

# TEN

FEDERAL RESERVE BANK OF KANSAS CITY

Winter 2015

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**A declining U.S. budget deficit**

**The boom, bust and recovery in  
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**Economic Policy Symposium 2014**

# PROTECTING IDENTITIES

Improving security within the payment system



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## PROTECTING IDENTITIES

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Fraud and security weaknesses in the payments system can have direct and indirect costs, including consumers and businesses' lack of confidence in the system. Public and private institutions must assess how well a payment system manages fraud risks given constantly changing threats and complex interdependencies that can cause misaligned incentives.

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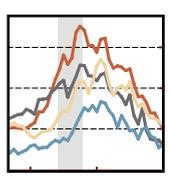
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### Community Bank Regulation: Intent vs. Reality

**C**ommunity banks play a crucial role in our region. The Kansas City Fed's seven-state district is home to some 900 banks with less than \$1 billion of assets, which is 17 percent of the nation's small banks. With combined assets of about \$150 billion, these banks represent just 1 percent of total industry assets. However, size comparisons understate their important contribution to the regional and national economy.

Community banks in the Tenth District help finance farmers who contribute to 12 percent of the nation's agricultural output as well as oil and gas businesses that account for 16 percent of domestic energy output. These banks also are particularly critical for homeowners and business operators in rural areas because of their willingness to meet the demand for tailored, nonstandard mortgages and for small business loans.

There are more than 5,000 such banks in the United States. As the national economy strengthens, community banks are prepared to resume their important role in their communities and the broader economy. However, these banks argue that the regulatory environment has thrown sand in the gears of efficiently and competitively meeting the credit needs of their communities.

Four years ago, the regulatory reform known as the Dodd-Frank Act (DFA) was passed. With its aim squarely focused on addressing the supervision and regulation of the largest financial institutions, the law and its architects acknowledged that small banks were neither the cause of the crisis nor the target of reforms. And to that end, the DFA expressly exempted small banks from its reach. So, why since then have community banks increasingly become concerned and vocal about regulatory burden as a threat to their ability to serve the

credit needs of their communities and, ultimately, to their viability?

This growing chorus of concern and frustration about regulatory burden has the attention of policymakers and regulators. Federal banking regulators all agree that calibrating supervision for community banks is appropriate and important, and they express genuine sympathy for the need to apply the right balance to the supervision and regulation of small banks.

Yet, in spite of legislators' and regulators' best intentions, customers and communities that rely on smaller banks for access to credit are feeling the weight of regulatory burden, and bankers are pleading for relief. Industry advocates have identified a number of specific remedies, and efforts are underway to consider how they might be implemented. For its part, the Federal Reserve has likewise expressed its commitment to a deeper understanding of these issues.

In this issue's message, I offer my own views on the regulatory burden dilemma facing small banks, their regulators and legislators, and why it is proving to be so difficult to address in a meaningful way. I also offer my perspective on a way forward to ensure that regulation retains its objectives for public interest and the safety of the banking system. Before going further, I need to note that my comments here are my views only and not those of the Federal Reserve System or its Board of Governors, which is charged with bank regulation responsibilities.



## The aim of regulation

The aim of bank regulation in the United States is both to protect the public and foster an efficient competitive banking system. Similar to the backdrop for the DFA, much of the U.S. regulatory system developed in response to financial crises and other events.

Generally speaking, bank regulation is designed to protect depositors, ensure monetary and financial stability, provide for an efficient and competitive financial system and protect consumers. It is not intended to keep banks from failing or to hinder banks from taking risks in meeting the needs of their customers and efficiently allocating credit.<sup>1</sup>

Striking an appropriate balance between regulation, banking and policy has always been a struggle. In that regard, today's environment is no different. Tension has long existed between allowing banks sufficient flexibility to adapt to a rapidly changing environment while maintaining a regulatory framework that ensures financial stability and adequate consumer protection.

Getting that balance right is critical. History offers any number of examples of well-intended regulation resulting in unintended outcomes. For example, the 1999 Gramm-Leach-Bliley Act that allowed banking organizations to expand into nonbank financial activities aimed to allow banks to diversify and reduce risk. Instead, as we learned from the financial crisis, substantial increases in risk-taking, leverage and business-model complexity increased financial fragility.

Likewise, the Basel capital requirements allowed the largest banks to use internal models to calculate their own risk weights for risk-based capital requirements, in part, "to

build upon and further encourage investments banks are already making in their internal risk management systems."<sup>2</sup> While the intent was to improve risk management and better align capital ratios with portfolio risk, the result was regulatory arbitrage and leverage ratios that proved inadequate relative to the risks that many of the largest banks took leading into the crisis.

Getting the right balance for banking regulation is not easy. Legislators and regulators face the growing challenge of regulating an industry that over the past three decades has become highly concentrated and engaged in activities that range from traditional lending to complex finance. While commercial banks of all sizes benefit from public safety nets, the operating models, activities, and risk profiles they employ vary widely. Indeed, community banks are not smaller versions of the country's largest banks. If our regulatory apparatus is going to effectively meet its aims, policymakers must understand how these commercial banking business models operate and why a locally-owned community bank is not the same as a branch of a systemically important financial institution in meeting the credit needs of the local community.

## Understanding relationship banking

The community bank business model is often described as relationship banking. Community bankers typically have long-term, direct relationships with their customers that provide the detailed knowledge about their character, reputation and history. This is necessary to make informed, qualitative assessments about credit quality. These

<sup>1</sup> For an in-depth review of the purposes of bank regulation as well as what bank regulation is not intended to do, see Kenneth Spang, *Banking Regulation: Its Purposes, Implementation, and Effects*, Federal Reserve Bank of Kansas City, 2000.

<sup>2</sup> See William J. McDonough, "Implementing the New Basel Accord," remarks to the Global Association of Risk Professionals, Feb. 11, 2003.



relationships allow community banks to tailor loans and other services to their customers.

Many community banks also are closely held institutions with the top management and board members having significant ownership positions. These ownership incentives shape the bank's culture and help to ensure its key policymakers are focused on achieving good performance, avoiding excessive risk-taking and supporting the health of their communities. Studies by staff at our Reserve Bank on ownership and management structure find the better-performing and safer community banks are those where the major decision makers have much to lose if they do not make the right decisions.<sup>3</sup>

I often hear that such a business model is becoming less economical in a world that is fast paced and increasingly transactions-based. However, research from our Reserve Bank shows there is real value in relationship lending and in the soft personal information on customers that community bankers typically have.<sup>4</sup> This business model is one in which the incentives of banks are aligned with outcomes that benefit their customers and the economy. When incentives are aligned in this way, the need for an "ability to repay" rule, for example, seems unnecessary.

Another defining feature of community banking is its business model transparency. Traditional bank lending is inherently opaque because it is based on the inside, non public information that bankers gain from their relationships with borrowers, but the business model need not be opaque. In contrast to the largest banks, community bank shareholders, creditors, customers and regulators find it relatively easy to monitor and verify

risks. Management oversight and market discipline are much more effective with such a transparent business model. Employees know what is expected; regulators are better able to thoroughly examine the bank, identify risks and recommend appropriate corrective actions as needed.

Finally, to understand the community bank business model is to understand that failure is an option when risks are poorly managed. This feature offers a powerful incentive to manage risk. To be sure, community banks don't always get it right and history points to their failures, especially during past periods of financial stress. Fortunately, an efficient resolution process is available to minimize the cost to their communities and customers, maintain essential banking services and retain public confidence.

## **The reality of the current regulatory environment**

The business model of community banks no longer dominates the commercial banking industry. Regulation has expanded to address the size, concentration and complexity of the largest banks. Unfortunately, it also has impinged on thousands of community and regional banks.

The issue is whether we can effectively achieve desired outcomes for all commercial banks under the current regulatory framework, or whether we will try to further bifurcate the system with separate rules for the largest banks and community banks. We face a decision about the path forward. Based on my own experience, I would offer three observations about the nature of today's regulatory environment that weigh most heavily on community banks in

<sup>3</sup> Robert DeYoung, Kenneth Spong, Richard J. Sullivan, "Who's Minding the Store? Motivating and Monitoring Hired Managers at Small, Closely Held Commercial Banks," *Journal of Banking and Finance*, July 2001, pp. 1209-1243; and Richard J. Sullivan and Kenneth R. Spong, "Manager Wealth Concentration, Ownership Structure, and Risk in Commercial Banks," *Journal of Financial Intermediation*, April 2007, pp. 229-248.

<sup>4</sup> See "Small Business Lending and Social Capital: Are Rural Relationships Different?" Robert DeYoung, Dennis Glennon, Peter Nigro, Kenneth Spong, presented at Community Banking in the 21st Century: A Community Banking Research and Policy Conference, October 2-3, 2013.



the interest of framing potential remedies.

My first observation is that the rules are increasingly prescriptive and complex. In a global market for finance and commerce, regulators have responded to a larger, more concentrated and complex banking industry with more complicated rules. However, the value of this complexity is questionable. In the case of capital rules—a key component of regulation and bank safety—recent empirical and theoretical research shows that simpler capital rules are better. For example, researchers at the Bank of England and Organisation for Economic Cooperation and Development have shown that simple leverage ratios are better than risk-based ratios in predicting default.<sup>5</sup> Researchers at the Bank of England also have shown that theoretically complicated rules can lead to worse results when granular measures of asset risk do not account for correlations among a bank's asset portfolio or when models attempt to estimate risk parameters for risks that are unknowable.<sup>6</sup>

Long before Basel III was adopted, community banks were considered well capitalized and their risks well understood. They remain so today. For example, banks with less than \$1 billion of assets had a Tier 1 leverage ratio of 9.5 percent in 1996, and today it is 10.5 percent. Even so, community banks must adopt the more complicated capital rules with finer degrees of risk weights and capital buffers. The risk-weighted asset schedule of the call report has 57 rows and 89 pages of instructions yet no additional capital was required for the majority of community banks.

