

FALL 2009 REGION FOCUS

THE FEDERAL RESERVE BANK OF RICHMOND

HAVE MARKETS FAILED US?

Some question whether the
efficient market hypothesis
has survived the financial crisis



REGION FOCUS

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DIRECTOR OF RESEARCH
John A. Weinberg

EDITOR
Aaron Steelman

SENIOR EDITOR
Stephen Slivinski

MANAGING EDITOR
Kathy Constant

STAFF WRITERS
Renee Courtois
Betty Joyce Nash
David van den Berg

CONTRIBUTORS
Kartik B. Athreya
Daniel Brooks
Ann Macheras
Bob Schnorbus
Sonya Ravindranath Waddell

DESIGN
Big (Beatley Gravitt, Inc.)

CIRCULATION
Alice Broaddus

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The Importance of Financial Education

In October, I gave a talk to the Council for Economic Education, addressing what educators might do to help people make more informed financial choices. This issue seems particularly timely in the wake of the financial crisis, and in this column I would like to revisit the topic.

Every day, we are faced with financial decisions. But for most of us, there are only a few key choices that have the potential to fundamentally shape our financial future. In those cases, it is important that we make the correct choice — or, perhaps more importantly, avoid a really bad choice. Among those decisions are: whether to pursue higher education; whether to purchase a house and, if so, on what terms; and how to best save for retirement. I believe that financial education should focus on those key decisions, ones that will have large and potentially long-lasting effects on people's lives.

Consider education. Wage inequality has been growing in the United States since the late 1970s. While there are numerous potential causes of this trend, many research economists agree that one of the most significant is skill-biased technical change. That is, technological progress over the last few decades has increased the productivity of skilled workers more rapidly than it has of less-skilled workers. As a result, the financial returns to accumulating skills have grown sharply. Often — though not always — those skills are obtained through higher education. Investments in human capital can prove more useful if they are made at a relatively early age, giving people the opportunity to recoup their investment throughout the majority of their working lives. In addition, such training tends to build on itself, because acquiring skills early in life makes it easier to acquire additional skills later in life. The evidence is clear that, over time, higher education has become a larger determinant of lifetime earnings. This suggests that it is particularly important that high school students fully understand the returns to human capital investment as they consider which path to take following graduation.

Most households will purchase a home. It is crucial that they know how much they can afford to spend and which terms would be most desirable given the path they expect their earnings to take over their lifetimes. Homeowners should see the considerable benefit in gathering that information. But prudent regulation, such as requiring the essential provisions of a mortgage contract to be clear and explicit, can make the process easier. I think it is also important to note that homeownership itself is not a wise choice for everybody. For example, for those who value mobility and are apt to move relatively frequently to pursue better job opportunities, the search and transaction costs of purchasing a house can be prohibitively large. More critically,

purchasing a home usually means placing a considerable amount of a household's savings into a single asset that is often costly to trade. This decision may be particularly risky for a household with a variable income stream and low levels of savings, as is true of many low-income households. When one considers such factors, I think it becomes clear that renting does not necessarily mean "throwing your money away," as is commonly suggested. It is simply another way to obtain housing, one that is appropriate for some households, just as buying is for others.

Planning for retirement involves a hard set of choices as well, which, if not done carefully, can lead to painful results. In the aftermath of this recession, which has seen many workers postpone their impending retirement, the importance of accounting for a range of plausible risks should be clear. Given the differences in how people wish to live in retirement — that is, whether they want more, less, or roughly the same annual spending as when they were working — it is hard to say much in the abstract about what is an "optimal" retirement plan. But I think everyone would benefit from understanding that there generally is good reason to shift your retirement portfolio from more risky to less risky assets as you grow older. This understanding might have helped prevent some of the considerable losses in retirement funds that some consumers have unfortunately experienced.

People do not always make the best possible choice in every situation. But we can learn which decisions are likely to be especially consequential and to take appropriate care when making them. Directing our financial education efforts toward that goal, I believe, could help many people more effectively pursue their ambitions and avoid costly mistakes.



A stylized, handwritten signature in black ink, appearing to read 'JML'.

JEFFREY M. LACKER
PRESIDENT
FEDERAL RESERVE BANK OF RICHMOND

Danville Works New IKEA Factory Hums

One manufacturer decided to swim against the outsourcing current and situate a factory close to its market.

Swedwood, the manufacturing unit for IKEA, opened its first U.S.-based manufacturing facility in Danville, Va. By the time the factory opened in May of 2008, there were more than 175 employees at the 930,000 square-foot plant. Swedwood expects to hire another 625 workers by 2013.

For Southside Virginia, the new factory brought relief. Here the economic blues are nothing new. Danville, home to 48,411 residents, according to the 2000 Census, has struggled with high unemployment and a stagnant economy for a decade. In the current recession, Danville's unemployment jumped to 13.9 percent in January 2009, well above the 7.6 percent nationwide unemployment rate. By October, the rate had fallen to 11.2 percent, much higher than Virginia's 6.3 percent rate.

Manufacturers have generally left Danville for the cheaper labor found overseas. For example, textile manufacturer Dan River Inc. was facing overseas competition and steadily decreased its production. The textile mill once employed as many as 15,000. By 2008, only a handful of workers remained when the company filed Chapter 11 bankruptcy. The departure of the textile mill and smaller manufacturers crippled the economy. For a city where about 15 percent of jobs were in the manufacturing sector (compared to the 7 percent Virginia average), the decline of manufacturing was particularly devastating.

For some manufacturers, transportation makes up a large percentage of total costs. This is especially true for IKEA, known for low-priced furniture. Two years prior to IKEA's 2006 announcement that they would open the Danville plant, crude oil had more than doubled in price, from about \$30 a barrel in 2004 to \$70 a barrel by August of 2006.

The Danville facility produces wood-based products such as bookshelves, and coffee and side tables. According to Jorgen Lindquist, vice president of Swedwood in North America, "this kind of lightweight furniture is cheap to make, so transportation is a huge part of the overall cost." Having to ship goods from factories in Eastern Europe all but wiped out the benefits of manufacturing in such low-wage economies.



IKEA's Swedwood manufacturing plant in Danville, Va., specializes in wood-based furniture such as bookcases and side tables.

Now IKEA's products can be shipped to East Coast distribution centers in Georgia, Maryland, and New Jersey. Proximity to those centers was one reason why Danville was chosen. A manufacturer also needs skilled labor, and Danville had plenty who were eager for employment.

The Danville Office of Economic Development especially welcomed the arrival of Swedwood. After the tobacco settlement in 1999, in which states received \$206 billion over 25 years from tobacco companies, millions of dollars went to aid Danville's weakening economy. The city and its home county, Pittsylvania, used that money to attract industry and built the 900-acre joint industrial park Swedwood now occupies.

Swedwood was also lured by the industrial park's communications capacity. Using money from the tobacco settlement, the state initiated the Mid-Atlantic Broadband Cooperative (MBC) to construct a fiber-optic network covering a large section of southern Virginia. This enables Swedwood to connect to its home office in Sweden. According to Tad Derisa, general manager of MBC, it cost less for Swedwood to buy connectivity to Sweden through the cooperative than other carriers.

Because IKEA is not publicly traded, it is difficult to gauge the impact of its manufacturing move to the United States. With the value of the dollar declining and the rise in oil prices at the time, other manufacturers were reviewing the United States for possible sites. The outsourcing trend is unlikely to reverse, even with a sharp increase in oil prices. But in some cases, these high transportation costs may provide some employment relief for small towns like Danville.

—DANIEL BROOKS

Troubled Asset Relief

Bank of America Repays Government Loans

Bank of America in December repaid the \$45 billion it borrowed from the government's Troubled Asset Relief Program (TARP). Bank officials said in a press release that the repayment clears a "significant hurdle" and demonstrates the company's strength following the nationwide financial crisis.

More than half of the repayment came from cash, with more than \$19 billion coming from a new issuance of stock. Bank of America is the nation's largest bank-holding company by assets and received the second-biggest chunk of TARP money behind Citigroup.

Most banks want to repay the money, in part to be free of government influence over executive pay and other operational issues. But it's not easy. Banks must prove they're out of financially tumultuous waters before using resources to pay back TARP funds. This includes judging whether the weak economy could pose further troubles.

For Bank of America, the decision likely also factored in possible financial challenges issuing from its acquisitions of Countrywide in 2008 and Merrill Lynch in 2009. "It may still have to stomach losses from its portfolios associated with [those] acquisitions," notes Daniel Indiviglio of *The Atlantic*.

TARP was initiated by the U.S. Treasury in October 2008 following the onset of the financial crisis. The program gave eligible banks capital in exchange for preferred shares of common stock granted to the government. The only way for banks to recoup those shares is to buy them back which, in effect, is a repayment of the TARP money. But they can only do that with government approval.

Treasury allows TARP repayment based on an institution's soundness, capital, and ability to lend, all of which are determined in concert with the bank's regulator.

Regulators also have a say in how banks finance TARP repayment. Banks are required to hold a certain amount of capital against assets to protect against possible future losses. Using existing cash to repay TARP funds will lower the bank's capital ratio, all else being equal. A bank's capital cushion will help weather strains stemming from the financial crisis. That means repaying TARP funds could impair its ability to withstand future turmoil. Alternatively, banks can repay TARP funds by issuing new shares, but that displeases current shareholders who want shares to stay scarce and, hence, more valuable.

The Federal Reserve's Fifth District was home to two of the nation's largest banks prior to TARP's inception: Bank of America and Wachovia, both based in Charlotte. However, San Francisco-based Wells Fargo announced in the same month TARP was created that it would merge with Wachovia. Wells Fargo received \$25 billion in TARP funds, and repaid the money late in December.

Citigroup, the New York-based bank, was the largest recipient of TARP funds at \$50 billion. Citigroup paid \$20 billion back in December. Repaying TARP funds and reassuming control over executive pay likely also made it easier for Bank of America to secure a replacement for CEO Kenneth Lewis who retired at the end of 2009. Brian Moynihan, an internal pick, was chosen as the new head of the banking giant.

— RENEE COURTOIS

Apples, Soybeans, Poultry

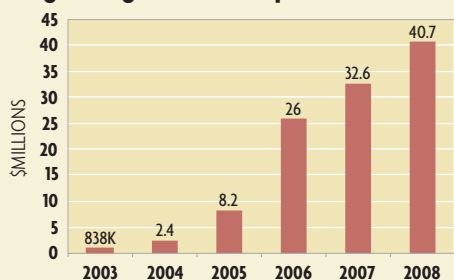
Virginia's Exports to Cuba Grow

Cuba is an expanding market for Virginia agricultural products, with \$45 million sold as of the third quarter of 2009. Virginia ranks among the top five states in the value of exports to the Caribbean nation. Cuba was opened to medical and agricultural exports in 2000 for the first time since 1962.

The Virginia Department of Agriculture and Consumer Services reports that the state's agricultural exports totaled \$2.2 billion in 2008 to all corners of the globe to the mutual benefit of farmers and consumers. Virginia cattle, for instance, are shipped to Turkey and this export of genetic stock improves Turkish stock, says VDACS marketing director Charles Green. Virginia also sells \$100 million in agricultural goods annually to China.

Farmers and VDACS representatives went to Cuba last November to promote and negotiate shipments of soybeans, pork, poultry, and apples. The state has exported agricultural products to Cuba since 2003, when it sold \$838,000 in

Virginia Agricultural Exports to Cuba



SOURCE: Virginia Department of Agriculture and Consumer Services

products. In 2008, that number had grown to \$40 million.

The process takes patience, though. Transactions must go through a third-country bank. But the relationship is paying off. The Cuban government buys through its agent, Alimport. VDACS sets up meetings between exporters and government representatives. "They may relay a desire to quote on a particular product; we bring it back and put it out here to the industry to see if anyone is interested in providing a quote on that particular product," Green says.

Foreign consumers can help diversify markets for farmers. Apple growers Philip Glaize of Winchester, Va., and Henry Chiles from Crown Orchards, for instance, work together to supply necessary volume for their overseas buyers.

The Cuban government agency coordinates purchase requests of multiple agencies, and consolidates them into contracts with exporters, Green says. The market could be expanded, he says, but current trade and travel restrictions limit growth. There are other transaction costs as well. Because of everything from travel licensing to the necessary export licenses from the U.S. Treasury and U.S. Department of Commerce, it's not as easy as going to Mexico City to visit a customer. But it has been worth the investment.

This is one of those markets where it's truly unique when you see someone who is American," Green adds. And when he does, it's often someone from the South. "Geographically it makes sense — we have a competitive advantage. It's a three-day transit time to get a vessel down there with soybeans."

— BETTY JOYCE NASH

Cash Economy

Underground Commerce Grows in Recession

Some transactions in the economy aren't conducted on the books. Some are simple cash transactions between people in what analysts call the "underground economy." Contrary to the connotation, much of this activity is not illicit. Most of the underground economy does not involve drugs, prostitution, or other illegal activities but is more likely to involve paying a neighbor to mow your lawn or shovel snow — tasks that, were it not for the nonreporting of the earned income, would be otherwise perfectly legal.

Recessions tend to be fertile periods for these deals. One way to measure the underground economy is to evaluate the ratio of unreported income to reported income. Edgar Feige, professor emeritus of economics at the University of Wisconsin-Madison, estimates that in 2008, unreported income reached about \$2 trillion, the highest since World War II. This estimate puts the percentage of unreported income at between 22 percent and 24 percent of reported income.

As a first step to estimating the underground economy, Feige took a look at currency in circulation, which at the start of 2009 hit \$824 billion. His research shows that about a third of U.S. currency is held overseas, less than earlier estimates. The remainder, Feige notes, includes underground transactions.

During World War II, the calculated percentage of unreported income rose dramatically, but fell off during the post-war period and remained fairly stable until 1973. This

figure rose to a temporary peak in 1982, also a recession year. Feige estimates that the 1980s and 1990s showed considerable fluctuations in levels of reported and unreported income. Yet during the past decade, levels of unreported income rose substantially.

Lack of employment opportunities probably plays a role in the rise of unreported income. "People do try to substitute work in the unofficial sector for work in the official sector where they're losing their jobs," Feige says.

When so much income is unreported, legislators have fewer tax revenues at their disposal. His findings suggest that governments could be out more than \$600 billion a year, which includes money from overseas tax havens. That figure, called the "tax gap," was last published by the Internal Revenue Service in 2002, when it was about \$345 billion. Collecting that money could allow lawmakers to reduce deficits.

Feige also posits a close relationship between distrust of the government and the growth in unreported income. Events like the Vietnam War and Watergate scandal caused an increase in government mistrust. That led to an increase in noncompliance with tax laws, Feige says. He expects dissatisfaction with the Iraq War and other policies to drive increased rates of government distrust. "I suspect that could be an important factor in the increase in noncompliance we've witnessed."

— DAVID VAN DEN BERG

The Evolution of Fed Independence

BY STEPHEN SLIVINSKI

Today there is a consensus that a central bank can best contribute to good economic performance by pursuing price stability — and that it should remain independent from political forces. In the case of price stability, this understanding evolved over decades of experience. The notion of independence of the central bank was more difficult to fulfill.

The original conception of the Federal Reserve System when it was created in 1913 was meant to continue the spirit of the “independent treasury system” that existed in the pre-Fed era. That system assumed that the U.S. Treasury would store its gold and assets in its own vaults lest it unduly influence the markets for credit and money. Ideally, Treasury meddling in what passed for monetary policy at the time was to be avoided.

Yet for most of the first four decades of its existence, a lack of independence was characteristic of the Federal Reserve. The hand of the executive branch of the U.S. government was ever-present when the Fed began operations in November 1914. The 1913 act that created the Fed made the Secretary of the Treasury and the Comptroller of the Currency *ex officio* members of the Board. In fact, the Treasury secretary presided over all meetings in those early days. The Board did not have its own building — they held their meetings in the Treasury building instead.

Thus, the evolution of monetary policy cannot be understood without an understanding of the changes and personalities involved in the evolution of the Fed as an institution. Throughout much of its history, the struggle for independence has often occurred in conjunction with changes in policy — and these changes have tended to reinforce each other.

Wars, Depression, and Dependence

When the United States entered World War I in April 1917, the Federal Reserve almost instantly became the primary vehicle for financing the war effort. The main function of the Fed during those war years was to lend money to banks to purchase “Liberty Loans” bonds from the U.S. Treasury. They loaned the money at a discounted rate — not coincidentally lower than the interest rate on the war bonds — to entice bond purchasers. After the war, the Federal Reserve Bank of New York remained the official fiscal agent of the U.S. Treasury Department.

In the post-war years, the Fed busied itself with maintaining the newly reconstructed gold standard. Its missteps in the wake of the stock market of October 1929 contributed to the impression that the Fed was powerless.

Political forces retained the upper hand in the economic upheaval of the Great Depression. As economist Allan Meltzer points out in his history of the Fed, monetary policy would basically be dictated by Congress and the White House between 1933 and 1951. For instance, after Franklin Roosevelt became president in 1933 he assumed emergency powers that explicitly took the United States off the gold standard. Congress would later that year mandate that the Fed issue “reserve notes” not backed by gold. The Fed was forced to freeze its asset portfolio and the monetary base was effectively determined by the Treasury.

Additionally, the Federal Reserve structure as we know it today is a by-product of the policy actions taken during the Great Depression. Many of

How monetary policy and central bank autonomy came of age



Although the Fed Board of Governors moved into their own building in 1937, their independence in monetary policy wasn't established until 1951. The headquarters was named the Eccles Building — after the former Fed chairman influential in achieving Fed independence — in 1982.

them were motivated by a desire of policymakers to further centralize control over monetary policy. When Roosevelt went looking for a new head of the Federal Reserve Board, he settled on Marriner Eccles, an assistant to his Treasury secretary. Yet Eccles told the president he wouldn't take the job unless the Fed was reformed to give the Board more power over the regional Fed banks. The 1935 amendment to the Federal Reserve Act modified the FOMC and Eccles became its chief. He would serve as chairman until 1948.

While the 1935 act took the Secretary of the Treasury and the Comptroller of the Currency off the Fed Board, it didn't translate into a softer hand by the executive branch in monetary policymaking. When the United States entered World War II, the Fed became again a mechanism by which the government could more cheaply finance the war effort. In April 1942, the Fed announced a policy of cooperating with the Treasury to keep interest rates low. By 1947, the Fed was summarizing its "primary duty" as "the financing of military requirements and of production for war purposes." In his memoirs, Eccles even described his work during this period as "a routine administrative job" as the Fed "merely executed Treasury decisions." Alan Sproul, the president of the New York Fed, lamented, "We are not the masters in our own house."

The Accord

After the war, Eccles — worried about inflation — began to make strong statements behind the scenes to the effect that the Fed should no longer support the prices of Treasury bonds. The "peg," as it was called, was the rule by which the Fed would buy up those Treasury securities if prices fell as a result of a sell-off. President Truman didn't take kindly to the Fed's new stirrings of independence and told Eccles that he would not be reappointed when his term as chairman was over in 1948. He was replaced by Thomas McCabe but stayed on the Board as vice chairman.

Yet many within the Fed, particularly New York's Sproul, were worried about the loss of Fed independence. For the next two years, the Fed and the Treasury would cooperate but in a rather tense and uneasy way. While the Treasury bond peg remained mostly intact, the stage was slowly being set for a showdown.

The spark that ignited the next consequential chain of events was the Korean War which began on June 26, 1950. Although the first year of that war was financed mainly by tax increases, the Treasury Secretary John Snyder made no secret of his department's commitment to keeping the Fed in the business of maintaining the bond price peg.

The FOMC had other ideas in mind. Still wary of inflation, Fed policymakers were eager to raise the short-term interest rate to reduce the money supply and stave off price increases. That would also have an effect on government financing of debt — it would drive down the price of bonds, which is always inversely correlated with the interest rate, and also increase the government's cost of borrowing.

After the August 1950 FOMC meeting, a movement was

afoot to persuade Snyder to accept a small increase in short-term interest rates. At that meeting, Sproul raised a challenge: The FOMC "should not seek instructions" from the U.S. Treasury. Eccles agreed and said that if the Fed is "expected to survive as an agency with any independence whatsoever [it] should exercise some independence."

President Truman was also willing to try to influence Fed policy. In early December 1950, he phoned McCabe at his home and urged him to "stick rigidly" to the pegged bond rates. "I hope the Board will not allow the bottom to drop from under our securities. If that happens that is exactly what Mr. Stalin wants."

To help smooth relations and try to persuade the administration to change their stance on the bond peg, McCabe met with Truman and Snyder at the White House on Jan. 17, 1951. The chairman stated the concerns of the Fed and the meeting ended without a specific resolution. McCabe seemed convinced that their conversation would continue behind the scenes at a later date.

But the next day Snyder delivered a speech to the New York Board of Trade in which he announced that McCabe had agreed with the Treasury's peg policy. This infuriated the members of the FOMC. The minutes of the Fed meeting record that McCabe reported to his colleagues that he had made no such commitment.

The Fed decided to fight back. At their January 29 meeting, in a challenge to the Treasury, the Fed allowed the price of the pegged government bond to drop. The action prompted Truman to call the entire FOMC to the White House to apply some pressure the next day. It was the first time a U.S. president had done such a thing.

As Meltzer describes it, "The meeting with the president smothered the conflict in ambiguity. Everyone seemed to agree, but no one changed position." Yet the FOMC members also were confident that nothing said at the meeting could have been construed as an endorsement of the Treasury's policy position.

At noon on February 1, the White House released a press statement that took the Fed policymakers by surprise: The Truman administration announced that the Federal Reserve Board had agreed to the peg policy. In his memoirs, Eccles noted that if swift action was not taken, the Federal Reserve would lose the independent status Congress meant it to have and "would be reduced to the level of a Treasury bureau."

