

FALL 2007

REGION FOCUS

THE FEDERAL RESERVE BANK OF RICHMOND

The Changing Face of Downtown

Where Old
and New
Converge

- Subprime Mortgage Lending
- The Great Migration
- Interview with Susan Athey

REGION FOCUS

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

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PRESIDENT'S MESSAGE

Looking Forward



In this issue of *Region Focus*, we take a look at the business of economic forecasting. Some call it a science, others an art. Clearly, forecasting contains elements of both. And while no single forecast is always going to be 100 percent accurate, it's also clear that forecasts provide value to those who read them, from Wall Street to Main Street.

Forecasting is an input into our everyday decisionmaking process. Your decision about whether to buy a car, for example, is based on a personal forecast that you will have the income to pay for it, and perhaps on a forecast that the car will maintain value over the years should you decide to sell it. Such a forecast may be based on a detailed analysis or on a simple gut feeling.

The Federal Reserve System produces some of the most detailed economic forecasts in the world. Recently, Chairman Ben Bernanke announced that some of the Fed's forecasts would be released to the public on a more frequent basis. Instead of semiannual projections with horizons of two years, now there will be quarterly forecasts with three-year horizons. Federal Open Market Committee (FOMC) participants will also add overall (or "headline") inflation to their forecasts, which already encompass changes in real gross domestic product, unemployment, and core inflation (which excludes prices of food and energy). Summary narratives will now accompany the numerical projections, giving a richer account of the Fed's outlook.

These are important changes. The Federal Reserve Bank of Richmond will continue preparing its own economic forecast and submit it as usual to the Board of Governors. The addition of the third year to the forecast horizon, along with the new narrative, will give an indication of individual members' preferences for inflation and perspectives on other longer-term trends. This should shed more light on the diversity of opinion around the FOMC table. The perspective in, say, San Francisco may be quite different than in Philadelphia, both geographically and philosophically.

Increasing the frequency and the depth of Fed communications with the public is part of a broader strategy that should help improve the effectiveness of monetary policy. In part, this is because forecasts are crucial to the process of conducting monetary policy in the first place. Changes in the target federal funds rate do not affect the economy immediately; there is a lag. Monetary policy is thus

necessarily forward-looking, aiming to anticipate how policy actions will mesh with ever-moving economic conditions.

Externally, forecasts can help guide public expectations about future monetary policy. If the public uses the forecasts to gain a better understanding of where the Fed believes the economy is headed, then it is more likely to respond accordingly. Asset prices in financial markets, for example, may be more likely to move in directions favorable to the Fed achieving its objectives of price stability and sustainable growth.

Meanwhile, a public that is able to compare economic forecasts with central bank behavior can better discern patterns in monetary policy. If the pattern is consistent, policymaking becomes more credible, and inflation expectations become anchored. This is particularly useful to the Fed during times of economic shocks. The central bank can take policy actions in response to shocks — such as a spike in oil prices, for example — without shaking the public's confidence that the long-term inflation objective remains the same. Moreover, expectations are crucial to the behavior of inflation, and an informed public can better learn to form inflation expectations that are consistent with monetary policy.

A forecast of future economic conditions is just one piece of information that the Fed shares with the public. It also conveys objectives, its current policy stance, and, to some extent, its decisionmaking process. Together these messages form the core of the Fed's overarching strategy for explaining its policy actions to the public.

Chairman Bernanke called the Fed's communications strategy "a work in progress." Indeed, the past two decades have witnessed an evolution in Fed communications. It was only 14 years ago that the Fed first started announcing policy changes at the time they were made. More recently, FOMC minutes have been released three weeks after a meeting, instead of five to seven weeks later. Each step builds on past advances.

It's important to keep in mind that the way the Fed conducts monetary policy is not changing. For now, we are just trying to explain it better.

A handwritten signature in black ink, appearing to read "Jeffrey M. Lacker". The signature is fluid and cursive, written in a professional style.

JEFFREY M. LACKER
PRESIDENT
FEDERAL RESERVE BANK OF RICHMOND

Before the Fed

BY ERNIE SICILIANO

Between the Civil War and the founding of the Federal Reserve, the U.S. banking system was largely unregulated, with mixed results

The United States' first two central banks were short-lived. The First Bank of the United States founded in 1791, was a source of constant political debate, and its 20-year charter was not renewed. The Second Bank opened in 1816, then lost its charter in 1836 under the antagonistic Andrew Jackson administration. Thus began a period when U.S. banking was significantly less regulated than today.

For a time, government intervention was limited to setting reserve requirements. It was easy for any bank to obtain a state charter, provided it met the \$100,000 minimum capital requirement, about \$2 million in today's dollars. Most alien to today's customs was that 7,000 state banks issued their own currency. Yet the system functioned with surprising efficiency. A financial press listed the prices of all outstanding currencies, giving full information to the market. During the 1850s, the number of state-chartered banks grew by 79 percent, and the availability of financial

capital enabled strong economic growth in the antebellum era. "Those states that promoted financial development the most, either through liberal chartering, free

banking, or broad-based branch banking experienced moderate to high rates of growth," economist Howard Bodenhorn wrote.

Some have labeled this the era of "free banking." It lasted until the early years of the Civil War. It was not market failure that derailed free banking, but rather President Abraham Lincoln's war debts.

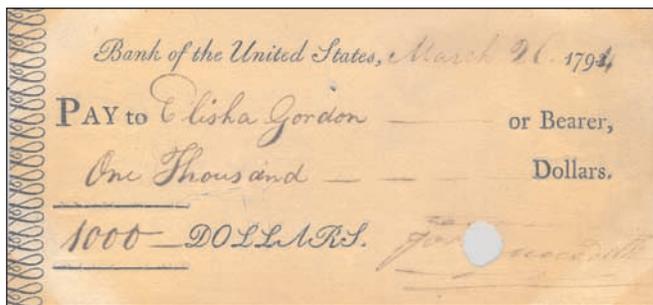
The National Banking Act

The North spent \$3.2 billion to win the Civil War, and Lincoln recognized that existing taxes and tariffs could not cover the entire cost. During the war, the federal government printed U.S. notes — paper money called greenbacks. This fiat currency was expected to be retired after the war. But because the political environment favored an expanded money supply, a limited amount remained in circulation and can still be exchanged for cash today.

However, the greenbacks that remained could not entirely fund the war so Lincoln instituted the National Banking Act in 1863. The act chartered national banks to compete with state banks. Banking at the time was largely local because the economy was not fully integrated. A disproportionate majority of the national banks were concentrated in the Northeast, especially in New York City. Because of the Civil War, the government neglected to charter banks in the South.