In addition to the higher compliance costs associated with these capital rules, community banks continue to hold higher levels of capital than the largest banks. Unless and until the

largest banks achieve commensurate levels of capital (inclusive of their off-balance-sheet assets), they retain a capital-ratio advantage over community and regional banks that is far more powerful than the funding cost subsidy confirmed in a recent Government Accountability Office study.

My second observation is that regulation and supervisory frameworks have evolved with far less reliance on examiner experience and supervisory judgment and more emphasis on data-driven, econometric models and measurement to produce a more systematic, objective and standardized approach to supervision. For the enhanced supervision of the country's largest banks, this approach has been considered highly successful, for example, in making assessments about capital adequacy under stress test scenarios. However, for community bank supervision, the substitution of rigid rules for examiner judgment has altered the supervisory process without adding value and has instead created higher costs of compliance.

Appraisal requirements have been cited as an example in this regard. Over the last two decades, the required use of appraisals has expanded in response to the 1990s savings and loans crisis and the 2008 financial crisis. For real estate in larger metropolitan areas, market values can be readily determined. For real estate in smaller communities, especially rural communities, there may in fact be no "objective" market price. Despite this difference, appraisal regulation is rigid and restricts the kind of judgment-based lending that facilitates lending to small businesses and individuals in rural and other small community markets.

My third observation is related to the nature of consumer compliance regulation,

5 See Andrew Haldane, "Constraining Discretion in Bank Regulation," Federal Reserve Bank of Atlanta Conference on "Maintaining Financial Stability: Holding a Tiger by the Tail(s)," April 9, 2013; and Adrian Blundell-Wignall, Paul Atkinson, and Caroline Roulet, "Bank Business Models and the Basel System: Complexity and Interconnectedness," OECD Journal: Financial Market Trends, Vol. 2014 – Issue 2.

6 See Andrew Haldane in note 5 and David Aikman, Mirta Galesic, Gerd Gigerenzer, Sujit Kapadia, Konstantinos Katsikopoulos, Amit Kothiyal, Emma Murphy, and Tobias Neumann, "Taking Uncertainty Seriously: Simplicity Versus Complexity in Financial Regulation," Financial Stability Paper No. 28, Bank of England, May 2014.

and here I worry the pendulum has swung too far. To be sure, regulation has an important role to play in consumer protection and fair access to credit. Those protections should not be diluted, especially for banks that rely on model-based consumer lending. However, for banks that depend on relationship lending with customized terms and conditions, the regulations and the focus on identifying specific undesirable products seems to run counter to the requisite subjectivity that underlies the strengths of community bank lending. Mortgage lending, UDAAP (Unfair, Deceptive, or Abusive Acts or Practices), CRA (Community Reinvestment Act) and fair lending must not only protect consumers from bad actors, but allow consumers to be served where subjectivity is required. Unfortunately, I frequently hear community bankers expressing concern that compliance reviews have taken a more prosecutorial tone. As one banker noted, these reviews have forced bank customers to prove they aren't crooks and bankers to prove to regulators that they aren't deceptive and unfair.

## **Moving forward**

In making these observations, I share the desire on the part of both bankers and regulators to find meaningful solutions. Community banks have become entangled in a web of reforms intended to address the risks in the largest banks. These reforms respond to a business model employed by a few large, globally active banks, but have created spillovers for community banks. Although it is enticing to contemplate the construction of separate rules and frameworks that reflect these different business models and risks, commercial banks of all sizes remain beneficiaries of a public safety

net. For that reason, I believe community banks have a vested interest in seeing that regulatory reforms move ahead to ensure that the largest banks are well capitalized, well supervised, well managed and subject to failure. Achieving that end will serve the public well. While that work is underway, regulators must also allow examiner judgment and common sense to play a greater role in their supervisory regimes for community banks.

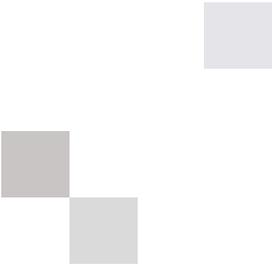
I'm often told that the world has become more complicated, that we have too many banks in the U.S. and that we cannot go back to less-complex and more-straightforward regulation and rules and greater supervisory judgment. I'm not convinced. One of the best responses to that assertion was from Sir Mervyn King, the former governor of the Bank of England. Although his reference was made in the context of finding a solution to the issue of too big to fail, the same might be said for addressing the regulatory environment more generally. He said, "There are those who claim that such proposals are impractical. It is hard to see why. ... What does seem impractical, however, are the current arrangements."



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

The above message was adapted from a speech President George delivered on Sept. 23, 2014 at the Federal Reserve Bank of St. Louis' conference on "Community Banking in the 21st Century."





# PROTECTING IDENTITIES

IMPROVING SECURITY WITHIN THE PAYMENT SYSTEM

**H**igh-profile payments data breaches are on the rise and have cost companies and consumers millions of dollars annually. Most recently, hackers stole 56 million payment cards from Home Depot's database after gaining access to the company's network. In 2013, Target Corp. disclosed that its data breach affected 40 million credit and debit card accounts.

Federal Reserve Bank of Kansas City Economist Richard J. Sullivan says the direct cost of fraud on automated clearinghouse (ACH), debit card, and credit card payments reached \$6.1 billion in 2012. And investments and ongoing expenses for preventing, detecting, monitoring, and responding to payment fraud added considerably to direct costs.

A 2014 Identity Fraud Study by Javelin Strategy and Research reported that although the amount of records criminals stole reached into the hundreds of millions, the number of victims who reported fraudulent activity on their accounts was 13.1 million.

Sullivan says the number of records exposed fluctuates from year to year and shows no trend.

"The year 2013 stands out as particularly

bad: breaches exposed 547 million records, nearly matching the cumulative 603 million records exposed from 2008 to 2012."

Megabreaches—those exposing 10 million or more records—occur infrequently, yet contribute to the large share of total records exposed. From 2008 to 2013, megabreaches accounted for only 17 of the 5,437 publicly disclosed data breaches, but together exposed 979 million records, 85 percent of all records exposed.

## Data breaches

Hackers stole a third-party vendor's user name and password to enter Home Depot's network in 2014. According to a company statement, the stolen credentials allowed hackers direct access to Home Depot's point-of-sale devices. The criminals then acquired more rights to the system and installed custom-built malware on Home Depot's self-checkout systems in Canada and the United States. The company's security software was unable to detect the malware because hackers tailored it to the system.

In addition to the 56 million stolen payment cards, hackers downloaded separate

files containing approximately 53 million email addresses, though the files contained no payments data or customers' personal information.

The Home Depot incident was the largest disclosed retail data breach in U.S. history and built upon high-profile breaches in 2013.

Target's data breach during the Thanksgiving holiday in 2013 put 40 million credit and debit card accounts into the hands of hackers. That same year, Adobe was attacked, exposing thousands of user IDs, passwords and credit card information.

Other notable cyber-attacks included: Schnucks grocery store chain of St. Louis—2.4 million payment cards stolen;

JP Morgan Chase & Co. in New York: 500,000 corporate and government clients who held prepaid cards issued by JP Morgan were stolen.

In his recent research, "Controlling Security Risk and Fraud in Payment Systems," Sullivan says, "Fraudsters use exposed sensitive data in a decentralized, worldwide production process translating stolen data into fraudulent payments."

Instead of making direct or in-person purchases with the stolen information, criminals increasingly turn to eBay, PayPal and Amazon to make purchases.

Although direct losses in the United States from all methods of payment fraud do not show adverse trends, the number of data breaches has had an upward trend since 2009 and has put many consumers at risk.

## The individual costs

Not all security breaches are large or concentrate on the payments system. Criminals' aspirations are the same, however. They hope to use personal data for monetary gain.

Criminals go after personal information through a variety of sources, such as a store clerk copying a customer's payment information or an office assistant selling files containing individuals' Social Security numbers. It could be as simple as someone phishing online or going through discarded mail.

But once a person's identity or payment information has been compromised, it's difficult to rectify the problems it causes.

A few years ago, Angela Stallings received



PHOTO BY GARY BARBER

ANGELA STALLINGS, who works at Kansas City CARE Clinic, a healthcare clinic serving the uninsured and underinsured of the Kansas City metro area has dealt with the ramifications of identity theft for almost a decade. Someone gained access to Stallings' personal information and has used it to commit fraud, including taking out college loans in Stallings' name and gaining employment under a false identity.

bills for college loan debt.

“It was for a college in St. Louis,” she said. “I’ve lived in Kansas City my entire life; I’ve never left Kansas City or gone to a college in St. Louis.”

She sent the statements back with an explanation that they had the wrong person, but the requests for payment kept coming. She contacted the administrator of the college loans and sent paperwork that included a brief explanation, her government identification and personal information.

The problem stopped for a couple years, but resurfaced when an agency tried to collect the debt. Stallings had hired a lawyer to help her clean up her credit and hoped to solve the issue.

Recently, however, an agency called Stallings’ employer to verify her work history. The woman who had used Stallings’ personal information for the college loans was now using it again for various activities, such as employment.

“I’ve never met the woman and have no idea how she got my information,” Stallings said. “She has the same first name, but a different last name, but she’s still able to use my information.”

Stallings, like many victims, is frustrated with the system. She has to prove she’s not responsible for the other woman’s debt and activities. She’s also responsible for the associated costs, such as lawyer fees.

There are several steps fraud victims can take to avoid further damage and address the problem (See sidebar: “What to do if you’re the victim of a data breach”). Sometimes the solution is simple, others times it’s a lengthy, complex process.

And when one considers the amount of information criminals glean in large data breaches, the opportunity to exploit more victims is staggering.

## Securing the system

The payments system’s complexity, both within and across all payment types, makes the solutions to address the variety of vulnerabilities and inadequate approaches to security complex as well. Reducing fraud will take efforts on

# WHAT TO DO IF YOU’RE THE VICTIM OF A DATA BREACH

Although private information may seem private, some information is public domain.

**Names and street addresses** are public information

**Email addresses** are sensitive because many emails are attached to account user identification

**Account passwords** are more sensitive

**Social Security numbers and credit-card numbers** have high priority

## HERE’S WHAT TO DO IF YOU’RE THE VICTIM OF A DATA BREACH:

### Find out what type of breach occurred.

Depending on the breach and the state in which you live, you may receive a breach notification letter that describes what happened, or you may find out about a breach through media reports.

