

THIRD QUARTER 2010

# REGION FOCUS

THE FEDERAL RESERVE BANK OF RICHMOND

**PUBLIC**

# **PENSIONS**

# **UNDER PRESSURE**



**...No quick fix and a growing bill**

# REGION FOCUS

VOLUME 14  
NUMBER 3  
THIRD QUARTER 2010

## COVER STORY

14

### Fuzzy Math: Public pensions are underfunded — how bad is it?

Millions of Americans rely on public pensions for retirement, but the funding status of many plans took a big hit during the recession. Some observers worry that public pensions will prove to be a major economic problem, while others say the issue will largely resolve itself as the economy recovers.

## FEATURES

18

### Continental Divide: How did the European debt crisis become so severe?

Fiscal problems in a number of European countries have raised concerns about long-term economic performance and the future of the eurozone, as well as the implications for the American economy.

21

### Furniture Firms Eke Out Gains

Furniture sales began to pick up in the first half of 2010 after slumping during the recession. Custom upholstery and mattress manufacturing represent two bright spots in the domestic furniture industry.

22

### Out from the Shadows

The financial crisis shed light on the so-called “shadow” banking sector, the not clearly understood area in which much of the turmoil took place. Understanding the functions, purpose, and instabilities of the system will be key to successful reform.

26

### Can the Music Industry Adapt to the Digital Future?

Digital downloads and illegal file sharing signal a need for the music industry to adopt a new business strategy. But the jury is still out on how artists and labels can profit in a world where consumer preferences have fundamentally changed.

## DEPARTMENTS

- 1 President's Message/A New Approach to Federal Housing Policy
- 2 Upfront/Regional News at a Glance
- 6 Policy Update/Financial Reform Moves Forward, Challenges Remain
- 7 Federal Reserve/The Changing Face of Monetary Policy
- 12 Jargon Alert/Regulatory Capture
- 13 Research Spotlight/Unemployment Benefits and Job Searches
- 28 Interview/Bruce Caldwell
- 32 Economic History/Utopia, USA
- 35 Around the Fed/Funny Money and Phone Payments
- 36 District Digest/Economic Trends Across the Region
- 44 Opinion/Macroprudential Supervision: Proceed with Caution

Our mission is to provide authoritative information and analysis about the Fifth Federal Reserve District economy and the Federal Reserve System. The Fifth District consists of the District of Columbia, Maryland, North Carolina, South Carolina, Virginia, and most of West Virginia. The material appearing in *Region Focus* is collected and developed by the Research Department of the Federal Reserve Bank of Richmond.

DIRECTOR OF RESEARCH  
John A. Weinberg

EDITOR  
Aaron Steelman

MANAGING EDITOR  
Kathy Constant

STAFF WRITERS  
Renee Courtois Haltom  
Betty Joyce Nash  
David A. Price

EDITORIAL SUPPORT/CIRCULATION  
Jessie Sackett

CONTRIBUTORS  
R. Andrew Bauer  
Charles Gerena  
Becky Johnsen  
Ross Lawrence  
Sonya Ravindranath Waddell

DESIGN  
BIG (Beatley Gravitt, Inc.)

Published quarterly by the Federal Reserve Bank of Richmond  
P.O. Box 27622  
Richmond, VA 23261  
[www.richmondfed.org](http://www.richmondfed.org)

*Subscriptions and additional copies:* Available free of charge through our Web site at [www.richmondfed.org/publications](http://www.richmondfed.org/publications) or by calling Research Publications at (800) 322-0565.

*Reprints:* Text may be reprinted with the disclaimer in italics below. Permission from the editor is required before reprinting photos, charts, and tables. Credit *Region Focus* and send the editor a copy of the publication in which the reprinted material appears.

*The views expressed in Region Focus are those of the contributors and not necessarily those of the Federal Reserve Bank of Richmond or the Federal Reserve System.*

ISSN 1093-1767

## A New Approach to Federal Housing Policy

For decades, owning a home has been viewed as a key component of the “American Dream.” It’s a goal to which many people aspire and one that federal policymakers have promoted, largely through subsidizing housing-related debt. Even if one supports subsidies for homeownership, there are strong reasons to question the way those subsidies are structured. In particular, it may be more desirable to subsidize home equity rather than debt, a point I will consider later in this article.

First, I think it’s worth stepping back and noting that while purchasing a home is often a wise choice for many people, it’s not a universally good idea. There are people for whom homeownership doesn’t make sense.

Many people value mobility. For instance, they may want to be able to move from one part of the country to another to pursue their career goals, as different and perhaps better job matches become available. For them, owning a home can make such moves considerably more costly.

Moreover, even if a household prefers to stay in the same area, it may wish to either downsize to a smaller house or upsize to a larger one, depending on its circumstances. That, too, can be costly. Finding a buyer may take time — and once an agreement is made the transaction costs often are considerable.

So why do we so actively promote homeownership as a policy goal? One argument is that homeownership produces what economists call “positive externalities.” People who own their own homes, the argument goes, have more of a stake in their communities than do renters. They are more likely to maintain their properties, which benefits their neighbors. And they also may even become “better citizens,” participating more actively in organizations that aim to improve the safety of their neighborhoods and the quality of the local schools.

I think there is something to this argument. It makes sense in theory and I think most of us have seen it in practice. But do these benefits outweigh the costs associated with the policies that we have employed to increase homeownership? The answer to that question is less clear.

Government-sponsored enterprises (GSEs) such as Fannie Mae and Freddie Mac facilitated the issuance of mortgages that, upon closer scrutiny, should not have been made. Why did they, and their creditors, take on such risks? I think there can be little doubt that they were emboldened to act incautiously by the belief that they would receive federal assistance in the event that those risks would put them in financial peril. The implicit policy of protecting “too-big-to-fail” firms ultimately failed the American public and contributed to the financial crisis.

However, even if the GSEs had acted more prudentially

when evaluating the subprime loan market, there is still reason to question whether the way we promote homeownership is wise, as I noted at the beginning of this article. As it stands, we effectively subsidize mortgages — that is to say, debt. I think there is a better way. We could instead encourage savings and the accumulation of home equity. One way to do this is to create tax-favored savings accounts for potential homeowners. As Charles Calomiris of Columbia University recently noted, these accounts “could be used by low- and moderate-income families to accumulate adequate down payment.” Such a policy would limit the risks associated with current GSE practices and provide incentives for households to more carefully consider how much house they can afford and under what terms.

As the economy continues to recover, it is important to reconsider and correct those policies that directly contributed to the crisis, as well as fundamentally examine our long-term societal goals. Homeownership is a good thing for many people. But it is not for everyone. If we are going to promote it, we should recognize that and tailor our policies accordingly. This wouldn’t mean an end to the “American Dream.” Far from it. Instead, it would mean an end to policies that, in combination with other public actions, have the potential to imperil our financial system again — and our prosperity. **RF**



A handwritten signature in black ink, appearing to read 'Jeff M Lacker'.

JEFFREY M. LACKER  
PRESIDENT  
FEDERAL RESERVE BANK OF RICHMOND

## Start Your Engines

## Racing Teams in Virginia, North Carolina Win X Prizes

**Two car companies in the Fifth District won a total of \$7.5 million in the Progressive Insurance Automotive X Prize for Super Fuel-Efficient Vehicles contest.**

Both have roots in racing. Edison2 of Lynchburg, Va., won \$5 million for its entry in the mainstream class; Li-ion Motors of Mooresville, N.C., won \$2.5 million for its Wave II electric car. The remaining \$2.5 million went to the Swiss X-Tracer Team in the motorcycle-style two-seater class. The competition drew 111 teams from 15 countries; winners were announced in September.

Edison2's "Very Light Car #98" was required to seat four people, travel 200 miles on a tank or charge, and meet performance, handling, safety, and emissions standards; all entries were required to get more than 100 miles per gallon or its energy equivalent.

The team of racing engineers and designers was already exploring the idea of light-weighting parts for racing, according to spokesman Scott Brown. They formed the company officially as Edison2 to go for the prize, and entered all three categories. The team's racing backgrounds together total more than 19 victories at Le Mans, Sebring, and Daytona. "Our engineers feel the innovations you see in racing that allow a car to crash at 200 miles per hour are the same ones that allow a car with low mass to still be a safe car on the highway." Innovations include a diamond-shaped chassis that deflects impact and a lightweight, sturdy steel frame.

*Edison2 of Lynchburg, Va., won \$5 million for its entry in the mainstream class of the Progressive Automotive X Prize with its Very Light Car #98.*



The Edison2 vehicle weighed in at 830 pounds. The internal combustion-powered vehicle gets 102.5 miles per gallon of 85-percent ethanol fuel. The team designed and built the car from the ground up. "We would design on the computer, make the parts in-house or send to a machine shop in Rustburg (Va.), and have it back the next day." The Edison2 team works in a 360,000 square-foot former textile factory owned by founder Oliver Kuttner, a Charlottesville developer. The company is located in downtown Lynchburg. The presence of the machine-tool industry led to quick turn-around in component redesign. The vehicle's lug nut, for example, weighs 0.1 ounce rather than the typical one ounce.

The prize money will accelerate the company's next generation vehicle, an electric version of the Very Light Car. "We view the X Prize as the beginning of something, not the end," Brown said.

Li-ion Motor Corp. beat out competitors in the "alternative" category. Despite its heavy lithium-ion battery, the Wave II still weighed only 2,176 pounds, and achieved a 187 mile-per-gallon equivalent. The company intends not only to manufacture vehicles but also to license its technology to manufacturers worldwide, according to team leader Ron Cerven, a former racer. Li-ion Motors' team includes fabricators who formerly worked in NASCAR.

The prizes capped 30 months of car and business plan development. The idea was to jump-start the next generation of efficient, clean, affordable, safe cars. Entries were judged, in part, on whether business plans proved that 10,000 of the models could conceivably be produced, annually, by 2014.

The X Prize concept is modeled after the 1919 purse of \$25,000 to inspire the nonstop flight between New York and Paris. In 1927, Charles Lindbergh won. These privately funded, performance-based prizes encourage innovation, with competitors typically spending 10 to 40 times the amount of the purse to achieve a goal. The foundation is also sponsoring the \$10 million Archon Minerals X Prize for genomics, the largest prize in medical history. To win, a team must sequence 100 human genomes within 10 days for less than \$10,000 per genome. The foundation has also launched the \$30 million Google Lunar X Prize for the first team to send a robot to the moon, travel 500 meters, and send images and data to earth.

— BETTY JOYCE NASH

PHOTOGRAPH COURTESY OF EDISON2

## Supersizing College Sports 16-Team Conference Put on Hold

Fans may loyally follow their favorite college sports teams, but the teams follow the money — and there is a lot of money in television.

How much? The Atlantic Coast Conference (ACC) just signed a new deal with ESPN worth \$1.85 billion over 12 years. Each of the 12 schools (eight are in the Fifth District) will receive nearly \$13 million per year. That's twice the previous contract, but less than the \$17 million annually that schools in the Southeastern Conference (SEC) get from its TV deals. It's also less than the \$17 million payout to schools in the Big 10, which also operates its own regional television network. That's a lot of money for athletic departments, which typically operate at a loss. In 2009, only 14 of the 120 schools in the top-tier division made money on athletics, and the median loss was \$10.2 million. (When schools do make money, it's generally only on football and men's basketball.)

The lure of those revenues nearly broke up the Big 12 Conference last spring. Six teams, including perennial powerhouses the University of Texas and the University of Oklahoma, were expected to depart the Big 12 and join the existing Pac-10 Conference to form a new 16-team "super-conference." The Pac-10's current television contract is up for bid this year, and Texas would have been a huge new market for both the major networks and a potential new Pac-10 channel (following the Big

10's lucrative example). Plus, more schools would mean more high-stakes intra-conference and championship games, which are worth millions of dollars each year.

The breakup of the Big 12 would have been a huge change, but also one that was part of a larger trend. Just seven years ago, 19 teams switched conferences, and even the Big 12 has only existed in its current form since 1996, after attracting some schools from the old Southwest Conference. The conference shuffle can be traced to a 1984 Supreme Court decision, which found that the National Collegiate Athletic Association had violated the Sherman Antitrust Act by restricting the number of games that could be broadcast each week. This decision freed schools to negotiate television contracts. Within a decade, conference alignments seemed determined largely by the potential viewing audience.

In the end, Colorado and Nebraska were the only teams to leave the Big 12. Conference commissioner Dan Beebe convinced his members that the conference's next TV contract would be worth at least as much as they could earn in the Pac-10, and announced a generous revenue-sharing agreement. For now, the idea of a "superconference" has been put on hold. But as long as the TV contracts keep getting bigger, the conferences surely will.

— JESSIE SACKETT

## Franchise Fight GM, Chrysler Dealers Must Leave the Fold

John Bell, owner of a Chevrolet dealership in rural Sistersville, W.Va., breathed a sigh of relief in September: An arbitrator ruled against General Motors' effort to terminate his franchise. The decision was based on an array of factors, including the arbitrator's findings that Bell's dealership is "economically viable," and that its closure would require customers to travel great distances for sales and service at another dealership and would create a hardship for the dealership's employees.

GM had given Bell notice in June of 2009 of its intention to end his status as a GM dealer as part of an effort to shrink its dealer network. At the time, GM notified a total of 1,454 dealers, and Chrysler did the same with 789 of its dealers — nearly a quarter of each company's network. Within the Fifth District, some 218 GM and Chrysler dealers were slated for termination (out of 2,024 new-car dealers in the region representing all automakers).

Hundreds of the dealerships targeted by GM and Chrysler were not as fortunate as Bell's. GM prevailed in all but four of its 62 arbitration cases that were litigated to completion, and Chrysler won all but 32 of the 108 completed cases against it. In addition, GM offered 702 dealers the opportunity to stay on if they met various conditions.

The terminations have the potential to be economically significant to the affected communities. New-car dealerships generate significant state sales taxes and employment. In 2007, new-car dealers employed an average of 54 people each, with an average payroll of \$2.6 million. To be sure, some of the terminated dealers may be able to continue doing business in the used-car market or as dealers for other brands.

U.S. automakers have long desired to reduce their number of dealerships. Supporters of scaling back the dealer networks believe that smaller networks would allow the remaining dealers to become more profitable

and to invest in upgrading their facilities. Foreign auto brands such as Honda and Toyota have far smaller networks than Detroit.

For decades, the discretion of automakers to terminate dealer franchises has been highly limited. Auto dealers, as major employers, have significant influence within state legislatures. The states have thus enacted dealer-friendly laws that limit an auto manufacturer's ability to terminate a franchise.

Economists have criticized these laws. For example, economists Francine Lafontaine of the University of Michigan and Fiona Scott Morton of Yale argue in a recent paper in the *Journal of Economic Perspectives* that the laws have been "to the detriment not only of manufacturers, but also of consumers, resulting in higher cost of retailing and higher prices for cars, inflexibility of the dealer network, and a lack of innovation in car distribution."

What made the terminations by GM and Chrysler

possible is that the federal government required the companies to submit restructuring plans last year to support their quests for federal assistance — including plans to cut back their dealer networks. The group from the Department of the Treasury responsible for assessing the restructuring plan and negotiating federal assistance to the companies, known as the Auto Team, pressed the companies to shrink the networks quickly. The bankruptcy courts approved the programs to terminate dealerships, overriding the protective state laws.

The auto dealers showed that they can also exercise clout at the federal level, however. Congress enacted the legislation to allow dealers to go to arbitration to attempt to save their franchises, known as the LaTourette Amendment, at the urging of the National Automobile Dealers Association and state and local dealer associations in response to the termination notices from GM and Chrysler.

— DAVID A. PRICE

## Sweet Drinks

### D.C. Extends Sales Tax to Beverages

The District of Columbia has approved a 6 percent tax on retail sales of sodas, sports drinks like Gatorade, and other sweetened nonalcoholic beverages except coffee/tea and carbonated fruit drinks.

The tax differs from the penny-per-ounce excise tax originally proposed, a move that soft drink makers, local stores, and restaurants fought through advertising. Retailers oppose the sales tax as well. Neighboring Virginia charges 2.5 percent in state sales taxes and Maryland, 6 percent. Washington, D.C., currently does not tax food purchases except in restaurants.

The estimated \$8 million from the tax will go, in part, to pay for physical education programs and more fruits and vegetables in school lunches.

It's unclear whether a tax as low as 6 percent will help curb soft drink consumption, thought to be a culprit in rising obesity levels, especially among children. But there is evidence that soda consumers are price-sensitive. A recent study published in the *American Journal of Public Health* found that sales of regular (not diet) soft drinks declined by 26 percent at the hospital cafeteria at Brigham and Women's Hospital in Boston when it raised its prices. The

decline persisted not only during the price-increase phase, but also through several other periods, including one in which the cafeteria returned to baseline prices. The add-on, however, was a hefty 35 percent.

In a separate study, from the Economic Research Service of the U.S. Department of Agriculture, economists analyzed a hypothetical tax on sweetened sodas, fruit drinks, sports and energy drinks, and powdered mixes. The authors used national data sets that included actual consumer purchases of beverages. One data set came from the longitudinal consumer panel of the firm Nielsen Homescan. Authors also used daily beverage intake data from the Centers for Disease Control's National Health and Nutrition Examination Survey, designed to assess the health and nutritional status of children and adults.

Results suggested that a 20 percent increase in the price of sweetened drinks could cut net calorie intake from all beverages by 37 calories a day for the average adult, with effects for children estimated at 43 calories a day. But that tax was much larger than the D.C. sales tax, leaving open the question of whether the sales tax will affect soda consumption.

— BETTY JOYCE NASH

## NASCAR Hall of Fame Opens in Charlotte A Slow Start but Hope Remains

The new NASCAR Hall of Fame in Charlotte is designed to appeal to both casual and hard-core race fans. Visitors can drive high-tech racing simulators, change a tire, or see up close Dale Earnhardt's famous No. 3 Chevy.

But so far, attendance has been below projections. Between its opening in May and the beginning of August, the Hall had 102,000 visitors, well shy of opening expectations. The NASCAR Hall of Fame is owned by the City of Charlotte, licensed by NASCAR, and operated by the Charlotte Regional Visitors Authority (CRVA).

As the Hall's spokesperson Kimberly Meesters points out, though, it's difficult to extrapolate a full year's performance based on three months' data, and the Hall also generates revenue through memberships and special event rentals. And many of the expenses are variable costs: Fewer people in the building means buying fewer cleaning supplies, for example.

The attendance numbers cast doubt on projections about the Hall's economic impact on the region. Prior to construction — and prior to the financial crisis — UNC-Charlotte economist John Connaughton estimated the Hall's annual economic impact at \$60 million. Although he used relatively conservative multipliers to calculate potential increases in spending and employment, such projections are uncertain and often overstated.

"They're based on the best available information at the time," Connaughton explains. "We would never have contemplated a recession as bad as it was."

The U.S. Travel Association reports modest improvements in the travel outlook, but characterizes the recovery as "rocky." Many consumers are looking for the most frugal options when they do travel, such as staying with relatives instead of in hotels.

Still, there are positive signs. Charlotte's hotel occupancy is up 12 percent over the same time last year, and North Carolina's gross state product has been increasing modestly, after a 2.7 percent decline in 2009.

Financing the Hall was "radically complex," according to City of Charlotte Treasurer Scott Greer. Totalling more than \$200 million, the package is a mix of public and private debt that also helped fund a 102,000 square-foot expansion and other upgrades to Charlotte's convention center. The site also includes a privately developed 19-story office tower.

The majority of the financing is "Certificates of Participation" (COPs), a type of municipal bond that is



*A race fan tries his hand at the "Pit Challenge" exhibit at Charlotte's NASCAR Hall of Fame.*

backed by the lease payments from a particular project. In Charlotte's case, the city is making those payments via the revenues from a 2 percent increase in the hotel/motel tax. The city also borrowed \$41.5 million in bank loans. Sponsorship revenue and commemorative brick sales are dedicated to paying back \$20 million of those loans, with the remainder to be repaid from the sale of a parcel of land donated by the state. To date, the Hall is about 20 percent of the way to its sponsorship goal, but these are non-recourse loans without a fixed repayment date. "I don't want to say that they're indefinite. We'll probably pay them off in 10 to 12 years," Meesters says.

The financing structure is designed to limit taxpayer support. With COPs, bondholders may only repossess the asset — that is, the Hall of Fame — in the case of default. If the hotel tax increase can't cover the debt service, the Hall could end up being owned by the bondholders. The attendance revenues are used only for operating expenses, not debt service. "Cutting expenses is always an option," Meesters says.

The people predicting hard times for the Hall, she says, should withhold judgment. "It's such a complex business model to explain in the first year," says Meesters. "Ask us five years from now, and we'll be able to say these are our peaks, these are our valleys, and this is who we market to."

— JESSIE SACKETT

*Editor's Note: At press time, the CRVA announced that the Hall of Fame had a \$190,000 deficit as of August 2010, and was considering \$3 million in annual budget cuts.*

# Financial Reform Moves Forward, Challenges Remain

BY RENEE COURTOIS HALTOM

By most accounts the nation's financial regulatory framework has some catching up to do. Regulation did not effectively keep pace with the profound changes in the financial system over the last several decades and was a contributing factor to the financial crisis, Fed Chairman Ben Bernanke stated in testimony to the Senate Committee on Banking, Housing, and Urban Affairs in September 2010.

The Dodd-Frank Wall Street Reform and Consumer Protection Act, signed into law by President Obama in July 2010, is intended to bring regulation up to speed. At 848 pages and 16 separate titles, the Act is the heftiest reform package to greet the financial system in decades. With the legislation lawmakers attempt to address an array of potential gaps in financial regulation and policy.

A key example is the notion of systemic risk. Many regulators now argue that supervision and regulation before the crisis was much too focused on the health of single institutions (microprudential supervision) at the cost of awareness concerning the financial system as a whole (macroprudential supervision). The latter would require greater focus on the linkages between firms that lend to and borrow from each other.

The Dodd-Frank Act aims to fix this problem by creating the Financial Stability Oversight Council (FSOC). The group is responsible for identifying systemically important financial institutions, which the Fed will then be required to supervise. The FSOC is comprised of staff from each of the financial regulatory agencies, including the Fed.

The mortgage boom brought attention to occasionally unsound practices in consumer finance. The Act creates an independent Bureau of Consumer Protection housed within the Fed, charged with writing consumer financial protection laws and examining financial institutions for compliance.

The legislation addresses the so-called Volcker Rule (named after former Fed Chairman Paul Volcker), which prohibits banks from certain speculative investments unless they are being made on behalf of a customer, limiting the extent to which banks can engage in risky behavior using their own money. Credit rating agencies will be more tightly regulated and less relied upon by regulators. In the area of executive compensation, shareholders of large corporations will now have a voting say in how much executives are paid.

One of the Act's stated goals is to put a credible end to government bailouts of financial institutions that fall into trouble. Several Fed policymakers have argued that actions taken by the Fed and other agencies during the crisis, though necessary given conditions, were "distasteful" (in the words of Chairman Bernanke) and "excruciating" (according to

Richmond Fed President Jeff Lacker) because of the moral hazard problems they would almost certainly exacerbate. The concern is that institutions would now be more likely to expect assistance in a crisis, which may encourage them to take undue risks and make such crises more likely.

The Act attempts to mitigate moral hazard by curbing the government's discretion to intervene. The Act limits the Fed's ability to extend some types of emergency loans under Section 13(3) of the Federal Reserve Act, the provision heavily invoked during the financial crisis for the first time since the Great Depression. The Fed is no longer allowed to lend to specific individuals, institutions, or corporations. Instead, emergency loans from the Fed are now allowed only if made available to a broad array of firms, and require Treasury approval.