Not that the South cared. Southerners generally distrusted the federal banks as government overreach. Had the South not seceded, Southern votes in Congress likely would have prevented the passage of the National Banking Act. After the war, national banks in the South continued to lag the North because the war had gutted Southern infrastructure, and so Northern banks were viewed as more secure. Federal officials also were biased toward granting national charters to already existing banks, thus setting the South at an even bigger competitive disadvantage.

The national bank notes would finance Lincoln's government because to issue them, banks had to purchase government bonds. In the event that a national bank defaulted,



The First Bank of the United States opened in 1791 and operated for 20 years. This check was drawn on the bank on March 26, 1794.

customers could redeem the notes for up to 90 percent of value at the Treasury and the government would cancel the banks' bonds. Lincoln hoped that the security bond-backing provided would cause people to use the notes to the exclusion of state bank notes. Still, state banks, especially the most profitable ones, were reluctant to leave the status quo. They feared the prospect of federal regulation. By mid-1865, 85 percent of American currency remained in state bank notes.

The next year, a 10 percent tax was imposed on state bank notes, which put them at a severe disadvantage and made national bank notes the nation's primary currency.

Growth of Retail Banking

The predictable consequence of the 10 percent tax was the death of state bank notes. The unintended consequence was innovation in banking services. With the ability to issue currency gone, state banks had to invent new financial services to remain in business.

Checkable deposits, although around before the creation of the bank act, grew in popularity after the tax on bank notes. By 1881, checkable deposits made up 82 percent of banking receipts. Checking became especially popular among farmers who lived in rural areas not widely served by national banks.

In addition to checking, state banks drew upon farmers' need for credit and issued real estate and commercial loans. Besides their proximity to most farms, state banks derived a competitive advantage in the loan market because they were much less regulated than national banks. Those regulations that did exist were regularly flouted. Laws for commercial lending dictated that loans be short-term, with promise of immediate payment, but banks regularly made loans to farms based on mortgages of cattle. Loans were made for farmers' long-term fixed investments, as opposed to helping with moving short-term sales. National banks had

higher loan limits and were prohibited from making real estate loans. However, they, too, exploited lax enforcement. In fact, roughly half of all national banks were already making real estate loans before the law was changed to allow them to do so.

As the farmers' demand for credit services grew, so did the demand from wealthy people for banking services. Speculation exploded at this time, and banks fueled it by issuing call loans, which were loans given to investors to purchase stocks. If an investor defaulted, banks could seize his stock portfolio instead. By 1870, one-third of all loans in New York were call loans.

Trusts, which first developed before the Civil War with the chartering of United States Trust Company in 1853, also expanded, and by 1913 there were more than 1,800 trust companies. While trusts traditionally handled only land management for the wealthy, they expanded their services to include investment banking and even checking accounts. They loaned freely and under no government regulation. Pretty soon, trusts became almost indistinguishable from state banks.

The Flaw(s) in the System

While the banking system was partly responsible for the era's robust economic growth, it was not perfect. Although bank failures for non-national banks were around 17.6 percent (compared with 6.5 for national banks), a government comptroller's review of the failures between 1865 and 1911 found that most were due to incompetence. The comptroller found that only 13 percent of banks failed due to adverse business conditions while the rest failed due to corruption or mismanagement.

If there was a fundamental flaw in the system it was that banks were vulnerable to runs, which often led to wider panics involving other banks. There were five panics between the passage of the National Banking Act and the Panic of 1907. Four panics

resulted in depressions, the lone exception being the Panic of 1890.

Panics generally followed several patterns. Sometimes there would be a well-publicized default at a major bank, often caused by economic downturn or a big-name speculator placing a bad bet on the market. When the public found out, they lost confidence in the banks and scrambled to retrieve their savings. At other times, farmers would rush to get cash from banks to move crops in the fall. Banks had loaned more than they had on reserve so they could not meet all of their requirements. Because there was no central bank or banking system, these panics were confined to specific regions and there was little contagion.

There were many reasons why banks struggled to deal with panics. For example, the large concentration of banks in New York, and the banks' loose lending of call loans to risk-prone speculators, made defaults more likely. Some economists have argued that the banks adhered too religiously to the reserve requirement (usually around 25 percent) and were too quick to stop making payments. They argued that had banks dipped below the reserve requirement to pay, confidence would never have slipped and panics would have stopped. On the other side of the debate, economists, including Milton Friedman, argued that banks' closings were necessary and actually reduced panics. He reasoned that had banks stayed open and then failed, it would have forced other banks to close, thereby lengthening panics. Today, economists still debate the extent to which the banks' behavior exacerbated panics.

What economists agree on is the primary cause of panics: an inflexible currency. (See "Runs Make the Bank" on page 24, where we present an economist's story about panics as deriving from the funding of illiquid assets with liquid liabilities.) Unable to expand currency to meet demand, banks were handcuffed to a limited amount of currency. Increasing the number of national bank notes in

circulation was too costly because for banks to get notes, they had to buy government bonds. Greenbacks — U.S. notes printed during the Civil War that passed as legal tender — were set at a fixed amount by the government. The government also had legislated steep reserve requirements of about 25 percent on deposits, further constricting the money supply.

The Clearinghouse Solution

After the Panic of 1857, banks devised a market-oriented solution to address panics. They established clearinghouses, or bank-like organizations, whose purpose in part was to serve as central places where banks could hold reserves and borrow and lend to each other. “The existence of the clearinghouse suggests that private agents can creatively respond to market failure,” economist Gary Gorton has written. “In fact, it is almost literally true that the Federal Reserve System was simply the nationalization of the private clearinghouse system.” When banks faced high currency demand, they would withdraw their reserves from clearinghouses. But because clearinghouses were wary of risking collapse by giving out their reserves, they issued certificates worth 75 percent of the value of the amount they held for the banks. In exchange for the certificates, banks would pay back the value of the certificates plus 6 percent interest.

The clearinghouse certificates began in New York City in 1860. After 1860, other cities’ clearinghouses began issuing notes. By 1907, the practice became so widespread that A. Piatt Andrew, an assistant secretary of the Treasury from 1910 to 1912 and assistant to the National Monetary Commission, estimated (with some questions over his accuracy) that among cities with more than 25,000 people, clearinghouses issued a cumulative total of \$330 million in clearinghouse notes.

