President's Message: How Long Can The Expansion Continue?
William Poole

The current economic expansion in the United States was 102 months old at the end of September 1999. It began in April 1991, and we have experienced no negative quarters in real gross domestic product growth since then. The pace of economic growth has been especially robust in the last few years. In fact, if real growth continues through the first quarter of next year—and all indications are that it will—the current boom will surpass that of the 1960s and become the longest expansion in U.S. history. What's going on here? Have we banished the business cycle?

Probably not. Any reading of history suggests that market economies have suffered business cycle fluctuations in a variety of times and places, and that periods of good times are interspersed with periods of economic distress, sometimes mild, sometimes severe. Even the vaunted Japanese economy, which has grown rapidly for most of the postwar era, has spent much of the 1990s mired in recession.

But even if the business cycle is here to stay, the current boom has tapped into sources of strength beyond those that contributed to past upswings in economic activity. For instance, the productivity of our nation’s workers has grown faster during the last few years than it had for more than two decades before. Meanwhile, the end of the Cold War has permitted the U.S. government to redeploy its expenditures away from defense and toward other productive ventures. In the process, we’ve shifted from a budget deficit to a budget surplus, releasing resources into the private sector. Finally, good monetary policy, measured by an inflation rate that has been both low and stable by historical standards, has contributed to a policy environment that allows markets to work efficiently.

With the expansion now at historic lengths, should we expect recession around the corner? Stated differently, do economic expansions die of old age? The statistical evidence on this question says no.

One way to illustrate this issue is the following: Suppose you flip a coin five times, and it comes up heads each time. What is the probability of flipping heads on the sixth try? The answer is 50 percent—the first five heads have no influence on the current coin toss.

Similarly, the fact that our economy has expanded for several years in a row now does not increase the odds that we will enter a recession next year. Careful statistical analysis shows that economic fortunes do not depend on the length or timing of past expansions. They depend instead on stable prices and low inflation. Betting on a quick end to our record-breaking expansion might not be a good wager.
Community Profile: A Tale of Two Cities—Hannibal, Mo./Quincy, Ill.

Jeryldine Tully

When the new, four-lane, $50 million Mark Twain Memorial Bridge opens in September of 2000, it will further strengthen the ties that bind Hannibal, Mo. and Quincy, Ill.—the two towns that flank the section of the Mississippi River the bridge will cross. But while the towns are only 20 miles and a bridgespan apart, their economies—and their approach to economic development—differ substantially. Hannibal, blessed as the boyhood home of Mark Twain, has had a steady source of tourism revenue to bank on since its founding in 1819. Quincy, with no such trump card to play, has been forced to generate its own livelihood.

Quincy's Story

In 1978, Quincy formed the Great River Economic Development Foundation, a private, non-profit organization designed to retain existing businesses and attract new ones to the area. The organization, which gets its funding from public and private sources, was born out of necessity, according to its current president Jim Mentesti. That year, the area lost 3,500 jobs when the 990,000 square foot Motorola plant in town closed down. Three years later, Quincy suffered a second blow when the Electric Wheel plant also closed—taking with it another 1,500 jobs. The unemployment rate in Adams County, Ill., reflected these job losses, jumping from 5.5 percent in 1979 to 12.6 percent in 1982.

A year after the economic development foundation was created, the city broke ground on a 100-acre industrial park, which was funded through a city-wide bond issue, along with private donations. Today, the industrial park is filled to capacity with 20 different businesses. Meanwhile, the former Motorola plant has been turned into an "industrial mall" with eight to 10 companies taking from 1,200 to 400,000 square feet apiece. And the once-defunct Electric Wheel plant is up and running again as Titan International Inc. With roughly 1,000 workers, it's now the largest industrial employer in Quincy.

Apart from the industrial park and the economic development foundation, Quincy's two-decade turnaround can be credited to another factor: In 1991, the area received a huge boost when interstates 72 and 172, four-lane highways that connect Springfield, Ill., to Quincy, were completed after 30 years of work. Before that, Mentesti says, Quincy was regarded as a place where "you can't get there from here." Now, new plants and expansions of existing plants are springing up all over town:

In 1998, Wis-Pak Inc., a soft drink bottling corporation, opened a $20 million, 68,000 square foot plant, which will fill bottles and cans of Pepsi-Cola products for 32 Pepsi-Cola franchises throughout the Upper Midwest.

In June 1999, Archer-Daniels Midland Co., announced that it would spend $20 million to upgrade its Quincy-based soybean processing plant—a plant it purchased from locally owned Moorman's Manufacturing in January 1998.
Construction on a 69,000 square foot USPS postal sorting center, which will house more than 100 employees, was just begun, with operations expected to get under way in the fall of 2000.

**Hannibal's Tale**

Across the river in Hannibal, economic activity is considerably more subdued. Deanna David, economic development specialist for the Northeast Missouri Development Authority, admits that she's not actively recruiting new manufacturers "for the simple fact that it's going to hurt those who are already here." By hurt, David means steal employees away from. Like Quincy, Hannibal is having a difficult time finding qualified candidates to fill open positions at existing firms, let alone new ones. "It's a Catch-22," David explains. "We've almost gotten too big for our britches." Commercial development, however, is increasing and highly encouraged.

One project the city has undertaken is the development of a 120-acre industrial park on the west side of town. The city and the Board of Public Works purchased the property, but it is now controlled by the Missouri Department of Transportation, which is removing dirt from the site to use for the new bridge approaches. After the dirt is gone, the city will regain control of the land, which will have been cleared at MODOT's expense—a deal that would have made Mark Twain proud.

Until it's time to court residents for the new industrial park, David will continue to respond to—rather than solicit—inquiries about the region's development possibilities. A recent inquiry from the Swiss Colony Company resulted in a 14,000 square foot call center for holiday sales that employs from 50 to 400 people, who would otherwise be out of work during the area's off-season.

