Dennis Lockhart
President and CEO of the Federal Reserve Bank of Atlanta
In the complex U.S. economy, trends do not often fit cleanly into categories such as cyclical and secular. Broadly speaking, though, it is possible to classify certain developments as mainly cyclical and others as more persistent, or secular.

As the video explained, we have experienced a cyclical economic recovery (see frbatlanta.org/economy-matters/annual-report/2016.aspx). Let’s delve deeper into cyclical elements of the economy that have, by and large, rebounded.

**Macroeconomy**

*Annual GDP growth is a sort of speedometer for the nation’s economy.*

Start with the broadest gauge of the nation’s entire economy. Gross domestic product, or GDP, is a monetary measure of the value of all final goods and services produced. In 2016, GDP in the United States totaled roughly $18.9 trillion, according to the U.S. Bureau of Economic Analysis. Another important macroeconomic indicator is inflation, which has been below the central bank’s 2 percent target throughout the recovery.

Congress established the Federal Reserve’s monetary policy objectives of maximum employment and stable prices in the Federal Reserve Act. These legislated objectives are often referred to as the “dual mandate.”

*Note that in the following charts, gray bars indicate recessions.*
GDP growth

GDP has mostly recovered, but is weak by historical standards.

Turning to the overall economy, GDP growth since the Great Recession has been weak by historical standards. Burdened by the depth and duration of the recession, the severe financial crisis, and various secular factors discussed later, annual real GDP growth since the end of the last recession has hovered around 2 percent. In contrast, within three years after the previous six recessions, annual GDP growth had reached almost 4 percent.

A windy decade (Timeline)

An extraordinary increase in house prices and mortgage debt partially set the stage for the financial crisis. From 1998 to 2006, average U.S. home prices more than doubled, while home mortgage debt rose from the equivalent of 61 percent of GDP to 97 percent of GDP.

Look through the decade-long timeline to view some of the unexpected events that likely influenced the economic recovery.
Both nonresidential fixed investment—basically the part of GDP that represents investment spending by businesses—and consumer spending on goods and services suffered very large declines in 2008 and 2009. The recovery from the recession has shown a divergence between the roles of business versus household spending in supporting GDP growth. Initially, growth in business spending helped offset relatively weak consumer spending. The latter was held back by high unemployment and large household debt. But consumer spending has picked up pace in more recent years as the labor market and debt positions improved. At the same time, however, business investment growth has waned. The net result has been GDP growth stuck at around 2 percent a year.
**Inflation**

*The inflation trend has remained relatively stable.*

![Graph showing inflation trend](image)

Source: U.S. Bureau of Economic Analysis, retrieved from FRED, Federal Reserve Bank of St. Louis

The trend in inflation, as indicated by year-over-year change in the price index for nonfood and energy consumer expenditures, has generally hovered between 1 and 2 percent since 2009, a bit below the Fed’s 2 percent target—but similar to where it has been since the mid-1990s. Even though the inflation trend dipped in the wake of the recession, the trend then stabilized. This return to relative stability can reasonably be attributed to the Fed’s strong commitment to its 2 percent inflation objective, which its aggressive policy actions during the recession and recovery demonstrated.

**AUGUST 2007**
Interbank credit markets freeze

**OCTOBER 2007**
Citigroup writes down subprime mortgage losses
An important ingredient for achieving low and stable inflation in the future is that households and businesses believe that inflation will actually be low and stable in the future. Surveys of professional forecasters provide one indicator of those expectations. These have remained relatively stable over time at a level that is close to the Fed’s inflation objective.
Because inflation expectations are an important barometer of how businesses plan to act, the Atlanta Fed asks businesses directly about pressures on their production costs. The Atlanta Fed survey of Business Inflation Expectations shows that firms’ expectations over the coming year move in line with changes in actual inflation, and have recently moved higher to a level broadly consistent with the Fed’s longer-run inflation objective.

**Labor Market**

**The labor market: More of us are working than ever.**

Businesses have been hiring at a solid pace despite tepid growth in output. Consequently, aggregate employment has staged a reasonably robust cyclical recovery from a bruising downturn.