Over time, the practice evolved. In 1873, clearinghouses began pooling, or

putting all banks’ assets and liabilities on a single balance sheet. The practice added confidence to the banking system because, by lumping all banks together, it made failing banks seem more stable. Also, clearinghouse checks were issued. Although not backed by anything, these checks served as currency until they were withdrawn, though they had to be cashed at an official clearinghouse.

Clearinghouses later began issuing loan certificates in substantially smaller denominations. Originally, certificates had been in \$5,000 and \$10,000 denominations. However, as the certificates began to be used in the buying and selling of regular goods, the clearinghouse system in Atlanta, for example, began issuing \$10 certificates. Pretty soon, it was even possible to get 25 cent certificates. Such small denominations were necessary because when sellers made change, the currency detracted from bank reserves, so naturally clearinghouses wanted sellers to use certificates instead.

Although it did not completely prevent economy-wide panics, the clearinghouse system greatly improved the banks’ ability to meet currency demands. Well-timed issues of clearinghouse certificates are credited with preventing large-scale spreading of the panics in 1884 and 1890. Interestingly enough, the default rate on clearinghouse notes was low. In 1890, Spring Garden National Bank defaulted on \$170,000 worth of clearinghouse loans from the Philadelphia Clearinghouse Association, which represented the only recorded default of the era.

“The most extraordinary fact associated with the several clearinghouse episodes between 1857 and 1907,” wrote economist Richard Timberlake, “is that the losses from all the various note issues, spurious and otherwise, *were negligible*.”

However, the clearinghouses were not without problems. At the time, it was illegal for state banks to issue private money, which included

certificates. Even if they were legal, the certificates would be subject to the 10 percent tax on state bank notes. However, like so many other regulations, banking officials overlooked the obvious illegality of clearinghouse notes because of the clear benefits they provided to the economy.

Clearinghouses also posed moral hazard and conflict-of-interest problems. With clearinghouse certificates largely available, banks might be prone to profligate lending and ignore their reserve requirements, knowing that clearinghouses might bail them out. In fact, as Gorton notes, “In general, banks were not allowed to fail during the period of suspension of convertibility, but were expelled from clearinghouse membership after the period of suspension had ended.” In addition to the delayed suspensions, the clearinghouses set reserve requirements and conducted their own audits. The efforts could not completely prevent loose lending, a moral hazard problem that still exists today with the Federal Reserve.

Panic of 1907

The biggest weakness of the clearinghouse system was that it did not do anything to make more currency available when the economy needed it. For banks to acquire national bank notes, they needed to buy bonds. However, in 1900, the United States returned to the gold standard, meaning the supply of government bonds was tied to the supply of gold. The government couldn’t buy bonds if it didn’t have the gold to back it.

At first, the system worked well, as the return to the gold standard coincided with new gold discoveries. The new gold meant that the government had money to put into the economy, and in 1904 and 1907, Treasury Secretary Lyman Gage used the excess gold to inject money into the economy by buying up bonds. He timed the purchases so that the money entered the economy around the time farmers began demanding

currency to move crops to market. However, the country's banks still remained handcuffed. Gage himself advocated a "large central bank with branches," a harbinger of the Fed, and the Panic of 1907 highlighted the ill effects of an (essentially) fixed currency.

The panic, easily the most damaging up to this time, began when F.W. Heinze, famed speculator and president of Mercantile National Bank, lost a huge bet on United Copper Co. In less than 24 hours, he lost \$50 million as the stock plunged from \$62 to \$15.

At first, the clearinghouse system held up and Heinze's banks were able to clean up their balance sheets and remain in business. However, some of Heinze's associates were not so lucky. When it was reported that Heinze was in financial trouble, the public suspected his friends were in similar straits and promptly rushed those banks. Knickerbocker Trust, whose president was an associate of Heinze, paid more than \$8 million in just three hours as part of the run. Because Knickerbocker was a trust and not literally a bank, it could not be bailed out by the clearinghouse.

The collapse of Knickerbocker inspired a run on other banks. The panic was quelled by the bailouts of J.P. Morgan, who also enlisted the support of other financiers like John Rockefeller and Secretary of the Treasury George Cortelyou. To help stem the run on Knickerbocker Trust, Cortelyou pumped \$23 million of taxpayer money into New York national banks. Meanwhile, Morgan managed to raise \$25 million from

various financiers in 15 minutes after a run on the Trust Company of America. He would later finance another \$25 million to help the brokerage firm Moore and Schley. The bailouts re-instilled Americans' confidence in the banking system, and the panic itself lasted about a month and a half.

Federal Reserve Act

Although the panic was brief, it had lasting effects on legislators and they decided to reform the banking system. The first attempt was the Aldrich-Vreeland Act in 1908, which deviated little from the clearinghouse system. The act authorized the Treasury Department to print out a new series of notes that would be lent to banks, like clearinghouse certificates, during times of crisis. The only difference was that, unlike clearinghouse notes, these new notes were subject to taxes. The new system successfully averted its first panic in 1913, when, at the start of World War I, Britain and Germany left the gold standard, which caused a bank run in the United States.

The act was intended to be just a temporary solution, and its most influential provision was the creation of the National Monetary Commission, made up of a number of congressmen, including Sens. Aldrich and Vreeland and Special Assistant Treasury Secretary A. Piatt Andrew. The commission went on a secret trip to Jekyll Island, Ga., emerging with a proposal to create the National Reserve Association, which would consist of a group of reserve associations with the power to issue

currency in exchange for reserves as well as assets such as payments for services.

Though setting the groundwork for the Federal Reserve, the association was never approved by Congress. Vreeland was a Republican, and in 1912 Democrat Woodrow Wilson won the presidency. For the Democrats, it marked a change from 52 years of Republican rule interrupted only by the Cleveland administrations. They were not going to spoil it by voting for a Republican-sponsored banking act. Appealing to their rural and populist base, the Democrats denounced it as a giveaway to wealthy Northeast banks.

The Democrats responded by passing the Federal Reserve Act in 1913 instead. It established up to 12 district banks that worked with a seven-member committee in Washington, D.C., to coordinate and regulate banking in the United States. The Federal Reserve banks issued notes backed by gold to increase the money supply. The banks also served as a lender of last resort by lending money to banks to meet currency demands.

The Federal Reserve Act patched up some problems of the clearinghouse system. It eliminated distortions caused by different states' regulations and enforced laws. Having the various districts meant there would no longer be a piling up of reserves in New York banks. Most important, it addressed the issue of currency elasticity. By issuing new currency and lending to banks, the Fed would be more effective in meeting demand for currency. **RF**

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Signaling

BY VANESSA SUMO

Hyundai cars were once known for being faulty and unreliable. They were the butt of American late-night talk-show jokes, with one suggesting that a good way to frighten astronauts was by placing the Hyundai logo on the spacecraft's control panel. But Hyundai has since regrouped, investing heavily in making much sturdier cars. And judging by the rave reviews, its efforts have been largely successful.