Her office is also busy trying to add another tier to the tourism industry—which is only the area's third-biggest revenue generator after manufacturing and agriculture—by joining with Clarksville, Mo., and Louisville, Mo., to create an artists' corridor along a 50-mile stretch of the Mississippi River. David has been fielding phone calls from artists nationwide who are considering making Hannibal their home. While David welcomes the boost in tourism dollars, she's even more enthused about the prospect of attracting artists' family members who may need a job.

**Strength in Numbers**

So whose approach to economic development is working? Many would predict that Quincy's approach—build it and they will come—should be more successful. Given today's robust economy, both cities are experiencing employment growth. But Hannibal is outperforming Quincy: Looking at figures from the counties that these two cities dominate, employment in Marion and Ralls counties, Mo., rose 11.2 percent from July 1992 to July 1999; employment in Adams County, Ill. rose by 8 percent.

Ultimately for both cities, a third approach—a regional one—may hold the key to their future. The appropriateness of this approach emerged six years ago when a natural disaster brought the communities together.

During the Flood of 1993, bridge approaches to the existing Mark Twain Memorial Bridge were washed out, forcing those who lived in one town, but worked in the other to take airplane shuttles to and from work or drive more than 200 miles north to Keokuk, Iowa, or south to St. Louis to cross the Mississippi. David says the flood pointed up just how interdependent the two towns are. "It really brought it home," she says. Mentesti of Quincy agrees, saying that the success the residents of both towns achieved battling the river made them realize that there is strength in numbers. This awareness of the need for working relationships across state boundaries led to the creation of the Tri-State Development Summit, the first of which was held in 1996.
At the yearly summit, representatives from Missouri, Illinois and Iowa meet to discuss four main topics: transportation, tourism, workforce development and river issues. Each of these topics is then addressed in greater detail throughout the year by a public/private, cross-state task force. Task force accomplishments thus far include:

- The transportation group is making significant headway in getting U.S. Highway 36 upgraded to interstate status, linking it to I-72 in Illinois;
- The tourism group just produced its first tri-state tourism brochure so that "when somebody comes to Hannibal, they just won't do Hannibal and go home," Mentesti says;
- The workforce group brought together community college presidents from all three states to collaborate on an online computer science instructional program, which will be launched with a $210,000 private sector grant; and
- The rivers group has pushed all three states to pass legislation for the first-ever, tri-state inter-modal port authority.

Arguably the greatest accomplishment of the group so far, though, is the new awareness it has created of the area as a distinct region—a region that can be packaged and promoted to businesses and tourists throughout the Midwest. Before, Mentesti explains, the view was that "St. Louis is St. Louis, Chicago is Chicago, Kansas City is Kansas City, and everybody else in between is a thing without an identity. We are a region now."
## Hannibal/Quincy, by the numbers

### Population

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hannibal</td>
<td>17,728</td>
</tr>
<tr>
<td>Quincy</td>
<td>39,918</td>
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</table>

### Labor Force

<p>| | |</p>
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hannibal</td>
<td>15,843</td>
</tr>
<tr>
<td>Quincy</td>
<td>36,002</td>
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</table>

### Unemployment Rate

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hannibal</td>
<td>3.5%</td>
</tr>
<tr>
<td>Quincy</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

### Per Capita Personal Income

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hannibal</td>
<td>$20,305</td>
</tr>
<tr>
<td>Quincy</td>
<td>$22,110</td>
</tr>
</tbody>
</table>

### Top Three Employers

**Hannibal:**

- Diemakers, Inc.  860
- Dura Automotive  750
- Hannibal Regional Hospital  640

**Quincy:**

- Blessing Hospital  1,700
- Quincy Public Schools  950
- Titan International  900

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**NOTES:** Population statistics are for the cities of Quincy and Hannibal (July 1999). All other figures are for Adams County, Ill. and Marion County, Mo. (August 1999).
Down, But Not Out: The Future of Community Banks
Timothy J. Yeager

On a street corner in a suburb of St. Louis sits a local grocery store called Freddie's Market, where older residents recall shopping as children. Nothing is particularly unusual about the small store, except that it is still in business. Unusual because down the street about a mile is a regional chain store that dominates the St. Louis grocery market. The chain’s better selection and cheaper prices have driven nearly every other independent grocery store in town out of business.

Fast-forward 30 years. On another street corner in a St. Louis suburb sits a community bank. Nobody banks there anymore except the older folks. Younger residents frequent the mega-bank branches and ATMs located conveniently in the discount and grocery stores, where customers’ auto loans are electronically approved while their groceries are bagged.

In 1999, community banks are hardly a dying breed. Of the 8,567 U.S. commercial banks in business during the first quarter of 1999, 6,984 (or 82 percent) were community banks—those that both have less than $300 million in assets and are not owned by a large bank holding company. The United States is unique among industrial countries for the ubiquity and vitality of its community banks. Recent changes in the U.S. banking environment, however, threaten the long-run viability of these institutions. Will community banks retain their current place in the banking industry of the future, or will they go the way of the mom and pop grocery store?

A Breed Apart

Community banks differ from other banks in that their business depends on personal relationships with depositors and creditors. Core deposits—checking, savings and small-time deposits—are the primary funding sources of community banks. These banks develop relationships with their customers that help to attract and retain core deposits. In contrast, larger banks rely more heavily on “hot money” to fund their loans. Unlike core deposits, hot money is a relatively more expensive funding source because banks nationwide bid for those funds. Hot money moves in and out of banks quickly, fleeing to the highest bidder, whereas core deposits are rooted in a given community and are not as likely to be withdrawn unexpectedly. As Figure 1 illustrates, 86.3 percent of community bank deposits are core deposits, compared with 70.8 percent at other banks.
Figure 1

Small Banks Rely On Home-Grown Funding

(AS OF MARCH 31, 1999)

COMMUNITY BANK DEPOSITS

<table>
<thead>
<tr>
<th>Core Deposits</th>
<th>Non-Core Deposits</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.7%</td>
<td>86.3%</td>
</tr>
</tbody>
</table>

NON-COMMUNITY BANK DEPOSITS

<table>
<thead>
<tr>
<th>Core Deposits</th>
<th>Non-Core Deposits</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.2%</td>
<td>70.8%</td>
</tr>
</tbody>
</table>

NOTE: Core deposits include checking, savings, and small-time deposits. Non-core deposits are all other deposits.

