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If production continues to increase, the United States could become the world's largest oil producer by 2016. Increased production, however, has created a supply bottleneck—most existing oil pipelines are unable to handle the added volume.

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While the health of community banks has recovered significantly since the financial crisis, commentary from bankers and industry analysts suggest they are still struggling due to pressures on core revenue from interest earned on loans and securities investments.



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Regional Federal Reserve presidents serve in several capacities, one of which is as a conduit between their Federal Reserve Districts' communities and the nation's central bank.

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President's

message

Structure matters: The decentralized Federal Reserve

n "End the Fed" demonstration took place recently outside my office on Main Street in Kansas City, Mo. It was a reminder that democracy demands accountability from its most powerful institutions to its citizens. The Federal Reserve is no exception.

In my role as president of a regional Reserve Bank, I am well aware of the range of views on the topic of Federal Reserve accountability. For example, one commentator wrote that even if the central bank's "power would remain in the hands of the wisest, the most honorable, and the most disinterested" leaders, "it would not be possible to satisfy the people throughout the country that the vast resources and powers of the bank were used only for the best interests of all the people and without partiality or favor to any section of the country, or to any class or set of people ..."1 When it comes to the nation's financial matters, someone else noted that authority should not be "concentrated in one city where a small clique could control the system."2

Yet another comment stated that, "The business resources of the United States ... cannot be centralized. ... By reason of the great expanse of the country and the diversity of business conditions in the different sections of the country, the details of the business of a central bank could not be managed at a central office." Finally, the desire for local control was highlighted in this comment: "No centralized power could dominate an organism

whose life is drawn from functions local to each community."⁴

The sentiments behind these words—concerns about power and the concentration of financial resources—ring true, but they are not, in fact, comments on the recent financial crisis. This commentary offers a flavor of the robust and contentious public



debate that preceded the signing of the Federal Reserve Act in 1913. It is striking to me how familiar those words are today. It was this public sentiment about the country's economic future under a central bank that influenced Congress to shape the institution in a way that would garner the trust and confidence of the American public. The result was a decentralized structure that exists today with locations across the country operating under a rigorous system of checks and balances.

As a career Federal Reserve employee, bank supervisor and lifelong Missourian, I understand the importance of having a central bank that is accountable to the public. In fact, as an official with input to national policy who lives and works in the center of the United States, my role is not happenstance, but rather it is a deliberate choice on the part of the Federal Reserve's congressional founders that reflects

¹ Victor Morawetz. The Banking and Currency Problem in the United States. 1909

² Robert Owen. The Federal Reserve Act. 1919.

³ "Doubts Money Plan." The New York Times. Dec. 3, 1911.

⁴ Pamphlet produced by the National Citizens League, circa 1912.



their intentions for the structure of the nation's central bank. It is my view that the Federal Reserve's ability to achieve its broad objectives over the past century has been possible because of its decentralized structure.

Structure enhances public trust

The Federal Reserve Act established a framework for the nation's central bank that departed materially from that of the First and Second Banks of the United States. Congress rightly understood that the monolithic structure of these first two central banks was ill-suited to represent and serve the diverse interests, geographies and industries that make up the U.S. economy. The Federal Reserve's founders understood that the long-term success and credibility of the institution would rely on its ability to gain support outside the Washington-New York corridor of political and financial interests.

To ensure public accountability, the Federal Reserve Act called for a government agency the Board of Governors in Washington, D.C. composed of individuals who are nominated by the president and confirmed by the Senate to serve 14-year terms. The Board of Governors plays an important public oversight role for the entire system, without which a meaningful role for the quasi-governmental regional Reserve Banks would not likely be acceptable to the public. However, to ensure there was appropriate balance and representation, the Act also called for between eight and 12 Reserve Banks to be located across the country. A committee of cabinet members took several months to arrive at its decision to name the 12

Federal Reserve cities that would serve as the regional arms of the nation's central bank.

One hundred years ago, on May 18, 1914, a delegation signed paperwork to incorporate the Federal Reserve Bank of Kansas City. Similar meetings occurred that spring in 11 other cities, and the Federal Reserve System began operations on Nov. 16, 1914.

Each Reserve Bank is overseen by a local Board of Directors composed of community and business leaders from diverse sectors across each of the 12 regions. These directors share governance responsibility for Reserve Bank operations along with the Board of Governors.

In addition to Reserve Bank boards, individuals serve as directors on the boards at 24 Federal Reserve branch offices. All told, some 270 individuals across the country serve as Federal Reserve directors, providing real-time economic information for the Federal Reserve to consider in its policy formulation. In addition, through their experiences as leaders in business, and in the labor, consumer, banking and agriculture sectors, directors offer an independent perspective on Reserve Bank operations, budgetary issues and other strategic challenges.

Structure improves operational effectiveness

Over the past century, the Federal Reserve's local connections have proven to be valuable in carrying out its responsibilities. Whether responding to a crisis, delivering financial services or supervising banks, the deep understanding of regional interests has facilitated effective operational performance.



Importantly, the Reserve Banks are designed to understand credit availability issues at the local level. You need not go back to 1913 to find an example that underscores this. As financial markets seized up during the most recent crisis, the Board of Governors and the Federal Reserve Bank of New York focused their efforts and resources on designing liquidity facilities to ease financial conditions. Even as resources were dedicated to pulling Wall Street out of the depths of the financial panic, problems developed in other parts of the country that needed to be addressed, including in the Kansas City Fed's region.

crisis to a high of more than \$400 billion.⁵

As funding from Wall Street dried up in 2009, the effects rippled across the country. In my district, a sizable and healthy financial services firm lost access to its line of credit from a large Wall Street bank. While this regional institution would not be considered systemically important by today's regulatory definition, it certainly played an important role in the economy of its own Midwestern community.

Staff at the Federal Reserve Bank of Kansas City worked closely with the Board of Governors' staff to consider the firm's

"... I think it is quite feasible that if Congress were to design the Federal Reserve System today, it might well choose to have 50 Reserve Banks rather than just 12."

Among the roles served by the regional Reserve Banks is the statutory responsibility to act as a "lender of last resort" to depository institutions in the region. Specifically, the Federal Reserve is charged with lending against collateral to solvent institutions, making its role as a bank supervisor complementary to the ability to confirm eligibility to borrow on short notice. In the case of the Kansas City Fed, serving as a lender of last resort across its sevenstate region means leveraging relationships and access to information on thousands of institutions. This information is a particularly critical resource during crisis situations. During the crisis of 2008, the monthly volume of discount window borrowing from the Federal Reserve spiked from less than \$1 billion prequalifications to gain timely access to funding and avoid failure. The firm survived the crisis because the local Reserve Bank was familiar with the institution and was able to connect it with programs that allowed this otherwise viable firm to continue its vital operations.