The Korean carmaker, however, had to fight hard to dispel its shoddy image. One way was to provide car buyers with a very generous 10-year or up to 100,000 miles warranty on its cars' engine and transmission, the first in the industry to do so. A warranty as bold as this effectively backs Hyundai's claims of a better car.

Consumers understand that a warranty would be too costly to provide if the company knows that its product will frequently fall apart. Buyers typically cannot discern the quality of a car before purchasing it, so a warranty conveys a "signal" to the buyer that this car is truly as reliable as the company says it is.

Signaling is used in a large number of settings, where information about the strengths of a product or seller may be difficult to observe directly but rather communicated indirectly by using a signal. A company willing to pursue an expensive advertising campaign likewise tells consumers that it believes it has a quality product to offer buyers; otherwise it wouldn't spend the money getting that information out to the public. Prior to widespread labeling regulation, food makers who wanted to signal that their products were healthy often voluntarily placed the ingredients and nutritional values of their goods on packages. Even if many consumers were ill-equipped to make judgments about all of the information provided, the fact it was there demonstrated that the producers had nothing to hide to the health-conscious — in fact, quite the opposite. Signals are also used in corporate finance such as when a firm takes on debt to signal its confidence about future profits.

Without signals, buyers and sellers might have a frustrating time finding each other. Take the market for used cars: If a buyer can't tell the difference between good and bad quality, then the best he is willing to pay is somewhere in between. The problem is that the price is bound to be

lower than what the seller of the good car is asking, but would undoubtedly make the seller of the bad car very happy, because the price is much higher than what his car is really worth. A possible result is that all good cars will be taken off the market, and the used car lot will be left with only the "lemons." (In economics, this is known as the problem of adverse selection.)

Signals are also pervasive in the job market, the example used by Stanford University economist Michael Spence, who won the Nobel Prize for his influential work on signaling. Spence supposes that there are two types of workers, one with a higher productivity than the other. Both are looking for a job, and a prospective employer or a firm would like to pay each

type according to what he is worth. The problem is that the firm has no way of separating the highly productive types from the rest of the pack, and so like in the market for used cars, the firm will simply offer the average wage.

But the more productive fellow can do something to distinguish himself, for instance, by going to school. Acquiring education signals to a prospective employer that he is the more able worker and deserves a higher wage. But what would stop a less talented job candidate from also acquiring education, in the hopes of signaling that he is as good as the others? Spence notes that the cost of schooling must be much higher for the less productive worker for the signal to be believable. This might be true, for instance, if he takes a much longer time to finish an academic degree. He would then find it unprofitable to go to school just to convince the employer that he is more capable than he really is.

Taken to the extreme, the theory of signaling suggests that people acquire schooling because it is valuable as a signal, but it does not make them more productive. The truth is probably somewhere in the middle, that education is partly about acquiring skills and partly about trying to communicate one's ability to a job recruiter. But even some signaling, while beneficial for the individual and the firm, can be a waste of resources from a broader societal viewpoint. Indeed, if people had perfect information, then a car dealer who aims to convince that he is not some fly-by-night operator would not have to spend so much money on building that swanky showroom. **RF**



ILLUSTRATION: TIMOTHY COOK

RESEARCH SPOTLIGHT

Influential Chairmen

BY ERNIE SICILIANO

Former Federal Reserve Chairman Alan Greenspan reportedly received an \$8.5 million advance for his memoir, *The Age of Turbulence*. The lofty price illustrates the large cache of the title “Chairman of the Federal Reserve,” a position that is widely perceived as second in power only to the president.

Indeed, “central banks’ policies can have significant macroeconomic effects, and it is often assumed that the governor exerts a disproportionate influence over those policies,” say economists Kenneth Kuttner of Oberlin College and Adam Posen of the Peterson Institute for International Economics, explaining the lionization of bank governors. In their new study published by the National Bureau of Economic Research, “Do Markets Care Who Chairs the Central Bank?” they find that markets respond to central bank governors even before they have a chance to act.

Kuttner and Posen looked at the behavior of markets after a new governor is announced and find that announcements result in fluctuations in exchange rates, bond yields, and, to a lesser extent, stock prices. Such fluctuations indicate that markets expect certain behaviors from the new governor.

Kuttner and Posen test two related hypotheses of what financial markets anticipate from new governors. (The authors use the term “governors” interchangeably with “chairmen.”) First, markets believe that new central bank governors are “weak” on inflation until proven “strong.” If true, then this hypothesis would mean that the announcement of new governors would be associated with heightened inflation expectations. Second, markets may interpret the announcement of a new governor as a harbinger for future monetary policy, but without the presumption that new chairmen will be “weak.”

To test their hypotheses, the authors analyze data from 1974 to 2006 from 15 industrialized countries with flexible exchange rates. They found 62 announcements of a new central bank governor. The economists divided the announcements into 42 “newsworthy” and 20 “non-newsworthy” announcements. Non-newsworthy announcements were when the incoming governor was already anticipated, while newsworthy appointments were surprise resignations by incumbent or unknown appointments.

If, as the first hypothesis suggests, incoming governors are initially viewed as weak, Kuttner and Posen argue that

expected inflation will rise, causing falling exchange rates, rising bond yields, and falling stock prices. However, the authors find that financial markets do not follow this trend when a new governor is named. The lack of directional movement suggests that financial markets do not specifically view incoming governors as weak or strong.

The markets’ reactions indicate that the announcement of a central banker provides some tidbit of information about future policy. The markets do respond to this tidbit, the authors find, but the reaction only occurred the day of the announcement, and there was no significant reaction in two days before or after the announcement. (Indeed, this

is what one would expect if the announcement was not leaked in advance and the capital markets efficiently incorporated the new information.)

Further demonstrating the efficiency of financial markets, the economists found that the foreign exchange market react only to newsworthy appointments — as the market had already

priced in previously named governors. The bond market reacts to newsworthy events, but curiously also react to non-newsworthy events. Stock markets react only to newsworthy events. According to the authors, the weaker significance is probably due to the fact that stock prices reflect future earnings more so than central bank policy. Moreover, future earnings are affected by many factors, of which central bank policy is only one. However, the economists cited “a few strong reactions” in the stock market, such as in 2005 when Ben Bernanke took control at the Federal Reserve.

