanisms and markets for distributing liquidity across financial institutions and leading to a more brittle financial system.

And third, maintaining a large balance sheet can give the uncomfortable impression that monetary and fiscal policy are intertwined. Maintaining an excessively large Treasury portfolio can give the impression that the Fed's balance sheet is supporting government debt markets.

As we move past the post-pandemic surge in inflation, we have the prospect of transitioning to a more normalized cycle where the Fed regularly recalibrates monetary policy to meet its dual mandate of price stability and full employment. I am optimistic the Fed can achieve such an outcome, but it will take a careful approach that is attentive to the data and signals from the economy. My belief is that a cautious and gradual approach to policy adjustments would be best suited for this uncertain environment.

Making a CONNECTION

In founding the Federal Reserve more than a century ago, Congress recognized the importance of connecting the nation's central bank to the Main Streets of America. The Federal Reserve Bank of Kansas City carries out this role through its president and its programs and activities throughout the Tenth District, and beyond. Here is a glimpse of the recent activities of Kansas City Fed leaders and staff.

KANSAS, MISSOURI and BEYOND »

Delivering remarks on the economy at Omaha Chamber event
In mid-November, Kansas City Fed President and CEO Jeff Schmid was the keynote speaker at the Greater Omaha Chamber's annual economic outlook event. The event brought together nearly 300 attendees. The chamber covers the eight-county Omaha metropolitan area and nearby counties in Iowa.

Meeting manufacturing industry members in Kansas City's Fairfax District
President Schmid in November spoke with members of the Fairfax Industrial Association. The Kansas City organization, founded in 1951, advocates for the manufacturing industry in the Fairfax District, which includes an automaking plant, and addresses needs of businesses in the area.

Thomas Hoenig, former Kansas City Fed president, receives Truman Medal

In an occasion reflecting his notable contributions to regional and national policy, Former Kansas City Fed president Thomas Hoenig in October received the 2024 Truman Medal for Economic Policy. The Truman Medal was created in 2005 to recognize extraordinary achievement in the formation and conduct of economic policy. The medal is presented biennially at a ceremony in Kansas City. Pictured with Hoenig: Former Kansas City Fed president Esther George and Alex Burden, executive director of the Truman Library Institute

'Lessons in leadership' with retired U.S. Army officer

The Kansas City Fed in December hosted Retired Lieutenant General Jon Jensen for a speaking event at the Kansas City office. During the "Lessons in Leadership" discussion with President Schmid, Jensen shared some of his experiences and thoughts on leadership and teamwork. Employees from across the Tenth District attended in person or virtually. Jensen's military career included serving from 2020 to 2024 as the 22nd director of the Army National Guard.

KC Chamber event gathers executives in the metropolitan area

Pictured, left to right: Mark Garrett, former chair of the KC Chamber; President Schmid; Raven Jemison, CEO of the Kansas City Current; Claudia Meyer, president and CEO of Cristo Rey Kansas City; Charlie Koch, president of Bank Midwest; Eric Dorfman, president of the Linda Hall Library of Science, Engineering & Technology and Joe Reardon, KC Chamber president and CEO. Photo courtesy of the Greater Kansas City Chamber of Commerce

Learning about Kansas City's preparations for 2026 World Cup

In October, as part of a joint meeting of the Bank's boards of directors in Kansas City, leaders visited CPKC Stadium, home of the Kansas City Current soccer team and the world's first stadium built for women's professional sports. During the visit, President Schmid and First Vice President Kim Robbins (right) were pictured with Pam Kramer (center), CEO of KC2026, the nonprofit that will plan and activate 2026 FIFA World Cup activities in Kansas City.

Annual conference explores the country's rising demand for energy

The ninth Energy and the Economy conference was hosted in November by the Federal Reserve Banks of Kansas City and Dallas. During the conference, held in Dallas, President Schmid delivered keynote remarks, pointing out that the Tenth District outpaces the rest of the country in production of renewable energy. Learn more about the topics explored at the 2024 conference on page 19.

Tenth District honors military veterans and families

Throughout November, the Tenth District's Veteran Engagement Network conducted activities to honor military veterans and their families. During veterans' appreciation activities at the head office, President Schmid joined Kansas City employees for a photo.

First Vice President Kim Robbins speaks at Girls in Tech KC event

During the recent Girls in Tech KC event at the Kansas City Fed, First Vice President and Chief Operating Officer Kim Robbins provided remarks for the nearly 100 middle school girls in attendance. The event, led by the KC STEM Alliance during Computer Science Education Week, is part of an initiative to inspire the next generation of female leaders in technology-related fields. Learn more about the event on page 14.

COLORADO, NEW MEXICO, WYOMING »

Presentation at Economic Summit in Boulder

Nick Sly, Vice President and Denver Branch Executive, spoke about economic trends and current issues at the Boulder County Chamber of Commerce's Economic Summit. The October event included opportunities to meet and interact with members of the Boulder business community.

Speaking with members of the Parker Chamber of Commerce

Nick Sly in November delivered a presentation on local economic trends for the Parker, Colorado, Chamber of Commerce. The organization comprises a diverse group of business leaders and community members.

Wilkerson participates in State of the Economy panel
Chad Wilkerson, Senior Vice President and Oklahoma City Branch Executive, joined an economists' panel at the Greater Oklahoma City Chamber's State of the Economy event. About 500 people attended the event in November.

Branch welcomes 13th Student Board of Directors
Student Board of Directors meetings at the Oklahoma City Branch kicked off in the fall of 2024 with 25 students from 16 schools. Students' activities included a "Fed 101" primer, college and career readiness sessions and a StrengthsFinder assessment.

Event highlights initiative to connect small businesses with vital credit
The Oklahoma City Branch, in partnership with the U.S. Treasury, the Federal Deposit Insurance Corporation and the Office of the Comptroller of the Currency, brought together tribal organizations and bankers in November to identify opportunities for new lending and investment under the State Small Business Credit Initiative.

Kansas City Fed alumni directors discuss economic topics
Nate Kauffman, Senior Vice President and Omaha Branch Executive, hosted a roundtable discussion on the economy and business conditions with alumni Kansas City Fed directors in December. The group included former Omaha Branch Board members and individuals who served on the Bank's Kansas City Board and live in Nebraska.

Independent Community Bankers convene
In October, Nate Kauffman spoke at the Nebraska Independent Community Bankers Annual Conference in Lincoln. He shared an update on economic conditions for the United States and Nebraska.

Forum on bank supervision and risk management
The Kansas City Fed hosted a Banking and Supervision Forum at the Omaha Branch in September. The forums are held annually in various locations throughout the Tenth District. They serve to connect the Bank's leadership with leaders at local financial institutions.

Advisory council for the Bank gains information on affordable housing during Omaha visit
In October, the Omaha Branch hosted the Bank's Community Development Advisory Council for the group's semi-annual meeting. Advisory council members heard from local leaders in the affordable housing sector about ways the community is addressing its affordable housing deficit. The members also toured a new Habitat for Humanity of Omaha development.

Notes from around the Tenth District

Cortney Cowley succeeds Chad Wilkerson as Oklahoma City Branch executive

Kansas City Fed President and Chief Executive Officer Jeff Schmid in December 2024 announced the appointment of Cortney Cowley as assistant vice president and Oklahoma City Branch executive.

In this role, Cowley serves as the Bank's lead officer and economist in Oklahoma. She works closely with the Branch's board of directors and is responsible for briefing Schmid on economic trends in the state. She also oversees the regional economic team in Oklahoma City and engages with business, civic and community groups across the state. Cowley's appointment took effect Jan. 1, 2025.

Cowley succeeds Chad Wilkerson, who is retiring after 26 years at the Kansas City Fed.

Cowley had been senior economist in the Regional Affairs Department in the Oklahoma City branch office, where she has supported economic initiatives in the Tenth District, including surveys and policy briefings on regional and agricultural economic trends. She also served as a special adviser on the agricultural economy to Federal Reserve Governor Michelle Bowman. Her recent research has focused on agricultural finance, commodity markets, farm management and natural resource economics and policy.