Likewise, the regional Reserve Bank is able to gauge the local effects of financial market conditions and economic drivers through its role in supervising banks. Although considerable attention is focused today on systemic risk and systemically important financial institutions, the Federal Reserve's regional connections to more than 6,000 community banks and 50 state banking departments provide essential information about the economic health of small business, regional economies, credit

⁵ See http://research.stlouisfed.org/fred2/series/DISCBORR.



conditions and the impact of broader regulatory issues.

Through the Reserve Banks' presence in their respective communities, regional issues can be addressed with the expertise and knowledge that a regional Reserve Bank is equipped to provide. Having been so recently reminded that access to credit is critical to the economic success for communities large and small, I think it is quite feasible that if Congress were to design the Federal Reserve System today, it might well choose to have 50 Reserve Banks rather than just 12.

Structure fosters independent thinking

The system, by design, is intended to include a diverse range of perspectives, and the Reserve Banks contribute importantly to this diversity. Many have criticized this feature by suggesting that the cacophony of voices sends mixed signals. Yet, other public institutions reflect similar democratic processes where a mosaic of perspectives and input is sometimes messy. Essential to sound outcomes are leadership and governing processes to bring these voices together for the purpose of decision making. The same is true for the Federal Open Market Committee (FOMC).

The FOMC has a long-established process that provides for discussion and debate of policy options. But, the decision-making process is quite clear: 12 participants—seven from the Board of Governors and five from the Reserve Banks—cast votes at each meeting and the majority defines the policy action with a statement articulating its rationale. A \$17

trillion economy with complex dynamics is well-served by this process, which includes a range of viewpoints and inputs.

This structure also, by design, allows for dissenting views. This feature recognizes the value Americans place on independent thinking. Some have argued: Why not keep differing views internal and present a united or consensus view to the public? Wouldn't solidarity give more confidence and clarity to the public? I believe that masking differing policy views is inconsistent with central bank communication and transparency. Making differing views available to the public serves to clarify issues. It is the public duty of each participant of the FOMC to express their views. To suggest that FOMC members should appear to be unanimous in voting records is to suggest that diverse perspectives are not valued and underestimates the public's ability to discern intellectual honesty.

Finally, independent, stable and informed leadership is especially important to the Federal Reserve's policymaking process. Policy decisions have broad impact and benefit from the institution's research, thoughtful analysis and public input. Experience and informed judgment are as important to good policy as academic and theoretical frameworks.

The Federal Reserve Act calls for members of the Board of Governors to serve 14-year terms, yet according to one recent report, the average tenure of Federal Reserve governors since 1936 has been 7.3 years. Since 1986, the average tenure has fallen to five years, and the last 10 governors to serve have held their seats for an average of four years.⁶

⁶ The New York Times. "Tenures Becoming Shorter at a Short-Handed Fed." May 12, 2014.

Furthermore, whether monetary policy, banking regulation or payments, the public depends on those who serve to bring diversity of experience to the Federal Reserve's most challenging issues. This means honoring the Federal Reserve Act's requirement for diversity of background and geography among the governors. Consistent with this, I agree that the Federal Reserve Board would be strengthened by having someone with community banking or community bank supervision experience to fill one of its current openings.

Conclusion

The financial crisis is behind us, thankfully, but not far behind. The image in the rearview mirror is still large—and perhaps closer—than it appears. The Federal Reserve's history is important, but it is only helpful to the extent that it positions us to consider how we might address the considerable challenges that await the central bank in the years to come. Those challenges include normalizing monetary policy, effectively supervising the largest financial institutions, and ensuring a safe, efficient and accessible payments system.

Today's debate is not about second-guessing those who made difficult choices in the interest of the country during the depths of the financial crisis. However, it is not enough to defend the steps taken during the crisis by saying, "It could have been worse." Instead, the experience of the financial crisis should lead policymakers to the unequivocal conviction that they will not rest until the foundations of our financial system are shored up to avoid

similar outcomes next time. That is the pledge policymakers made to the American public. Through the broad-based input provided by the decentralized Federal Reserve, we can deliver on this pledge. Those demonstrating on Main Street in Kansas City and other parts of the country deserve this.

The Federal Reserve's centennial provides an opportunity to engage the public and to reflect on the values that have allowed the institution to serve the country. Its defining characteristics, if embraced, can continue to serve as a source of strength for the nation in the future. As former Senator Robert Owen noted in an October 1913 speech on the role of Reserve Banks within the Federal Reserve System, "Their function must be to protect the commerce of the nation, to stabilize the interest rate and to give permanency to the prosperity which this country ought to enjoy continuously."

That sentiment is as true today as it was 100 years ago.

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

Esthuf George

The preceding text was delivered to The Exchequer Club in Washington, D.C., on May 21, 2014.

TRANSPORTING CRUDE

U.S. faces hurdles in getting oil supply to market



rude oil production in the United States declined steadily for more than 20 years until recent innovations in drilling and natural resource extraction created a boom reminiscent of the oil discoveries of the 19th and 20th centuries.

"From early 2010, when the current surge started, to the end of 2013, U.S. production of crude oil rose nearly 40 percent," according to Chad Wilkerson, a Kansas City Fed economist and Oklahoma City Branch executive, and Nida Cakir Melek, also an economist.

The Energy Information Administration (EIA) expects production to increase another 25 percent, which would make the United States the world's largest oil producer by 2016, surpassing Saudi Arabia and Russia. The country's aging oil infrastructure, especially its pipelines, however, can't handle the volume.

"The bottleneck both pushed down central U.S. crude prices relative to world prices and significantly increased the use of alternate modes of oil transport," Wilkerson and Melek said.

Surge in production

For years, industry analysts suggested U.S. crude oil production was in a decades-long decline. According to the EIA, U.S. crude oil production dropped steadily from 1985 to 2008, from almost 30 billion barrels to 21 billion barrels annually. A number of reasons contributed to the decline, such as exhausted oil fields and the lack of domestic investment in oil exploration.

The decline pushed the United States out as the world's No. 1 oil producer—a distinction it had for half of the 19th and most of the 20th centuries—and ushered in Saudi Arabia and Russia as the world's oil giants.

Although the United States has imported foreign oil since after World War I, slowing U.S. production in the 1980s accelerated the dependency on foreign oil ahead of the recent production decline.

In the intervening years, U.S. energy companies worked on technology enhancements in natural gas extraction, which led to a boom in 2002 and opened the door to the current windfall in domestic crude oil.

Mitchell Energy & Development Corp. experimented for 20 years to develop hydraulic fracturing, commonly known as fracking, after the company discovered in the early 1980s that shale contained vast amounts of natural gas that normal drilling practices could not extract. Hydraulic fracturing consists of shooting a mixture of water, chemicals and sand into drilled wells to create fissures in rock formations to free trapped gas.

Devon Energy Corp. of Oklahoma City, among others, developed horizontal drilling techniques, which allow operators to drill to a certain depth, then drill further at an angle or even sideways to expose more of a reservoir and extract greater amounts of natural gas.

