Winter 2014

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- The durability of durable goods spending
- Aging population impacts future state revenues
- Honoring Robert L. Owen

GENERATIONAL CHANGE
Could baby boomers put the boom in multifamily housing
COMMEMORATING ROBERT L. OWEN
New history exhibit honors Oklahoman

The Oklahoma History Center and the Oklahoma City Branch of the Kansas City Fed unveiled a new history exhibit in Oklahoma City that commemorates the Federal Reserve System’s 100th anniversary and the man who helped make it possible.

THE DURABILITY OF DURABLE GOODS
Consumer spending weakens despite low interest rates

Notwithstanding record-low interest rates, the pace of the current recovery has been slow. One unexpected response to the decline in interest rates during the recovery was the weakening of consumer spending on durable goods.

CALCULATING THE IMPACT
The aging U.S. population’s influence on state tax revenues

While several studies have noted the affect an aging U.S. population will have on future tax revenues, few have calculated the projected effects across states.

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The outlook for 2014

The U.S. economy has been recovering steadily the past few years despite facing obstacles ranging from fiscal policy issues to weak global growth. As we start a new year, the outlook for both the economy and community banks is brighter, but challenges remain.

Real gross domestic product (GDP), one of our broadest measures of economic activity, has shown steady growth over each of the last three quarters. Some of the improvement has been driven by temporary factors, such as inventory accumulation, but if we look past such transitory issues, the data suggest the growth outlook for 2014 may be among the strongest since the end of the recession.

One simple reason growth should improve is the initial impact of last year’s fiscal policy stance has eased. The cumulative effect of the mandated spending cuts and higher taxes, by some estimates, was to lower overall real GDP growth by about 1.5 percentage points. Granted, there will likely be further adjustments to fiscal policy to ensure long-term stability, but with the effects from 2013 fading and the recent budget agreement reducing some policy uncertainty, the growth outlook is positive.

Beyond these fiscal issues, more importantly, is the fundamental strengthening in private demand. Better labor markets, stronger household balance sheets and income growth have fostered this improvement. Real disposable income growth and average hourly earnings in the private sector have been trending higher. Employment growth, too, has gained strength, as nearly every major sector has higher employment compared to a year ago.

Businesses also are well-positioned to begin increasing investment in new capital. Corporate profits are at record highs, balance sheets are healthy and many firms have the resources to make new capital expenditures and expand capacity. Many businesses, however, have remained cautious the past few years due to a number of uncertainties that include the strength of the global and U.S. recovery, the impact of regulations and new laws, and concerns over the direction of both fiscal and monetary policy. To the extent these uncertainties fade and global growth strengthens, as it could if Europe continues to recover, business investment is poised for growth.

Accordingly, absent an unexpected shock or a downturn in global growth this year, I expect U.S. growth for 2014 to be in the range of 2.5 percent to 3 percent, reflecting the combination of less fiscal drag, healthier household balance sheets and improving labor markets—one of the better years in some time.

Even as growth projections strengthen, inflation measures remain low. In fact, some have questioned whether inflation is too low given the Fed’s inflation target of 2 percent or whether the United States could face the risk of deflation. I do not share those concerns because several special factors appear to be weighing on inflation measures, such as lower-than-usual healthcare costs, changes in how the price of...
some financial services are calculated, and low import prices. Additionally, longer-term inflation expectations have remained stable near the 2 percent goal.

The outlook for community banks

As the U.S. economy continues its path to full recovery, a vibrant and diverse system of banks with sustainable, long-term prospects is critical to support the health of local and regional economies, and therefore, the national economy.

Overall, the health of community banks is good, although it has not fully recovered to pre-crisis levels. Net earnings have been relatively flat since 2012, but they are at a respectable level of about 1 percent of assets. Problem assets are trending down, and although they are still somewhat elevated, I expect the trend to continue. Capital ratios also continue to strengthen.

What concerns me, though, is that the quality of net earnings is not strong. Earnings have been largely supported by declining provisions and reserve releases, which we know cannot continue much longer. At the same time, we’ve seen that the net interest margin, which is the primary source of revenue for community banks, has lost much of its post-recession gain and is near a 40-year low due to the low interest rates and weak loan demand.

With this extreme pressure on net interest margins, bankers have expressed concern about lower underwriting standards, longer maturities at fixed rates and increased competition from larger banks that are likely to pull out of local markets when the economy improves further. Bank supervisors are monitoring these risks for vulnerabilities that will lead to asset quality problems when interest rates start to rise or if there is a downturn in the economy. Even so, an extended period of zero interest rates is not conducive to good banking and encourages a reach for yield.