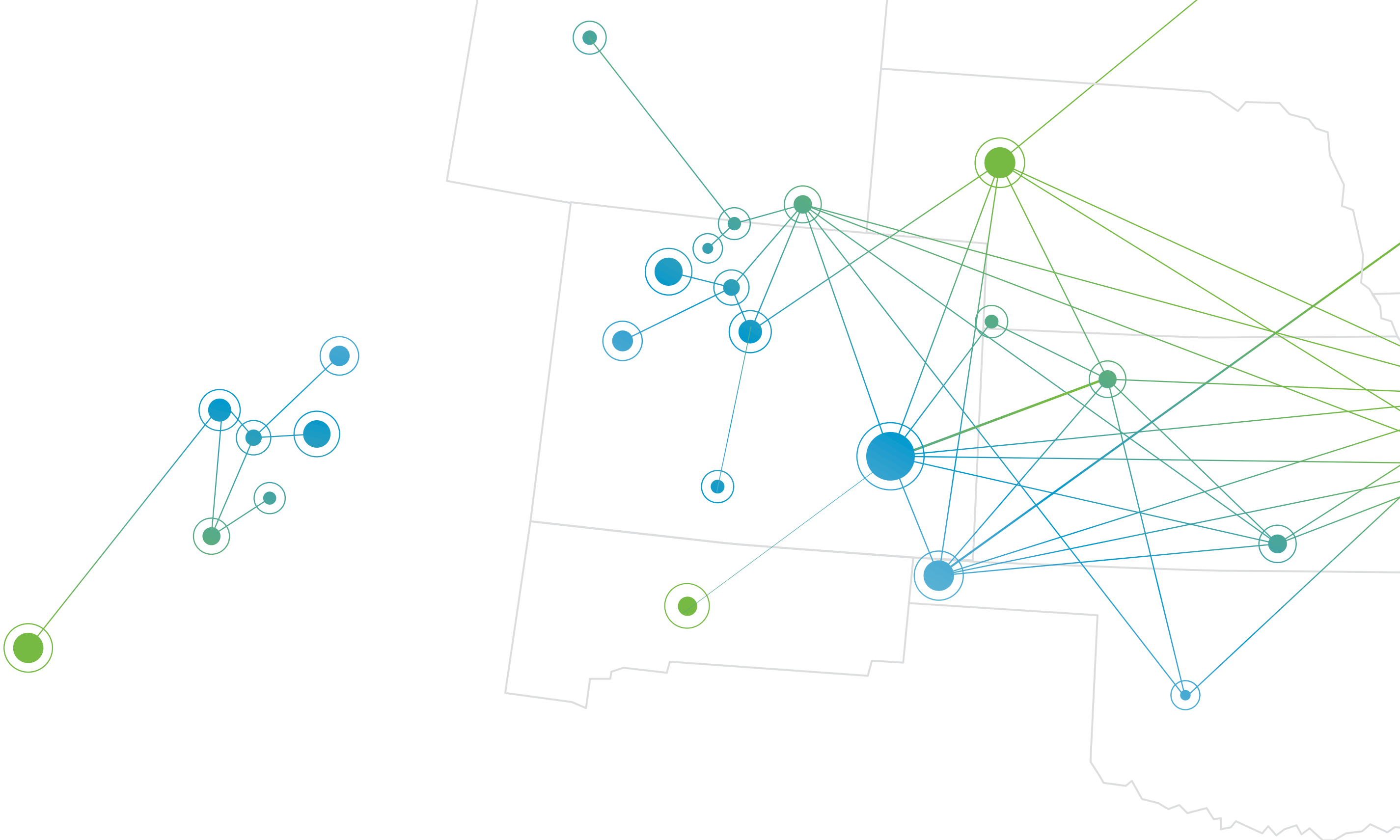
"Cortney's background as an economist and her connections across Oklahoma and the Tenth District are valuable assets for the Kansas City Fed as we pursue our mission," Schmid said. "The insights Cortney will provide from Oklahoma City will ensure that the state is well represented in the monetary policy deliberations I participate in at the Federal Open Market Committee."

Cowley joined the Bank in 2015 as an economist after completing her doctoral degree in Agricultural Economics at Oklahoma State University. She was promoted to senior economist in 2021. She holds a bachelor's degree in Biosystems Engineering from Oklahoma State and a master's degree in Civil Engineering from Colorado State University.

Cortney Cowley

Wilkerson joined the Bank in 1998 as a research associate in the Economic Research Department and held several positions during his tenure at the Kansas City Fed. While serving as branch executive, he also had responsibility for the Bank's Oklahoma City regional affairs work, the Bank's Community Development function, and supervision of several business surveys.

"Personally, I am grateful to Chad for his leadership and service to the Bank and the Federal Reserve, as well as the support he has provided me in economic briefings and relationship building in Oklahoma," Schmid said. "We will greatly miss his leadership and outstanding work ethic, as well as his humor, down-to-earth style and camaraderie."



Expanding opportunities in banking and financial services

In October the Federal Reserve Banks of Kansas City and Cleveland hosted the ninth annual Minorities in Banking Forum, a Federal Reserve System event aimed at broadening advancement opportunities in the financial services field.

This 2024 event, held in Cleveland, brought together 107 mid- to senior-level industry leaders who are people of color. Attendees represented 25 states and 57 financial institutions.

The forum, conducted over two days, focused on diversity and inclusion, leadership, and career enhancement. Sessions included industry updates, professional development conversations, diversity and inclusion strategies, and networking opportunities. The forum explored a wide range of themes and topics, including breaking barriers; navigating negotiations in the workplace; understanding and addressing microaggressions; finding pathways for equitable career advancement and addressing burnout.

Discussions during the forum covered ways to tap into the Federal Reserve's community development resources. The forum also provided information to increase attendees' overall awareness of the Fed's mission and resources. The Kansas City Fed is scheduled to be the site of the 10th annual forum, set for Sept. 25-26, 2025.

The Federal Reserve's annual Minorities in Banking Forum assembles mid- to senior-level leaders and focuses on inclusion, leadership and career enhancement.

FURTHER RESOURCES

Stay informed about Reserve Bank forums and other activities at *KansasCityFed.org/events*. Learn more about Federal Reserve career opportunities at *KansasCityFed.org/careers*.

Girls in Tech KC inspires future innovators

Nearly 100 middle school students from the Kansas City area participated in hands-on technology activities during the 2024 Girls in Tech event at the Kansas City Fed.
Photo by Gary Barber

As one of five partner sites for the Girls in Tech KC initiative, the Federal Reserve Bank of Kansas City in December hosted nearly 100 middle school girls during Computer Science Education Week.

The event, led by the KC STEM Alliance, sought to inspire the next generation of female leaders in technology by providing hands-on experiences and direct exposure to career pathways in computing professions.

The Bank's involvement underscores its commitment to fostering innovation and diversity in the Kansas City region's workforce. Information technology professionals make up roughly half of the Bank's workforce.

The Girls in Tech participants explored computer science through activities such as the Hour of Code. This initiative is a response to the growing demand for a qualified and diverse workforce in the region's tech industry. While women hold 57% of all professional jobs nationally, they make up just 27% of computing occupations, according to 2023 data from the National Center for Women in Technology.

The initiative also connects students with financially rewarding and sustainable career opportunities in a rapidly evolving industry. By fostering these connections early, Girls in Tech KC aims to reduce barriers and broaden the talent pool for local employers seeking diverse, innovative teams.

FURTHER RESOURCES

Learn more about Girls in Tech KC and the KC Stem Alliance, respectively, at *kcstem.org/students-parents/especially-for-girls* and *kcstem.org*.