Figure 2

Small Banks Like Small Businesses

(AS OF JUNE 30, 1998)

COMMUNITY BANK SMALL BUSINESS LENDERS

<table>
<thead>
<tr>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>45.8%</td>
<td>54.2%</td>
</tr>
</tbody>
</table>

NON-COMMUNITY BANK SMALL BUSINESS LENDERS

<table>
<thead>
<tr>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0%</td>
<td>91.0%</td>
</tr>
</tbody>
</table>

NOTE: Banks identify themselves as small business lenders if most of their business loans have original amounts of $100,000 or less.

SOURCE: FFIEC Reports of Condition and Income for Insured U.S. Commercial Banks
Personal customer relationships with borrowers give community banks an edge over other banks in small business lending since local banks can gather information about the borrower from several sources not available to other banks. Intangible information, such as an entrepreneur's reputation in the community or co-workers' assessments of the managerial talent of the loan applicant, are obtained more easily by a community banker. In contrast, larger banks typically focus on firms for which credit information is more readily available.

As Figure 2 shows, 45.8 percent of community banks identify themselves as small business lenders, compared with only 9 percent of non-community banks. Community banks are also more likely to extend small business loans based on limited information since they can monitor these loans better than larger institutions can. Information advantages are greatest when the borrowing firm has its deposit accounts with the local bank originating the loan; in this case, the loan officer can track cash flows more quickly and accurately. 3 Deposit account flows also provide the bank with information that cannot be obtained publicly. In addition, the borrower is more likely to be honest with the banker about the condition of the firm if he or she knows that the banker has “inside” information.

Community banks are also usually more flexible in tailoring their loan policies to small business customers. Because loan officers at small banks are closer in the chain of command to senior managers, they generally deal with less bureaucracy and, therefore, have more discretion in lending with "exceptions." The short chain of command also gives senior managers better oversight over credit performance, which makes it more difficult for loan officers to hide problem loans. At larger banks, on the other hand, loan officers follow more rigid rules because senior managers do not have the same oversight. This sort of flexibility gives community banks an advantage in small business lending.

Community banks can use their edge in originating and monitoring small business loans by exploiting economies of scope—the ability to produce two or more related products more cheaply than producing each of them individually. A bank might develop a relationship with a large depositor, for example, and leverage that relationship to provide business loans and trust services to the depositor. Although any bank can exploit economies of scope, community banks are in a better position to cross-sell products to small business customers because of the greater breadth of information they have on those customers.

For large banks, providing the sort of personal attention that community banks provide is impractical since larger banks have geographically dispersed depositors and borrowers, making relationships difficult to establish. Moreover, larger banks usually deal with businesses for which good information is publicly available, so investing time in establishing a personal relationship to better determine credit-worthiness is unnecessary. In addition, personnel turnover at larger banks and firms is higher, making the process of establishing personal relationships more difficult and less rewarding. In fact, some large banks restrict person-to-person meetings altogether for certain depositors, insisting that they use ATMs to keep bank personnel costs down.

**Threats to Community Banking**

Increased competition, improved technology and deregulation have reduced some of the advantages that community banks have historically enjoyed in this country.

Core deposits are more difficult for community banks to attract and retain because regional and national banks, credit unions and capital markets are competing more aggressively for these deposits. Thanks to mergers, acquisitions and interstate branching, a depositor at Bank of America, for example, can withdraw funds from North Carolina to California without paying ATM fees. Such convenience is difficult for community banks to match. Recent rules have also made it easier for customers to join local credit unions, which often pay higher deposit rates than community banks due in part to their nonprofit status.
Brokerage firms have also competed aggressively for deposits. The current level of stock market returns has prompted many depositors to exchange their certificates of deposit for higher-yielding cash management accounts and mutual funds. And with larger banks now selling mutual funds, bank sales of these instruments have grown by an average of 24 percent a year over the past four years, while bank deposits have increased just 6 percent per year. Perhaps even more telling, traditional NOW deposits (interest-bearing checking deposits) shrunk by an average of 15 percent a year during the same time period.

Community banks are also beginning to lose their information edge. Innovations in information technology have reduced large banks' costs of evaluating potential small business borrowers. One such innovation is credit scoring—a process in which computer models quickly process credit information and assign the borrower a rating. Hence, large banks are now able to penetrate lending markets that community banks had dominated in the past.

The most significant challenge to the viability of community banks, however, is the consolidation of the banking industry, which enables banks to exploit economies of scale and, thus, operate at lower average costs (see below). Branching restrictions that previously limited larger banks' encroachment in the community bank market have since been eliminated. Just two decades ago, most banks were severely restricted from opening branches both within and across state lines. One way around this was to form a bank holding company (BHC), which then became the parent company of separately owned banks. In the 1980s, most states loosened restrictions to allow interstate banking through BHCs. The Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 allowed BHCs to acquire and merge with banks in other states. A BHC can now easily expand across state lines by acquiring a community bank, for example, and converting it into a bank branch.

As larger banks with lower average costs expand into community bank markets via acquisitions and mergers, they will be able to price their products more competitively than smaller banks. Except for the eroding advantage that community banks have in originating and monitoring small business loans, the basic products that small and large banks offer are similar. If community banks do not offer something different, deposits will flow to the highest bidder, and loan demand will go to those institutions offering the lowest rates. More often than not, these will be large banks.

**Mom and Pop Provided Personal Service, Too**

Banking expansion restrictions kept banks artificially small; removal of those restrictions has led to a great deal of consolidation. Because the grocery industry also has significant economies of scale—yet had no history of expansion restrictions—we may be able to learn something about banking's future by studying the grocery industry's past.