The effects of this unfavorable interest rate environment are compounded by the regulatory framework. After two decades of deregulation and misplaced confidence in the ability of market discipline to moderate risk exposures, the pendulum has swung in favor of new, complex regulation. Congress responded to the financial panic and the resulting deep recession by passing the Dodd-Frank Act, aimed at reducing the systemic risks posed to our economy by firms that we commonly refer to as too big to fail (TBTF). It remains unclear whether the new regulatory regime will in fact end TBTF and thereby reduce the systemic risk posed by the largest banks and the subsidy they enjoy. My own view is that incentives have not changed in a way that would achieve the desired outcome of a safer, more competitive financial system.

What is clear is that while much effort has been directed to implementing the Dodd-Frank Act, the competitive and regulatory pressures on the community bank model have only worsened. Over the past 30 years, the distribution of banking assets across community, regional and large global banks has moved steadily toward more concentration. Industry concentration has accelerated over the past 15 years with the 10 largest banking firms increasing their share of industry assets from 44
percent in 1997 to 68 percent in 2013. Even more striking, their size has almost tripled as a share of GDP, rising from 24 percent to 68 percent. With this growing scale, the scope of their activities expanded as well. In 1997, these large banking organizations held nearly 90 percent of their assets in traditional banking activities. In 2013, traditional banking accounted for just 67 percent of assets. And the five largest banks designated as posing a systemic risk hold far less equity as a percent of total assets than community banks.

Community banks have lost market share to these large players with a share of industry assets half as large as 15 years ago, falling from 35 percent to 17 percent. Yet, they have generally retained a business model that we associate with traditional banking: making loans and taking deposits in their local communities. In fact, community banks make more than half of all small business loans and extend credit in thousands of locales across the country, including rural areas. Return on equity may be the bottom line in financial reports, but the foundation for the community bank is customer relationships and community economic health.

So as we look toward an improving outlook for 2014, the viability of community banking in the current regulatory and monetary policy environment is a relevant consideration given their important role in meeting local credit needs.

**An effective regulatory system**

To address the regulatory burden on community banks, a rising chorus is calling for a two-tiered regulatory system to better calibrate regulations according to the business model and size of banks. While I am sympathetic to the idea of this kind of differentiation and the desired relief it hopes to offer, I do not think it is the answer. As we have seen with certain provisions of the Dodd-Frank Act, calibrating regulations across broad groupings of banks is very difficult and the outcomes are not always as intended. And fundamentally, it does not address a more threatening issue to the viability of community banks and the perseverance of a diverse banking system. That issue is TBTF. We must pursue the essential reform needed to eliminate TBTF, which is the cause of the increasingly complex regulatory system confronting community banks and stands in the way of securing a financial system that serves—not threatens—the economic well-being of the country.

I realize that ending TBTF is not necessarily viewed as a community bank’s biggest issue. In my own region, community bankers will readily acknowledge that TBTF is a serious problem, but their focus understandably is on the competitor across the street which is generally a government sponsored enterprise, a credit union or another community or regional bank. Others are reluctant to call for reform of these largest banks because they view all banks as part of the same industry and advocate such. Still others have become resigned to TBTF as a permanent fixture of the global financial system that cannot be changed, and therefore, hinge the community bank’s survival prospects on tiered regulation as the most practical answer to the regulatory burden.

In many respects, policymakers have already moved toward a bifurcated regulatory
system by resorting to massive and complex rules for TBTF banks in hopes of smothering their systemic risk. These rules may temporarily handicap TBTF risks, but I do not believe these policies can solve the problem. Research suggests that regulatory complexity incentivizes the regulated to game the rules (Kane), while other research finds that simple rules are harder to manipulate and more durable (Haldane).1

Because community banks and TBTF banks are inextricably linked by public safety nets, I believe it is in the long-term interest of community banks and the health of our economy to rely on a single regulatory framework. Our existing regulatory framework rests on sound principles—a safe, stable and competitive banking system; equal access to services; consumer protection; and the prevention of illegal activities. To implement these principles, we need rules for banks of all sizes that are understandable, enforceable and equitable. We also need a supervisory process with appropriate flexibility so examiners can apply experienced judgment and thereby differentiate the supervisory regime based on the risk profile and business practices of individual institutions.