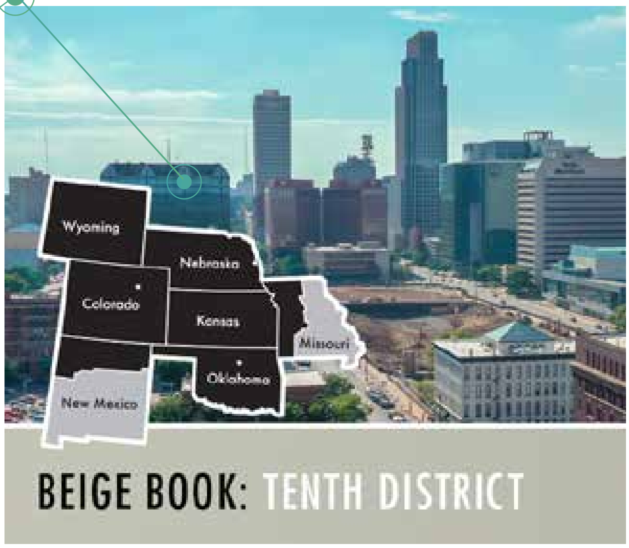
Kansas City Fed introduces measure of market-based uncertainty

The Federal Reserve Bank of Kansas City has launched a daily measure of Policy Rate Uncertainty—the KC PRU—regarding where short-term U.S. interest rates will be one year in the future.

The KC PRU measures one-year-ahead uncertainty using the prices of financial options, which settle based on future short-term interest rates that tend to be highly correlated with the federal funds rate. The measure is calculated at a daily frequency, which allows examination of how policy rate uncertainty responds to a policy announcement or macroeconomic development in real time.

In addition, the Bank combines information from both historical and newly issued options, which allows the Bank to calculate the daily measure starting in the late 1980s and update it as more data becomes available. The KC PRU is calculated through an automated procedure using publicly traded options contracts. The measure does not reflect the views of the Federal Reserve Bank of Kansas City, its staff, or the Federal Reserve System.

The KC PRU is explained in-depth in a September 2024 *Economic Review* article by Vice President Brent Bundick, Senior Vice President A. Lee Smith and Research Associate Luca Van der Meer. The article is available to read and download at *KansasCityFed.org/research*.



Moderate growth, short-term optimism

Economic growth in the Tenth District was modest and balanced across sectors in recent months, according to the Federal Reserve's Beige Book summary released in December 2024.

Still, contacts reported expectations for strong demand growth in the coming months, which supported their plans to increase hiring and capital expenditures over the near term. Beige Book reports, based on feedback from contacts across several industries and economic sectors, are made available to the public eight times a year. See the most recent Tenth District summaries and sign up to receive alerts at *KansasCityFed.org/surveys/beige-book*.

Feedback indicated that consumer spending resumed its healthy pace seen over the past year, but contacts noted that consumers recently became more price-sensitive and quality-sensitive. Contacts viewed the cycle of commercial real estate delinquencies as not yet over, but they also viewed the associated risks as being well-distributed such that further strains would not lead to a significant decrease in the flow of credit to the sector. Still, loan demand was tepid amid volatility in longer-term rates. Employment levels remained steady across the District. Hiring activity was subdued as few contacts reported adding headcount recently, and nearly all businesses reported that worker turnover was abnormally low.

Renewable-energy industry contacts reported growing commercial electricity demand from large data centers as a key driver for expanded capacity in coming years. Conditions in the farm economy remained subdued, and many contacts cited declines in farm equipment values as a growing concern.

Bank Anniversaries

The following banks in the Tenth Federal Reserve District are celebrating one, five, 10, 20 or more years as Federal Reserve members in January, February and March.

Colorado Bank & Trust Company of La Junta	La Junta	Colo.	101
Community Bank & Trust	Neosho	Mo.	83
Oklahoma Capital Bank	Tulsa	Okla.	33
Community State Bank	Poteau	Okla.	30
Adams Bank & Trust	Ogallala	Neb.	30
Union State Bank	Arkansas City	Kan.	29
Exchange Bank of Missouri	Fayette	Mo.	29
Bank of Star Valley	Afton	Wyo.	29
Exchange Bank and Trust Co.	Perry	Okla.	27
Method Bank	Wyandotte	Okla.	27
First Option Bank	Osawatomie	Kan.	26
Town & Country Bank	Ravenna	Neb.	25
Lamar Bank & Trust Company	Lamar	Mo.	25
FirstBank	Antlers	Okla.	24
Bank 7	Oklahoma City	Okla.	23
Butte State Bank	Butte	Neb.	23
Auburn State Bank	Auburn	Neb.	22
Bank of Eufaula	Eufaula	Okla.	21
United Bank & Trust	Marysville	Kan.	21
Union State Bank	Everest	Kan.	21
Bank of Commerce	Chanute	Kan.	21
Five Points Bank	Hastings	Neb.	21
Alva State Bank and Trust	Alva	Okla.	1

Costs Put Affordable,

QUALITY CHILDCARE OUT OF REACH FOR MANY FAMILIES

by ANDREA GALLAGHER

After her daughter was born, Shauna Rose faced challenges finding suitable childcare services.

When Shauna Rose's daughter was born two months early, Shauna had to burn most of her maternity leave while in the hospital. After leaving her job in eastern Nebraska, she is now looking for childcare in a new city. Not an easy task, since most childcare facilities are telling her there is a long waitlist.

"I called every childcare center that was rated a 4 or 5 on Step Up to Quality (an online resource for parents and childcare providers), and everyone was full," Rose said. "Nobody had capacity, and the centers that did have capacity, following a tour, I did not feel my daughter would receive quality care from."

As a result, Rose said, she did research on starting her own childcare center and encountered many roadblocks. Now she is looking into starting up an in-home daycare center but first must complete training, licensing and mentorship requirements.

One outlet that provided guidance for Rose was Lincoln Littles in Lincoln, Nebraska. The organization's goal is to remove barriers and provide opportunities for all children from birth to age 5, including access to affordable, high-quality early care and education.

"Lincoln Littles serves as a chamber of sorts to childcare providers offering resources, training opportunities, grants, and thought partners," said Anne Brandt, executive director. "We also provide tuition assistance and childcare assistance to parents and increase quality childcare opportunities. Additionally, we offer support to businesses to help retain and recruit employees as well as workforce development for the childcare industry."

Among the biggest issues in childcare? Affordability, lack of quality care and long waitlists for infant and toddler openings, Brandt said. Those issues won't be resolved on their own, she said.

"The future has lots of potential, however it is going to take public investment through policy change," she said. "Childcare is essential and part of the infrastructure of any community."

Associate Economist John McCoy

Implications for the labor force

The Kansas City Fed explored the challenges associated with attaining childcare in an October 2024 *Economic Bulletin*, "Cost of Childcare Increasingly Weighs on Labor Force Engagement." The author, Associate Economist John McCoy, began his research after the topic was brought up many times during the Bank's community outreach activities.

Anne Brandt is executive director of Lincoln Littles in Nebraska.

"Childcare issues have been front of mind for many, especially since the pandemic," McCoy said. "It appears that the primary concern has shifted from the availability of childcare to the availability of affordable childcare. During the pandemic, most concerns we heard about were shortages due to pandemic disruptions. Now, price is a bigger issue for families and may be causing some people to re-think their relationship with the labor force."

In Oklahoma, there is a shortage of qualified childcare workers as a result of several factors, including effects from the pandemic, when many older workers retired. Carrie Williams, executive director of the Oklahoma Partnership for School Readiness in Oklahoma City, said childcare workers are among the lowest-paid in the workforce. She said the average pay is about $11.67 an hour, and many positions don't offer health or retirement benefits.

"This combination of low pay and limited incentives makes the field unattractive to young people," Williams said. "Additionally, many current childcare workers are leaving for jobs in retail settings...where they can earn $17–$18 per hour and often receive comprehensive benefits packages."

Williams said the childcare workforce must find ways to increase wages and offer good benefits, and that likely will require public investment from the state.