In the 1930s, a typical grocery store was small, family-owned and offered produce, dairy and meat under one roof. The supermarket drastically changed the grocery industry. Innovators like The Great Atlantic and Pacific Tea Company (A&P) introduced the concept of buying products in bulk to reduce per-unit costs. Founded in 1859, A&P initially sold only tea on the docks in New York City. In the 1920s, the company adapted its bulk-buying strategy to the grocery market and became the largest grocery chain in the nation for most of this century. Later improvements in technology, such as computer scanners and electronic cash registers, have further facilitated the growth of large supermarkets. Today, supermarkets are often huge retail outlets that include bank branches, florists, delis and bakeries, in addition to the "traditional" grocery offerings of meat, produce and dairy.

Since World War II, rapid consolidation and growth in grocery chains—those with 10 or more stores—has radically altered the grocery industry. Chain stores’ market share of total grocery sales increased from 34 percent in 1948 to more than 66 percent in 1992. The largest 63 grocery firms—those with 100 or more stores—increased their market share over the same period from 27 percent to 47 percent. Smaller chains—those
with 10 to 99 stores—also grew rapidly, increasing from 7 percent to 19 percent of total grocery sales. The tremendous growth of chain stores has come at the expense of small, single-store firms. Such firms’ market share has shrunk from nearly 60 percent in 1948 to just 21 percent in 1992.8 Despite the relative decline in single-unit store sales, however, these stores remain the most common type of grocery store. Of the 133,263 total grocery stores in the nation in 1992, nearly 84,000 (or 63 percent) were single-unit stores.9

Why have so many small grocery stores survived? Some grocery stores—particularly specialty stores that offer, for example, ethnic or organic foods—have a limited demand for many of their items. Large grocery chains are unable to reap economies of scale from such products and choose not to offer them. While specialty stores have survived by filling a niche in the grocery industry, other small stores have survived because they are either located in remote areas that face less competition from the larger chains or because consumers are willing to pay a premium to receive more personal service.

Community banks occupy a similar niche position in the banking industry: Their specialty products are the small business loans that require significant costs to originate and monitor; their presence in rural areas often gives them a locational advantage; and customers who frequent them often do so because of the personal service they offer.

**A Glimpse into the Crystal Ball**

Elimination of branching restrictions, competition for deposits and improved information flows will disproportionately reduce the number of—and the share of assets at—community banks over the next several decades. As larger banks exploit economies of scale through mergers, acquisitions and rapid growth, they will offer standard products at prices that community banks will not be able to match.

Community bank customers will, therefore, increasingly become those who are willing to pay a premium to receive personal service, rather than just be another anonymous face at a growing regional or national chain. In fact, anecdotal evidence suggests that business loan demand at community banks actually increases after a national chain buys out a regional bank in the area. This appears to be due to many businesses’ preference for dealing with community banks that have a track record in the community. Time will tell whether this is a short-lived effect as larger banks gain ground, or if these businesses will remain loyal to their community banks over the long haul.

Community banks outside of metropolitan areas are likely to fare better than those in urban areas. Although competition is intense in nearly every corner of the U.S. banking market, the degree of competition is less severe in rural areas. More important, community ties are generally tighter in smaller areas, and more customers will be willing to pay a premium to bank with the known and trusted institution, rather than switching to a regional bank branch.

Community banks will play a role in the future banking environment because they provide personal customer service and cater to small businesses. Like mom and pop grocery stores, however, their market share will decline over time as larger banks exploit their economies of scale.

**Sidebar 1**

**Do Economies of Scale Exist in the Banking Industry?**

Economies of scale implies that “bigger is cheaper.” In other words, firms that produce large amounts of output have lower average costs. Firms with high start-up costs—automobile producers, for example—typically have significant economies of scale because they spread those costs over more units as production increases. A firm with an output level that is lower than the level that minimizes average
costs suffers a cost disadvantage, which threatens its long-term viability if it does not expand production.

Numerous economists have studied the cost structure of the banking industry. Because various statistical techniques are used in measuring economies of scale, researchers have produced conflicting results. To the extent that there is agreement, however, the consensus is that economies of scale exist for the smallest banks; average costs are minimized in an asset range somewhere between $75 million and $300 million.

Nobel laureate George Stigler argued that economies of scale are best measured by an extremely simple tool called the survivor technique. This technique differs from other approaches because the results are not sensitive to the researchers’ choices of statistical modeling. Instead, economies of scale are measured over the long run by observing the evolution of the surviving firms. If surviving firms grow over time while small firms decline, then economies of scale must be present. The survivor technique requires classifying firms by industry size and then calculating the share of industry output coming from each class over time.

A necessary assumption of this technique is that there are no growth restrictions on the firms in the industry—an assumption that did not hold for U.S. banks before the 1980s. Branching restrictions prevented banks from fully exploiting economies of scale; therefore, small firms that otherwise would have been driven from the market were able to survive. Since the 1980s, however, restrictions have gradually been lifted, paving the way for even more rapid consolidation as firms attempt to exploit economies of scale that have been present, but unexploitable, for some time.

Between 1983 and 1998, large banks grabbed significant market share from their smaller counterparts. As the accompanying table shows, between 1983 and 1998, market share for banks with less than $100 million in assets declined by 60 percent, while market share for banks with between $100 million and $300 million in assets declined by 39 percent. In 1983, community banks held one-fourth of the market share; by 1998, the fraction was just one-eighth. In contrast, banks with more than $1 billion in assets held 65 percent of the market in 1983 and 81 percent in 1998. These statistics support the belief that significant economies of scale exist in the banking industry.
Table 1

Large Banks Grow at Small Banks' Expense

(Constant 1992 dollars)

<table>
<thead>
<tr>
<th>Total Assets</th>
<th>Percent of Total Commercial Bank Assets</th>
<th>Number of Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $100 million</td>
<td>13.7%</td>
<td>11.0%</td>
</tr>
<tr>
<td>$100 - $300 million</td>
<td>11.4%</td>
<td>10.0%</td>
</tr>
<tr>
<td>$300 - $1 billion</td>
<td>9.8%</td>
<td>9.1%</td>
</tr>
<tr>
<td>$1 billion - $15 billion</td>
<td>30.4%</td>
<td>35.9%</td>
</tr>
<tr>
<td>Greater than $15 billion</td>
<td>34.7%</td>
<td>34.0%</td>
</tr>
</tbody>
</table>

NOTE: Data are as of Dec. 31 for each year and include all U.S. commercial banks, except for special status banks.