In addition, policymakers should consider alternatives that could foster both a safer system and a simpler regulatory framework. Such alternatives include strengthening the separation of banking and commerce or adopting a modern version of Glass-Steagall.2

Unfortunately, these ideas have been sidetracked as too blunt or overly simplistic. Such reforms would change incentives to take excessive risk and would simplify the largest banking organizations, providing a stronger foundation for management and boards of directors to govern compliance and risk management. For supervisors, it would improve their ability to enforce rules and facilitate orderly resolutions if a large bank fails. Until TBTF and its subsidized advantages are adequately addressed, economic security remains at risk, and community banks might well expect to lose market share while continuing to deal with the issue of how future regulatory changes can appropriately be applied to them.

In the near term, timely shifts in monetary policy and better calibration of regulatory requirements may offer potential relief to smaller banks. Ultimately, though, ending TBTF and its related advantages will serve to enhance the viability of community banks and restore public confidence. I am hopeful that policymakers will continue to vigorously pursue this important objective.

ESTHER L. GEORGE, PRESIDENT
FEDERAL RESERVE BANK OF KANSAS CITY

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In October, the Oklahoma City Branch of the The Federal Reserve Bank of Kansas City unveiled an exhibit commemorating former Oklahoma Senator Robert L. Owen.

Owen sponsored the Federal Reserve Act in the U.S. Senate, which President Woodrow Wilson signed into law Dec. 23, 1913. Owen's bill authorized the creation of the Federal Reserve System, the United States' first central bank in more than 75 years, including both a government agency in Washington, D.C., and 12 regional Reserve Banks around the country.
The exhibit, which is in the Oklahoma History Center in Oklahoma City, opened to the public following the dedication on Oct. 17, and contains several Federal Reserve artifacts and a bronze bust of Senator Owen.

The dedication coincided with the Kansas City Fed's joint-board meeting in Oklahoma City. President Esther George, top left photo, center, spoke at the ceremony as did former Oklahoma City Branch Board directors Steven Agee, top left photo, right, dean and professor of Economics at the Meinders School of Business, and Bill Anoatubby, top left photo, left, governor of the Chickasaw Nation.

For more information about the Owen exhibit, visit http://www.okhistory.org/historycenter/federalreserve/index.html.
GENERATIONAL
A U.S. Census Bureau report in 2006 showed baby boomers were living longer, healthier lives with fewer disabilities. The study, “65+ in the United States: 2005,” used data from census surveys and other federal sources and researchers found that the percentage of people over age 65 who had a disability decreased from 26.2 percent in 1982 to 19.7 percent in 1999.

The trend continued into the next century as the leading edge of the baby-boom generation surpassed 65. Researchers partially attribute boomers’ longevity to improved health, allowing boomers to work longer, and to higher education levels, giving them better employment opportunities, resulting in access to better health care and healthier living.

Even with the recession and slow recovery that forced some boomers into early retirement and impaired retirement portfolios, a larger percentage of boomers still accumulated more financial wealth than previous generations.

These details have given economists reasons to contemplate the influence of aging baby boomers on the U.S. economy.

The retirement of a growing number of baby boomers has placed a burden on the fewer available productive workers. Some economists, however, say there’s little reason to assume this effect will harm the nation’s economic output. For example, some data forecast a surge in immigration that could replenish the economy’s labor supply.

Could baby boomers put the boom in multifamily housing?
Other economists, however, say the effects could be far reaching, including increased healthcare demand, diminished tax revenue collections and changes in the housing market.

**A housing market shift**

Aging baby boomers could propel a demographic shift from single-family to multifamily housing, according to research by Kansas City Fed Senior Economist Jordan Rappaport.

In the report, “The Demographic Shift From Single-Family to Multifamily Housing,” Rappaport projects construction will increase in the short term, but slowing U.S. population growth will reduce demand over the long term, especially in the single-family market.

“The longer term outlook is especially positive for multifamily construction, reflecting the aging of the baby boomers and an associated shift in demand from single-family to multifamily housing,” Rappaport said.

By the end of the decade, he said, multifamily construction is likely to peak at a level nearly two-thirds higher than its highest annual level during the 1990s and 2000s.

In contrast, despite moderately strong growth by early 2015, single-family construction is projected to “contract at a moderate rate.” By the end of the decade it is likely to peak at a level “comparable to what prevailed just prior to the housing boom.”

Rappaport added that the boost to multifamily housing may further contribute to
a geographic shift from suburban to city living. “For cities, this offers the possibility of revitalization and the shoring up of public finances,” he said.

To attract these aging suburbanites, however, cities will have to offer “significant amenities, such as safe streets, diverse retail and restaurant options, museums, and venues for theater, music and sports,” Rappaport said.