The Act also sketches out a process — known as resolution authority — by which the government will step in to dismantle large, systemically significant bank holding companies or nonbank financial firms in the event of failure. (Failing banks, on the other hand, are dealt with by the Federal Deposit Insurance Corporation.) Supporters of this provision of the Act claim that without such plans, the rapid, disorderly failure of a single large firm can harm many creditors that have extended that institution loans. Others, however, have argued that by effectively shielding creditors this process could dampen market discipline.

Implementing the Act will be a significant undertaking for all regulatory agencies. It requires the Federal Reserve alone to complete more than 50 rulemakings and guidelines, many studies and reports under a short timeframe, and more than 250 separate projects and initiatives to implement the law.

It's not just the scale of the Act that poses a challenge. Many new tasks — such as judging the degree of systemic risk that an institution poses, or deciding when a firm is too imperiled that it must be dismantled — are difficult calls to make. Perhaps more important, firms will likely innovate in ways that allow them to work around new regulatory barriers they find excessively burdensome. Regulators will have to remain flexible and vigilant to maintain a regulatory framework appropriate for a dynamic financial system.

Charles Plosser, the president of the Philadelphia Fed, summed up the thoughts of many financial industry observers in a September speech: "Dodd-Frank is a massively complex piece of legislation, and many details remain to be worked out in the rule-writing underway to implement the act. It is also highly likely there will be many unintended consequences. It is too early to assess all of its ramifications or whether it can achieve all of the lofty goals that people assigned to it. Only time will tell."

RF



# The Changing Face of Monetary Policy

BY BETTY JOYCE NASH

Two presidential appointees were recently sworn in as governors of the Federal Reserve Board. As hearings in the U.S. Senate proceeded toward confirmation, the popular labels “hawk and dove” flew freely as Fed watchers sought clues for shifts in thought among the appointees. The new governors, Janet Yellen and Sarah Raskin, will serve on the Federal Open Market Committee (FOMC), the body charged with conducting monetary policy.

Labels never fit well, though, and today hawk and dove are even more relative as monetary policy has achieved a certain consensus about some issues, particularly the relationship between inflation and long-run unemployment. Macroeconomics and monetary policy today are better understood than in the 1960s, '70s, and '80s. Core principles include a priority for stable prices, an inflation target (either explicit or implicit), and the conditioning of expectations in a way that doesn't surprise markets.

## Then and Now

The FOMC comprises 19 members, 12 of whom are voting members. The seven Board governors (when fully staffed) and the New York Fed president always vote, along with a rotating group of four Reserve Bank presidents. After its deliberations, the FOMC issues a statement directing the New York Fed to make the trades that influence the availability of credit in the economy. The Banking Act of 1935 created the committee and, for many years, participants and voting members alike were bankers and lawyers, not economists.

That's no surprise. Back when the Federal Reserve System was formed in 1914, the job of the regional Reserve Banks was to issue currency and, later, to sort checks. The Reserve Banks also

were lenders of last resort, issuing loans to banks through the discount window. Those staffing the Reserve Banks back then were typically former commercial bankers.

In those first two decades, monetary policy wasn't considered part of the Reserve Banks' mission, says Jerry Jordan, former Cleveland Fed president. He also served on the Council of Economic Advisers under President Ronald Reagan and as former research director of the St. Louis Fed. When the FOMC was formed, Board chairman and banker Marriner Eccles wanted to minimize the role of the Reserve Bank presidents.

The first three of the eight FOMC chairmen were in business or banking. One of the longest serving and most influential was William McChesney Martin. He chaired the FOMC from 1951 through 1970. The FOMC of the 1950s generally responded to increases in expected inflation by raising the federal funds rate in a manner consistent with that of the inflation-taming 1980s and 1990s, according to economists who have studied that era.

By the 1960s, Board staff and governors included more economists, but few Reserve Bank presidents were economists. That could be a handicap at meetings, Jordan says. “So, if you had a staff in Washington conversant with economic models and some (academic) governors, then that put the Reserve Bank presidents at a disadvantage.” The communication gap could be dramatic under some chairmen. For example, Arthur Burns was the first academic economist to chair the Board. A professor of economics at Columbia University, he served under Presidents Richard Nixon and Jimmy Carter during most of the 1970s.

“Arthur's style was to pick on somebody at every meeting,” Jordan remembers. “By picking on him, he

## The Evolution of the Federal Open Market Committee



President	Term of Office	Primary Profession
-----------	----------------	--------------------

### Federal Reserve Bank of Atlanta

Dennis Lockhart	2007-present	Finance
Jack Guynn	1996-2006	Public Servant
Robert P. Forrestal	1983-1995	Lawyer
William F. Ford	1980-1983	Economist
M. Monroe Kimbrel	1968-1980	Banker
Harold T. Patterson	1965-1968	Lawyer
Malcolm Bryan	1951-1965	Economist
W. S. McLarin Jr.	1941-1951	Banker
Robert S. Parker	1939-1941	Lawyer
Oscar Newton	1935-1939	Banker
Eugene R. Black	8/34-12/34	Banker
William S. Johns*	5/33-8/34	Banker
Eugene R. Black	1928-1933	Banker
M. B. Wellborn	1919-1928	Banker
Joseph A. McCord	1914-1919	Banker

### Federal Reserve Bank of Boston

Eric Rosengren	2007-present	Economist
Cathy E. Minehan	1994-2007	Banker
Richard F. Syron	1989-1994	Economist
Frank E. Morris	1968-1988	Economist
George H. Ellis	1961-1968	Economist
Joseph A. Erickson	1948-1961	Banker
Laurence F. Whittemore	1946-1948	Business
Ralph E. Flanders	1944-1946	Business
William W. Paddock	1942-1944	Lawyer
Roy A. Young	1930-1942	Banker
Wm. P.G. Harding	1923-1930	Banker
Charles A. Morss	1917-1922	Business
Alfred L. Aiken	1914-1917	Banker

### Federal Reserve Bank of Chicago

Charles L. Evans	2007-present	Economist
Michael H. Moskow	1994-2007	Economist
Silas Keehn	1981-1994	Business
Robert P. Mayo	1970-1981	Banker
Charles J. Scanlon	1962-1970	Banker
Carl E. Allen	1956-1961	Banker
Clifford S. Young	1941-1956	Banker
George J. Schaller	1934-1941	Banker
James B. McDougal	1914-1934	Banker

### Federal Reserve Bank of Cleveland

Sandra Pianalto	2003-present	Business
Jerry L. Jordan	1992-2003	Economist
W. Lee Hoskins	1987-1991	Economist
Karen N. Horn	1982-1987	Economist
Willis J. Winn	1971-1982	Finance
W. Braddock Hickman	1963-1970	Economist
Wilbur D. Fulton	1953-1963	Banker
Ray M. Gidney	1944-1953	Banker
Matthew J. Fleming	1935-1944	Banker
Elvadore R. Fancher	1914-1935	Banker

\*interim

intimidated other people who were not willing to be associated with whoever was being picked on.”

Over time, Reserve Banks built individual research departments, and research directors often attended FOMC meetings with Bank presidents. There, they often engaged in policy discussions. Richmond had one of the earliest departments in the system, recalls economist Dewey Daane, now an emeritus professor at Vanderbilt University. Daane joined the Bank’s research department in 1939, directed from 1937 until 1949 by University of Virginia economist Elbert Kincaid. Here’s how Daane recalls his introduction to the FOMC: “The [Richmond Fed] president called me into the office and said, ‘I think the presidents are going to get mixed up more in the monetary side. I don’t know anything about that. You’ll have to help me.’” Daane later served two terms on the Board of Governors, from 1963 through 1974.

By the 1970s, more economists began moving into Reserve Bank presidencies. Some Reserve Banks have had relatively few presidents since 1914; tenure averages nearly 11 years. The Richmond Fed has had only seven presidents. “What that means is that the Reserve Bank presidents are the institutional memory of the Federal Reserve,” says William Poole, who was president of the St. Louis Fed from 1998 until March 2008.

The Federal Reserve Act calls for diverse representation from not only financial, but also agricultural, industrial, and commercial, interests. In fact, William McChesney Martin objected, in 1966, to the appointment of economist Andrew Brimmer. Nothing personal, he said, he simply didn’t want another economist, citing the Act, according to Allen Meltzer’s *A History of the Federal Reserve*. Early Board governors were, like Reserve Bank presidents, likely to be bankers, businessmen, or lawyers.

Governors today may be economists, among them well-known academics like Ben Bernanke, but they also may be nominated for their specialty knowledge in business or law. In addition to FOMC duties, they also head committees that govern the Board. Of the current six Board members, two hold doctorates in economics.

### Go-Stop

By the 1970s, more economists were serving on the FOMC, but they could not steer the nation out of growing inflation. The 1970s have been deemed a time of “disarray” in monetary policy by Marvin Goodfriend, a former long-time Richmond Fed economist now at Carnegie Mellon University. In a *Journal of Economic Perspectives* paper, “How the World Achieved Consensus on Monetary Policy,” Goodfriend outlines the debates.

Policymakers debated the inflation process. The division broke down between those who thought unions, monopoly firms, or outside shocks such as oil and food prices caused inflation, and the monetarists, who blamed the increase in the money supply. A belief was widely held that expansive monetary policy, a lower federal funds rate to stimulate the

output, could permanently reduce unemployment. That policy could be inflationary, and often was. But it could be worthwhile, providing inflation didn't get out of hand.

Burns, for one, believed in "the power of many corporations and trade unions to exact rewards that exceed what could be achieved under conditions of active competition." This power drove costs and prices "that may be cumulative and self-reinforcing," according to Burns' testimony in Congress quoted by Richmond Fed economist Robert Hetzel in his book *The Monetary Policy of the Federal Reserve*. But, absent money supply increases, union or monopoly power arguably couldn't raise the general price level. Though workers might negotiate higher wages, firms would be hard-pressed to pass costs to consumers.

Burns ran the committee forcibly and fell prey to political pressure by some accounts. Former Richmond Fed President Al Broaddus attended FOMC meetings under three chairmen, including Burns. A chairman, he notes, can exert tremendous influence, sometimes usefully and sometimes not. "If a chairman discourages discussion as Burns sometimes did, in my view, you will lose the value of the debate to help understand policy challenges you need to face." But the reverse is also true. If the chairman doesn't control the meeting flow, then excessive, free-form discussion may hinder the committee's work.

The Burns era is crucial to understanding today's thinking about monetary policy. Though Burns took a public stand against inflation, the federal funds rate fell from an average of 8.02 percent in the first quarter of 1970 to 4.12 percent by the final quarter, theoretically to jump-start the economy. The rate of inflation was 4.55 percent at the end of that year, sending real interest rates below zero.

Burns' successor, G. William Miller, was inexperienced, and served a scant 18 months until August 1979, when Paul Volcker was sworn in. Monetary policy had failed to stop inflation, and the Fed's credibility eroded. The FOMC had engaged in a "go-stop" policy that loosened money to reduce unemployment by stimulating output. But when inflation grew, worries loomed, and when the FOMC tightened money by raising the federal funds rate, the policy could throw the economy into recession.

In this fashion, people began to expect inflation as inevitable and factor it into buying decisions, fueling even higher prices.

Richmond Fed's first president with a doctorate in economics was Bob Black, who began his term in 1973. He'd been president six years, a voting FOMC member every third year, when he got Volcker's call on Oct. 6, 1979, for a special meeting. Volcker wanted to change the Fed's procedures. He wanted to set the quantity of reserves rather than the price, the federal funds rate. Theoretically, the funds rate would then settle appropriately — if the money supply were targeted correctly. A fortuitous by-product was that this relieved the Fed of rate-setting responsibility. In 1982, inflation declined, and the Volcker Fed returned to targeting price rather than quantity of balances. Ultimately, inflation

**President** **Term of Office** **Primary Profession**

**Federal Reserve Bank of Dallas**

Richard W. Fisher	2005-present	Public Servant
Helen Holcomb*	2004-2005	Banker
Robert D. McTeer Jr.	1991-2004	Economist
Robert H. Boykin	1981-1991	Lawyer
Ernest T. Baughman	1975-1980	Economist
Philip E. Coldwell	1968-1974	Economist
Watrous H. Irons	1954-1968	Economist
R. R. Gilbert	1939-1953	Banker
B. A. McKinney	1931-1939	Banker
Lynn P. Talley	1925-1931	Banker
B. A. McKinney	1922-1925	Banker
R. L. Van Zandt	1915-1922	Banker
Oscar Wells	1914-1915	Banker

**Federal Reserve Bank of Kansas City**

Thomas M. Hoenig	1991-present	Economist
Roger Guffey	1976-1991	Lawyer
George H. Clay	1961-1976	Lawyer
H. G. Leedy	1941-1961	Lawyer
George H. Hamilton	1932-1941	Banker
W. J. Bailey	1922-1932	Banker
J. Z. Miller Jr.	1916-1922	Banker
Charles M. Sawyer	1914-1916	Banker

**Federal Reserve Bank of Minneapolis**

Narayana Kocherlakota	2009-present	Economist
Gary H. Stern	1985-2009	Economist
E. Gerald Corrigan	1980-1984	Economist
Mark H. Willes	1977-1980	Economist
Bruce K. MacLaury	1971-1976	Economist
Hugh D. Galusha Jr.	1965-1971	Lawyer
Frederick L. Deming	1957-1965	Economist
Oliver S. Powell	1952-1957	Banker
John N. Peyton	1936-1952	Banker
William B. Geery	1926-1936	Banker
Roy A. Young	1919-1926	Banker
Theodore Wold	1914-1919	Banker

**Federal Reserve Bank of New York**

William C. Dudley	2009-present	Economist
Timothy F. Geithner	2003-2009	Public Servant
Jamie B. Stewart*	6/03-11/03	Banker
William J. McDonough	1993-2003	Economist
E. Gerald Corrigan	1985-1993	Economist
Anthony M. Solomon	1980-1984	Economist
Paul A. Volcker	1975-1979	Public Servant
Alfred Hayes	1956-1975	Banker
Allan Sproul	1941-1956	Lawyer
George L. Harrison	1928-1940	Lawyer
Benjamin Strong	1914-1928	Banker

\*interim

Reserve Bank Presidents and Professions Since 1914

President	Term of Office	Primary Profession
-----------	----------------	--------------------

### Federal Reserve Bank of Philadelphia

Charles I. Plosser	2006-present	Economist
Anthony M. Santomero	2000-2006	Economist
Edward G. Boehne	1981-2000	Economist
David P. Eastburn	1970-1981	Economist
Karl R. Bopp	1958-1970	Economist
Alfred H. Williams	1941-1958	Economist
John S. Sinclair	1936-1941	Lawyer
George W. Norris	1920-1936	Lawyer
E. P. Passmore	1918-1920	Banker
Charles J. Rhoads	1914-1918	Banker

### Federal Reserve Bank of Richmond

Jeffrey M. Lacker	2004-present	Economist
J. Alfred Broaddus Jr.	1993-2004	Economist
Robert P. Black	1973-1992	Economist
Aubrey N. Heflin	1968-1973	Lawyer
Edward A. Wayne	1961-1968	Banker
Hugh Leach	1936-1961	Banker
George J. Seay	1914-1936	Banker

### Federal Reserve Bank of San Francisco

John F. Moore*	10/10-present	Banker
Janet L. Yellen	2004-2010	Economist
Robert T. Parry	1986-2004	Economist
John J. Balles	1972-1986	Economist
Eliot J. Swan	1961-1972	Economist
H. N. Mangels	1956-1961	Banker
C. E. Earhart	1946-1956	Banker
Ira Clerk	1/46-9/46	Banker
William A. Day	1936-1945	Banker
John U. Calkins	1919-1936	Banker
James K. Lynch	1917-1919	Banker
Archibald Kains	1914-1917	Banker

### Federal Reserve Bank of St. Louis

James Bullard	2008-present	Economist
William Poole	1998-2008	Economist
Thomas C. Melzer	1985-1998	Finance
Theodore H. Roberts	1983-1984	Banker
Lawrence K. Roos	1976-1983	Business
Darryl R. Francis	1966-1976	Economist
Harry A. Shuford	1962-1966	Lawyer
Delos C. Johns	1951-1962	Lawyer
Chester C. Davis	1941-1951	Business
Wm. McC. Martin Sr.	1929-1941	Banker
David C. Biggs	1919-1928	Banker
Rolla Wells	1914-1919	Business

\*interim

SOURCES: Multiple sources, including the Federal Reserve Bank of St. Louis, Federal Reserve Archival System for Economic Research (FRASER), Committee on the History of the Federal Reserve System.

fell from a high of 13.5 percent in 1980 to under 4 percent a few years later, and maintained a low rate. Today, the Fed's implicit inflation target is about 2 percent.

The Volcker disinflation, as the era is now called, advanced the idea that stable prices are paramount; expectations, whether of inflation or deflation, can influence economic activity.

Dissents were more frequent then, as policy was being worked out. For instance, though Black agreed with Volcker's overall strategy, he dissented often over nuances of policy. He once apologized to Volcker before voting by stating: "Mr. Chairman, it pains me to have to dissent again." He favored lower short-run money targets than the committee as a whole thought appropriate.

The Bernanke and Greenspan years seem downright calm, dissent-wise, compared to the 1970s and early 1980s. For example in 1978, members dissented 19 times in 10 of 19 meetings. In 1979, there were 20 dissents in 13 meetings, and in 1980, there were 25 dissents at 13 of 17 meetings during the year.

A longer time span shows that about 8 percent of all voting observations from 1966 to 1996 were dissents, according to economist Rob Roy McGregor of the University of North Carolina at Charlotte. From 1987 through 1999, that proportion declined to 6 percent. He has co-authored a book about FOMC decisionmaking, and says the combination of professionals and advanced knowledge may have contributed to less disagreement. "The decline in dissent might have to do with the greater number of economists, but combined with that is the sense that we have a reasonably unified framework that the committee can use."

Today, McGregor says most economists believe as Milton Friedman instructed: Inflation is a monetary phenomenon, not fundamentally driven by union or monopoly-firm wages. "That issue has become settled in the last 40 years and taken for granted by committee members." The idea that there may be a short-run trade-off but no long-run trade-off between inflation and unemployment, McGregor confirms, is fairly well accepted.

Poole's dissents were typically hawkish, but he also dissented for other reasons. He dissented in January 2008, at a conference-call meeting held one week prior to the scheduled meeting. He saw no reason for action one week ahead. "I also believed the market would interpret the FOMC's action as a response to the decline in equity prices in Europe," he explains. The stock market at home was closed because of a holiday. "And the Federal Reserve had always argued that it did not respond to the stock market."

That notion of systematic, expected policy decisions is paramount on the committee, and reflects academic work on rational expectations in the 1970s, particularly that of Nobel Laureate Robert Lucas. Before this idea had taken root on the FOMC, members couldn't fully appreciate the need to make decisions that would not shock the market.

Poole cites, by way of example, that three strong employment reports in succession would have the market

anticipating a rise in interest rates. “If the Fed raised the federal funds rate to exactly the same rate as the market anticipated, then it wouldn’t be a surprise, and it would be already priced into the market,” he explains. Before that idea was understood, some policymakers thought policy actions could be more effective if they jolted the market.

The rational expectations revolution in economics emphasized the importance of monetary policy following a path that is as predictable as possible, Poole says. “The market should behave as policymakers expect and policymakers behave as markets expect.”

### The 13th Member: The Committee

Contributing to agreement is the committee itself, where consensus is valued. Most members would say that the chairman never loses. A chairman has never been outvoted nor will he ever be, Poole observes.

Yet there’s always a measure of dissent and disagreement. That produces healthy debate among the large number of well-trained economists, many of them from the Reserve Banks, and of course Bernanke himself is a thoroughly trained economist, Broadus says. Take the idea of inflation targeting, for which Broadus, Bernanke, and others have argued. “Others opposed it. If you have deflation developing but the Fed is aiming for between 1 percent and 2 percent, if that target is there, people will think the Fed will do what they have to do. Others don’t find that argument persuasive. That’s an important debate. And it’s no less intense than the old Keynesian-Monetarist debate.”

Today, new disputes have sprung up, including ones over the fine points of that earlier divide. The trade-off between *short-term* unemployment and inflation can provoke differences, Poole notes, as well as the nature of the process by which inflation expectations are created or changed.

Monetarism, Broadus says, has morphed into the view that what really matters is for the Fed to clearly state its inflation objective. “That’s what you might call ‘Son of Monetarism.’”

More than two dissents are rare on the committee. “A third, however, would be viewed as a sign that the FOMC is in open revolt with the Chairman’s leadership,” former Fed

governor Laurence Meyer wrote in his book, *A Term at the Fed*. That would disrupt the process of monetary policy-making and unsettle financial markets.

Disagreement can stem from many quarters, for instance, the ballooning of the Fed’s balance sheet. Jeffrey Lacker, current Richmond Fed president, dissented at the Jan. 27-28, 2009, FOMC meeting. It wasn’t because he disagreed with expanding the monetary base, but because he preferred to buy U.S. Treasury securities rather than target credit programs through the Term Auction Lending Facility.

Some economists think that “providing financial assistance to particular entities is more like fiscal policy than monetary policy,” Poole notes. He adds that today there are probably new significant disputes, and cites the “too big to fail” concept, the Fed’s credit policies, and debate over whether the Bear Stearns bailout was a good idea as examples.

Recorded dissents don’t necessarily reveal members’ preferences. Disagreement may not result in dissent, and those can be probed only through the verbatim transcripts of meetings. But the Reserve Bank presidents frequently give speeches, in which they may detail ideas about monetary policy, whether or not they’ve dissented. In this fashion, they plant ideas in the public discourse. These discussions also appear to be a way of informing the market, by conditioning expectations. The federal funds target today is 0 percent to 0.25 percent, for example, and Kansas City Fed President Thomas Hoenig has dissented at each meeting this year, signaling his inflation concerns. In contrast, President James Bullard from the St. Louis Fed has not dissented, yet has spoken out regarding his concerns about deflation, another signal to markets. FOMC statements today employ the phrase “extended period” to tell the market the rate will stay low until there’s a compelling reason to move it.

And so while economists may have reached broad agreements on certain macroeconomic principles, voting members are likely to disagree as discussions proceed, in search of the best policy path. But members do seem to agree on this: Predictability is paramount, with the market’s expectations aligned with those of policymakers. **RF**

### READINGS

Chappell, Henry W., Rob Roy McGregor, and Todd Vermilyea. *Committee Decisions on Monetary Policy: Evidence from Historical Records of the Federal Open Market Committee*. Cambridge, Mass.: MIT Press, 2005.

Fernandez-Villaverde, Jesus, Pablo A. Guerron-Quintana, and Juan Rubio-Ramirez. “Reading the Recent Monetary History of the U.S. 1959-2007.” National Bureau of Economic Research Working Paper no. 15929, April 2010.

Goodfriend, Marvin. “How the World Achieved Consensus on Monetary Policy.” *Journal of Economic Perspectives*, Fall 2007, vol. 21, no. 4, pp. 47-68.

Hetzl, Robert. *The Monetary Policy of the Federal Reserve: A History*. New York: Cambridge University Press, 2008.

Meyer, Laurence. *A Term at the Fed*. New York: HarperCollins, 2004.

# Regulatory Capture

BY BETTY JOYCE NASH

In the early days of flight, airlines couldn't provide air service profitably so the government stepped in with support. Airlines began to carry mail, paid for by airmail contracts. By 1933, four carriers collected 94 percent of airmail service subsidies. Later, the Civil Aeronautics Board (CAB) set fares, subsidies, and mail rates. Airlines were permitted profits, based on reported operating ratios. That provided an incentive for airlines to overinvest and generate higher operating costs. Profitable routes also subsidized unprofitable ones, justified by the CAB, which contended small cities would otherwise lose air service. By 1978, airlines were largely deregulated, but for decades government intervention was exploited to serve the interests of various stakeholders — including the regulated firms. This is an example of regulatory capture.