SOURCE: FFIEC Reports of Condition and Income for Insured U.S. Commercial Banks
The change in the number of banks also supports the assertion that economies of scale exist at small banks. As the chart illustrates, the total number of banks with assets less than $300 million decreased by 43 percent between 1983 and 1998, while the number of all other banks declined by just 1 percent.

Because the survivor technique is a long-run approach to measuring economies of scale, it is too early to draw definite conclusions. So far, though, evidence from the cost-structure literature and the survivor technique indicates that economies of scale are available at low asset levels. This means that banks
with assets of $300 million or more appear to have a cost advantage over smaller banks, calling into question the long-run viability of small banks.

[back to text]

Boyd D. Anderson and Thomas A. Pollmann provided research assistance.

Endnotes

1. See Williams (1997). [back to text]
2. No single, agreed-upon definition of community banks exists. The $300 million bank size cutoff is employed to differentiate banks that cannot effectively exploit economies of scale. Large bank holding companies are those with more than $1 billion in assets. Data are from the FFIEC Reports of Condition and Income for Insured U.S. Commercial Banks. [back to text]
5. See Clark (1993). [back to text]
7. See Walsh (1993). [back to text]
10. See Berger and Humphrey (1994). [back to text]
12. Output is measured by bank assets. However, bank assets understate output growth because they exclude off-balance-sheet items (unused funding commitments by banks), which have grown significantly in recent years. Because larger banks have increased their off-balance-sheet items more than small banks have, the bias reduces the chances of uncovering significant economies of scale. [back to text]

References


Clark, Michelle A. "Banks and Investment Funds: No Longer Mutually Exclusive," The Regional Economist, Federal Reserve Bank of St. Louis (October 1993), pp. 5-9.


National and District Overview: National and District Economies Maintain Cruising Speed

Kevin L. Kliesen

The U.S. economy strengthened measurably in the third quarter. Although tough times are still evident in parts of the farm economy, and indications are that the construction industry is losing steam, the U.S. and Eighth District economies continue to operate at what appears to be full capacity.

Pedal to the Metal

Real GDP increased at a 4.8 percent annual rate in the third quarter, nearly 2 percentage points faster than its growth during the first half of the year. Consumer spending, paced by strong demand for durable goods like motor vehicles and household appliances, advanced at a brisk 4.3 percent rate, while business fixed investment—in particular, spending on capital goods like computers, software (recently reclassified as fixed investment) and other information processing equipment—grew at blistering 14.9 percent rate. Besides continued strong U.S. growth, investment spending is getting a boost from strengthening economic growth in Canada, Europe, Asia and parts of South America, which is, not surprisingly, spilling over to a resurgence in foreign demand for U.S. exports.

To some extent, factories are increasing production to rebuild inventories, which have become quite lean recently. It may also be the case that firms are building in a cushion to offset potential disturbances stemming from Y2K. This may help to explain why new factory orders for manufactured durable goods registered their largest gain in five and a half years in the third quarter.

Speed Bumps Ahead?

The growth of real GDP has exceeded 4 percent for the past four years. Some monetary policy-makers, thus, are concerned that aggregate demand for goods and services continues to grow at a pace that exceeds the economy's capacity to expand (otherwise known as potential GDP growth), which some economists believe is now around 3 percent.

At some point, demand growth that continues to exceed supply begins to boost prices. Indeed, there are some indications that it is already in train. Through the first three quarters of this year, the inflation rate, as measured by the CPI, is running about 1 percentage point faster than last year's 1.6 percent, which was the low for this expansion. Growth in the GDP price index, a broader measure, shows a similar pattern. The spike in oil prices no doubt accounts for a large share of this run-up in prices: When energy prices are removed from the CPI, year-to-date price increases (1.9 percent) are actually running a bit less than last year (2.4 percent). Thus, if oil prices retreat, and non-oil price increases remain subdued, then inflation might return to where it was in 1998.

Aggregate price pressures, however, have been restrained to a considerable degree by favorable developments on the supply side during the past couple of years. These include a strengthening U.S. dollar,
which has helped tamp down import prices, a sharp drop in oil prices, a substantial slowing in health care costs and, perhaps most important, strong labor productivity gains. The latter has helped firms offset increased labor and nonlabor costs, while keeping a lid on retail prices and protecting profit margins. Although productivity growth remains rather strong, most other favorable developments have withered away. From this perspective, then, it appears that the risk of higher future inflation has increased.

District Labor Shortages Continue

For the most part, strong demand growth at the national level has gone hand-in-hand with the demand for goods and services produced in the Eighth District. Accordingly, labor utilization rates remain exceptionally high. In three states—Indiana, Missouri and Tennessee—the third-quarter unemployment rate was well below the U.S. average of 4.2 percent, with the unemployment rate in the four largest cities in the District even lower. At the same time, growth of nonfarm payroll employment in several states has slowed measurably from last year. Whereas third-quarter U.S. nonfarm payroll increased 2.2 percent, the seven-state average growth was much less, 1 percent. One reason, as most regions of the country continue to report, is that widespread labor shortages are hampering many firms’ ability to expand production. By necessity, this has forced firms to boost productivity or lure employees away from marginal firms who might not otherwise be able to compete.

Thomas A. Pollmann provided research assistance.