Such strong reactions are emblematic of U.S. financial markets, which generally react more aggressively than foreign markets. Kuttner and Posen offer two explanations: First, U.S. data “tended to contain a larger element of surprise than many of the other appointments in the sample,” and thus may have biased the results. Second, the Federal Reserve’s announcements may face more scrutiny in America — the result of more aggressive press coverage, a more active Federal Reserve, a lack of “a clearly defined policy mandate” such as inflation targeting, or what the authors describe as a “certain American institutional tendency to ‘personalize’ monetary policy.” By that, the authors refer to the tendency of the public to attribute the effectiveness of monetary policy to the individual personality or wisdom of the chairman. **RF**

“Do Markets Care Who Chairs the Central Bank?” By Kenneth N. Kuttner and Adam S. Posen. National Bureau of Economic Research Working Paper 13101, May 2007.

The Supreme Court Rules on Retail Price Pacts

BY BETTY JOYCE NASH

When a Texas retailer marked down its Brighton brand leather collection, the manufacturer cut off its supply. That set off a chain of legal cases that finally wound up in the U.S. Supreme Court.

Earlier this year, the court overturned the presumption, and almost 100 years of antitrust legal precedent, that resale price maintenance arrangements (RPMs) always, *per se*, violate antitrust laws. RPMs are agreements that give manufacturers say over the prices retailers charge for their goods. The court ruled 5-to-4 in *Leegin Creative Leather Products, Inc. v. PSKS, Inc.* that those cases should be decided by the “rule of reason” rather than be considered automatically, or *per se*, illegal. Manufacturers traditionally have sidestepped such agreements by “suggesting” retail prices.

University of Virginia economist Kenneth Elzinga noted that it’s never made any economic sense for resale price maintenance to always be presumed anticompetitive. In fact, price agreements can enhance distribution and marketing that may benefit consumers and promote competition. Elzinga served as the economic expert for the manufacturer in the case.

“Resale price maintenance can give downstream retailers incentives to offer more in-store information and services about a product, stay open longer hours, display a product more attractively, and offer other retail amenities that will expand the demand for the product [benefiting the product’s manufacturer], and make the shopping experience more attractive [benefiting consumers],” Elzinga says.

Their marketing investments will pay off and “not be subject to free riding by discounting retailers who do not offer these services but free ride off the retailers who do,” he says.

Since the 1911 decision which held that it is always illegal to use market power to set prices, there have been gargantuan changes in the retail industry. It’s not likely that big-box retail companies, in a strong position to dictate terms to manufacturers, would be interested in resale price maintenance contracts, especially in light of intense international price competition. That leaves smaller retailers and boutiques, where service is more important than price, as the most likely partners in RPM agreements. But Mallory Duncan, counsel for the National Retail Federation, says all manufacturers will ask themselves whether they want to lose the push from low price leaders by retrenching to full-service stores.

Quentin Riegel, vice president for litigation for the National Association of Manufacturers, says the interpretation may have a modest effect. But price agreements will be hard and expensive to defend, so few companies will adopt

them, he predicts. “First of all, if a company wants to set the retail price of its product, it’s going to have to do so in the face of competition,” he says. “Their first hurdle [is that] they have to believe that price is really going to increase sales.” Second, the firm will need a “very good reason to do it that’s competitively justified,” Riegel says. He adds that it’s still illegal (with triple damages) to set unjustified price floors. Now, however, a plaintiff in a vertical pricing case must prove that competition has been lessened.

The National Retail Federation, unlike the National Association of Manufacturers, filed no brief on the issue — its members sit on both sides of the fence. Duncan points out that there’s been tension in the law. As long as there was no explicit price maintenance, manufacturers could do business with whomever they wished, even pulling product “if someone wasn’t looking.”

Power retailers might decide to throw their weight behind a competitor who is not going to condition sales, Duncan says, and that could radically shift market share.

The Consumer Federation of America opposes the court’s decision. So does the American Antitrust Institute (AAI), which insists that higher prices will result. There’s also fear that the decision will stifle retail innovation which has been seen over the last century, especially if manufacturers and retailers get together on deals. However, economists think it is unlikely manufacturers would want to discourage competition among retailers because that would hurt sales.

The AAI also says it will be too expensive to successfully bring a “rule of reason” case, so it’s “inevitable that *Leegin* will mean an increased incidence of anticompetitive RPM and higher prices for consumers.”

But Elzinga points out that it’s also expensive to lose a case under the *per se* rule and unfair if the action did not hurt competition, as in the *Leegin* case. “RPM contracts are voluntary contracts between manufacturers and retailers,” he says. “That alone should afford them some protection from litigation or regulation. With regard to *Leegin*, most stores who sold the Brighton brand were pleased to enter into the ‘Brighton Pledge’ to maintain the resale prices that *Leegin* requested. No one held a gun to anybody’s head on either side of the transaction.”

But uncertainty abounds as to how states will react. Thirty-seven states, including the Fifth District states of North Carolina, South Carolina, Maryland, and West Virginia, filed briefs in opposition. Some states said they will enforce the *per se* rule despite the Supreme Court decision because they have explicit rules against resale price agreements. **RF**

Greenspan's Rule

BY DOUG CAMPBELL

"A Taylor Rule and the Greenspan Era." Yash P. Mehra and Brian Minton. Federal Reserve Bank of Richmond *Economic Quarterly*, Summer 2007, vol. 93, no. 2, pp. 229-250.

Stanford University economist John Taylor suggested what became known as the "Taylor rule" in 1993 as a means for central banks to control inflation while stabilizing the economy. In general, the Taylor rule instructs policymakers to lean against the wind — to keep interest rates relatively high when inflation is elevated or employment is above full, and to set a low target rate when conditions are reversed. Policymakers take into account the "output gap" — the difference between actual and full-employment output levels — and the difference between actual inflation relative to the central bank's target level. Overall, following the Taylor rule may help the Fed implement policy, insofar as its predictability helps generate reasonable public expectations about future short-term interest rates.

While Taylor originally proposed the rule as a guide to policy, he and other economists also established that the rule neatly summarized actual monetary policy behavior during the 1980s and 1990s. More recent research suggests that policy actions taken by the Federal Reserve under former Chairman Alan Greenspan followed the Taylor rule but with "interest rate smoothing" — that is, making changes in the target federal funds rate in small, cautious, and predictable movements. Also, some economists have found that monetary policy follows a "forward-looking" Taylor rule, focusing on expected economic developments and seeking an equilibrium rate consistent with price stability and full employment, and that it focuses on "core" inflation. (The core inflation measure usually eliminates items like energy and food products.)