Devon acquired Mitchell Energy for \$3.5 billion in 2002, making it one of the largest oil and gas producers in the United States. The company combined the two technologies, allowing greater extraction of the once inaccessible natural gas.

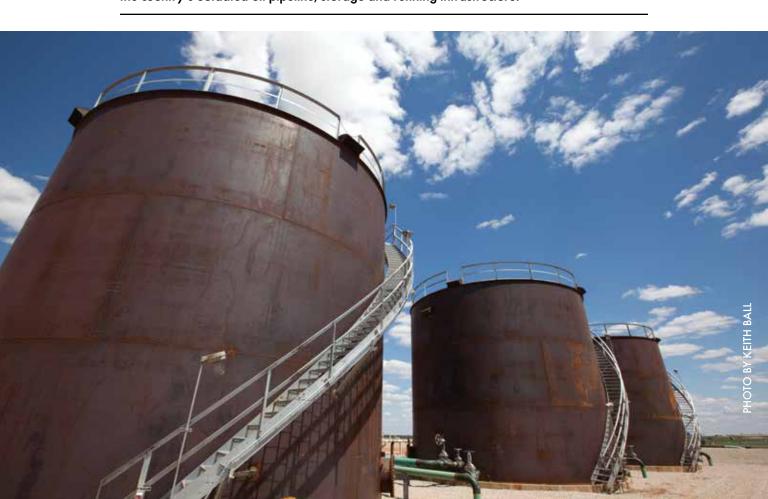
By 2011, U.S. natural gas production

grew 30 percent to 24.6 trillion cubic feet annually, creating a 70-year supply. When natural gas production was at its zenith, energy companies, using the new technologies, turned to crude oil, drilling at sites once considered played out and exploring the country's untapped shale deposits.

Between 2009 and 2011, the United States experienced three consecutive years of crude oil production increases for the first time since 1983-85, as well as the largest surge in output within a three-year period since the late 1960s, Wilkerson and Melek said. And by 2012, the United States' use of imported petroleum decreased from 60 percent to about 40 percent—the lowest level since 1991.

The most recent productive oil plays—the Eagle Ford Shale in south Texas and the Bakken Shale in North Dakota—account for more than three-quarters of the overall increase. Other plays in the midcontinent region—including the Permian Basin in West Texas and New Mexico, the Niobrara Shale in

THE U.S. CRUDE OIL PRODUCTION SURGE has led to a glut in reserves, which has exposed the country's outdated oil pipeline, storage and refining infrastructure.



Colorado and Wyoming, and smaller plays in Oklahoma and Kansas—account for another third of the increase in U.S. oil production, offsetting some production declines in Alaska and U.S. offshore wells.

The production surge has led to a glut of oil, which has exposed the country's outdated oil pipeline, storage and refining infrastructure and problems with the oil pricing system.

This is especially true at Cushing, Okla., where most central U.S. oil pipelines meet and the price is set for U.S. benchmark West Texas Intermediate (WTI) crude.

Market price and the pump

The increase in oil produced a spread between two oil price benchmarks. WTI has been trading at a considerable discount as opposed to a slight premium historically. From 1990 to 2010, WTI averaged \$1.38 more per barrel than Brent North Sea Oil, the international benchmark, and only traded below Brent 10 percent of the time and never by as much as \$5. But since January 2011, WTI has averaged nearly \$15 less per barrel than Brent.

The discount, however, has not benefited consumers in the central United States at the pump. Gasoline prices remain near national levels and continue to follow Brent oil rather than WTI prices.

"Despite lower oil prices in the region, recent studies have shown Midwest gasoline prices have not varied from other regions because some gasoline in the Midwest is still imported from refineries on the coasts," Wilkerson and Melek said.

The market price spread also was due to the nation's inadequate pipeline capacity. Production companies in the central states amassed large inventories of crude oil that they could not get to market.

An inadequate infrastructure

Bonnie Petersen says innovations in natural resource extraction have turned western Colorado into an "energy haven," where companies extract a mix of uranium, coal, natural gas, oil shale, shale oil and crude oil from the Niobrara Shale and Green River formation.

Petersen is executive director of Club 20, a coalition of individuals, businesses and governments from 22 counties in western Colorado. Club 20 lobbies for energy policies its membership supports at the state and federal levels.

Transportation, Petersen said, is recognized by public officials in western Colorado as important to capitalizing on the economic opportunities energy represents.

"All of our communities are having discussions about transportation and transportation infrastructure," she said. "You don't have natural resources like we do without looking into the future and trying to address some of those issues."

But finding the funding to meet those infrastructure needs is difficult, she said, because it involves more than pipelines. Oil production involves many entities that need electricity, water, wastewater treatment, adequate roadways and new technology.

Pipeline and trucking capacities are adequate to handle current oil production levels in the state, Petersen said, but the transportation outlook could quickly change should oil production continue to increase.

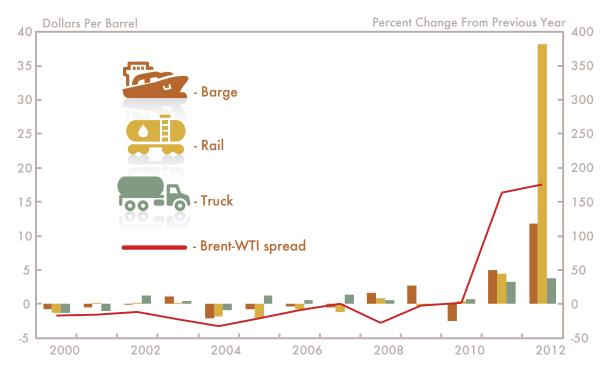
The Keystone XL Pipeline, which Wilkerson and Melek say is receiving "significant scrutiny" nationally and resistance from residents in northern central states, such as Nebraska, is not proposed to cross into Colorado.

Club 20 Energy Committee Chairman David Ludlam said Colorado officials are watching the pipeline's development because it's a good measure of how federal and state officials across the country will address increased production needs.

Canadian government representatives recently made a presentation on the pipeline to Club 20's Energy Committee.

"Symbolically, what the controversy over this pipeline indicates is we have a huge level of uncertainty about the ability to permit projects large or small through the federal government

OIL PRICE SPREAD AND ALTERNATE MODES OF OIL TRANSPORTATION



Source: Energy Information Agency

because of shifting priorities, policies and politics," Ludlam said.

To address infrastructure needs, companies and governments have spent or plan to spend billions on construction projects—primarily pipelines and storage. According to Wilkerson and Melek, 2,597 miles of oil pipeline and related projects are scheduled for completion in the United States in 2014 and an additional 1,734 miles of pipeline construction is planned to start this year and finish in 2015.

Expense and lack of guaranteed profit, however, are the biggest roadblocks to improving the infrastructure. Investment in pipelines and expansion of refineries is a risk, because shale oil productions start and end quickly, unlike traditional oil wells.