Strains on families

In 2024, the Oklahoma Partnership for School Readiness (OPSR) commissioned a RAND Corporation study to examine the true costs of providing childcare in Oklahoma. The report revealed that "the fees families can afford to pay are far below the actual costs of care. This disparity has contributed to a shrinking childcare industry, with licensed facilities dropping from 3,573 in 2015 to 3,108 in 2024, further straining availability. Increasing state subsidy rates for providers is a key solution to addressing this imbalance."

Another potential strategy would be to reinstate a benefit allowing childcare workers to receive subsidized care for their own children, which was originally funded by federal pandemic dollars but ended in September 2024 when the funding expired.

Williams added that it's not only difficult for parents to find open slots at childcare centers, but yet another challenge is to find one that fits their budget.

"A family earning the state median income of $61,000 and enrolling an infant and a 3-year-old in a childcare center could spend, on average, one-third of their annual income on childcare alone," Williams said

According to the Center for American Progress, the childcare industry is facing a national shortage of early care and education providers and teachers. As of November 2023, the childcare sector was still more than 30,000 jobs below February 2020 levels.

"Introducing tax credits could help," Carrie Williams said. "Businesses that contribute to employee childcare costs could be incentivized, and refundable tax credits could make childcare professions more financially viable."

Carrie Williams is executive director of the Oklahoma Partnership for School Readiness.

Meanwhile, Rose finally was able to find a job and childcare after months of being on a waiting list. However, she continues to advocate locally for affordable and accessible childcare for parents such as herself. She hopes to propose a new model inviting employers to contribute through sponsorship to new centers.

Brandt agrees that working to address the community's current needs is the best way to make progress.

"We aspire to grow with the needs of the community, but for now we plan to go deeper into our current programs and develop partnerships with key local leaders and area businesses to design solutions," Brandt said.

FURTHER RESOURCES

Scan the QR code or visit *KansasCityFed.org/research* to read and download the *Economic Bulletin*. Visit *KansasCityFed.org/community* to read Beige Book feedback from childcare providers in Tenth District communities.

ENERGY AND THE ECONOMY:
Meeting Rising Energy Demand

Federal Reserve Bank of Dallas | Federal Reserve Bank of Kansas City | #FedEnergy24

by ANDREA GALLAGHER

Senior Vice President and Oklahoma City Branch Executive Chad Wilkerson has served as host and moderator of the annual Energy and the Economy conference. Photos courtesy of the Federal Reserve Bank of Dallas

Energy powers almost every aspect of our lives. It drives industries, transportation, communication, technology and economic development. To highlight its crucial role, the Dallas and Kansas City Federal Reserve Banks in November hosted the ninth joint Energy and the Economy conference.

More than 200 participants attended the conference in Dallas, with an additional 750 watching virtually. The 2024 theme was "Meeting the Rising Energy Demand."

"Participants at this year's energy conference joined in meaningful discussions about the challenges facing the power sector, ranging from geopolitical developments that have become increasingly impactful to the energy sector, to the future demand for oil and the opportunities and challenges for renewable power and additional sources of energy," said Chad Wilkerson, senior vice president, Oklahoma City Branch executive and session moderator during the conference.

The conference agenda, available at KansasCityFed.org, was divided into four parts, with various topics and speakers in each session. Dallas Fed President Lorie Logan opened the conference by talking about energy, as well as providing an economic outlook.

"Both the Dallas and Kansas City banks have invested deeply in understanding the energy economy," Logan said. "Together, our districts empower the nation, contributing nearly 40 percent of the U.S. energy sector's GDP. At the Dallas Fed, we're committed to leading the energy conversation through our research at the intersection of energy and economics."

Logan added that economic activity is strong, inflation is coming down, and the economy is approaching a point that can sustainably deliver both maximum employment and stable prices.

"I anticipate the FOMC will most likely need more rate cuts to finish the journey, but it's difficult to be sure how many cuts may be needed and how soon they may need to happen," Logan added. "I am keeping an open mind, scrutinizing economic data and financial conditions, and listening carefully to business and community contacts as I assess what next steps may be appropriate for monetary policy."

Rapid transformation

The first session explored the global outlook for energy going forward, while the second session addressed building infrastructure needed to meet long-term demand. David Rodziewicz, senior economics specialist at the Kansas City Fed, served as a panel chair and helped plan the conference agenda. He hopes participants learn how the energy industry is rapidly transforming.

"The takeaway for me is that demand for energy is rising, putting the industry up against some constraints," he said. "My session on infrastructure took a broad look at these issues and the challenges and opportunities associated with building new infrastructure for meeting both growing and changing

"Together, our districts empower the nation, contributing nearly 40 percent of the U.S. energy sector's GDP," Dallas Fed President Lorie Logan said in her opening remarks.

energy demand. Across the board, permitting was highlighted as a critical issue for building new energy infrastructure. Additionally, capital constraints and supply chains remain further headwinds for both growing and changing energy supplies."

View from the Tenth District

The keynote speech was delivered by Kansas City Fed President Jeff Schmid. He spoke about the energy industry in the Tenth District, which includes Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and Wyoming.

"Like Texas, the Tenth District also outpaces the United States in renewable energy," Schmid said. "Kansas, Nebraska, and Oklahoma are some of the windiest states in the country, and Colorado, New Mexico, and Wyoming are some of the sunniest. Pipelines and oil storage in Cushing, Oklahoma, are vital infrastructure, and many District manufacturers support oil and gas firms, as well as the renewable energy sector. Furthermore, the region's important agricultural sector is interwoven with the energy economy, supplying feedstocks to regional biofuel plants and producing renewable ethanol and biodiesel."

Industry perspectives

Other sessions covered how the United States will meet the rising demand for power and how companies are adapting to the ever-changing energy landscape. The conference was capped with a panel discussion among energy sector executives.

"I've been in the energy industry for 20 years," said Kristina Lund, president of the Pattern Energy Group. "One of the bright sides is technology has provided us with so many different kinds of opportunities…a lot of innovation. It's way better to have growing demand than declining demand."

Rodziewicz said that many people ask why the Federal Reserve hosts an energy conference. He answers by explaining that the event provides a

valuable way for people inside the Fed to listen, convene and connect with energy industry leaders.

"It provides an important input for calibrating our own views on the energy industry," he added. "While we set the agenda and pick the speakers, we learn just as much from the conference as those in the audience."

Next year's conference will be held at the Kansas City Fed's Denver Branch. Colorado is both a leading state in terms of oil and natural gas production, but also in renewable energy production.

FURTHER RESOURCES

Learn more about the 2024 Energy and the Economy conference, go to *KansasCityFed.org/energy/energy-conference.*

Ask an ECONOMIST

Nida Çakır Melek and Alex Gallin

Powering up: The surging demand for electricity

After years of stagnant growth, U.S. electricity demand has surged in recent years. The increase has been driven in part by the commercial sector, particularly the rapid expansion of data centers and the adoption of artificial intelligence (AI). The surge is expected to continue, signaling a shift toward a more electrified economy, with significant implications for economic competitiveness and energy infrastructure.

The acceleration in U.S. electricity demand is examined in a September 2024 *Economic Bulletin* by Nida Çakır Melek and Alex Gallin. The full article is available at *KansasCityFed.org/research.*

How did U.S. demand for electricity change in recent years?

For a decade before the pandemic (2010–19), growth in electricity demand was nearly flat. Although population growth and the economic recovery from the Great Recession increased electricity use during this period, these increases were partly offset by widespread adoption of energy-efficient technologies such as LED bulbs and modern HVAC systems. Over the last three years, however, electricity demand has grown on average 1.3% per year—more than twice the average rate during 2010–19. Moreover, this surge is expected to continue, with the projected average growth rate for power demand exceeding rates seen in the two decades before the Great Recession.

Which factors have been driving the recent surge?

Commercial electricity demand accounted for 60% of growth in total U.S. power demand from 2021 through 2023. Our analysis shows that this growth has been concentrated in Virginia, North Dakota and Texas, while commercial electricity usage in the rest of the country remained relatively stable. North Dakota has experienced the fastest relative growth in commercial electricity demand, partly because of the establishment of large computing facilities supported by the state's abundant and competitively priced energy sources. Virginia has emerged as a major hub for data centers, driven in part by its access to a high-capacity fiber-optic network and to subsea fiber cables that facilitate fast and reliable data transmission. And Texas, one of the most densely populated states with data centers, also has seen significant power demand growth due in part to its lower energy costs, robust economic activity, and population growth.