Capture can take various forms: subsidies, control of entry by competitors, and price-setting, among others. Economist George Stigler, who did much to develop the theory of regulatory capture and to identify prominent cases, concluded that “as a general rule, regulation is acquired by the industry and is designed and operated for its benefit.” Stigler’s work built on earlier research on political utility maximization. He applied those theories to regulation, and helped pave the way for the deregulation wave that began in the late 1970s.

Regulation is typically a response to a perceived market failure, ostensibly to serve the public interest. But as the airline industry example demonstrates, regulatory capture can pose problems for policymakers who want to implement regulation that improves the general welfare. Last spring, people questioned the conduct of the government regulator overseeing offshore drilling. But it's unclear, until the case is unraveled, whether regulatory capture or simple ineptitude contributed to the accident.

A significant insight emerging from capture theory is that a regulator may act, either intentionally or unintentionally, in a way that results in personal or institutional gain. This can be fostered through a close relationship between industries and regulatory agencies. Regulating agencies may have incentive to hire from regulated firms to acquire expertise, and firms may rely on industry-supplied knowledge.

An early federal regulatory effort was the Interstate Commerce Act of 1887. Railroads supported the creation of the Interstate Commerce Commission (ICC) because its rules would strengthen the existing cartel. Previously,

railroads had competed for business through price wars, secret rebates, and price concessions. The ICC is now regarded as a classic example of regulatory capture, in which regulators enact rules in favor of the regulated industry. For example, in the Transportation Act of 1920, Congress allowed the ICC to regulate minimum, not just maximum, shipping rates. The Act also controlled entry into and exit from the industry. Stigler also cited the regulation of long-distance trucking as an example of capture. As roads and vehicles improved, by 1930 trucks posed competition for railroads in long-distance hauling. The railroads then sought state-imposed weight limits on trucks. Soon all states regulated truck weight and dimensions. Stigler noted that Texas and Louisiana limited trucks serving (in competition with) two or more railroad stations to 7,000 pounds. But trucks that served (did not compete with) one station were allowed

twice the weight, 14,000 pounds. In 1935 the Motor Carrier Act gave the ICC the power to control permits, approve routes, and set tariffs. That discouraged new entrants. Ultimately, Congress deregulated the industry over industry and union opposition, but it took a long time, until 1980.

Regulatory capture also can become institutionalized. For example, local and state citizen boards may be comprised of those who work in a profession or industry, creating a potential conflict of interest. In some states practitioners of law, medicine, dentistry, cosmetology and others may draft laws that determine the qualifications of those eligible to enter their occupation.

The extent of regulatory capture depends to some degree on the intensity of interest among those affected. Regulated firms may have much

at stake in regulatory activity. Consumers, though, will have a small or diffused stake in the outcome. Environmental regulation is a classic case where regulated firms have concentrated interests, but individual interest is diffuse. Environmental organizations act as intermediaries, ostensibly promoting the public interest through lobbying and other efforts.

An essential insight of Stigler and other economists who followed his lead was that all players in the regulatory regime — firms, bureaucrats, interest groups, and legislators — act as economic agents who have the interest and opportunity to advance strategic actions. Although public service may motivate players, Stigler pointed out that these are not the only incentives at work.



RF

ILLUSTRATION: TIMOTHY COOK

# RESEARCH SPOTLIGHT

## Unemployment Benefits and Job Searches

BY DAVID A. PRICE

In July, President Obama signed legislation to extend the availability of federally funded unemployment benefits for workers who have exhausted their state unemployment benefits. Opponents of the measure, titled the Unemployment Compensation Extension Act of 2010, contend that unemployment benefits are a disincentive for recipients to seek new jobs; extending the benefits, these critics say, prolongs the recipients' unemployment.

How much, if at all, do unemployment benefits affect job searching? Labor economists have studied this question for decades. In 1977 Northwestern University's Dale Mortensen developed a seminal model relating unemployment benefits to job-search effort. Mortensen predicted that although rising benefits would depress job-search effort on the part of those workers eligible for benefits, they would also motivate some workers who have exhausted their benefits to try harder to find a job — because holding a job gives a worker rights in future unemployment benefits, and so increasing benefits makes job-holding more valuable. (Mortensen shared the 2010 Nobel Prize in economics for his work on labor markets.)

Subsequent research has found that hikes in unemployment benefits are indeed associated with longer periods of joblessness and also that the rate at which recipients find jobs goes up when they run out of benefits. Are these relationships the result of incentive effects on the recipients' efforts to find jobs?

Alan Krueger of Princeton University and Andreas Mueller, a Ph.D. student at Stockholm University's Institute for International Economic Studies, looked at the question in a new way by analyzing how much time workers spent on job searching. Krueger and Mueller relied on data from the American Time Use Survey (ATUS) of the Bureau of Labor Statistics and the U.S. Census Bureau. Since 2003, ATUS has measured the amount of time people spend each day in various activities, such as in paid work, child care, household tasks, and shopping. Interviewers collect this information from respondents by telephone. Some activities that the ATUS counts as job searching include researching job openings, completing job applications, sending out resumes, interviewing, and related travel.

The authors looked at ATUS data on 2,171 unemployed individuals whom they divided into four groups: those who had lost their jobs, those who expected to be recalled to

work by their previous employer, those who had voluntarily left their jobs, and those who had newly entered or re-entered the work force. (The first and second of these groups are typically eligible for benefits; the third and fourth generally are not.) They incorporated the data on time usage — specifically, the number of minutes per day spent on job searching — into regression models as the dependent variable. The regressions also included the maximum weekly benefit amount (which varies from state to state), education, gender, marital or cohabitation status, the presence of children in the household, and other independent variables.

For workers who were eligible for unemployment benefits and who were not expecting to be recalled to their jobs, Krueger and Mueller found that they devoted less time to job searching as the maximum weekly benefit amount went up. The search efforts of those workers with more limited financial resources responded more strongly to unemployment benefits: The relationship was stronger for low-income workers (annual household incomes below \$25,000) than for other workers, and it was stronger for workers who did not have work-

ing spouses or partners than for those who did. In contrast, for workers who were ineligible for benefits, the regressions indicated no statistically significant relationship between unemployment benefits and job searching.

The authors also found that the amount of time spent on job searching varied as the end of the worker's eligibility approached, which occurs in most state programs after week 26 of unemployment. For workers eligible for benefits, the time spent on job searching increased dramatically between weeks 15 and 26, from less than 20 minutes per day to more than 70 minutes. And when a worker's benefits expired, the time spent on job searching dropped back to roughly 25 minutes, near their original levels. "One possible explanation," they wrote, "is that the unemployed become discouraged if they fail to find a job despite increasing their search effort before UI benefits run out." For ineligible workers, the time spent on job searching was "fairly flat" over time.

Krueger and Mueller are conducting a follow-up study with a larger sample of more than 6,000 unemployed workers, who are being surveyed on a weekly basis to track how their search time changes over the period of unemployment, how they adjust their reservation wage (that is, the lowest amount they are willing to work for), and whether they receive job offers, among other issues. **RF**

"Job Search and Unemployment Insurance: New Evidence from Time Use Data." Alan B. Krueger and Andreas Mueller. *Journal of Public Economics*. April 2010, vol. 94, issues 3-4, pp. 298-307.

# Fuzzy Math

## Public Pensions are Underfunded — How Bad Is It?

BY RENEE COURTOIS HALTOM

About 7.7 million retirees in the United States currently receive benefits from public-sector pension plans. Another 19 million workers will one day be added to the recipient list. They work or have worked for states, municipalities, police forces, and schools. Public pensions hold more than \$3 trillion in assets, and disbursed more than \$175 billion in benefits to retirees in fiscal year 2008 — nearly \$23,000 a year for each of those current retirees, according to the U.S. Census Bureau.

But public pension funding levels have fallen precariously low in some cases. The financial crisis carved a 25 percent dent in the median plan's assets in 2008. In better times, investment returns can cover three-quarters of a public pension plan's costs for the year (employee and employer contributions make up the rest). Poor asset performance has drawn attention to worsening funding positions of the plans over the last two recessions.

Funding levels always fluctuate with the business cycle. But many commentators say the problems are different this time: The recent recession was the second major market decline in a single decade, and now underfunding is both severe and pervasive across plans. The worst projections suggest plans will start running out of money in less than a decade. Since states are required to balance their budgets each year, that means any shortfalls may be covered by taxpayers.

In aggregate, public pensions were about 84 percent funded in fiscal year 2008 (the last year for which a comprehensive estimate is available), according to a recent report by the Pew Center on the States, a Washington, D.C.-based think tank that studies state issues. That's a gap of \$452 billion.

And pensions aren't the only public obligation coming due. Adding in promised health care and other nonpension benefits for retirees makes the shortfalls look even larger. The Pew Center estimates there are \$587 billion of these liabilities outstanding, with less than 5 percent of them funded as of fiscal year 2008. Only two states, Alaska and Arizona, had funded more than half of health and other nonpension benefit liabilities. This is largely because states were not required by official accounting standards to acknowledge and report the liabilities until 2006. Many funded them on a pay-as-you-go basis until just recently, so they're in the process of catching up on funding. Still, combining the unfunded liabilities of public pensions and other public worker retirement benefits yields a gap of about \$1 trillion. That roughly equals states' total outstanding bond debt as of 2008, and almost one-third of the Pew Center's estimate of total retirement liabilities.

Looking at pensions alone, Illinois is in the worst shape, with assets equaling just 54 percent of liabilities, followed by Kansas (59 percent) and Oklahoma (61 percent). Half the states' plans were fully funded as recently as 2000. By 2008 only four states met that bar. The Federal Reserve's Fifth District includes states on both ends of the performance

PHOTOGRAPHY: GETTY IMAGES



spectrum (see chart page 17). North Carolina is in good shape at 99 percent; only four states nationally were better funded in 2008. In contrast, only six states were performing worse than West Virginia. It was funded at 64 percent. Before the recession the state was on a track toward improvement, in part by having made large annual contributions over the last decade.

Sizing the shortfalls is not easy. The asset side of the equation is skewed by “smoothing” investment gains or losses, usually over five years, to get a better sense of trend performance. Though this is standard accounting practice, it makes both exceptional and dismal years, like recent ones, look moderate. West Virginia is one of three states that doesn’t smooth at all, so on paper it took a larger hit than most in 2008, partially explaining its poor performance. But for the other 47 states, smoothing means the gap is likely to appear larger once reports on fiscal year 2009 begin to trickle out, says Kil Huh, Pew Center research director and one author of its recent report. As recent bad years replace more distant good years in the smoothing sample, funding levels will look worse.

Meanwhile, estimating the true size of liabilities is not straightforward. That requires translating tomorrow’s benefit obligations into today’s dollars, a practice called discounting. A small change in the discount rate can cause huge swings in how large liabilities appear, so the choice of rate is important — and quite controversial. Many economists say public pensions currently use assumptions that are much too optimistic, which understates liabilities and encourages plans to set aside less money today.

It is not necessarily troublesome if a plan is underfunded; it’s a matter of degree. “A plan that’s funded at 40 percent probably has an underfunding problem. A plan that’s funded at 80 percent is not necessarily in as bad a condition,” says Keith Brainard of the National Association of State Retirement Administrators, whose members are public pension sponsors. “The more important factor is whether the pension plan is causing fiscal stress for the plan’s sponsor, the employer: the state, the school district, the city.”

That’s the feared outcome. Everyone is in agreement: Even if plans were to run out of money, pension benefits will be paid one way or another. That means either taxes must be raised or other government services reduced, both of which would be painful and would almost certainly harm local economies.

### **Making the ARC**

There are more than 2,500 public pension systems in the United States according to the Census, but the largest 75 plans account for more than 80 percent of assets and participants. Some states such as Hawaii and Maine have just one state-sponsored plan for all state and local government employees plus “special districts” like utilities, hospitals, and schools. Other states, like Pennsylvania and Illinois, have hundreds of independent public plans. In some states the localities pay as much as three-quarters of the total contri-

butions to state-administered plans, but in other states localities pay for none of them.

The array of structures and political dynamics causes funding levels to differ widely across plans, but some themes do emerge. Public pensions “got religion” about funding in the late 1970s and early 1980s, according to Alicia Munnell of the Center for Retirement Research (CRR) at Boston College. Public-sector employment grew in the 1960s and early 1970s, and a public study on the plans in 1978 brought some attention to the inconsistent and nontransparent treatment of their growing liabilities. Then stock market performance improved, and in 1986 the Governmental Accounting Standards Board (GASB) created the first standards for how public pensions should disclose plan assets and liabilities. As a whole they vastly improved their funding levels over time.

For the most part, that means they were diligent about making the annual required contribution (ARC). The ARC is the amount a plan sponsor must contribute in a given year, based on current liabilities and certain assumptions, in order for it to be fully funded as of some future date (up to 30 years out, depending on the plan). Experts say a plan consistently making its ARC payments is one of the most important ways to keep it healthy, since falling short in one year means more must be contributed in subsequent years to catch up.

The stock market boom of the late ’90s helped plans by beefing up asset performance. Funding looked rosy; some plans even became overfunded. Many plans succumbed to pressure to increase benefits or reduce contributions, just as plans were hit with a rough decade that included the 2001-2002 market slowdown and the recent financial crisis. That, combined with growing public awareness of the economic implications of the aging population, has brought considerable public attention to the health of public pensions.

Pension benefits to existing public-sector retirees go up but rarely go down. In good times public pensions often increase benefits — some states even have provisions whereby any excess returns are automatically devoted to increasing benefits — while in bad times many simply fail to make the full ARC payments. The vast majority of public pensions are defined benefit plans, in which the amount of benefits is guaranteed (versus defined contribution plans, where benefits are accrued based on how contributions perform once invested). In almost all states, public pensions are legally restricted from cutting benefits that have already accrued from past years of work. States that have tried face lawsuits, most notably the ongoing cases against the state pensions of Colorado, South Dakota, and Minnesota, which attempted to reduce cost of living adjustments (COLAs) already promised to existing and future retirees.

Public pensions have time and again been regarded by courts as a constitutionally protected contract between states and employees. In the face of severe fiscal crises, New York City in the 1970s and Orange County, Calif., in the 1990s both cut jobs, reduced services, and imposed losses on bondholders. Orange County even declared bankruptcy.

Yet neither failed to make full pension payments because the legal status of benefits is so well established.

This is true in the private sector as well, says Andrew Biggs of the American Enterprise Institute, a Washington, D.C.-based think tank. In general, accrued benefits are protected under the Employee Retirement Income Security Act (ERISA). But private employers have proven more willing to cut future benefits in bad years — raising the retirement age, suspending 401(k) matching for a period (private retirement plans are more likely to operate under a defined contribution framework), or changing benefit accrual rates. “I think that would be a better way of doing it in the sense that if your alternative is firing 10,000 teachers, you would instead scale down wages, scale down pension contributions,” he says. “It’s a badly designed thing but there’s a variety of reasons it says that way.”

### The Discounting Debate

How bad is underfunding? That centers on the question of whether tomorrow’s liabilities are being accurately measured.

Pension boards and policymakers base funding and benefit decisions in large part on the guidance of actuaries, who in turn look to the GASB. Its rules say future pension liabilities should be discounted using the plan’s expected rate of return on assets. Plans on average assume about an 8 percent return.

Is that too optimistic? Accountants and economists tend to disagree on this issue. Actuaries point out, correctly, that public pensions have averaged more than 9 percent returns over the past 25 years. They say this makes their assumptions both realistic and the truest indication of how much would have to be put aside today in order to reach tomorrow’s funding goals.

Economists, on the other hand, would ask how certain are the future obligations. Can public funds reduce benefits or otherwise step down from liabilities if funding falls short? History has proven that they cannot, so pension liabilities are a “risk-free obligation” in finance parlance. Therefore, public pensions should measure liabilities as if they were going to invest all contributions in very safe but relatively low-yielding assets, such as Treasury bonds. Discounting at a risk-free rate would reflect the risk of payments from a taxpayer’s perspective, and accordingly calls for public funds to set aside more money today. Public pensions could still invest funds in the same equities and other risky assets that have historically produced favorable returns on average, however. Economists argue that discounting is mostly about measuring the liabilities accurately.

The Pew Center’s estimate of a \$452 billion gap in pension funding takes the GASB-recommended discounting method as given. An alternative, more pessimistic scenario is presented by researchers Joshua Rauh and Robert Novy-Marx of Northwestern University and the University of Chicago, respectively. They re-estimated the liabilities of the 116 largest pension plans sponsored by the 50 states using GASB discounting methods. Those plans had stated liabilities of \$2.98 trillion and assets of \$1.94 trillion in 2008.

But by discounting liabilities at a Treasury rate, they find that liabilities actually exceed \$5 trillion, and the funding gap is greater than \$3 trillion — more than \$10,000 for every individual in the United States. Ohio is in the worst shape under their methodology in terms of its unfunded liabilities as a percent of tax revenues. The state would need to devote almost nine years of tax revenue solely to pension funding simply to catch up to already-made promises.

An alternative way to assess the seriousness of underfunding is to estimate when state plans will run out of money based on current assets and future payments to retirees. In a study published earlier this year, Rauh assumed that all future contributions would exactly cancel out any future additions to liabilities. The result: Seven states would run out of money by the end of 2020 — even if they do actually realize 8 percent returns on investments.

Munnell and her colleagues performed what perhaps may be thought of as a more charitable exercise. They took into account that plans could use the contributions of future workers to fund payments for today’s retirees. That would hurt the long-term funding position of plans, but could prove useful in a funding pinch. Their analysis, too, shows many plans running out of money in the next couple of decades. But it pushes the date of insolvency out far enough, arguably, for plans to improve funding levels and realize an improvement in asset performance. In other words, the best guess about when the day of reckoning will arrive depends crucially on one’s assumptions.

When private pensions ran into underfunding problems in the 1980s, the federal government responded by recognizing that many fund sponsors did not have the wherewithal to increase contributions when the return on equities fell short of expectations, writes Munnell with CRR colleagues Richard Kopcke, Jean-Pierre Aubry, and Laura Quinby. The private pension insolvencies placed enormous strain on the Pension Benefit Guaranty Corporation (PBGC), which insures a fraction of private pensions. The solution drawn by the government for the private sector was to establish minimum contribution standards anchored by more conservative assumptions about the returns fund managers would earn over time on pension assets.

But administrators of public funds argue their plans are different. Corporations could go bankrupt at any time, leaving the PBGC footing the bill, and therefore are required to maintain a much shorter, more conservative focus, Brainard says. This differs from the “going concern” nature of public employers, especially of the largest plans, which are state-sponsored and not likely to go bankrupt any time soon. “As a result it’s more reasonable for these entities to keep a longer term focus, to invest on a longer term basis.” That’s why public plans are allowed to stretch their target for full funding over 20 or 30 years. “There’s no compelling reason at any point that a public pension plan should necessarily be fully funded.”

But some caution is warranted because of who bears the risk in the event that a fund runs out of money, Biggs says.

“If a corporation earns a profit or loss on operations, it’s not the corporation that bears it; it’s passed on to the shareholders or the employees,” says Biggs. Similarly, if the government comes up short on pension payments, it’s not actually the government that bears the burden. “It’s people who pay taxes to the government, people who would be employees of the government, or other beneficiaries of the government. It’s the stakeholders.”

Passing risk on to subsequent generations is exactly what the GASB rules intend to avoid. “One of GASB’s main criteria is interperiod equity, that the current crop of taxpayers should pay for the services they receive,” Brainard says. “If we begin to charge for those services as if we’re going to achieve a risk-free return then we stand a very good chance, in our view, of overcharging the current crop of taxpayers and undercharging the future taxpayers,” he says. “You shouldn’t put it off to the future, but neither should the current crop of taxpayers pay for more than they are receiving.”

These multiple considerations show there are no easy answers to the discounting question. So the debate rages on — with little resolution. Munnell says economists and actuaries are talking past each other because they’re performing fundamentally different exercises.

“I think actuaries are in the business of best guesses. They’re trying to say, ‘Using our best guess, how much should you have to put aside to fund this plan and to pay off the unfunded liability? And our best guess is that we’re going to earn what we’ve earned in the past,’” she says. “And the economists say, ‘Listen, all I’m interested in is how big are your liabilities. And if you’re absolutely going to have to pay them, 100 percent, then they have to be discounted by a rate that reflects their riskiness.’”

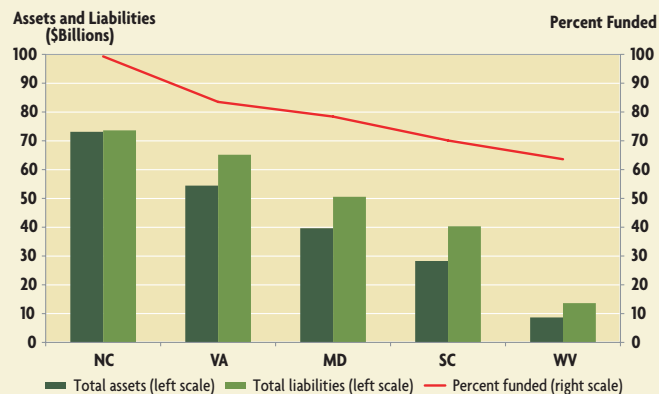
### No Quick Fix

Perhaps the greatest value of conservative discounting would be to limit the opportunity for reckless behavior. Munnell refers to CalPERS, the California public employee pension system, and the largest public pension fund in the nation. Funding in the late 1990s exceeded 110 percent using the expected return on assets. Times looked so good that it dramatically increased benefits, she says, and the state is still paying for that today. Using a risk-free discount rate, the plan would have appeared only 76 percent funded at the time. History has proven that it matters how big liabilities appear.

But for now, policymakers’ hands are tied, Munnell says. Suppose the pensions utilize 5 percent discounting as finan-

## Fifth District Funding

Pension funding levels in fiscal year 2008



NOTE: Data not available for Washington, D.C.

SOURCE: Pew Center on the States, “Trillion Dollar Gap,” February 2010

cial economists suggest. Then what? Liabilities would look larger, and therefore so would the ARC payments that would keep a given plan funded. But in reality there’s still not that much public pensions can do in the short term to improve their position. It would be difficult to increase contributions when state and local governments are struggling through fiscal woes and depressed economies. They can’t reduce benefits for existing retirees, as legal precedent has thus far proven.

Benefits can be reduced for future workers but the potentially significant cost associated with that is to render public sponsors less competitive as employers. So keeping pensions healthy is not the only factor public entities are dealing with, Brainard says. “It’s also the risk of being able to ensure that we have the resources necessary to provide public services: Schools are taught, streets are policed, fires are fought.”

At any rate, that wouldn’t help their finances until years to come. “It’s like turning a major tank ship in the sea,” says Huh of the Pew Center. “You make these small adjustments and you get on a different path. That’s basically what we’re seeing with the pension system.” For example, about 20 years ago Minnesota increased its retirement age for new employees, from 65 to 66. “But now 70 percent of the work force is covered by that one year change. It has managed to save the state about \$650 million.”

In the end, it may be a waiting game. Improving funding levels will depend largely on a recovering economy and financial market. It remains to be seen whether the current focus on public pension health will hold when the economy recovers.

**RF**

## READINGS

Aubry, Jean-Pierre, Alicia Munnell, and Laura Quinby. “Public Pension Funding Standards in Practice.” Paper prepared for the National Bureau of Economic Research State and Local Pension Conference, Moran, Wyoming, August 2010.

Novy-Marx, Robert, and Joshua Rauh. “The Liabilities and Risks of State-Sponsored Pension Plans.” *Journal of Economic Perspectives*, Fall 2009, vol. 23, no. 4, pp. 191-210.

Rauh, Joshua. “Are State Public Pensions Sustainable? Why the Federal Government Should Worry About State Pension Liabilities.” *National Tax Journal*, September 2010, vol. 63, no. 3, pp. 585-601.

*The Trillion Dollar Gap: Underfunding State Retirement Systems and the Roads to Reform*. Washington, D.C.: The Pew Center on the States, February 2010.