The fight for Fed independence also began to hone the thinking of Fed policymakers about the nature of inflation and the consequences of pegging the interest rate of Treasury bonds. By committing to a policy of buying those bonds when the price fell below an arbitrary level, the FOMC members began to understand that they were expanding the money supply. Richmond Fed economist Robert Hetzel and former Board of Governors economist Ralph Leach suggests this marked an "intellectual watershed." "Gone," they write, "was the self-image of a central bank that allows an 'elastic currency' passively to 'accommodate commerce.' The Fed moved toward the idea of control

of money creation to stabilize the purchasing power of the dollar.”

The Fed forced resolution of the dispute on February 19. That day it informed the Treasury that it “was no longer willing to maintain the existing situation in the Government security market.” As Sproul recounted in congressional testimony a year later, the Fed also let them know that unless there was someone at the Treasury who could work out a prompt and definitive agreement with them, they “would have to take unilateral action.”

The Treasury finally acknowledged the need to end the public dispute by holding a meeting at the White House between the president and other government policymakers. Snyder, however, was not at the meeting. He was in the hospital recovering from surgery. Instead, he left the negotiations in the hands of William McChesney Martin, assistant secretary of the Treasury.

After a few days of negotiation, the parties involved agreed on what became known as the Treasury-Fed Accord. As ratified, it read: “The Treasury and the Federal Reserve System have reached full accord with respect to debt-management and monetary policies to be pursued in furthering their common purpose to assure the successful financing of the Government’s requirements and, at the same time, to minimize monetization of the public debt.”

This newfound independence by the central bank would mark the start of a new era for the Fed. “For the first time since 1934, the Federal Reserve could look forward to conducting monetary actions without approval of the Treasury,” writes Meltzer. Now the Fed “faced the task of rediscovering how to operate successfully.”

That task would have to be undertaken with a new leader. In one final shot at the Fed, Truman told McCabe that his “services were no longer satisfactory.” Even though his term ran until 1956, McCabe agreed to resign — but only under the condition that he be replaced with someone who would pass muster with the FOMC. The president appointed William McChesney Martin, one of the key figures in the Treasury-Fed Accord negotiations. He would go on to serve for almost 19 years once he assumed office on April 2, 1951 — the longest term of any chairman to this day.

A Brief Detour

The Martin era is still seen today as a vital period during which the Fed was established as a credible and autonomous policymaking body. Part of the success of the Martin years was the unwillingness of President Dwight Eisenhower to meddle in Fed policy the way his predecessors had.

On the other hand, throughout his presidency Lyndon Johnson was eager to get Martin to pursue an easy money policy to assist him in funding both the Vietnam War and his deficit-fueled increases in government spending. Johnson frequently criticized Martin’s policies in private meetings and asserted that he seemed intent on hurting Johnson politically.

LBJ’s crusade to steer Martin was ultimately an ineffec-

tive one. Yet Johnson did reappoint Martin in 1966 for what would become his last term as Fed chairman.

Another president for whom Fed policy was seen as a tool to influence political outcomes was Richard Nixon. In his memoirs he was quite outspoken about how he thought the tight Federal Reserve monetary policy virtually killed his chances of getting elected president in 1960.

In 1970, President Richard Nixon was intently pursuing a political strategy that had as one of its goals increased employment through easy money. He appointed Arthur Burns as Fed chairman with the expectation — sometimes explicitly stated — that he would be more sympathetic to using monetary policy to pull unemployment down. During an applause-filled interlude at Burns’ swearing-in ceremony, Nixon famously turned to him and said: “You see, Dr. Burns, that is a standing vote of appreciation in advance for lower interest rates and more money.”

Burns was initially sympathetic, and that mutual expectation married a shift in monetary policy with a close relationship between the White House and the Fed that didn’t exist since the pre-Martin days. Burns, like Nixon, had a view of inflation that made him prone to believing that hard-money Fed policies would be misguided in the 1970s. He came to believe the “cost-push” model of price increases in which inflexible labor union contracts were keeping wages artificially high and contributing to inflation in the price of goods that utilized that labor. In that model, monetary policy was ineffective at battling inflation in the short term.

The temporary weakening of Fed independence under Burns wasn’t motivated only by the president’s steps toward assuring a compliant Fed. They were also facilitated by Burns himself who was quite willing to bargain with the White House to achieve policy outcomes that he saw as critical to defeating cost-push inflation. Economic historians acknowledge that he at least tacitly promised an easy money policy to the White House in exchange for Nixon’s imposition of wage and price controls.

The consensus of the economics profession since then is that such controls and the easy money policy that accompanied them were harmful to the economy. The high inflation it created led to a period of economic stagnation that lasted until the early 1980s.

What broke the cycle was the appointment of Paul Volcker as chairman in 1979. Volcker was able to restore not only a more Martin-esque monetary policy by taming inflation and slowing money growth but also restore the independence and credibility of the Fed. Political support in such an endeavor was also important, and the lack of meddling by both presidents Jimmy Carter and Ronald Reagan was crucial to that success.

A New Accord?

Just as policy shifts in the past have been tied to shifts in Fed independence, a new concern among some economists is

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JARGONALERT

Prisoner's Dilemma

BY DANIEL BROOKS

Rick and Kyle are two aspiring thieves with plans to get rich from reselling antiques on the black market. For their first heist, they set out to rob an antique shop in the countryside. They break into the shop's back door. When the alarm is triggered, they head to their getaway car. As they flee, a state trooper pulls the two over for speeding. Noticing that the car matches the eyewitness description of the one fleeing the scene of the crime, the trooper searches the car. He finds two unregistered firearms, and the men are locked up in the county jail.

Rick and Kyle are placed into separate cells. No communication is allowed between them. The officer goes to each cell and gives them the same options: Confess to the robbery or stay silent. If one confesses and the other stays silent, the confessor will receive no jail time, but the other must serve five years. If both stay silent, each gets one year in jail for the firearms charges. And if both confess, they each receive three years in jail.

Assuming that Rick and Kyle are self-interested, each will confess. Rick is worried that Kyle will not stay silent. So, if Rick stays silent, he gets five years, but if he confesses he gets three years. Even if Kyle decides to remain silent, Rick would still confess because no jail time is better than one year in jail. (Similar thoughts are running through Kyle's mind.)

The dilemma is that, for each suspect, confessing is the better choice no matter what the other person does. But, as a whole, they are worse off because they end up with a total of six years in jail when they could have received a total of two years if they both stayed silent.

Countless variations of this "prisoner's dilemma" story have been pondered ever since mathematician Albert W. Tucker first coined the term and formalized the game in 1950. Yet the punch line remains the same: Rational individuals acting in their own interest can result in suboptimal outcomes in the aggregate.

A common application of the prisoner's dilemma intuition is in the analysis of the conflict inherent in individual and group decisions. Members of a group that act in their own self-interest can end up making the group worse off than if everyone were to cooperate.

Examples may be found in the real world. Assume, for instance, that greenhouse gas emissions are responsible for global warming and that, all else equal, it would be desirable to curb climate change. Nations face a choice to either reduce greenhouse gas emissions or maintain the status quo.

If enough nations cooperate, emissions will fall and the temperature stabilize. But since reductions in emissions require costly actions, any nation could sit on the sidelines and let other nations bear that cost while they enjoy the benefit. With enough selfish nations on the bench, cooperation breaks down and everyone loses relative to what they could achieve if they worked together. This might also be recognized as a "free-rider" problem. Prisoner's dilemmas can be seen in this light as an example of such a problem.

The logic of the prisoner's dilemma makes a big assumption about individuals: It presumes that they care mainly about their self-interest. Economic experiments have tested this assumption. When looking at a variety of prisoner's dilemma experiments from 1958 to 1992, Dartmouth College economist David Sally found that when participants played the games, on average, they tended to act selfishly only about half the time. A plausible explanation for this is that the players are less prone to selfish behavior than economists predict.

Another explanation might be that cooperation is actually an optimal strategy in the real world where people interact with each other repeatedly over time. To test this, Robert Axelrod, a social scientist at the University of Michigan, organized a tournament. Academic colleagues were invited to submit a computer strategy, which was to be repeated a number of times.

As it turns out, the exclusively selfish strategies did very poorly. The one that fared the best was also the simplest: the "tit for tat" strategy developed by a mathematical psychologist. It required the player to cooperate on the first move and then choose the same strategy that the opposing player picked on the previous turn. While the strategy gives the benefit of the doubt to the opposing player, it also lets him know that a lack of cooperation will not go unanswered. The enforcement of this implied social norm and the nature of reciprocal behavior over repeated rounds of the game might explain the rate of cooperation in a variety of experiments.

Or, to put it another way, even inherently selfish individuals may tend to cooperate more often when benefits to cooperation over the long run outweigh the benefits over the short run. It is through these experiments that economists have been able to mine a wealth of economic and social insight that arises from the hypothetical predicament of two prisoners.



RF

ILLUSTRATION: TIMOTHY COOK

How Forecasts Can Influence the Present

BY DANIEL BROOKS

Would positive news about economic growth in the next quarter make you increase your spending or investment today? And, as a result, might this spending actually speed the growth of gross domestic product (GDP) more than the forecasters expected? Stanford University economist Nir Jaimovich and Northwestern University economist Sergio Rebelo ponder those sorts of questions in their new paper. They propose that “news shocks” about the economy’s future may, in fact, be a key driver of business cycles.

To economists, shocks are factors that unexpectedly increase or decrease output and employment. A news shock is a change in the expectation about the future derived from new information that can affect your investment, consumption, and work decisions today.

While the idea of news shocks can be traced as far back as the work of British economist William Beveridge in 1909, interest in news shocks revived after the U.S. tech stock boom and bust of the 1990s and early 2000s. The interest stems from a quite plausible story: Between 1995 and 2001, forecasts of the long-run growth rate of earnings for companies in the S&P 500 index rose rapidly, from 11.5 percent to 17.7 percent. Investment increased when the earnings forecasts went up. Yet investment in those companies, on average, went down when the realized earnings were reported. Jaimovich and Rebelo suggest that the initial news shock was driven by the prospects of new technologies, which then led to high expectations about earnings growth. But when those technologies or companies failed to live up to expectations, investment fell and a recession resulted.

Economists have grappled with business cycle theory for decades. Yet it remains difficult to fit news shocks into the standard neoclassical economic model. Business cycle data feature two forms of “comovement” — meaning, you can see the factors move together in the data. “Aggregate comovement” describes how major macroeconomic aggregates such as output, consumption, investment, hours worked, and real wages rise and fall together in all sectors of the economy. “Sectoral comovement” occurs when those aggregates rise and fall together in different sectors of the economy independent of whether the same aggregates rise or fall in other sectors. The trick is to find a model that can account for both types of comovement in response to shocks that include news shocks.

In a 1984 paper, Robert J. Barro of Harvard University and Robert G. King, now of Boston University and a visiting scholar at the Richmond Fed, showed that only a contemporaneous shock to total factor productivity (TFP), such as technological improvement, can produce aggregate comovement. In their model, Jaimovich and Rebelo go a step further to introduce three new elements into the neoclassical growth model to generate comovement in response to news shocks. The first assumes that firms can vary their means of production — this is called “variable capital utilization.” The second factor, “adjustment costs to investment,” takes into account the expense incurred from changing investment, such as scrapping plans to buy new machinery. (For example,

if it’s less costly to change your plans sooner than later, you’ll have an incentive to act more quickly to news about the future.) The third factor is a short-run “wealth effect” on labor supply that assumes people will alter the number of hours they work in response to positive news.

With a model able to produce fluctuations from news shocks, the next question is whether the model can produce estimates that mirror the empirical data. Jaimovich and Rebelo also use data from the “Livingston Survey” of output forecasts. Started by Pulitzer Prize-winning financial columnist Joseph Livingston in 1946 and compiled by the Federal Reserve Bank of Philadelphia since 1990, this survey gathers the forecasts of different economic variables by professional forecasters. This provided the authors with two-quarters-ahead forecasts of GDP for a number of years.

Comparing the simulations of their model to the business cycle data from 1947 to 2004, the authors discovered that their model generates nine recessions compared to the 14 they estimate actually occurred during that period. However, the recessions in the model are less severe than those in the data. Jaimovich and Rebelo explain that a possible explanation for the discrepancy is that the model does not take into account other shocks to the U.S. economy such as a rise in energy prices.

Their results indicate that a neoclassical model can indeed generate business cycles without relying solely on negative productivity shocks. Instead, news about the economy’s potential future — and, in particular, estimates of variables such as future TFP — can heavily influence the pattern of economic growth.

RF

“Can News about the Future Drive the Business Cycle?”

by Nir Jaimovich and Sergio Rebelo.
American Economic Review. September 2009, vol. 99, no. 4, pp. 1097-1118.

New Credit Card Rules Could Harm Some

BY DAVID VAN DEN BERG

The Federal Reserve and Congress have announced plans to bar credit card issuers from some controversial practices and require card issuers to disclose more information to card holders. Some of these changes have already taken effect, while others are scheduled for 2010. While these tougher rules are designed to protect consumers from some questionable practices, the policy change could bring unintended consequences.

The Federal Reserve approved a set of changes to credit card regulations in December 2008 after a lengthy review process. In May 2009, Congress approved and President Obama signed the Credit Card Accountability, Responsibility, and Disclosure Act, which built on the Fed's rules. The Federal Reserve will implement the law, and expects to complete that process by August 2010.

The Fed's new rules bar credit card companies from using "double-cycle billing." This is a method used to calculate interest for a given billing period. It takes into account not only the average daily balance of the current billing cycle but also the average daily balance of the previous period.

Consider a card holder who makes a credit card purchase on January 10 for \$1,000. When the bill arrives in February, the customer pays \$700, leaving a \$300 balance. When the March bill arrives, under double-cycle billing, the customer would face interest charges dating back to the January purchase of \$1,000 as well as on the remaining \$300 balance.

The Fed also substantially restricted fees on subprime, low-limit credit cards. These cards are known as "fee harvester" cards because they have low credit limits yet require relatively sizable fees from the consumer. In addition, the Fed initiated rule changes that: 1) require a "reasonable amount of time" for consumers to make a payment 2) mandate that payments beyond the minimum due be allocated to the balances with the highest interest rate, and 3) ban annual percentage rate increases in the first year except in certain instances such as when a customer is more than 30 days delinquent.

The Fed created new disclosure requirements, too, mandating that key terms be stated clearly when an account is opened. Credit card companies will be required to show not just the amount of time it would take for the borrower to repay the debt if he makes only the minimum payment each month but also an itemization of interest charges for different types of transactions. Fees and interest charges will now have to be grouped separately on statements, as will a tally of the total fees and interest paid for the given month and for the year to date.

Congress added more rules to those the Fed approved. Among them is a mandate that promotional interest rates

must last at least six months. They also require college students under the age of 21 to prove their ability to repay or get an adult co-signer in order to receive a credit card.

Although many credit card practices are addressed in the new regulations, notes Adam Levitin, a law professor at Georgetown University, the new rules address only problems that are apparent today without solving the problems of tomorrow. Levitin says this approach can start "to look like a regulatory game of Whac-a-Mole. No sooner do regulators put the kibosh on one problematic practice, then another one pops up."

There could be other unintended consequences of the regulation. The new rules limit some of the tools lenders currently use to manage the risk they take on, argues Kenneth Clayton, senior vice president and general counsel of the American Bankers Association's Card Policy Council. Card issuers can either price risk for all consumers upfront, or price for individual consumers as their circumstances change.

The latter option, while leading to the evolution of certain practices that have been outlawed by the new regulations, has arguably also allowed credit card companies to offer lower rates and more credit to some borrowers.

Yet if credit card companies are sufficiently restricted from charging credit card holders for the risk the bank is taking, the lenders might operate under the assumption that all borrowers are about equally likely to default. This could manifest itself in lower credit limits for existing qualified borrowers or a decrease in the number of credit opportunities for new borrowers.

What's more, traditional fees often provide informational value to the consumer as well as the provider, notes a 2008 study by the Federal Reserve Bank of Chicago's Sumit Agarwal, the Federal Reserve Board's John Driscoll, Harvard University's David Laibson, and New York University's Xavier Gabaix. The researchers studied fees assessed on cash advances, over-limit purchases, and late payments. Paying such a fee is a form of "negative feedback." Paying a fee in the previous month reduced the likelihood they paid a fee in the current month by about 40 percent. The more time that passes after a consumer pays a fee, the more likely the consumer will be to forget about it. "However," the study concludes, "on net, knowledge accumulation dominates knowledge depreciation. Over time, fee payments drastically fall."

Once the rules take effect, policymakers should pay close attention to monitor the behavior of credit card issuers and consider the long-term aggregate effects of the new rules on both pricing strategies and the availability of credit. **RF**

Lending Standards and the Foreclosure Crisis

BY DANIEL BROOKS

“Decomposing the Foreclosure Crisis: House Price Depreciation versus Bad Underwriting.” Kristopher Gerardi, Adam Hale Shapiro, and Paul S. Willen, Federal Reserve Bank of Atlanta Working Paper 2009-25, September 2009.

There are two competing theories to explain the sudden outbreak of foreclosures from 2007 to 2009. One theory centers on poor underwriting standards: Borrowers had trouble making payments on their mortgages because those loans were either unrealistically generous or because borrowers were taking out loans based on little income and bad credit. An alternative explanation suggests that housing values were the main explanatory variable in the growth of foreclosures. After all, the authors point out, subprime mortgage performed well until 2006 when house prices began falling.

Using deeds records from Massachusetts — including residential mortgages, purchase and sale, and foreclosure transaction between 1989 and 2008 — the authors create a model to describe the explosion of foreclosures in Massachusetts since 2005. To isolate the effects of the underwriting standards, they estimated what the foreclosure rate of subprime borrowers in 2005 would have been if the price of the homes purchased were in line with the 2002 pricing levels. They discovered that the foreclosure rate would have been vastly lower relative to the actual observed foreclosure rate despite the larger percentage of subprime borrowers that existed in 2005.

The authors conclude that “relaxed underwriting standards did severely aggravate the crisis by creating a class of homeowners who were particularly vulnerable to the decline in prices.” Yet, “that emergence alone, in the absence of a price collapse, would not have resulted in the substantial foreclosure boom that was experienced.”

“Vacancy Posting, Job Separation, and Unemployment Fluctuations.” Regis Barnichon, Federal Reserve Board Finance and Economics Discussion Series 2009-35, July 2009.

In this paper, Barnichon asks the question, “At the beginning of a recession, does unemployment go up because of few hirings, more job losses, or both?” To provide an answer, he suggests determining the relative importance of the two main forces that drive unemployment — vacancy posting (more job losses) and job separation (fewer hirings) — in explaining the movement in the unemployment data.

He finds that, on average, vacancy postings drive unemployment during normal times. But if you look at the turning

points of the business cycle, as Barnichon describes, job separation drives “rare but violent fluctuations in unemployment.” It’s responsible for almost all of the movements in unemployment during the first two quarters after unemployment reaches a low or high point. (Vacancy postings don’t become the main contributor until a year later.) The author also concludes that previous studies which found the opposite could lead economists to “understate the breadth and speed of adjustment of unemployment around turning points.”

“Why do the Elderly Save? The Role of Medical Expenses.” Mariacristina De Nardi, Eric French, and John Bailey Jones, Federal Reserve Bank of Chicago Working Paper 2009-02, July 2009.

In this paper, the authors address two important questions with respect to savings and the elderly: Why do the elderly keep large amounts of assets until late in life? And why do the wealthy elderly spend their assets more slowly than the poor elderly?

In the paper, the authors describe their model of saving by retired elderly singles. To develop their model, they use data obtained from the Assets and the Health Dynamics of the Oldest Old (AHEAD) survey conducted by the University of Michigan. Based on this dataset, they estimate the different processes for mortality and out-of-pocket expenses as dependent on sex, health, permanent income, and age. The authors also take into account social insurance programs such as Medicaid, which was not included in the AHEAD data.

Their analysis shows that out-of-pocket medical expenses grow at an increasing rate with both age and permanent income. This leads the authors to conclude that for many elderly people the risk of having to pay expensive medical bills as a result of living longer is a more important motivation to save than the desire to leave assets to loved ones in a will — the “bequest motivation,” as economists call it. Indeed, the wealthy elderly in the sample tend to live longer and have higher medical bills than those below them on the income ladder.

The poor are faced with a different scenario. Because social insurance programs help protect against catastrophic medical expenses, the poor tend to consume rather than save, leaving little money behind for retirement. Such programs can also benefit the wealthy elderly as well because these programs can protect them against catastrophic medical expenses, which could have the potential to bankrupt them.

RF

Recessions and Entrepreneurship

Is necessity the mother of invention?

BY DAVID VAN DEN BERG

In 1986, at the age of 29, Gary Erickson started a wholesale bakery called Kali's Sweets & Savories. The bakery made Greek calzones and cookies, and sold them to specialty food retailers in the San Francisco Bay area. By 1991, the company had 10 employees and was generating more than \$300,000 in annual sales, but failed to break even. Erickson was working nights and driving the delivery truck on Tuesdays and Fridays, and working at a bicycle company by day.



During the 1990-1991 recession, Erickson started Clif Bar, an organic nutrition bar company. He got the idea to start the firm while on a 175-mile bike ride in November 1990. While eating an energy bar he brought with him, Erickson decided he could make a better one. He spent hours in his mother's kitchen, and in 1992, shipped the first Clif Bars to distributors. His business partner continued to run the bakery for 15 months while Erickson focused on creating the energy bars.

As a startup entrepreneur, Erickson had the luxury of focusing on only a few key tasks, such as product development, sales and marketing, packaging and distribution, while his competitors faced economic challenges. The product Erickson worked hard to create in his mother's kitchen has grown into a diversified firm offering the Clif Bar energy bars, sports drinks, wine, and more. The company took in \$176 million in net revenue in 2008.

Clif Bar is just one high-profile firm launched or conceived during a recession. More than half the Fortune 500 were born either in a recessionary period or in a bear market, according to research from the Ewing Marion Kauffman Foundation, a Kansas City, Mo.-based nonprofit that researches entrepreneurship. Notable startups in recessionary periods include Microsoft, Burger King, and Hyatt.