ABOUT THE AUTHOR

Kevin L. Kliesen

Kevin L. Kliesen is a business economist and research officer at the Federal Reserve Bank of St. Louis. His research interests include business economics, and monetary and fiscal policy analysis. He joined the St. Louis Fed in 1988. Read more about the author and his research.
Revamping Medicaid: A Five-Year Check-up on Tennessee's Experiment
Adam M. Zaretsky

In January 1994, the state of Tennessee, with permission from the federal government, eliminated its traditional Medicaid program and replaced it with a managed care program known as TennCare. TennCare was one of the first projects in the nation to move all Medicaid-eligible people from a typical fee-for-service program into a managed care environment. The proposal for the change came on the heels of years of spiraling Medicaid expenses in Tennessee that would have required either higher taxes or fewer services for the program to remain viable.1

Under TennCare, the state pays a capitation fee—a fixed monthly premium per participant—to a group of privately run managed care organizations (MCOs), which are then required to provide their enrollees with at least the same level of medical services that would have been provided under Medicaid. TennCare would save Tennessee money, advocates argued, because the state would have to pay only the capitation fee—not actual medical expenses—to the MCOs.

Because of these savings, the argument went, the state would also be able to bring under the TennCare umbrella those who previously did not have insurance either because they could not afford it (and were not Medicaid-eligible) or because they had a pre-existing condition that rendered them uninsurable. The original plan was that TennCare would be able to insure about 800,000 or so Medicaid-eligible Tennesseans and another 400,000 uninsured or uninsurable residents. However, now that more than 1.3 million residents (nearly a quarter of Tennessee's population) are enrolled, and the capitation rate has not been adjusted to account for the higher-than-expected risk the program presently faces, TennCare finds itself in somewhat dire financial straits.

A Success Story?

TennCare has succeeded on several fronts, most notably by bringing health insurance to a group of individuals who previously did not or could not otherwise obtain it. By June 1999, TennCare was insuring more than 800,000 Medicaid-eligible people and almost 500,000 uninsured/uninsurable people. Capitation rates are currently about $116 per month per enrollee—a figure that appears to be in line with the original plan's projections. And the MCOs that TennCare contracts with provide their enrollees the same types of coverage—including prescription drugs—that privately funded HMOs do.

The federal government, satisfied with TennCare's overall progress, extended its original five-year waiver by three years, allowing TennCare to operate through Dec. 31, 2001.2 A recent survey of TennCare recipients shows that they, too, are pleased with the program.3 According to the survey, recipients are currently at least as satisfied with TennCare as they were with its Medicaid predecessor. They also now see physicians at their offices more often and visit emergency rooms less frequently for routine care—a severe problem in traditional Medicaid programs.
TennCare has run into problems, however, especially financial ones. Although capitation rates are currently at anticipated levels, they are not, it turns out, enough to cover the costs of the medical care that doctors and hospitals have been providing. In fact, according to a March 1999 audit report by PricewaterhouseCoopers, TennCare pays hospitals about 72 cents for each dollar spent, while doctors receive only 34 cents on the dollar. Moreover, the program's reimbursements to pharmacists are currently the lowest in the nation for a Medicaid program.

The audit report recommends that TennCare increase its capitation payment about 9 percent, or $11 a month per enrollee, to cover current deficits. The report's capitation rate calculation, however, includes $5 from a one-time, $60 million federal government windfall payment—a payment that Tennessee does not expect to receive again in fiscal year 2000. Thus, the increase in the capitation rate should actually be $16, rather than the $11 recommended. Unfortunately, the state's fiscal position is not very sound right now; the budget is in the red.

A Foreseeable Dilemma

So how has TennCare gotten into such poor shape? Simply put, the program has failed to properly pool and price its risk. For starters, TennCare's capitation rates have been calculated solely on the expected medical costs of its Medicaid-eligible participants and not adjusted for the bigger (or smaller) risk other groups might present. The problem was then made worse when TennCare inadvertently changed the risk of the insured pool. As the program's enrollment approached its legislated cap, it was closed to the uninsured—a group that requires few medical services overall—even though it was still admitting the uninsurable—a higher risk group.4

These oversights hurt TennCare because it was not acting as an insurance company should. When an insurance company acts correctly, it is able to collect premiums from all of its enrollees, knowing that only some will actually need coverage at any given time. A health insurance company, for instance, would want to be certain that it insures enough healthy people so that their premiums would help cover the medical costs of its sick enrollees. By properly diversifying its insured pool, an insurance company might collect, say, $1 million a month in premiums, but be required to pay out, perhaps, only $900,000 for health services. If an insurance company were to insure only sick people, though, it would most probably lose money and eventually go out of business.

To build an appropriate pool of participants and properly gauge the pool's risk, a health insurance company must be able to identify the sick from the healthy. Accomplishing this can be tricky, though, because an insurance company has difficulty separating the two groups, even though sick people, who anticipate high medical expenses, are more likely to want to buy health insurance than healthy people. An insurance company therefore needs to find a way around this adverse selection problem. One common way is by insuring inherently diverse groups of individuals—the employees of a firm, for example. The combined risk of diverse groups is almost always lower than that of a given individual, which translates into lower premiums for all.

That said, TennCare, like other state-run insurance programs, is not necessarily able to manage its adverse selection problem since legislation defines the group that the program must insure—namely, Medicaid-eligible people, as well as the uninsured and the uninsurable. It turns out, however, that the mismanagement of the inclusion of these two latter groups is what eventually led to TennCare's current financial difficulties.

Under the original TennCare framework, the cost of care for the uninsurable was to have been offset by the premiums paid by the uninsured—a healthier group, in general. But as the accompanying chart shows, while the ranks of the uninsured declined, those of the uninsurable—individuals with often costly conditions to treat—continued to grow rapidly. All the while, no necessary adjustments in capitation fees were made. The die of the present crisis, therefore, had already been cast: TennCare’s exposure to risk was now greater than had previously been planned for, and the program did not react accordingly.
By the spring of 1999, TennCare's enrollment of the uninsurable—people who could not obtain private health insurance because of pre-existing conditions—was about 10 times greater than when the program began in January 1994. Enrollment of the uninsured—a group that requires few medical services overall and that had been shut out of TennCare between 1995-97—was up less than four times its January 1994 level. Thus, relatively more sick than healthy people were entering the program—a potentially dangerous prescription.