Suburbs looking to retain aging households may have to recreate or create a range of urban amenities and enact rezoning to encourage multifamily construction.

In the marketplace

Developers say they already have seen signs of this shift in several communities.

“Independent baby boomers who are not ready for senior living, but don’t want to take care of the yard, are looking at urban multifamily living, where they can stay in the swing of things,” said Robert Mayer, a commercial real estate agent with Century 21 and a development consultant in Kansas City, Mo.

Baby boomers opting for a more carefree lifestyle parallels another trend: “Millennials who don’t want to live in the boring suburbs and instead want to live in the hip areas of the city,” Mayer said.

Even so, suburbs aren’t suffering. Mayer noted a spate of new, luxury apartment projects rising up around vibrant suburban retail centers, entertainment venues, schools and churches.

David Zucker, co-founder, principal and director of development of Zócalo Community Development in Denver, said the public’s aspiration to redevelop urban areas or create areas that simulate urban environments is definitely there, especially among younger generations.

But people’s housing choices are not always determined by dollars per square foot or mortgage rates. “We live where we feel comfortable,” he said.

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CONSTRUCTION TRENDS

Single-family construction since 1990 can be divided into four periods: pre-boom, boom, crash, and recovery.

Pre-boom
From 1990 to 2002, single-family construction was characterized by several runs of moderate-to-strong growth punctuated by several moderate retrenchments.

Boom
From late 2001 through late 2005, the growth of single-family starts accelerated to an average annual rate of about 10 percent.

Crash
From late 2005 through early 2009, single-family construction plunged. Starts contracted at an average annual rate of almost 30 percent, with a cumulative decline of more than 70 percent.

Post-crash
From early 2009 through mid-2013, single-family construction began with a boost from the tax credit for first-time home buyers followed by an offsetting contraction when the credit expired. Vigorous growth of single-family construction resumed in mid-2011, but paused at the beginning of 2013.

Multifamily construction since 1990 can be divided into three periods: pre-crash, crash, and recovery.

Pre-crash
During the long pre-crash period, multifamily construction first fell sharply and then rebounded. Then, from late 1998 through early 2006, multifamily starts remained approximately constant.

Crash
Although there was no boom in multifamily construction, there was a crash. It began in mid-2006 and significantly accelerated in mid-2008. Over a three-and-a-half year period, multifamily starts fell by three-fourths.

Recovery
In sharp contrast to weak post-crash growth in single-family starts, multifamily starts rebounded almost immediately. As of mid-2013, multifamily had regained two-thirds of its preceding fall.
And aspirations don’t always create realities.

Zucker says urban redevelopment in America faces several obstacles, but two issues persist.

He says the industry has forgotten how to design the urban neighbors of the past.

“We’ve lost the intellectual capability to do it correctly,” he said.

The Federal Aid Highway Act of 1956 played a significant role in redirecting residential and commercial development in the United States, as interstates made commuting to work and home expedient.

The G.I. Bill also played a role by providing a range of benefits for returning World War II veterans. Benefits included low-cost mortgages, low-interest loans to start a business, cash payments of tuition and living expenses to attend college or vocational schools, and unemployment compensation.

This allowed many families to move from cities to the suburbs, where housing and amenities were more affordable.

This shift ushered in a style of architecture and design built on expediency rather than longevity. This style gave America strip shopping centers, indoor shopping malls, warehouse-style commercial and office buildings, and sprawling residential developments.

“We’ve designed our architecture to be experienced at 35 mph rather than how architects and designers developed our (historic) public buildings to be experienced at 2 mph,” Zucker said.

Before World War II, architects designed buildings and communities for the human element. Some of these places are now being repurposed, such as Kansas City’s Union Station, Denver’s Larimer Square and The Old Market in Omaha.

Post World War II developments have a
shelf life of 30 years, Zucker says.

“How many people want to redevelop a suburban strip mall or subdivision?” he asked.

Today, the public desires to reconnect in an urban community setting, Zucker said; however, we have to figure out how to execute it correctly.

“We can rekindle it, we can relearn it, but we’ve lost the ability to design on a human scale,” he said.

The dozens of federal, state and local laws, regulations and policies geared toward suburban development comprise the second issue.

Some federal agencies will not insure mortgages involving mixed-use development in which commercial occupies more than 20 percent of the same building as multifamily residential.

And many zoning laws, especially in suburbs, don’t allow urban-style developments that mix retail, commercial and multifamily within the same proximity. Also, building codes and guidelines are designed for suburban developments and cannot be applied to urban-style construction.