Like many startup entrepreneurs, Erickson launched Clif Bar by applying lessons from prior experiences, receiving help from family, and following his passion. Success was far from certain. That's true for business creators who launch firms in economic expansions too. Entrepreneurship offers challenges and opportunities in good times and bad, though those challenges and opportunities may differ with changing economic conditions. But, one thing remains constant: Entrepreneurship soldiers on no matter the economic circumstances.

New technology costs have fallen over time, opening up new avenues for entrepreneurs-to-be. That's true regardless of whether the economy is in an expansion or a downturn. However, only recessions offer entrepreneurs something

COURTESY OF BURGER KING CORP.; CLIF BAR & COMPANY; HYATT HOTELS & RESORTS

vital to the development of new firms: a larger than usual supply of available skilled labor.

Starting a business requires capital. Financing through bank loans, credit cards, or by venture investors may prove harder to get in a recession, says Stephen Kaplan, a professor of entrepreneurship at the University of Chicago Booth School of Business. This will have a bearing on the success rate of businesses. Looking at current and past recessions can help us ascertain some insight about how businesses are born and how they survive.

Necessity vs. Opportunity

The Index of Entrepreneurial Activity, produced by the Kauffman Foundation based on data from the Census Bureau and the Bureau of Labor Statistics, documents new business creation. Overall, the index shows the rate of business creation rose slightly in 2008 to 0.32 percent of the adult population, meaning 320 out of 100,000 adults started a business each month in 2008. That's up from 2007's rate of 0.30 percent. Since 1996, the rate of business creation has fluctuated between 0.27 percent and 0.32 percent.

In the Fifth District, Washington, D.C.'s entrepreneurship rate has been the most volatile. Its rate spiked sharply from 1999 to 2000 and again from 2006 to 2007, but a steep decline followed both surges. Yet Washington, D.C., had a higher entrepreneurship rate in 2008 than in 1996. As shown in the table on page 15, the District of Columbia and Maryland are the places in the Fifth District that had higher entrepreneurship rates from 2006 to 2008 than from 1996 to 1998.

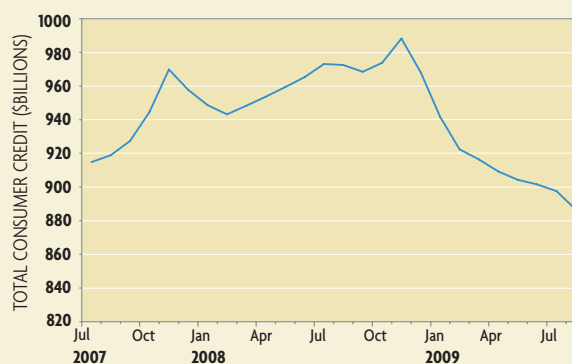
Trends in the overall average business creation rate may mask divergent patterns in business creation for different types of businesses. For instance, rough economic times tend to see the creation of more one-person businesses, while in better times, multi-employee firms emerge, says Brian Headd, an economist with the U.S. Small Business Administration. One-person firms represent 3 of every 4 businesses in the country, but their economic activity is relatively small. In 2002, of the 17.5 million one-person firms, only 3.5 million (20 percent) had annual receipts of \$50,000 or more.

Not all one-person firms stay in that category, however. Between a quarter and a third of firms that eventually employ workers started as one-person businesses, says Dane Stangler, an analyst at the Kauffman Foundation.

The survival rates for firms started in recessions are quite similar to those founded in economic expansions. An average of 48 percent to 49 percent of all new firms between 1977 and 2001 survived to age five. The biggest drop-off occurs in years one and two. This makes sense, Stangler writes, "when we consider that there is remarkable consistency from year to year in the number of new firms and establishments that Americans start."

Stangler notes that determining the effects of a recession on any single company is difficult. "There is so much churn and turnover, combination and recombination occurring at any given time in the American economy, that it's often

Recession Reduces the Supply of Credit



SOURCE: Federal Reserve Board of Governors

difficult to trace the effects of recessions or bear markets on any one company. Within one company, moreover, there will be multiple changes of business as management moves from opportunity to opportunity."

The Kauffman index also groups businesses into three categories of future income potential (based on past performance of firms in various industries): low, moderate, and high. From 2007 to 2008, the two lowest income potential categories drove the increase in business starts. During recessions generally, the creation rates for these businesses tend to be higher.

There are different motivations for entrepreneurial activity and some of that is dependent on the situation in which a businessman may find himself. What analysts call "necessity entrepreneurship" is the type that arises when a displaced worker launches a firm because it is his only option. That is distinct from "opportunity entrepreneurship," which can occur when an entrepreneur sees a niche to fill regardless of his employment status.

Both types of entrepreneurship can appear in recessions, says Ted Zoller, a professor of entrepreneurship at the University of North Carolina-Chapel Hill's Kenan-Flagler Business School. He says that you'd see necessity-based motivations among people just trying to replace their wages. Then you'd see opportunity motivations among individuals who are displaced by large companies that have access to markets being ignored because of the economic circumstance of the larger enterprises.

Small businesses create most of the nation's new jobs, employ about half of the nation's private-sector work force, and provide half of the nation's nonfarm, private real gross domestic product as well as a significant share of innovations. That's all according to the U.S. Small Business Administration in its 2009 report, *The Small Business Economy*.

Stangler suggests that of the firms started in 2008 and 2009, it's likely a tiny number may grow into the largest companies in 2020 or 2030, and a few hundred may eventually receive accolades as fast-growing firms. "When two or three dozen young firms hire four, six, or eight people at a

time for several years, it mostly goes unnoticed. Only when they reach sufficient collective size do they begin to appear in the public consciousness, even though they have been regenerating the economy for several years," he writes.

The big question still remains: How do you fund a new business? The answer to that question will be influenced by how much capital entrepreneurs can access. In a recession, this entrepreneurial fuel may be hard to find.

A Great Future in Plastic?

Entrepreneurs have several different places to turn for money to launch their firms. They can utilize credit cards, take out other loans, get help from friends or family, or turn to venture-capital investors. Venture investing is a high risk game with a high rate of failure but large returns. During a recession, venture capitalists are more likely to invest in new companies only after they have shown some promise and are more likely to band together to make investments to share risk, Zoller says.

Philippe Sommer, director of the entrepreneurship program at the University of Virginia Darden School of Business, formerly ran a venture fund and described the thought process he used when picking projects. "We used to talk about three kinds of companies: A companies, B companies, and C companies," he says. "A companies" were firms with the right people, the right approach to the market, and a strategy that made sense to a funding source. It's no surprise that those companies tended to get funded in both good and bad times. But the "B" and "C" firms, some of which might receive funding when the economy was doing

well, were less likely to receive money during recessions.

No matter how one gets the funding, creating a business and reaping the benefits of entrepreneurship is costly. Starting a business, on average, costs about \$31,000, though those costs can vary widely by industry.

Entrepreneurs often use credit cards to cover those costs. From 2007 to 2008, more than 90 percent of small business loans were for less than \$100,000, and many of them were on credit cards, according to Kauffman research. More than half the firms surveyed by the foundation relied on credit cards to launch, and nearly a third carried a balance. However, every \$1,000 in debt increased the likelihood of firm failure by 2.2 percent.

As the recent financial crisis worsened, you would expect the supply of credit to tighten and also for people to be more reluctant to take on debt. Federal Reserve data indicates that the amount of revolving debt — which is overwhelmingly in the form of credit cards — plummeted in 2009. The decline of more than 7 percent between January and September is the largest over the last 30 years.

Existing credit card holders are finding their credit limits have been cut too. According to a FICO study, 33 million people, or 20 percent of the country's card holders, had their limits reduced between October 2008 and April 2009. Of these, only 27 percent had their limits reduced because of negative items in credit reports.

Credit card loans may be harder to get because of bank fears over increased default risk during a severe recession. The October 2009 Federal Reserve Senior Loan Officer survey also notes that demand for loans continued to

The Demographics of Entrepreneurship

One of the most iconic faces of entrepreneurship in American history is one that appears on signs all across the nation. "Colonel" Harland Sanders started franchising his Kentucky Fried Chicken restaurant at age 65 with a family recipe for fried chicken and a \$100 Social Security check. That was in 1955. Less than a decade later, Sanders had 600 franchises in the United States and Canada.

Today, one of the prominent faces of entrepreneurship is Mark Zuckerberg, the 25-year-old billionaire and co-founder of Facebook, a social media Web site that is one of the 10 most visited sites in the world. Zuckerberg took Facebook live from his Harvard dorm room in 2004, dropped out of school and relocated to Palo Alto, Calif., where he now runs the company.

Popular perceptions may suggest people like Zuckerberg and his Facebook co-founders represent the future of entrepreneurship. But they're actually outliers, says Duke University professor Vivek Wadhwa. He co-authored a paper on technology entrepreneurship for the Ewing Marion Kauffman Foundation, and found that the average and median age of founders of technology firms was 39. "Experience is the most important ingredient of success,"

Wadhwa says. "The stereotypes are inaccurate and a legacy of the dot-com days."

The age group that had the highest rate of entrepreneurship across all industries from 1996 through 2007 was 55 to 64. The age group of 20 to 34 had the lowest rate during this period, which included the dot-com boom.

Entrepreneurship in the age group of 55 to 64 is hardly a new phenomenon. People in that age range are far more "experienced, balanced, and wiser," Wadhwa says. They also have less of something else — fear. "The strongest factor that prevents people from becoming entrepreneurs is the risk," Wadhwa adds. "Once you're in this age group, the risk and the fear is much less."

Other factors can explain the prevalence of entrepreneurship among older adults. For one, people 55 and older may have more wealth they can use to launch a business, notes Dane Stangler, a Kauffman Foundation analyst. Also, some older adults may not possess the skills most in demand in a rapidly changing economy so they find themselves turning to self-employment as a way to making a living. That fact "lurks in the data" but is hard to tease out, Stangler says.

Stangler says these older and bolder adults could fuel

weaken across all major categories except for prime residential mortgages. Just as banks may have more fear about credit card holders defaulting, it's possible the specter of bankruptcy may cause consumers to hesitate taking on additional debt.

Access to credit is “the No. 1 issue” for entrepreneurs, Stangler says. Lack of credit may dampen new firm creation in a severe recession. Zoller says tighter credit will make it harder for the new firms that get started to survive. That's because new firms have to establish a durable cash flow and need working capital to cover operations while economic growth is slow. Without that, “I think you're going to see more failures during this recession than you've seen in previous recessions,” Zoller says.

Financing troubles may affect employment growth at small firms that do survive. David Altig, Federal Reserve Bank of Atlanta senior vice president and research director, notes that businesses with fewer than 50 employees account for about a third of net employment gains in expansions. They've also accounted for about 45 percent of job losses since the current recession started. “Given that these are the types of businesses most likely to be dependent on bank

lending — and given that bank lending does not appear poised for a rapid return to being robust, the prognosis for an employment recovery in these businesses is a question mark,” he writes.

Despite the difficulties, recessions can reinforce the can-do attitude of many — and that can spur entrepreneurship generally. “People are being called upon to take responsibility for their lives in different ways than they were 20 or 30 years ago,” says Jerome Engel, chair of the new venture program of the Haas School of Business at the University of California at Berkeley. “The current economic downturn makes increasingly apparent to people the need for autonomous individual action, on a local and small scale, to secure their financial futures.”

Those small-scale actions can lead to broader improvement in the economy over time. As Stangler writes, “despite the pain of the current recession, there is reason for hope — good things do grow out of recessions.” While the future of any specific new firm is hard to predict, the overall net value to the economy is likely to be positive in the long run. “Every generation of startups is, often invisibly, both a renewal and restructuring of the economy,” he notes. **RF**

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an entrepreneurship boom. The country is now experiencing rapid growth in the numbers of people in the 45 to 64 age group, and life expectancy keeps growing. By 2050, American life expectancy is projected to be 83 years, compared to 78 now. If the rate of entrepreneurship in this group stays constant, this could all translate to a multitude of new companies in the future.

Rising entrepreneurship among older adults isn't confined to one type of business either. “The pattern generally holds across industries,” Stangler says. “There's no industry that stands out for being where the young people are starting companies, and another where the middle age and older demographic groups are starting companies.”

While more senior entrepreneurs may be forming companies, how likely is it those companies will produce major

Average Monthly New Business Starts

Per 100,000 Adults

State	1996-1998	2006-2008
D.C.	280	350
MD	250	270
NC	280	250
SC	300	230
VA	260	230
WV	190	150
U.S.	290	300

SOURCE: Kauffman Foundation

innovations like Facebook? Might an older entrepreneur be more likely to start a “lifestyle” firm, while a younger person more apt to start a groundbreaking one? “Such a concern makes sense, but further research needs to be done,” Stangler writes.

Kauffman Foundation research also demonstrates that immigrants tend to be more entrepreneurial than native-born Americans. One in four engineering and technology companies launched between 1995 and 2005 had an immigrant founder.

Immigrants are also more likely to start businesses of all types. They had higher entrepreneurship rates across all industries every year from 1996 through 2008. In that last year alone, the gap between the overall entrepreneurship rates of the two groups was the widest in the survey period: The rate was almost twice as high for immigrants as it was for the native-born population. — DAVID VAN DEN BERG



The Price Is Right?

Has the financial crisis provided a fatal blow to the efficient market hypothesis?

BY RENEE COURTOIS

Business cycle fluctuations are costly, but they do come with a small upside for economists: They serve as a way to test how well prevailing economic theories hold up to reality.

The recent recession is no different. Some have suggested that the long-standing “efficient market hypothesis” (EMH) has been disproved once and for all by the financial crisis. The EMH says that financial market participants act as powerful information gatherers about an asset’s “true” value, such that an asset’s price will generally reflect all information available about that asset.

But if financial markets are efficient, critics argue, how could investors have gotten things so wrong as far as housing and securitization markets are concerned? Housing prices soared, and securities backed by risky subprime mortgages were sold throughout the financial system at prices that, as now seems apparent, didn’t reflect their true risk. “In short, the belief in efficient financial markets blinded many, if not most, economists to the emergence of the biggest financial bubble in history. And efficient-market theory also played a significant role in inflating that bubble in the first place,” wrote Nobel laureate Paul Krugman in a September 2009 article in the *New York Times Magazine*.

Krugman’s concerns represent one side of the divide over the EMH. The theory extends back to the birth of modern finance. Before the 1950s, the world had few workable models for how asset prices are determined, but this changed with the advent of computers. Statisticians began to study stock market prices, an obvious area in which to apply their new high-powered tools because the daily activity of stock markets provides exceptionally abundant data.

The EMH emerged from this research. Economist Eugene Fama first formalized the theory in his 1964 economics Ph.D. dissertation at the University of Chicago — although the hypothesis was intuited by some scholars long before economics itself became a discipline. The basis for the theory is the self-interest of investors: Because they want to earn a profit, investors will work fervently to expose and trade on even the tiniest bit of new information relevant to an asset’s intrinsic value, leaving no available information left unexploited. This means if there is something knowable about an asset, it will quickly be reflected in its price. The

more frequently trading activity takes place within a market — stock markets, for example, enjoy nearly constant price discovery through daily trading activity — the more likely the asset’s price is to reflect everything there is to know about its true risk and economic prospects.

Fama’s famous 1970 paper, “Efficient Capital Markets: A Review of Empirical Work,” helped set off the 1970s as the growth period of the EMH’s development. Economists showed how equity prices reflected information about economic fundamentals (like corporate earnings or, on the macroeconomic level, interest rates and consumption) consistent with the “rational expectations” paradigm that was beginning to dominate economic research at that time.

Efficiencies and Anomalies

Most of the early research found that stock markets do tend to meet a certain degree of efficiency. Fama’s 1970 work focused the EMH literature by defining possible degrees of market efficiency. In general, where the costs to markets of gathering information exceed the benefits of trading on it, a market will be inefficient in the sense that it will not reflect that information. This is largely why “strong form” efficiency — a market so efficient that an asset’s price even reflects private information held by CEOs and other insiders — is broadly acknowledged as being highly unrealistic.

However, in a “semi-strong” efficient market, stock prices reflect all information that is *publicly* available (think price histories, publicly available accounting reports, and other corporate announcements). A semi-strong efficient market would require significant skill on the part of traders to analyze and interpret information. The early research on market efficiency generally suggested that stock markets met this threshold. For instance, data indicated that investors were unlikely to “beat” the market as a whole and were better off putting their money in index funds that purchase the entire market rather than managed funds or individual stocks.

But by the mid-1980s, economists had increasingly uncovered “anomalies,” occurrences in which financial markets appeared to act in a way that was contrary to the EMH. Some economists found statistically important amounts of

predictability in stock prices. These can be exploited by simple trading strategies, which should not be possible in an efficient market that exhausts all profit opportunities. One of the most enduring anomalies is the idea of stock price momentum: that the same stocks which are doing well for a several-month period tend to be the same ones doing well over the next several months. The converse appears to be true for underperforming stocks. This pattern, too, is predictable. These anomalies cast doubt on the idea that a stock's price reflects all relevant and available information.

Why would markets leave information on the table with profit opportunities unexploited? Explaining this was a ripe area for research. "There are a number of psychologists and behavioral economists who started coming up with counter examples to standard efficient markets results," recalls economist Andrew Lo of M.I.T., who contributed to the early research on anomalies. "Things like loss aversion, herding behavior, mental accounting, probability matching. These are experimental results where they would take test subjects and give them various different kinds of gambles and these individuals would behave in a manner that was not consistent with efficient markets."

A key example is the phenomenon first documented by Harvard economist David Laibson: that people follow the path of least resistance when choosing whether to invest in their 401Ks. If enrollment is voluntary, they tend not to do it. But if enrollment is compulsory and opting out requires an extra step, they tend to stay invested. That is, people appear to irrationally make investment decisions based on factors other than their expected financial gains. By the mid-1980s, the field of behavioral finance had fully emerged, applying psychology to financial markets to understand how and why investors might sometimes make irrational trading decisions.

It's not investor irrationality that is at odds with the EMH, just that irrationality can easily bleed into asset prices. Savvy investors have incentive to identify and trade against investors who are ignoring fundamentals, driving asset prices back to rational levels. Under the EMH, "it's the smart money that matters," Lo explains. "Some people are crazy all the time, and all the people are crazy some of the time, but the smart money will drive out all these behavioral anomalies."

Indeed, behavioral economics has had a hard time turning documented anomalies and instances of irrationality into models that consistently explain movements in stock prices. Many anomalies disappear once you try to pin them down with a model. Since bouts of irrationality seem to exhibit themselves randomly in stock markets, they're hard to predict — which, of course, is

exactly what the EMH says about stock prices: You can't consistently predict them.

Behavioral economists aren't dismayed by this, however, since there's nothing in psychology that suggests people should under- or overreact in any *consistent* manner. "Of course, we do not expect [behavioral] research to provide a method to make a lot of money off of financial market inefficiency very fast and reliably," wrote Robert Shiller, one of the most prominent EMH critics, in a 2003 paper. "We should not expect market efficiency to be so egregiously wrong that immediate profits should be continually available."

Fama takes that as a small victory. He says behavioral economists have good evidence that people are sometimes systematically irrational. "All that stuff I think is great. The work that they do is really good in describing the kinds of biases that people have, and how it shows up in their behavior." But to argue that irrationality can be systematic enough to make prices predictable is something else, he says. "Most of them don't even make that jump. They don't think people can take advantage of whatever inefficiencies are there. And my opinion is, they're basically conceding that for all *practical* purposes, markets are efficient." In the absence of an alternative model for how asset prices might deviate from intrinsic values, much economic research implicitly assumes the EMH holds by using stock prices as a proxy for a firm's or market's true value.

The Bubble Debate

Even though assuming market efficiency is the dominant way of modeling asset prices, the debate still looms over whether this holds true for the economy as a whole — and no such debate is more alive than the one over the nature of asset bubbles. "[M]arket efficiency can be egregiously wrong in other senses," Shiller continued in 2003. "For example, efficient markets theory may lead to drastically incorrect interpretations of events such as major stock market bubbles."

Many economists have agreed that the recent run-up in housing prices was, in retrospect, unjustified by economic fundamentals — the common definition of an asset price bubble. One possible explanation from the behavioral camp is herd behavior, in which some financial market participants mimicked the actions of others.

The fact that everyone everywhere seemed to be profiting from the housing and securitization markets may have validated to both homeowners and investors the belief that house prices would continue to rise indefinitely. Herd behavior could have led both groups to dismiss the risks associated with mortgage and securitization markets and invest in them beyond the degree that fundamentals — such as their incomes,

Efficient Market Hypothesis:
Stock prices will quickly reflect
all available information
about the asset's
true value.



If financial markets are efficient, how could investors have gotten things so wrong as far as housing and securitization markets are concerned?

backed securities and other securitization products, on the other hand, information arguably is more opaque, and concentrated within a relatively small group

balance sheets, and other macroeconomic characteristics — would justify. (It should be noted that herd behavior is often witnessed in sell-offs too. “The fight and flight response has been very well documented as being a rather ancient part of our neurophysiology. All of us are hardwired with a very simple set of reactions to fearful events. If you smell smoke and you see a big fire in the room next to you, you will get scared and you will run as quickly as you can,” says Lo. “If you’re on the floor of the New York Stock Exchange and you just lost 20 percent of your wealth, you’re going to get scared and you’re going to want to run like hell, but that’s not really going to help your financial wealth.”)

But there can also be rational explanations for bubbles that are perfectly consistent with the EMH. The EMH says that investors’ financial decisions at a given time reflect their perception of economic fundamentals. Yet there is nothing in the EMH that says those perceptions are always correct. To the extent that information about an asset is not widely available or is costly to obtain and interpret, investors will form expectations absent that information. It could also be the case that investors fully suspect asset prices are inflated, but believe they can “ride” the boom a bit longer, causing them to rationally buy in. People’s perceptions also can be affected by policy: If people believe unsuccessful risks will be bailed out by government, then they will rationally take on more risk than fundamentals alone would justify. Short of being inside investors’ heads, rational bubbles are very difficult to distinguish from irrational bubbles.