## Fiscal problems in a number of European countries have raised concerns about long-term economic performance and the future of the eurozone

BY ROSS LAWRENCE

Concerns about sovereign debt — essentially, the debt of national governments — in Europe have spread briskly. For many in the United States, perhaps the most disconcerting element of the debt crisis is that fiscal spending, debt repayment, and currency valuation issues thousands of miles from home can have real implications for the American economy. Investors, for instance, recall the Russian default of the late 1990s and the turmoil that followed in financial markets.

How did fiscal problems in southern Europe become so severe, raising concerns about the sustainability of the economic recovery in the region? And how did the euro, a currency that some economists and policymakers once speculated could replace the dollar as the world reserve currency, lose nearly a quarter of its value against the dollar during the past two years?

### Timeline of the Crisis

In October 2009, the Socialist Pasok Party won the Greek national elections in a landslide, ousting a center-right government plagued by both a corruption scandal and growing economic turbulence. With Greece under new leadership, its government began revising the country's questionable budget outlooks. It adjusted the projected deficit to 12.7 percent of GDP, more than double the deficit projection submitted to European Union (EU) officials earlier in the year. In October, Greece drew a rebuke from the European Commission for failing to meet its deficit targets. European Economic and Monetary Union (EMU) member

countries are generally expected to maintain annual deficits totaling no more than 3 percent of GDP, although some leeway is often granted — Greece had claimed 3.7 percent to be its number earlier in 2009, for example. Also in October, Moody's Investor Services said it would review the country's A1 credit ratings and possibly lower them.

Throughout the final quarter of 2009, officials in Athens reviewed the budget and set goals for reducing the country's shortfall. A finalized budget submitted in November sought to cut the deficit to 8.7 percent of GDP in 2010, a move Prime Minister George Papandreou and his finance minister, George Papaconstantinou, hoped would signal their commitment to reorganizing the country's public finances. But at the same time, forecasts about Greece's debt-to-GDP ratio, the relationship between a country's total outstanding debt and its annual GDP, concerned many. The government's own estimates placed that number at 121 percent in 2010, while EU forecasts saw debt to GDP rising to 124.9 percent that year. In December, the major credit-rating firms — Fitch Ratings, Standard & Poor, and Moody's — each downgraded Greek debt.

During the first quarter of 2010, Greece continued taking steps to curb the looming crisis. The government's policy moves were not enough to allay investors' fears, however, in part because austerity measures — which included public-sector pay cuts, higher excise taxes on cigarettes and alcohol, and stricter retirement rules — prompted large-scale protests that seemed to threaten the government's capability to enact serious change. On March 25, European leaders

agreed to create a joint financial safety net with the International Monetary Fund (IMF) that would allow Greece to receive coordinated bilateral loans financed jointly by both EMU member countries and the IMF. That action would occur only if the situation deteriorated further and was subject to several stipulations, such as Athens exhausting its other borrowing options. Nevertheless, on April 27, S&P downgraded Greek bonds to “junk” status, indicating it saw Greek debt as increasingly risky.

Fiscal troubles have not been limited to Greece. Two other southern European countries — Portugal and Spain — also have faced significant fiscal challenges. When Moody’s put Greek credit ratings on review in October 2009, it changed the outlook on Portuguese debt to negative. More recently, in the second quarter of 2010, both Spain and Portugal received downgrades, with further downgrades for both countries and Ireland into the fall. (Ireland’s fiscal situation worsened sharply in November, the consequences of which were still developing as this article went to press.)

### Response and Outlook

The most ambitious move by the EU came in May, as European officials agreed to a nearly \$1 trillion rescue package of government-loan guarantees for the continent. Leaders intended for the coordinated intervention in government bond markets to send a signal of the EU’s commitment to fledgling financial public finances in Greece, Portugal, and Spain. For Americans, the EU’s move may sound startlingly similar to some of the policies the United States enacted in 2008 during the financial crisis, albeit with a few key differences. “There are certainly parallels between the European rescue package and the U.S. bailout,” said Guillermo Calvo, an economist at Columbia University and former chief economist at the Inter-American Development Bank. “But there are important differences, as well, other than the recipients. Conditions in Europe and the United States are different — the dollar is still the world reserve currency, for one.”

The rescue package and other policy moves may have reduced the threat of another recession caused by European financial turmoil, at least for the time being, Calvo says. But that is not to say that policymakers or investors are out of the woods. “There are a lot of policies in play. Their results are uncertain over the short term, and definitely over the longer term,” said Robert Carpenter, an economist with the Federal Reserve Bank of Richmond and the University of Maryland, Baltimore County. “In my opinion, the evidence suggests that market participants view the risk

of Greek default as moderate to high.”

Desmond Lachman, an economist with the American Enterprise Institute, a Washington, D.C.-based think tank, argues that the rescue package may help “kick the can forward” but that significant changes will be required, and those may be painful. “Greece must get its deficit down from 14 percent of GDP to 3 percent to be sustainable. That kind of fiscal adjustment could bring about deep recession, so it’s a kind of trap that makes it very difficult.”

That scenario could cause problems for Greece’s neighbors. Greek debt sits on the balance sheets of France, Germany, and other Western European countries, Lachman says. The concern is not entirely about Greece, though. “The Greek economy is relatively small,” says Calvo. “The fear is that if Greece goes, then Spain will be the next to fall.” That could cause other eurozone countries, such as Germany, to waiver and refuse to make additional loans, Calvo argues. According to the IMF, as of 2009 Spain was the world’s ninth-largest economy by nominal GDP, while Greece was number 28. The Spanish economy has been anything but robust during the economic downturn, with unemployment at roughly 20 percent.

Default is not inevitable, but the road to fiscal health and stability in Europe is a complex one to navigate. Austerity measures are one piece of the puzzle, but implementing them has proven difficult. Public-sector employees have protested in Greece, at times violently, and austerity measures only passed in Spain by a single vote. If such efforts become too politically contested in either country, there is a chance fiscal recovery efforts will be hampered significantly.

The rescue package is perhaps the most important policy move thus far in determining the trajectory of the crisis. Although the move seems to have quelled some distress, it remains an imperfect solution. “While crises may be contained through the injection of liquidity in the short run,” Carpenter says, “the potential for moral hazard is made worse through bailouts, and now these bailouts involve sovereign states, who can pass the cost of their decisions to residents of other countries.” Carpenter emphasizes that a bailout buys time, but that unless Greece adopts a more sustainable fiscal path, it may face future crises regardless.

The entire effect of the “Aegean contagion” on the United States remains to be seen. U.S. banks are not completely insulated from the situation in Europe, but the degree of the exposure is difficult to determine. Federal Reserve Chairman Ben Bernanke told members of the Joint Economic Committee that “exposures of U.S. banks via credit default swaps or direct

### Sovereign Debt in the European Monetary Union

Outstanding central government debt as a share of 2009 GDP

Greece	125.7
Italy	106.6
Belgium	95.3
Portugal	81.1
United Kingdom*	75.1
Austria	64.3
France	60.8
United States*	53.1
The Netherlands	49.9
Spain	46.1
Ireland	46.0
Germany	43.8
Finland	37.6
Slovenia	34.1
Slovak Republic	33.6
Luxembourg	8.6

NOTES: \*The United States and the United Kingdom are not EMU members. Cyprus and Malta are members of the EMU but not the OECD and are not included on this chart. SOURCE: Organization for Economic Co-operation and Development

holdings to European governments is relatively limited.” But some market participants are less sanguine. Banking analyst Richard Bove speculated in a research report that “big American banks have a bigger stake in this drama than thought.” He estimated that J.P. Morgan Chase, the United States’ second largest bank by consolidated assets, has \$1.4 trillion of exposure across Europe, while the next largest, Citigroup, Inc, has \$468.4 billion.

Although economists and investors disagree about the precise amount of American-bank exposure to Europe, there is little dispute that a systemic crisis in the EMU would be felt sharply across the Atlantic. “A European meltdown would be very bad for the United States,” Lachman says. “There is not high exposure to peripheral sovereign debt, but a major European problem would cause U.S. banks to feel the effects. A declining euro also would hurt U.S. exports to Europe and could cause risk aversion in American markets.”

### The European Monetary Union: Past and Future

Although any country that maintains a high debt-to-GDP ratio risks financial turmoil, the common currency experiment in Europe makes the Greek, Portuguese, and Spanish situations particularly distinctive and unpredictable. One key limitation of being in the euro zone is that, for better or for worse, these countries cannot devalue currency to make debt repayment less painful.

The origins of monetary union in Europe date back to the 1992 Maastricht Treaty, which established provisions for a single currency, and the euro became legal, albeit at first nonphysical, tender for 14 European Union countries on Jan. 1, 1999. Six more countries, including Greece, would adopt the euro during the 2000s. The most notable non-member is the United Kingdom, which still uses the British pound. For the other EU member states, the reasons for monetary union seemed compelling. “It would end forever the exchange-rate volatility that had bedeviled the continent since the breakdown of the Bretton Woods system of fixed rates in the 1970s,” writes economist Niall Ferguson of Harvard University in an opinion article for the Financial

Times. He also points out that proponents of the euro hoped it would end costly currency conversions and lead to greater price transparency that would improve intra-continental trade. But as Calvo, Ferguson, and Lachman each note, the geopolitical reasons were probably just as, if not more, convincing for member states. Centralized monetary control in theory would promote peaceful interdependence among European states, and it would create a currency powerful enough to challenge the U.S. dollar for world-reserve status.

For all the benefits of monetary union, however, the details still proved challenging. The biggest concern for most economists, it would appear, was the divorcing of monetary and fiscal policies — although the EMU established a single currency and thus a single monetary policy, there would be significantly less coordination in terms of member-state spending. Although convergence criteria were put into place and eventually codified with the Stability and Growth Pact, how such rules would be enforced remained unclear.

The sovereign debt crisis may provide the necessary spark for EMU members to discuss fiscal coordination policies in earnest, but any attempts to centralize authority likely will be met with resistance. “It will be difficult to achieve currency stability without fiscal harmonization,” says Calvo. “They have been talking about doing this from the beginning, but I don’t know how they are going to make it happen.” Ferguson touched on a similar note. “What the Greek crisis has belatedly revealed is that such fiscal centralization is the necessary corollary of a monetary union,” he writes, arguing that the choices before the EMU are much more fundamental than simply whether to bail out countries facing significant fiscal problems.

But if ever there was an opportunity to pursue fiscal coordination, now may be the time. “That’s one of the benefits of these crises sometimes,” Calvo says. “Things will be volatile for some time, but this crisis could spark the right policies in the end.” Making such decisions politically possible is the crux of Europe’s long-term recovery, but so far that has proven to be an elusive goal. **RF**

### READINGS

De Grauwe, Paul. “Crisis in the Eurozone and How to Deal with It.” Center for European Policy Studies Policy Brief no. 204, Feb. 15, 2010.

Funk Kierkegaard, Jacob. “In Defense of Europe’s Grand Bargain.” Peterson Institute for International Economics Policy Brief no. 10-14, June 2010.

Lachman, Desmond. “The Greek Economic Crisis and the U.S. Economy.” Commentary delivered to members of the Joint Economic Committee of the U.S. Congress, May 27, 2010.

Schwarz, Steven L. “Facing the Debt Challenge of Countries that Are Too Big to Fail.” Duke Law Working Paper no. 30, 2010.

### Subscribers:

Please send us the **reply card** to keep *Region Focus* coming your way...



# Furniture Firms Eke Out Gains

BY BETTY JOYCE NASH

In the heart of North Carolina's furniture cluster sits a chair, originally installed in 1922, and replaced in 1951. The chair measures 18 feet high, and sits on a 12-foot-tall base. Its presence speaks volumes about the industry's legacy in Thomasville, aka Chair City.

But people don't buy furniture in a recession. It's a purchase that can be put off. The resulting sales slump has accelerated the industry's long-term decline as furniture makers farm out production overseas.

Lately, though, furniture sales are showing a pulse. Nationwide, sales of furniture and accessories, including rugs, rose 2 percent over the first half of 2010. That was good news. In 2008, sales fell by 9 percent; in 2009, the decline was 11 percent, according to the U.S. Department of Commerce.

The blip in business has emerged from the residential, not the commercial, market. Sales of office furniture fell by 30 percent in 2009, but are expected to increase modestly, by 1.5 percent, in 2010, and by 9 percent in 2011, according to the Business and Institutional Furniture Manufacturer's Association.

The recession hammered manufacturing employment. North Carolina had more than 90,000 people working in furniture and related products in 1990; now there are fewer than 32,000. That's because today 72 percent of the wood furniture sold in the United States is made elsewhere, mostly in Asia. Taiwan started manufacturing furniture in the 1980s, and the industry developed in China in the 1990s. Today Vietnam is the growing center of production, according to Richmond, Va.-based furniture analyst Jerry Epperson, of Mann Armistead & Epperson, an investment banking firm.

The growth of container shipping facilitated the trend, but as higher gasoline prices and other factors drive up shipping costs, supply chains may change. In fact, some Chinese firms have located plants in the United States. The upholstered-furniture firm Craftmaster of Taylorsville, N.C., is part of China-based Samson Holding.

Domestic manufacturers still retain an edge in bulky, hard-to-transport goods. The United States dominates mattress making, for instance. The product is sold first, then delivered, to avoid retail storage problems. Custom, high-end upholstered furniture is also a domestic strength, according to Andy Counts of the American Home Furnishings Alliance. "If you're someone like Bernhardt [Furniture Co.] using a high-end, detailed fabric where the pattern has to match, it takes a lot of skill to make that happen."

Every sofa that costs more than \$1,000 is sold before it's made, Epperson says. "Yes, they can make it overseas," he says. "Are they going to be able to make it in long production runs? No." For instance, Chinese firms make leather sofas, but mostly in standard black or brown. For now, 37 percent of upholstered furniture comes from abroad. Upholstered production is strong in North Carolina and Mississippi.

As the industry continues to re-vamp, more manufacturing jobs disappear. Stanley Furniture is letting 530 people go at its Virginia plant as the firm relocates production of its adult furniture product line offshore. The firm will keep its Robbinsville, N.C.,

factory, from which 350 people were cut in 2008. Stanley reported its second quarter 2010 sales fell by 10.5 percent over the same quarter in 2009. But that was 3.8 percent better than first quarter 2010. Second quarter's \$11.5 million net loss reflected accelerated charges related to the firm's restructuring.

"Business conditions in the second quarter remained sluggish with a downturn in sales for June showing that today's consumer continues to take a cautious approach toward the purchase of wood furniture in our price segment," according to Glenn Prillaman, president and chief executive officer.

But amid the layoffs, some firms plan modest expansions. A furniture assembly plant owned by United Furniture, with 150 workers, will open in High Point, N.C., in a distribution center vacated by Stanley. A Canadian office furniture manufacturer also plans a High Point facility that will employ about 75.

Another hopeful sign: More buyers showed up at the semi-annual International Home Furnishings Market in High Point last spring. The market is the most prominent furniture exposition worldwide, with 12 million square feet of space; the event promotes many permanent retail showrooms in the area. Buyer attendance at the fall market remained flat from 2009 to 2010, but there was growth in the number of new buyers attending, says Brian Casey, president and chief executive officer.

The recovery is slow. Bassett Furniture reported a 1.5 percent sales increase, including a 17 percent sales increase in its upholstery division, at the end of its traditionally slow third quarter, which ended Aug. 28, 2010. The firm still lost \$2.4 million for the quarter, but that was an improvement over the previous year's loss of \$3.4 million in the same quarter.

While the furniture industry has shrunk, the collection of businesses that cater to furniture in the High Point area remains strong, Casey says. The region is nevertheless a significant cluster, and positions North Carolina to build on existing businesses in design, marketing, logistics, distribution centers, and component manufacturers. **RF**



*This steel-skeleton "Big Chair" went up in 1951 to commemorate the city's reputation as The Chair Town or Chair City. It is a reproduction Duncan Phyfe armchair and overlooks the town square.*

# Out from the Shadows

## The run on shadow banking and a framework for reform

BY RENEE COURTOIS HALTOM

One reason the recent financial crisis caught many regulators and economists off guard is that the problems arose in a sector of financial activity which existed largely outside of view. A narrative that's catching on in academic and policy circles is that much of the financial crisis was a garden-variety bank run, in which many depositors withdraw at once, rendering a bank insolvent. Only *this* run occurred in the "shadow" banking sector, which before the crisis many people didn't traditionally think of as banking and therefore didn't appreciate its susceptibility to runs.

That's because the primary actors were not commercial banks. The shadow banking system performs a role similar to traditional banks — credit intermediation, or connecting lenders and borrowers — except the lenders and borrowers are large businesses, broker-dealers, and institutional investors with millions or billions to invest and lend at a time. Also, like traditional banking, much of the credit intermediation in the shadow banking system takes the form of maturity transformation — issuing short-term, liquid liabilities against longer-term, less liquid assets.

The traditional banks patronized by households and businesses are backed by federal deposit insurance and have access to liquidity from the Fed. Both backstops help prevent bank runs and make the system relatively stable. Because government support may weaken market discipline, banks are also regulated, which supports that stability.

Shadow banking activities, on the other hand, faced no explicit government support and no safety and soundness regulation before the crisis. Runs on the system occurred in 2008 when "depositors" withdrew their funding from "banks."

Because of the havoc that followed, the term "shadow banking" now has a generally negative connotation. Yet it remains a vital component of the financial system. The shadow banking system may have exceeded \$20 trillion in liabilities at its peak, possibly doubling that of the traditional, regulated banking system. Today it stands somewhere around \$15 trillion. Shadow banking is critical because it funds the traditional banking sector by purchasing loans from bank balance sheets. This allows banks to shed risk and extend additional credit. Without shadow banking, traditional banking likely would be much costlier for households and businesses.

And the system generally operates well — until there's a crisis. If the sector breaks down, it can constrict the flow of credit until it risks bringing the economy down with it. The recent financial crisis has led to a far greater understanding of the weaknesses posed by the system and the opportunities for making it more sound, but reform still has far to go.

### Banking's Crawl to the Shadows

According to Yale University economist Gary Gorton, a leading researcher on the development and operation of the shadow banking system, banking's crawl to the shadows occurred over three or four decades as financial markets and regulators adjusted to accommodate an increasingly dynamic economy. This was marked by at least three trends.

The first change, according to Gorton, was that traditional banking became less profitable. Banks were restricted from paying interest on demand deposits. In the high interest rate environment of the late 1970s and 1980s, banks faced increasing competition from interest-bearing services offered by nonbanks such as money market mutual funds. Meanwhile, banks also were prohibited from exotic services such as insurance and securities underwriting. The bank charter grew less valuable relative to other types of financial business.

Banks found a way to finance themselves that was much more profitable than deposit taking and its associated costly regulatory requirements. They securitized the loans they made and sold them to eager investors, which shifted assets and associated risks off their balance sheets. Securitization was such a successful innovation that even nonbanks, like large corporations that issue credit cards or auto loans, used it.

The second change Gorton notes is the explosion of institutional investing, including pension funds, mutual funds, and insurance companies. "These guys are sitting on mountains of cash — that is, in the course of their business, everything is not invested 100 percent of the time," Gorton says. Even nonfinancial corporations, the Microsofts and Boeings of the world, have large treasury departments that hold cash to pay bills and payrolls — so they can't tie it up in investments but need a safe, short-term place to hold it. "Essentially they need a checking account," he says. But the prohibition of interest on demand deposits made the traditional banking sector a poor choice as a place to park those



large sums, and their balances would well exceed limits on deposit insurance, today set at \$250,000. This trend created a demand for safe, short-term investments.

And that led to a growing demand for collateral — the third change Gorton notes — to add safety to investments outside the insured and regulated banking sector. Collateral, or treasuries and high-grade bonds, acts like currency in the market for funds. Institutions are able to borrow large sums to fund operations because they set aside collateral that the lender takes ownership of in the event of default. Collateral makes shadow lending safe, in theory, much like deposit insurance does for commercial banking. Derivatives alone required about \$4 trillion in collateral by the end of 2008, according to the International Swaps and Derivatives Association, and many other forms of private borrowing are also backed by collateral. That means no one really knows for sure how much collateral the modern financial system requires to function. What we do know is there is a large demand for safe, liquid securities to act as collateral.

The supply of collateral eventually grew to meet that demand. As shadow banking grew, and foreign governments acquired greater amounts of U.S. Treasury debt, highly rated securitized assets like mortgage-related securities and collateralized debt obligations stepped in as instruments of collateral.

These three trends, Gorton says, produced the shadow banking sector that existed before the crisis. Shadow banking essentially creates a checking account for large institutions, and in that sense it is money creation, just like households' checking accounts. In fact, the Fed used to count some shadow banking instruments as money in M3, the broadest measure of the money supply. The Fed stopped measuring M3 in 2006 because the costs of tracking all that complex, private activity exceeded the minimal benefit it provided to the conduct of monetary policy.

### The Repo Market

A major instrument in shadow banking is repurchase agreements or “repos,” a type of short-term loan. Here's how a repo contract works: I agree to lend you \$100 for a set period of time, often just one day. You use the \$100 to make investments or pay off other liabilities, and in the meantime you give me a set of bonds — perhaps highly rated credit card or mortgage securitizations — with a market value of \$102 as collateral. The extra \$2 provides a small buffer, called a haircut, in case you're unable to pay the loan back and I have trouble reselling the bonds to recover my funds. The harder it would be to unload the collateral on the market, the greater the haircut I would require. After the period expires, I give you back the collateral, and you give me back the \$100 plus interest — although many repo lenders simply “roll” their investment each day and stay invested. Repos are much like a demand deposit, which can be withdrawn at any time, so repo lenders are “depositors” in the shadow banking system.

The size of the repo market is staggering. One large com-

ponent is the “tri-party” repo market, in which repos are funneled through one of two national clearing banks, JPMorgan and BNY Mellon. These clearing banks report that the largest lenders individually provided more than \$100 billion daily before the crisis. At the peak the tri-party market financed a monthly average of \$2.8 trillion in assets. The market is relatively thin: The top 10 cash borrowers account for 85 percent of tri-party repo volume, and the top 10 lenders provide about 65 percent of the funds invested. Institutions would regularly borrow \$100 billion in the tri-party repo market, sometimes as much as \$400 billion. Many borrowers were highly leveraged. Investment bank Lehman Brothers, for example, maintained \$700 billion of assets and corresponding liabilities on capital of about \$25 billion. A large portion of those assets were long-term investments that could not easily be sold if cash were needed, yet Lehman, like others, chose to fund them largely through short-term repo markets since copious demand for short-term investments made that funding source cheap. In 2008 Lehman would sometimes roll over \$200 billion of its balance sheet each day in repos.

Many market participants also use repos that are not funneled through any common intermediary (called simply “bilateral” repos). “Almost nothing is known about this whole market,” Gorton says, so there is no way to know for sure how big the repo market ultimately became. His best estimate, based on existing knowledge of various corners of financial activity, is that the total repo market may have grown as large as \$12 trillion, a couple trillion larger than the traditional banking sector.

### Fixing the Run on Repo

How was the breakdown of repo markets like a bank run? Repo lenders face a daily decision to roll over the investment — that is, to not “withdraw” their funds from the shadow banking system. The more repo lenders withdraw, the more likely the borrower is to become insolvent and default, leaving lenders with the collateral. Yet if repo lenders begin to not want or trust the collateral, their version of deposit insurance, they'll be more likely to withdraw their investment. If this self-reinforcing cycle escalates, lenders have no choice but to withdraw or risk being the last one standing and holding potentially devalued collateral.