Zucker says one obstacle with urban development he faces is public safety, such as fire departments that view dense housing layouts, small streets, alleyways and other urban features as safety hazards.

“I don’t dispute the idea that there is growing interest in multifamily or urban living (among baby boomers), but I think it imposes so many of these devils in the details,” Zucker said.

**Gentrification of the urban core**

Several U.S. cities that redeveloped urban communities have experienced gentrification, which is a shift toward wealthier residents, businesses and increased property values. This has generated more revenue for cities, but to the detriment of low- and moderate-income residents.

Mayer says that’s part of the pros and cons cities must address when redeveloping communities.

“This happens to the creative class—artists and musicians for example—who make an area trendy, by living and working there,” Mayer said. “Then comes gentrification and developers drive prices up, forcing them to move because they cannot afford the area anymore.”

Mayer said this happened in the Crossroads Art District in Kansas City, Mo., and could happen to other up-and-coming areas that attract young professionals and empty-nester boomers looking for a lifestyle change.

Rappaport’s research forecasts other major and long-lasting effects on the U.S. economy. They include decreasing prices of single-family homes and a shift in consumer demand for goods and services from those tailored to houses with yards to those associate to apartment living.

In addition, the possible shift toward city living may dampen demand for automobiles, highways and gasoline, while increasing demand for restaurants, city parks and high-quality public transit.

“Households, firms and governments that correctly anticipate these changes are likely to especially benefit,” Rappaport said.

**Further Resources**


**Comments/Questions** are welcome and should be sent to teneditors@kc.frb.org.
Despite record-low interest rates, the pace of the current economic recovery has been only moderate. This pace was unexpected by many forecasters and prompted extensive research into the roles of credit frictions, uncertainty and other factors. One way these factors may have weakened the recovery is by reducing the stimulative effect that a decline in interest rates usually has on consumer purchases of durable goods.

A broad measure of consumer durables spending includes four categories of spending: residential investment, personal consumption expenditures (PCE) on motor vehicles and parts, PCE on recreational goods and vehicles, and PCE on furnishings and durable household equipment. Combined spending on these goods was 9 percent of GDP in 2012.

The slow growth in consumer durable goods spending, a small but volatile component of GDP, has likely contributed to the moderate pace of the recovery.

Current consumer spending on motor vehicles and parts has lagged behind past recoveries.

**Real 4-year auto loan rate**
- 6.6% *Four years after previous recoveries started*

**Real 4-year auto loan rate**
- 2.9% *Four years after the 2009 recovery started*

*Note: The lines labeled “Previous recoveries” is the average of the recoveries from the recessions of 1981-82, 1990-91, and 2001. The trough of the current business cycle occurred in the second quarter of 2009.*

Source: Bureau of Economic Analysis.
The growth of residential investment has been slower in the current recovery than in the average of previous recoveries. Historically, residential investment rebounded vigorously at the onset of a recovery. In the first four years of the current recovery, which started in 2009, residential investment grew just over half as much as in the past three recoveries.

A statistical model that relates real durable goods spending to real interest, lending standards and real disposal income confirms that the sensitivity of this type of spending to interest rates has diminished. This model can be used, in a counterfactual exercise, to assess how much more real GDP growth might have been achieved in the current recovery if sensitivity had not diminished. The model shows that by the fourth year of the current recovery, from beginning 2012 to midway 2013, the average contribution of durable goods spending to quarterly real GDP growth could have been 0.45 percentage point higher than what has occurred.

A new year often signals a time to review your current lifestyle and make changes through better routines and improved habits. Have you ever considered that your family’s financial lifestyle might need adjustments? It could be a perfect time to revamp and simplify financial habits, and include your kids in the process.

The first step in becoming more “fiscally fit” is to have a family meeting to discuss and set goals for the road to better financial health.

Brainstorm areas where overspending seems to consistently occur, including the grocery store, clothing and electronic purchases at the mall, and entertainment sites. Once you’ve pinpointed the problem areas, talk about how the family can work together to eliminate the urge to splurge. Begin by clarifying the difference between wants and needs, as many kids confuse wanting an item with needing it. Explain that they don’t need to have a new toy; they merely want to own it. Then define the word “contentment”—being satisfied with what you currently have. Ask them to think about and explain the saying, “It’s not about having what you want, but wanting what you have.”