The EMH says “that all the information that we have is reflected in prices,” Lo summarizes. “EMH critics might say that’s not true, because the very great risks were not in prices. But, again, an efficient markets type would say, ‘Well, maybe back then we didn’t have that information. Maybe back then we didn’t fully appreciate just how dangerous some of the toxic assets were. And so at that point in time, the best available information was incorporated into prices.’”

Both arguments may be right, according to Lo, but both also misconstrue the concept of market efficiency: It is an ideal, not something that either is or isn’t true. “It’s not that the EMH is wrong, it’s that it doesn’t always work. Markets are not *always* efficient *all* the time. Sometimes they are efficient, sometimes they are not,” he says.

What determines whether a market is efficient are factors like the degree to which information is available and the frequency with which price discovery takes place. The research on market efficiency has focused almost entirely on stock and traditional bond markets in which both of those conditions are likely to be met. In the market for mortgage-

of investors. And the market for a home clears only once every several years, Lo points out.

He suggests that engineers have a more constructive way of thinking about efficiency. Engineers evaluate engines relative to the ideal of being 100 percent efficient in terms of how much energy goes in for the output it produces. Of course, an engine of 100 percent efficiency is an unattainable fantasy — just like the idea that markets can be perfectly efficient. “I think that is changing, slowly,” Lo says, “but it will have to change a bit more before I think we have a more complete view of market dynamics.”

Concerning the recent episode, maybe it’s *who* seemed to be on the losing side of inflated asset prices that has intensified doubt over the EMH. Over the last couple of years it is the “smart money” Lo refers to — the large, savvy investors with lots of analytical tools at their disposal — that has seemed to take the largest economic hits. Yet it is the smart money that should have been able to identify and undo bubble behavior. “That’s exactly why the efficient market hypothesis has a bit of a black eye. It’s because what was supposed to have been the smart money ended up losing tremendous *amounts* of money over the course of the last couple of years. So it really calls into question the whole premise of efficiency,” Lo says.

The Price is Right, Except When It Isn’t

The stakes in this debate reach beyond academic dispute. If economists can find a way to identify and measure asset bubbles in real time, then they might be able to prick them before excessive damage is done.

The bursting of an asset bubble can be costly, as we have seen, but pricking a bubble before it inflates too high — for example, by the Fed raising interest rates — may bring about recession. Policymakers who are deciding whether to act must gauge whether the costs of a potential recession are greater than the costs of a potential asset bubble bursting. This gamble is highly uncertain, largely because policymakers would have to identify a bubble in real time and also gauge by how much prices are overinflated. Yet, if profit-motivated market participants can’t gauge when an asset bubble is occurring, should policymakers be able to do any better?

According to some EMH critics, policymakers and financial market participants didn’t give enough credence to the possibility that markets had gotten prices wrong. “Some economists took the fact that prices were unpredictable to infer that prices were in fact ‘right,’” wrote behavioral economist Richard Thaler of the University of Chicago in

the *Financial Times* in August 2009. As early as 1984, Shiller wrote that conflating the EMH with the idea that prices are right has been “one of the most remarkable errors in the history of economic thought.”

Under this view, the run-up in housing prices was dismissed by investors and policymakers alike with the efficient market rationale that markets have greater wisdom than individuals. Furthermore, critics claim the idea that markets always get things right may have pervaded the very aspects of modern finance that typically serve to dissuade excessive risk-taking, from abiding by generally accepted accounting standards to a casual approach to risk management.

Justin Fox, economics and business writer for *Time* magazine, thinks the EMH gradually evolved into the erroneous view that markets should not be questioned. According to Fox, there was a line of people believing that market-established prices literally are *correct*, and advocating that stance broadly. “That permeated the teaching of finance in business schools and in economics departments and elsewhere for a couple of decades,” according to Fox. He describes how he believes this evolution took place in his 2009 book, *The Myth of the Rational Market*.

In Fox’s view, this interpretation of the EMH engendered a complacent view of asset bubbles. Under the EMH “you basically don’t believe in bubbles. When a bubble is going on, you instead try to come up with all these rationalizations for why prices must be that high, because they *must* be that high for a reason.” In his experience observing the financial community, he believes there has been a natural tendency when markets are doing well for a long period of time for market participants to start believing in what prices are saying, rather than any other signals they are getting. “Anybody out there who’s saying, ‘This is crazy, prices of houses or tech stocks aren’t worth this much,’ is made to look stupid for year after year as the bubble grows,” he says. “Some elements of the EMH offered a theoretical basis for believing those things.”

But, according to Fama, the EMH does not preclude market mistakes. If the bubble can’t be easily pinpointed, that actually reinforces the EMH. “Bubbles are 20/20 hindsight, basically. In my opinion, a bubble means that you could predict when it’s going to break. I don’t think that was the situation,” he says. Indeed, many investors convinced that they had identified the end of the tech and housing bubbles lost a great deal of money prematurely trying to short-sell (placing a bet on a decline) in those

markets — and many, of course, remained optimistic and stayed in past their peaks.

Similarly, for policymakers it is not enough to know *whether* a bubble exists. Policymakers must also decide by how much prices are inflated, the likely magnitude of the potential fallout, whether the tools they have in their arsenal would be effective in reducing the bubble, and whether pricking the bubble could cause the very economic contraction they are trying to avoid. These questions rely on far more judgment than just whether prices are providing an accurate signal of an asset market’s true value.

Market Mistakes vs. Market Failures

Also lurking behind discussions of the validity of the EMH seems to be a latent debate over the desirability of relying on markets in general. When prices aren’t “right,” they could provide misguided signals and may therefore prevent capital from being allocated to its best uses. This idea caused John Maynard Keynes to complain that the capitalist system leaves the country’s investments in the hands of a “casino.” Few would advocate that markets be dissolved in favor of government-managed capital allocation, but those who view markets as a predominant source of harmful economic fluctuations might advocate a stronger role for policy in managing them.

For regulation to strike the right balance, policymakers must understand the difference between market mistakes and market failures. Market mistakes can be costly, as we have seen, but trying to avoid them might be a poor goal for policymakers. If such mistakes are indeed unpredictable, it would be difficult or impossible to form policy based on avoiding them. Market mistakes also are hard to identify in real time with enough certainty to thwart them. Intervening even when there is pretty good reason to believe things are out of hand is still exceptionally risky, which is why Fed policymakers have been hesitant to do it (although some Fed policymakers have proposed revisiting that stance in light of the fallout from the housing decline).

Market failures, on the other hand, involve some fundamental flaw in market functioning that policy might be able to improve. It is not obvious that the crisis reflected a fundamental market failure. It could instead have reflected a failure of regulation, for instance. A discussion about the validity of markets should include recognition that policy and regulation can play a role in the functioning of free

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To argue that irrationality can be systematic enough to make prices predictable is something else. And so my opinion is, behavioral economists are basically conceding that for all practical purposes, markets are efficient. — EUGENE FAMA

The Business of Higher Ed

Prices and costs of a college education

BY BETTY JOYCE NASH

West Virginia Wesleyan University froze tuition and fees for the current academic year, the second time in four years the school in Buckhannon has done so. The sticker price with room and board comes close to \$30,000. The college, like most institutions, offers discounts on tuition and fees for students who qualify.

College sticker prices have outstripped inflation for three decades. High prices can deter access and completion, especially for students whose parents never went to college, like many at West Virginia Wesleyan. Located in the middle of Appalachia, most of its 1,400 students receive some financial help; 30 percent qualify for federal need-based Pell grants.

The sheepskin typically brings benefits — wiser lifetime choices and better lifetime earnings. Demand for higher education has increased, spurred by public subsidies, including those for student loans made by private and government lenders. (Until the credit crisis, unsubsidized private student loans were also widely available.) But stagnant graduation rates and middle-class incomes, rising prices, and now reduced student lending have renewed conversations about how institutions use resources and how transparent their finances are.

Education Economics

Nationwide, the published in-state price of attending a public institution went up by an inflation-adjusted 6.5 percent in 2009-2010 over the previous year, and the privates went up by 4.4 percent. But that doesn't tell the whole story. Net prices — which factor in financial aid and tax breaks — crept up, on average, by 2 percent in the current academic year 2009-1010, but fell between 2005 and 2009.

The difference between published prices and net prices make analysis of college costs difficult. For instance, one of the fastest-growing budget items for institutions is financial aid, especially for private schools. On average, tuition and fees account for about two-thirds of money families spend to send a student to a private, four-year college, and a third at a four-year public, according to the College Board's 2009 "Trends in College Pricing."

Because education retains the centuries-old model of students and teacher in a classroom, labor costs keep prices high. When other firms substitute capital for labor, output improves and wages do too. Real wages rise as fast as productivity. But in personal service industries such as higher education and other "craft professions," wages may rise without the productivity shift. The phenomenon is known as "cost disease." By way of example, economists William G. Bowen and William Baumol explained that a quartet takes the same length of time and number of musicians to perform

a concerto as it did centuries ago. Yet the wages of the musicians increase because they, like professors, have opportunities elsewhere in the market where productivity is actually rising.

Another possible explanation: Revenues may dictate spending. Without shareholders to demand efficiency, institutions spend whatever funds they raise or receive to achieve a break-even budget. This "revenue theory of costs" may apply to nonprofits like colleges. If the buyers of a college education paid the total freight, costs might be contained through price competition. But because education consumers are subsidized, there's the potential for revenues to drive costs.

Higher education institutions also suffer from a "principal-agent" problem. The agents are the faculty, staff, administration, and governing boards who manage money on behalf of the principals, the students, parents, and taxpayers. The agents may decide on the level of overhead expenses that may or may not benefit principals, says Bob Martin, an economist at Centre College in Danville, Ky.

Martin notes that "bundling" in higher education has added to cost — services previously not included such as spiffier accommodations, gourmet food, travel opportunities, and entertainment options. Such amenities enhance a school's reputation. Since *U.S. News and World Report* began to rank colleges in 1983, competition among schools has intensified. The more money that an institution spends per pupil, on average, the higher its rank, although the magazine doesn't count spending on dorms, sports, or hospitals. Some observers suggest the ensuing competition has contributed to an arms race of sorts.

"There's been a huge emphasis on the *U.S. News* ratings," says Patrick Callan of the National Center for Public Policy and Higher Education. "Almost everything there is an input that you can buy. You can even buy students with financial aid."

Productivity Logjam

Public universities are shifting costs to families to make up for declining state subsidies even as enrollment has increased.

Although the price of a college education is rising, the graduation rates are similar to the 1970s. The success rate after four years of attendance in 2007 was 36 percent; five years, 53 percent; and six years, 57 percent. The numbers capture full-time, first-time bachelor's or equivalent degree seekers, according to the National Center for Education Statistics.

Growing enrollments are also affecting costs. Between 1997 and 2007, enrollment grew by 26 percent. This largely reflects increases in the number of 18- to 24-year-olds in the

United States. The proportion of that population enrolled in college increased by 2 percent. Yet state tax appropriations per student this year fell by 12 percent in inflation-adjusted terms compared to a decade earlier. State general fund appropriations have fallen in South Carolina, for instance, from 15 percent in 1999-2000 to about 10 percent in 2008-2009.

As public subsidies decrease, tuition costs tend to rise. One growing expense is not only salaries but also benefits, says Jane Wellman of the Delta Cost Project, funded by the Lumina Foundation for Education in Indianapolis. Especially for public institutions. "For a while, when the state retirement systems were making money hand over fist, they started giving away more generous benefit packages." After adjusting for inflation, average benefit expenditures for full-time instructional faculty on nine-month contracts grew by 80 percent from 1977-1978 to 2006-2007.

Administration costs are rising too. "It's hard to know whether it's the lawyer you had to hire, or increased campus security because of legitimate needs to increase campus security," Wellman notes. "They also have to spend more money on legal stuff; that's the world we live in."

The expenditures may be desirable — for instance, hiring professional counselors to work with undergraduates can benefit those students. "The problem is the patterns are not examined and they occur without people being aware of them," Wellman says.

The Delta Cost Project bundles student services and instruction in its data and shows declines relative to increased spending on overhead and administration. And for those institutions that compete for students on the residential character, "they would all say there's been an arms race to add those enhancements," she notes.

To cope with the cost of instruction, more nonprofit institutions have started online classes. Virginia Tech's Math Emporium, "a learning center for the study of mathematics," accommodates more than 500 students at a time, 24 hours a day, seven days a week. The University of North Carolina at Chapel Hill will offer Spanish 101 exclusively online starting in spring of 2010. Traditional instruction for the typical 250-student enrollment would cost about \$80,000, according to Larry King, who chairs the romance language department. The online course cost is estimated at about \$50,000.

While eventually these enterprises may break "the productivity logjam," most students are educated the old-fashioned way — in a classroom by a professor at a board, stimulating inquiry, and issuing grades. "We're still in the early stages of this," says University of Virginia economist David Breneman. "To the best of my knowledge there is no documentation that somehow you will eliminate the need for more faculty." For better or worse, online learning sooner or later may change the model among nonprofit institutions as it has among for-profit schools.

However large an institution's labor costs, spending on faculty is not going up, Wellman notes. The share of spending devoted to instruction (which includes labor) declined by 1.4 percent to 63 percent from 1996 through 2006 in public

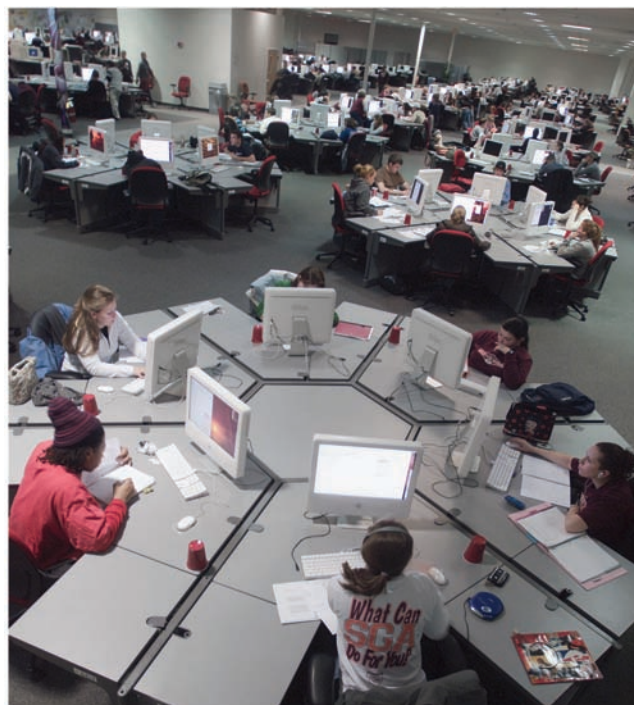
research universities. Institutions reduced instructional spending per student between 1995 and 2006 but increased, by similar amounts, spending on administrative support and student services.

The percent of tenured faculty has also dropped. About half of full-time faculty was tenured in 2005-2006, according to the Digest of Education Statistics, a decline from 56 percent in 1993-1994. Spending on faculty is a minority of total spending in most institutions, and it's been declining for the past two decades, according to the Delta Cost Project.

The American Association of University Professors has found that between 1976 and 2005, the number of full-time, tenured and tenure-track faculty had grown by a scant 17 percent. Meanwhile, the number of full-time nonfaculty professionals has more than tripled, an increase of 281 percent. Full-time, nontenure track faculty grew by about 200 percent. The number of administrators doubled over that time.

At the same time, tuition prices have grown faster than education and general spending per student. This further suggests that public and private schools are depending more on tuition to pay for other functions such as research.

Effects vary by institution and year. The University of Virginia's state appropriations have been cut four times in the last one-and-a-half years, Breneman says. "Frankly, we're not making all that up in tuition." Endowment earnings have fallen and there's been little hiring, so the economic cost of production is possibly stagnant or falling. But long term, production costs trend upward. "We know the production cost considerably exceeds the price even in the private sector."



Virginia Tech students can take certain math classes 24/7 on 531 computers at the Math Emporium. Tech inaugurated the online learning center in 1997 to cope with growing enrollments.

Increasing prices also highlight the differential pricing that occurs in higher education. Many students at private schools don't pay the sticker price. State schools can bring in more revenue by enrolling nonresident students who pay more than twice as much as residents. And professional schools of law and business at the University of Virginia and other top public institutions can raise tuition to market rates.

Tracking Costs

Kevin Carey, policy director of Education Sector, a think tank funded in part by the Bill and Melinda Gates Foundation, ticks off myriad tax incentives postsecondary institutions receive either directly or indirectly: tax breaks for individuals with children in college, nonprofit status that allows them to pay no taxes on endowment earnings or property, plus subsidized loans and grants. Such subsidies and barriers to entry likely contribute to the cost problem.

Colleges and universities say, on average, students pay much less than the full cost of their education. But the student share is rising. By 2006, students at public research universities were covering close to half their educational costs, up from about 39 percent four years earlier. Shares of educational costs covered by tuition increased more slowly in private schools. Research by the Delta Project shows that students who pay full price, on average, pay close to the full cost.

Some courses of study are more expensive than others, even though all undergraduates may pay the same tuition. Biology and chemistry cost more than English. And then there are freshmen classes: How much could it cost for an adjunct to teach a 300-person lecture without receiving health or retirement benefits? "There's no way that's not profitable," Carey says. "But they don't organize their finances in a way that would make that evident. They get money from a lot of different sources, spend money on a lot of different things, tend not to link revenues and expenditures in a way that allows you to calculate which are profitable and which aren't."

The traditional four-year residential experience is a shrinking share of the market, according to Guilbert Hentschke of the University of Southern California School of Education. But the market is exploding, so the "numbers in the category are pretty robust." He has studied for-profit colleges and universities (FPCUs). The for-profits cultivate customers in a demographic group who need a career, and might not attend a traditional institution. They deploy the model into different labor markets. And they're flexible. If there's no demand for a class, then they won't offer it. The FPCUs offer instruction without athletics, and they're not invested in real estate. They also centralize curricula.

Nonprofits must cope with expenses beyond their control, such as state and federally mandated rules, but they are also not likely to use infrastructure in a way that would enhance productivity or to consolidate purchasing power. At West Virginia Wesleyan, Bob Skinner says, the college walks a "tightrope that all small colleges especially in rural areas walk." They make money when they rent out facilities in the summer, and their president is "notorious for negotiating the best rates when she travels."

There are ways to lower the total costs students pay and perhaps increase efficiency. For instance, an estimated 25 percent of additional cost is incurred because students take more classes than are necessary to graduate.

Keeping the Education Advantage

The success of the United States over time will depend on human capital, and that will require educating a bigger proportion of the population. Jobs require more skills than ever; it typically takes more schooling just to maintain a standard of living, never mind improve it. "Just being willing to work hard in jobs doesn't do it anymore," says Hentschke.

Some of the very elements that make it hard to penetrate higher education finance in the United States may be the same ones that make the system the envy of the world. For instance, the decentralized market structure makes standardization of any kind difficult, even though schools abide by appropriate accounting rules. And while the scramble for student and faculty talent drives up costs for universities (and leads to differential pricing), it also contributes to vigorous efforts to be the best.

Institutions' numbers, diverse funding streams, and autonomy create healthy competition, according to a working paper by Duke University public policy and economics professor Charles Clotfelter. The United States has held a "first-mover advantage" in higher education for more than half a century, and has attracted global talent. But the financial crisis may jeopardize that standing as it affects government spending and endowments, and college prices. Other countries are catching up. The U.S. share of higher education enrollments worldwide fell from 29 percent in 1970 to 12 percent in 2006. Its share of science and engineering doctorates is also likely to fall.

Getting first-generation students to college is a big deal, particularly in Appalachia. And encouraging them to study science and math is a good idea too. West Virginia Wesleyan just opened a new science research center, funded in part with \$6.5 million in grants through U.S. Sen. Robert Byrd's office. "That's the first time we've seen that kind of money," Skinner says. The research center, it is hoped, will continue to pay for future generations.

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Questions Grow Along with Ginnie's Portfolio

BY BETTY JOYCE NASH

The housing market may still be in recovery, but the Government National Mortgage Association's business is booming. That growth has led some to question whether it will be able to remain stable over the long run.

Ginnie Mae, as the government agency is known, guarantees mortgage-backed securities issued by approved private lenders and composed of federally insured or guaranteed loans. Through November 2009, Ginnie had guaranteed about \$407 billion in mortgage-backed securities, compared to \$246 billion over the same period in 2008. Most of its collateral consists of mortgages insured by the Federal Housing Administration (FHA). While the FHA doesn't make loans, it insures lenders against defaults on loans that meet its standards. The loans are then sold on the bond market.

The volume of FHA loans has grown since 2008 as private lenders have retreated from risk. The FHA alone has insured 75 percent more loans in fiscal 2009, which ended Sept. 30, than the previous year. The FHA helps low- and moderate-income families who might not meet conventional standards buy homes by lowering loan costs. Down payments can be as low as 3.5 percent.

But as Ginnie's portfolio grows, more of these government-insured mortgages are defaulting, prompting some to believe that Ginnie will need help, too, just as Fannie Mae and Freddie Mac have been sustained by a credit line from the U.S. Treasury and a commitment by the Fed to buy up to \$1.25 trillion of GSE debt and mortgage-backed securities. It's unlikely that the Fed will hit that ceiling.

Ginnie Mae and Fannie Mae were offspring of the Federal National Mortgage Association, formed in 1938 to guarantee Uncle Sam's mortgages. Fannie was designed to serve conventional loans and Ginnie to support the market for FHA, Veterans Affairs, Office of Public and Indian Housing, and U.S. Department of Agriculture Rural Development Housing and Community Facilities Programs. When Fannie Mae was spun off from the federal government in 1968, its activities went off the federal government's balance sheet. Freddie Mac, formerly the Federal Home Loan Mortgage Corporation, shortly thereafter also became a publicly traded, shareholder-owned corporation in 1989.