SOURCE Budget Office, Bureau of TennCare

A Hard Lesson Learned

At the end of Tennessee's current legislative session—despite the state facing a budget deficit—the Legislature approved an additional $190 million for TennCare in fiscal year 2000. Consequently, the capitation rate is scheduled to increase $16 a month for each enrollee, with MCOs required to spend $12.40 of it on patient care. The Tennessee Legislature and TennCare administration also realize that changes must occur for the program to remain viable over the long run. More-prudent risk management and more flexibility in pricing this risk should hold the program in good stead for some time to come. By the looks of the changes so far, it seems that TennCare has started getting the message.

Paige M. Skiba provided research assistance.
2. The Health Care Financing Administration—the government agency that administers the Medicaid and Medicare programs—granted Tennessee a five-year waiver in 1993, which allowed the state to withdraw from Medicaid and institute TennCare. Without the extension, the original waiver would have expired on Dec. 31, 1998. [back to text]
3. See Lyons and Fox (1999) for more detailed results of the recipient survey. [back to text]
4. By federal regulation, TennCare must always cover Medicaid-eligible participants, regardless of the enrollment cap. [back to text]

References


State of Tennessee. Department of Health. _TennCare Fact Sheet_ (July 12, 1999).

_______. TennCare Budget Office. _Exhibit 5.1: Comparison of Cost—TennCare._

The NAIRU: Tailor-Made for the Fed?
Kevin L. Kliesen

According to a recent editorial published in The Wall Street Journal, Federal Reserve monetary policy relies inordinately upon a concept known as NAIRU—the Non-Accelerating Inflation Rate of Unemployment. According to the June 15 editorial:

"...there are signs the Federal Reserve is worrying about inflation for the wrong reasons. While modern markets keep trying to move on to the 21st century, the Fed won't let go of such hand-cranked notions as the Phillips curve, or NAIRU—a concept as dense as its name."

Although the monetary authorities regularly use models based on a NAIRU/Phillips curve framework—that is, to forecast inflation, which figures prominently in monetary policy decisions—do they rely upon them to the degree that some believe?

The Phillips Curve: Whole Cloth or Hair Suit?

The modern Phillips curve has evolved into a catch-all term that describes the causality between changes in the aggregate price level (inflation) and the strength of aggregate demand. Although the curve has had a controversial history in the economics profession, it nonetheless underpins the short-term inflation process of most large-scale macroeconomic forecasting models.1 The relationship is named for New Zealand economist A.W. Phillips, who showed how the unemployment rate varied inversely with the rate of change in nominal wages in the United Kingdom from 1861 to 1957. Unlike Phillips' original framework, the modern Phillips curve now alleges an inverse trade-off between the unemployment rate and inflation.2

Initially, some economists believed that a stable relationship existed between unemployment and inflation. In other words, if the unemployment rate was higher than what policy-makers thought it should be, then they could reliably boost aggregate demand—by increasing the growth of the money supply—without causing inflation to accelerate. But as Nobel Prize-winning economist Milton Friedman warned in 1967, efforts to lower the unemployment rate through aggressive monetary expansion would eventually result in a higher inflation rate only. Friedman was later proven correct, as both inflation and unemployment rose simultaneously during the 1970s.

In the hopes of salvaging something of the framework, Phillips curve proponents devised two important innovations. First, that expectations matter: Specifically, that the current level of inflation is importantly influenced by firms' and individuals' expectation of future inflation rates. Second, the original measure of aggregate demand—the civilian unemployment rate—was replaced by something called the output gap. The output gap is the difference between measured real GDP and the (estimated) level of real GDP that could exist based on the economy's available amount of capital and labor inputs, and on how productive those inputs are. This is where NAIRU enters the picture.

Inflation, the Output Gap and NAIRU
Many of those in the business of forecasting inflation rates—for example, the Board of Governors—use large-scale macroeconometric models based on a Phillips curve framework. The basic premise behind the modern Phillips curve is that this year's inflation rate is, to a large extent, determined by last year's output gap. So, how does NAIRU enter the analysis? NAIRU is the unemployment rate that would result when the output gap is zero; that is, when the economy is growing at its potential with no unusual wage and price pressures. But when aggregate demand growth is such that the demand for labor temporarily pushes the unemployment rate below NAIRU, measured real GDP is greater than potential GDP, and a positive output gap opens up. When this happens, upward pressure on wages results, which is then transmitted into higher prices for goods and services. This does not occur immediately, however, since price changes at the individual firm (micro) level take time to work their way into price changes at the aggregate (macro) level.

The accompanying chart, which includes all combinations of the (lagged) U.S. output gap and the inflation rate from 1960 to 1998, shows how the Phillips curve has evolved over time. From 1960 to 1969, just as proponents believed, the Phillips curve displayed a positive slope: The more real GDP rose above potential GDP, the further the reported unemployment rate fell below NAIRU, and, thus, the more inflation rose. During the 1970s and 1980s, though, as indicated by the progressively flatter slope of the line, the relationship began to break down. During the 1990s, the relationship between NAIRU and inflation disappeared, and the Phillips curve became a virtually flat line. Not only that, but if the observations for 1990 and 1991—years of relatively high inflation and unemployment—were removed, the slope would be negative.
Chart 1

The Modern Phillips Curve

What Worked in the '60s and '70s...

...Looks Broken down in the '80s and '90s
Phillips curve proponents argue that a series of favorable supply shocks has temporarily distorted the unemployment rate/inflation nexus. These include the dramatic reduction in health care costs between 1993-95 and the plunge in crude oil prices between late 1996 and late 1998. Phillips curve proponents argue that, once these factors are accounted for, the relationship still holds. Others, however, argue that, unless these factors can be identified beforehand, the Phillips curve relationship cannot be reliably exploited by the central bank to forecast inflation.

Is the Fed in a NAIRU Straitjacket?