15.6 MILLION
Number of jobs added after the depth of the recession

3 PERCENT
People in the shadow labor force in 2006

3½ PERCENT
People in the shadow labor force in 2016

*Note that in the following charts, gray bars indicate recessions.*
In March 2014, employment finally returned to the level of December 2007, when the Great Recession officially began. After hitting bottom in September 2010, the labor market had 75 consecutive months of employment growth through December 2016, adding 15.6 million jobs. We ended 2016 with nearly 7 million more payroll jobs than before the recession began.

Nonfarm employment has rebounded, and then some.

In September 2008:
- Fannie Mae, Freddie Mac go into government conservatorship
- Lehman Brothers collapses; largest bankruptcy in U.S. history
The most often-cited measure of unemployment ended 2016 exactly where it was immediately before the Great Recession, 4.7 percent. The “headline” unemployment rate steadily declined since peaking at 10 percent in October 2009—another sign of cyclical recovery.

Source: U.S. Bureau of Labor Statistics
During the recession, economists often spoke of a “shadow labor force”—people who wanted a job but were not actively looking for work. They are not counted in the labor force and thus are not recorded as unemployed. These people are a “shadow labor force” of sorts because they do tend to reenter the job market at some point. Some 40 percent of the marginally attached in a given month join the labor force the following month, Atlanta Fed research finds. During much of the recovery, the once-expanding shadow labor force signaled nagging underlying weakness in the job market, even as employment increased. Gradually, however, their ranks have been shrinking as more people reenter the workforce because of improved job opportunities. And more stable employment has meant that fewer people are entering the shadows.


Shadow labor force

And yet there's more to labor market health than basic measures of employment and unemployment.
Part-time for economic reasons

The number of underemployed people has drifted downward.

Another concerning labor market indicator has been widespread underemployment—people working part-time who want a full-time job. Like the shadow labor force, this group has shrunk during the recovery as employment conditions have improved but remains a bit larger than it was before the Great Recession.

Consumer Finances

Consumers’ finances are much healthier.

Consumer spending is the largest single component of GDP, so the health of the consumer sector is crucial to the health of the overall economy. Several broad measures of consumers’ financial well-being and spending describe a cyclical recovery.

650.4 PERCENT
in October 2016, household net worth relative to income, compared to 649.1% in January 2007

-1.6 PERCENT
Amount consumer spending dropped in 2009 from the previous year

2.3 PERCENT
Amount consumer spending grew in 2016 from the previous year

*Note that in the following charts, gray bars indicate recessions.*
During the recession, widespread unemployment produced a severe drop in aggregate labor income. At the same time, falling home and investment portfolio values battered consumers’ wealth. The collective net worth of households (the value of assets less liabilities) has since climbed relative to their income, thanks mainly to rising stock and home prices.
As employment, income, household wealth, and consumer confidence rebounded, total consumer spending also climbed, albeit a bit more slowly than recent norms.
By the end of 2016, consumers’ confidence in the economy bested its pre-recession level. This matters. Sentiment can be an important signal of future consumption—confident consumers are active consumers. Along with real personal income growth, household wealth, and access to credit, confidence is an important element supporting consumption growth.
Housing

The residential real estate market is vital to the economy, even though new residential construction accounts for only about 3 percent of GDP. For homeowners, purchasing a home is usually their largest single financial transaction, and their homes may become their most valuable holding. In fact, residential real estate accounts for about 70 percent of the value of all household nonfinancial assets. The real estate sector also supports hundreds of thousands of construction jobs, as well as employment for those selling homes, making home loans, and producing and selling housing-related goods and services.

*Note that in the following charts, gray bars indicate recessions.*

JANUARY 2011
Arab Spring protests spread

MARCH 2011
Massive earthquake, tsunami take place in Japan
Home prices climbed to record levels in 2006 in the run-up to the housing bubble but began falling before the recession hit. They reached a new low in 2012 and have for the most part recovered to the same levels they were at the peak of the housing market. There are concerns that upward pressure on home prices is making homes unaffordable in some areas.
The bursting of the housing bubble flooded the country with distressed properties as mortgage loan defaults mounted, and foreclosures rose to record levels in 2009. Layered on top of that, rising unemployment during the recession further squelched the demand for homes.