### Find out what kind of information was stolen.

Was it credit, debit, passwords or email addresses? This will help you know what steps to take to avoid further damage. Remember, hackers can crack even the most encrypted data and use bits and pieces of information to build profiles. All breaches of security, whether emails or credit cards, are important.

**Beware of phishing scams:** Even if criminals only stole email addresses, they often use the information they gain on a person to trick him or her into giving them more information.

### Change the password on your account immediately.

Don’t use the same password for all of your accounts. If you do, change all your passwords.

**Create strong passwords,** more than eight letters with numbers and symbols. Do not use a word or words found in the dictionary.

Ask your bank and your credit-card issuers to alert you immediately if they detect suspicious activity on your accounts.

Ask consumer credit-reporting bureaus to place a fraud alert on your name. This way, if anyone tries to steal your financial identity, you’ll know.

### Look into credit-protection services that will flag suspicious activity on your accounts.

Losing your personally identifiable information in a data breach doesn’t guarantee you’ll become a victim of identity theft. But if that does indeed happen, make sure to tell the credit-reporting bureaus right away.

**If you detect credit- or debit-card fraud,** contact the card issuer immediately. Doing so may limit your liability.

**Contact the Federal Trade Commission** to create an identity-theft affidavit, and then file a report with the local police force. Doing both will aid you in clearing your name, which, in the worst cases, can take years. Make sure you document each phone call made, and each email message and letter sent, during your efforts.

Information sources: Privacy Rights Clearinghouse and Tech and Gadgets (NBC)

both public and private fronts. Where to place security improvement efforts, many of which are under way, is a challenge.

“Given the poor recent record on data breaches, protecting sensitive data is a high priority in the short term, made even more urgent by evidence that consumers lose confidence in some payment types after a data breach,” Sullivan said.

Medium-term priorities focus on spurring progress on existing efforts in the industry to bolster network and payment security, Sullivan added. In the long term, more fundamental changes can help ensure the payment system is resilient and can adapt to the changing security environment.

In the near term, hackers will continue attacks aimed at acquiring data useful to payment fraud.

Public and private institutions have evolved

payment cards to minimize the risks should a data breach occur.

Europe began its migration to embedded microchip cards, or smart cards, for credit, debit and ATM in 2002, when EuroPay, MasterCard and Visa collaborated on EMV (EuroPay, MasterCard, Visa), the leading global standard for chip technology. The United Kingdom, Japan, Mexico, Canada and 80 other countries then spent the next decade transitioning to EMV-based cards.

The main barrier to implementation of smart cards in the United States is the cost associated with changing retail point-of-sale card readers and network systems. Today, less than 1 percent of the cards issued in the United States use embedded microchip technology, although supporters say it cuts down on fraud significantly because it uses dynamic authentication.

## “... IMPLEMENTATION OF SMART CARDS COULD SIGNIFICANTLY REDUCE FRAUD AND EVEN REDUCE VULNERABILITIES WHEN DATA BREACHES OCCUR.”

a “control structure” to ensure payment security and deter fraud, Sullivan said. The control structure typically has four elements: network organization and governance, payment network rules, security techniques and protocols, and supervision and enforcement.

The elements control access to the network; coordinate payment security; set operational rules that embed security features; determine responsibility for security, including liability for fraud losses; determine and design appropriate security techniques and protocols; define and oversee adherence to security standards; and apply sanctions for noncompliance.

For example, Home Depot’s breach occurred when a third-party vendor employee’s credentials were stolen, compromising access security to the company’s payments network.

Because of recent breaches, several American retailers have concentrated on security techniques and protocols, and recently sped up the implementation of secure smart

In the dynamic authentication process, verification information on a microchip is encrypted and each transaction is assigned a unique code—no transaction code is ever the same. This code-generating process, industry supporters say, significantly reduces or even prevents thieves from copying and reusing payment verification information. And only the customer knows the PIN.

With the standard magnetic-stripe card, verification information is static, meaning it doesn’t change with each transaction. Also, most card readers are stationary and require a customer’s signature, enabling thieves to wirelessly skim transaction verification information, meaning even the most cautious cardholders, those using ATM cards with PINs, could have their information stolen.

Hackers breached Target’s network by scanning transactions at its point-of-sale card reader.

In response, Target announced it would

issue its branded credit and debit cards as MasterCard smart cards. Target's decision to replace thousands of store registers with ones that accept smart cards pressured other retailers to take action.

Wal-Mart Stores Inc.'s Sam's Club introduced its microchip-embedded card in June 2014. All Sam's Club locations now feature chip-enabled terminals, and the company plans to roll out the technology to all Wal-Mart locations by 2015.

Industry analysts say the implementation of smart cards could significantly reduce fraud and even reduce vulnerabilities when data breaches occur.

Most payment fraud breaches and theft, however, occur through out-of-sight transactions. For example: A customer at a restaurant gives the server a card, which is taken to a stationary reader out of the customer's sight. The employee can copy the card number or use a reading device to capture all the information on the magnetic stripe.

New payments technology has advanced to combat this type of fraud online. As European countries improved their payment systems, authorities encouraged merchants to use 3D secure payments, which require a cardholder to register a payment card with the issuer and create a PIN for Internet purchases.

The cards and systems aren't foolproof; however, it has cut fraud significantly in countries using the devices.

## Taking risks

U.S. cardholders used more than 1 billion debit and credit cards in 2011, making 69 billion transactions valued at more than \$3.9 trillion. These payments accounted for about 50 percent of all noncash retail payments in the United States.

Although the incidents of payment card fraud in the United States is small relative to the number of daily noncash transactions, the immense volume of payment transactions adds up to big losses due to fraud.

In 2012, the estimated number of unauthorized transactions (third-party fraud) was 31.1 million, with a value of \$6.1 billion, according to "The 2013 Federal Reserve System Payments Study."

Companies not only face the loss of money and reputation with data breaches, they are vulnerable to legal actions if they do not make improvements. Consumers also lose confidence in certain payment methods as a result of data breaches.

Sullivan says that because of the modern payment system's complexity, policymakers and industry leaders need a broad perspective to judge weaknesses in the control structure over payment security and the control structure's ability to adapt as new fraud methods arrive.

"A long-term perspective is especially important because fraudsters' incentives to exploit security weaknesses will not disappear," he said. "Critical contributions to the control of payment fraud will continue to come from private security services. Improvement could also come from contributions that take a payment system-wide approach, such as a group coordinating diverse payment participants, promoting cooperation, and finding effective solutions to weak payment security."



KEVIN WRIGHT, EDITOR

## FURTHER RESOURCES

**"Controlling Security Risk and Fraud in the Payment Systems,"** By Richard J. Sullivan

[www.KansasCityFed.org/publicat/econrev/pdf/14q3Sullivan.pdf](http://www.KansasCityFed.org/publicat/econrev/pdf/14q3Sullivan.pdf)

**COMMENTS/QUESTIONS** are welcome and should be sent to [teneditors@kc.frb.org](mailto:teneditors@kc.frb.org).



# RE-EVALUATING LABOR MARKET DYNAMICS

FEDERAL RESERVE BANK OF KANSAS CITY  
JACKSON HOLE ECONOMIC POLICY SYMPOSIUM  
AUGUST 21-23, 2014

**Y**ears after the darkest days of the financial crisis and despite aggressive monetary stimulus, labor markets remain far from pre-crisis conditions in many advanced economies. Countries hardest hit by the housing bust and financial crises continue to witness high rates of unemployment, with rates in some cases near or above 20 percent.

Several years may be required before many of these labor markets return to “normal,” providing that normal has not been permanently altered by recent experiences. In addition, high rates of long-term unemployment and youth joblessness raise the risks of hardened labor markets.

High rates of unemployment in many countries reflect decisions by firms to lower labor costs by reducing the number of

employees rather than wages. Such wage inflexibility, particularly during swings in the business cycle, likely contributes to extended periods of unemployment.

Moreover, there are other longer-term labor market developments that also have implications for economic growth. For example, there is evidence that churn in some labor markets and rates of new firm creation have declined, which may suggest less robust, productive and growing economies going forward. There also is increasing evidence of greater job polarization, where employment in middle-skill occupations is declining due in part to technological innovations and shifts in manufacturing activity toward emerging markets. Finally, demographic changes will continue to have significant effects on labor markets in the decades ahead.

The 2014 Jackson Hole Economic Policy Symposium, Re-Evaluating Labor Market Dynamics, addressed these issues, while central bankers—whether their objectives focus on inflation alone or include employment—consider labor market conditions in monetary policy decisions.

Some of the speakers at the symposium included: Janet L. Yellen, chair, Board of Governors of the Federal Reserve System; Mario Draghi, president, European Central Bank; Haruhiko Kuroda, governor, Bank of Japan; Alexandre Antonio Tombini, governor, Central Bank of Brazil; and Ben Broadbent, deputy governor of monetary policy, Bank of England.

“The Economic Symposium offers an environment for attendees to present insights and exchange ideas about important economic issues such as the labor market, which is a key consideration in the Federal Reserve’s monetary policy decisions,” Kansas City Fed President Esther George said. “Our Bank is proud to host the symposium to help generate better understanding of these issues.”

To read the proceedings, including papers and commentary for this year’s economic policy symposium and previous symposiums, visit [KansasCityFed.org/research](http://KansasCityFed.org/research).