Here's how this played out during the fall of 2008: On rumors of severe housing exposure and potential failure, Lehman Brothers' counterparties refused to roll over the investments that funded its operations. This created a panic. Investors were uncertain which large institutions — many of which they or their counterparties had extended loans to — could face a funding crisis next. Yet mounting subprime defaults also made investors doubt the value of the collateral that was supposed to make them whole. Repo lenders began requiring larger and larger haircuts as insurance. Repo borrowers were forced to sell other assets in order to provide the haircuts. As the panic wore on, more and more assets were sold and their prices dropped, requiring the borrowers

to sell still more, dropping their prices further. Collateral became worth less and less until repo lenders stopped lending entirely. That took away a major ultimate funding source for virtually all types of economic activity, all within a matter of days.

The run was stemmed when the Federal Reserve, the Federal Deposit Insurance Corporation, and the Treasury stepped in to provide short-term loans through a variety of liquidity facilities. Through the course of the crisis these facilities were targeted to a number of shadow banking markets in addition to repo. The shadow banking system has contracted by \$5 trillion since the crisis (see chart), estimate a group of New York Fed researchers, but they and many others argue that official lending drastically reduced the negative effect on the economy, which otherwise may have gone into an even deeper recession.

The run on repo markets was no different than the bank runs modeled 30 years ago by economists Doug Diamond and Philip Dybvig, says Morgan Ricks, a former hedge fund trader and U.S. Treasury employee who currently teaches at Harvard Law School. Their model's innovation was to show how the banking system can be subject to runs even if all actors are fully rational and informed, an instability the government can cure by insuring deposits. If there is a similar fundamental instability in repo markets, an important consideration for policymakers is the extent to which that market requires some kind of government support in order to remain stable.

The key for repo markets, according to Gorton, is to recognize that safe, liquid collateral functions like deposit insurance for repo lenders. To create those conditions, collateral needs to be what he calls "information insensitive." These are assets so safe that it is not profitable for anyone to expend resources analyzing them for arbitrage opportunities. As a result they should be impervious to large price swings based on new information, safe for relatively uninformed agents to hold, and very likely to remain liquid.

Many types of securitized debt, including those used as collateral, met the definition of information insensitivity. Much of the debt was deemed by rating agencies to be near riskless. The chain of mortgage securitization in some cases was prohibitively complex or literally impossible to trace, Gorton argues, which raises the cost of gathering information about the risk. High ratings and the expectation that the asset's value was not vulnerable to new information may have made these assets ideal as a form of collateral.

But investors can become unwilling to hold those instruments of collateral when it suddenly becomes profitable for the market at large to produce information on them — for example, when significant, previously unknown exposures to subprime losses become apparent and there are potentially large mispricings to trade on. When this took place, repo lenders withdrew their investments rather than launch the costly infrastructure that would be required to assess the collateral's value on an ongoing basis. In a blackout it is too late for everyone to become an electrician, Gorton says.

Repo investors arguably didn't place a high probability on this outcome for a number of reasons. The borrowers were major broker-dealers like investment banks that had no interest in defaulting (and may have been perceived as implicitly backed by government liquidity in the event of failure, an expectation which would turn out to be true). So the risk of ever taking ownership of the collateral may have seemed small. Even if borrowers defaulted, much of the collateral was ultimately based on house prices, which had never declined on a national scale.

Despite the unexpected outcome, it hardly makes sense for everyone to become an electrician in the future, Gorton says. Rather, he supports a proposal that has been floated in the wake of previous financial disturbances, that of "narrow banking." Only a heavily regulated and restricted set of banks would be allowed to purchase securitized assets. They in essence would manufacture safe collateral for the shadow system to use, again, as currency in the market for funds. Effectively, the government would determine which securities are eligible to be used as collateral, verify their safety, and provide liquidity via the Fed's discount window in the event of panic. This safe supply of collateral would have the potential to prevent future runs in shadow banking, though it would also necessarily limit the supply (raise the cost) of maturity transformation services of banking and shadow banking.

Morgan Ricks offers an alternative solution. As suggested by the Diamond-Dybvig model, Ricks proposes to extend deposit insurance to the creditors of any entity that engages in maturity transformation, or the type of "borrowing short to lend long" that got many institutions into a funding bind during the crisis. If one thinks of repo and other loans as deposits in the shadow banking system, his proposal means the government would have to decide which deposits are funding "safe enough" investments. Then it would prohibit maturity transformation outside that circle — effectively, it would prohibit banking from taking place in the shadows. Insurance would come with regulation, activity restrictions, and, he argues, fees that would pay for it all, minimizing the exposure of taxpayers.

Would deposit insurance weaken market discipline in shadow banking, as it potentially does in commercial banking? Ricks says no, because market discipline is something of a myth in these markets. Just as the Diamond-Dybvig model predicts, to the extent that it is possible for nonfundamentals-based information to trigger a run — such as rumors of insolvency rather than actual insolvency — creditors will be oriented not toward business fundamentals but toward whether a firm's other providers of liquidity are staying in the game. During a panic, even if a short-term creditor has done its homework and is convinced of a firm's financial strength, the only rational move is to step away, Ricks says.

### **Banking by Any Other Name**

Both plans require a clear stance by the government on what activities or assets would be supported. But there is a fine

line between staving off panics and providing incentive for individual institutions to take and spread risk. That's why the devil is in the details with any proposal that involves government support.

"What you really want to do is prevent bank runs when it's truly a systemic panic, but not when it's because of the fault of the bank itself. You want a bank to face the full costs of any stupid thing it does on its own," said University of Chicago economist Raghuram Rajan in a December 2009 interview with the Minneapolis Fed. Rajan has been credited with sounding an early warning of the system's potential instability at a Federal Reserve conference in 2005.

The trouble, Rajan says, is that these instances overlap when competition and perhaps moral hazard cause banks to herd together in risky behavior. Then the run is both systemic and a result of individual choices that turn out to be ill advised.

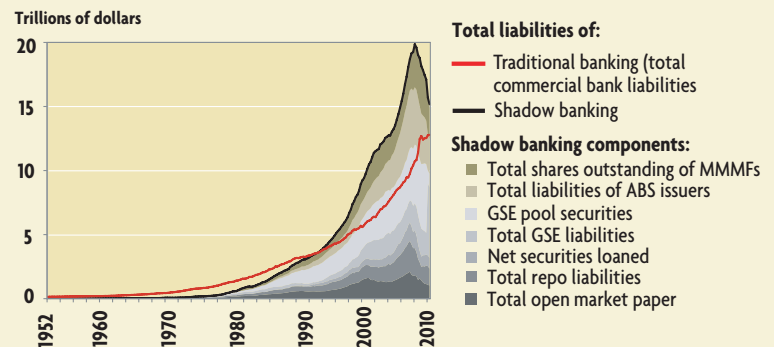
Though economists and other onlookers have different views on where and how the safety net boundaries should be drawn, nearly all agree that a safety net with ambiguous borders is the least desirable of all possible scenarios. The country saw this unfold in dramatic fashion as Bear Stearns was rescued and Lehman Brothers allowed to fail. Many believe the government's decision to let Lehman fail set off a new wave of uncertainty over which counterparties would actually be given assistance.

You can't have it both ways, according to Ricks. There is a fundamental trade-off between market discipline and stability. Trying to have both — by having a safety net, but one whose boundaries were vague — nurtured an environment for unpriced risks to spread.

But drawing lines is not easy when activities vary widely, even among like types of institutions. Given the modern, complex financial system, regulators are increasingly called upon to regulate by function. "If it looks like a bank, and smells like a bank, it is functionally a bank," says Ricks. "Repo is not an institution, it's a market, a type of instrument, a type of funding source."

## How Big Did Shadow Banking Get?

That depends on how one defines "shadow banking." Pozsar, Adrian, Ashcraft, and Boesky (2010) define the sector as bank-like activity not backed by explicit government support before the financial crisis. The components included by the authors in that definition, displayed here, make clear that the sector easily eclipses the traditional banking sector in total liabilities. Some researchers, like Gary Gorton of Yale, estimate the sector is even larger if one includes other private transactions like bilateral repurchase agreements (bilateral repos), which were never properly measured.



NOTE: Original chart created by Pozsar, Adrian, Ashcraft, and Boesky (2010), replicated here by the Federal Reserve Bank of Richmond. Shadow banking liabilities excludes those held as assets by commercial banks. SOURCE: Federal Reserve Flow of Funds data

Regulation almost always shrinks the banking industry and thus the availability of credit to the economy, Gorton says. Trying to regulate a shockless system into existence would also stymie economic activity. Even if that weren't an issue, regulators have a limited ability to quash risk. The more you penalize the risks we are aware of, the more you encourage the risks that are hidden from view.

"Any time your system is dependent on the regulators outsmarting the bankers, the bankers will win," Gorton adds. The problem with most of the recent efforts at financial reform is they "just want to impose more and more regulations on these firms and that's just going to move the banking system somewhere else." An important lesson from the crisis is that risky behavior will almost always move to the shadows.

**RF**

## READINGS

Federal Reserve Bank of Minneapolis. *The Region*. "Interview with Raghuram Rajan." December 2009.

Gorton, Gary, and Andrew Metrick. "Securitized Banking and the Run on Repo." NBER Working Paper No. 15223, August 2009.

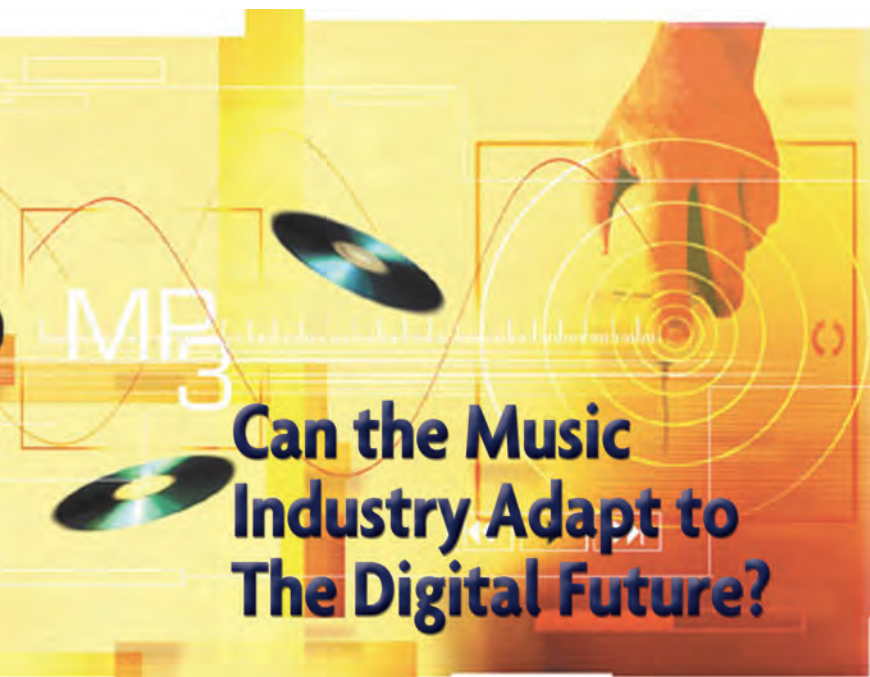
\_\_\_\_\_. "Regulating the Shadow Banking System." *Brookings Papers on Economic Activity*, Fall 2010.

Lacker, Jeffrey M., and John A. Weinberg. "Now How Large Is the Safety Net?" Federal Reserve Bank of Richmond *Economic Brief* no. 10-06, June 2010.

Pozsar, Zoltan, Tobias Adrian, Adam Ashcraft, and Hayley Boesky. "Shadow Banking." Federal Reserve Bank of New York Staff Report no. 458, July 2010.

Rajan, Raghuram. "The Greenspan Era: Lessons for the Future." Speech to symposium sponsored by the Federal Reserve Bank of Kansas City in Jackson Hole, Wyoming, Aug. 27, 2005.

Ricks, Morgan. "Shadow Banking and Financial Regulation." Columbia University Law and Economics Working Paper no. 370, August 2010.



## Can the Music Industry Adapt to The Digital Future?

BY ROSS LAWRENCE

**T**he music industry is going through a shakeup. Revenue from music sales has declined from more than \$14.6 billion in 1999 to \$6.3 billion a decade later. Conventional wisdom holds that the rise of the Internet's popularity is at the heart of this phenomenon — and the evidence mostly indicates that this view is correct. Online stores like iTunes, along with an abundance of file-sharing and user-driven sites like YouTube, have changed the rules for marketing, selling, and distributing music.

To be sure, there are factors that complicate this narrative. The 1990s likely saw a significant one-time boost in music sales as customers replaced vinyl records and cassette tapes with CDs. Moreover, two recessions during the 2000s certainly did not help the industry. Still, it is likely that technology, above all else, transformed the music business. Record companies must adapt quickly or further risk becoming dinosaurs in an ever-changing commercial landscape.

### Technological Drivers: How We Got Here

The industry has seen no shortage of changes in music media during the past half-century or so. Following several decades during which vinyl records were king, cassette tapes began to gain footing in the popular music market during the early 1970s. As technology improved and sound quality became better on these tapes, sales boomed; by 1977, cassettes overtook vinyl records as the most popular medium for music sales. Sony released its portable Walkman in 1979, allowing for music tapes to be transported easily by joggers and others who wished to listen to tunes on the go.

By the late 1970s, researchers at Sony and Phillips, among other companies, were at work on a new digital medium. The two companies released the first CD players and discs commercially in the United States on March 2,

1983, a day sometimes referred to as the “Big Bang” that set off a new era of digital music. At first, CDs mostly found a niche market among classical music aficionados, who appreciated the high audio quality of the recordings. As the cost of players began to decline, however, CDs began to attract more buyers interested in popular music. Dire Straits’ album “Brothers in Arms,” released in 1985, became the first CD to sell 1 million copies. CD sales eclipsed those of vinyl records in 1988 and eventually overtook sales of cassette tapes in 1992.

The 1990s were the heyday of CDs, as they sat safely atop the pecking order of music media. At the high point of CD sales in 2000, according to Nielsen Soundscan, consumers bought more than 943 million. But the picture became much less rosy for the record labels as the decade following 2000 progressed. Within eight years of that peak, CD sales would plummet 54.6 percent — or about 514.6 million fewer units sold per year.

The trend is clear: For the past decade, revenue from CDs has dropped precipitously, coinciding relatively neatly with the rise of the Internet as a primary vehicle for exchanging information, including music files. Other advances in technology accompanied this occurrence. In November 1996, a U.S. patent for the MP3 audio file format was issued, and about three years later, portable MP3 players began appearing on the market. (MP3 is short for MPEG-1 Audio Layer 3; MPEG, in turn, is short for Moving Picture Experts Group, a body that sets voluntary international standards for audio and video files.)

Napster, an online community intended for sharing MP3 files free of charge, went online in June 1999 and was operational until 2001. The company’s success sparked one of the earliest waves of mass copyright suits, with legal challenges coming from both major record labels and artists like Metallica and Dr. Dre. Napster peaked with about 26.4 million unique verified users. Even as litigation eroded the site’s popularity and eventually shut down the service, alternative file-sharing programs began attracting former Napster users. As early as July 2001, the writing may have been on the wall. “The grim reality is that Napster’s audience is beginning to be fragmented across many services, which will be very difficult, if not impossible, to litigate against in the same way,” says Mark Mooradian, vice president and senior analyst at Jupiter Media Metrix.

As illegal file sharing began to draw the ire of musicians and record companies, legal downloads became a growing business, as well. Apple Inc. introduced its iPod music player in 2001, the dominant offering to this day; it added its iTunes online music store in 2003. According to the NPD Group, a market research firm, the number of Internet users paying for downloads totaled 36 million in 2009, with online downloads accounting for 33 percent of music tracks purchased in the United States that year. Digital sales rose between 2007 and 2009 despite the recession.

## What Changed and Where the Road Is Going

Many economists believe that record companies and musicians generally are correct in suggesting that illegal file sharing has significantly affected CD sales as well as overall revenues. “The Internet was going to change the business model and might have led to a shakeup of the labels, but by itself it would not have lowered the payments going to artists or overall industry profitability,” says Stan Liebowitz of the University of Texas at Dallas. “The movement to legal downloads should have made the industry more profitable, not less, since it lowers cost and enhances the product.” A colleague of Liebowitz’s at the University of Texas at Dallas, Alejandro Zentner, estimates in a 2006 study that usage of file-sharing sites reduced a consumer’s probability of buying music by an average of 30 percent. And a 2004 study by Rafael Rob and Joel Waldfogel of the University of Pennsylvania, who collected data from a sample of Penn undergraduates, indicates that downloading reduced per-capita expenditures on hit albums; the researchers conclude that downloading could have caused about a 20 percent reduction in music sales from 1999 to 2003.

One paper that has garnered much attention contradicts this view, however. In a 2007 study Felix Oberholzer-Gee of Harvard Business School and Koleman Strumpf of the University of Kansas argue that file sharing has had no statistically significant effect on legal sales of music. They speculate that a shift in spending toward other forms of entertainment can largely explain the decline in music sales.

While the extent to which illegal downloads are affecting revenues, the digital trend is almost certainly affecting the marketplace in another way: Consumers no longer need to buy an entire album when they want only one or two of its songs. George Mason University economist Tyler Cowen notes that iTunes and other digital media thus allow listeners to limit their purchases better in accordance with their tastes. “Web listening means you don’t end up buying music you don’t like,” he says.

But the news may not be all bad for artists and music labels. Benjamin Shiller, a doctoral candidate in applied economics at the University of Pennsylvania, says there may be opportunities for companies to profit from the Web. “My research indicates the Internet is a good thing for revenue in some ways,” Shiller says. “Recommender

systems, like iTunes Genius, can help improve sales and allow smaller artists to gain exposure,” he says. Artists can also promote their work on social network sites such as Facebook.

Given the varying challenges confronting an industry in flux, what can artists and record labels do to keep up? Some performers like Radiohead and Wilco have gotten creative, choosing to release content online free of charge or with the stipulation that listeners pay whatever price they think is appropriate. Another option is greater emphasis on live performance, a market that digital distribution seems unlikely to displace.

New channels also may emerge in unexpected places. For example, Activision Blizzard, publisher of the *Guitar Hero* line of music videogames, and Harmonix Music Systems, publisher of the competing *Rock Band* games, has opened online stores where players can buy music for their games.

Steve Meyer, a former executive with Capitol and MCA Records, says the most important thing going forward is for record companies to embrace the world of digital media and look to the future. “Labels need to accept the world we’re living in — people are downloading, and there’s no way to turn back the clock or stop the pace of technology.” In addition to searching for new online models, Meyer recommends that firms and artists recognize that putting music on iTunes at least guarantees some revenue. This point was reaffirmed by Electric and Musical Industries’ recent decision to release the Beatles catalog to iTunes. Prior to November 2010, the catalog was not available legally for online downloading; this release was a symbolic step in the transition to digital media.

Cowen offered a similar assessment to Meyer, pointing out that copyright litigation by music labels will not alter the fundamental trends in the industry. Ultimately, both firms and customers may need to adapt to a landscape for popular music that will never resemble the one that existed 10, 20, or 30 years ago. “Mostly we’re in a world of paid downloads, and it means drastically lower revenue for music companies ... [which will] continue with a generational changing of the guard,” Cowen says. “Right now plenty of 56-year-olds still buy ‘Paul Simon’s Greatest Hits’ and so on. That will change. We’ll get a lot more low-tech music done for the love of it; the days of Led Zeppelin hiring a massive orchestra are over.” **RF**

## READINGS

Connolly, Marie, and Alan B. Krueger. “Rockonomics: The Economics of Popular Music,” National Bureau of Economic Research Working Paper no. 11282, April 2005.

Liebowitz, Stan J. “Economists Examine File Sharing and Music Sales.” In Gerhard Illing and Martin Peitz, (eds.), *Industrial Organization and the Digital Economy*. Cambridge, Mass: MIT Press, 2006, pp. 145-174.

Oberholzer-Gee, Felix, and Koleman Strumpf. “The Effect of File Sharing on Record Sales: An Empirical Analysis.” *Journal of Political Economy* February 2007, vol. 115, no. 1, pp. 1-42.

Rob, Rafael, and Joel Waldfogel. “Piracy On The High C’s: Music Downloading, Sales Displacement, and Social Welfare In a Sample of College Students.” *Journal of Law and Economics*, April 2006, vol. 49, no. 1, pp. 29-62.

## INTERVIEW

# Bruce Caldwell

**Editor's Note:** *This is an abbreviated version of RF's conversation with Bruce Caldwell. For the full interview, go to our Web site: [www.richmondfed.org/publications](http://www.richmondfed.org/publications)*

Economics is one of the oldest of the social sciences. Many date its founding to the publication of Adam Smith's *Wealth of Nations* in 1776. But there were people studying the social phenomena we now call economics well before that, including, for instance, the Spanish scholastics of the 1500s.

It used to be common for Ph.D. programs in economics to require students to take coursework in the history of economic thought, to learn not only what their predecessors wrote but to also try to apply those insights to contemporary problems. Some of those students went on to write their dissertations and to develop fertile research agendas in the field.

While history of economic thought has not died out within the economics profession, its prominence has diminished. Many economics departments have perhaps one historian of thought, doing work that many of his colleagues may find esoteric. This is not true at Duke University, where history of thought has long been a vital field and remains so today.

Bruce Caldwell directs Duke's Center for the History of Political Economy, the aim of which is to support existing researchers, help develop younger scholars, and generally advance the understanding and study of the field. Caldwell joined the Duke faculty in 2008 after teaching at the University of North Carolina at Greensboro. His own areas of expertise are economic methodology and the work of Nobel Prize winner F. A. Hayek. Aaron Steelman interviewed Caldwell in his office at Duke in August 2010.

**RF:** Duke has long been a prominent place for research in the history of economic thought. How did this come to be the case? And how do you see the Center for the History of Political Economy, which you direct, as fitting into and extending that tradition?

**Caldwell:** Joseph Spengler was probably the most important historian of thought in the department in the early days, and he brought other faculty members and students who were interested in the field to Duke. Craufurd Goodwin, Neil De Marchi, and Roy Weintraub later joined the faculty. The major journal in the field, *History of Political Economy*, was founded at Duke in the late 1960s and has been published here since then. In the 1980s, Weintraub was instrumental in starting the "Economists' Papers Project," which is a collection of important personal and professional papers by economists. Among the papers included in the collection are



those of nine Nobel Prize winners, the most recent of which are Paul Samuelson's papers. It also includes the papers of the American Economic Association and the History of Economics Society. The collection brings people to campus who are doing archival work.

The Center for the History of Political Economy is actually relatively new. I came to Duke in 2008 to direct it. It was funded by a grant from a North Carolina foundation called the Pope Foundation. We have workshops where outside speakers come in, and we have weekly lunches where people who are either residents of the Center or faculty members present and get feedback on early stages of their research. We host an annual conference that is co-sponsored by the *History of Political Economy*, and the papers presented are published in a hard-cover edition of the journal. We have other, smaller conferences and special events as well. The most important initiative that the Center has launched is our visiting fellows program. We bring in quite a few junior people, often those who are working on or have just completed their dissertations, and they will work on publishing papers related to their graduate school research, as well as on increasing their knowledge of various parts of the field. We also bring in senior scholars who often work on major research projects. It's been very exciting. We have a critical mass of people coming in each year, in addition to our existing faculty members who are interested in the history of thought, and it's just a great intellectual environment.

**RF: Do you have many graduate students at Duke who are writing their dissertations on topics related to the history of economic thought?**

**Caldwell:** We haven't had very many recently. That's one of the things we are trying to do, to renew interest in doing history of economics as a field. So, to that end, we are encouraging people to come work in this area, and we are able to provide financial support for them. Related to this effort are our summer programs. This past summer we had 24 people from all over the country spend three weeks with us, and it was like a boot camp in the history of economics. The program was aimed mainly at undergraduate teachers of the history of economics and it was quite successful. The Summer Institute was sponsored by the National Endowment for the Humanities. It's unusual for them to fund economics programs, but given our mission to try to revitalize the history of the study of ideas, it was something that they were willing to fund.