Because of that difference, Wilkerson and Melek found, companies have sought alternative modes of oil transportation. Barge transportation has the least expensive operating

cost and was one of the fastest-growing modes in 2011. Barge transport of crude oil—usually from the Plains or Texas to Gulf Coast refineries—tripled in 2011 and doubled again in 2012. Barge use, however, is limited to fixed waterways that cannot be expanded easily.

Oil transport by truck has the lowest startup cost and can cover the largest geographic area. Trucks' expensive operating costs, shipment capacity limits and labor intensity make it a short-term solution to the growing need, according to Wilkerson and Melek.

Transportation by railroad is the fastest-growing alternative method. Rail grew much faster than truck or barge transportation in 2012 and growth continued in 2013, according to industry data. Trains, however, are more expensive than barges and less flexible than trucks. There's also concern about safety and the railroads' ability to transport large amounts of oil without putting the public at

risk. For example, in February 2014, a 120-car Norfolk Southern Corp. train carrying heavy Canadian crude oil derailed and spilled in western Pennsylvania. The Norfolk derailment is one of many recent train accidents involving crude oil that have prompted residents, local governments and environmental and safety organizations to seek stronger safety standards.

Planning for the future

As each mode of transportation has grown, so have environmental concerns. The southern leg of the Keystone XL Pipeline, which runs from Oklahoma to the Gulf Coast, is now operational, and has helped ease some of the glut at Cushing. But the northern portion of the project, which would extend from Canada's tar sands through the Plain states to Oklahoma, remains incomplete because of concerns about the type of oil transported, the route and possible oil spills.

Farmers in Nebraska have fought the project. They are concerned about leaks and spills contaminating water, crops and livestock, and have put pressure on state and federal representatives. Because the pipeline crosses international borders, it requires a presidential signature.

Other pipelines in the country have met similar resistance, as residents and local governments worry about the effect oil transportation could have on the environment, public safety and local infrastructure.

With U.S. crude oil production expected to increase another 25 percent in the next two years, many people in government, the oil industry and the related business sectors want a measured approach to development with oil shale.

"We believe in order for us to become energy secure in the United States ... we need to utilize traditional energy sources, renewable energy sources and other new potential energy sources we might see come about," Petersen said.

It's important to have everyone at the table. Club 20 wants to see what economically feasible, environmentally responsible technology can be developed for specific resources, such as shale crude extraction and transportation.

"As that work is being done, then our members want to work with industry to figure out how to deal with impacts that a breakthrough might bring to the area," she said.

Petersen and Ludlam agree on one potential stumbling block to Colorado's oil shale development.

"One of the things we're concerned about, and one of the things all of the sectors have in common in western Colorado ... is that we suffer from a (lack of a) coherent, clear national energy strategy as it's related to public lands," Ludlam said.

"Something that's rather disheartening in western Colorado around oil shale opportunity is the fact that government policies have essentially limited the ability for research and development to be done on that technology," Petersen added.

Strategy shortcomings, Ludlam said, could hinder natural resource transportation.

"As a result of that, when you don't have certainties on being able to permit future transportation mechanisms, be it utility lines for alternatives or pipelines for traditional oil and gas, whatever it may be, (development) becomes very difficult," he said.

Ludlam says the nation needs an energy policy that is clear, coherent and predictable.

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KEVIN WRIGHT, EDITOR

FURTHER RESOURCES

"Getting Crude to Market: Central U.S. Oil Transportation Challenges," By Chad Wilkerson and Nida Cakir Melek, www.kansascityfed.org/publicat/mse/MSE_0114.pdf.

COMMENTS/QUESTIONS are welcome and should be sent to teneditors@kc.frb.org.



Finding the value in mobile payments

for merchants and consumers



egan Chesterfield reaches into her purse to pay for a cup of coffee. Instead of a wallet, she pulls out a smartphone.

"The app has a barcode that the store's machine reads and it withdraws the money from my account."

Chesterfield replenishes the account, which is maintained by a third party the merchant uses for mobile transactions, every time she gets paid.

"I only keep about \$20 or \$30 in there," she said.

She says using a "virtual wallet" is easier than getting her leather wallet out and paying with a debit or credit card, or getting cash out of the ATM and carrying it with her.

"I think it's safer than carrying around cash and the app helps me keep track of how much I spend," she said.

She has to use her debit card most of the time though.

"There aren't many places that use apps or can read your phone," she said.

This may change in the future, however, as merchants are actively developing and implementing mobile payments.

U.S. payments environment

U.S. consumers like Chesterfield, who use mobile payments, are few compared to Europe and Japan, but the payments system is trending toward mobile use.

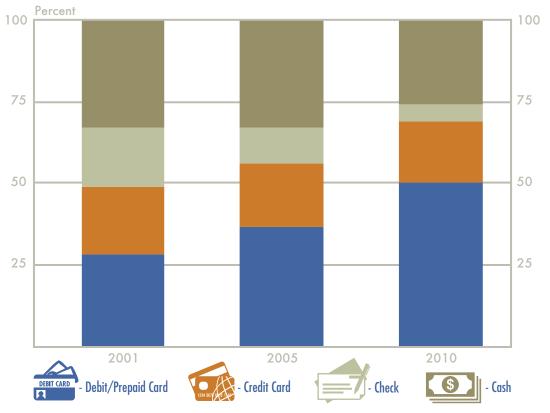
According to Federal Reserve Bank of Kansas City Senior Economist Fumiko Hayashi and Payments System Research Specialist Terri Bradford, the U.S. payment system has evolved from paper-based payments, such as checks, to electronic payments, such as payment cards.

In their research, "Mobile Payments: Merchants' Perspectives," Hayashi and Bradford explain that the share of consumers who prefer to use a credit, debit or prepaid card at brick-and-mortar merchants increased from 49 percent in 2001 to 69 percent in 2010.

Fees charged to merchants to process payment cards, and rules and security standards set by payment card networks, affect merchants' net income.

"Fees merchants pay to accept card transactions have risen rapidly in the last two decades because of increased volume and value of card transactions and increased fees per transaction," Hayashi and Bradford said. "The increased fees per transaction are attributed to

CONSUMERS' PREFERRED METHOD OF PAYMENT AT BRICK-AND-MORTAR MERCHANTS



Source: Hitachi Consulting and BAI

interchange fees, which are paid to card issuers and account for more than 80 percent of all fees merchants pay for card transactions."

One of the merchants' motivations to accept mobile payments is to reduce the card acceptance fees.

Hayashi and Bradford based their research on a survey they conducted of merchants representing a variety of market categories. About 65 percent of merchants interviewed were from the top 100 retailers, based on 2012 retail sales, and each was either a national or large regional retailer. Participants represented various functions in their organizations and had knowledge about mobile payments.

According to Hayashi and Bradford, payment cards are more expensive for merchants than any other payment method, especially credit cards offering rewards. Recent regulations reduced the fees on debit card transactions, but cash remains the cheapest method of payment for some merchants.