Source: U.S. Census Bureau

**DECEMBER 2011**
China’s economic growth slows through 2011

**OCTOBER 2012**
Superstorm Sandy strikes New Jersey, New York; second costliest U.S. hurricane ever
Rising house prices during the economic recovery have helped increase homeowners’ equity. However, rising prices also dampened the demand for home purchases somewhat, which is one of the reasons that home sales have not rebounded more strongly. Other factors may also be constraining housing demand. For example, the rate of household formation is lower than it was, as a larger share of young adults are living longer in their parents’ homes.

**Existing home sales**

... but remain below the pre-recession peak.

![Graph showing existing home sales](image)

Source: National Association of Realtors

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**NOVEMBER 2012**

Euro zone economy falls back into recession

**DECEMBER 2012**

U.S. government approaches “fiscal cliff”
Monetary policy was the primary public policy tool deployed during much of the recovery, and it likely supported the cyclical rebound. Even though the economy has returned to a healthier state, by historical standards, monetary policy remains accommodative—interest rates are low. That’s largely because of the secular factors restraining the recovery.

Note that in the following charts, gray bars indicate recessions.
First to mitigate the impact of the financial crisis on the economy, and then to support an economic recovery, the Fed has been keeping interest rates very low. Nearly nine years after the federal funds rate was effectively cut to zero, it remains historically low. Moreover, given projections of lower potential GDP growth in the future, the Fed expects that rates will not return to levels we saw before the recession. In December 2016, the Federal Open Market Committee (FOMC) boosted its target for the fed funds rate, to a range of 0.5 percent to 0.75 percent. Over the longer run, the FOMC expects that the funds rate will be in the neighborhood of 3 percent—a lower long-run level than in the past.
After the standard tool of monetary policy—lowering the federal funds rate—was by itself insufficient to stimulate the economy in the depths of the recession, the central bank purchased bonds and other assets to try and push down long-term interest rates to spur economic growth. Quantitative easing, or QE, was an unconventional way to relax monetary policy. As the Fed purchased bonds in three rounds—in 2009-10, in 2011, and 2012 through 2014—the balance sheet grew from under $1 trillion to about $4.5 trillion. QE ended in late 2014.

The FOMC has stated that it expects to reduce the size of its balance sheet once the normalization of interest rates is well under way.
Beneath the cyclical healing lie stubborn forces that have not been much influenced by monetary policy, and probably won’t be. Addressing these issues is likely up to federal and state legislative bodies, along with the private sector.

**Secular Trends**

Note that in the following charts, gray bars indicate recessions.

**AUGUST 2014**
Police shootings, demonstrations roil U.S.

**OCTOBER 2014**
Fed announces end of quantitative easing
Age demographics influence numerous aspects of the economy including consumption, wealth distribution, and investment patterns. A number of researchers view aging as a major reason for recent tepid GDP growth. In an October 2016 paper, a group of Federal Reserve economists writes that demographic factors, especially aging, have helped create a “new normal” of slow GDP growth and low interest rates that could last decades.

Source: U.S. Census Bureau

**Population aging**

An aging population is shackling economic growth.

**AUGUST 2015**

Worries about Chinese economy send Dow down over 1,000 points in a day

**NOVEMBER 2015**

Terrorists carry out attack in Paris
One of the biggest of these secular forces is a declining trend in the labor force participation (LFP) rate—the share of the adult population wanting and available to work.

An expanding labor force is critical to economic growth. In the simplest terms, the economy’s long-term growth rate equals the growth rate of labor employed plus the growth rate of the productivity of that labor. We’ve seen what’s happened amid slow growth of productivity and the labor force during the recovery: a tepid economic expansion.

Source: U.S. Bureau of Labor Statistics

**Labor force participation**

**Labor force participation has generally declined since the turn of the century.**

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**DECEMBER 2015**

FOMC raises rate target to 0.25–0.50%

**JUNE 2016**

United Kingdom votes to leave European Union
Many factors have put downward pressure on the LFP rate over the last decade. But the longer-term issue of an increasing share of the population reaching retirement age has been the biggest single drag on participation, according to the Atlanta (see frbatlanta.org/chcs/labor-force-participation-dynamics.aspx).

In fact, over the last few years, aging was the only significant factor still holding back participation. Countervailing forces—including individuals delaying retirement, a shrinking shadow labor force, and people not seeking work for health reasons—all helped offset the effect of an aging population.