We are thinking of other summer programming that, for example, would help graduate students turn a literature review article into something that could be published. This is a way of getting people to understand that the history of economics doesn't mean that you're just going back in some antiquarian way and looking at Adam Smith — although there's quite a lot to be gained from that — but also that it can be a vital way to better understand current questions in economics.

**RF: Many economists seem to think that the discipline has consistently made strides for the better, rather than, on occasion, experiencing missteps that have led it in stagnant or even counterproductive directions. What do you make of that claim? If there have been periods of retrogression in your opinion, what are the most prominent examples in this century?**

**Caldwell:** I am generally known as a Hayek scholar, but the first area that I was interested in was economic methodology and my first book was called *Beyond Positivism: Economic Methodology in the Twentieth Century*. In that book, I argued that most economists embrace a certain vision of science that explicitly embraces positivist thinking. In this vision of science, it's a cumulatively progressive enterprise and, indeed, if you feel that the work of the last five years represents the best truth that we have and that the latest working papers are even better, then history becomes less important; it becomes just something of a hobby. Now if you don't share that positivist vision, of course, then there's indeed quite often important lessons to learn from history, various things that history can teach which simply poring over the latest working papers is not going to give you — a certain appreciation for larger themes, the fact that everything wasn't discovered five years ago, and that the present is not the epitome of all knowledge.

Phil Mirowski has written about the physics envy of the

economics profession in the 19th century, and I think a continuation of that took place in the 20th century. The perception was that the way to be truly scientific was to know the latest modeling and econometric techniques, pick a field, and then apply them. That vision of science has much less of a role for history. I think the move to that vision is obvious, and it's one I personally think is wrong and that we're trying to reverse.

**RF: There have been many great neoclassical economists who also have been great historians of thought: Viner, Stigler, Hutchison, to name a few. But now it seems that history of thought is predominantly done by people who are broadly Austrian, post-Keynesian, or neo-Marxist in orientation. Why is this field relatively popular with heterodox economists and relatively unpopular with mainstream economists, at least in the United States?**

**Caldwell:** I would like to point out that there are vast numbers of historians of economics who are not heterodox economists. Just thinking of my colleagues who do history of economics in this department — not one of the four would consider himself heterodox. And few of the most prominent people — I am thinking of people like Mark Blaug, Steve Medema, Philippe Fontaine, Mary Morgan, Roger Backhouse — would do so either.

Still, there is some truth to the premise of your question. A lot of critics of neoclassical economics are, in fact, interested in history of thought. The most obvious reason why, perhaps, is that if you are, say, an Austrian School economist, you think that the way economists are practicing economics now is fundamentally wrong. So you are naturally inclined to look at history and find out where things took an incorrect turn. It may also be true that the critics of neoclassical economics for one reason or another often are interested in social science more broadly, and this leads them to areas of inquiry that are further afield than what many people today consider economics proper.

**RF: What do you think history of thought has to teach us when considering contemporary policy issues such as the financial crisis of 2007-2009?**

**Caldwell:** I think what the study of the history of economics does is gives you some sense of the long haul, the understanding that great minds have thought about similar issues. The issues are always specific to a certain point in time and part of what a historian does is to provide the context for that. But it's also true that certain ideas keep recurring. There is, indeed, old wine in new bottles — that is the analogy that's often used and I think the grand themes don't go away.

Consider the question: Is a business cycle inevitable? If you were a recently trained economist who had come through the Great Moderation and had not studied history

of economics your answer to that question might have been: “No, of course not, it’s not inevitable. Look at history.” (By which you would mean, the immediate past.) That’s a tragedy because, I would say, that through the course of the last 150 years, most economists would have said: “Yes, indeed, it is inevitable.” And most of those economists, most of the time, would have said that such cycles have to do with money. So, yes, every time is a little different but there are similarities. That perspective gives one a certain amount of humility, which I think is ultimately good, particularly when you are advising on policies that have profound effects on people.

**RF: So do you think macroeconomics has gone off the rails?**

**Caldwell:** I’m not a macroeconomist and I am loathe to offer opinions about a field that I’m not a specialist in. But it certainly does seem that macroeconomists didn’t contribute terribly much toward anticipating any kind of crisis and haven’t offered a very coherent explanation or response to it. And it doesn’t seem that the models currently on offer have been able to address some pretty important and obvious questions. Now, academic economists who are building models are not professional forecasters and shouldn’t be held entirely accountable for that. But the response of the profession to this crisis has been pretty weak, I think, and has made economists appear as if they’re just not engaged with the actual world. I think that’s quite difficult for people who are not economists to understand and has been damaging to the profession.

**RF: You mentioned that you are often described as a Hayek scholar. How did you become interested in Hayek?**

**Caldwell:** One of the findings of my book *Beyond Positivism* was that economists, in talking about methodological issues and about their field as a science, were borrowing from the language of positivism. However, within the philosophy of science, positivism was basically a dead letter. So what I came away with was that economists were borrowing from a defunct philosophy of science. So at that point I started to become interested in some of these alternative groups, simply because they were often quite explicit about their methodological concerns with neoclassical economics. And, ultimately, I got interested in Hayek because I thought that his writings about the limits of social science and our ability to predict and control social processes provided important insights. So it was via my earlier interest in methodology that I first got interested in Hayek. Now, having said that, I find Hayek to be a fascinating figure for many, many reasons.

**RF: During the 1930s, Keynes and Hayek were arguably the two most prominent economists in the world. While Keynes’ reputation ascended and the number of**

**“Keynesians” grew rapidly, Hayek’s reputation suffered and the Austrian School largely fell out of favor until a revival of interest in the 1970s. What do you think accounts for the radical changes in stature and influence of these two schools of thought?**

**Caldwell:** When Hayek moved to the London School of Economics, he started with a review of Keynes’ 1930 book *A Treatise on Money*. That was a devastating review, and they had a duel of sorts in the academic journals, with neither gaining a clear upper hand in the profession. But that changed when Keynes published the *General Theory* in 1936. Hayek labored long and hard and finally published *A Pure Theory of Capital* in response, which did not have anywhere near the kind of impact. Keynesian ideas subsequently dominated economics right through the next 40 years.

Certainly the broad sweep of events is going to be crucial to explaining something like Keynes’ prominence. You’re in the Great Depression; Keynes was talking about policies that seem custom-made for dealing with a big problem; Hayek’s basic model says that, well, the problem was that interest rates were too low for too long and this altered the structure of production in such a way that was unsustainable, and basically the crisis part is the economy trying to return to some sort of equilibrium.

**RF: Hayek also said that you need to let that crisis run its course and that activist fiscal or monetary policy is a mistake, correct?**

**Caldwell:** Essentially, yes. He later said in some places that if you get into what he called a secondary depression, you can use stimulative policy. So if things keep spiraling downward, you might respond there. But Hayek actually struggled with monetary issues throughout his life, and if you look at his writings from the 1930s through the 1970s, you’ll come up with five or six different takes on it. People sometimes ask me, What do you think about Hayek on monetary policy? My response is: Which Hayek?

So, in the same way that the broader forces brought Keynesianism to a high point, the stagflation of the 1970s really undermined the belief that you could fine-tune the economy. That helped to undermine the Keynesian consensus and introduce the more recent period, one where there’s more support for markets. I think that these things go back and forth, and you can see parallels in other time periods as well.

**RF: As you noted, the stagflation of the 1970s led many people to question the Keynesian consensus. Somewhat ironically, by this point it seems that Hayek basically had stopped doing economics. How do you account for this?**

**Caldwell:** This is what I focus on in my book *Hayek’s Challenge* because, indeed, he’s jumping from field to field. What’s driving that? Where’s it coming from? In a nutshell, the story I would tell is that in the mid-1930s he started a



## Bruce Caldwell

### ► Present Position

Research Professor of Economics and Director of the Center for the History of Political Economy, Duke University

### ► Previous Faculty Appointment

University of North Carolina at Greensboro, 1978-2008

### ► Education

A.B. (1974), College of William & Mary; Ph.D. (1979), University of North Carolina at Chapel Hill

### ► Selected Publications

Author of *Hayek's Challenge: An Intellectual Biography of F. A. Hayek* and *Beyond Positivism: Economic Methodology in the Twentieth Century* as well as numerous articles in such journals as the *History of Political Economy*, *Journal of the History of Economic Thought*, and *Journal of Economic Methodology*

project that was never finished, called the “Abuse of Reason” project. It was designed to show why we were going down the wrong path. What he had in mind was the belief that planners could engineer society in just the way a physical engineer engineers a bridge. He called that belief “scientism,” because he thought it was not truly scientific but it had all the trappings of science.

If you take a look at the 1930s, capitalism had apparently collapsed and the alternative systems that were on offer — fascism and communism — were unacceptable to the vast majority of people. Hayek is in Great Britain at this time, and the intelligentsia generally thought that socialism was the way forward. He was trying to oppose that, so this Abuse of Reason project had methodological components and ultimately resulted in *The Road to Serfdom*, by far his most famous book.

One of the objections to *The Road to Serfdom*, by both Keynes and Alvin Hansen, was: Well, you’ve told us what’s wrong with socialism and we can understand that. But what would you put in its place? What do *you* want?” Hayek wanted a liberalism for the 20th century, like the classical liberalism that had been dominant in Great Britain in the 19th century. And he founded the Mont Pèlerin Society in 1947 with that aim in mind. Also, in his subsequent work in political philosophy, particularly *The Constitution of Liberty* and then later the three-volume *Law, Legislation, and Liberty*, he hoped to sketch a vision of liberalism for the 20th century.

Why did he turn back to economics? Well, think about what happened in the 1970s: Again, it’s stagflation. That’s why he started doing economics again. He had argued in *The Constitution of Liberty* that a full employment policy was dangerous — that it was likely to lead to higher rates of inflation as policymakers try to achieve their employment mandate. He was always worried about inflation. This was a guy who lived through the Austrian variant of the hyperinflation after World War I, and during the 1970s he saw inflation as an increasingly pressing problem.

**RF: How would you respond to the criticism that history of economic thought often boils down to hagiography?**

**Caldwell:** There certainly is hagiography out there. But as a historian of economics, when other historians and I see that kind of work, that’s what we call it. And it’s not impressive. Sometimes you can get something useful from it if there are some facts mixed in with the adulation, but frankly in my case, my fascination with Hayek has to do with the range of topics that he dealt with. And I found the connections that

he was making across these various fields to be fascinating. I don’t agree with all the stuff he said, but I was interested in why economics turned out the way it did in the 20th century. Hayek has been a wonderful vehicle for studying that. He was someone who was always on the outer edge of the profession, but always interacting with it and the most important people in the discipline. What a fascinating figure. There are lots of fascinating figures in the history of economics, but he kind of stuck with me.

**RF: Why do you think that so many intellectuals, including economists, were drawn to socialism in the early part of the 20th century?**

**Caldwell:** As part of editing Hayek’s collected works I have gone in to look at the footnotes of those books to see the arguments he was responding to — and that allows you to almost enter the mindset of the 1930s. Almost all of the academics — not just social scientists but natural scientists as well — wanted science to be planned. They thought that the pursuit of profits was robbing science of funding that could be used to create a better society. This type of sentiment is true of artists and public intellectuals also. They’re saying, look, socialism is the way ahead and capitalism is dead. I mean, in the middle of the Great Depression, that was an easy argument to buy. People like Karl Mannheim, one of the founding fathers of sociology, were saying: It’s not a choice of whether we want to have planning or not. It’s whether we have good planning or bad planning. If we embrace good planning, we can do a better job. If not, it will be the sort that they have in the Soviet Union and we ought to avoid that. So it was a time period that was quite different from ours.

**RF: Do you think economists should spend more time explaining basic economic principles?**

**Caldwell:** I think one way to answer that is to explain my own experience. The class that I most enjoy teaching is introductory micro. I think the amount of insights that you get in the space of one semester, in terms of understanding how the world works and the right questions to ask, is incredible. You can understand a newspaper, you can understand the evening news — and you can critique the evening news if you’ve done well in the course. So yes, I think the value added of introductory courses is enormous. And I think the topics covered really get people’s attention as long as they have a good instructor. **RF**

## Utopia, USA

Efforts to reshape society flourished in the 19th century

BY BETTY JOYCE NASH

**T**win Oaks community near Louisa, Va., made and sold record amounts of tofu in 2009, leading to a 15 percent increase in members' monthly allowance: \$86.

The income-sharing community has operated continuously since 1967, originally inspired by B.F. Skinner's novel, *Walden Two*, and the principles of equal pay and a 42-hour workweek. Today, Twin Oaks' credo is to live in cooperation — and in equality — using as few resources as possible. Tofu-making is only one of Twin Oaks' enterprises. Those range from book-indexing to hammock-making; members also grow most of the vegetables and fruit they eat.

Utopian efforts in the United States began with early religious settlers, such as the Puritans in the early 17th century. Many of the earlier religious groups remain today; celibate Shakers are few, dependent on conversion to replenish numbers, the Hutterites and Amish are thriving. The Amish population has doubled since 1991, according to a new report from the Young Center for Anabaptist and Pietist Studies at Elizabethtown College in Pennsylvania. A handful of Amish and Mennonite communities dot the landscape in nearly every Fifth District state.

But in the first half of the 19th century, the United States incubated many and myriad utopian experiments, against the backdrop of the industrial revolution. Despite differences in philosophy or doctrine, idealists often migrated among groups, and communities sometimes located near and learned from each other. In some cases, they even bought each other's property. Scholar Maren Lockwood in 1965 described the idealists' motivations: "Like those politicians who devised the Constitution, like the pioneers who grappled with their new land, like Franklin experimenting with electricity, they promised a demonstration of the better life. They would detach themselves from the worldly society. Freed of its imperfections, they would create an ideal social system composed of truly moral men."

### Perfect Place — No Place

Sir Thomas More introduced the literary genre in the 16th century, and, with it, the word: "Utopia" derives from the Greek "eutopos," which means perfect place, and "outopos," no place. Utopian thinking may be as old as mankind, certainly as old as Plato's *Republic*, dating from the fourth century B.C.

The United States was founded on the idea that people had a right to "life, liberty, and the pursuit of happiness." In the wake of independence, the country became utopia's proving ground. The purpose of shared resources, for reli-

gious sectarians, was to free up time so they could live more holy lives, while the social reformers wanted to demonstrate superiority of communal work and living, according to Clifford Thies, an economist at Shenandoah University.

Some communities sprang from native soil, but many were transplants. Science and reform ideas turned tradition inside out during the Enlightenment, as science focused its new tools and theories on society's ills. Among the influential post-Enlightenment thinkers were English philosophers Jeremy Bentham and father and son James and John Stuart Mill, who advanced the concepts of utility and individual freedom. They sought to organize society using the principle of the greatest happiness for the greatest number of people.

The industrial revolution and ensuing urbanization of society inspired, among others, Scottish textile magnate Robert Owen. Influenced by his friend and business partner Bentham, Owen bankrolled his Indiana utopia when he purchased New Harmony, a prosperous town on the frontier, in January 1825. The community, purchased from the entrepreneurial, religious Rappites, was an early secular utopian effort. Ultimately, Owen founded 19 lesser-known communities in the United States and nine in Britain. All eventually folded, but his ideas were widely promoted and lauded.

By the 1820s, reform was rolling out. Americans experimented with forming public schools, promoting women's rights, and improving sanitation, among other efforts. Original American philosophy, art, music, and literature also began to flourish.

The utopias were as unique as the founders, often ego-driven, charismatic, and controlling. Sometimes founders' beliefs and idiosyncrasies helped doom their efforts. German Pietist leader George Rapp's Harmony Society grew three prosperous communities in Pennsylvania. But in the end, Rapp's insistence on celibacy, and his growing reluctance to return property to withdrawing members ultimately contributed to the society's demise.

The experiments tested ideas about private property, work and remuneration, education, entrepreneurship, and the expansion of family beyond its traditional confines. Communities had problems, though. Participants could coast on the work of others, where public goods were produced and distributed equally, and communities solved the free-riding in a variety of ways — or not. Historians have suggested that religious communities were more likely to endure because they shared commitment, worship practices, dress, and conduct. Absent that sense of purpose, many utopias floundered.

## Science of Society

America's original secular, social-reform attempt at utopia was Owen's New Harmony. Unlike some "communitarians," Owen was less interested in self-sufficiency than in a "new view of society." In his book of the same name, he wrote: "Train any population rationally, and they will be rational. Furnish honest and useful employments to those so trained, and such employments they will greatly prefer to dishonest or injurious occupations. It is beyond all calculation the interest of every government to provide that training and that employment; and to provide both is easily practicable."

Owen bankrolled his own ideas with his mill fortunes. His spinning mills in New Lanark, Scotland, became a prototype for raising up the poor and working classes. His "Institution for the Formation of Character," started in 1816, encouraged cradle-to-grave learning.

Owen sought to form a communal organization that could mold character and solve social problems. He decried the evils of individual property, irrational religion, and traditional marriage, yet he used religious arguments, referenced to "Millennialism," and the Second Coming, and quoted from the Bible to attract people to his crusade. Robert Owen and his wife separated; he and five of the couple's eight children helped spread "Owenism" in America.

What a town it was that Owen got for his money. There were 2,000 acres of cultivated land, including a vineyard, apple and pear orchard, four brick homes, a steam engine, two granaries, wool and cotton factories, a thresher, a five-acre vegetable garden, and 126 family homes. So what could go wrong? Owen's paternalistic ideas met resistance among the pioneering types at New Harmony, and there was great dissension among the residents, as well as between Owen and his partner William Maclure. The community eventually splintered into small groups. Problems included the lack of an inspired purpose and the absence of a self-sustaining economic base and stable governance.

Even by opening day, April 27, 1825, Owen had not determined how the economics would work. Beyond giving members access to the community store and housing, there were no guidelines. Free-riding was rampant. A year later, he spelled out obligations, including a time store in which people were paid in local scrip based on their labors. The currency could then be exchanged for goods at the time store. That led to further disagreement. According to the *New Harmony Gazette*, a letter from his partner, Maclure, on May 17, 1826, stated: "The thing most wanted is to protect the industrious, honest members against the unpleasant, mortifying sensation of working for others who are either unwilling or unable to work their proportion necessary." The idea was that residents should take turns laboring at tasks, especially disagreeable ones.

Despite Owen's bias against private property, he never espoused communalism. "Neither he nor his wealthy partner found it in their nature to turn over their New Harmony property to the otherwise communitarian citizenry any more than Owen would have given his mill town to the

laborers of New Lanark," according to historian Donald Pitzer of the University of Southern Indiana.

New Harmony folded in two years, as Owen was largely absent day-to-day. Instead he had hit the road to promote his prototyped vision. While the community disintegrated, many of its intellectuals stayed in New Harmony and kept up the historic buildings. An agricultural boom in the late 19th century, followed by an oil boom in the 1930s and 1940s, also attracted investment to the town. Ultimately, Kenneth Dale, a great-great grandson, and his wife Jane, invested and helped preserve New Harmony. Jane Owen died just last summer. Today, New Harmony is home to a conference center and quiet small town. Last fall, the Communal Studies Association held its annual conference there.

While Owen's community flopped, at least one New Harmony resident, Josiah Warren, employed the knowledge he witnessed firsthand. He had noted faltering cooperation in New Harmony, and that confirmed his belief that suppressing individuality stifled initiative and responsibility. He is particularly known for his views on labor; and he founded the Cincinnati Time Store.

"All labor is valued by the Time employed in it," he wrote. People who worked in the service of another received an equal amount of time in return. "The estimates of the time cost, of articles having been obtained from those whose business it is to produce them, are always exposed to view, so that it may be readily ascertained, at what rate any article will be given and received."

Warren later extended his Time Store cooperative movement in Equity and Utopia, two individualist communities he founded in Ohio, and also Modern Times in New York. Modern Times lasted about a decade, from 1851 to the early 1860s. To varying degrees, these communities strived to eliminate discrimination by class, sex, and race, and fostered education and scientific inquiry.

## Entrepreneurs in Utopia

A contemporary surviving corporation grew out of John Humphrey Noyes' Oneida community in central New York, founded in 1848. A graduate of the Yale University Divinity School, Noyes abhorred the Jacksonian-era capitalism that had emerged in the 19th century. In an ideal society, he believed, individual interests were less important than those of the group. Noyes and his followers believed Christians could attain perfection — spiritual, intellectual, and emotional. At its peak, the Oneida community counted 300 members.

Fifty-one members chartered the original Oneida Association; they shared possessions and contributed \$108,000 toward the community in its first nine years. Children were raised by the group, committees oversaw its enterprises, and members rotated among work assignments. Oneida members grew, sold and canned fruit and produce, operated a saw and flour mill, and fabricated animal traps and chains. Oneida's substantial legacy has been obscured by emphasis on its "complex marriage" arrangement, developed to prevent attachment and loyalties, which Noyes feared

would work against community interests. Every man could marry every woman, a sort of “free love,” and Noyes promoted birth control to limit the community’s size.

Oneidans ensured community participation through daily meetings. They might discuss the amount of butter served at dinner or whether to open a New York City business office, according to Lockwood. By the late 1870s, Noyes’ age interfered with his responsibilities. With leadership in question and young members less willing to sacrifice, common values began to disintegrate. Remaining members formed a joint stock company in 1880 to retain the remaining property and businesses, the Oneida Community, Ltd. This joint stock company was owned and operated by its 226 members. The company’s finances deteriorated, however, until Noyes’ son returned in 1894 after working as a wholesaler in the outside world. He changed production methods, dropped trap manufacturing, and concentrated on brand marketing and good working conditions. The company, a major maker of flatware, remains headquartered there today.

Also among entrepreneurial utopias were the Amana Inspirationists, who emigrated from Germany in 1842, and were befriended by the Rappists. First established in New York, by 1855 the group had formed a network of villages in the new state of Iowa. These were purposefully designed for agricultural production. Most property and goods were held in common. The community pooled labor to grow and market agricultural and manufactured goods; its mills and factories were among the first in Iowa.

Today, about 1,700 people live in the colonies, however communal Amana ultimately dissolved during the Depression, as orders for goods dwindled. Fire destroyed flour and woolen mills in 1923. Young people were leaving, for work and higher education. To preserve its heritage, the members separated church and business interests. Amana Society Corp. was created to manage the community’s businesses, ending 100 years of communalism. Shares were doled out, which members were free to sell. People began to work for wages, cook their own meals, and establish individual homes. Today, the Amana Society manages profitable businesses in agriculture, tourism, furniture-making, and more. Until 1965, the society owned Amana Refrigeration Products, started by two community members; it is now part of Whirlpool Corp.

### The Utopian Urge

Though many utopian ideas backfired or died with their founders, their legacies influenced the thinking, develop-

ment, and settlement of the United States and its economy. Take the self-proclaimed prophet George Rapp, who formed the Harmony Society, from which Owen purchased New Harmony. The Rappites started out poor, and built wealth through an astonishing array of business enterprises, including silk production, in three locations between 1805 and 1916. They were also early investors in the oil and railroad industries. Ultimately, their substantial holdings were squandered when the original founders died, and the remaining property turned over to the state of Pennsylvania.

Thinkers like Owen, Rapp, Noyes, and Warren transformed dreams into lasting contributions to society: campaigns for women’s rights, birth control, growth of tax-supported public schools, and abolitionism. Owen, for instance, studied social behavior and put ideas into practice, offered infant care 30 years before the German Kindergarten came along, and insisted on “loving kindness” with no “contrived rewards or punishments.”

The most enduring communities in the 19th century used the marketplace to their advantage and realized gains from trade. Early utopian experiments also led to the kibbutzim of Israel and the latter 20th century communities such as Twin Oaks. Of the communities that date from the late 1960s and early 1970s, survivors may be small and few, but significant.

Founded in 1973, East Wind of Missouri is also an income-sharing group, dedicated to equality and cooperation; the group of 65 successfully markets nut butters. In Tennessee, The Farm was built from scratch by 320 San Francisco hippies, led by Stephen Gaskin, starting in 1971. Today, about 250 members either work in nearby towns to support themselves or work in The Farm’s cottage industries.