One new electronic payment method some merchants offer, Hayashi and Bradford point out, is a proprietary payment method using the automated clearinghouse (ACH) to directly debit their customers' bank accounts. Merchants' cost to process ACH transactions is about 15 cents per transaction, making ACH less expensive than debit or prepaid cards but likely more expensive than cash.

Recent debit card regulation and two legal settlements have allowed merchants more flexibility in how they want customers to pay and how they can keep down costs associated with card payments, but many merchants don't take advantage of the flexibility, Hayashi and Bradford said.

In the United States, the implementation of Europay Mastercard Visa (EMV) cards—cards embedded with a computer chip—is currently underway. The cards are less susceptible to fraud than current magnetic stripe cards. The switch is expensive—card readers and cards cost merchants and card issuers.

One way payment networks are prompting merchants to make the switch to more secure chip cards is by shifting fraud loss liability for "card-present" transactions to the merchant if the merchant has not invested in EMV technology and the card issuer has—otherwise liability remains the same, with the card issuer absorbing most of the loss.

EMV technology allows for the use of contactless readers. Instead of inserting a computer-chip card into a device, a contactless reader connects with the card's chip using near-field-communication (NFC), a technology used for mobile payments.

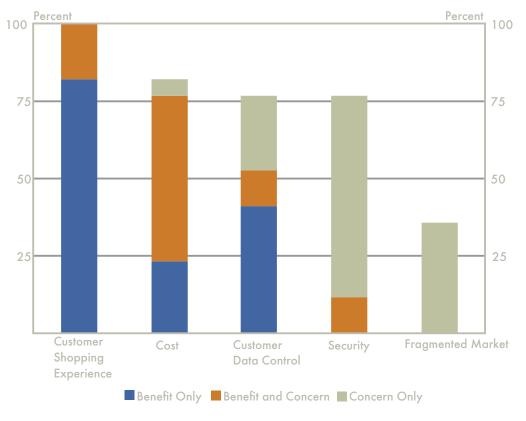
Today's mobile payments

A Pew Internet & American Life Project survey found that a majority (65 percent) of respondents agree with the statement that by 2020 "most people will have embraced and fully adopted the use of smart-device swiping for purchases they make, nearly eliminating the need for cash or credit cards." One-third of respondents, however, thought NFC and mobile payments will not catch on by that date.

Mobile carriers, credit card companies, Google, eBay/PayPal, Square, Intuit and various other companies are offering a range of payments tools, platforms and apps for local business owners, retailers and consumers.

The pace of acceptance and use of these tools and devices has been slow. Google Wallet, for example, is still having trouble with consumer adoption. By far, online bill payment in the United States remains the most common "mobile payment" activity.

SHARES OF MERCHANTS WHO CITED ATTRIBUTES AS A BENEFIT, A CONCERN, OR BOTH



Source: Hayashi and Bradford

Shane Langston, president of DCT Mobile, a Kansas City, Mo., systems integration company specializing in mobile applications, said there's a curiosity about mobile payments—clients regularly ask him and his employees about implementation. But the curiosity among some DCT clients doesn't necessarily translate into a desire to transition payment methods.

DCT provides mobile software to clients, including business-to-business companies, business-to-consumer companies, service industries and direct-store delivery businesses.

DCT representatives don't recommend mobile payment as of now, Langston said, given the U.S. market is still based on payment cards.

"The reason we haven't gotten into it is because of the complexity and cost to develop that software, and there are just not enough customers to make it worthwhile," Langston said.

The demand, however, is growing among merchants, especially merchants who serve a more technology-driven clientele.

According to a report published in Compendium, in 2013, 18 to 29 year olds used a smartphone more than any other



PHOTO BY ISTOCK

age demographic in the United States, and it is one of the fastest growing groups to likely use a smartphone for some type of financial transaction.

Matt Matros, CEO of Protein Bar, said in a recent interview with Mobile Payments Today that mobile payments are growing within the restaurant industry—the new technology allows merchants to better serve mobile-savvy customers with high expectations.

Mass adoption within the industry will take time, however, because merchants are still uncertain about the new technologies and the companies that support them, and consumers are concerned about transaction security, Matros said.

Available mobile payment technology

The three main technologies that have emerged for mobile payments are NFC, code-based—barcode and QR code—and cloud-based.

NFC allows a consumer to complete a transaction by tapping or waving a mobile device at a merchant's point-of-sale terminal. The information is transferred through a short, wireless transmission.

Barcodes and QR codes store information that can be read by a point-of-sale scanner.

Cloud technology uses remote servers to store data and can make transactions by using a consumer's mobile phone number with a personal identification number (PIN) entered into a PIN pad at a merchant's store. Other cloud-based methods rely on location-based technology that monitors a consumer's location with a mobile payment application.

Each of the three technologies is used in some existing mobile payment applications or ones in development, Hayashi and Bradford said.

NFC is used for mobile wallet applications provided by Google and by Isis, a joint venture of mobile network operators AT&T, T-Mobile, and Verizon. Barcodes and QR codes are

mainly used in a merchant's proprietary mobile payment application, such as the one used by Starbucks and for open-loop mobile payment applications offered by third-party providers, such as LevelUp.

Also, a joint venture among a growing number of leading merchants called the Merchant Customer Exchange (MCX) plans to use QR codes at least initially in its mobile payment application. Cloud technology is used by third-party mobile payment providers, such as PayPal and Square.

Requirements for consumers and merchants to use mobile payments vary by technology. NFC-based mobile payments require both consumers and merchants to make significant investment.

"However, the U.S payment card industry's migration to EMV card technology may encourage merchants to install NFC-equipped terminals," Hayashi and Bradford said. "Merchants who plan to adopt EMV can also accept NFC-based mobile payments by installing contactless card readers. For many merchants, the cost difference between investing in EMV contact card readers and investing in EMV contact card readers is likely small."

In contrast, code-based and cloud-based mobile payments have fewer requirements. Consumers only need a smartphone and an app. While QR-code based mobile payments may require merchants to install QR-code scanners, barcode- and cloud-based mobile payments do not require any equipment installation.

The future

Hayashi and Bradford found that among five mobile payments attributes they examined, the effects on merchants of two attributes are clear while three are unclear.

Two attributes with clear effects on merchants are customer shopping experience and fragmented markets.

Enhanced shopping experiences through mobile offerings will encourage consumer

adoption of mobile payments and help merchants stay competitive.

A marketplace with dozens of applications and devices could cause fragmentation—with fragmented technologies and applications, merchants will need to invest heavily and will have difficulty selecting mobile applications suited for them.

The effects of three other attributes—cost, customer data control and security—are uncertain. Whether mobile payments will provide cost savings to merchants depends on the technology and funding sources used for mobile payments. Whether merchants gain control or ownership of customer data depends on who provides mobile payments, and mobile payments will likely improve payment security over magnetic-stripe cards but heighten concerns about customer data security.