The idea behind all three entities was to create a national — and global — market for housing capital by selling bundled mortgage loans on the secondary market. That allows lenders to free up cash for more loans. (On the flip side, however, if investors weren't buying securities, they might place their funds in banks, which could then lend that money.) But the government-sponsored enterprises, Fannie and Freddie, also held on to more mortgages in their own portfolios, according to the U.S. Government

Accountability Office. That exposed them to interest rate risk on outstanding debt.

However, Ginnie Mae retains no such portfolio of mortgages. Nearly all (more than 95 percent) of Ginnie Mae-guaranteed loans wind up in pools of securities, but a small percentage could be held in a lender portfolio or securitized through another entity such as Fannie or Freddie, according to a Ginnie Mae spokesperson.

Ginnie has sustained itself financially, and so has the FHA. But some observers worry about FHA default levels. Delinquency rates for FHA loans grew by 1.4 percentage points between third quarter 2008 and the same period of 2009, according to the Mortgage Bankers Association. By comparison, the rate had not changed this time last year, between third quarter 2008 and the same quarter 2007.

FHA-insured loans represent 18 percent of all mortgages originated, up from 4 percent two years ago. But as the FHA's share has been growing, its capital reserve has not. And the FHA's recently released actuarial study found its capital reserve ratio to be 0.53 percent, below the 2 percent threshold required by law. An independent actuarial study released in November says reserves fell to \$3.6 billion as of Sept. 30, down 72 percent over 2008. However, the FHA has \$30 billion in 30-year-reserves, according to the study.

A recent Inspector General's report in September faulted the FHA for its lack of controls over lender approvals. The FHA also failed to obtain or consider negative information on lenders from other Housing and Urban Development offices, and to make sure supporting documents and application fees were collected. Despite approving triple the number of lender applications in fiscal 2008 as in 2007, the FHA staff has remained constant. The Inspector General report cited oversight as a significant problem.

For its part, the FHA has announced an expansion of risk management efforts. For example, the agency is using more extreme scenarios in its models, including ones in which reserves drop below zero. And the FHA has tightened underwriting standards on refinancing and beefed up lender oversight. Borrower credit scores have improved too. The average FICO score today is 693 compared to 633 two years ago.

In addition to providing a boost to the mortgage market, Ginnie Mae securities ("Ginnies") have become an attractive investment option with commercial banks. That's because there has been a flight to security occurring in the overall credit markets, says economist Tony Plath of the University of North Carolina at Charlotte. The government guarantee mitigates investor risk and Ginnies offer a better yield than Treasuries. And banks have used Troubled Asset Relief Program money to buy Ginnies, Plath notes. Total bank holdings of Ginnies rose from around \$40 billion to \$120 billion between midyear 2008 and 2009. **RF**

Jalopy Economics

How to judge the success of “Cash for Clunkers”

BY RENEE COURTOIS

In the late summer months of 2009, a government program helped nearly 700,000 owners of old cars replace them with new vehicles. The Car Allowance Rebate System (CARS), better known as “Cash for Clunkers,” is credited with stimulating auto sales and gross domestic product (GDP) in the third quarter of 2009. It’s an example of an economic stimulus program that attempts to accelerate consumption — or, better yet, spur entirely new consumption — to provide an immediate boost to economic activity.

The program, in effect primarily in July and August of 2009, granted rebates between \$3,500 and \$4,500 for car buyers who traded in older vehicles with low fuel efficiency to purchase new vehicles with better gas mileage (plus a few other criteria). Generally, the greater the improvement in fuel efficiency from the swap, the higher the rebate granted. The program required the clunkers to be destroyed, getting relatively fuel inefficient cars off the road. Strong demand quickly consumed the program’s \$3 billion budget, which ended the program on August 24, earlier than anticipated.

The program was popular, and without a doubt provided a short-term boost to the economy. But that’s not enough to know whether its benefits outweighed its costs. Economists say its immediate stimulus should be weighed with its medium- and long-term effects.

With a program like Cash for Clunkers, many economists worry first about efficiency. By making cars artificially cheaper to consumers, the program distorts the allocation of resources. Economic theory suggests that prices derived from freely functioning markets will coordinate buyers

and sellers until all mutually beneficial transactions are exhausted. This outcome will be “efficient,” meaning no one can be made better off unless you take from someone else to do it. The catch is, to produce this powerful result, prices must be allowed to reflect how goods and services are truly valued.

This basic idea can easily be applied to the Cash for Clunkers program. The program’s rebates distorted that powerful price mechanism. When that happens, resources are less likely to be allocated to where society values them most. Those resources include everything from car supplies and labor to the energy it takes to produce a new car, all of which arguably could have been used to produce something that provided greater societal benefits.

CARS Costs and Benefits

In addition to economic stimulus, program onlookers anticipated a host of desirable side effects, ranging from environmental benefits to assistance to low-income groups. Others noted distortions to secondary markets affected by auto sales and what economists call an economic “payback” effect later.

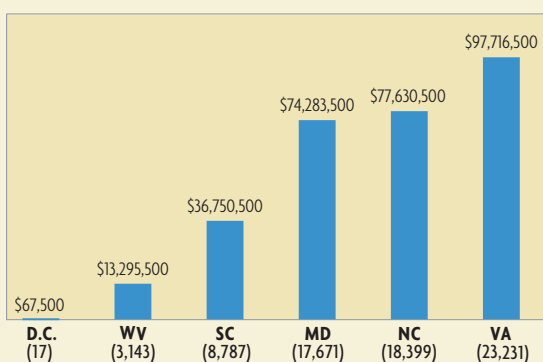
The array of possible short- and long-term effects makes it hard to gauge the program’s success, but analyzing its initial costs and benefits is one way to start. CARS had a temporary stimulative effect on auto sales and economic growth. Monthly auto sales jumped from a 9.5 million annual rate in the first half of 2009 to 11.2 million in July and 14 million in August while the program was in effect.

Automakers ramped up production to make up for the inventory depleted under the program, which provided a boost to GDP. A report by the White House’s Council of Economic Advisers (CEA) estimates the boost from Cash for Clunkers to the auto sector directly added \$3.6 billion to GDP in 2009, and about 35,000 “job-years” (one job held for one year) in the second half of 2009.

But this effect is temporary. Once the short-term production is exhausted, the demand for those jobs will likely be too. Furthermore, cars purchased during the program were cars that would have been bought at some point in the future, whether months or years later. Automakers will sorely miss that demand later when those purchases would have taken place. Because CARS borrowed demand from the future, auto sales and GDP will face a dip in those future months that will tend to offset the boost in the third quarter of 2009.

To be sure, the CARS program likely brought some clunker owners into the market who otherwise would have

Fifth District Clunkers



NOTE: Number of vouchers in parentheses

SOURCE: Official Web site of the Car Allowance Rebate System (CARS)
Accessed Dec. 14, 2009

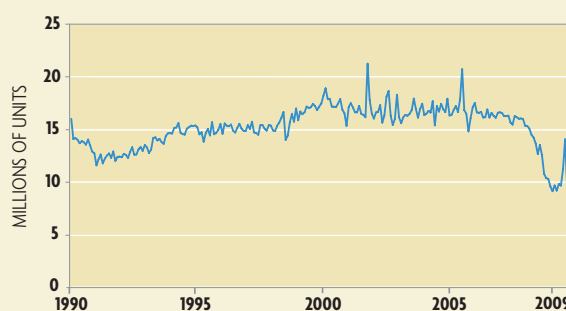
held on to their cars for years to come. Estimates of this number range widely, with many hovering around one-third of all CARS purchases. Nonetheless, to the extent that demand came from the near future, there will be what is called a “payback” effect on economic trends. The payback is the amount of consumption that was borrowed from the future, and therefore will be absent from sales in those future months. The trouble is, we can’t know for sure from what future date demand was borrowed, so the impact of the payback will be hard to measure. Even if auto sales dip after the program’s end, this will not necessarily be due to the payback effect because auto sales are notoriously volatile from month to month. And since CARS borrowed consumption from an unknown future date, it follows that any payback should be spread more benignly over many months or even years.

Yet if auto sales don’t dip, it could indicate a strengthening economy rather than proof that the payback is small. Vehicle sales for September, after the program’s close, dipped back to below-trend levels seen earlier in 2009, with initial signs of recovery in October and November. On the flip side, a Cars.com survey reports that consumers who participated in CARS planned to scale back holiday season shopping as a result, potentially revealing an unintended effect that will eat into the program’s boost to the overall economy. The CEA’s best estimate of the payback is a drop in GDP in the first half of 2010 that will more than reverse the boost provided by CARS in 2009.

Secondary Effects

CARS also may have borrowed demand from the used car market since some car purchasers would have been in the market for a used car instead. That implies less of a payback

Cash for Clunkers Boost to Auto Sales



NOTE: Total light weight vehicle sales (import and domestic), seasonally adjusted at an annual rate

SOURCE: Bureau of Economic Analysis/Haver Analytics

for the new car market, but pain for used car sales (as well as used car supply, since many clunkers would have gone into the used car market). This could have significant distributional effects. It was suggested by some commentators that the program would benefit primarily lower-income people, who would seemingly be the predominant owners of clunkers. But this may not have been borne out.

“I think for the most part the people who partook of this largesse by the government were people who drove clunkers by choice, not economic necessity, because if you were driving a clunker by economic necessity, you did not have the money to go into the market,” says economist George Hoffer of Virginia Commonwealth University.

In the months leading up to the program, reports of credit difficulties pervaded the auto industry. Sales reportedly fell through because financing was scarce. Before Cash for Clunkers, the No. 1 problem for new car sales was credit,

continued on page 34

The Auto Industry in the Fifth District

The transportation industry in the Fifth District includes manufacturers, automotive parts suppliers, and the biggest used-car retailer in the nation, CarMax, headquartered in Richmond, Va. Manufacturers include the BMW plant in Spartanburg, S.C., and Toyota Motor Manufacturing in Buffalo, W.Va., which produces engines, automatic transmissions, and gears. However, the moribund vehicle market has affected profits and, in some cases, the very existence of several suppliers.

In Virginia, Alcoa Wheel Products in Lebanon and steering-parts maker JTEKT in Daleville have announced closings. Nevertheless, the firms are continuing to produce in the short-term because the federal Cash for Clunkers program generated a short burst of demand, according to Mike Lehmkuhler of the Virginia Economic Development Partnership. Others haven’t been so lucky. GM plans to close its Fredericksburg powertrain plant by year’s end in 2010. But some suppliers in the state are weathering the downturn. For instance, Dynax in Botetourt County

remains in the business of producing clutch/friction plates for automatic transmissions.

Transportation-related manufacturing employment has dropped dramatically in South Carolina. At the end of first quarter 2009, the sector employed about 27,000, down from 32,537, the annual average for 2007, according to Steve McLaughlin, a labor analyst at the S.C. Employment Security Commission. North Carolina has seen layoffs in the transportation sector too. Annual average transportation-related employment was 34,773 in 2007. First quarter 2009 employment in the sector, however, fell to 26,095, according to the N.C. Employment Security Commission.

In West Virginia, however, transportation sector employment is stable, according to Joe Doran of Workforce West Virginia. Most of the firms are small, with the exception of the Toyota plant in Buffalo. Employment in the first quarter of 2009, when compared to the same period in 2008, declined 3.4 percent, from 2,059 workers to 1,989.

— BETTY JOYCE NASH

INTERVIEW

George Kaufman

Editor's Note: *This is an abbreviated version of RF's conversation with George Kaufman. For the full interview, go to our Web site: www.richmondfed.org/publications.*

It will be many years before economists have a comprehensive understanding of what caused the financial crisis. But policymakers need to act in real time to help resolve such crises and to take steps that will improve the overall stability of the financial system.

George Kaufman has spent his professional career, now ranging over five decades, studying the financial industry. His work has spanned both “theory” and “practice” — or, perhaps more precisely, has connected the two. He has brought academic rigor to bear on important policy questions. Like all economists who endeavor to influence policy, some of his research findings have been heeded while others have not. Indeed, Kaufman has long maintained that the financial system would benefit from greater market discipline. But the lack of such discipline arguably was one of the major factors contributing to the onset and severity of the crisis — and remains an issue that policymakers must confront in the wake of the safety net protection that was recently extended to numerous institutions.

Kaufman worked as an economist at the Federal Reserve Bank of Chicago from 1959 to 1970. He then spent the following decade at the University of Oregon, before returning to Chicago in 1981 to teach at Loyola University and to direct its Center for Financial and Policy Studies. Kaufman is the founding editor of the *Journal of Financial Stability*, serves as co-chair of the Shadow Financial Regulatory Committee, and is a consultant at the Chicago Fed.

Aaron Steelman interviewed Kaufman in December 2009.



RF: There are signs that the economy may have turned the corner. Looking back at the financial crisis from our current vantage point, what are the major lessons that policymakers should take from it?

Kaufman: There are a number of important lessons. First, capital matters for banks. It is not everything, but with too little, banks are likely to freeze up and fail, and contagion is likely if losses at one bank wipe out capital at other banks in chainlike fashion. Capital should be the primary concern for any prudential regulatory system.

Second, asset price bubbles are dangerous to the economy and the longer they last, the more dangerous they become. More attention needs to be devoted to them, including whether to include asset prices in the measure of prices targeted by policymakers and how to protect financial institutions against their bursting. In addition, the implications of low interest rates on asset prices as well as on goods and services prices and employment need to be carefully studied.

Third, planning and preparation for tail events, such as financial crises and insolvency of large financial institutions, are very important. These plans should be made public so everyone understands the ground rules. Part of the reason for the inconsistency in public policies attacking the current crisis was the lack of advance planning for the measures that were announced publicly. The inconsistency in policy increased uncertainty in the market and intensified the turmoil. Strategies adopted should be consistent through time so that participants can make plans. Inconsistent actions lead to inconsistent and unpredictable responses.

Four, simplicity trumps complexity.

RF: In March of 2008, you remarked, “Everybody knows Santayana’s saying that those who fail to study history are condemned to repeat it. Those who study financial history are condemned to first agonize over the patterns they recognize and then repeat it anyway.” Do you think that will be true this time as well?

Kaufman: Yes, very much so. Many of the policy actions taken were the same or similar to the actions in past crises — say, in the S&L crisis of the 1980s — but even larger in scale. They focused on bailouts and forbearance. In part, this reflects a combination of being caught by surprise, lack of preparation, need to act quickly (frequently over a weekend) with no grand plans, extreme risk aversion, and political pressure. Thus, moral hazard is likely to be stronger coming out of the crisis than going in.

RF: That leads me to a broader issue, one that you may have not directly addressed, but I imagine you have considered: Why is there often such a large gap between the recommendations of academic economists and the actions of the policymakers they seek to influence or may even directly advise? And in which areas do you think economists have been most successful in bridging that gap?

Kaufman: There is a gap because policymakers are in the hot seat and under pressure from various constituencies, many of whom focus on the short run, while academic economists focus primarily on long-run efficient solutions. The academic economists would act more like the policymakers and vice versa if there was a role reversal. Policymakers are likely to respond more favorably to advice from academics and other outsiders when the leading constituencies are out of favor or discredited. For example, the prompt corrective action and least-cost resolution provisions of the Federal Deposit Insurance Corporation Improvement Act, which were designed with the help of academics, were enacted in 1991 over the objection of most bankers and bank regulators, whose credibility had been tarnished by the S&L crisis. In contrast, in the current financial crisis, while bankers may have had their credibility tarnished again, regulators appear to have maintained theirs better and academic proposals have not advanced as far. But, as Keynes concluded:

The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back.

RF: Given the expansion — both implicit and explicit — of the federal financial safety net during the crisis, what practical steps could policymakers take to restore meaningful market discipline?

Kaufman: Very few in the short run. Based on the experience of the last two years, most market participants believe that by exerting sufficient pressure on the government and regulators they can receive a wide range of guarantees on their deposits and other creditor securities. Only actual losses through time will dissuade them. But losses, if any, are likely to be permitted by regulators only in noncrisis periods. To build their credibility, regulators must be willing to let market discipline operate and permit losses on all de-jure uninsured deposits and other liabilities over a number of years. In a crisis atmosphere, such as recently, market discipline is again likely to be an early casualty. Thus, the long-run cost of recent bailout programs in terms of weakening market discipline through time is very high.

RF: In a perfect world, to what extent would you limit the safety net? For instance, is there good reason to do more than simply guarantee small depositors at commercial banks?

Kaufman: No.

RF: Many in the public — and a nontrivial number of economists — believe that the financial system is inherently fragile and requires significant regulation to reduce systemic risk. How would you respond?

Kaufman: There is a difference between fragility and breakage. For example, fine wine glasses are more fragile than ordinary drinking glasses, yet, at least in my household, the ordinary drinking glasses break more frequently. That is because they are handled more carelessly. The same is true with banking. Before the introduction of the Fed, banks operated with lower capital ratios than nonbanks, as they do now, yet their failure rate was no higher on average. However, banks did fail more in clusters, as their high leverage makes them more sensitive to tail shocks that affect them in common. But, in the absence of a government safety net, bankers are likely to handle their banks with care, taking only as much ex-ante risk as is consistent with their capital. Of course, ex-post risk may exceed ex-ante risk, particularly in a crisis. Then the central bank needs to provide liquidity, but not to protect creditors of insolvent banks. Such a strategy is only self-defeating. The greater the protection provided, the greater the risks bankers take, and the greater the number and cost of failures.

RF: Some blame the financial crisis on financial innovations that went astray. What are your thoughts?

Kaufman: I believe that innovation both in methodology and application have been and continue to be an integral part of finance and that, on the whole, both finance and the macroeconomy have benefited from it. Numerous empirical studies have shown convincingly that political jurisdictions which have deeper and more sophisticated financial sectors have experienced faster economic growth. But there are costs as well as benefits to having large financial sectors. When things go right in the financial sectors, the economy benefits. But when things go wrong, they have adverse consequences for the economy — and the larger the financial sector, the more serious the damage.

The rapid growth in financial institutions and markets in the United States in recent years has in part been driven by innovation. Because finance basically involves information collection, storage, processing, and distribution, innovations in computer and telecommunication technology have shortened the time necessary to perform these functions and reduced their costs. This has encouraged innovations that permit financial products to be tailored more to the unique needs of existing or potential participants in financial markets.

Innovations of any kind are risky and their lasting value should be judged on the basis of their benefits relative to costs. Some may not work as advertised and possibly do considerable damage at high cost. Others may work but require a long learning curve, during which time the costs exceed the benefits but are then reversed. And some may generate benefits immediately.

Many of the world's greatest innovations required lengthy learning curves to gain the full benefit. Early application of the steam engine to railroads and ships resulted in numerous explosions that killed or maimed users. And the bigger the engine, the more deadly the accidents. Likewise, early flying machines, including those that proceeded or immediately followed the Wright Brothers, had a poor safety record and the higher the flight, the greater the severity of injury. Those that did not fly high did not produce many injuries but they achieved little.

The great advances in computer technology and telecommunications in recent years have encouraged the development of increasingly complex financial instruments. Some of the innovations were so complex that they outran the ability of both users and regulators to understand them quickly. Thus, they had the potential for misuse with resulting serious damage. And the potential was realized.

An example is subprime residential mortgages. They were designed to increase the flow of mortgage credit to households that previously had not qualified for regular mortgages because their credit rating and income were too low. Thus, they were not eligible for homeownership. But, as we now know, these mortgages were often misused to provide credit to those who could not afford them or did not fully understand the conditions of the mortgage contract. So, the default rate was unexpectedly high and subprime mortgages have almost disappeared from the market. But

undoubtedly some low-income or credit-challenged households are using them successfully to purchase homes that they otherwise would not have been able to. Nevertheless, it appears that, as of now, the costs have exceeded the benefits.

I believe that in the not-too-distant future subprime mortgages will reappear, but probably under a different name and with an improved design. I am reminded of the development of corporate junk bonds in the 1980s. They were the subprime mortgages of their day. Junk bonds were subprime corporate bonds that opened capital markets to risky, often younger, corporations. And like subprime mortgages, they were misused at first. Judging their risks required different analytics than for regular corporate bonds and they experienced high default rates. Indeed, they resulted in the bankruptcy of the investment banking firm Drexel Burnham Lambert, which was the largest underwriter of junk bonds, and in a prison term for the firm's Michael Milken, who was the primary champion of junk bonds. As Drexel was also the largest market maker for junk bonds, its demise almost shut down the junk bond market. But the need for bonds to service this underserved part of the corporate market remained, and investors learned in time to understand them and use them correctly. Junk, or more tactfully, high-yield, bonds made a comeback and now comprise some 20 percent of the corporate bond market and no longer raise eyebrows.

The feeling that financial innovation has gone too far is quite widespread. Recently, for instance, former Fed Chairman Paul Volcker expressed concern over the value added by such innovation. I admire and respect Paul Volcker greatly. He was one of the world's great central bankers and is now one of the truly wise men in finance. But here I believe he may overstate the negative. The innovated securities did not cause the crisis but magnified its impact. The basic cause was the bubble in home prices, which provided the base for many of these securities. Would we have been better off if we had banned the steam engine and the airplane because of the high casualty rate at their births? I don't think so. But one can come back and argue that the aggregate cost of the financial accident was much higher. And they may be right, but the cost of correcting the problem I believe is also far less. And this includes not only subprime mortgages but also the more complex securitized products like collateralized debt obligations and credit default swaps. If used correctly, they show great promise in adding to our future economic welfare by diversifying risk over a broader base of investors and thus increasing the flow of funds and investment. I believe that in time market participants will climb up the learning curve and at least partially resuscitate the less complex of these innovations and use them more safely. But it will take time.

RF: How would you define an asset price bubble? And when we believe that one is emerging or has emerged, what, if anything, should policymakers do in response?