How much is electricity demand expected to grow in the near term?

Near-term forecasts for U.S. electricity demand have been revised up substantially. The 2024 forecast rose from 1.3% in the January 2023 U.S. Energy Information Administration (EIA) report to 2.6% in the agency's September 2024 report. The 2025 forecast has been revised even more dramatically: The demand growth forecast in the September 2024 report is more than eightfold that of the January 2024 report. Forecasts for both years are well above the average growth from 2010 through 2019. These upward revisions underscore the uncertainty in projecting electricity demand, particularly as AI adoption and data center growth ramps up.

Specifically, the cross-industry adoption of generative AI—which requires data centers for the necessary computational power and storage capacity—has accelerated this trend. For example, data retrieved from Bloomberg ESG show that companies such as Google and Microsoft more than quadrupled their electricity use from 2016 to 2023, citing expansions in AI and data centers among the drivers of their increased electricity consumption. This boom, combined with other trends such as industrial onshoring and clean energy investments, is contributing to a marked increase in forecasts of electricity use. In some states, those investments are already driving up demand, with further increases likely as more projects come online.

What are the implications of this demand increase for the U.S. economy overall?

The surge in U.S. electricity demand, particularly within the commercial sector, underscores the ongoing transformation toward a more electrified economy. The integration of advanced technologies such as AI, automation and data centers into the U.S. economy is energy-intensive but important for maintaining economic competitiveness. Countries that efficiently power these technologies are likely to lead in innovation and productivity gains.

To fully realize the potential benefits of this electrification, substantial investments in energy infrastructure may be necessary. This includes expanding transmission and distribution networks, modernizing the grid, and increasing renewable energy capacity. These investments will not only support growing electricity demand but also ensure that the U.S. economy can continue to grow competitively and sustainably.

(Left page) Nida Çakır Melek and Alex Gallin, *Photo by Gary Barber*

FURTHER RESOURCES
To read and download the full *Economic Bulletin*, scan the QR code or visit *KansasCityFed.org/research*. Read an article about the Kansas City and Dallas Reserve Banks' recent Energy and the Economy conference—"Meeting the Rising Energy Demand"—on page 19.

RESEARCH SNAPSHOTS

Bank risks, labor market, rent trends

Here are summaries of recent economic research published by the Federal Reserve Bank of Kansas City. Go to *KansasCityFed.org/research* to read the full articles and follow the latest analysis in *Charting the Economy*, a stream of timely economic data curated by the Bank's research staff.

What can the 1980s tell us about risks to banks today?

The commercial real estate (CRE) sector shifted significantly after the COVID-19 pandemic, as more remote work led to increased office vacancies. If higher office vacancy rates persist, losses could accrue not only to owners of those properties, but also to the banks and other financial intermediaries that finance them. Similarly, the late 1980s saw broad structural changes and regional downturns weigh on property prices, especially in the office subsector. Many small banks faced losses and eventually failed, weakening economic activity in their regions. Overall, the current distress in CRE is unlikely to reach the peaks of the 1980s and 1990s, though the recovery from ongoing CRE strains is fraught with uncertainty.

—Padma Sharma and Brendan Laliberte, December 2024 Economic Review

Nonofficial data also suggest the labor market remains healthy

The unique economic circumstances following the pandemic have raised questions over the accuracy of official statistics and their utility in assessing the health of the labor market. For example, the survey used to calculate payroll growth may not fully capture the post-pandemic rise in new establishments given the lag between a firm's birth and when it is surveyed. The Kansas City Fed shows that after excluding all official data from the Reserve Bank's Labor Market Conditions Indicators, the level of activity, a broad measure of current conditions, still remains above historical norms—suggesting a healthy labor market.

—José Mustre-del-Río, November 2024 Charting the Economy

Nebraska's labor market still strong, but more people working multiple jobs

The labor market in Nebraska remains strong, but some emerging trends point to elements of softness important to monitor moving forward. In particular, the number of individuals working more than one job has increased in recent years. Over the last quarter century, multiple job holders have on average earned less and worked more hours per week than people working one job. Without gains to income from an additional job, an increase in the number of people working longer hours at more than one job could point to emerging financial weakness among some households in the state.

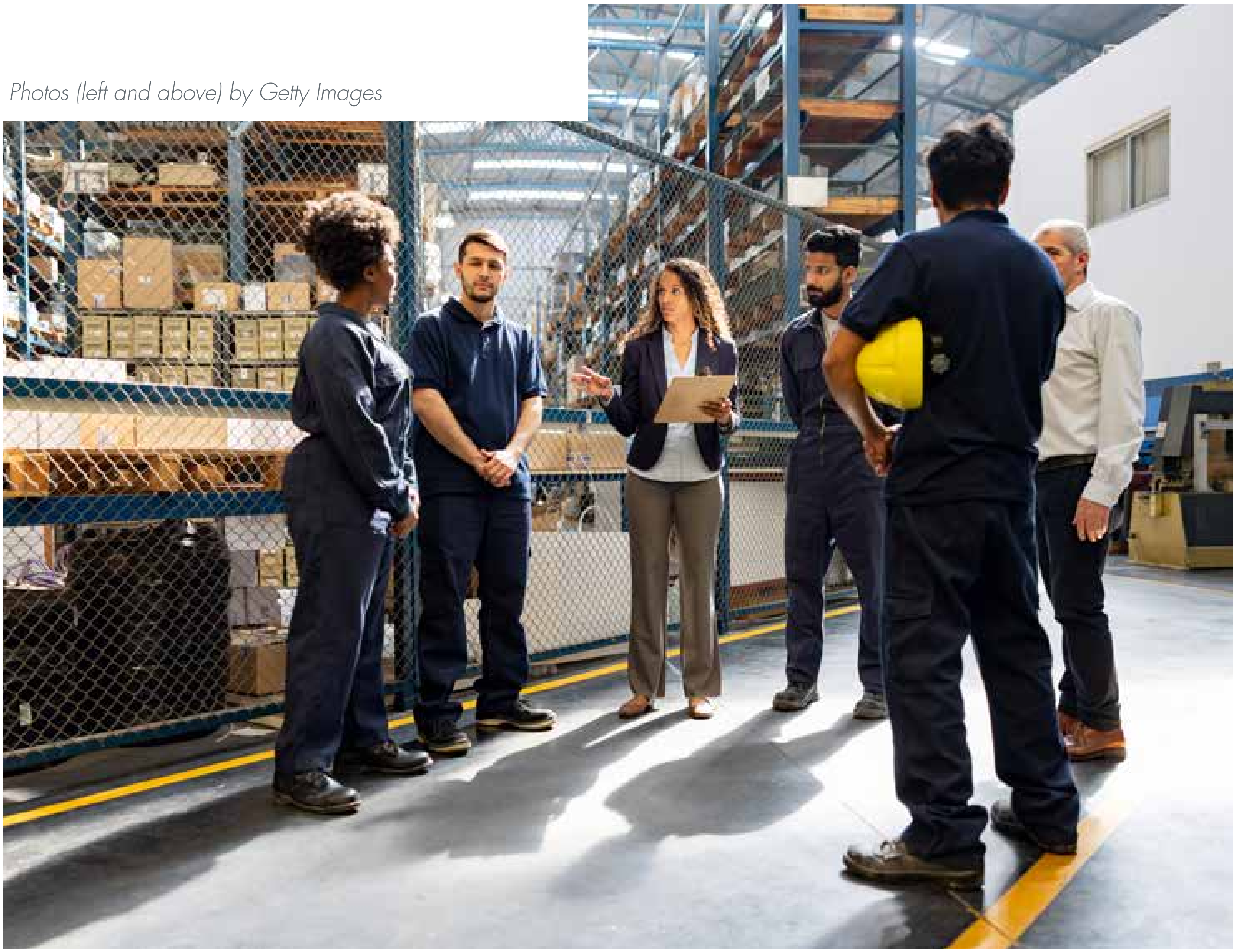
—John McCoy and Nate Kauffman, November 2024 Nebraska Economist

Trends for new tenants suggest rent inflation will continue to decline

Although rent inflation as measured by the consumer price index (CPI) for rent has been declining since its early 2023 peak, it remains above its pre-pandemic pace. The new tenant rent index from the Bureau of Labor Statistics, which tracks rent growth exclusively for new leases, provides a more timely view of rental market conditions and offers insights into the future trajectory of rent inflation. Recent declines in new tenant rent inflation suggest that overall rent inflation as measured in the CPI should continue to ease in the coming months, helping to further reduce overall inflation.