While Langston said he doesn't envision mobile payments becoming the new normal anytime soon, he believes payment methods in the United States will change.

"Eventually the mag stripe will go away and it will be replaced by this chip technology, but it will be across all transactions," he said.

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KEVIN WRIGHT, EDITOR

FURTHER RESOURCES

"Mobile Payments: Merchants' Perspectives," By Fumiko Hayashi and Terri Bradford, www.kansascity-fed.org/publicat/econrev/pdf/14q2Hayashi-Bradford. pdf.

COMMENTS/QUESTIONS are welcome and should be sent to teneditors@kc.frb.org.

AFTER THE RECESSISN

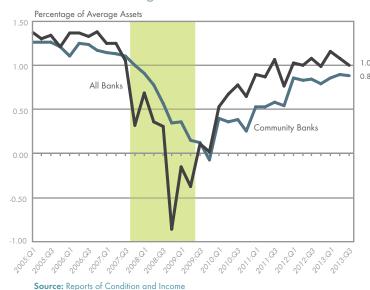
THE CONTINUING RECOVERY OF COMMUNITY BANKS

A strong system of community banks is critical for the health of local, regional and national economies. While the health of community banks has recovered significantly since the financial crisis, commentary from bankers and industry analysts suggest they are still struggling due to pressures on core revenue from interest earned on loans and securities investments. Federal Reserve Bank of Kansas City Economist Charles S. Morris and Assistant Economist Kristen Regehr examine the reasons for these pressures in their research, "What Explains Low Net Interest Income at Community Banks?"



OVERALL PERFORMANCE OF COMMUNITY BANKS

Return on Average Assets



The overall performance of community banks—defined as banks with total assets up to \$1 billion—has improved since the end of the Great Recession. For example, profitability, measured by return on average assets (ROAA), has increased significantly over the past few years, but remains below pre-crisis levels. While the increase in ROAA is encouraging, the concern about the recovery in community bank profits is the absence of any post-recession growth in net interest income.

Notes for both charts: The shaded areas depict recession quarters.

THE IMPORTANCE OF NET INTEREST INCOME

Net interest income is the core source of revenue for banks, particularly community banks. For example, in the third quarter of 2013, net interest income accounted for 62 percent of industry total revenue, but 77 percent of community bank total revenue.

Net interest income rose early in the recovery but has since decreased and is near a 40-year low (see chart on page 19). Low short-term interest rates, a flat yield curve (the relationship between short- and long-term market interest rates) and weak lending activity are cited by many bankers and analysts as important reasons for the current low levels of net interest income.

ECONOMIC CONDITIONS' INFLUENCE ON COMMUNITY BANKS

Net interest income depends directly on the interest rates a bank charges on loans, earns on securities and pays on deposits and other debts, and on the composition of its assets and liabilities. These factors, in turn, are affected by broader economic conditions, such as market interest rates and economic growth.

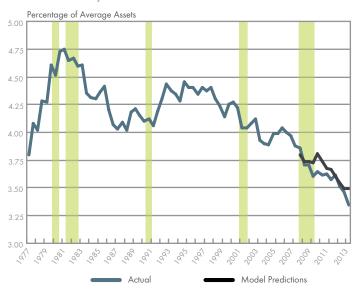


IS THIS THE NEW NORMAL?

Given community banks' importance to local households and businesses, policymakers, bankers and other interested parties would like to know whether low net interest income is the new normal for community banks or if it will recover once the economy improves.

EXAMINING RECESSIONS, RECOVERIES & NET INTEREST INCOME

Community Bank Net Interest Income: Actual and Predicted Values



Source: Reports of Condition and Income

Why hasn't community bank net interest income recovered more than four years after the Great Recession? Morris and Regehr construct a model that shows how net interest income is affected over time by differences in economic and banking conditions. The black line shows the predictions of the model are fairly close to actual net interest income (blue line). The results indicate the decline in community bank net interest income in the current recovery is largely consistent with the historical influence of the factors that affect it, such as market interest rates and lending activity.

Morris and Regehr also find that when compared with recoveries from other recessions over the past 40 years, the current levels of net interest income are in the middle of the pack given banking and economic conditions.

THE FUTURE OF COMMUNITY BANKS

The success of community banks ultimately depends on their ability to earn an adequate return on lending. So, given the importance of community banks to local economies, the lack of recovery in community net interest income is a legitimate concern.

Community banks have faced hard times over the years, but they have always found ways to grow their business and thrive. Morris and Regehr's analysis shows that low net interest income can be explained by low short-term interest rates, a flat yield curve and a decline in lending. Thus, they conclude that net interest income should return to pre-crisis levels as the economy improves and monetary policy normalizes.

FURTHER RESOURCES

"What Explains Low Net Interest Income at Community Banks?," by By Charles S. Morris and Kristen Regehr, www.kansascityfed.org/publications/research/er/index.cfm.



Identity Theft is Hazardous to Your Wealth

Michele Wulff is a former public school educator of 30 years and a recipient of the national peer award "Excellence in Teaching Economics." As an economic education coordinator with the Kansas City Fed, she works to heighten financial literacy throughout the seven states of the Tenth District.

e've all heard the horror stories related to identity theft. Someone steals and uses someone else's personal information, such as a Social Security number or account number, to commit fraud.

A worst case scenario happens when an entire financial identity is stolen and new credit is established without the victim's knowledge. The damage has been done by the time the crime is discovered. Then there is a financial mess to clean up.



You may have taken steps to protect yourself from this painful situation through monitoring your accounts and checking your credit reports. You may have even subscribed to an ID theft protection service. But did you ever consider protecting your child's identity?

Child identity theft is the new frontier for fraud, according to a Carnegie Mellon CyLab study. Using a database of 42,000 child IDs, the study found that one in 10 were victims of identity theft through stolen Social Security numbers. Fifteen to 18 year olds were the most common targets, making up 43 percent of the total. But there were 303 victims under the age of five, with the youngest being five months old.

Why is stealing a child's identity preferable to that of an adult's? It all comes down to awareness. Adults can keep tabs on their information through reviewing their accounts, statements and credit reports. But a child can't acquire credit and may only have a basic savings account, and parents won't be aware of fraudulent transactions occurring in their child's name. It gives the thief more time to operate before being detected. This mode of operation usually includes combining the child's Social Security number with a different date of birth to create a "synthetic identity." The thief will then open lines of credit with the new identity, using his own address. This type of fraud is especially difficult for authorities to discover.

Identity thieves can score by accessing personal and financial details from your home computer if it is not adequately protected. Passwords and user names can be hacked to break into accounts. Malware, intrusive software used to disrupt computer operations or gather personal information, can be downloaded through innocent-looking links. Phishing emails that claim to be from reputable agencies and ask for passwords or sensitive information can be an identity threat. If your children are online frequently, they can be easy targets for these ploys. Information gathered from mobile devices and texting also can lead to identity trouble.