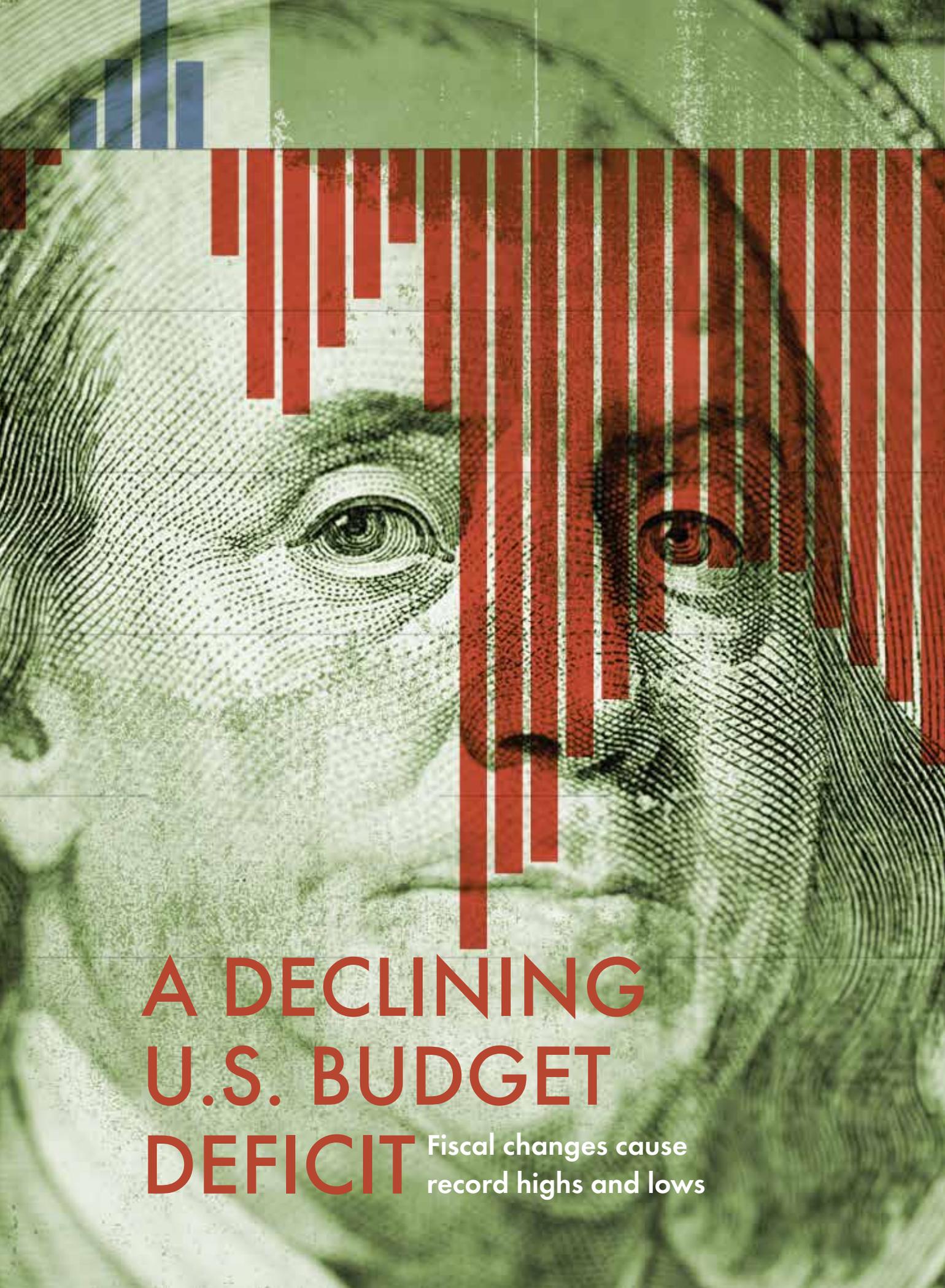


PHOTO BY FEDERAL RESERVE BANK OF KANSAS CITY

Kansas City Fed President Esther George is interviewed by Fox Business Network’s Peter Barnes at the 2014 Economic Policy Symposium.

## Economic Policy Symposiums

- 2014 Re-Evaluating Labor Market Dynamics
- 2013 Global Dimensions of Unconventional Monetary Policy
- 2012 The Changing Policy Landscape
- 2011 Achieving Maximum Long-Run Growth
- 2010 Macroeconomic Challenges: The Decade Ahead
- 2009 Financial Stability and Macroeconomic Policy
- 2008 Maintaining Stability in a Changing Financial System
- 2007 Housing, Housing Finance and Monetary Policy
- 2006 The New Economic Geography: Effects and Policy Implications
- 2005 The Greenspan Era: Lessons for the Future
- 2004 Global Demographic Change: Economic Impacts and Policy Challenges
- 2003 Monetary Policy and Uncertainty: Adapting to a Changing Economy
- 2002 Rethinking Stabilization Policy
- 2001 Economic Policy for the Information Economy
- 2000 Global Economic Integration: Opportunities and Challenges
- 1999 New Challenges for Monetary Policy
- 1998 Income Inequality Issues and Policy Options
- 1997 Maintaining Financial Stability in a Global Economy
- 1996 Achieving Price Stability
- 1995 Budget Deficits and Debt: Issues and Options
- 1994 Reducing Unemployment: Current Issues and Policy Options
- 1993 Changing Capital Markets: Implications for Monetary Policy
- 1992 Policies for Long-Run Economic Growth
- 1991 Policy Implications of Trade and Currency Zones
- 1990 Central Banking Issues in Emerging Market-Oriented Economies
- 1989 Monetary Policy Issues in the 1990s
- 1988 Financial Market Volatility
- 1987 Restructuring the Financial System
- 1986 Debt, Financial Stability and Public Policy
- 1985 Competing in the World Marketplace: The Challenge for American Agriculture (Kansas City)
- 1985 The U.S. Dollar: Recent Developments, Outlook, and Policy Options
- 1984 Price Stability and Public Policy
- 1983 Industrial Change and Public Policy
- 1982 Monetary Policy Issues in the 1980s
- 1981 Modeling Agriculture for Policy Analysis in the 1980s (Vail, Colo.)
- 1980 Future Sources of Loanable Funds for Agricultural Banks, (Kansas City)
- 1979 Western Water Resources: Coming Problems and the Policy Alternatives (Denver)
- 1978 World Agricultural Trade: The Potential for Growth (Kansas City)



# A DECLINING U.S. BUDGET DEFICIT

Fiscal changes cause  
record highs and lows



**O**ver the last 50 years, federal deficits have widened during and after economic crises. Federal government policies, such as temporary stimulus packages, typically have had significant effects on the deficit.

Since the 1980s, the United States has carried a budget deficit in every fiscal year but 1999 and 2000. The largest deficits since World War II occurred from 2009 to 2011, after the federal government attempted to stimulate the economy following the Great Recession.

The budget deficit topped the \$1 trillion mark in 2009, setting a record at \$1.4 trillion, according to the Congressional Budget Office. The record trend continued in 2010 as the stimulus packages and extended emergency unemployment benefits approved by Congress took hold and the economy struggled to improve.

Yet, the deficit decreased by 2013 due to a healing economy, which reduced the size of automatic stabilizers, the unwinding of

temporary stimulus measures and new revenues from the Federal Reserve and government-sponsored enterprises.

The structural deficit also decreased due to higher tax rates on high-income earners, the cuts made with the implementation of the federal budget sequester and the ongoing withdraw in military involvement overseas.

## **Changes in the deficit**

Although temporary influences, such as federal stimulus programs, play a role in increasing the deficit, Federal Reserve Bank of Kansas City Senior Vice President and Director of Research Troy Davig and Associate Economist Michael Redmond say cyclical fluctuations, which they describe as automatic stabilizers, also influence the deficit, particularly revenue.

The economy itself also has an effect. Davig and Redmond describe that influence as the structural deficit. The structural deficit is the underlying balance between revenues

and expenditures in a healthy economy, and therefore is not effected by the business cycle ... at least in theory.

## Temporary increases in the deficit

In 2008 and 2009, Congress passed two major stimulus bills, the Economic Stimulus Act of 2008 and the American Recovery and Reinvestment Act of 2009. Each was designed to counteract the severity of the recession.

The Economic Stimulus Act focused on boosting personal incomes and, to a lesser degree, lowering corporate tax payments, which had a large effect on federal revenues. Individuals received about \$120 billion in rebates while corporations paid about \$50 billion less in taxes in the short run, which were largely recouped with larger tax liabilities in the long run for a net revenue loss of about \$8 billion.

Congress followed the stimulus with the

## Deficit versus Debt

A budget deficit occurs when the federal government spends more on expenditures than what it receives in revenue. The national debt is a result of the federal government borrowing money to cover budget deficits.

American Recovery and Reinvestment Act. At a cost of \$832 billion, the American Recovery and Reinvestment Act was the largest stimulus program enacted in response to the Great Recession. The Act temporarily increased federal consumption and investment spending, including for infrastructure, education, health-care and energy. The government also increased transfer payments to states and individuals.

Congress also passed a series of bills intended to help individuals and businesses,

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**FEDERAL STIMULUS PROGRAMS**, such as the American Recovery and Reinvestment Act, supplied funds for infrastructure projects that were intended to jump start the struggling economy.

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including a temporary decrease in the Social Security contribution rate and an extension of unemployment benefits through the Emergency Unemployment Compensation program.

Federal spending for these programs increased from less than \$50 billion in 2008 to about \$225 billion in 2010; revenue, on the other hand, fell significantly between 2008 and 2011. The combination helped push the deficit past \$1 trillion for the first time in U.S. history.

### **Temporary influences on deficit decline**

Although temporary federal stimulus measures added to the deficit during the first years of the recovery, the costs had dissipated by 2013, falling near 2008 levels. The decrease was one of three mitigating influences of a larger total deficit reduction of about \$753 billion.

The other two temporary influences were Federal Reserve remittances and dividend payments from government-sponsored enterprises (GSEs), such as mortgage giants Fannie Mae and Freddie Mac.

In December 2007, the Federal Reserve expanded its balance sheet in response to the recession and recovery by creating liabilities that banks can either keep as reserves or convert into cash. Before the crisis, banks sought to hold only enough reserves to meet minimum reserve requirements and to ensure the settlement of payments. Reserves in the banking system averaged about \$10 billion in the years prior to the recession.

By year-end 2013, the Federal Reserve had created a large amount of liquidity in the banking system through its asset-purchase program. It boosted banking system reserves to \$2.5 trillion. In 2008, Congress authorized the Fed to pay interest on the reserves, the rate for which has been one-quarter of a percentage point but can change over time. This was done to help the Fed control interest rates in an environment with plentiful reserves but does have the effect of increasing interest expenses.