Kaufman: Asset price bubbles are difficult to identify. One person's bubble is another person's fundamental value. As I noted in my answer to the first question, the best protection against damage from the bursting of a bubble is to fortify the financial system, which, as also noted above, is highly leveraged and fragile to tail shocks. Higher capital ratios would cushion and absorb the adverse impact and reduce systemic risk. Alternative policies of incorporating asset prices in the inflation target or leaning against the bubble are insufficiently researched to date.

RF: What do you think of the recent rules aimed at limiting executive compensation?

Kaufman: I understand the public backlash against the outlandish bonuses paid by some financial institutions, but trying to stop the practice is both costly and likely to be unsuccessful. In a competitive environment, limiting compensation in some firms or industries is likely to be costly to those firms or industries as their best talents are bid away. Ironically, this may hurt the government if the affected firms are those that the government aided and received ownership in. Moreover, compensation regulation is relatively easy to circumvent. For example, in response to a similar public outcry against high executive compensation in the mid-1990s, the government imposed a ceiling of \$1 million on the deduction that corporations could take on cash compensation by their top executives. The response was an increase in compensation in stock options rather than cash, leading to an increase in risk-taking. One promising avenue, however, is increased emphasis on deferred payments.

RF: How important do you think independence from the political branches is for the conduct of sound monetary policy by the Fed? And if you think it is desirable, are you concerned that some of the proposals in Congress could compromise that independence or might they shed useful light on the Fed's actions?

Kaufman: I think Fed independence for monetary policy is very important. At times, to achieve favorable longer-term outcomes in employment and price stability, temporary short-run outcomes may be politically unpopular — say, high interest rates or high unemployment. If politics made it difficult to permit these short-run outcomes, the desired long-run results may be more difficult to achieve. Permitting the Government Accountability Office to audit the activities of the Federal Open Market Committee (FOMC)

George Kaufman

➤ Present Position

John F. Smith Jr. Professor of Finance and Economics, and Director of the Center for Financial and Policy Studies, Loyola University of Chicago

➤ Previous Faculty Appointment

University of Oregon (1970-1980)

➤ Education

B.A. (1954), Oberlin College; M.A. (1955), University of Michigan; Ph.D. (1962), University of Iowa

➤ Selected Publications

Author of *The U.S. Financial System: Money, Markets, and Institutions*; editor or co-editor of more than 20 books on financial economics; author or co-author of numerous papers in such journals as the *American Economic Review*, *Journal of Political Economy*, *Journal of Monetary Economics*, and *Journal of Finance*

to increase transparency would lead to second-guessing of its actions and introduce an additional element of uncertainty. An interesting alternative proposal suggested recently by the Shadow Financial Regulatory Committee, which I co-chair, is to have the FOMC speed up the release of the transcripts of its meetings from the current five-year delay to three or four weeks, in line with the release of the summary minutes. This would achieve transparency without providing a platform for second-guessing by another government agency.

RF: Please tell our readers a little about the Shadow Financial Regulatory Committee. For instance, why was it founded, who serves as its members, and which issues has it been considering?

Kaufman: The Shadow Financial Regulatory Committee, which is now entering its 25th year, is a group of independent experts on the financial services industry and its regulatory structure. The purposes of the Committee are: (a) to identify and analyze developing trends and ongoing events that promise to affect the efficiency and safe operation of the financial services industry; (b) to explore the spectrum of short- and long-term implications of emerging problems and policy changes; (c) to help develop private, regulatory, and legislative responses to such problems that promote efficiency and safety and further the public interest; and (d) to assess and respond to proposed and actual public policy initiatives.

The results of the Committee's deliberations are intended to stir debate and to increase the awareness and sensitivity of members of the financial services industry, policymakers, the media, and the general public to the importance and implications of current events and policy initiatives affecting the efficiency and safety of the industry.

The longevity of the Committee attests to its success in achieving its objectives. Perhaps its most lasting contribution to date is its role in developing the prompt corrective action and least-cost (structured early intervention and resolution) provisions of the Federal Deposit Insurance Corporation Improvement Act of 1991.

Members of the Committee are drawn from academic institutions and private organizations and reflect a wide range of views. The only common denominators of the members are their public recognition as experts on the industry and their preference for market solutions to problems and the minimum degree of government regulation consistent with efficiency and safety.

RF

ECONOMIC HISTORY

A Tale of Two Virginias

BY STEPHEN SLIVINSKI

The economics of West Virginia's secession

What we know today as the state of West Virginia used to be 55 counties that were part of Virginia. By the Civil War, the economic and demographic differences between many of these counties and the rest of the Old Dominion had become so pronounced that the secession was seen by many at the time as inevitable.



On April 17, 1861, the convention called by the Virginia General Assembly to consider secession from the Union met in secret in Richmond. This meeting was viewed with suspicion by some attendees — namely, many members of the delegation from the western counties of Virginia. When the final vote was tallied, the secession measure had passed: 88 to 55. At the convention, most of the “no” votes came from 32 delegates from what we know today as West Virginia, mainly from the northern, western, and central parts.

Three days after the convention adjourned, 22 of the delegates opposed to Virginia’s secession found themselves in another secret meeting to contemplate another secession. The site of the meeting was the room of Sherrard Clemens at the Powhatan Hotel near the capitol. Clemens was a U.S. congressman who was famous for challenging the governor’s son to a duel in 1859 over actions taken during a gubernatorial race. (He sustained a near-fatal wound then.) The attendees of the Powhatan Hotel meeting decided they would “oppose secession to the last,” wrote Charles Ambler,

one of the most prominent historians of this period. And they also went one step further: They agreed that it was time to promote secession of the western counties of Virginia — or, at least, as many of them as possible — from the Old

Dominion and cast their lot with the Union.

This was not a rash decision but instead the peak of an emerging

“sectionalism” that saw the western counties as too unique to fit with the rest of Virginia. Part of the difference was from attitudes over the morality of slavery. Another was demographic — the ethnic composition of the new immigrants to the western counties was different than that of the eastern ones.

The main divergence was largely over economic issues. Many within the western counties viewed the attitudes and policies supported by many in Virginia as inhospitable to the prosperity of non-slaveholder farmers and businesses. Ambler makes the case that the split was inevitable in his history of the period. Historian Barbara Rasmussen notes: “West Virginia statehood was long in the making and had its start in politics driven by economic interests, not abolition.”

The Seeds of Secession

The economic differences between the western counties that eventually seceded from Virginia and the rest of the state were long-standing and based on a series of specific factors. The economic differences that arose from western Virginia’s unique geography were indeed large factors. These western and northwestern areas of Virginia were mountainous and rugged, and winters came early. None of this made the area conducive to the production of tobacco, a cash crop for the eastern counties. The plantation system that was typical of tobacco farming never took hold and, as such, neither did widespread slave ownership. The counties were instead characterized by collections of yeoman farmers.

Some of the wealth generated after 1812 also came from the mining of natural resources. The production of salt was lucrative, and later came the dominance of iron and coal mining.

On the farms, hogs, corn for whiskey, sheep, apples, and lumber were the main agricultural emphasis. And having the Ohio River along their western border gave the western counties of Virginia better initial access to the interior waterways of America to transport all of their products — an endeavor made all the more profitable by the invention of the steamboat.

The demographics of the western counties also differed from those of eastern Virginia. Scotch-Irish and German immigrants tended to move west to where the nonslave jobs were. Many other workers also moved west, mainly from Pennsylvania, New Jersey, New York and New England — none of which had ingrained loyalties or ties to the Old Dominion. Meanwhile, the eastern counties were largely characterized by bloodlines that could be traced to original colonists and over the ocean to England. As historian Charles Ambler wrote in his classic 1904 work, *Sectionalism in Virginia from 1776 to 1861*, as population moved westward and became more diverse in nationality, the “contrasts and conflicts between the older and newer societies became more pronounced.”

One of the most pronounced differences was over the issue of slavery. In addition to the relatively small benefit of slave labor in the more mountainous counties, the new immigrant population tended to be religiously and ideologically opposed to slavery. Couple that with the aforementioned lack of slaves in the western counties generally, and it is easy to see the budding schism. Such was identified at the time by many Virginia residents, including those in the slaveholding eastern counties, like the areas of the Tidewater along the Chesapeake Bay.

Yet, as volatile as the slavery issue was — and although there was indeed a small enslaved population in the western counties — other pressing political questions had a more direct economic influence on the western counties. Of primary importance in the early 19th century was access to capital. At that time, the only two legally chartered banks in all of Virginia were located in Richmond. Coins issued by these banks were too scarce to serve as a suitable medium of exchange out west. So private citizens created unincorporated banks to issue notes, which circulated freely based on the reputation of the issuer.

After petitioning the state legislature to open some western banks, the legislature agreed to charter banks in Winchester and Wheeling in 1817. Yet other banking centers — Baltimore, Pittsburgh, and Philadelphia, in particular — had already gained a foothold in the region and continued to fund much of the commercial activity afterward.

While the western counties became more prosperous and populous, the political dynamic in matters of East versus West was dictated by a political system that Thomas Jefferson noticed as early as 1790 was unbalanced. The imbalance was driven largely by a voting system that gave more weight to slaveholding counties. The attempt to address the inequities resulted in a constitutional convention in 1830. But the outcome was not to change the

apportionment rules that favored slave owners. Instead, the agreement added more seats to the state’s Senate and House which were awarded arbitrarily to the western counties.

This hardly ended the sectional strife. In fact, it set off a short-lived and unsuccessful movement among the northern panhandle counties to consider a merger with Pennsylvania.

Another important sectional conflict is illustrated after the advent of rail travel. The Baltimore and Ohio Company wanted to extend their railroad through Virginia, heading west to the Ohio River by passing through the Kanawha River valley. The General Assembly was concerned about the proposed route running too far south and causing the state to lose trade coming from the west as it could be rerouted to Baltimore and Philadelphia instead. So they initially vetoed the request of the railroad. They opted instead to support other projects — both rail and waterway — that they reasoned would direct more trade eastward toward Richmond and Norfolk.

Instead, the B&O Railroad eventually extended west out of Washington, D.C., through Cumberland, Md., and back into what is now West Virginia. Over time, it made cities along its route, such as Grafton and Fairmont, into industrial centers. It also contributed to making Wheeling a vibrant center of commerce, rivaling Pittsburgh. “With the building of the [B&O Railroad],” wrote historian James Morton Callahan in 1923, “the trans-Allegheny Northwest became independent of Richmond. Trade could no longer be diverted from Baltimore to Richmond.” He concluded that this indicates that the “line of business separation was drawn a quarter of a century before the act of political separation was accomplished.”

Of course, many railroads and road improvement projects didn’t come cheap and many were financed at least partly by tax revenue. But the counties of western Virginia were wary of any project that the eastern legislators might have been likely to support that mainly benefited the southern and eastern parts of the state.

The tax code tended to favor slave owners at the expense of eastern farmers by exempting slaves under a certain age from taxation and nominally taxing the others. Meanwhile, taxes on land and livestock, assessed at their full value, hit those in the West hardest. Also, the convention called in 1850 to reform the state constitution — like the one in 1830 — yielded a change that prohibited the state government from pledging the credit of the state to defray the obligations of any company or corporation. This effectively put an end to some government-supported “internal improvements,” such as certain road projects, that the western delegations were demanding. Later, the tax inequality was further exacerbated in 1860 when the General Assembly increased taxes on wool — raised mostly in western Virginia — while keeping untaxed eastern tobacco and wheat crops.

The Wheeling Conventions

The year after the wool tax was passed as a way to finance the state’s military mobilization, the state of Virginia voted

to secede from the Union. Yet, as expected, the support for severing ties with the North was far from unanimous. Indeed, there were even some differences of opinion in the western counties.

When the “Cotton States” like South Carolina proposed secession, opinions in the western part of Virginia were generally skeptical. Here economic concerns seemed again to play a role. As Ambler wrote in his 1933 history of the state: “To West Virginians, Constitutional guarantees were generally considered sufficient protection for property rights of all kinds and for other rights as well.”

The chief concern among many was that, in the case of Virginia’s secession, their own land would be seen as a battleground frontier by the competing armies. Council meetings in some of the counties resulted in resolutions stating adherence to the Union, invoking the Constitution as an important protection of their prosperity.

It is worth noting that there was hesitancy over secession in the eastern parts of Virginia as well. Seven southern states seceded in late 1860 and early 1861. During this time, eastern newspapers urged state leaders to take the lead in securing concessions from the North before considering secession. This was, reports historians Otis Rice and Stephen Brown, “a view shared by many Virginians, even those east of the Blue Ridge.”

In early 1861, when the secession convention that had been called by Governor John Letcher had adjourned and the western delegates had finished their meeting in the Powhatan Hotel, the fate of Virginia was left in the hands of voters. The secession ordinance was to come to a vote on May 23. But some western leaders were urging a preemptive meeting to consider plans to secede to the Union if the ordinance passed.

Then, almost as if the intent was to further alienate the western counties, the Virginia governor instituted on May 11 a ban on shipping flour, grain, pork, beef, or bacon to Ohio or Pennsylvania. This further drove a wedge between the economic interests of western Virginians and the political reality of staying dependent on Virginia.

The counties that largely supported creating a new state chose the city of Wheeling as the site of their convention which took place May 13 to May 15. Turning back proposals to declare their intent to secede before the May 23 vote, the delegates settled on reconvening on June 11 after the result of the secession referendum had been established.

Most of the counties of northwestern Virginia voted substantially against joining the Confederacy, perhaps by as much as a 3 to 1 vote. There were, however, 11 counties — mostly in the center of what is known today as West Virginia — that didn’t favor the Union. These counties were sparsely populated, but their inclusion in the final boundaries of the new state wasn’t a foregone conclusion at the time.

As the war progressed, Union forces drove Confederate soldiers out of the Kanawha and Monongahela Valley by July. The most pro-Union of the delegates to the final stage of what became known as the Second Wheeling Convention —

which had initially begun in June — now had momentum at their back. At its end, the delegates elected Francis Pierpont, a delegate from Marion County, to be the nominal “governor” of the new state.

The convention adjourned in late August after deciding to submit the statehood referendum to a vote on October 24. It passed overwhelmingly — 23 votes in favor for every 1 opposed. All told, 39 counties approved the formation of a new state.

A New State

The boundaries of the new state were still a sticking point when delegates to a convention called for the purpose of writing the state’s constitution met again in Wheeling starting in late November 1861. In addition, there were some sectional issues that arose during this final Wheeling convention as a result of each county’s economic concerns.

The route of the Baltimore and Ohio Railroad was a key factor in the inclusion of the counties that would become West Virginia’s eastern panhandle, even though these counties were generally supportive of the Confederacy. Those counties — Jefferson, Berkeley, Morgan, Hampshire, Hardy, and Pendleton — were added only on the condition that voters approve admission into the new state. Of 11,000 voters, only 1,610 cast ballots. Only 13 of those votes were against statehood, leading some to speculate that pro-Confederacy sentiment was suppressed. (Later legal challenges to the boundaries of the state — mounted by the eastern panhandle counties — were rejected by the Supreme Court in 1871.)

Moreover, the counties of the southern part of the state that had supported Virginia secession from the Union “were included even against their wishes,” suggests Ambler. To safeguard against their future political influence, however, he reports that when the constitution was finally written, their representation in the state legislature was reduced to a minimum.

All told, 50 counties were included in the state boundaries. Five counties (Mineral, Grant, Lincoln, Summers, and Mingo) were added after statehood.

Another issue concerning government support of infrastructure projects seemed to mimic the political debates about why West Virginia should secede from Virginia in the first place. Delegates from the Kanawha Valley wanted road and railroad improvements and argued in favor of constitutional authorization for the state to issue bonded debt for such projects. The northern counties indicated no desire to include such a provision. When the vote was taken on the amendment to allow bonding, it was rejected by a vote of 25 to 23. A last-minute compromise that allowed the state to support infrastructure in other ways, including a mechanism that allowed the creation of specific taxes to pay off new projects, allowed the convention to end on a note of harmony. The constitution also included provisions to eliminate classifying property of different types for the sake of taxation — a response to the offense many took to the favor-

ing of slave property over other forms of property in the antebellum days.

In April 1862, voters of the then-fledgling state approved the new constitution, and in May the new “Restored Government of Virginia” petitioned the U.S. Congress for recognition of the state. As Congress deliberated, the Union was effective at holding the line in West Virginia despite a few attempts by the Confederate army to capture territory. Indeed, when the de facto legislature of West Virginia sent to the Virginia General Assembly a request to secede in May, it was granted. When Congress finally granted approval in December and President Lincoln concurred, the only step to be taken was a referendum terminating slavery in their territory, which passed handily.

The state of West Virginia was accepted into the Union

on June 20, 1863. It has the distinction of being one of only two states formed during the Civil War (the second was Nevada). Additionally, it was the only state to form by seceding from a Confederate state (though similar proposals were debated in other states, including North Carolina and Tennessee).

Yet, while many of the debates about secessions are largely looked upon as epic battles over abolition, West Virginia’s secession was mainly the result of economic concerns. As Rasmussen notes, those most eager to secede from the Old Dominion were acting on “an extremely rational expression of enlightened self-interest.” In retrospect, it’s no mystery why the western counties sought to leave Virginia. Perhaps a more difficult question is why the marriage persisted as long as it did.

RF

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FEDERAL RESERVE *continued from page 7*

whether current Fed actions may jeopardize Fed independence in the future. This recession has spurred new expansions in the Fed’s loan portfolio, opening up its lending window to institutions that were not privy to Fed funds before the economic downturn. Indeed, some have argued that this has been a long-standing shift in Fed credit policy that started with lending meant to prop up the Penn Central Railroad in 1970, the infusion of liquidity the Fed provided to the failing Continental Illinois National Bank in 1984, and the engineered bailout of Long-Term Capital Management in 1998.

Consequently, economist Marvin Goodfriend, formerly of the Richmond Fed and currently of Carnegie Mellon University, has proposed a “new accord” for Fed credit policy. Meant to mimic what the Treasury-Fed Accord did for monetary policy, the goal would be to place explicit boundaries on actions that could harm Fed independence.

“It’s important to appreciate the difficulties to which the Fed exposes itself in the pursuit of credit policy initiatives

that go beyond traditional last resort lending to banks,” notes Goodfriend. Not only does it open the door for more congressional pressure to lend to some and not to others, but it also puts the Fed in an untenable position when the Fed must cooperate with the Treasury on items such as banking regulation and payments system policy. “This interdependence exposes the Fed to political pressure to make undesirable concessions with respect to its credit policy initiatives in return for support on other matters.”

Only time will tell whether the recent expansion in Fed lending will be temporary or not. In the meantime, it’s important to understand the historical experience of the Fed. The independence of the Fed is something that Fed policymakers still tend to guard closely. Yet it’s not always the case that independence is taken away all at once as it has been in previous decades, particularly during wartime. Some Fed observers and policymakers worry that actions that may seem well-intentioned and short-lived today could chip away at Fed autonomy over the long term.

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markets and the forming of investor expectations in both positive and negative ways. Regulations like disclosure laws can help markets become more efficient by making information widely available. But a too-large public safety net that convinces market participants they will not have to bear all or most investment losses can induce investors to rationally take risks they otherwise would not have.

Financial market participants may have taken market efficiency for granted, as Fox believes. The only scenario that would be at odds with what the EMH really says would be one in which information had been accessible and market participants just didn't use it. Yet the vast majority of economists, policymakers, and financial market participants did not see the financial crisis coming, perhaps indicating that such infor-

mation about the true risk was not there for the taking. Or perhaps parties who ignored information about the risks were rationally responding to perverse incentives to do so.

Economists don't yet fully understand all the factors that might cause markets to occasionally get prices wrong. To explain this, you can favor behavioral theories on psychology and investor biases, errors of regulation, or perhaps just a pervasive difficulty of accessing information due to characteristics of the market in question. But none of these explanations are inherently at odds with the EMH. Studying the financial crisis with the benefit of hindsight will help economists, investors, and policymakers better understand the causes behind fluctuations in asset prices for which there is no easy explanation. **RF**

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CLUNKERS *continued from page 25*

Hoffer says, yet "there was not one word about credit problems during Cash for Clunkers." This may imply CARS participants had good credit, large down payments, or both. All are consistent with a higher income population.

Richmond, Va.-based CarMax lobbied Congress unsuccessfully to include used cars in the program. Had the program included used cars, it might have benefited the less-wealthy, who tend to be more active in the used-car market, Hoffer says. "It would have been more income-neutral."

Environmental benefits were a selling point for the program too. But they're not as straightforward as they appear. Many vehicles scrapped under the clunkers plan would have gone into the used-car market, so CARS removed older polluting cars from the road. All else equal, this should have reduced emissions. CARS participants enjoyed a 9.2 MPG increase in fuel efficiency, on average. This will certainly be a direct benefit to drivers of those cars: *Consumer Reports* estimates that will save owners \$720 apiece in annual fuel costs.

But scrapping the clunkers produces carbon, as do new car production processes. Perhaps more important, many of the clunkers likely were driven less than the new replacements will be. These owners now have more comfortable fuel-efficient cars that are cheaper to drive and thus likely to be driven more. This will eat into emission savings. Hoffer believes it could even produce more emissions for a number of cars, not less. The bottom line is that assessing the environmental benefits of CARS requires looking deeper

than just the car-for-car improvement in fuel efficiency.

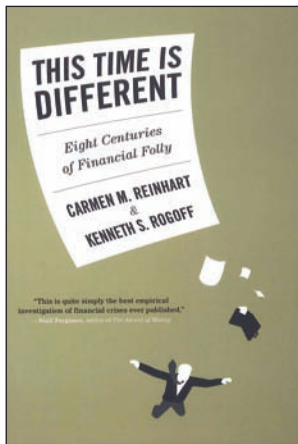
Jaws of Life for the Auto Industry

Like any economic stimulus, CARS is likely to be more effective when there are idle economic resources, a description that certainly matched the economy in 2009. But it matters why resources are idle. By most accounts, the auto industry has faltered because its products are not highly valued relative to competitors. The program may have provided only a temporary reprieve to an industry facing a long-term structural decline. And since two of the Detroit Three were effectively closed for the summer, when the vehicles started selling, they couldn't take advantage of the sales momentum, Hoffer notes.