Another way identity thieves hit pay dirt online is by trolling for personal information on social media sites. Many unsuspecting teens share too much about themselves online or through using mobile apps.

What can you do to safeguard your child's identity? Be proactive by doing the following:

- Keep your child's Social Security card, birth certificate and other personal information safely locked away.
- Give out your child's Social Security number sparingly and only to those you know and trust.
- Use a shredder to destroy documents containing your child's personal information.
- Use anti-virus and firewall protection online and keep it updated.
- Unless it's an emergency, do not access your child's credit report if he is younger than 16. This could count against you or your child's credit history and alert thieves that a report is on file.

Teach your child these online privacy rules before allowing computer or smartphone use:

- Create strong passwords and change them frequently.
- · Be careful and think before clicking on a link.
- Don't respond to emails or texts asking for personal or family information.
- Don't post personal details when using social media.
- Don't accept friend requests from strangers.

Try our ID Intelligence Quiz on page 22 with your child to reinforce these rules. The information learned will help kids fight the battle against identity theft.



Financial Education Resources

The Kansas City Fed is committed to promoting economic and financial literacy and greater knowledge of the Federal Reserve's role by providing resources for teachers, students and the public. Visit our website at KansasCityFed.org for more information. The resources below are a few of many available on this subject.

Website Resources

www.zdnet.com/blog/btl/identitythefts-next-frontier-your-kids/46816.

This article gives information about the Carnegie Mellon Cylab study on child identity theft.

www.consumer.ftc.gov/topics/ protecting-your-identity.

This website gives information on warning signs of child identity theft and how to repair the damage if theft occurs.

Federal Reserve Resources

Protecting Yourself Against **Identity Theft**

www.philadelphiafed.org/consumerresources/publications/protectingyourself-against-identity-theft.pdf. This publication discusses what consumers should do to keep their identity safe. For adults.

Let's Get Financially Focused

www.philadelphiafed.org/ education/teachers/lesson-plans/ PersonalFinanceGrades9-12.pdf. This lesson teaches students about the negative impact that identity theft can have on their financial health. For ages 14-18.

To Pay the Price

www.Kansascityfed.org/publicat/ education/teachingresources/Pay_ the_Price.lesson.pdf. This lesson and role play introduces students to online banking and addresses identity theft. For ages 10-13.

Fiction Books

For ages 8-12.

Identity Theft: Book Two in the Identity Mystery Trilogy by Carolyn Keene Nancy Drew fights back against cyberbullies who steal her identity.

Hardy Boys #2: Identity Theft

by Scott Lobdell and Daniel Rendon Frank and Joe Hardy are assigned a case of stolen identity to solve. For ages 8-12.

Nonfiction Books

50 Ways to Protect Your Identity in a Digital Age

by Steve Weisman

This book suggests how to avoid identity theft risks, minimize the risks you can't avoid and take the right steps if you've been victimized. For adults.

Stopping Identity Theft: 10 Easy Steps to Security

by Scott Mitic

This book offers ideas to secure your online presence and spot identity theft scams. For adults.

ID Intelligence Quiz

Check your knowledge of identity theft and how to avoid the risks by taking the true/false quiz below. Remember, the identity you save may be your own!

	1)	Identity theft is against the law.	T	F
	2)	Kids don't have to worry about identity theft until they're 18.	T	F
	3)	Always carry your Social Security card with you so you'll have it when you need it.	Т	F
	4)	Using your middle or last name for a password is OK.	T	F
	5)	You should not click on links you're unfamiliar with.	T	F
,	6)	You should not list your address or school on your Facebook page.	Т	F
	7)	You can accept friend requests from someone you don't know, as long as another friend knows them.	Т	F
	8)	Your identity can't be stolen through the mobile apps on your smartphone.	Т	F
,	9)	Identity thieves sometimes use texts to get personal information.	Т	F
	10)	Child identity theft is growing in the United States.	T	F



Answers:

1)1 2)6 3)6 4)6 2)1 4)1 5)6 8)6 6)1 10)1

MAKING A CONNECTION

Regional Federal Reserve presidents serve in several capacities, one of which is a conduit between their Federal Reserve Districts' communities and the nation's central bank. Presidents also use their expertise to help communities outside their district. In fulfillment of her role, President Esther George made recent visits to communities throughout the Tenth District.



- President Esther George recently spoke to a group with the Fairfax Industrial Association, which met at Neff Packaging Systems. The association represents about 130 businesses in the Fairfax Industrial District of Kansas City, Kan.
- **President George and members** of the Kansas City Fed's Denver **Branch Board of Directors** toured the Climax Molybdenum Co., a subsidiary of Freeport-McMoRan, at Henderson Mine in Empire, Colo., during an off-site Board meeting in the Breckenridge, Colo., area. The company is viewed as a world leader in molybdenum and metal-based products for a variety of applications in the steel, oil, chemical, automotive, aerospace, construction, electronics and general industries. (Pictured left to right) Denver Branch Executive Alison Felix, Board member Richard Lewis, George, Board Chair Larissa Herda, and Board members Mark Zaback, Lilly Marks, Anne Haines Yatskowitz, and General Manager Mike McDonald, Henderson Mine.
- President George spoke to the Community Bankers Association of Oklahoma board meeting on April 1 at the Kansas City Fed Oklahoma City Branch.





Notes from around the Tenth District

Financial education program reaches thousands of students

Every year in April, Kansas City Fed employees and other local organizations present financial education lessons to kindergarten, first-, second- and third-grade classrooms as part of the Teach Children to Save program.

This year, 189 volunteers visited 395 classes in 114 schools—a total of 8,347 students from kindergarten to third grade. Participation was up from 2013, which had 154 volunteers visit 323 classrooms in 99 schools—a total of 7,080 students from kindergarten to third grade.

Teach Children to Save is a national initiative created by the American Bankers Association and a key part of the annual Money Smart Month of Greater Kansas City campaign.

The program is free and requires no preparation or work on the teacher's part. Volunteers are trained and bring all necessary materials to the classroom.

The lessons last approximately 45 minutes and include a children's story, a hands-on

activity and takeaways for each student, all tied to money and the importance of saving. The lessons also correlate to the Kansas and Missouri state standards in economics for grades kindergarten-third grade:

- Individuals must make choices
- Money is used in exchange for goods and services: bartering
- Benefits of saving money in a bank
- Opportunity costs of choices: scarcity
- Costs and benefits of spending and saving decisions

"Thank you so much for reaching out to community volunteers and asking them to come and share information about banks, saving and money with elementary schools," said Mikesha D. Bradner, a kindergarten teacher at Claude Huyck Elementary School in Kansas City, Kan. "It was such a great experience for all of us." For more about the program and Money Smart Month, visit www.kansascityfed. org/education/moneysmart.cfm





FEDERAL RESERVE BANK OF KANSAS CITY BOARD OF DIRECTORS CHAIR BARBARA MOWRY (center, right) and President Esther L. George (center, left) presented Kansas City Fed Student Board of Directors 2013-14 participants their pins and certificates during a ceremony at the Bank.