—Nida Çakır Melek, Emily Pollard and A. Lee Smith, November 2024 Charting the Economy

Photos (left and above) by Getty Images



Oklahoma's rising labor force participation driven largely by Native Americans

Oklahoma's labor force participation recently moved higher than the U.S. rate for the first time in over three decades. Most of the labor force gains were in or near the Oklahoma City and Tulsa metropolitan areas, but the southeastern portion of the state also made a sizable contribution. The Kansas City Fed finds that the state's increase in labor force participation since 2021 has mainly been driven by heightened participation among the Native American population, in metropolitan and non-metropolitan areas. Additionally, these gains have mostly been concentrated at schools, hospitals and government entities.

—Chad Wilkerson and Chase Farha, October 2024 Oklahoma Economist

Federal government outlays remain historically elevated, spurred by robust transfers

In times of economic stress, the federal government often steps in to support the U.S. economy. When unemployment rates are high, federal government outlays rise due to increased spending on social programs and stimulus measures. These higher outlays boost the economy at a time when incomes (and therefore tax revenues) are weaker, but also raise the federal government deficit. When unemployment returns to healthier levels, revenues rise and the government tends to scale back stimulus measures, lowering the federal deficit. However, this pattern appears to have changed more recently. An increasing share of federal government outlays has shifted to individuals in the form of transfers over time. This trend was particularly notable during the years following the onset of the pandemic. Understanding the full effect of federal government outlays requires examining not only federal spending but also how transfers affect individuals and state and local governments.

—Huixin Bi and Alison Felix, November 2024 Economic Bulletin

Commercial real estate activity remained stable as investor perspectives aligned

The value of the Kansas City Fed's Commercial Real Estate (CRE) index decreased slightly from -0.6 to -0.75 coming into the fourth quarter of 2024. The decline in CRE activity was driven almost entirely by a drop in loan demand that occurred before the recent changes in the stance of monetary policy and movements in longer-term rates. Other indicators of CRE activity remained stable generally, and perceptions of prevailing conditions among market participants became much more similar heading into the end of the year.

—Nicholas Sly and Juan David Munoz Henao, Fourth Quarter 2024 KC Fed CRE Index

Fighting push payment scams in fast payment systems

Fast payments can help consumers improve their cash flow, but the speed and irrevocability of these payments also make them a target for fraudsters seeking to commit authorized push payment (APP) scams. Combating APP scams is vital to ensuring the safety of fast payments and building and maintaining consumer confidence in fast payment systems. Although consumers ultimately decide whether to initiate a fast payment with an APP scam risk, addressing the issue of APP scams in fast payment systems will likely require more than just greater consumer vigilance. As fraudsters increasingly leverage technology to create scams that appear more realistic, even vigilant consumers may fail to detect them. To effectively mitigate APP scams, fast payment system operators and participating financial institutions likely will need to play more active roles.

—Ying Lei Toh, November 2024 Payments System Research Briefing

Photo by Getty Images

How has real wage growth in the Rocky Mountain Region outpaced other states?

Real wage growth, meaning wage growth after accounting for inflation, was faster in most states in 2024 compared to recent years. With inflationary pressures subsiding over the last year, average real wages returned with positive territory for many households in most locations across the United States. However, the average rate of real wage growth fluctuates widely for individual states, causing their pace of real wage growth to frequently shift relative to one another. In September 2024, Rocky Mountain states arrived at the upper end of the wage growth distribution compared to other states. Despite the natural inclination to attribute shifts in real wages to differences in regional price growth, the composition of job gains plays an even bigger part.

—Juan David Munoz Henao and David Rodziewicz, November 2024 Rocky Mountain Economist

Asset purchases in a monetary union with default and liquidity risks

Using a two-country monetary-union framework with financial frictions, the Federal Reserve studied sovereign default and liquidity risks and quantified the efficacy of asset purchases. Default risk increases with government indebtedness and shifts in the fiscal limit perceived by investors. Liquidity risks increase when the default probability affects credit market tightness. Shifts in fiscal limits, more than rising government debt, played a crucial role for Italy around 2012. While both default and liquidity risks can dampen economic and financial conditions, the Fed's model suggests that the magnifying effect from liquidity risks can be more consequential. In this context, asset purchases can stabilize economic conditions especially under scenarios of elevated financial stress.

—Huixin Bi, Andrew Foerster and Nora Traum, December 2024 Research Working Paper

Photo by Getty Images

Consumer credit cards show few signs of financial stress

Since monetary policy tightening began in March 2022, interest rates have risen across a range of consumer financial products, including credit cards. However, the consumer credit market showed little sign of financial stress as of September 2024. On balance, consumer credit markets showed limited evidence of mounting stress, even among subprime borrowers. Although subprime delinquencies have increased, rollover behavior and bank forecasts for these borrowers did not indicate a major deterioration in credit quality. Moreover, the recent easing in monetary policy may limit further deterioration in this market.

—Jordan Pandolfo, December 2024 Economic Bulletin

Tenth District manufacturing activity declined modestly in December 2024

Tenth District manufacturing activity declined modestly in December, while expectations for future activity accelerated. Price increases accelerated from last month, and raw materials prices continue to increase at a faster pace than finished product prices. The month-over-month composite index was -4 in December, down from -2 in November and unchanged from -4 in October. The composite index is an average of the production, new orders, employment, supplier delivery time, and raw materials inventory indexes. Nondurable goods manufacturing was basically flat while durable goods declined somewhat, driven by wood, mineral, and primary metal manufacturing. Most month-over-month indexes were negative. The production index ticked down from -4 to -5 while new orders fell from -9 to -17. Employment rose slightly with a reading of 3, while backlogs continued to sink to -22. The year-over-year composite index for factory activity ticked up from -18 to -16.

—Megan Williams and Chase Farha, December 2024 Tenth District Manufacturing Survey

The future of U.S. productivity: Cautious optimism amid uncertainty

Unexpected strength in productivity in 2023–24 sparked debate among economists and policymakers about its drivers and sustainability. Productivity is a critical determinant of long-term economic growth and living standards; higher productivity allows economies to produce more output per hour worked, leading to increased real wages and incomes. Understanding the drivers and sustainability of U.S. productivity growth is thus important as policymakers forecast long-term economic growth and set monetary policy. The Kansas City Fed examined the recent increase in productivity and assessed whether it represents a durable acceleration from the sluggish growth of the 2010s. The analysis suggests that while the recent productivity uptick likely embodies elements of both temporary cyclical factors and more persistent structural changes, neither a return to the pre-pandemic trend of slow productivity growth nor a sustained productivity boom is yet assured.

—Nida Çakır Melek and Alex Gallin, December 2024 Economic Review

kcFED SOCIAL SEEN

Social media highlights of our engagement across the region.

1 **MEINDERS SCHOOL OF BUSINESS AT OKLAHOMA CITY** Our recent tour of Kansas City began at the Federal Reserve Bank of Kansas City…Our students left with a better understanding of the structure and responsibilities of the Federal Reserve Bank and a complimentary bag of (shredded) cash.