## **TEMPORARY INFLUENCES ON U.S. DEFICIT**

### **Federal Reserve remittances to the U.S. Department of the Treasury**

\$20 billion per year before the Great Recession  
\$75 billion-plus per year from 2010 to 2013

### **All Federal income from assets**

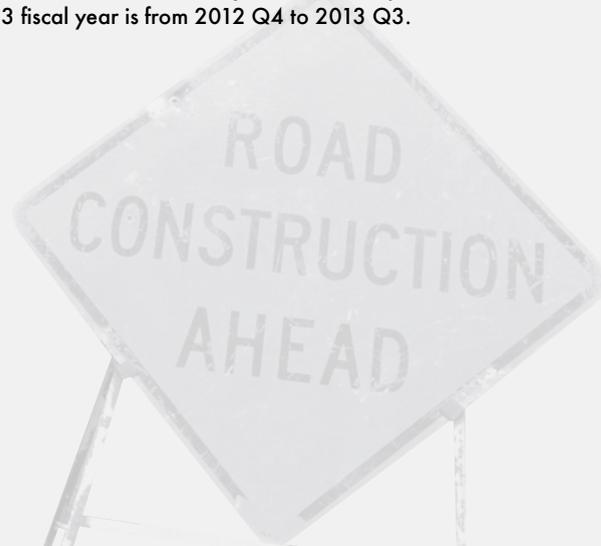
Less than \$50 billion (average) per year 2010-2012  
\$300 billion second quarter 2013  
\$90 billion third quarter 2013  
\$200 billion fourth quarter 2013  
\$50-\$100 billion in first three quarters 2014

### **Temporary Federal Spending**

(\* Economic stimulus programs and Emergency Unemployment Compensation)

\$40 billion in 2008  
\$125 billion in 2009  
\$250 billion in 2010  
\$160 billion in 2011  
\$90 billion in 2012  
\$45 billion in 2013

\* Data are from federal fiscal years. For example, the 2013 fiscal year is from 2012 Q4 to 2013 Q3.



The assets the Fed has accumulated by issuing the reserves, however, have significantly higher yields. For example, the yield on 10-year Treasury securities has fluctuated from 1.5 percent to 3.5 percent since 2011, and other assets purchased by the Fed, such as agency mortgage-backed securities, often yield more. Because the average returns on Fed-held securities have been higher than the cost of paying interest on reserves, the Fed has received much more in interest income than it has paid in interest expenses.

After paying operating expenses, interest on reserves and dividends to its member banks, the Federal Reserve remits the remainder of its earnings to the U.S. Department of the Treasury. Since 2008, remittances to the Treasury have increased from about \$20 billion per year to at least \$75 billion.

GSEs remittances also have increased significantly in that time. The increase came mainly from the 2008 rescue of Fannie Mae and Freddie Mac. After the federal government

made a large capital injection into the two GSEs, the Treasury received the right to a full quarterly sweep of the profits. In 2013, all Federal income on assets surged to \$300 billion in the second quarter and \$200 billion in the fourth quarter, reflecting one-time accounting adjustments to recognize deferred tax assets.

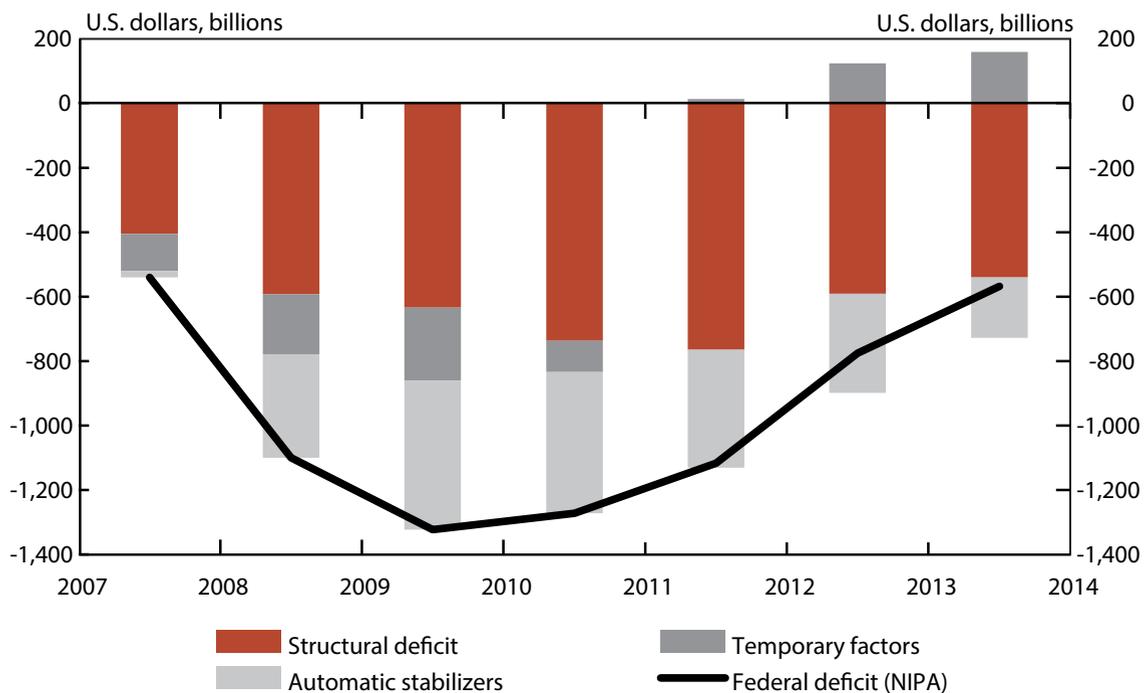
Although the federal government unlikely will receive payments of this magnitude in the future, Freddie Mac and Fannie Mae remain profitable. The Office of Management and Budget projected the Treasury would receive an additional \$181.5 billion from the two GSEs over the next decade.

## Cyclical movements in the economy

While temporary influences have affected the deficit, automatic stabilizers also have accounted for the deficit's increases and decreases.

Davig and Redmond describe automatic

# DECOMPOSING THE DEFICIT



Source: Congressional Budget Office, economists Troy Davig and Michael Redmond's calculations.

stabilizers as movements in revenues and costs that could have occurred absent any policy reforms—that is, stabilizers arise from cyclical fluctuations in the economy such as the interaction between the business cycle and the tax code or social safety net.

For example, Davig and Redmond explain, when recessions occur, declining economic activity reduces the tax base, resulting in less government revenue. The fall is pronounced—not only does the level of tax revenue fall, but tax revenue also falls as a share of gross domestic product (GDP).

Also, government expenses increase during recessions as a result of increases in social insurance programs. In the recession, large numbers of workers were unemployed, putting a strain on unemployment benefits. In turn, that same large number of unemployed workers consumed less and paid fewer taxes.

According to Davig and Redmond's calculations, automatic stabilizers in 2010 resulted in a deficit that was \$480 billion larger than if the economy had been operating at full employment. Although the economists' model indicates that real GDP is still below potential, it is substantially closer than it was in 2010. As a result, automatic stabilizers added \$187 billion to the deficit in 2014, about \$293 billion less than in 2010.

## The structural deficit

Although one-time stimulus programs and automatic stabilizers affect the deficit, the structural deficit also has an effect.

After accounting for the automatic stabilizers and for all the temporary factors that resulted from the discretionary response to the Great Recession, Davig and Redmond consider the remaining portion of the deficit to be structural. In other words, this is “the deficit that would be realized if the economy was operating at its potential level and the contribution of temporary factors were neutral.”

For example, a budget deficit occurs when

a government spends more than it receives in revenue. This could be temporary due to contraction in the business cycle. A structural deficit occurs when a budget deficit persists for a long time regardless of the business cycle.

The United States has had a structural deficit even when the economy is doing well, but it's still able to borrow at low interest rates because of investors' confidence in the country's ability to pay its debts.

The structural deficit remains near 3 percent of GDP.

## The future

The federal government announced in October the Fiscal Year 2014 final budget results, which show the deficit fell to \$483 billion, 2.8 percent of GDP, the lowest level since 2007.

Davig and Redmond estimate that there is still some scope of improvement in the deficit, stemming from cyclical improvements in the economy.

“However, temporary factors and long-term structural issues are likely to mitigate further deficit improvement in the years ahead.”



KEVIN WRIGHT, EDITOR

## FURTHER RESOURCES

### “Accounting for Changes in the U.S.

**Budget Deficit,”** By Troy Davig and Michael Redmond, [www.KansasCityFed.org/publications/research/er/index.cfm](http://www.KansasCityFed.org/publications/research/er/index.cfm).

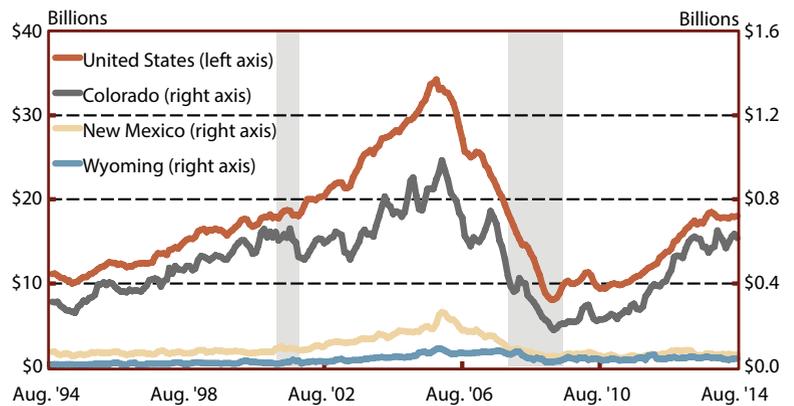
**COMMENTS/QUESTIONS** are welcome and should be sent to [teneditors@kc.frb.org](mailto:teneditors@kc.frb.org).