The Fellowship for Intentional Community lists more than 1,700 communities of various stripes in the United States, forming or existing. They range from a dozen people living together on land held in trust to urban co-housing to larger income-sharers such as Twin Oaks.

How long will they last, these communities, cooperatives, collectives, and eco-villages? It doesn’t matter, says Tim Miller, a professor of religion at the University of Kansas who is working on an encyclopedia of utopian communities. “It’s not longevity, it’s what does society learn from the experiment?” That’s a good question — the same one that feeds the urge to reinvent society, an urge that apparently never dies. While Robert Owen’s communities failed, his influence and image survive; there’s even a campaign on Facebook to use his picture on Scottish bank notes. **RF**

### READINGS

Guarneri, Carl J. “Reconstructing the Antebellum Communitarian Movement: Oneida and Fourierism.” *Journal of the Early Republic*, Autumn 1966, vol. 16, no. 3, pp. 463-488.

Lockwood, Maren. “The Experimental Utopia in America.” *Daedalus*, Spring 1965, vol. 94, no. 2, pp. 401-418.

Pitzer, Donald, ed. *America’s Communal Utopias*. Chapel Hill: University of North Carolina Press, 1997.

Thies, Clifford. “The Success of American Communes.” *Southern Economic Journal*, July 2000, vol. 67, no. 1, pp. 186-199.

# Funny Money and Phone Payments

BY CHARLES GERENA

**“Estimating the Volume of Counterfeit U.S. Currency in Circulation Worldwide: Data and Extrapolation.” Ruth Judson and Richard Porter, Federal Reserve Bank of Chicago Policy Discussion Paper 2010-02, March 2010.**

Between one-half and two-thirds of all U.S. dollars in circulation are held beyond the country’s borders because it is considered stable currency in many regions. But with popularity comes potential complications: Not all that money is real.

Ruth Judson and Richard Porter of the Chicago Fed examined data from the Federal Reserve’s cash offices and the Secret Service to estimate how much counterfeit money is in circulation. Their answer: Not a lot. The authors’ best guess is that \$60 million to \$80 million of counterfeit currency is circulating worldwide, which is only one fake note for every 10,000 real notes. For the denominations most commonly handled by U.S. consumers, the incidence of counterfeits that cannot be detected with minimal authentication effort is even smaller — about three for every 100,000 real notes.

Why? The barriers to entry for counterfeiters are high. “Producing high-grade counterfeits requires access to presses, inks, and high-grade paper,” the authors write. “In addition, the notes must then be either passed or distributed to others for passing, which is a complicated undertaking when large volumes of notes are produced.”

**“Mobile Payments in the United States at Retail Point of Sale: Current Market and Future Prospects.” Marianne Crowe, Marc Rysman, and Joanna Stavins, Federal Reserve Bank of Boston Public Policy Discussion Paper No. 10-2, May 2010.**

Cell phone users are everywhere, whether behind the wheel or standing in line at Starbucks. And they’re doing more with their mobile devices, which are capable of streaming movies or locating the nearest restaurant. Yet Americans haven’t taken to using their devices to make mobile payments, according to a recent paper by a team of economists at the Boston Fed.

“The scope for bundling mobile payments with value-added services is great, and consumers are already conditioned to expect, and have shown a willingness to pay for, an ever-expanding array of innovative applications on their smart phones,” the authors note. “And this technology could greatly increase the efficiency of the U.S. payment system by offering a payment method that would encourage the transition to electronic payments even for small dollar purchases.”

However, implementing such a system would be expen-

sive, at least initially, for both merchants and cell phone manufacturers. There are also security concerns, though the authors note that mobile payments arguably would be no less secure than payments made by swiping a card with a magnetic stripe.

Japan and South Korea have managed to integrate cell phones into their payment systems. In the case of Japan, “the country is predominantly urban and densely inhabited, has a population that is homogeneous and technically sophisticated but highly cash intensive, and relies heavily on mass transit.” Train commuters in eastern Japan first used contactless cards to pay their fares. Then, the same technology was added to cell phones.

In contrast, “the United States’ large geographic size, dispersed population, and decentralized transit agencies make U.S. transportation systems less useful to serve as the gateway for widespread adoption of mobile payments.” Also, countries with a higher percentage of consumer transactions paid in cash have a larger potential market for mobile payments, since they typically replace low-value cash transactions. By one estimate, cash accounted for only 14 percent of the value of consumer transactions in the United States.

**“Hiring, Job Loss, and the Severity of Recessions.” R. Jason Faberman, Federal Reserve Bank of Philadelphia *Business Review*, Second Quarter 2010, pp. 16-24.**

What difference does it make if people are unemployed during a recession because of a slowdown in hiring or a rise in job losses? It can say a lot about the nature of that recession, according to a paper by R. Jason Faberman of the Philadelphia Fed.

During a severe recession, there is usually a sharp drop in output, and companies reduce their payrolls through layoffs and voluntary worker separations. Moderate recessions, in contrast, are characterized by smaller declines in output and weaker hiring by firms.

So, the nature of a recession “will greatly affect the composition and consequences of the unemployed,” notes Faberman. The recessions of the 1970s and 1980s, for instance, “saw steep declines in employment and sharp increases in unemployment. At the same time, the pace of layoffs was very high but relatively short-lived,” Faberman writes. The less severe recessions of 1990-1991 and 2001, in contrast, were characterized by “a moderate rise in job losses but a relatively steep drop in hiring, particularly during the 2001 recession. Furthermore, the 1990-1991 and 2001 recessions had declines that persisted well after the official end of the recession.”

RF

### The Roles of New and Existing Establishments in Employment in the Fifth District

BY R. ANDREW BAUER

The most recent recession has had a dramatic impact on employment, with payroll employment falling 8.4 million, or 6 percent, from December 2007 through December 2009, according to the Bureau of Labor Statistics. Job losses from contracting establishments and business closings rose dramatically, while the number of new jobs created fell sharply. Although the labor market has stabilized in 2010, there is some concern that the severity of the recession with its impact on the financial system will slow business expansion and new firm growth as the economy recovers and, as a result, will slow the recovery in the labor market. This article looks at historical trends within the Fifth District in job creation and job destruction as well as trends during the most recent recession.

#### Historical Job Flow Trends: Changes Over the Business Cycle

There is always a churning within the economy as businesses expand and new businesses are formed to seek new opportunities, while other firms are contracting or closing. This dynamic is amplified by the business cycle. During a downturn, businesses contract and close at a more rapid rate and job losses therefore increase. At the same time, the rate of business expansion and business starts are slowed as managers and entrepreneurs are more reluctant to begin new endeavors during times of economic uncertainty. As a consequence, the pace of job hiring falls. The cycle reverses during economic expansions as existing firms expand their work force and new firms are created, increasing job gains and moderating job losses.

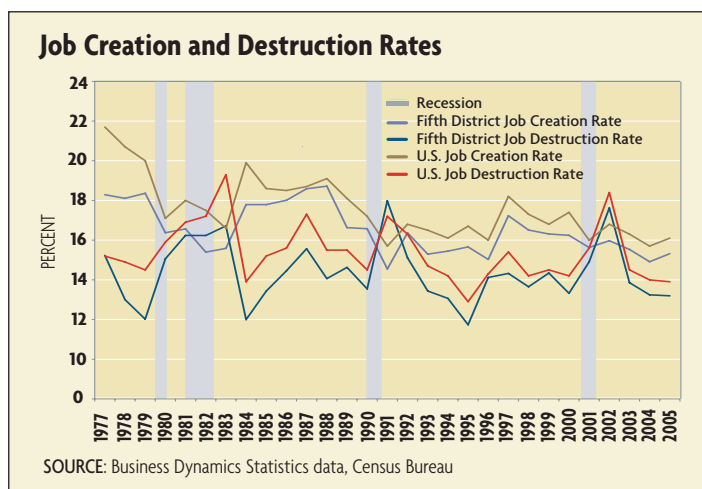
Information on U.S. business and employment dynamics

has improved considerably in recent years. One source is the Business Dynamics Statistics (BDS) data from the Census Bureau, which details employment at the establishment level. This data allow for an examination of the source of changes in employment resulting from existing establishments or from new or closing establishments. In addition, the BDS data provide information on the size and age of establishments, which permits a more detailed accounting of employment growth. The BDS data are annual and cover the years from 1977 to 2005 — allowing for an examination of business dynamics and job flows over various business cycles.

One way of summarizing the churning of jobs within the economy is to look at the total number of jobs created and the total number of jobs destroyed and compare them to the total level of employment. These two metrics are called the job creation rate and the job destruction rate. These two figures indicate the percentage of jobs being created and destroyed just as the unemployment rate indicates the number of unemployed persons in the economy. For instance, a job creation rate of 10 percent indicates that 10 percent of the jobs in the economy were newly created from the previous year, while a job destruction rate of 10 percent implies that 10 percent of the previous year's jobs no longer exist. During periods of economic growth, the job creation rate will be higher than the job destruction rate as businesses are hiring at a faster rate than they are dismissing workers. Of course, even during times of very strong economic growth, there is always some job destruction, just as when the economy is exceptionally weak, jobs are still being created.

The annual job creation and job destruction rates for the United States and for the Fifth District from 1977 through 2005, the latest year for which data are available, vary considerably over the business cycle (see chart). The average job creation rate over the period is roughly 18 percent for the United States and about 17 percent for the Fifth District. The average job destruction rate is slightly lower, roughly 15 percent for the United States and about 14 percent for the Fifth District. These figures suggest that the economy is indeed very dynamic as each year almost one in five jobs in the United States is a newly created one and that there is sizeable turnover as a large number of jobs are lost each year — even during periods of economic growth. The difference between the United States and the Fifth District, albeit modest, suggests that the Fifth District economy is perhaps slightly less dynamic and slightly more stable than the overall economy.

Job creation can result from expansion of existing estab-



lishments or from new establishments. According to the BDS, roughly one-third of newly created jobs in the United States result from new establishments while the remainder is from expansion of existing establishments. The same is true for the Fifth District. As for job destruction, again roughly one-third of job losses are due to establishment closings. It should be noted that in the BDS data, an establishment is not necessarily the same as an individual firm. An establishment is one physical location and may be an individual firm, such as a local restaurant, retail store, or business — but it could also be one location of a nationwide or regional chain, like a big-box retailer or bank.

Examining job creation and job destruction over time, job creation is procyclical while job destruction is countercyclical, as one would expect. During recessions, destruction rates rise sharply and then return to their pre-recession levels relatively quickly. Interestingly, the job destruction rate rose in the Fifth District by similar amounts during the recessions of the early 1980s (by 4.7 percentage points); the 1990-91 recession (by 4.4 percentage points); and the 2001 recession (by 4.3 percentage points), despite the fact that the 1981-82 recession was more severe than the later recessions.

The job creation rate declined during each of the recessions, although the severity of the decline was less uniform. The decrease during the recessions of the early 1980s was more significant than during the later, more moderate recessions, with the job creation rate dropping 3 percentage points from 1979 to 1982. Interestingly, the smaller decline in job creation during the 1990-91 and 2001 recessions resulted from job creation from new businesses. During the 1981-82 recession, job creation from new businesses fell sharply, but increased during the 1990-91 recession and edged only lower slightly during the 2001 recession. In those later recessions, the dynamics of new business growth helped offset larger declines in employment at existing establishments.

One final observation is that both the rate of job creation and the rate of job destruction within the United States and the Fifth District decreased from the 1980s expansion to the 1990s expansion. This is perhaps somewhat counterintuitive, especially when one considers the strong growth during the second half of the 1990s expansion. Those years were marked by a sharp increase in business startups and investment related to the dot.com boom and high rates of economic growth. Yet even in those boom years of the 1990s, the job creation rate, on average, was lower than in the 1980s. This is also true for the rate of jobs being created by new businesses. Those trends appear to have continued during the most recent expansion period.

### Differences within the Fifth District

Just as we see some modest differences between the United States and the Fifth District, there are differences among the jurisdictions that comprise the Fifth District (see table). Within the Fifth District, Maryland and Virginia have job creation rates comparable to the U.S. average, while the

**Average Job Creation and Job Destruction Rates by State (1977-2005)**

	Fifth District	U.S.	DC	MD	NC	SC	VA	WV
Establishment Entry Rate	12.5	13.0	11.2	12.6	12.8	13.1	12.9	11.2
Establishment Exit Rate	10.4	11.1	10.3	10.5	10.4	10.7	10.4	10.4
Job Creation Rate	16.5	17.6	16.4	17.7	16.3	16.6	17.6	15.8
Job Creation Rate by Entry	6.2	6.6	5.5	6.6	6.1	6.4	6.6	5.8
Job Destruction Rate	14.3	15.4	15.1	15.3	13.9	14.1	14.7	15.0
Job Destruction Rate by Exit	5.0	5.5	4.9	5.3	4.8	4.9	5.1	5.0
Net Job Creation Rate	2.2	2.2	1.3	2.3	2.4	2.4	2.9	0.8
Reallocation Rate	28.7	30.3	28.4	30.2	27.1	27.7	28.9	28.1

SOURCE: Business Dynamics Statistics data, Census Bureau

other jurisdictions are below the U.S. average with West Virginia, at 15.8 percent, having the lowest overall job creation rate. The District of Columbia has the lowest job creation by entry rate, which is the percentage of newly created jobs that are created by new businesses. Job destruction rates vary considerably within the Fifth District, as well, with Maryland having the highest rates and North Carolina the lowest. Recall that having a high job destruction rate is not necessarily problematic. In combination with a high job creation rate (as in Maryland), a high destruction rate suggests a more dynamic economy.

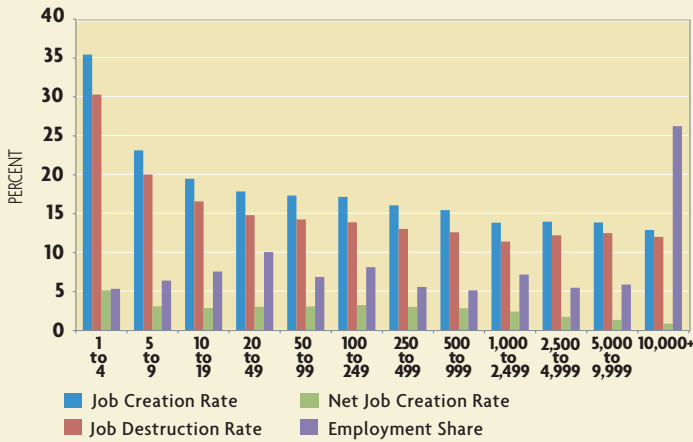
Also included in the table are the establishment entry and exit rates, which measure the frequency with which businesses are started and closed, another indicator of the business dynamics of a region. Within the Fifth District, South Carolina has the highest establishment entry and exit rate which indicates that, relative to the other jurisdictions of the Fifth District, there is more business turnover.

Business and employment dynamics vary across regions of the Fifth District based on differences in underlying economic conditions and industry composition. Ultimately, differences in human capital (skilled and educated work force), physical capital (plant and equipment), technology, infrastructure, and regulation will drive the expansion of businesses, the formation of new businesses, and economic growth.

### The Importance of Size and Age

The BDS data also allow for examination of employment dynamics by the size and age of businesses. It is well known that small businesses are a significant source of job creation in the economy. Small businesses have very high rates of job creation as well as job destruction. Very small firms, those firms with one to four employees, create and destroy jobs at a very rapid rate. Each year within the Fifth District, more than one-third, 35 percent, of all jobs at establishments with one to four employees are newly created from the previous year. At the same time, however, 30 percent of jobs at establishments of this size are destroyed. Clearly, there is a tremendous amount of turnover for these very small establishments. This dynamic affects a very large segment of

### Fifth District Average Job Creation and Destruction by Firm Size (1977-2005)



SOURCE: Business Employment Dynamics data, Bureau of Labor Statistics

the economy, as roughly 40 percent of all establishments in the Fifth District have one to four employees. The most important factor driving this turnover is the opening and closing of establishments — which accounts for roughly two-thirds of all created and destroyed jobs for establishments of this size.

The net job creation rate, the percentage of jobs that are created each year less the percentage of jobs destroyed, is 5 percent for these establishments — a strong rate of growth compared to firms of other sizes. As a result, despite the fact that these establishments have a relatively small share of total employment (5 percent), on average they account for roughly 12 percent of all newly created jobs each year.

Even with a much broader definition of small business, the numbers still tell the same story. Establishments with fewer than 500 employees, the metric used by the Small Business Administration to categorize a small business, account for a very large share of all establishments within the United States and in the Fifth District. According to the BDS, 83 percent of all establishments in the Fifth District employed fewer than 500 in 2005. Defined this way, net employment in small businesses increased by 178,000 in 2004 and 104,000 in 2005; this accounted for 68 percent and 47 percent, respectively, of the net number of jobs created in those years. Clearly, small businesses are an important driver of employment.

As one would expect, job creation and destruction rates decrease as establishments increase in size and as they become more mature. Establishments with 10,000 employees or more have the lowest job creation and destruction rates as a category, at 13 percent and 12 percent, respectively, and a net job creation rate of just 1 percent as a consequence. But since these large establishments account for more than 25 percent of all employment, they still account for a significant share of the new jobs created each month. In 2005, these large establishments accounted for 16 percent of new jobs created that year.

Recall that a new establishment may be a new location of an existing business or may be a new business. Because the BDS dataset also includes information on firm age, however,

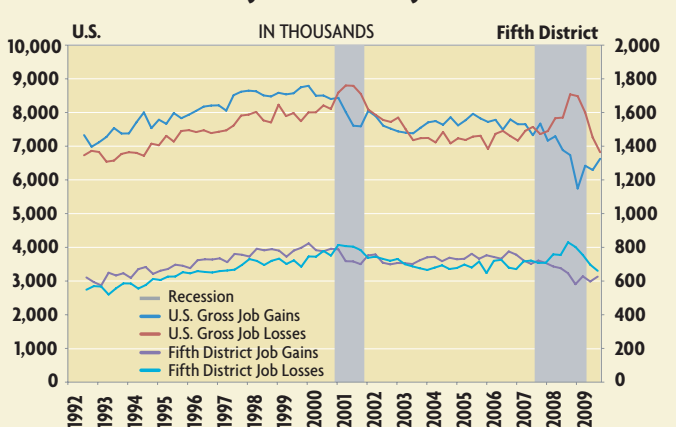
we can go one step further and isolate the effect of new firms, or business startups, on employment dynamics. According to the BDS, new firms (establishments with age equaling zero) contribute considerably to employment creation each year. In the Fifth District, new firms account for 17 percent, on average, of all newly created jobs. That percentage varies with the business cycle. For example, following the severe 1981-82 recession, new firm job creation fell to just 13 percent in 1983 and 10 percent in 1984. There is reason for concern that employment growth will be slower in this recovery in part because of weaker growth of new businesses, as was the case in the early 1980s, due to the severity of the most recent recession, lingering problems in the financial system, and the limited availability of credit.

### Recent Job Flow Trends

For the latest information regarding job gains and losses at establishments, we turn to the Business Employment Dynamics (BED) data from the Bureau of Labor Statistics. It also details employment gains and losses at the establishment level and distinguishes changes in employment from existing and new establishments. The BED data are quarterly and cover the years from 1992 through the end of 2009, allowing for a more current examination of job flows.

The latest BED indicates the labor market has stabilized and made some improvement but remains considerably below where it was prior to the recession. Gross job gains are defined in the BED data as the sum of all net gains in expanding and opening establishments, whereas gross job losses are defined as the sum of all net losses in contracting and closing establishments. The difference between the two represents the net job gains in the economy. In the chart, we see that the 2001 and 2007-2009 recessions are both characterized by a sharp rise in gross job losses and a sharp decline in job gains with those movements most pronounced in the most recent recession. Note, however, that even during expansions, there is considerable turnover in the labor market, with gross job losses averaging just over 7 million during the last expansion period. Overall employment increases

### Private Sector Gross Job Gains and Job Losses



SOURCE: Business Employment Dynamics data, Bureau of Labor Statistics



during such periods because gross job gains outweigh job losses.

Looking at the most recent recession, U.S. gross job losses rose from 7.4 million in the fourth quarter of 2007 to 8.5 million in the fourth quarter of 2008 — an increase of 16 percent. After peaking in that quarter, gross job losses declined to 6.8 million in the fourth quarter of 2009 — the lowest rate since 1994. Gross job losses declined 25 percent from the fourth quarter of 2007 through the first quarter of 2009, although they have since edged higher.

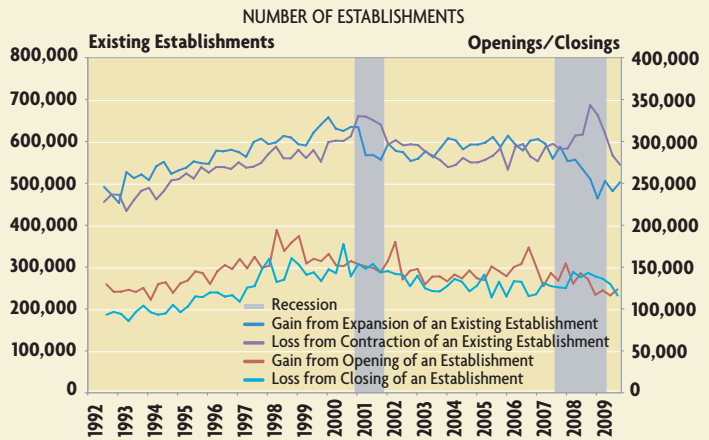
In contrast to job losses, gross job gains remain well below their prerecession levels. In the Fifth District, we see very similar changes in job flows during the latest recession (see chart). Gross job losses rose by 121,000, or 17 percent, from the end of 2008 to 2009 while gross job gains fell by 19 percent from the end of 2008 through the first quarter of 2010. And as we see with the overall U.S. data, the rate of job loss has returned to below its prerecession level, whereas job gains have not, and remain near a historic low.

There can be a number of reasons why gross job gains have yet to return to their prerecession levels. Productivity gains realized by many firms during the recession may have lessened the need to add workers despite the stabilization and upturn in the economy. Smaller firms that would like to expand and hire new workers may face credit constraints that prevent them from doing so. Changes in regulation, new legislative initiatives, and concerns about changes in tax policy could also be causing businesses to be more hesitant and reluctant to expand and hire. It could also be the case that the duration and severity of the recession, the dramatic events that played out in the financial system during the recession, and the ongoing transition in some sectors of the economy, such as the real estate market, may have created a “wait and see” attitude that is causing businesses to postpone hiring until there is greater certainty about their business prospects and the economy more broadly. Very likely, each of the mentioned factors is hurting job growth.

When we look at the BED job flows in the Fifth District in greater detail, we see that the decline in gross job gains can be attributed to a decline in gains at existing establishments and a decline in openings at new establishments. Notably, through the end of 2009, net employment at existing establishments continued to decline. According to the BED data, within the Fifth District, roughly 80 percent of all job gains are due to expansion of existing establishments while 82 percent of all job losses are the result of contractions at existing establishments.

Note that these figures are higher than the BDS data, which indicated that about two-thirds of changes in employment resulted from changes at existing establishments. The difference between the two is a result of the difference in how the data is collected. The BDS data are an annual snapshot describing employment conditions as they exist in March of each year and will miss some of the intra-annual job flow among existing establishments that the quarterly BED survey is able to capture.

## Fifth District Job Gains and Losses by Type of Establishment Change



SOURCE: Business Employment Dynamics data, Bureau of Labor Statistics

The implication of the BED data is that the net impact on employment from existing establishments is considerably larger than at new or closing establishments. Job gains from expanding establishments fell by 21 percent from the fourth quarter of 2007 through the first quarter of 2009 while job gains from opening establishments fell by 13 percent. Both remain near their low during the recession and at their lowest level since the early 1990s. Clearly, given continued economic growth we would not expect these depressed levels to persist indefinitely. It remains unclear, however, when the factors that are holding businesses back — whether uncertainty, credit access issues, or otherwise — will fully dissipate.