2 **KANSASCITYFED** In 1954, seven employees at our Omaha Branch were volunteers in the Ground Observer Corps, a civilian branch of the Air Defense Command of the Air Force. The city of Omaha was home to one of the 49 Filter Centers in this program.

3 **KANSASCITYFED** Did you know? The largest note ever printed by the Bureau of Engraving and Printing was the $100,000 Gold Certificate, Series 1934! But you won't run across one in an old piggy bank because they were for use only by Federal Reserve Banks.

4 **JAMES REDELSHEIMER** It's not every day you get to interview a Broadway star! Julius Thomas III, the acclaimed star of "Hamilton," volunteered his time to join our "Economics in Entertainment" professional development session for educators, held at the Federal Reserve Bank of Kansas City.

5 **KANSASCITYFED** Our commitment to employees shines all year long. Members of the Rainbow Alliance, our employee-led inclusion network, gathered at our Kansas City and Omaha offices for a photo to mark their support for #LGBTQIA colleagues on National Coming Out Day.

GET SOCIAL» *Find us on Instagram, LinkedIn, X (formerly Twitter), Threads and YouTube to follow Kansas City Fed activities, share your photos and post feedback.*

SHOULD I STAY OR SHOULD I GO?

Compared with the 1990s, fewer young college graduates are choosing to move out of state for employment

by STAN AUSTIN

When Anirmend Battulga graduated in 2023 from the University of Colorado Denver, he had choices to make. With a bachelor's degree in Electrical Engineering in hand, the Denver native considered employment options beyond his home state.

Although it wasn't a difficult decision in the end, Battulga weighed the options and chose not to relocate, at least not now. He decided to accept a position as an estimator with a contracting firm in nearby Aurora, where his family resides.

"The biggest decision is cost of living," Battulga said. "I've been living with my parents, trying to save money. I wanted to stay here in Colorado. If I relocated, I'd have to, in a sense, start all over."

The decisions that young college graduates face regarding whether to migrate out of state for employment are not new. However, compared with the 1990s, graduates in recent years appear less likely to move out of state.

Photo by Carl Bower

The Kansas City Fed explored that trend, the factors behind it and related topics in a September 2024 *Research Working Paper* titled "Should I Stay or Should I Go? Interstate Mobility and Earnings Gains of Young College Graduates." The paper's authors, Andrew Glover and José Mustre-del-Río, investigated how the relationship between interstate mobility, labor market returns from moving, and initial wealth have evolved over time.

They found that in the late 1990s, nearly 7% of young college graduates moved across state lines every year. "These workers enjoyed 30 percent higher earnings three years after moving relative to similar stayers, but their gains were not immediate, amounting to only 7% in the first year post-move," Glover and Mustre-del-Río wrote.

By the mid-2010s, mobility had fallen by more than half, to 4.2%, and average earnings gains among movers fell and became more front-loaded. At the same time, debt increased among all young college graduates. These changes took place concurrent with worsening labor market prospects and financial conditions upon entering the labor market.

Broader trends

Mustre-del-Río said that the decline in interstate mobility for young college graduates appears to be part of a broader shift.

"There's a sense in economics, at least in the U.S., that there's this declining mobility or declining dynamism," Mustre-del-Río said. "Part of that mobility pertains to interstate mobility. It does look like, over time, people are just moving less and less."

One hypothesis about that trend asserts that many cities in the United States have become more and more similar, perhaps lessening the appeal of relocation for some individuals.

"So the benefit or the trade-off of moving from one place to the next might be smaller than it used to be," Mustre-del-Río said.

The Kansas City Fed study utilized a data model that identified four main factors behind the changes in interstate mobility since the 1990s:

After graduating from Rockhurst University, Mara Roudebush chose to remain in Kansas City, where she works in advertising and marketing. Photo by Gary Barber

University of Colorado Denver graduate Anirmend Battulga weighed his options and chose to remain in the state, working for a contracting firm in Aurora. Photo by Carl Bower

- Changes in the present value of earnings from moving.
- Changes in the timing of earnings gains.
- Changes in wealth upon entering the labor market.
- Changes in the disutility or undesirable effects from moving.

Importantly, Mustre-del-Río said, previous industry studies related to worker mobility focused on earnings prospects in the first year or so after relocation. The Kansas City Fed study goes beyond that to include data on what happens with workers' earnings and wealth gains in the years following a move.

"In particular what we end up finding is that back in the 1990s when people used to move more, it wasn't so much that the gains that they got immediately upon moving were all that big, but really they accrued gains two and three years out," Mustre-del-Río said. "That suggests that we need to think carefully when we're trying to understand why people move. It not just that they were moving back then for that one-off gain, but for gains that accrued over time. And then, once you start thinking about the fact that these gains can accrue over time and that the payoff isn't immediate, then you need to start thinking about things like wealth or debt or access to credit."

The study examines the role that initial wealth plays in the mobility equation, pointing out that "the decline in mobility due to lower initial wealth leads to persistently lower income for workers who enter the labor force poor."

Strong connections

For Battulga, the decision to remain in the greater Denver area had a lot to do with maintaining family and personal relationships without being "stressed" with moving to a different city.

"I think for my personal decision to stay with family (in Aurora), it was that it provided me the cushion to kind of reevaluate myself after college," Battulga said.

Also, he said that not having to incur costs of relocating has allowed him to allocate funds toward other interests, such as traveling and investing. Still, he understands that situations can vary, especially when it comes to deciding to stay or leave.

"Some of my friends decided to stay with family because they couldn't afford (to relocate) or they had some kind of student debt that they had to address first before moving out," he said. "A lot of them lived with family and friends and grew up here…and at the same time they secured internships and work experience, so that by the time they graduated they had something lined up (in the state)."

In Kansas City, part of the Tenth Federal Reserve District's western Missouri footprint, Des Moines, Iowa, native Mara Roudebush graduated from Rockhurst University in 2020 and works as a senior account manager for an advertising and marketing firm.

"The big thing for me was just the career opportunities (in Kansas City)," Roudebush said, noting that before her current role, her first job out of college was with a Kansas City-based advertising firm that is one of the largest in the world. "That was the original piece of it… having some companies based here who were really well-known across the country that I felt would provide a really good grounding for my career and give me the potential to move up and gain good experience."

Roudebush said that her husband's family is in the Kansas City area, "and just having some family and friends from college and his family here was a big part of me staying in the area and wanting to be around people that I knew and loved."

> "SOME OF MY FRIENDS DECIDED TO STAY WITH FAMILY BECAUSE THEY COULDN'T AFFORD (TO RELOCATE) OR THEY HAD SOME KIND OF STUDENT DEBT THAT THEY HAD TO ADDRESS FIRST BEFORE MOVING OUT."
>
> — Anirmend Battulga

For her peer group of college graduates—who were entering the job market in the first year of the COVID pandemic—she said it was "about 50/50," with people who found jobs quickly tending to stay in Kansas City, and those who didn't find work immediately tending to leave. Student debt was a factor in the decision-making for some of those graduates, she said, although federal pandemic policies put a pause of most student payments.

For her, going to school in a large metropolitan area also made a big difference in the mobility decision.

"I wasn't in a college town; I was in Kansas City, and that opened my eyes to a lot of opportunities and networking, and all of that was really accessible to me," Roudebush said.

Personal investment

Christiana Rangel has been manager of Recruitment and Outreach in the University of Missouri-Kansas City's School of Humanities and Social Sciences for five years and has seen many students remain in the area after completing their studies.

"I meet with a lot of students over time who do want to cross state lines, and lot of those conversations are about why they don't (move)," Rangel said. "A lot of our students are first-generation college students, and there's a lot that comes with that. A lot of students have familial responsibilities at home. So they could have some anxiety about 'If I leave, who's going to do that?' Those are discussions that I have quite frequently."

Rangel said that she also has observed that concern about potential costs of relocating, such as having to take out loans to do so, is another reason for young people deciding not to move.

Mustre-del-Río said that another way to consider the mobility decision is to see it as an investment decision, although every graduate won't have the available wealth to do so without borrowing and thereby increasing debt.