Moreover, the program used valuable economic resources to replace still-functioning cars. Destroying those productive assets represents a loss of welfare to society. That's why a true estimate of the program's net benefits must also subtract the value of the destroyed assets.

It is not easy to quantify this welfare loss. One could even argue that the cost is small, since the program affects a small number of cars relative to the total number on the road. But more important, if policy broadly used artificially low prices to affect individual decisionmaking in an attempt to subsidize industries precisely because they are not highly valued, then the distortions and unintended consequences could produce losses that may overwhelm the gains. **RF**

The Precursors of Financial Crises



THIS TIME IS DIFFERENT: EIGHT CENTURIES OF FINANCIAL FOLLY

BY CARMEN M. REINHART
AND KENNETH S. ROGOFF
PRINCETON: PRINCETON
UNIVERSITY PRESS, 2009, 463 PAGES

REVIEWED BY STEPHEN SLIVINSKI

The subtitle of this new book by University of Maryland economist Carmen Reinhart and Harvard University economist Kenneth Rogoff gives the reader the best hint to the content inside. The heart of the book consists of a wealth of new data and analysis — much of which appears in a nearly 100-page appendix — on public indebtedness, currency crises, and financial meltdowns over the past eight centuries. The scope of the data — much of which have never been collected before — is impressive and the book stands as a testament to the scholarship of its authors. Such a treasure trove should not go unnoticed by economic historians.

The broader theme of the book is indicated by the main title. In their tour of the data, the authors highlight empirical regularities that tend to correlate with the onset of financial crises. Most of the book deals with the levels of government indebtedness that predate financial crises. The run-up in sovereign debt (particularly “external debt” issued to bondholders who reside outside the country) has often presaged defaults of one form or another by the government. This is seen more frequently in developing economies that tend to be more affected by swings in export prices and international financial conditions.

Yet, while developing nations can fall into the trap of serial default on bond debt, all nations, including developed economies, have at one time or another indulged in another, less severe, form of default: the inflation of the nation’s currency. Reinhart and Rogoff rightly spend some time seeking to counter the notion, all too common in conventional discussions of the topic in the media, that currency debasement is a distinctly different creature than debt default. Instead, the authors suggest that inflation is akin to defaulting on a bond or restructuring a debt because the outcome is the same: The government forces the bondholder or currency holder to accept a payment lower in real terms than the original value of the debt. Reinhart and Rogoff call it “default through debasement” and note that if “serial default is the norm for a country passing through the emerging market state of development, the tendency to

lapse into periods of high and extremely high inflation is an even more striking common denominator.”

The other empirical regularity they encounter as a precursor to financial crises is a run-up in asset prices — particularly housing prices — above a long-term trend. More often than not, the authors argue, borrowing fuels the asset price bubble. The bursting of the bubble then tends to precipitate a banking crisis that drags down lending institutions. In addition, recessions that accompany banking crises tend to be deeper and harder to recover from than other recessions.

The authors close, however, with a chapter that perhaps inadvertently points out the principal shortcoming of the book itself. Once they have firmly established how often leverage and asset price appreciations precede crises, they go one step further to suggest that the regularities may be a basis for a real time “early warning system” for policymakers. So, for instance, since housing prices are at the top of their list of “reliable indicators” of an impending banking crisis, real-time collection of housing price data might help regulators anticipate potential crisis scenarios.

Yet the authors don’t weave a robust narrative to suggest how the variables interact. Although excessive leverage, a capital windfall from abroad, and faster-than-usual housing price appreciation do tend to correlate with financial crises, determining which variable might potentially burst the bubble is much harder. And, contrary to the spirit of the book’s title, it’s plausible that different crises can be precipitated by all three aspects occurring in various sequences.

The authors do acknowledge that the metrics identified by their analysis will not provide “an obvious indication” of an impending crisis. But any early warning system that is built on a theory-free framework is bound to be problematic.

It’s also important to acknowledge that the empirical regularities don’t occur in a policy vacuum. Institutions matter, and the embedded rules of financial markets and the regulations that govern financial firms and depository institutions play a role in economic outcomes. The case for an early warning system for policymakers is weakened by this lack of analysis — and, in the end, a sober analysis of how regulatory institutions work and the limitations on what government can effectively do might even topple the case for codifying these early warning metrics. Foremost among the concerns may be the notion that any governing body given power to act on threats to systemic stability may actually encourage the type of behavior it was designed to discourage.

Despite such caveats, Reinhart and Rogoff have written a very valuable book, one that can be read profitably by a lay audience, policymakers, and academic economists alike. **RF**

Location, Location, Location: The economic differences between rural and metro areas in the Fifth District

BY ANN MACHERAS

What does it mean to be a “rural” area in today’s economy and, more specifically, in the Fifth District? We may visualize open fields and farm equipment, or dense woods with scant development, or small towns connected by country roads, or no towns at all — just open space.

Although there are some official definitions, there is no consensus on precisely what classifies an area as rural. Many of us may imagine “rural” to be the opposite of “urban,” thus rural areas are often described as those that are not part of an officially designated metropolitan statistical area. A more careful definition will be explored in this article — one that will allow us to examine the degree to which economic performance differs across areas in the Fifth District to the extent they are more rural or more urban. Common measures of economic prosperity, including employment growth, income, and poverty can be used to assess differences across regions. Another important determinant of economic growth, the mix of industries, can help explain the variation in economic performance revealed by comparing more rural with more urban regions.

Defining Rural Areas

The temptation to use the metropolitan versus nonmetropolitan distinction as a way to categorize places as rural and nonrural (or urban) is understandable. After all, there are much more economic data available for metropolitan statistical areas than for other area types, such as counties. This results in a dichotomy in which an area such as a county must be considered either entirely rural or entirely urban.

Yet rural areas can differ widely in both structure and complexity. As an example, Amelia County, which is officially part of the Richmond, Va., metropolitan area, has a total population of 12,808 and a population density of 32 persons per square mile. Compare that to Henrico County, also part of the Richmond metro area, which has a population of 292,599 and a population density of 1,102. Nearby Nottoway County, similar in population and population density to Amelia County, is not part of the Richmond metro area. So, by the simplest definition, Amelia County would be labeled as “urban” while Nottoway County would be labeled as “rural.” In fact, Amelia County and Nottoway County share more characteristics than either does with Henrico County, despite the fact that one is urban and the other is rural.

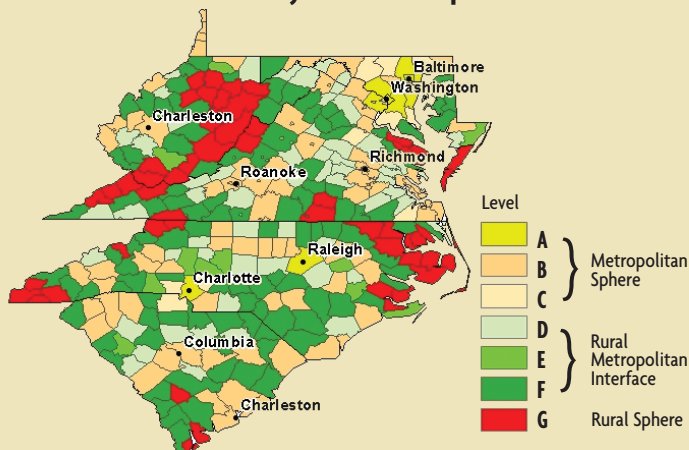
Fortunately, recent research has improved the way we define rural places. One measure, the Index of Relative Rurality (IRR) was developed by Purdue University agricultural economist Brigitte Waldorf. It uses as its base four characteristics of rural places that are commonly used in existing definitions of rurality: population, population density, extent of urbanized area, and distance to the nearest metropolitan area. The IRR then combines these four characteristics of rural areas and generates a single index measure ranging in value along a continuous scale from 0 to 1, with smaller numbers assigned to the least rural areas and larger numbers for the most rural areas.

Returning to our comparison of Amelia and Nottoway counties, the Index of Relative Rurality defines Nottoway as the more urban county (IRR=.486) and Amelia as the more rural county (IRR=.630), even though Amelia is part of the Richmond metro area.

One obvious difference between Amelia and Nottoway counties is Amelia County’s relative proximity to the amenities of the Richmond metro area that provides its residents with easier access to shopping, airports, and cultural opportunities. Perhaps more important than access to these amenities is the advantage that businesses derive from “agglomeration economies,” or the benefits of access to a critical mass of suppliers, labor pools, and entrepreneurial networks. Although proximity to a metro area is one of the metrics embedded in the index, it is useful to explicitly highlight accessibility to a metro area in combination with the rurality index when describing a rural-metropolitan sphere. This helps us to examine the differences among rural areas.

A research team developed the rural-metropolitan sphere definition for a project designed to explore rural competitiveness in Indiana. (The team included researchers from Purdue University, Indiana University, and the Strategic

Fifth District Counties by Rural-Metropolitan Level



SOURCE: Indiana Business Research Center and U.S. Census Bureau

Development Group, Inc. The rural-metropolitan sphere consists of seven levels ranging from levels A and B — which contain highly urban metropolitan core counties that differ only by population — to level G, which contains nonmetropolitan counties that are not adjacent to a metropolitan area. The metropolitan sphere contains levels A and B, but also adds the outlying metropolitan counties that are less rural ($IRR < 0.4$). In contrast, the rural sphere contains only level G, the most remote counties.

By far, the most revealing levels bridge together the rural and metro spheres with the rural-metropolitan interface (levels D, E, and F) where we find a range that accounts for both rurality and remoteness — from less rural to more rural and from the most metropolitan to the more remote adjacent counties. The hybrid rural-metro group (known as the “rural-metro interface”) defines Amelia County, Va., as an outlying metropolitan county with $IRR \geq 0.4$ (level D) and Nottoway County, Va., as a nonmetropolitan county adjacent to a metropolitan area with $IRR \geq 0.4$ (level F).

The Fifth District has a wide variety of different types of counties ranging from least rural to most rural and varying by distance from the officially defined metropolitan statistical areas. The map summarizes the number of Fifth District counties (and, in the case of Virginia, independent cities) at each level of the rural-metropolitan sphere.

Not surprisingly, most of the population in the Fifth District resides in the metropolitan sphere, which also contained some of the fastest-growing areas from 2000 to 2008. The areas in the rural-metropolitan interface generally grew more slowly and accounted for 23 percent of population in 2008. The more metropolitan and less rural counties in level C grew the fastest, at 18 percent, while the outlying metro counties that were more rural (level D) grew faster than any other areas in the rural-metropolitan interface.

However, outlying metro counties grew by 11 percent, which is not as quick as their less rural counterparts. The rural sphere, level G, experienced the smallest increase in population since 2000, growing just under 3 percent. Even based solely on the summary information for population shares and population growth, the need to differentiate among metropolitan areas and among rural areas becomes clear.

Indicators in the Rural-Metropolitan Sphere

Economic prosperity plays out differently depending on the degree of rurality and proximity to metropolitan areas. The economic indicators in the table provide some common measures of income, employment opportunity, and poverty for the Fifth District.

The largest urban counties have the highest median household income and the highest average wages, although the cost of living would presumably be higher relative to more rural areas. Compared to other areas, large metropolitan counties also have the lowest unemployment rate and among the lowest poverty rates.

Economic Indicators by Rural-Metropolitan Levels

Economic Indicator (Mean)	Metropolitan Sphere			Rural-Metropolitan Interface			Rural Sphere
	A	B	C	D	E	F	G
Population							
2008 (Share of District Total)	24.0%	43.1%	5.8%	6.8%	3.7%	12.4%	4.2%
Avg. Annual Change, 2000-2008	9.5%	11.2%	17.7%	11.2%	6.3%	4.6%	2.8%
Median Household Income							
2007	\$68,294	\$50,863	\$63,001	\$46,388	\$39,497	\$38,410	\$35,143
Avg. Annual Change, 2000-2007	2.9%	2.5%	3.1%	2.6%	2.1%	2.3%	2.5%
Average Wage							
2008	\$58,433	\$40,986	\$37,873	\$33,652	\$33,415	\$32,125	\$31,436
Avg. Annual Change, 2000-2008	4.0%	3.4%	3.6%	3.4%	3.0%	3.1%	3.5%
Total Covered Employment							
2008	4,010,221	6,018,554	602,927	547,712	447,720	1,190,427	451,831
Avg. Annual Change, 2000-2008	0.8%	0.8%	1.8%	0.4%	-0.2%	-0.4%	0.6%
Unemployment Rate							
2008	4.6%	5.0%	4.9%	5.6%	6.8%	7.1%	5.8%
Avg. Annual Percentage Point Change, 2000-2008	0.2	0.3	0.2	0.3	0.3	0.3	0.1
Poverty Rate							
2007	9.1%	12.3%	8.4%	13.5%	14.8%	17.4%	17.7%
Avg. Annual Percentage Point Change, 2000-2007	0.1	0.3	0.2	0.3	0.4	0.4	0.2

SOURCE: Indiana Business Research Center, Bureau of Labor Statistics, U.S. Census Bureau

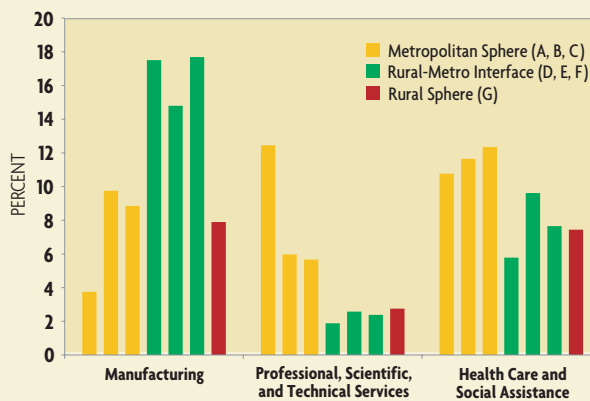
Abundant employment opportunities in the metropolitan-sphere counties contributed to the relatively high wages and incomes in these areas. Employment growth was strongest in the more urban outlying metropolitan counties, which also averaged the lowest poverty rate. In contrast, the most rural counties (levels F and G) have the lowest median household income, the lowest average wages, and the highest poverty rates. Employment growth in these areas has been negligible or has declined since 2000, leading to higher average unemployment rates than any of the areas in the metropolitan sphere.

What explains the difference in economic performance? While a definitive answer remains the subject of much academic and policy debate, the composition of economic activity clearly matters. Industry composition is one important determinant of regional economic growth, although regional competitiveness also depends heavily on the availability and quality of labor and the innovation capacity that allows firms to adopt new technologies and develop new products and services to meet changing market demand.

Industry mix differs across the rural-metropolitan sphere and, more important, certain industries grow at different rates — some industries become economic drivers while others become a drag on growth. By focusing on three major industry sectors: 1) manufacturing, 2) professional, scientific and technical services, and 3) health care and social assistance, we can compare regional concentration in sectors that have declined as well as in sectors that have grown over the past decade.

Nationally, the manufacturing sector accounted for nearly 10 percent of total employment in 2008 and has declined by an average annual rate of 3 percent from 2000 to 2008. Over the same period, professional, scientific, and technical services grew at an annual average rate of 2 percent, but accounted for only 6 percent of total employment in 2008. Of these three sectors, health care and social assistance accounted for the greatest share of national employment,

Employment Shares: 2008



SOURCE: Bureau of Labor Statistics

nearly 12 percent. It also had the highest average annual growth rate, at just under 3 percent from 2000 to 2008.

National employment growth rates provide important information because industry growth within a region often follows national or even global trends, especially in the case of the manufacturing sector, where the market for products extends well beyond the region.

As measured by the share of employment, the rural-urban interface counties have twice the concentration of manufacturing employment when compared to the metropolitan counties and the most rural counties (see chart). Adjacency to the more populated metropolitan sphere allows the manufacturing sector to tap into the available labor force while still having access to developable land. Interestingly, the most rural areas have only half the concentration of employment in manufacturing as the counties of the rural-metro interface. This may be because rural counties not adjacent to metropolitan areas lack the critical infrastructure and transportation networks that connect manufacturers with their supplier network and customer base.

Since 2000, employment in the manufacturing sector has declined broadly across every level of the rural-metropolitan sphere, but the greatest contraction has occurred in the rural-metro interface counties (see chart). The high concentrations of employment in manufacturing resulted in a declining or very low rate of overall employment growth since 2000. This may explain the lower wages and income levels characteristic of these areas.

Over the past decade, the professional, scientific, and technical services sector has been a driver of economic growth across all areas in the rural-metro sphere, but employment in this sector is twice as concentrated in the urban and outlying areas of the metro sphere as it is in the rural-metro interface or the rural sphere. In fact, this sector accounts for more than 12 percent of employment in the most populated metropolitan areas (level A), presumably because the concentration of potential customers attracts companies that can operate on a large scale.

However, the fastest growth in the professional, scientific, and technical services sector has occurred in the

outlying metropolitan counties. Counties in the rural-metro interface and the rural sphere also experienced high growth in this sector, albeit from much lower levels of industry concentration. With less than 3 percent of employment in the professional, scientific, and technical services sector, it should be no surprise that high rates of employment growth fall short of counteracting the much larger and deteriorating employment in manufacturing.

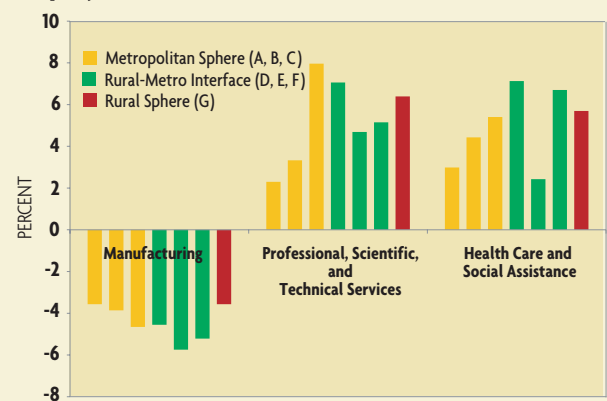
The health care and social assistance sector depends much more on regional demographic trends than the other two industry sectors discussed here, which experience the effects of national and global trends more acutely. Therefore, the prospect for growth of the health care and social assistance sector depends on both the current and future needs of the regional population.

Health care and social assistance employs significant shares of total employment in the metropolitan sphere, but also employs a sizable share even in the most rural areas. Within the rural-metro interface and the rural sphere, only retail trade, accommodation and food services, and the manufacturing sectors employ more people than the health care and social assistance sector. Moreover, health care and social assistance employment growth in the rural-metro interface and rural sphere outpaced growth in the metropolitan sphere from 2000 to 2008. Thus, while growth in population in the more rural areas was relatively slow compared to more urban areas, clearly the demand for health care and social assistance services grew in response to demographic shifts such as the aging of the population.

Differences in economic prosperity between the more urban and more rural areas are real, but strategies have been implemented in many rural areas to leverage connections with higher-education institutions to foster innovation and explore ways to diversify the regional economy and train a more highly educated work force to promote economic growth. As rural areas develop ways to diversify into growing industry sectors, thereby increasing the share of their work force engaged in high-growth industries, the result will be an improvement in their economic prosperity.

RF

Employment Growth: 2000–2008



SOURCE: Bureau of Labor Statistics

Country Pork

Swine producers fight low demand and high costs

BY BETTY JOYCE NASH

Livestock and crops have fed eastern North Carolina by generating jobs and spending. Sampson and Duplin counties are the top hog-producing counties in the nation. In fact, the world's largest pork processing plant is in Tarheel, N.C., owned by Smithfield Foods. That shows up in the Sampson County seat of Clinton, N.C., for instance, which now has underground power lines and a revitalized downtown.

But this mainstay of rural eastern North Carolina counties has fallen on tough times for the past two years because of what some are calling the most severe crisis in the pork industry's history.

Coharie Hog Farm in Clinton, N.C., the nation's 22nd largest, filed Chapter 11 in November, as did three other hog operations. The Coharie bankruptcy threatens the livelihood of about 80 "contract farms" that provide swine barns, management, and maintenance for raising company-owned animals at various stages in return for a per-pig price.

Pork producers nationwide are losing money on each animal as they cope with low market prices and rising production costs. As the nation's second-largest pork producer, North Carolina is feeling the pain. Here's the problem: A swine diet consists of mostly corn. Ethanol-driven demand for corn boosted prices from \$6.50 to \$8 per bushel. Corn prices are forecast to be in the \$4 per bushel range. Recent rains are causing more consternation because some of this year's crop may be inedible. Add the declining price for pork products — wholesale hog prices fell to about 51 cents a pound in August (a six-year low) but have since fluctuated around 61 cents per pound.

Producers have lost about \$21 per hog since October 2007, according to N.C. State University economist Kelly Zering. Premium prices for corn and soybean meal, also used in feed, continue to damage not only the swine industry but also the broiler chicken and turkey producers, also critical to Tarheel agriculture.

Four of the nation's top pork producers are in the Fifth District: Virginia-based Smithfield Foods and, in North Carolina, the now-bankrupt Coharie Farms along with Prestage Farms and Goldsboro Hog Farm. About 18 million North Carolina pigs have been sold annually over the past 10 years, according to Zering. The pork industry generates about 46,657 jobs in the state, directly and indirectly.

Effects of fears about the H1N1 flu virus and subsequent ban on pork imports by China and Russia briefly dragged down demand, says Deborah Johnson of the N.C. Pork Council. "When that happened, we saw consumption drop for several weeks," she says. "We are seeing it recover."

Another factor affected supply: Producers widely adopted a vaccine in 2007 for a disease that had thinned

herds. The vaccine improved output, driving down prices. In addition, profits were good and that encouraged more production.