In a new paper, economists with the Richmond Fed generally confirm that monetary policy under Greenspan is accurately described by the Taylor rule. Further, Yash Mehra and Brian Minton find empirical support that the Greenspan Fed's policy rule "was forward-looking, focused on core inflation, and smoothed interest rates." A key innovation of their paper is that it uses real-time data (the numbers available to policymakers at the time of their decisions) for economic variables and then checks whether the results change with final, revised data. Also, the authors used state-of-the-art forecasts from the Fed's Greenbook.

The authors do identify a few periods of departure from the rule, probably due to special macroeconomic developments. But overall their research suggests that the Taylor rule "predicts very well the actual path of the federal funds rate from 1987 to 2000."

"Doing Good or Doing Well? Image Motivation and Monetary Incentives in Behaving Prosocially." Dan Ariely, Anat Bracha, and Stephan Meier. Federal Reserve Bank of Boston Working Paper No. 07-9, Aug. 27, 2007.

Participants in a unique experiment were asked to donate between a choice of two charities — one perceived by the donors as "good," the other as "bad," and randomly assigned either public or private settings. In return, some donors received monetary incentives. The authors set up this experiment to test the notion that, when it comes to prosocial behavior, people won't respond very strongly to monetary incentives in public settings. Individuals seeking social approval want to signal traits which are generally seen as good — like charitable giving and volunteering. But if people are offered a tax break for a donation — and everybody knows about it — then this may erode the image gain.

Their results bear out this intuition: The "bad" charity did better when donors operated in private settings, and vice versa with the "good" charity. "Monetary incentives are more effective in facilitating private, rather than public, prosocial activity." The authors conclude: "People want to be seen as doing good; without extrinsic incentives, an observer will attribute the prosocial act to one's innate good traits which motivate people to behave prosocially." A possible policy implication is that government should expect tax benefits for items like environmentally friendly water heaters to be more popular than for hybrid cars — because neighbors can't see into people's basements.

"Economic Theory and Asset Bubbles." Gadi Barlevy. Federal Reserve Bank of Chicago *Economic Perspectives*, Third Quarter, vol. 31, no. 3, pp. 44-59.

The author provides a contrarian view on asset bubbles. Chicago Fed economist Gadi Barlevy says that the popular press inaccurately terms a "bubble" as a situation in which the price of an asset has risen so high so fast that it is susceptible to a collapse. Academics prefer a more rigorous definition: "a situation where an asset's price exceeds the 'fundamental' value of the asset."

Of course, many asset prices do display bubble-like tendencies, in both the popular and academic sense. In such cases, Barlevy warns that meddling with bubbles can be treacherous. The main reason that bursting a bubble might be advantageous is because bubbles "divert resources from other productive uses." But pricking a bubble might aggravate some fundamental inefficiency in the economy, or make some households worse off. **RF**

THE STATE OF THE ARTS

Struggling for an Encore

Money troubles nearly closed the Charleston, S.C., symphony orchestra's doors for good in 2006. The orchestra has been a fixture on the city's performing arts scene for more than 70 years.

Finances have been touch and go for several years, says Leo Fishman, president of the Charleston Symphony Orchestra's board of directors. Each crisis brought short-term solutions and unusual donations. In 2003, for instance, the symphony's full-time musicians agreed to an 18 percent pay cut for three years just to keep the orchestra playing, a typical move for arts nonprofits when finances fizzle.

This is not a new problem: Symphony orchestras nationwide struggle to balance budgets, and some have folded. The problem is particularly acute in mid-sized cities like Charleston.

Savannah, Ga., 100 miles south of Charleston, lost its symphony in 2003, for instance. Charlotte's symphony music director has decided to step down in 2009, reportedly over the group's precarious finances.

"The forces that are driving their financial squeeze haven't changed," says Kevin McCarthy, an arts and cultural affairs expert at RAND Corporation. Symphonies fight growing competition from other entertainment as well as aging audiences.

The dependence on public and private contributions has been predicted since at least 1965 when economists W.J. Baumol and W.G. Bowen, formerly at Princeton University, dissected arts groups' economic structure.

Technology brings little in the way of increased efficiency for performing arts groups, yet they still face increasing costs, just like any business. "The output per man-hour of the violinist playing a Schubert quartet in a standard concert hall is relatively fixed, and it is fairly difficult to reduce the number of actors necessary for a performance of *Henry IV, Part II*," the authors wrote in "On the Performing Arts: The Anatomy of Their Economic Problems."

And since a symphony is a "supplier of virtue," it makes sense that it "distribute its bounty as widely and as equitably as possible," Baumol and Bowen wrote. And so it isn't possible to raise ticket prices enough to pay the bills. For such groups to flourish, a wide variety of funding sources must be tapped.

But support for midsized orchestras in cities like Charleston can pose a problem. Nationally, less than half of a symphony's revenues comes from earned income, according to the American Symphony Orchestra League. Private contributions, endowments, and government grants make up the rest. Public money represents about 4 percent of revenues. The Charleston Symphony Orchestra, with an



Music director David Stabl has been faithful to the Charleston Symphony Orchestra since 1984.

annual budget of more than \$2.3 million, receives no state or federal funds, but does receive funds from the city, Charleston County, and the nearby town of Kiawah Island. The orchestra also raises money from individuals and corporations. In fact, a successful fund-raising effort allowed the orchestra to finish the most recent fiscal year with a surplus.

To draw crowds, particularly occasional concert-goers, symphony orchestras must stage blockbuster performances and invite superstar musicians. But big productions require big budgets, and that means only big groups can invest in those expensive performances. — VANESSA SUMO

STABILITY, CREDIBILITY

D.C. Makes Fiscal Progress

When the new mayor of Washington, D.C., Adrian Fenty, took office in 2007, he inherited a government in better shape than it was when Anthony Williams took the job in 1999. In Williams' eight years as mayor and his previous tenure as the city's chief financial officer, he was widely credited for bringing stability and credibility to a government plagued by scandal and insolvency.

"His reputation as a comptroller and accountant was a big factor in building confidence for investment in the city," recalls Tim Priest, an economist by training who leads the marketing efforts at the Greater Washington Board of Trade.

For example, with its investment-grade bond rating, the city has been able to raise capital for infrastructure and social projects. Those included mixed-income developments that have replaced public housing complexes and a new stadium for the Washington Nationals baseball team.

The District's experience illustrates the relationship between economics and stable, responsive, and fiscally sound government.