Student Board of Directors programs close with formal pinning

In a closing ceremony, the Federal Reserve Bank of Kansas City's Board Chair Barbara Mowry told students, who participated this academic year in the Kansas City Fed's Student Board of Directors program, they have taken the first step in achieving success.

"We (the Board of Directors) just came out of a strategic planning session for the Bank for the next 10 years," she said. "We spent most of our time talking about human capital, about building a culture here at the Bank."

Directors said they want employees who understand and contribute to the Bank's purpose and mission.

"We want people who make things happen," she said. "You, as students, have taken the first step in making things happen."

The Student Board of Directors program offers participants the opportunity to learn about personal finance, leadership, potential career opportunities and a behind-the-scenes look at how the Kansas City Fed and the local economy function.

To formally close the year, the Student Board members participated this spring in pinning ceremonies at the Kansas City Fed headquarters and at its Branch offices in Denver, Omaha and Oklahoma City.

During the ceremonies, the students were recognized for their dedication and hard work, and encouraged to take the lessons they've learned with them through college and their careers.

President Esther L. George said the students have already shown that they are hard workers—the program requires students to have high academic achievements and that they plan to attend college.

"We hope that your time here at the Fed has helped you make decisions and choices about your life," she said.

Many students will face decisions about their college degrees and how their education will help them obtain a job.

"I hope some of you will come and ask me to work at the Federal Reserve Bank of Kansas City," George said.

The program reached 53 students during the academic year of 2013-2014 and included students from the Kansas City, Kan., Kansas City, Mo., Omaha, Oklahoma City and Denver public school systems.

Learn more about the program at www.KansasCityFed.org.

NOTES from around the Tenth District



Kansas City Fed leads effort for Federal Reserve System centennial merchandise

The Federal Reserve System is commemorating its 100th anniversary in 2014. In support of the educational and outreach events for the centennial anniversary, the Federal Reserve Bank of Kansas City has created centennial merchandise and is leading the effort for the Federal Reserve System.

All items feature the centennial logo that is being used across the Federal Reserve System throughout the centennial commemoration. Items are for sale in the Vault, the store in the Kansas City Fed's Money Museum, or the Vault Online.

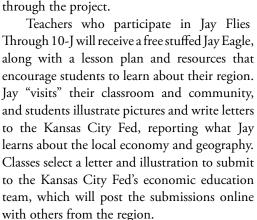
Go to www.kansascityfed.org/moneymuseum/thevault/ to learn more.

Invite Jay into your classroom

As part of the Federal Reserve Bank of Kansas City's centennial programming, it launched an economic education project called "Jay Flies Through 10-J," through which students meet Jay Eagle and learn how to report what's going on in their economies.

The program received such a good response from teachers and students this year, the Kansas City Fed will now offer the program year-round.

A teacher can register to participate at any time and complete the project as it best fits the curriculum. Once a teacher registers they will receive a series of emails to guide him or her



Learn more about Jay Flies Through 10-J at http://jayflies10j.kcfed.org. To see all the projects Jay Eagle has been involved in, visit http://kansascityfed.org/education/aboutj.cfm.

Kansas City Fed announces appointments to Economic Advisory Council

The Federal Reserve Bank of Kansas City has named eight members to its Economic Advisory Council in 2014, who are each joining the council for a three-year term:

- Gary DeFrange, president and chief operating officer, Winter Park Resort, Winter Park, Colo.
- Ken Lackey, chairman of the board, NORDAM, Tulsa, Okla.
- John Latenser, owner, Neff Packaging Systems, Kansas City, Kan.
- Steven Martin, president and chief executive officer, Blue Cross Blue Shield, Omaha, Neb.
- Tina Patel, chief financial officer and co-owner, Promise Hotels, Tulsa, Okla.
- Dan Solomon, chief risk officer, Koch Industries Inc., Wichita, Kan.
- Pat Vincent-Collawn, chairman, president and chief executive officer, PNM Resources, Albuquerque, N.M.
- Bridgette Williams, deputy director, Heavy Constructors Association of Greater Kansas City, Kansas City, Mo.

The council, which includes representatives of businesses from across the Tenth Federal Reserve District, meets twice a year with Federal Reserve Bank of Kansas City President Esther L. George to discuss the regional economy.

- Other members on the council include:
 Vincent Aulick, president,
- Aulick Industries and Aulick Manufacturing, Scottsbluff, Neb.
- Katherine Gold, president, Goldbug Inc., Aurora, Colo.
- Edmond Johnson, president and owner, Premier Manufacturing, Frederick, Colo.
- Jim Neiman, vice president and chief executive officer, Neiman Enterprises Inc., Hulett, Wyo.
- Douglas Stussi, executive vice president and chief financial officer, Love's Travel Stops & Country Stores Inc., Oklahoma City, Okla.

More information about the Federal Reserve Bank of Kansas City's advisory councils and boards of directors is available at kansascityfed.org/aboutus/ leadership.



NOTES from around the Tenth District

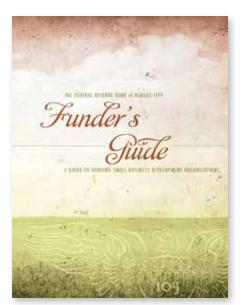
Kansas City Fed releases Funder's Guide for small business development organizations

Supporting small business growth is critical to the American economy. Small businesses help create new jobs, increase local wealth and reduce poverty.

As part of the ongoing support of small business development, the Kansas City Federal Reserve Bank has recently released the *Funder's Guide: A Guide to Funding Small Business Development Organizations*.

The guide is designed for philanthropic lending organizations that support community development. It highlights the important roles small businesses play in local communities and provides a high-level overview of what funders should look for when assisting organizations that support business growth.

To download the guide, go to: www. kansascityfed.org/publicat/community/smallbusiness/funders-guide.pdf.







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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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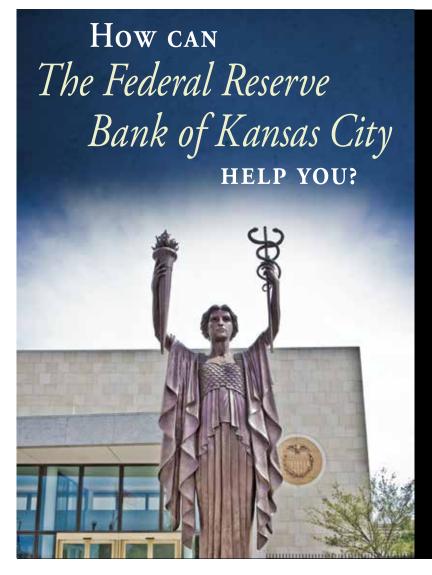
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