With an uncertain—if any—trade-off between inflation and the output gap in the 1990s, monetary policy-makers have appeared to change their view of the inflation process, and reacted accordingly. Since August 1987, the FOMC raised or lowered the federal funds rate target 49 times, with decreases in the target outnumbering increases 30 to 19. If the FOMC relies heavily on Phillips curve inflation forecasts, then more increases in the fed funds rate should be seen when the actual monthly unemployment rate falls below NAIRU—or, equivalently, when the output gap is positive. Similarly, when the unemployment rate rises above NAIRU (a negative output gap), we would expect to see the FOMC moving to lower the fed funds target rate.
In the late 1980s and early 1990s, this was generally the case. From March 1988 to February 1989, for instance, with strong economic growth pushing the unemployment rate below NAIRU, the FOMC raised the fed funds target rate from 6.75 percent to 9 percent. But as the economy began to slow, eventually entering into a recession in July 1990, the FOMC reversed course, eventually reducing the target rate to 3 percent in September 1992, which is where it stayed until February 1994. Even though there was still a negative output gap (actual unemployment was above NAIRU) in early 1994, the FOMC, in what would become known as the "pre-emptive strike against inflation," pushed the fed funds rate target back up to 6 percent by February 1995. Moreover, although the unemployment rate has persisted well below NAIRU since May 1995, the FOMC has moved to increase the fed funds rate three times since then (in March 1997, June 1999 and August 1999). In fact, because of the Asian crisis and Russian debt default last year, there have been twice as many reductions than increases in the funds rate over this period.

In short, during the past four years or so it appears that FOMC policy-makers have—more often than not—ignored the policy prescriptions of the modern Phillips curve. This should not be too surprising given the poor performance of most forecasting models during this period. So, what have policy-makers been looking at when forecasting inflation? There is some evidence that they have paid more attention to expectations. That is, if markets expect inflation to remain low for the foreseeable future, and expectations matter more than the output gap, as some believe, then policy-makers will be less likely to view a low unemployment rate with the alarm that they have in the past. Either way, using the Phillips curve framework to forecast inflation, and thus potential FOMC policy moves, is a process fraught with difficulty.

Thomas A. Pollmann and Daniel R. Steiner provided research assistance.

Endnotes

1. Most economists believe that, in the long run, there is no trade-off between inflation and unemployment. In other words, over time, the average unemployment rate, or natural rate, is determined by microeconomic factors like unionization rates or minimum wage laws. Likewise, over the long haul, most economists also believe that inflation is determined principally by the amount of money created by the central bank. [back to text]
2. The leap from changes in wage rates to the inflation rate was assumed to occur by some sort of mark-up process—that is, employers passed along higher wage costs to their customers. Humphrey (1986) is an excellent reference on how the Phillips curve evolved over time. [back to text]
3. NAIRU is not the same as Friedman's natural rate of unemployment. NAIRU stresses the hypothesized short-term relationship between inflation and the unemployment rate. Friedman's rate, as noted in Footnote 1, is the rate that would occur over the long run. [back to text]
4. This specification follows the one hypothesized by Stanford Professor John Taylor. [back to text]
5. The chart shows how the expected inflation rate has changed over time. This is seen as the point where the Phillips curve intersects the vertical line: Since the early 1980s, the Phillips curve has steadily shifted back down from where it was during the 1970s. [back to text]

References


**ABOUT THE AUTHOR**

Kevin L. Kliesen

Kevin L. Kliesen is a business economist and research officer at the Federal Reserve Bank of St. Louis. His research interests include business economics, and monetary and fiscal policy analysis. He joined the St. Louis Fed in 1988. Read more about the author and his research.
# National and District Data

## Selected Indicators of the National Economy and Banking, Agricultural and Business Conditions in the Eighth Federal Reserve District

### Commercial Bank Performance Ratios

#### SECOND QUARTER 1999

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### Return on Average Assets*

- **Eighth District**
  - **Arkansas**
  - **Illinois**
  - **Indiana**
  - **Kentucky**
  - **Mississippi**
  - **Missouri**
  - **Tennessee**

### Net Interest Margin*

- **Eighth District**
  - **Arkansas**
  - **Illinois**
  - **Indiana**
  - **Kentucky**
  - **Mississippi**
  - **Missouri**
  - **Tennessee**

### Nonperforming Loan Ratio

- **Eighth District**
  - **Arkansas**
  - **Illinois**
  - **Indiana**
  - **Kentucky**
  - **Mississippi**
  - **Missouri**
  - **Tennessee**

### Loan Loss Reserve Ratio

- **Eighth District**
  - **Arkansas**
  - **Illinois**
  - **Indiana**
  - **Kentucky**
  - **Mississippi**
  - **Missouri**
  - **Tennessee**

**NOTE:** Data include only that portion of the state within Eighth District boundaries. For additional banking and regional data, visit our web site at: http://www.stls.frb.org/fred/data/regional.html.

*Annualized data

SOURCE: FFIEC Reports of Condition and Income for all Insured U.S. Commercial Banks

For additional banking and regional data, visit our web site at: http://www.stls.frb.org/fred/data/regional.html.
Regional Economic Indicators

Nonfarm Employment Growth

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District Real Gross State Product by Industry—1997

SECOND QUARTER

Housing Permits

YEAR-OVER-YEAR PERCENT CHANGE IN YEAR-TO-DATE LEVELS

FIRST QUARTER

Real Personal Income

YEAR-OVER-YEAR PERCENT CHANGE

Unemployment Rates

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Major Macroeconomic Indicators

Real GDP Growth

Percent

Consumer Price Inflation

Percent

Civilian Unemployment Rate

Percent

Interest Rates

Percent

Farm Sector Indicators

U.S. Agricultural Trade

Billions of Dollars

Farming Cash Receipts

Billions of Dollars

U.S. Crop and Livestock Prices

Index 1990-92=100

NOTE: Each bar is a one-quarter growth rate (annualized); the green line is the 10-year growth rate.

NOTE: Percent change from a year earlier.

NOTE: Except for the fed funds target, which is end-of-period, data are monthly averages of daily data.

NOTE: Data are aggregated over the past 12 months.

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