But as pork production increased, U.S. consumption began to decline — from 50.8 pounds to 49.5 pounds per person in 2008 and 49.1 pounds in 2009. Consumption in 2010 is projected at 46.5 pounds. The decline is largely attributed to the global downturn.

From almost 22 billion pounds in 2006, production went to 23.3 billion in 2008, driven by strong export demand. Pork exports have since fallen by 10 percent through July 2009 over 2008, but remain higher than in 2007.

Pork producers are blaming, in part, the misperception that the H1N1 virus has anything to do with pork. For the record, the respiratory illness cannot be contracted via pork consumption or handling. Hog prices, however, have been depressed all year, according to U.S. Department of Agriculture economist Mildred Haley. A dip in early May could be attributed to the virus panic, she says, but prices recovered to previous 2009 levels shortly thereafter. Wholesale prices had declined even before the H1N1 virus outbreaks emerged in late April and early May.

And although exports to China, Japan, and Canada fell, exports to Mexico have risen. Haley points out that exports in 2008 rose by 48.6 percent over 2007. "U.S. pork exporters shipped 4.7 billion pounds of pork," she says. That compares to exports of 3.1 billion pounds in 2007. China imported more pork than usual in 2008 because of disease problems in herds in 2008 and "they also had the Olympics and didn't want any shortages."

The recent slack demand in exports has diverted product back onto domestic markets, and further depressed wholesale prices. To help, the U.S. Department of Agriculture says it will buy \$50 million in pork products for the nation's school lunch program. Producers are shrinking herds now, and the declining supply will boost prices eventually. Demand will improve with the economy, Haley says, but right now "people have less money to allocate to their food budget."

Nationwide, the average number of hogs per farm has grown, while the number of farms has declined. In North Carolina, the hog population intensified from 2 million hogs in 1982 to almost 10 million by the end of that decade.

With that growth came controversy over the industry's animal waste and its effect on waterways, especially after Hurricane Floyd inundated eastern North Carolina in 1999. A state moratorium on hog farms that use waste lagoons remains in effect. By December 2008, there were about 9.6 million hogs in the state, about 15 percent of the 67 million raised in the United States.

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State Data, Q2:09

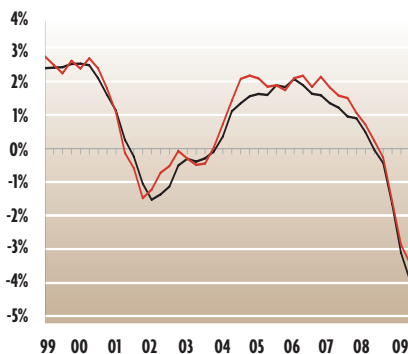
	DC	MD	NC	SC	VA	WV
Nonfarm Employment (000s)	702.9	2,543.7	3,943.3	1,852.8	3,672.9	738.0
Q/Q Percent Change	-0.6	-0.6	-1.2	-0.6	-0.5	-1.5
Y/Y Percent Change	-0.1	-2.5	-4.9	-4.6	-2.5	-3.0
Manufacturing Employment (000s)	1.3	123.5	450.2	216.9	241.4	51.0
Q/Q Percent Change	0.0	-0.9	-3.8	-3.0	-4.1	-4.4
Y/Y Percent Change	-22.0	-4.3	-13.5	-11.6	-9.7	-10.3
Professional/Business Services Employment (000s)	149.3	395.4	465.1	213.7	641.2	58.5
Q/Q Percent Change	-2.1	-1.4	-2.2	3.9	-0.5	-0.8
Y/Y Percent Change	-2.5	-1.0	-8.3	-5.1	-2.4	-3.9
Government Employment (000s)	237.0	492.1	717.5	342.6	703.2	146.7
Q/Q Percent Change	0.5	0.8	-0.4	0.6	0.5	0.3
Y/Y Percent Change	1.2	1.2	2.0	-1.4	1.7	0.3
Civilian Labor Force (000s)	327.8	2,958.9	4,567.1	2,199.0	4,166.0	792.9
Q/Q Percent Change	-0.9	-0.4	0.1	0.5	0.3	-0.3
Y/Y Percent Change	-1.3	-1.2	1.0	2.7	1.3	-1.8
Unemployment Rate (%)	10.5	7.1	10.9	11.8	7.0	8.4
Q1:09	9.6	6.6	10.4	10.9	6.5	6.0
Q2:08	6.6	4.1	5.9	6.3	3.8	4.3
Real Personal Income (\$Mil)	34,454.2	252,578.7	295,370.1	133,149.2	313,095.7	54,114.4
Q/Q Percent Change	-0.3	-0.1	0.1	0.4	-0.1	0.9
Y/Y Percent Change	-3.8	0.9	-1.9	-1.8	-0.8	2.7
Building Permits	35	2,554	9,929	4,092	5,789	424
Q/Q Percent Change	-86.5	21.9	36.4	14.2	24.1	14.9
Y/Y Percent Change	-81.5	-34.7	-36.2	-49.3	-21.2	-49.5
House Price Index (1980=100)	586.5	462.5	340.2	323.6	434.1	228.7
Q/Q Percent Change	-3.3	-3.9	-1.6	-1.1	-2.4	-1.2
Y/Y Percent Change	-5.7	-8.7	-1.3	-0.9	-4.4	-1.5
Sales of Existing Housing Units (000s)	7.6	66.8	124.0	67.2	110.4	24.4
Q/Q Percent Change	18.8	15.2	8.4	7.0	-0.7	7.0
Y/Y Percent Change	5.6	4.4	-26.5	-20.8	-1.4	-6.2

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®

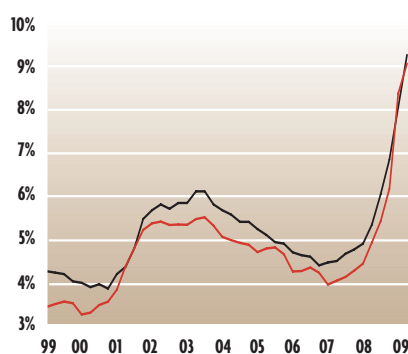
Nonfarm Employment

Change From Prior Year
First Quarter 1999 - Second Quarter 2009



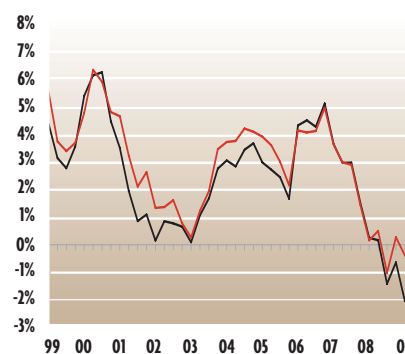
Unemployment Rate

First Quarter 1999 - Second Quarter 2009



Real Personal Income

Change From Prior Year
First Quarter 1999 - Second Quarter 2009

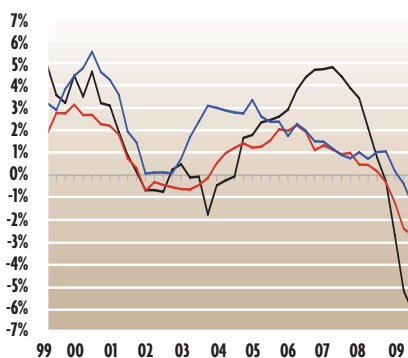


Fifth District

United States

Nonfarm Employment Metropolitan Areas

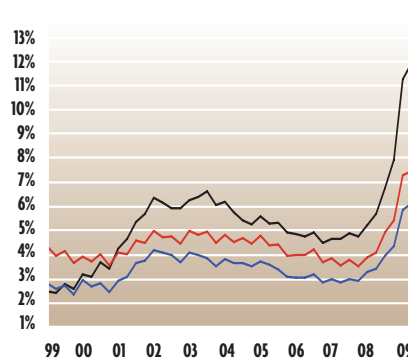
Change From Prior Year
First Quarter 1999 - Second Quarter 2009



Charlotte Baltimore Washington

Unemployment Rate Metropolitan Areas

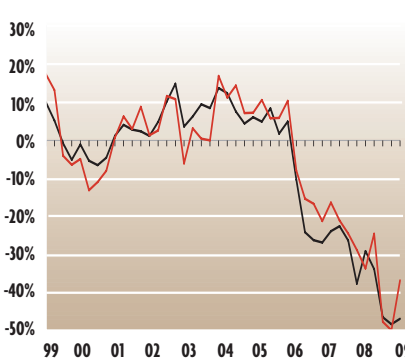
Change From Prior Year
First Quarter 1999 - Second Quarter 2009



Charlotte Baltimore Washington

Building Permits

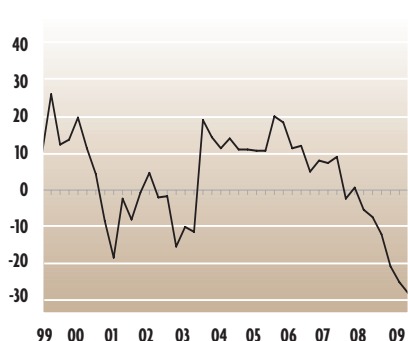
Change From Prior Year
First Quarter 1999 - Second Quarter 2009



Fifth District United States

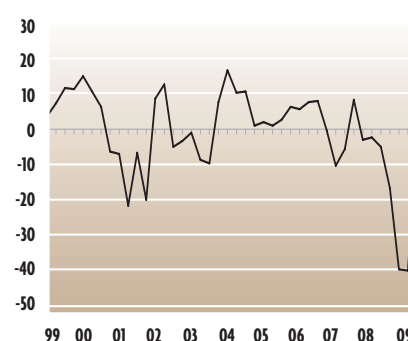
FRB—Richmond Services Revenues Index

First Quarter 1999 - Second Quarter 2009



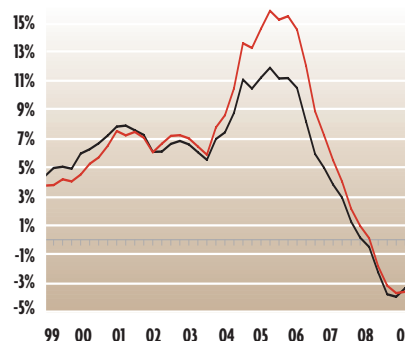
FRB—Richmond Manufacturing Composite Index

First Quarter 1999 - Second Quarter 2009



House Prices

Change From Prior Year
First Quarter 1999 - Second Quarter 2009



Fifth District United States

NOTES:

- 1) 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.
- 2) Metropolitan area data, building permits, and house prices are not seasonally adjusted (nsa); 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, Q2:09

	Washington, DC	Baltimore, MD	Hagerstown-Martinsburg, MD-WV
Nonfarm Employment (000s)	2,409.0	1,290.9	99.4
Q/Q Percent Change	0.7	1.4	0.8
Y/Y Percent Change	-1.4	-2.7	-2.7
Unemployment Rate (%)	6.1	7.5	9.7
Q1:09	5.9	7.3	9.3
Q2:08	3.4	4.1	5.0
Building Permits	2,863	1,054	175
Q/Q Percent Change	-4.9	74.2	8.0
Y/Y Percent Change	-22.7	-15.8	-45.1
	Asheville, NC	Charleston, SC	Durham, NC
Nonfarm Employment (000s)	169.4	813.9	285.6
Q/Q Percent Change	0.8	-0.6	-0.2
Y/Y Percent Change	-4.7	-6.1	-2.3
Unemployment Rate (%)	9.2	11.9	7.9
Q1:09	9.2	11.3	7.6
Q2:08	4.5	5.7	4.5
Building Permits	324	2,088	606
Q/Q Percent Change	-7.2	34.4	-4.6
Y/Y Percent Change	-40.4	-46.4	-5.5
	Greensboro-High Point, NC	Raleigh, NC	Wilmington, NC
Nonfarm Employment (000s)	347.1	505.1	142.0
Q/Q Percent Change	-0.4	0.4	1.1
Y/Y Percent Change	-6.1	-3.3	-4.7
Unemployment Rate (%)	11.6	8.8	9.9
Q1:09	11.2	8.5	10.3
Q2:08	5.8	4.5	4.9
Building Permits	669	1,551	784
Q/Q Percent Change	38.5	89.6	72.3
Y/Y Percent Change	-27.4	-51.1	-29.3

	Winston-Salem, NC	Charleston, SC	Columbia, SC
Nonfarm Employment (000s)	212.4	295.9	362.5
Q/Q Percent Change	0.1	1.6	0.9
Y/Y Percent Change	-3.3	-3.0	-1.7
Unemployment Rate (%)	10.2	9.4	9.1
Q1:09	9.9	8.9	8.6
Q2:08	5.3	4.8	5.2
Building Permits	422	915	862
Q/Q Percent Change	197.2	66.1	-6.6
Y/Y Percent Change	0.5	-30.1	-31.2
	Greenville, SC	Richmond, VA	Roanoke, VA
Nonfarm Employment (000s)	313.0	612.6	160.5
Q/Q Percent Change	0.6	0.9	0.9
Y/Y Percent Change	-3.1	-3.5	-1.7
Unemployment Rate (%)	10.2	7.9	7.5
Q1:09	9.5	7.5	7.0
Q2:08	5.0	3.9	3.6
Building Permits	380	812	105
Q/Q Percent Change	-5.9	51.2	31.3
Y/Y Percent Change	-65.7	-31.5	-44.4
	Virginia Beach-Norfolk, VA	Charleston, WV	Huntington, WV
Nonfarm Employment (000s)	766.8	150.4	118.2
Q/Q Percent Change	1.9	1.0	0.3
Y/Y Percent Change	-0.9	-1.1	-0.8
Unemployment Rate (%)	7.0	7.4	8.1
Q1:09	6.9	5.7	7.3
Q2:08	3.8	3.7	4.9
Building Permits	1,387	38	9
Q/Q Percent Change	18.5	35.7	50.0
Y/Y Percent Change	-20.0	-32.1	-25.0

For more information, contact Sonya Ravindranath Waddell at (804) 697-2694 or e-mail sonya.waddell@rich.frb.org

Why Efficiency Matters... Even If You Value Equality

BY KARTIK B. ATHREYA

How do you judge whether the outcomes delivered by a market or another economic system are good or bad? One concept that economists use is Pareto efficiency. To understand Pareto efficiency, it is useful to first define a Pareto improvement. A Pareto improvement is a change in outcomes that leaves no one worse off and at least some better off. A Pareto efficient allocation, then, is simply one from which there are no Pareto improvements: To make someone better off, you would have to hurt another. Similarly, a Pareto inefficient outcome is one where Pareto improvements *can* be made.

Yet, some object to using Pareto efficiency as a guide for policymaking, in part because it does not place clear limits on inequality. And, in fact, there are many reasons why you might generally prefer a more even distribution of resources. First, and perhaps most obvious, inequality might strike you as ethically wrong. No person should be able to live off his riches while others have to labor long hours in difficult conditions just to get by, you might argue. Another objection involves social stability. You might claim that a society with considerable income inequality is unlikely to avoid internal conflict over the long run. In both cases, you might say that to reduce inequality you would be willing to give up a little efficiency.

In this column, I will suggest that efficiency is still a useful guidepost for economists and policymakers. First, inefficient outcomes are by definition unambiguously wasteful. Two or more parties could be made better off without hurting anyone else. Second, there are good reasons to believe that a substantial portion of observed inequality stems from inefficient trading arrangements. Therefore, improvements in the efficiency of markets — particularly those markets that help people insure against certain types of risks such as poor health or other events that may be difficult to foresee — would likely lower inequality *and* make all better off. As a result, there are important classes of situations in which there is no inherent trade-off between equity and efficiency. Third, over the long run inefficiency is the single biggest source of inequality. The most profound sort of inequality today exists *between* nations. Those countries that have pursued efficiency-enhancing policies are generally rich and those that haven't are not. Thus, trading efficiency for greater equality is not always as easy as it might seem.

Inefficiency can cause inequality more locally as well. Consider a tax on luxury boat purchases, with all revenues used to fund public expenditures for the poor. On the face of it, it sounds like if anyone will be hurt by this policy, it

will only be a set of wealthy households who can afford to pay the taxes. The problem is that such taxes will reduce the number of luxury boat purchases in lieu of, say, luxury cruises, or some other activity that is a close substitute. This means that some boat workers will now have to search for new employers. And in the event that labor and equipment cannot be reallocated seamlessly, the consequences are potentially much larger. Therefore, inefficiency harms not just the rich, who either pay the tax or opt for a less-preferred option, but their trading partners as well, most of whom are not rich. Meanwhile, the revenues — and, hence, resources with which to make transfers — may not amount to much, since the demand for luxury items, such as yachts, is sensitive to price.

More generally, concerns about “fairness” or equality have led to many wasteful interventions — and *non*-interventions — in market function. For example, on the one hand, we often employ inefficient subsidies and forms of taxation, while on the other hand, we routinely fail to charge people for congesting roads or emitting carbon dioxide. Each of these policy choices either creates or abets inefficiency — and represents a foregone opportunity to make all of us better off. What's worse, in the cases where prices are hamstrung (for example, by rent controls), inequality may increase. Price-based allocation may be supplanted with “influence”-based allocation, and the latter almost by definition will favor the wealthy.

There is a better way. Competitive markets generally work well. Most of us are routinely able to make the purchases and sales we plan on, at prices that we usually are not surprised by. A central result of economics is that under ideal conditions the outcome of trade in such settings will be efficient. And under realistic conditions, it is still likely to deliver a serviceable approximation for the allocation of many goods and services. This in turn suggests that we should focus public policy on efforts that fall into one of three categories: 1) those that remove the malfunctions in markets that can raise inequality, 2) those that do not directly alter prices in otherwise well-functioning markets, and 3) those that allow most people to gain from any given Pareto improvement. Efficiency and equality are not necessarily at odds; in the pursuit of the former, society may actually find that it has more of the latter.

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Kartik Athreya is a senior economist at the Federal Reserve Bank of Richmond.

Jobs and Economic Recovery

Many economists are predicting a jobless recovery in which GDP grows but employment remains stagnant. Has the economy's "natural rate" of unemployment permanently changed for the worst? We'll explore the future of labor markets.

Counting America

The U.S. Census, a decennial count mandated by Congress, is nearly always controversial because it's hard to count every person in America. But it's important because the numbers determine congressional representation and the formulas used to disburse federal funding. How will Census 2010 differ in its use of statistical sampling and counting methods?

Abandoned Neighborhoods

Higher foreclosure and vacancy rates have left some neighborhoods a shadow of what they once were. Can policymakers realistically hope to address the decline in demand for real estate in these areas?

The Consumer Economy

Consumption spending accounts for two-thirds of GDP. Yet much of that is not what we traditionally think of as retail purchases. Join us on a tour of the history and economics of consumption.

Federal Reserve

We'll discuss the history of the Federal Reserve System's decentralized structure and the importance of the regional banks.

Interview

David Friedman of Santa Clara University discusses the importance of applying economic analysis to the law.

Economic History

The Jamestown colony is generally considered the first permanent English settlement in what is now the United States. But the colony struggled until it adopted a reasonable set of economic incentives.

Jargon Alert

It's common for people to ask, "What if?" When economists do it, they are probably positing a "counterfactual."

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Monitoring Trends

in Fifth District Business Activity

For nearly two decades, the Richmond Fed has conducted monthly surveys of manufacturing, retail, and services firms in the Fifth District. Participants are selected to ensure that the type, size, and location of survey respondents reflect the distribution of firms in the District. The surveys collect information about current and future (expected) levels of business activity. Over time, respondents' assessments have proven to be an accurate gauge of economic conditions in the region.

Manufacturing Surveys

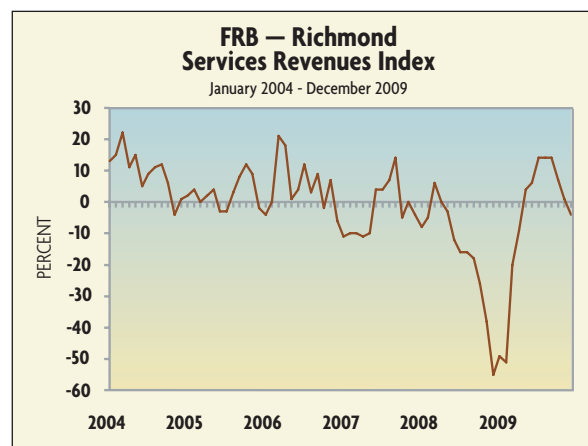
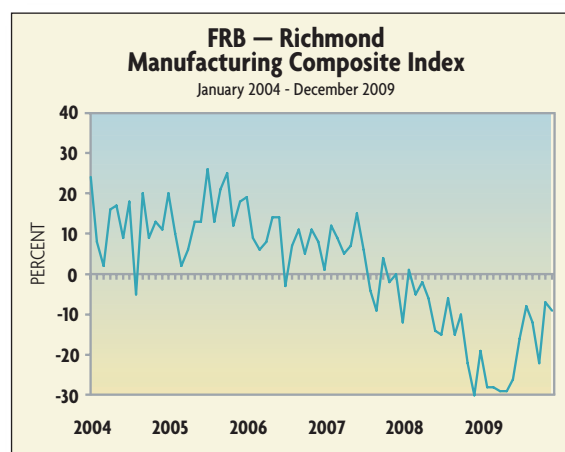
Manufacturers provide information on current activity, including shipments, new orders, order backlogs, and inventories. Respondents also supply information on employment conditions, prices, and expectations of business activity for the next six months.

Service Sector Surveys

Representative retailers and services-providing firms are also polled each month to provide their assessment of current and expected activity. Retailers provide information on sales revenues, big-ticket sales, inventories, and shopper traffic. Services firms also report on revenues. Both sets of respondents provide information about employment, wages, and prices at their firms, and express expectations regarding customer demand for the coming six months.

For more information on District manufacturing and service sector conditions, check out the Regional Economic Surveys at:

http://richmondfed.org/research/regional_economy/surveys_of_business_conditions/index.cfm



To become a participant in one of our surveys, please contact Faye Ball at 804-697-4490.