Once the stage is set, it’s time for financial action. Challenge the family to a “fiscal fast,” where no new purchases are made for a week, except in cases of real necessity, such as no milk in the fridge. Use up the food in the cupboards for meals and pack all lunches at home. Cut out any mall shopping trips or movie outings. Kids will need to entertain themselves with games, toys and activities accessible at home or outside. Expect to hear complaints during the week, and be ready with a pep talk to keep kids going. Parents also will have to play by the rules, so no lunches out or credit card purchases. At the end of the week, meet to assess the results. Was the family able to complete the challenge successfully? What was the toughest part of the fast? Did they learn anything about themselves and their habits during the week? Hopefully this fast will begin to change the tendency of spending unnecessarily.

Follow this fiscal experiment with a discussion of strategies that may help hold the line on spending going forward. Here are some suggestions to guide the conversation:

- **Inventory your stuff**—Ask kids to go through clothes closets and toy boxes to review all items they currently have. They will likely find things they had forgotten about, which will give them “new” stuff to use without making a trip to the mall.
Time out before buying—If kids find an irresistible item, tell them to take a time out before they make the purchase. If they wait until the following week, they may find the item isn’t as appealing to them. Or it may possibly be on sale!

Evaluate the want—Have them answer the following questions before buying:
• Will I use this item a lot?
• Can I get it at a lower cost?
• Is this a worthwhile purchase?

Scale of 1-5—Have them look at the item objectively and rate it from 1-5, with one representing “It’s nice but not needed,” and five representing “I can’t live without it!” They should only purchase items ranked 4 or 5.

Spend and save tracker—Use page 18 to have kids write down all purchases for a month to see exactly where their money is going. They may discover spending areas where they can cut back or make better decisions about in the following month. They can also review their savings habits.

Now that they have ideas on how to keep spending under control, focus on the importance of saving for their wants and needs. Explain that kids can save the money they would have previously spent in a fund for their future. If they put this money aside in a bank account, they’ll earn interest and be able to pay for big-ticket items they’ll need and want in years to come. This investment toward their future will go far in helping them become fiscally content.
Write down everything you buy for the next month in the correct spending areas. If you save any money, write it in the savings area.

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In 2011, the first members of the baby boom generation started reaching the traditional retirement age of 65. By 2030, almost 19 percent of the U.S. population is projected to be 65 or older. Alison Felix, Denver Branch executive and assistant vice president with the Kansas City Fed, says this population shift may lead to a loss of participants in the workforce, lower consumer spending and a corresponding reduction in government revenue.

Aging population

Projections by the U.S. Census Bureau show the segment of the U.S. population 65 and older will grow from 13.3 percent to 18.6 percent from 2011 to 2030.

“This trend will be reflected in each state in the nation, though the shift is expected to be more dramatic in some states than in others,” Felix and Assistant Economist Kate Watkins wrote in their latest research, “The Impact of an Aging U.S. Population on State Tax Revenues.”

Evidence of that shift is revealed in population projections from the 35 states that release their projections. By 2030, the share of the total population older than 65 is expected to increase by more than 5 percent in these states, Felix said. For states such as Maine and North Carolina, the projected increases are more than 10 percent.

And states that already have the largest shares of their populations 65 and older, including Florida, Maine, West Virginia, Pennsylvania and North Carolina, will continue to have the largest shares through 2030, at which time about one in four residents is likely to be a retiree.

Total populations are expected to continue increasing, but annual population growth in the United States is expected to slow from about 1 percent in the 1980s and 1990s to a little more than 0.6 percent from 2011 to 2030. This slowdown will stem primarily from the combination of a decreasing birth rate and an increasing death rate, the latter a result of the aging population, Felix said.

Decline in state tax revenue

Sales taxes and individual income taxes account for more than 80 percent of a state’s tax collections. The effect on tax collections
of a declining workforce and lower consumer spending will vary by state. Most states rely heavily on sales and income taxes while a few don’t collect income taxes. Also, tax structures, current population demographics, projected population shifts and other variables differ by state.

Felix’s research shows that despite these differences, the aging U.S. population will have a similar effect on tax revenues in most states.

“Isolating the effect of demographic change on tax revenue—by holding constant all other factors (such as likely income growth and other variables)—the results suggest that the aging of the population alone from 2011 to 2030 will reduce both income tax and sales tax revenue per capita in nearly every state,” she wrote.

And even though tax revenue per capita is likely to fall, total tax revenues will likely rise with increasing populations.

### Income tax revenue projections

Earning patterns vary across age groups, and therefore, changes in age demographics affect state tax collections. Many workers ages 15 to 24 pay fewer taxes because they work at part-time jobs and earn entry-level salaries. In contrast, workers at the peak of their careers, those ages 45 to 55, typically earn higher wages and pay more in taxes. Workers’ wages and tax obligations decrease when they retire.