# THE BOOM, BUST AND RECOVERY OF HOUSING MARKETS IN THE MOUNTAIN STATES

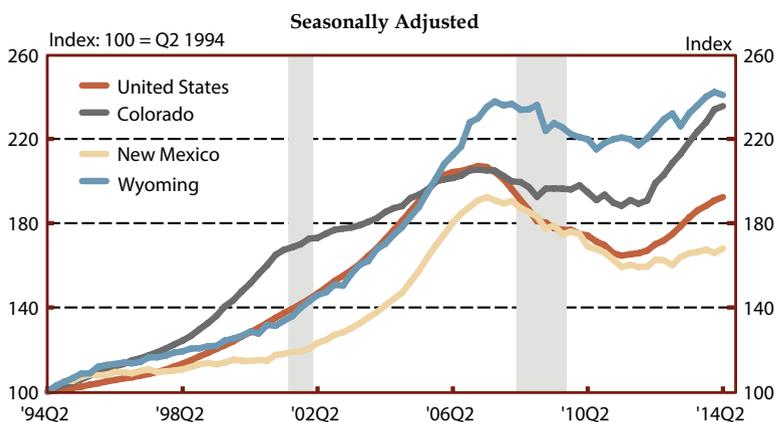
Before the 2007-2009 recession, residential housing construction and the housing market experienced strong growth across the nation. The demand for housing increased home ownership rates and investment potential. Then the housing bubble burst. Alison Felix, economist and Denver branch executive, and Sam Chapman, assistant economist, recently studied the housing market's boom, bust and recovery in the Tenth Federal Reserve District's mountain states—Colorado, New Mexico and Wyoming.

## CONSTRUCTION BOOM

In the mountain states, residential construction growth varied during the last two decades. Colorado experienced a slight slump in residential construction during the 2001 recession, but after a few volatile years, residential construction activity grew quickly. The value of residential construction peaked in November 2005 in both the United States and Colorado after having tripled between 1994 and 2005. The growth in residential construction activity in New Mexico and Wyoming was slower than that of the United States and Colorado between 1994 and 2001. Between 2001 and year-end 2005, residential construction increased at an average annual rate of more than 20 percent in both New Mexico and Wyoming.



Value of residential construction activity



Home prices (seasonally adjusted)

## A GOOD INVESTMENT

According to the Federal Housing Finance Agency House Price Index, average home prices approximately doubled in the United States and the mountain states between the first quarter of 1994 and pre-recession peaks in 2007. Between 1994 and 2001, Colorado home price appreciation outpaced New Mexico and Wyoming. Following the 2001 recession, however, home-price increases moderated in Colorado, while home prices accelerated in New Mexico and Wyoming.

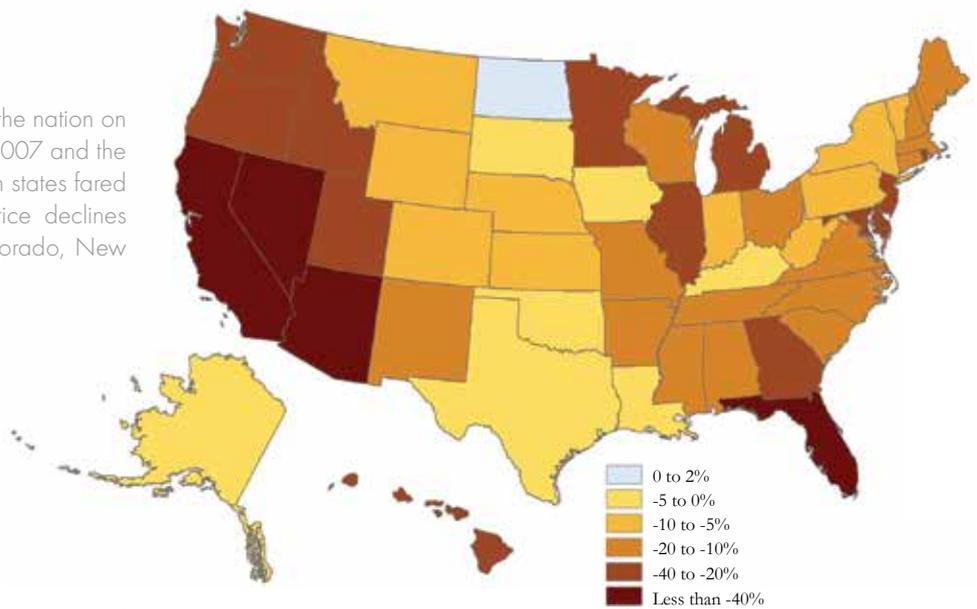
## THE BUST

Near year-end 2005, the value of residential construction reached its peak and began to decline, with construction levels eventually falling more than 70 percent in the United States and the mountain states.

**-70%**

## DECREASING PRICES

Home prices fell 20.1 percent across the nation on average between the first quarter of 2007 and the second quarter of 2011. The mountain states fared better than the nation, with home-price declines of 8.4, 16.6 and 6.4 percent in Colorado, New Mexico and Wyoming, respectively.



For many households, the decline in home prices led to a decline in household wealth, leaving many homeowners "underwater"—owing more on their mortgage than the new value of their home. This led to an increase in mortgage defaults.

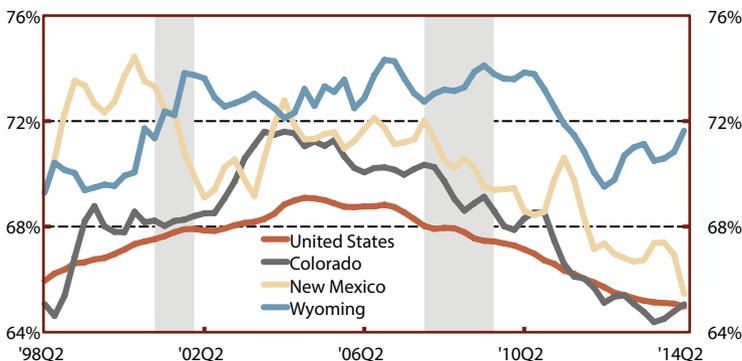
## RECOVERING FROM THE RECESSION

As of the second quarter 2014, Colorado and Wyoming's home prices are above previous peak values by 14.8 and 1.3 percent, respectively. Home prices in New Mexico, while slower to recover, have started to pick up, rising 5.5 percent from trough levels. Prices, however, remain 12.2 percent below peak levels.

## A DROP IN HOME OWNERSHIP

One reason for the strong increase in multifamily construction is the decline in homeownership rates across the United States and the mountain states since the housing market began to cool.

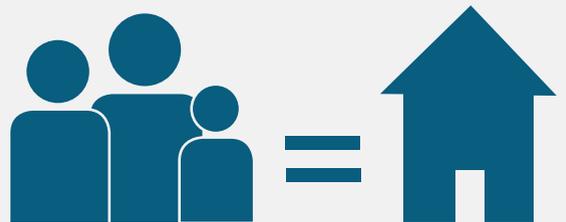
As of the second quarter 2014, homeownership rates for the United States, Colorado and New Mexico have continued to decline from pre-recession levels. Wyoming, however, has recently experienced an uptick in homeownership rates.



Home ownership rates

## MULTIFAMILY OUTPACES SINGLE-FAMILY CONSTRUCTION

Residential construction and permitting activity has gradually increased, particularly in Colorado and the nation. Residential permitting has been slower to pick up in New Mexico and Wyoming. Across the three states and nation, however, residential permitting activity remains well below pre-recession levels, and single-family construction has been slower to bounce back than multifamily construction.



After a sharp rise in home inventories in the years before the recession, inventories of single-family homes for sale have fallen since 2008. As inventories decline, the housing market is moving toward equilibrium, where the number of homes for sale meets the demand of potential buyers in the market.

For more information about the economic conditions in the mountain states, read *The Rocky Mountain Economist* at [www.KansasCityFed.org/publications/research](http://www.KansasCityFed.org/publications/research).



## Developing Resilience in Kids

**Y**ou've lost your job, had your hours reduced, or are overwhelmed with debt. Financial hardship is knocking at your door. How will you handle your misfortune and turn the situation around? And how do you explain it to your kids?

Changing financial circumstances can deal anyone a blow, especially if unforeseen. How we respond shows our ability to adapt and move forward. And because we are role models for our children, they'll take their cues from how we handle things. If we show our stress and anxiety, they also will become stressed and anxious. They may display these emotions through loss of concentration at school, getting lower grades or blaming themselves for being a part of the family's problems. However, if we view our setback with a more positive outlook, such as a challenge to be overcome, they will follow suit. And in the process, we can teach them the life skill of resilience.

When discussing resilience with kids, begin by introducing the saying "like water off a duck's back." Tell them this phrase is used to convey the idea that when something negative happens, it has little or no effect on you. Explain that this saying originated because ducks have oily feathers and water can't get through them, so it runs off their backs. The phrase is used to describe how someone handles a negative situation without being affected.

Tell them that everyone needs to develop resilience, or the ability to face, overcome and be strengthened by the difficulties in life. Whether it's a parent's job loss, a personal problem or family emergency, they should learn to respond to the challenge in a positive way and move on. Discuss that becoming resilient will help them cope with their difficulties, both financial and otherwise, so that the problems

will "run off their backs."

Try the following suggestions to help kids develop the skill of resilience in financial situations.

### **Face the difficulty:**

- To help kids face the new reality, call a family meeting to explain the situation at a level they can understand. Explain that because of the financial change, your family must use money to buy needs, such as food, shelter and clothing, before wants, such as toys, electronics and vacations. Discuss specifics, such as limits on birthday parties and trips to the mall.

- Tell them that your family is not the only one that has been affected by this type of situation. Others have had financial difficulties and have overcome them successfully.

- Emphasize that the new situation is not their fault and assure them that the family will face the challenge together.

### **Overcome the difficulty:**

- Ask kids to help you think of ways to cut back financially to meet a goal of reduced spending. Listen to all suggestions offered, and take them up on reasonable ideas. They will be proud to know that they helped solve the problem.

- Invite older children to participate in developing a new family budget reflecting the financial changes. Discuss monthly income and expenses so they will have a realistic picture of what the family can afford.

- Project confidence in discussing financial solutions. Tell them that things will improve soon with their understanding and support.

- Develop an optimistic outlook by reminding kids to focus on what they have, rather than what they're giving up due to financial circumstances.