"With this moving decision, especially for a job, it's helpful to think about it as an investment for yourself, and to make an investment you need some upfront money," he said.

Referring to the research findings, he said, "This is not just a story about 'I'm moving to this place because I like it; I'm moving to this place in search of opportunity,' and especially if the benefits from that opportunity come down the road, that's going to affect people differently depending on how much money they have in savings. That's a really big takeaway."

FURTHER RESOURCES

To read or download the *Research Working Paper,* scan the QR code or go to *KansasCityFed.org/research.*

CONNE

(Above) Kansas City Fed President Jeff Schmid speaks with workers at CS Precision Manufacturing in Gering. (Lower right) Omaha Branch Directors, President Schmid, Senior Vice President and Omaha Branch Executive Nate Kauffman and Bank leaders with a portion of the Scotts Bluff National Monument in the background.

Members of the Omaha Branch Board of Directors and Kansas City Fed leaders visited the Scottsbluff, Nebraska, area in August. In tandem, the Omaha Branch's staff hosted a series of events to connect with business and community leaders in the region.

The Omaha Branch has a seven-member board of directors which helps ensure that broad and diverse views from Nebraskans are part of monetary policy discussions. While the Branch directors typically meet in Omaha, occasionally meeting in a different part of the state provides valuable firsthand perspectives on local and regional economic conditions.

During an Economic Forum in Gering, Nebraska, hosted by the Omaha Branch in conjunction with the board meeting, about 115 business and community leaders heard an update on the economy from Nate Kauffman, senior vice president and Omaha Branch executive.

"We strive at the Federal Reserve to hear directly from people across the state of Nebraska how economic developments may be affecting their business or household," Kauffman said. "These direct and in-person interactions are crucial in gaining a better understanding of the issues affecting all parts of Nebraska."

ECTING

IN WESTERN NEBRASKA

Visit included community engagement activities, learning opportunities for Bank directors, leaders

(Top photo, pictured from left) Executive Vice President and Director of Research Joe Gruber, President Schmid and Executive Vice President Josias Aleman.

In addition to the board meeting in Scottsbluff, directors and staff toured CS Precision Manufacturing in Gering and got an up-close view of the manufacturing process for hydraulic couplings used in industries such as construction, agriculture and mining. In Gering, the group also visited the Legacy of the Plains Museum, which chronicles the history of settlers and agriculture in the North Platte Valley and High Plains regions.

Additional activities for the Kansas City Fed group included a roundtable discussion with business leaders from the region, a small group meeting on community economic development, and a program for bankers focused on emerging trends and key regulatory topics.

In addition, Kauffman visited Chadron State College in Chadron, Nebraska. He spoke with students about the role of the Federal Reserve, potential careers and the economy at a symposium hosted by the school's Business Academy.

FURTHER RESOURCES
Learn more about the Omaha Branch's work at *KansasCityFed.org/omaha*. Learn more about the Bank's directors and leaders at *KansasCityFed.org/about-us/leadership*.

Tenth District *by the numbers*

ECONOMIC INDICATORS, FACTS AND TRENDS FROM THE SEVEN STATES

59,500

Net nonfarm jobs added across Colorado from October 2023 to October 2024, with the private sector accounting for 40,000.

Source: Colorado Department of Labor and Employment

12th

Nebraska's position in a group's ranking of states' electricity production from renewable energy.

Source: American Clean Power Association

63.2%

Oklahoma's labor force participation rate through the first half of 2024, heightened by the state's Native American population.

Source: Kansas City Fed's October 2024 Oklahoma Economist

$39,700

New Mexico's median annual wage in October 2024, up 1% from October 2023.

Source: ADP Pay Insights

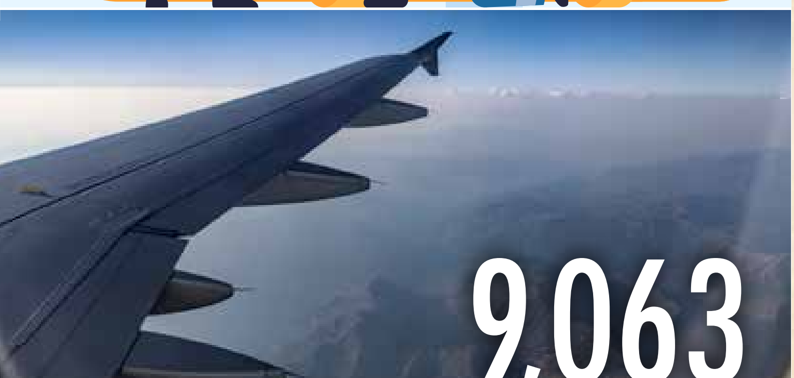
MORE ECONOMIC DATA

The Bank regularly publishes data about regional and national economic conditions at *KansasCityFed.org/research/indicatorsdata.*

6.3%

Decline in energy prices in Missouri from October 2023 to October 2024, driven mainly by lower gasoline prices.

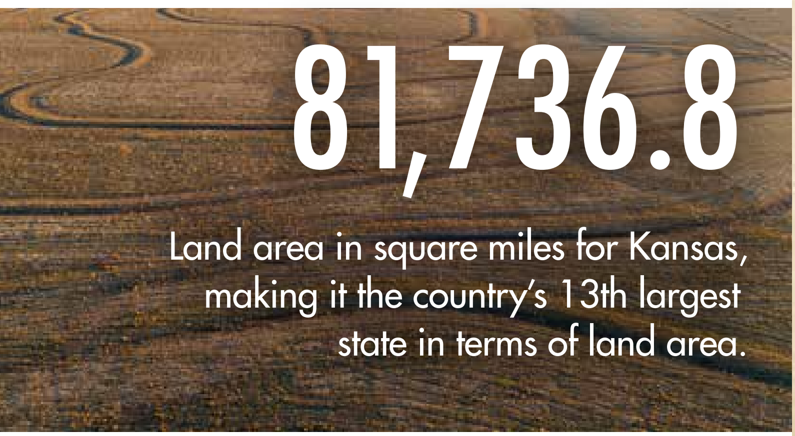
Source: U.S. Bureau of Labor Statistics



9,063

Travelers through Casper/Natrona County International Airport in Wyoming in October 2024, up 33% from October 2023.

Source: Casper/Natrona County International Airport



81,736.8

Land area in square miles for Kansas, making it the country's 13th largest state in terms of land area.

Source: U.S. Census Bureau

FROM THE VAULT

Kansas City Fed History

Allie Gator in a 1986 photo.

See ya later, Allie Gator

Back in the early 1980s, in a time before instant messaging and virtual teams, Federal Reserve offices around the country used methods of the era to stay connected. But occasionally those connections took a turn toward the whimsical.

Such was the case with "Allie Gator," dubbed more than 40 years ago as the "unofficial toy alligator of the Federal Reserve System." From at least 1983 to 1986, employees at the Kansas City Fed and numerous other Reserve Banks decorated Allie with buttons, badges and many other mementos before shipping the reptile to another bank or branch office for more decorations and, according to System archives, at least a couple of poems along the way. Internal publications of the era say that Allie's "life" as an unofficial mascot began in New York. By the time a Kansas City team's decorations were highlighted in October 1983, Allie's travels had included Denver, Baltimore, Chicago, Dallas, El Paso, Memphis, Minneapolis, Philadelphia and Salt Lake City.

Unfortunately, Allie's trail went cold after 1986, and the well-traveled gator's final destination remains a mystery.

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BANKING RESOURCES AVAILABLE

THE KANSAS CITY FED WORKS WITH OTHER SUPERVISORY AUTHORITIES TO ENSURE THE SAFETY AND SOUNDNESS OF FINANCIAL INSTITUTIONS, STABILITY IN THE FINANCIAL MARKETS AND FAIR AND EQUITABLE TREATMENT OF CONSUMERS

Resource topics at *KansasCityFed.org/banking*

- Supervision and regulation
- Community banking
- Publications
- Public records request process
- Board of Governors guidance
- Forums and other events