“Most states that assess individual income taxes have collections that follow this pattern of rising and then falling across age cohorts,” Felix wrote. “However, different tax structures and distributions of taxpayer earnings produce variation across states.”

Differences in labor force participation rates across age groups also can affect income tax collections. According to Felix’s research, only 55 percent of the 16-to-24 population participated in the labor force in 2011. Participation rates were highest for those 35 to 44 at almost 83 percent. Participation rates fall sharply at retirement, with only 26.4 percent of those ages 65 to 74 and 7.5 percent of those 75 and older remaining in the labor force.

### Sales tax revenue projections

Much like the pattern of income, consumer spending follows a lifetime pattern: spending increases as workers progress in their careers and spend less as they head into retirement. Consumers reach peak income levels by middle age, while those older and younger earn less.

As the population ages consumer expenditures may fall leading to a decline in

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**Average State Income Tax Liability by Age Cohort, 2011 and 2012**

![Graph showing average state income tax liability by age cohort, 2011 and 2012.](image-url)
State sales tax revenues. Of the states imposing a sales tax, the effect of an aging population alone on per capita taxable expenditures is projected to range from a decline of 3.3 percent for Hawaii to a 0.2-percent increase for Idaho, the only state with a projected increase, Felix said.

States in 2011 with the largest per capita decreases—Hawaii, Colorado, North Carolina, and Maine—had large populations in the 45 to 54 and 55 to 64 age groups. Population growth among younger age groups in these states is not projected to offset expected lower levels of consumption as these large, older age groups enter retirement.

Sales tax revenue projections vary across states due in part to differences in each state’s sales tax structure. Felix says tax exemptions for services, prescription drugs, food and services in many states has important implications for sales tax collections as the population ages.

“As people age and spend less, a greater share of their spending tends to go to services and prescription drugs, which are often tax-exempt. Thus sales tax collections from the elderly may fall faster than their total spending,” she wrote.

According to Felix’s research, 45 states currently assess sales taxes on general retail transactions, with rates ranging from 2.9 percent in Colorado to 7.5 percent in California.

State exemptions to sales taxes vary across the country. Prescription medicines are exempt in nearly all states while groceries are exempt in 31 states and the District of Columbia, but not in 19 other states. Sales taxes have traditionally been assessed primarily on goods, but some services also are taxed.

**Future considerations**

Felix’s research concludes that regional differences in state population compositions, income and consumption patterns and tax structure could affect the degree to which demographic change affects tax revenue in each state. Another consideration is the affect an aging population will have on government spending and services.

Overall, the analysis “shows that demographic change alone will likely reduce individual income taxes and sales taxes in nearly every state in the nation on a per capita basis in the coming years, holding all other factors constant. At the same time, total revenues will likely increase with total population growth in most states.”

**FURTHER RESOURCES**

“The Impact of an Aging U.S. Population on State Tax Revenues” by Alison Felix, Senior Economist and Denver Branch Executive and Kate Watkins

Personal Finance Day supports youth understanding of money management

The Federal Reserve Bank of Kansas City had Personal Finance Day programs Oct. 23 in Albuquerque, Denver, Omaha and Kansas City. Nearly 530 students participated in the programs, which were tailored to reach students at high schools with large minority populations.

Students attended the programs either at their respective high schools or the Kansas City Fed building in Kansas City.

The program engaged students with a variety of activities, including presentations about money management and challenges to create personal budgets. The Kansas City Fed collected evaluations from 340 students about their experiences with personal finance courses, as well as their thoughts about the helpfulness of the program and usefulness to other students.

Ninety-three percent of all students surveyed agreed or strongly agreed that the program would be helpful to other high school students. Topics that students indicated they would like to study in the future as a result of their experience with the program included entrepreneurship, budgeting, investing, saving, banking and credit union basics, and how taxes work for college students.

More than 90 percent of the students at South High School in Denver agreed that as a result of the program, they have additional tools for thinking carefully about money decisions.

“It was an amazing program that I thank you for teaching me where my money goes after leaving my hand,” wrote one Denver student in a feedback evaluation.

“We are pleased with the success of this personal finance education initiative,” Kansas City Fed Vice President Kristina Young said. “This program is an innovative way to engage young people and encourage them to expand their understanding of their personal finance options.”

These financial education programs are just one way the Kansas City Fed promotes financial education across the Tenth Federal Reserve District.