Economists avoid passing judgment on what forms of

governance are good or bad for economic development, according to Beth Honadle, director of the Institute for Policy Research at the University of Cincinnati. Rather, they “empirically study what the likely effects of various approaches will be relative to a number of generally accepted criteria or measures.” These criteria may include equity, efficiency, and the influence of government actions on private business decisions.

Economists do have some idea of what works and what doesn’t when it comes to governance. “Government discourages the attraction of industry, new business formation, and the retention and expansion of existing industry when it under invests in education, fails to control crime rates and protect people and property through public safety, and allows public infrastructure to deteriorate so that it impedes transportation and the sustenance of health, peace, and quality of life,” Honadle says.

For example, a local government facing a fiscal crisis may drastically cut “nonessential services” that undermine quality of life. In the long run, this may deter new residents and businesses, which can inject new tax revenue and spending into a community. Also, borrowing may become prohibitively expensive, since the government’s risk of default – real or perceived – is greater. Thus, fewer funds are available for municipal projects.

The District’s fiscal progress has contributed to the city’s economic progress. “The District’s record over these last eight fiscal years of consistently balanced budgets ... has taken the city’s bond rating from ‘junk’ status up to grade A, a first for this city,” noted Alice Rivlin during her Senate testimony in July 2006. (The former Federal Reserve governor chaired the Control Board that took over management of Washington’s local government from 1995 to 2001.)

Private investors have been confident enough in Washington’s government to make long-term commitments. More than \$12 billion of projects were completed in Washington, D.C., between 2001 and 2005. “When Mayor Williams took office nine years ago, there was a huge surge in real estate investment in the city,” says Priest of the Board of Trade. “The migration of residents out of the city stabilized and job growth strengthened.” — CHARLES GERENA

RELOCATION STATION

N.C. Workers Bound for Richmond

Bobby Hines has worked for Philip Morris USA for 28 years, the last eight of them at a plant in Cabarrus County, N.C. He transferred from Louisville, Ky., when PM USA closed down that shop. Now, he may again pull up stakes, this time for Richmond, when the company shuts down its North Carolina facility by decade’s end. But that would be his last stop, if he’s even offered a position, because Richmond will be the last remaining domestic plant for the makers of Marlboro.

After the closing announcement, the company set up a

“Richmond room” at the Concord plant, and has said it will issue bonuses of \$50,000 to relocate workers.

“They give you updates on house sales” as well as data on schools, recreation and other information about the area, says Hines. He is president of Local 229-T, the Bakery, Confectioners, Tobacco Workers and Grain Millers International Union. Union rules, he says, require the company to offer jobs to members if they have openings. Most of the 1,900 hourly employees are members of one of two unions. “I guess it all depends on how many openings and how many people retire up there [in Richmond],” he says. “I hope I get the opportunity.”

Falling U.S. cigarette consumption and exports have driven the Richmond-based company to close the plant.

In 2006, PM USA expanded the North Carolina plant, adding 12 high-speed cigarette machines and an 11-story automated storage facility. But even that, and the \$1 million that state and local officials contributed to keep them, didn’t sufficiently make up for the stateside consumption slide. The firm announced in June it will produce cigarettes closer to where the customers are — overseas — under its sister company Philip Morris International based in Switzerland. It will return the \$1 million.

Domestic demand for cigarettes has continued to fall — Philip Morris USA cigarette sales declined by 1.1 percent in 2006 compared to 2005 — and the company now sells four times as many cigarettes overseas as it does here. The firm will shift its export production, about 20 percent of cigarettes made at the Cabarrus plant, to Europe.

The consolidation to the Richmond plant won’t be complete until 2010, and by then those who choose or are chosen to relocate should know Richmond pretty well.

While it may be common for firms to cultivate and place their salaried employees in various locations, it is an unusual move to do so for hourly workers. It could be designed to lighten the blow of the surprise announcement, says North Carolina State University economist Mike Walden, or simply to draw on their high skill levels. Union negotiations are likely to contribute too.

“We try to demonstrate that we value our employees,” communications manager Paige Magness says, confirming that their training will benefit the firm. “I think our effort to attract them to Richmond to keep them in those jobs [makes that] evident.” She does not yet know, however, how many hourly or the more than 500 salaried workers will be offered jobs at the Richmond plant, or, of course, how many will choose to leave North Carolina.

The shutdown marks the end of the cigarette giant’s hefty contribution to the municipal tax base, \$5 million in 2006, as well as the ancillary community spending that the plant’s high wages generate. Tobacco manufacturing largely has faded from North Carolina’s economic landscape, with the last big operation consisting of 6,800 employees who remain in Winston-Salem at the R.J. Reynolds Tobacco facilities. — BETTY JOYCE NASH



DOWNTOWN IS DEAD.

America is busy rebuilding its downtowns. But these are not the downtowns of yesterday.

BY VANESSA SUMO



Greenville, South Carolina



LONG LIVE DOWNTOWN!

Deb Ayers Agnew remembers the thousands of people who had gathered in downtown Greenville, S.C., waiting for eggs to drop from the sky. It was a few weeks before Easter day of 1958. A helicopter, an uncommon sight at that time, was about to drop prized plastic eggs that contained candies and gift certificates from participating Main Street merchants.

Downtown in those days was accustomed to the crowds that habitually converged there to work, shop, dine, and amuse themselves. After all, downtown was the center of

everything. "All the main things that you would need in life could be purchased strictly by walking up and down Main Street," Ayers Agnew says. Her family owns Ayers Leather Shop, which opened at the bottom floor of the grand Poinsett Hotel almost 60 years ago (it has since moved to another location on Main Street). Throngs of locals and out-of-towners would patronize Greenville's downtown amenities, she recalls.

But like most downtowns across America, the automobile portended the decline of Greenville's city center. Stores

PHOTOS: COURTESY OF THE CITY OF GREENVILLE; VANESSA SUMO

and businesses followed the people who moved their homes to the suburbs. Even Greenville's Easter event was organized to compete against the shopping centers that were starting to come up, says Ayers Agnew. When the first indoor mall opened in the area in the late 1960s, the downtown exodus began. As malls prospered, the big department stores and smaller stores moved out. Even Ayers Leather Shop opened a store in this mall. It kept its downtown store, though, because the rent there had become cheap and it made sense to keep it for storage and repairs. Downtown Greenville in the 1970s had become fairly abandoned and somewhat seedy.

Today, cities all across America are busy reviving their downtowns. From Richmond to Raleigh, and from Charleston, W.Va., to Charlotte, business and government leaders in the Fifth District are trying to build up their downtowns, with mixed results among them. Greenville, a city of about 56,000 people, has been slowly rejuvenating its center for more than 25 years. Other cities have visited downtown Greenville to take notes on how to proceed with their own revitalization efforts.