Contributions to change

For the past decade, aging has been the most significant factor holding back participation.
Labor productivity is the output of goods and services per hour of work across the economy. The pace of productivity growth slowed to about 1.25 percent a year over the past decade, versus more than 3 percent in the late 1990s through 2004 and more than 2 percent over the previous 30 years.

Advancing labor productivity underpins wage growth and general prosperity. If productivity increases 2 percent a year, the average American’s standard of living will double roughly every 35 years, Fed Chair Janet Yellen says. One percent annual growth means the standard of living doubles every 70 years.
Weak investment spending by businesses in recent years has almost certainly hindered productivity growth. While U.S. companies have broadly increased spending on assets such as equipment, buildings, and software since the recession, the pace of spending has been low by historical standards. Businesses typically delay investing amid uncertainty, and uncertainty has been unusually high in recent years.

Nevertheless, slow investment spending relative to employment growth has sparked concern. Supplying workers with newer, better plants, equipment, and software has traditionally spurred productivity growth. But in recent years, growth in the capital stock of U.S. businesses has barely kept pace with expansion of the workforce.

With slower labor force growth potentially coming, we need better labor productivity to support even modest GDP expansion.
Another secular challenge lies in declining business dynamism. One indicator of this is the employment reallocation rate—the rate at which businesses create and destroy jobs. In the early 1990s about 12 percent of employment shifted across firms from one year to the next. By 2015, that rate had declined to only 9 percent. Productivity growth is generally supported by the decline of low productivity businesses and the expansion of more productive competitors. This growth is typically associated with high rates of resource reallocation. So the decline in the rate of job transformation is a potentially worrying sign for future productivity growth.
New and young firms—those that are five years old or younger—are vital jobs creators. Yet the rate of business formation is much lower than 40 years ago, and has shown almost no recovery from the last recession. Besides employment, fewer start-ups could also depress productivity, since fast-growing young businesses help spark productivity growth.

It’s not entirely clear why startups are scarcer. Theories include an older population, limited supply of or access to risk capital, and a less competitive business environment that favors incumbents over new entrants. It’s also possible that better matching of people with jobs has made workers happier and thus less likely to strike out on their own.

Employment at young firms

Young companies make up a smaller share of total employment, reflecting a long-term decline in new business creation.

Source: U.S. Census Bureau
Unexpected headwinds keep interfering with steady growth.

Unpredictable events can sow uncertainty that can restrict hiring and capital spending. Events that generate policy uncertainty “foreshadow declines in investment, output, and employment,” economists Scott R. Baker, Nicholas Bloom, and Steven J. Davis write in a March 2016 paper. That trio maintains an index measuring economic policy uncertainty (see policyuncertainty.com).

Of course, unpredicted events didn’t start in the past decade. But the index of policy uncertainty has drifted upward since the 1960s, Baker, Bloom, and Davis write. And since 2007, policymakers have faced seemingly unrelenting waves of uncertainty. Consequently, says Dennis Lockhart, Atlanta Fed president from early 2007 until the end of February 2017, “It’s very difficult, in real time, to know exactly where the economy is.”

Note that in the chart, gray bars indicate recessions.

U.S. Economic Policy Uncertainty Index

Sixth District Directors

Federal Reserve Banks each have a board of nine directors. Directors provide economic information, have broad oversight responsibility for their bank’s operations, and, with the Board of Governors’ approval, appoint the bank’s president and first vice president. Six directors—three class A, representing the banking industry, and three class B—are elected by banks that are members of the Federal Reserve System. Three class C directors (including the chair and deputy chair) are appointed by the Board of Governors. Class B and C directors represent agriculture, commerce, industry, labor, and consumers in the district; they cannot be officers, directors, or employees of a bank; class C directors cannot be bank stockholders. Fed branch office boards have five or seven directors; the majority are appointed by head-office directors and the rest by the Board of Governors.

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Recognizing the importance of understanding liquidity, the Atlanta Fed, through the Center for Financial Innovation and Stability (CenFIS), assembled more than 200 market practitioners, policymakers, and academic experts at Amelia Island, Florida, in early May for the 21st Annual Financial Markets Conference.