### Conclusion

When considering both the Business Dynamics Statistics and the Business Employment Dynamics data, we get a richer picture of changes in employment and the sources of those changes that underscore the churning in the economy. At any point in time, businesses are expanding and contracting or are being created or going out of business, resulting in a constant turnover in the labor market. This constant turnover and its impact on the labor market is a sign of a dynamic economy as resources are being moved from older industries and businesses to newer ones with greater growth potential. The business cycle amplifies these dynamics.

Despite some improvement in the labor market, the most recent data on job flows through the end of 2009 indicate a weak labor market characterized by a lack of job growth from new and expanding businesses. Job losses, however, have returned to their prerecession levels in the United States and in the Fifth District. So far in 2010, employment has improved considerably relative to 2009 with private payroll employment increasing 763,000 through August, a little less than 100,000 per month. It remains to be seen whether this improvement resulted from expansion by existing businesses or the creation of new businesses. Clearly, the economy will need to generate both for healthy labor market recovery.

RF

## State Data, Q1:10

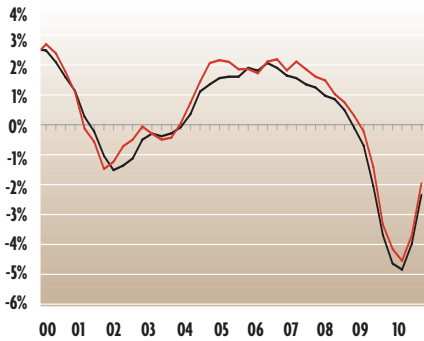
	DC	MD	NC	SC	VA	WV
<b>Nonfarm Employment (000s)</b>	<b>708.1</b>	<b>2,491.9</b>	<b>3,891.8</b>	<b>1,816.8</b>	<b>3,600.7</b>	<b>733.6</b>
Q/Q Percent Change	0.9	-0.3	0.0	0.4	-0.1	-0.6
Y/Y Percent Change	0.6	-2.1	-2.3	-1.5	-2.2	-2.6
<b>Manufacturing Employment (000s)</b>	<b>1.3</b>	<b>115.5</b>	<b>430.0</b>	<b>207.4</b>	<b>229.0</b>	<b>49.3</b>
Q/Q Percent Change	-4.8	-1.7	-0.9	0.0	-1.6	-0.3
Y/Y Percent Change	-9.1	-5.0	-8.6	-7.5	-7.8	-6.6
<b>Professional/Business Services Employment (000s)</b>	<b>150.7</b>	<b>389.1</b>	<b>466.3</b>	<b>206.4</b>	<b>635.5</b>	<b>58.4</b>
Q/Q Percent Change	1.1	1.5	0.4	-1.0	-0.2	-1.0
Y/Y Percent Change	0.5	0.4	-1.9	3.5	-1.7	-3.4
<b>Government Employment (000s)</b>	<b>246.4</b>	<b>487.0</b>	<b>728.0</b>	<b>352.1</b>	<b>692.5</b>	<b>149.8</b>
Q/Q Percent Change	0.6	-0.9	0.1	0.1	0.0	0.8
Y/Y Percent Change	3.7	-0.8	2.4	1.6	-0.8	1.0
<b>Civilian Labor Force (000s)</b>	<b>336.3</b>	<b>2,958.6</b>	<b>4,550.7</b>	<b>2,174.0</b>	<b>4,164.7</b>	<b>787.3</b>
Q/Q Percent Change	1.1	-0.1	0.6	0.1	0.4	-0.2
Y/Y Percent Change	1.3	-1.8	-0.6	-0.3	-0.5	-2.0
<b>Unemployment Rate (%)</b>	<b>11.8</b>	<b>7.6</b>	<b>11.1</b>	<b>12.4</b>	<b>7.1</b>	<b>9.4</b>
Q4:09	11.6	7.3	10.9	12.3	6.8	8.9
Q1:09	8.8	6.4	9.8	10.6	6.1	6.4
<b>Real Personal Income (\$Mil)</b>	<b>37,520.0</b>	<b>251,873.3</b>	<b>301,040.6</b>	<b>135,292.7</b>	<b>318,273.1</b>	<b>53,454.9</b>
Q/Q Percent Change	0.7	0.4	1.3	0.4	0.4	0.6
Y/Y Percent Change	0.9	0.1	1.3	0.1	-0.1	0.0
<b>Building Permits</b>	<b>299</b>	<b>2,985</b>	<b>9,136</b>	<b>4,414</b>	<b>5,193</b>	<b>420</b>
Q/Q Percent Change	-29.0	0.4	21.5	16.0	10.0	14.4
Y/Y Percent Change	15.4	42.5	25.5	23.2	11.3	13.8
<b>House Price Index (2080=100)</b>	<b>562.2</b>	<b>437.0</b>	<b>321.8</b>	<b>327.8</b>	<b>413.1</b>	<b>225.8</b>
Q/Q Percent Change	-1.3	-1.0	-1.7	-1.7	-1.7	0.2
Y/Y Percent Change	-3.3	-8.4	-5.9	-5.7	-6.4	-2.3
<b>Sales of Existing Housing Units (000s)</b>	<b>8.4</b>	<b>73.6</b>	<b>136.8</b>	<b>68.8</b>	<b>108.8</b>	<b>26.4</b>
Q/Q Percent Change	-19.2	-16.0	-16.0	-15.7	-9.6	-19.5
Y/Y Percent Change	23.5	26.0	15.9	8.2	-1.8	15.8

**NOTES:**

Nonfarm Payroll Employment, thousands of jobs, seasonally adjusted (SA) except in MSAs; Bureau of Labor Statistics (BLS)/Haver Analytics, Manufacturing Employment, thousands of jobs, SA in all but DC and SC; BLS/Haver Analytics, Professional/Business Services Employment, thousands of jobs, SA in all but SC; BLS/Haver Analytics, Government Employment, thousands of jobs, SA; BLS/Haver Analytics, Civilian Labor Force, thousands of persons, SA; BLS/Haver Analytics, Unemployment Rate, percent, SA except in MSAs; BLS/Haver Analytics, Building Permits, number of permits, NSA; U.S. Census Bureau/Haver Analytics, Sales of Existing Housing Units, thousands of units, SA; National Association of Realtors®

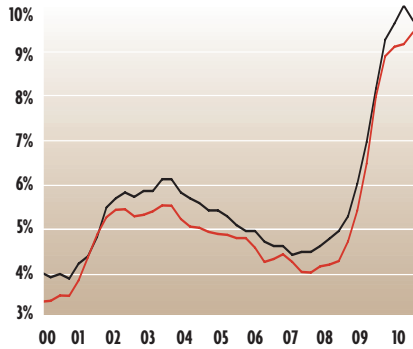
### Nonfarm Employment

Change From Prior Year  
First Quarter 2000 - First Quarter 2010



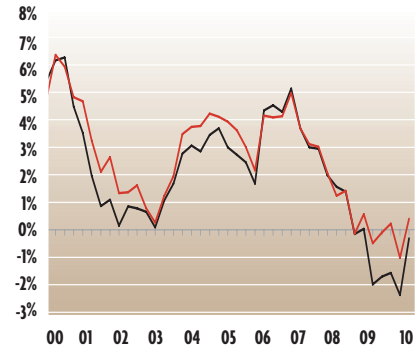
### Unemployment Rate

First Quarter 2000 - First Quarter 2010



### Real Personal Income

Change From Prior Year  
First Quarter 2000 - First Quarter 2010

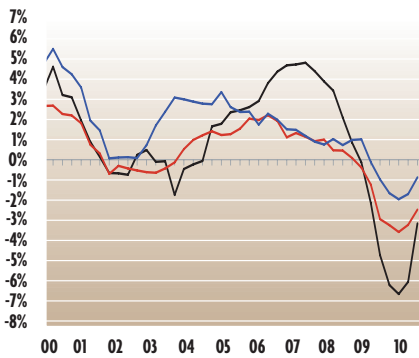


— Fifth District

— United States

### Nonfarm Employment Metropolitan Areas

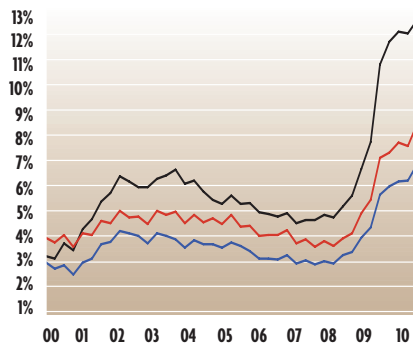
Change From Prior Year  
First Quarter 2000 - First Quarter 2010



— Charlotte — Baltimore — Washington

### Unemployment Rate Metropolitan Areas

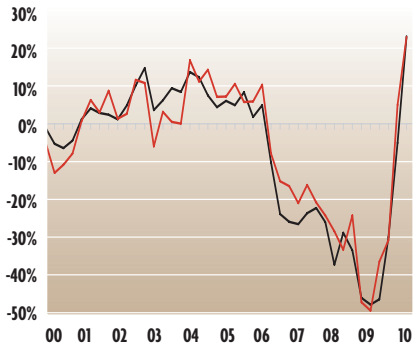
Change From Prior Year  
First Quarter 2000 - First Quarter 2010



— Charlotte — Baltimore — Washington

### Building Permits

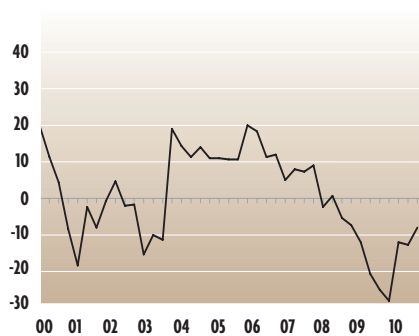
Change From Prior Year  
First Quarter 2000 - First Quarter 2010



— Fifth District — United States

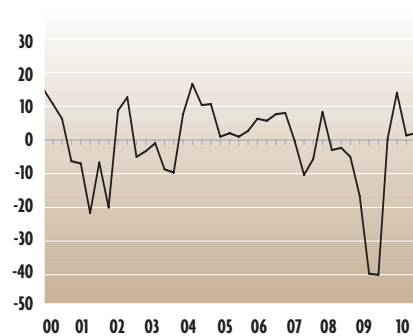
### FRB—Richmond Services Revenues Index

First Quarter 2000 - First Quarter 2010



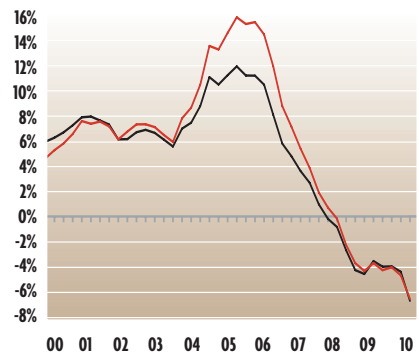
### FRB—Richmond Manufacturing Composite Index

First Quarter 2000 - First Quarter 2010



### House Prices

Change From Prior Year  
First Quarter 2000 - First Quarter 2010



— Fifth District — United States

**NOTES:**

- FRB-Richmond survey indexes are diffusion indexes representing the percentage of responding firms reporting increase minus the percentage reporting decrease. The manufacturing composite index is a weighted average of the shipments, new orders, and employment indexes.
- Building permits and house prices are not seasonally adjusted; all other series are seasonally adjusted.

**SOURCES:**

- Real Personal Income: Bureau of Economic Analysis/Haver Analytics.  
 Unemployment rate: LAUS Program, Bureau of Labor Statistics, U.S. Department of Labor, <http://stats.bls.gov>.  
 Employment: CES Survey, Bureau of Labor Statistics, U.S. Department of Labor, <http://stats.bls.gov>.  
 Building permits: U.S. Census Bureau, <http://www.census.gov>.  
 House prices: Federal Housing Finance Agency, <http://www.fhfa.gov>.

## Metropolitan Area Data, Q1:10

	Washington, DC	Baltimore, MD	Hagerstown-Martinsburg, MD-WV
<b>Nonfarm Employment (000s)</b>	<b>2,357.5</b>	<b>1,234.4</b>	<b>94.5</b>
Q/Q Percent Change	-1.5	-2.9	-2.4
Y/Y Percent Change	-0.9	-2.5	-2.7
<b>Unemployment Rate (%)</b>	<b>6.8</b>	<b>8.4</b>	<b>11.2</b>
Q4:09	6.2	7.6	9.4
Q1:09	5.6	7.1	9.3
<b>Building Permits</b>	<b>3,400</b>	<b>1,473</b>	<b>170</b>
Q/Q Percent Change	18.3	11.2	17.2
Y/Y Percent Change	13.0	143.5	4.9
	Asheville, NC	Charlotte, NC	Durham, NC
<b>Nonfarm Employment ( 000s)</b>	<b>162.0</b>	<b>796.3</b>	<b>281.9</b>
Q/Q Percent Change	-2.3	-1.3	-0.9
Y/Y Percent Change	-3.3	-3.2	-1.3
<b>Unemployment Rate (%)</b>	<b>9.9</b>	<b>12.6</b>	<b>8.2</b>
Q4:09	8.8	12.0	7.8
Q1:09	8.9	10.8	7.5
<b>Building Permits</b>	<b>311</b>	<b>1,747</b>	<b>446</b>
Q/Q Percent Change	22.0	21.7	-12.2
Y/Y Percent Change	-10.9	12.5	-29.8
	Greensboro-High Point, NC	Raleigh, NC	Wilmington, NC
<b>Nonfarm Employment (000s)</b>	<b>336.5</b>	<b>491.5</b>	<b>134.8</b>
Q/Q Percent Change	-1.9	-1.7	-2.2
Y/Y Percent Change	-3.4	-1.9	-2.4
<b>Unemployment Rate (%)</b>	<b>12.1</b>	<b>9.3</b>	<b>11.3</b>
Q4:09	11.4	8.9	10.4
Q1:09	10.7	8.2	10.0
<b>Building Permits</b>	<b>537</b>	<b>1,496</b>	<b>620</b>
Q/Q Percent Change	25.5	21.8	54.2
Y/Y Percent Change	11.2	82.9	36.3

	Winston-Salem, NC	Charleston, SC	Columbia, SC
<b>Nonfarm Employment (000s)</b>	<b>205.8</b>	<b>281.6</b>	<b>344.9</b>
Q/Q Percent Change	-1.4	-0.7	-0.8
Y/Y Percent Change	-3.0	-0.9	-1.3
<b>Unemployment Rate (%)</b>	<b>10.8</b>	<b>10.2</b>	<b>10.0</b>
Q4:09	10.0	10.3	10.0
Q1:09	9.6	8.9	8.7
<b>Building Permits</b>	<b>256</b>	<b>1,003</b>	<b>927</b>
Q/Q Percent Change	80.3	44.5	-3.3
Y/Y Percent Change	80.3	82.0	0.4
	Greenville, SC	Richmond, VA	Roanoke, VA
<b>Nonfarm Employment (000s)</b>	<b>291.7</b>	<b>590.4</b>	<b>152.3</b>
Q/Q Percent Change	-0.7	-1.3	-1.7
Y/Y Percent Change	-2.6	-3.2	-2.5
<b>Unemployment Rate (%)</b>	<b>11.0</b>	<b>8.5</b>	<b>8.3</b>
Q4:09	11.1	7.6	7.2
Q1:09	9.6	7.0	6.8
<b>Building Permits</b>	<b>535</b>	<b>883</b>	<b>107</b>
Q/Q Percent Change	52.0	8.2	3.9
Y/Y Percent Change	32.4	64.4	33.8
	Virginia Beach-Norfolk, VA	Charleston, WV	Huntington, WV
<b>Nonfarm Employment (000s)</b>	<b>724.3</b>	<b>144.2</b>	<b>113.9</b>
Q/Q Percent Change	-1.3	-2.1	-2.1
Y/Y Percent Change	-1.6	-3.2	-1.6
<b>Unemployment Rate (%)</b>	<b>7.9</b>	<b>9.1</b>	<b>9.3</b>
Q4:09	6.9	7.3	7.8
Q1:09	6.6	5.9	7.6
<b>Building Permits</b>	<b>1,125</b>	<b>47</b>	<b>12</b>
Q/Q Percent Change	-10.4	0.0	50.0
Y/Y Percent Change	-3.8	67.9	100.0

For more information, contact Sonya Ravindranath Waddell at (804) 697-2694 or e-mail [Sonya.Waddell@rich.frb.org](mailto:Sonya.Waddell@rich.frb.org)

# Macroprudential Supervision: Proceed with Caution

BY JOHN A. WEINBERG

One of the most widely accepted conclusions drawn by those examining the financial crisis and its effects is that financial regulation was inadequate in a number of ways. In particular, many argue that focusing on the conditions of individual institutions led regulators to overlook important macroeconomic or systemic aspects to the evolution of risks in the financial system. As a result, discussions of ways to improve regulation in the legislative process have focused on supplementing the current *microprudential* approach of supervision of individual institutions with a *macroprudential* approach to system-wide supervision.

A more macroprudential approach might mean many things. For instance, it might mean greater direct attention to the linkages among financial firms, especially the largest firms, in order to identify potential sources of spillovers of distress from one firm to its counterparties. Macroprudential supervision might also involve looking for concentrations of exposures by leveraged financial intermediaries to large aggregate risks in order to quantify how large a macroeconomic shock would be required to seriously compromise the capital buffer of the financial system as a whole. Broadly speaking, this type of exercise reflects the spirit of stress-testing, like that which was conducted for the largest financial firms in the winter and spring of 2009.

In addition to questions of measurement, macroprudential supervision raises questions of the appropriate regulatory response to indicators of risk at the system-wide level. One ingredient of macroprudential regulatory policy that has been suggested is to make some of the regulatory levers depend on certain macroeconomic conditions. For instance, some proposals call for adding a “countercyclical” component to bank capital requirements, so that required capital buffers for some firms would be greater at times when credit is expanding rapidly. Since credit generally tends to rise and fall with overall economic activity, this amounts to making bank regulation a macroeconomic policy tool.

Countercyclical bank regulation would create a new set of challenges for policymakers. Adjusting regulatory constraints on financial institutions with the rise and fall of credit flows in the economy creates a regime in which policy essentially leans against cycles in credit. Such a policy is motivated in part by a belief that expansions of credit have a natural tendency to become excessive, setting the stage for subsequent financial crises and economic contraction. Certainly, the housing credit boom of the past decade appears, in retrospect, to have been such an example, one that imposed large costs on the economy in its wake. But not all expansions of credit are excessive, and judgments about when credit is supporting normal economic growth and

when it is creating imbalances and risks to financial markets and the economy are hard to make. So a policy that uses regulatory levers to lean against credit cycles brings with it the cost that it will sometimes suppress desirable expansions.

This tension — between curbing excessive growth and facilitating beneficial growth — is inherent in any effort to conduct countercyclical macroeconomic policy. Historically, countercyclical monetary and fiscal policy were often more focused on the flip side of this problem — seeking to stimulate growth in an economy that had slowed relative to what policymakers viewed as its potential. But on either side of the business cycle the problem is conceptually the same. The reasons for economic fluctuations — whether as measured by credit flows or other indicators — are many. Not all slowdowns are amenable to a policy correction and not all expansions require the application of policy brakes. Embarking on a countercyclical policy regime means accepting the likelihood of some mistakes.

This recognition suggests a cost-benefit approach to thinking about countercyclical policies. In his 1987 book *Models of Business Cycles*, Robert Lucas addressed this issue by asking how much consumption of goods and services one would be willing to give up on an annual basis in exchange for eliminating all the ups and downs associated with the U.S. business cycle since World War II. The answer was not much. Subsequent researchers have extended Lucas’ exercise to a richer class of models and found that the answer is somewhat more complicated, but his basic insight serves as a cautionary note for countercyclical policy. And the problem of trading off between the variability that comes with cycles and long-run average economic performance is likely to be even more complicated when it comes to credit and financial intermediation. Regulatory intervention into credit markets can be a powerful tool — but one used with caution. We should remember, for instance, that attempts to cool credit markets by introducing credit controls in 1980 swiftly brought on a sharp economic contraction.

So while financial regulation could benefit from attempts to measure and understand the sources of macroeconomic risks to financial institutions and markets and by monitoring the ways in which firms create exposures to those risks, it is important to consider how that information will be used. Using capital and other regulatory tools to lean directly against cycles in credit markets may sound desirable in the wake of the financial crisis, but doing so brings real risks as well — risks that, upon further reflection, we may decide outweigh the potential benefits of such a policy. **RF**

---

**John A. Weinberg is senior vice president and director of research at the Federal Reserve Bank of Richmond.**

---

## What Causes Recoveries?

Economists have well-developed theories about why recessions begin — but how do they end? Are recoveries simply the result of wise monetary or fiscal measures? Or are there other forces that aid recoveries and influence their strength?

---

## Research Triangle

The Research Triangle region of North Carolina fared better than the state overall during the recession. Its buffer, though thin, stemmed not only from its employment mix of government, universities, and health care systems, but also from its supply of human capital.

---

## Student Loans

U.S. consumers now owe more on student loans than on credit cards. More students are using loans to finance college, and they're borrowing greater amounts. How did the current market develop? What are the implications for students and for higher education as a whole?

## Federal Reserve

The 33-year old Community Reinvestment Act (CRA) encourages financial institutions to extend credit to low- to moderate-income households in the communities where those institutions are chartered. How has the CRA affected bank lending practices, and did its mandate help fuel the housing boom and resultant economic turmoil?

## Interview

Joel Slemrod of the University of Michigan discusses the current state of fiscal policy in the United States and the effects of possible reforms on stimulating economic activity, increasing savings, and improving compliance with tax laws.

## Book Review

In *Stumbling on Wins*, David J. Berri and Martin B. Schmidt look at how managers of professional sports teams use economic and statistical principles to better assess talent — and produce more wins at lower costs.

Visit us online:

[www.richmondfed.org](http://www.richmondfed.org)

- To view each issue's articles and Web-exclusive content
- To add your name to our mailing list
- To request an e-mail alert of our online issue posting

Please send subscription changes or address corrections to Research Publications or call (800) 322-0565.

# A Look at the Richmond Fed *Economic Brief Series*

These Web-exclusive essays focus on current economic issues and trends and are based on ongoing research and published work of our staff economists.

## Other Recent Work Includes:

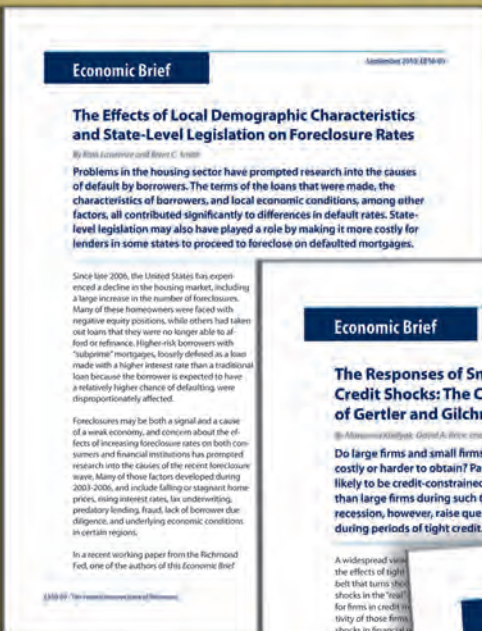
August 2010  
**When Did the Recession End?**

July 2010  
**How Useful Are Consumer Surveys as Macroeconomic Indicators?**

June 2010  
**Now How Large Is the Safety Net?**

To access the *Economic Brief Series* and other Fed resources:

[www.richmondfed.org/publications](http://www.richmondfed.org/publications)



September 2010



October 2010



November 2010