### **Be strengthened by the difficulty:**

- Tell kids this situation is an opportunity

to showcase their problem-solving abilities. Challenge them to think of “outside the box” ideas, such as starting a home business to raise funds. Try *Solve It!* the financial challenge game, on page 24 to practice their creative problem-solving skills.

- Discuss that this financial problem may help refine their decision-making abilities. It will give them practice making wise money choices now and in the future.

- Emphasize that opening a savings account as an emergency fund is a proactive way to alleviate financial difficulties as they arise. Follow through by taking kids to the bank to set one up.

As you work to rise above financial issues, remember that most kids can learn

resiliency and bounce back quickly with the proper guidance. And as kids transition and move forward, those problems will be quickly “running off their backs.”

**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 offers practical advice on how to educate young people on personal financial matters.



## 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](https://www.kansascityfed.org) for more information.

### FEDERAL RESERVE RESOURCES

#### **The Piggy Bank Primer: Saving and Budgeting**

An online workbook that looks at wants and needs, tracking spending, and developing a savings plan. For ages 5-9.

#### **Great Minds Think: A Kid’s Guide to Money**

This online booklet gives spending and budgeting tips. For ages 8-12.

### FICTION BOOKS

#### **The Berenstain Bears Get the Gimmees**

by Stan and Jan Berenstain  
Brother and Sister Bear want everything in sight! Mama and Papa Bear teach the cubs about the family budget and the importance of appreciating what they have. For ages 4-8.

### NON-FICTION BOOKS

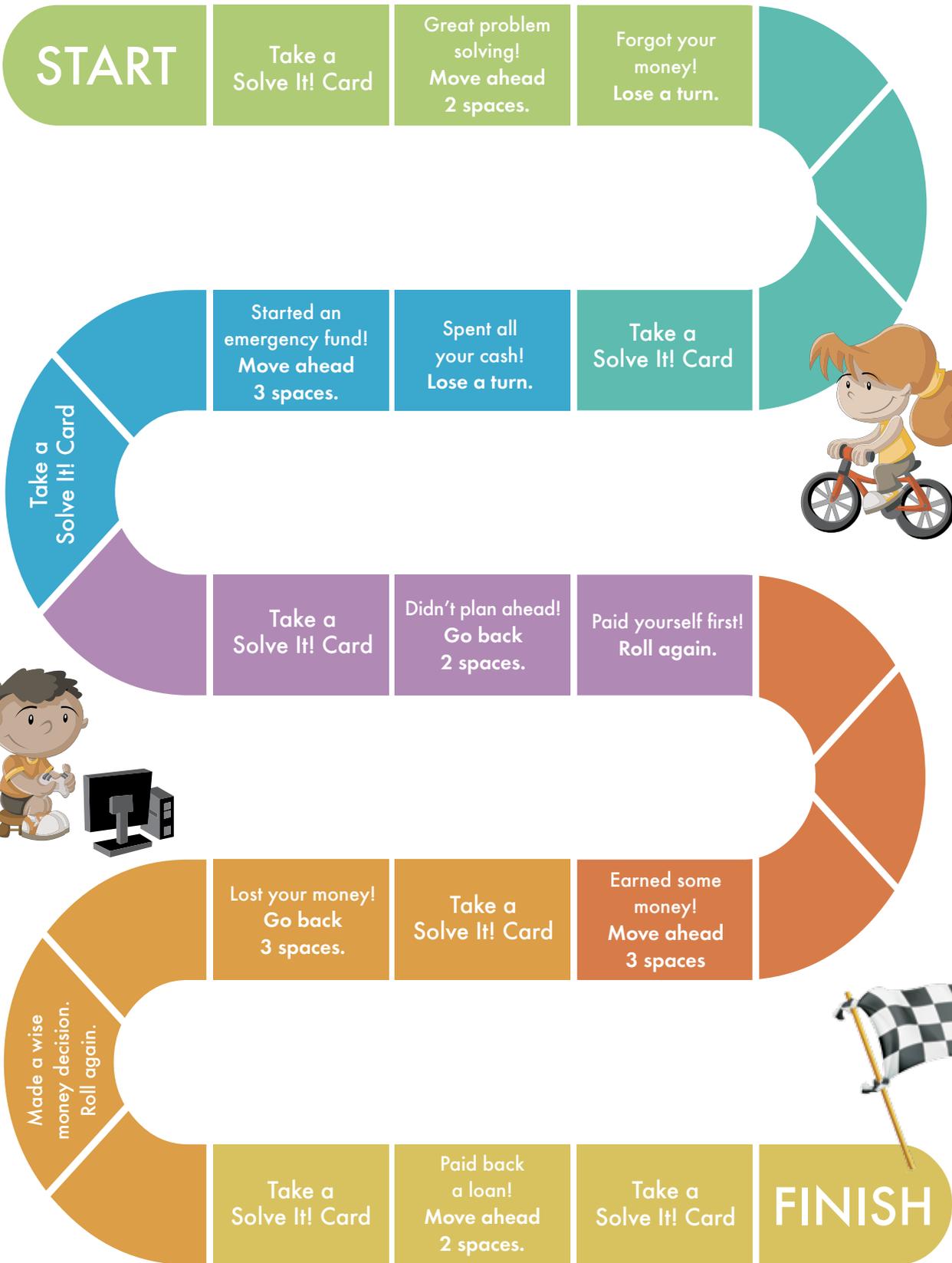
#### **Building Resilience in Children and Teens: Giving Kids Roots and Wings**

by Kenneth Ginsburg  
This book suggests coping strategies to help children from 18 months to 18 years build the seven “C’s”—competence, confidence, connection, character, contribution, coping, control—needed to bounce back from life’s challenges. For parents/families.

#### **The Resilience Factor: 7 Keys to Finding Your Inner Strength and Overcoming Life’s Hurdles**

by Karen Reivich and Andrew Shatte  
The authors share seven proven techniques for enhancing our capacity to weather setbacks. For adults.

# Solve it! The financial challenge



# The first player to the FINISH LINE wins

**Directions:** Cut out the Solve It! problem cards below and place them face down next to the game board page. Using a coin as a marker, play the game by taking turns rolling a die and moving the number of squares shown. Follow the directions on the square you land on. If you need to take a card, pick one and read the financial problem out loud. Solve the problem by thinking of a creative way to cover the problem's cost or coming up with an alternative solution. You must give a different solution to each financial problem. The first player to the finish line wins!

You forgot to bring the money for class pictures and it's due today!

**Solve it!**

Your mom's birthday is tomorrow and you need a gift quick!

**Solve it!**

You promised to pay for a new soccer ball if your dad let you join the team.

**Solve it!**

It's time to buy holiday gifts for your family and you're short of cash.

**Solve it!**

The field trip is today and you didn't bring bus fare.

**Solve it!**

Your goldfish is out of food and you are responsible for buying more.

**Solve it!**

You want to join your friends at a movie but you're out of money.

**Solve it!**

You lost the cash you brought to school to buy lunch.

**Solve it!**

You promised to pay back the money your sister loaned you by today.

**Solve it!**

You want to go to the basketball game but don't have enough money for admission.

**Solve it!**

Your library book is overdue but you don't have money to pay the fine.

**Solve it!**

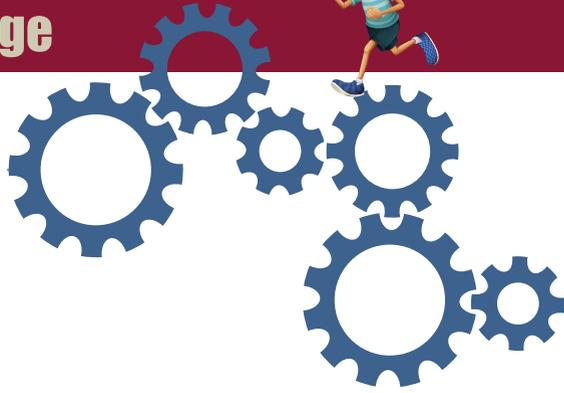
Your babysitting job fell through and you were counting on the cash to pay back mom.

**Solve it!**

# Solve it! The financial challenge



*idea*



**Solve it!**

# A snapshot of Consumer Credit Conditions

## The Kansas City Fed's Consumer Credit Reports provide:

- Semi-annual updates on debt levels, bankruptcies and more in each of the seven states of the Tenth District
- County-by-county maps of mortgage delinquency rates



Subscribe to the free Consumer Credit Reports at [KansasCityFed.org](http://KansasCityFed.org)

## Steve Maestas makes history with board chair appointment

For the first time in the Federal Reserve Bank of Kansas City's 100-year history, a director from New Mexico has been named by the Board of Governors in Washington, D.C., chair of the Bank's Board of Directors. Steve Maestas, chief executive officer of Maestas Development Group, Albuquerque, N.M., was named chair of the Kansas City Fed's nine-member Board for 2015.

Maestas has served as deputy chair since 2013 and was previously a member of the Kansas City Fed's Economic Advisory Council. Maestas' appointment is the second time in the history of the Federal Reserve System that someone from New Mexico has served as chair of a Reserve Bank board. The previous New Mexican to serve as chair was Robert O. Anderson of Roswell, N.M., who led the Dallas Fed board from 1961 to 1965.

Rose Washington, executive director of Tulsa Economic Development Corp., Tulsa, Okla., will serve as deputy chair for 2015. She has served as a director of the Kansas City Fed since 2013 and previously served on the board of the Bank's Oklahoma City Branch.

Margaret Kelly, retired CEO of RE/MAX, has been named chair of the Kansas City Fed's

Denver Branch Board of Directors in 2015. She has been a member of the board since 2010. A native of Detroit, she served as financial analyst for Metropolitan Hospital and Health Center before moving to Denver.

G. Richard Russell, president and CEO of Millard Lumber Inc. in Omaha will serve as chair of the Kansas City Fed's Omaha Branch Board of Directors in 2015. He has been a member of the board since 2009.

Peter B. Delaney, chairman, CEO and president of OGE Energy Corp., Oklahoma City, will serve as chair of the Kansas City Fed's Oklahoma City Branch board of directors in 2015. He has been a member of the board since 2012.