In March, the former chief of the Bank of Japan visited the Atlanta Fed to discuss the profound economic effects of a rapidly aging population. Professor Masaaki Shirakawa said his country has been slow to seriously address the fiscal and economic problems this demographic shift created.

Atlanta Fed economists published research on a range of timely matters including wages, inflation, the Chinese economy, housing finance and mortgage markets, the labor market, financial stability, financial markets and regulation, social insurance programs for the aged, and the effects of delinquent debt on mortality.

The Research team refreshed the Atlanta Fed’s labor force dynamics website. A key component of the site is the “spider chart,” which gauges various aspects of the labor market. Updates include a tool for looking at the main reasons behind changes in labor force participation for different age groups. The Research department also enriched the Wage Growth Tracker tool with additional historical data.

Atlanta Fed economists also introduced the Taylor Rule Utility in September. The new tool allows users to craft their own tool to recommend interest rate policies. To help you sort through the most common variations, the Taylor Rule Utility lets you choose from various measures for the inflation gauge, inflation target, the natural real interest rate, and the resource gap.

The Community and Economic Development (CED) group and the Philadelphia Fed introduced a tool to track philanthropic grants for community development—revealing which cities tend to get them and why. Following the Money examines foundation grants across 366 U.S. metropolitan areas.

The CED also published research and held conferences on housing affordability issues, workforce development—in particular, opportunity occupations—and community development finance.
In partnership with Emory University, the Americas Center held its fifth annual international economics workshop in December. Economists from leading universities and the Federal Reserve System presented new research on a range of topics.

The Americas Center hosted its annual roundtable Brazil economic forecast event. The event was co-sponsored with the Brazil-American Chamber and the World Affairs Council of Atlanta.

The Americas Center and North Carolina State University co-hosted “FATF@25,” a workshop on anti-money laundering measures. The meeting featured presentations by political scientists and policy analysts from eight countries on the latest trends in combating money laundering and terrorism financing.

**Education and Public Outreach**

More than 10,000 teachers participated in economic education workshops, webinars, and presentations. Attendance at guided tours at the District’s museums increased 20 percent over the 2015 number. Through its economic education programs, the team met a strategic objective to reach 75 percent of high schools in the Sixth District that are identified as inner city, majority-minority, or girls’ schools.

Online programs of the economic education team had a strong 2016. Page views of the Classroom Economist, Extra Credit, Katrina's Classroom, and Atlanta Fed lessons and activities more than doubled from 2015, topping 505,000. Student enrollments in classroom videos rose 34 percent to more than 138,000.

The economic education team distributed more than 65,000 printed infographics posters to teachers in 48 states and the Netherlands.

In the ECOnversations series of webcasts, Atlanta Fed experts discussed subjects including the economic growth of small cities, the effects of an aging workforce, first-time homebuyer demographics, and real estate conditions. A special edition addressed how a Reserve Bank president is selected and fielded questions from viewers.

Six Public Affairs Forums brought leading authorities to Atlanta Fed offices to offer economic perspectives on public policy issues. Forums explored topics including the economics of college sports, the connection between human resource practices and big data, and perspectives on the U.S.-Cuba relationship.

The Atlanta Fed Speakers Bureau facilitated employees sharing research, data, and information with 159 community groups and professional associations.
Payments

The Retail Payments Office (RPO) successfully implemented the first of three phased enhancements as part of an industry-wide initiative to expand expedited clearing and settlement of Automated Clearinghouse (ACH) transactions. This initiative supports the Federal Reserve's long-term Strategies for Improving the U.S. Payments System (SIPS).

Additional SIPS-related milestones included promoting industry awareness for transaction messaging standards that will enhance cross-border payments efficiency, and working across the Federal Reserve System to strengthen the security and resiliency of the System's financial services operations.

The RPO partnered with the Retail Payments Risk Forum and Board of Governors staff to complete the sixth triennial Federal Reserve Payments Study, with initial results released in December.

Internally, the RPO continued to make progress on numerous automation initiatives that will fuel check and ACH processing efficiencies, strengthen resiliency, and enhance responsiveness to market demands.

Supervision and Regulation

The Supervision and Regulation division continued efforts to enhance its risk assessment capabilities and to integrate this perspective into its supervisory programs. For example, as a result of concerns in certain segments of the commercial real estate market, examiners conducted a horizontal review focused on state member banks with heightened commercial real estate loan growth or concentrations. The results led to a number of recommendations to enhance risk management activities in this area.