For more information about resources available for students, parents and teachers, visit www.federalreserveeducation.org.
Evening at the Fed event reaches educators across Tenth District

In November, the Federal Reserve Bank of Kansas City’s main office and branches had 248 teachers from throughout the Tenth District attend Evening at the Fed events. Educators were invited to hear from the Kansas City Fed’s economic education specialists about the resources offered by the Bank.

“We were able to combine our Evening at the Fed program with a town hall videoconference program with former Federal Reserve Chairman Ben Bernanke,” said Jennifer Clark, who leads the Kansas City Fed’s economic education initiative. “To commemorate the Federal Reserve’s Centennial and its history, each of our offices invited teachers to participate in this special event.”

Evening at the Fed is an annual event held in all four Tenth District offices. The program works to build relationships with K-12 educators to help them be equipped to teach economic and financial concepts in the classroom.

Learn more about the Bank’s educational resources and programs at KansasCityFed.org/education

Investment Connection Online connects funders, organizations

The Federal Reserve Bank of Kansas City has launched a unique web-based tool called Investment Connection Online. The goal is to match funders, including financial institutions, government, corporate enterprises and community foundations, with organizations that have community and economic development proposals that need an investment, grant or loan.

Investment Connection Online makes it convenient for funders to learn about multiple proposals, new partnerships and investment opportunities, while nonprofits are able to access multiple funders looking for good community and economic development investment ideas via one website. Though funding is a crucial component, the forum also provides opportunities to inform funders about critical needs facing low- and moderate-income populations and to begin building relationships with members of the nonprofit community.

“The Federal Reserve works to bring together partners to share ideas and find innovative approaches to issues,” said Ariel Cisneros with the Kansas City Fed. “With Investment Connection Online, we identified the need to help match funders and nonprofits as a way to support today’s community.”

To learn more about the process, visit www.kansascityfed.org/community/cdi/investmentconnection/proposals.cfm.
Notes from around the Tenth District

Resource helps workers understand their paychecks

The Putting Your Paycheck to Work resource guide helps employees understand and make the most of their paychecks. The resources, developed by the Federal Reserve Bank of Kansas City, are available in both English and Spanish.

Topics include paycheck basics, understanding withholdings and deductions, the difference between direct deposit, checks and payroll cards, and tips on budgeting. Employer resources complement the materials for employees and can be used to reinforce the information provided in the fact sheets.

“Based on feedback we received from employers throughout the District, the Kansas City Fed developed the Putting Your Paycheck to Work fact sheets to fill a critical void,” Kansas City Fed Vice President Tammy Edwards said. “The materials were designed to help employees, especially those new to the workforce, better understand how to maximize their earnings.”

As part of the same initiative, the Kansas City Fed provides resources for educators to help students understand and manage their paychecks and income.

Take advantages of these resources at http://www.kansascityfed.org/community/workforce/paycheck.cfm.
The Federal Reserve System

Congress created the Federal Reserve in 1913 to bring financial stability after a number of banking panics. It is the nation’s third central bank. The first, established in 1791, and the second, created in 1816, were each operational for 20 years. In both cases, its charter failed to be renewed and the banks closed.

With the Federal Reserve Act, Congress sought to create a central bank the public would be more likely to support by making it “decentralized” with more local control. This new structure was designed to overcome one of the primary weaknesses of the previous central banks: public distrust of an institution that many felt could potentially be under the control of either government or special interests. The new central bank is a network of 12 regional Federal Reserve Banks, located throughout the country and under the leadership of local boards of directors, with oversight from the Board of Governors in Washington, D.C., a government agency.

The Federal Reserve is considered to be independent within government and broadly insulated from political pressures. While members of the Board of Governors are nominated by the president of the United States and confirmed by the Senate, the Federal Reserve’s regional structure, including local boards of directors and advisory councils, ensures that views from a broad spectrum of the public nationwide contribute to the central bank’s deliberations.

President Woodrow Wilson signed the Federal Reserve Act on Dec. 23, 1913, and the 12 regional Federal Reserve Banks opened on Nov. 16, 1914.

The Federal Reserve Bank of Kansas City

The Federal Reserve Bank of Kansas City and its Branches in Denver, Oklahoma City and Omaha serve the Tenth Federal Reserve District, which encompasses Colorado, Kansas, western Missouri, Nebraska, northern New Mexico, Oklahoma and Wyoming. As a part of the Federal Reserve System, the Bank participates in setting national monetary policy, supervising and regulating numerous commercial banks and bank holding companies, and providing other services to depository institutions.
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