The Kansas City Fed's board of directors oversees operations and policies, and advises on economic and banking developments. Each of the three Branch offices has a board of directors to provide insight on local economic conditions and to advise Branch executives. These regional relationships create the foundation for the Federal Reserve's decisions on national policy.

Learn more about the Kansas City Fed's directors at [KansasCityFed.org/AboutUs](http://KansasCityFed.org/AboutUs).

## Board of Directors New Chair Appointments



Steve Maestas  
Albuquerque, N.M.



Rose Washington  
Tulsa, Okla.



Margaret Kelly  
Denver, Colo.



G. Richard Russell  
Omaha, Neb.



Peter B. Delaney  
Oklahoma City, Okla.

## Kansas City Fed artwork commemorates 100 year anniversary

In November, the Federal Reserve Bank of Kansas City marked its centennial with the unveiling of the sculpture series, *An Abounding Asset: The Diligent Reserve*, which was created as part of a two-year educational partnership between the Federal Reserve Bank of Kansas City and the University of Kansas. The Kansas City Fed opened November 1914.

KU Professor Matthew Burke led a team of 50 students in designing and creating a three-dimensional sculpture that consisted, in part, of objects contributed by Kansas City Fed

supports the Kansas City Fed's mission.

The sculpture was unveiled before an audience of Kansas City Fed employees and more than 70 people from KU, including administrators, students, faculty, staff and students' family members. Its design allows the Kansas City Fed to display it simultaneously in different locations. The sculpture will be on display in three locations inside the main Kansas City building and in the Bank's Branch offices in Denver, Oklahoma City and Omaha.

The sculpture is an artistic interpretation of a time capsule. Instead of entombing objects to be shared 100 years from now, the piece artistically displays 186 work-related mementos contributed by Kansas City Fed employees. The sculpture is based on the beehive, which relates to the productivity, industry and order of the Bank and its employees. Students developed the concept after seeing a beehive in the Spirit of Industry relief sculpture on the exterior of the Bank's former building at 925 Grand in Kansas City, Mo.

The Federal Reserve System's centennial commemoration began in December 2013 with a program in Washington, D.C., to coincide with the anniversary of the signing of the Federal Reserve Act in 1913, and culminated with a commemoration event in November 2014, marking the anniversary of regional Reserve Banks opening for business in 1914.



FEDERAL RESERVE BANK OF KANSAS CITY PRESIDENT ESTHER GEORGE, Art Director Angela Anderson, University of Kansas Visual Art Professor Matthew Burke and Project Lead and Editor Kevin Wright unveil the Living Time Capsule project sculpture, *An Abounding Asset: The Diligent Reserve*, during a centennial event Nov. 14 at the Bank.

employees, retirees and directors. The project provided students an opportunity to gain experience in their related fields of study and a chance to learn about finance, economics, business and the operations and history of the Federal Reserve. In turn, the project allowed Kansas City Fed employees to participate in a Bank-wide commemoration project and develop a new educational model that

### Check out the Video

Learn more about the sculpture in the documentary about the sculpture's creation on [KansasCityFed.org](http://KansasCityFed.org) under Education.

## Oklahoma City Branch executive receives inside look at cotton crop

Branch executives serve as the Federal Reserve Bank of Kansas City's regional economists and representatives in the states in which their Branches cover. They also are responsible for briefing the Kansas City Fed's president—a member of the Federal Open Market Committee—on economic and business activity in their regions.

They accomplish their roles by establishing relationships with business and community leaders within their communities and rely on directors, whom serve on their boards, for regional economic insights.



Recently, Oklahoma City Branch Executive and Vice President Chad Wilkerson visited Abernathy Farms Inc., which is owned by Clint Abernathy, a board director at the Branch. Abernathy Farms Inc., is a 13,000-acre wheat, cotton and cattle operation near Altus, Okla.

“He is very knowledgeable about and engaged in the industry,” said Wilkerson, who visited the farm this fall with Oklahoma City Branch manager Megan Williams. “Visiting our directors in the places where they do their

business, such as Altus, supports the Fed's increased understanding of that community and the industries that drive its economy.”

Abernathy, a fourth-generation Oklahoma farmer who has farmed full-time since graduating from Oklahoma State University in 1981, first farmed with his father and now tends the land with his two sons. He has won several awards for innovative farming methods, including early adoption of GPS, drip irrigation, transgenic cotton varieties and reduced tillage. Abernathy serves on the National Cotton Board, based in Memphis, Tenn., and the boards of the Altus cotton gin and regional cotton seed mill in Oklahoma City, as well as various other agriculture and conservation-related boards.

Southwest Oklahoma is the only part of the Tenth Federal Reserve District where cotton is produced. Abernathy's farm includes about 4,000 acres of irrigated cotton production and nearly 9,000 acres of nonirrigated wheat production annually, as well as a small cow-calf herd. The severe drought in the southwestern United States from 2011 to 2013 resulted in virtually no cotton crops during those years. With the moderate improvement in soil conditions this year, Abernathy's farm was able to produce a crop in 2014.

During Wilkerson and Williams' visit, which coincided with the first cotton harvest in several years, the Fed employees operated mechanical cotton harvesters, watched the harvested cotton go through the local cotton gin and listened to Abernathy describe the process of raising and harvesting cotton.

For more information about the Kansas City Fed's Branch executives and their regional research, visit [KansasCityFed.org](http://KansasCityFed.org)

## Kansas City, Mo., school board honors Student Board of Directors participants

As part of their Scholar Superstars program, the Kansas City, Mo., school board honored students participating in the Federal Reserve Bank of Kansas City's Student Board of Directors program in October.

Kansas City Fed President Esther George attended the event to support the Student Board members as they shared a presentation about the program with members of the school board. Sixteen students from the Kansas City, Mo., public schools participated in the Kansas City Fed's Student Board of Directors program for the 2014-2015 school year. An additional nine students from the Kansas City, Kan., public schools also participated in the Student Board program.

Five Student Board members shared their experiences in a presentation including slides from a trip they took to a youth leadership conference in Washington, D.C., in September. During their visit, they toured the nation's capital, visited the Federal Reserve Board of Governors and met Federal Reserve Chair Janet Yellen.

"Our Student Board program focuses on leadership, professional development and

exposure to the broader working world," said Trudie Hall of the Kansas City Fed, who oversees the program. "They have an opportunity to meet and learn from the pool of talented people here at the Federal Reserve."

The Student Board of Directors program is comprised of diverse upper classmen from urban highschools. There are five Student Board of Directors programs throughout the Tenth District.

"In the program, they are exposed to career options, business etiquette, public speaking, financial literacy, networking, and other skills that they will build on in their careers," Hall said. "They learn about the Federal Reserve System—but they also learn about working with other people and diverse perspectives."

Learn more about the Kansas City Fed's Student Board of Directors program at <http://www.kc.frb.org/education/foreducators/student-board/index.cfm>



STUDENT BOARD MEMBERS shared their experience with the Kansas City, Mo., school board. Participants, from left, include Mollie Ponds, Alina Crouch, Bank President Esther George, Sadie Rhoads, Daniel Reyes, Dajaun Hindsman, and Paula Coyote Schaaf, a student adviser.

## Ukrainian delegates visit the Federal Reserve Bank of Kansas City

Five members of a Ukrainian delegation of elected, civic and business leaders visited the Federal Reserve Bank of Kansas City in November. The group toured the facility to learn more about the Federal Reserve System, the Tenth District and the Kansas City Fed's Community Development function. The group members work in supporting community development efforts in the Ukraine and were interested in learning best practices developed by the Kansas City Fed.

"We are always pleased to have the opportunity to work with leaders from abroad and to share with them and learn from them," said Assistant Vice President Erika Ramirez of the Kansas City Fed.

The visiting group was in the Kansas City area for one week and visited with other area groups, including the Greater Kansas City Chamber of Commerce and the Kansas City Economic Development Corporation, to learn more about Kansas City and its community development initiatives.

"For me, the most meaningful part of this visit was the ability to engage in discussions about community and economic development strategies with individuals focused on them in less developed countries," Ramirez said.



## Bank Anniversaries

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

Colorado B&TC of La Junta	La Junta	Colo.	91
Lusk State Bank	Lusk	Wyo.	81
St. Mary's State Bank	St. Mary's	Kan.	79
Community B&TC	Neosho	Mo.	73
Northstar Bank of Colorado	Highlands Ranch	Colo.	35
Freedom Bank of Oklahoma	Tulsa	Okla.	23
Centennial Bank	Centennial	Colo.	23
First Bank of Fairland	Fairland	Okla.	22
Adams B&TC	Ogallala	Neb.	20
Community State Bank	Poteau	Neb.	20
Community Bank	Topeka	Kan.	4
ONB B&TC	Tulsa	Okla.	1
First Central Bank	Warrensburg	Mo.	1
The Peoples Bank	Pratt	Kan.	1



KANSAS CITY FED VICE PRESIDENT TAMMY EDWARDS (front left), stands with the Ukrainian delegates, along with Kansas City Fed Economist Kelly Edmiston (far left), Kansas City Fed Assistant Vice President Erika Ramirez (second from left, back), and Kansas City Fed Community Development Adviser Liana Riesinger (far right, front).



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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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The views and opinions expressed in TEN are not necessarily those of the Federal Reserve Bank of Kansas City, the Federal Reserve System, its governors, officers or representatives.

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## LEARNING OPPORTUNITIES

The Kansas City Fed believes individuals of all ages should have the opportunity to understand how the economy functions and know what tools are available to make better financial decisions.

A part of that mission is teaching children and youth the importance of personal finance and economic principles. The Federal Reserve System has created several interactive games and simulations for children and youth that teach those educational concepts and how to apply what they've learned using real-world tools. Visit [www.federalreserveeducation.org/news/multimedia/games.cfm](http://www.federalreserveeducation.org/news/multimedia/games.cfm) for a complete list.

For more information about the Kansas City Fed's free economic education resources and programming for educators, bankers and consumers, visit [KansasCityFed.org/education](http://KansasCityFed.org/education).