The division continued to promote efforts to inform the banking industry and general public through a variety of forums, publications, and live events, including the ViewPoint Live webcasts.

The division’s annual Banking Outlook Conference featured keynote speakers and panel discussions on an array of banking and regulatory issues. The topics included the changing risk environment for financial institutions, commercial real estate markets and the impact of recent standards and regulation, technological innovation and its potential effect on traditional banks, and the national economic outlook.

Corporate Citizenship

Sixty-three Atlanta Fed employees served on the boards of directors or advisory councils for more than 100 nonprofit organizations working to address critical community needs like access to affordable housing, services for the homeless, and job training and placement for low- to moderate-income individuals.

Employees contributed 2,000 hours of volunteer time reading to students, offering career advice and résumé and interviewing assistance, preparing and delivering meals to seniors, cleaning up public spaces, and donating new and used goods to benefit veterans, seniors, and youth.
Financial Statements

The Board of Governors and the Federal Reserve Banks annually prepare and release audited financial statements reflecting balances (as of December 31) and income and expenses for the year then ended.

Audit Statement

The Federal Reserve Board engaged KPMG to audit the 2016 combined and individual financial statements of the Reserve Banks.*

In 2016, KPMG also conducted audits of internal controls over financial reporting for each of the Reserve Banks. Fees for KPMG services totaled $6.7 million. To ensure auditor independence, the Board requires that KPMG be independent in all matters relating to the audits. Specifically, KPMG may not perform services for the Reserve Banks or others that would place it in a position of auditing its own work, making management decisions on behalf of the Reserve Banks, or in any other way impairing its audit independence. In 2016, the Bank did not engage KPMG for any non-audit services.

* In addition, KPMG audited the Office of Employee Benefits of the Federal Reserve System (OEB), the Retirement Plan for Employees of the Federal Reserve System (System Plan), and the Thrift Plan for Employees of the Federal Reserve System (Thrift Plan). The System Plan and the Thrift Plan provide retirement benefits to employees of the Board, the Federal Reserve Banks, the OEB, and the Consumer Financial Protection Bureau.

Financial Statements Link

frbatlanta.org/economy-matters/annual-report/2016/milestones-and-more.aspx#financials
OMWI REPORT

Each year, the Office of Minority and Women Inclusion (OMWI) at the Federal Reserve Bank of Atlanta provides a congressional report summarizing the office’s actions with regard to the requirements under Section 342 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. This report highlights the work OMWI performed in the previous year to take the affirmative steps that the Dodd-Frank Act addresses—specifically, ensuring workforce and supplier diversity, as well as advancing financial literacy in inner-city, majority/minority, and girls’ schools. The Atlanta Fed undertakes these efforts in the Sixth Federal Reserve District. (See frbatlanta.org/-/media/documents/about/atlantafed/omwi/annual-report-to-congress/2016/0331-annual-report-to-congress.pdf.)

PAST ANNUAL REPORTS

The Atlanta Fed’s annual reports highlight the work of the Atlanta Fed over the preceding year. Reports before 2012 were printed publications, and many of these are available online on our website in PDF. Beginning in 2011, we have published online-only annual reports. These contain topical essays, dynamic charts, and videos and imagery, as well as links to the Bank’s financial statements and lists of our current directors and officers. View past reports: frbatlanta.org/about/publications/annual-reports.aspx.

CREDITS

About the Atlanta Fed

The Federal Reserve Bank of Atlanta is one of 12 regional Reserve Banks in the United States that, with the Board of Governors in Washington, DC, make up the Federal Reserve System—the nation’s central bank. Since its establishment by an act of Congress in 1913, the Federal Reserve System’s primary role has been to foster a sound financial system and a healthy economy. To advance this goal, the Atlanta Fed helps formulate monetary policy, supervises banks and bank and financial holding companies, and provides payment services to depository institutions and the federal government. Through its six offices in Atlanta, Birmingham, Jacksonville, Miami, Nashville, and New Orleans, the Federal Reserve Bank of Atlanta serves the Sixth Federal Reserve District, which comprises Alabama, Florida, and Georgia, and parts of Louisiana, Mississippi, and Tennessee.
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