It is clear from the crowds that walk around on a warm summer evening that Greenville is achieving much of what it had set out to do. On a typical Thursday night, there could be a concert playing by the river against a backdrop of restored industrial buildings, while another band plays to mostly 20- and 30-somethings after work, drinks on hand, in an outdoor plaza on tree-lined Main Street. Shakespeare could be performed in the park to delighted families sitting on the grass and enjoying the outdoors, while a minor league baseball game plays to sports fans in a new stadium down the street. All these events would likely be well-attended and all within reasonable walking distance (it is about a mile from one end of Main Street to the other end). Main Street is lively even after 5 p.m., when many other city centers would look like ghost towns after office workers have gone home.

Downtown Greenville will never be the center of industry that it was in the 19th and early 20th centuries. It will no longer house most of the offices or shops. There will, on the contrary, always be a mall or an office park just a few miles away. "The day of downtown as the center of the regional economy is dead almost everywhere," says Joel Kotkin, an expert on cities and author of *The City: A Global History*. There is simply no way to reverse the speed and comfort of the automobile, which will take you anywhere, anytime you want. Greenville understands this. "We realized that we couldn't make it into what it was before," says Nancy Whitworth, director of economic development for the city. Greenville's city center bears little resemblance to what it was in its heyday — save for the bustle of people.

Today's downtowns are different, as they surely have to be if they hope to compete with various concentrations of shopping, business, and entertainment. What they offer is an urban lifestyle where one can live, work, and play, and where walking is a predominant form of transportation. As such, downtowns today may not be for everybody. They are a niche product, likely geared to a certain demographic or two, and whose broader payoffs are important to the city. In this sense, downtowns today are really being reinvented rather than restored to their former glory.

An American Invention

The word downtown was coined in America. In the early 19th century, New Yorkers referred to the northern section of Manhattan as "uptown," and to its southern end when speaking about "downtown." But the words gradually took on a more functional meaning. The business district became commonly known as downtown, while the residential area as uptown. By the 1870s, writes Massachusetts Institute of Technology urban studies and history professor Robert Fogelson, the functional meaning had largely taken over the geographical because in very few cities was downtown south and

uptown north. "Downtown lay to the south in Detroit, but to the north in Cleveland, to the east in St. Louis, and to the west in Pittsburgh," notes Fogelson.

In the early days, American cities clustered around water-based transportation nodes, says Edward Glaeser, an urban economist at Harvard University, in an interview. Eastern cities formed in spots that hit the sea or a harbor, while inland cities were built on riverways or canals. One of New York City's great manufacturing industries, sugar refining, was located close to the water. Because sugar crystals coalesce during a long, hot sea voyage, raw sugar was shipped from the Caribbean to New York. Moreover, to take advantage of economies of scale, sugar refining was consolidated in one place so refineries were set up close to the port. From here, refined sugar could be transported to the rest of the country and to Europe.

People and businesses then gravitated toward this center of activity. "Ports and railway stations were massive pieces of infrastructure, and they could not be produced willy-nilly throughout metropolitan areas," wrote Glaeser and Matthew Kahn of Tufts University in a working paper for the National Bureau of Economic Research. Even when other forms of locomotion such as buses opened up the city, it still made sense to cluster commercial activity around transportation hubs. People would then move around by hub and spoke — they would arrive by train or bus and from there walk to their destination.

Another transportation innovation that encouraged the formation of a high-density urban area was the elevator (in particular, the "safety elevator" invented by Elisha Otis). By allowing people to move vertically, downtowns could build higher and higher, instead of pushing farther out.

But just as transportation technology shaped downtown's dominance, the internal combustion engine weakened its relevance. "The car and the truck have had an immense decentral-

izing effect,” says Glaeser. Cars and trucks allowed people to travel from point to point, rather than move by hub and spoke. The economies of locating by ports and railway stations greatly diminished. Moreover, because nothing could beat the speed of the car (it significantly reduced commuting time), residences and jobs became increasingly spread out. “I think of transportation technology as very much driving the urban form,” says Glaeser. As a result, Americans today live in less-dense areas miles from the city center, and traditional downtowns contain only a small share of metro-

politan employment, Glaeser and Kahn note. For instance, across the 150 metropolitan statistical areas they analyzed, only about a quarter of total employment is within three miles of the city’s center.

Although downtowns are more robust in bigger cities like Boston and San Francisco, these are still a far cry from what they once were, writes Fogelson. “Nowhere in urban America is downtown coming back as the only business district ... The almighty downtown of the past is gone — and gone for good. And it has been gone much longer than most Americans realize.”

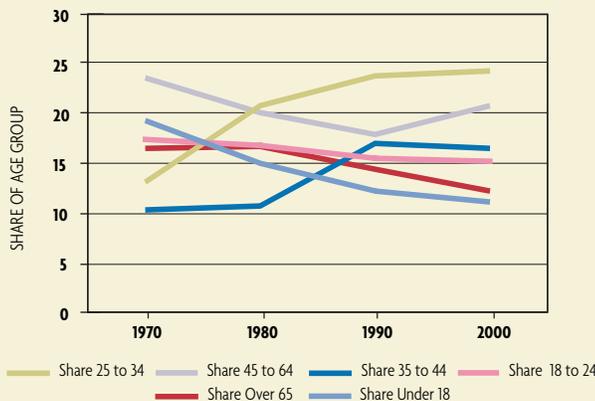
Reinventing Downtown

Today, many centers of activity can exist almost side by side because they serve different functions at different levels of density, says Barry Nocks, an urban planning professor at Clemson University.

In Greenville, Haywood Mall and the shopping belt along Haywood Road are less than a 15-minute drive from downtown. A few miles farther out is a big-box strip on Woodruff Road. Right across is Verdae, a planned mixed-use development with homes, offices, a shopping center, and a golf course. A cluster of new office spaces is located

Where the Young and the Baby Boomers Want to Be

Twenty-five- to 34-year-olds made up 24 percent of all downtowners in 2000, compared with only 13 percent in 1970. The group of 45- to 64-year-olds was a close second, comprising 21 percent of downtown residents in 2000.



NOTE: Based on author’s analysis of selected cities using data from the U.S. Census
SOURCE: “Who Lives Downtown” by Eugenie Birch. The Brookings Institution, November 2005

nearby composed of the Millennium Campus (a technology and research office park), and Clemson University’s International Center for Automotive Research. And then there’s downtown. Because cities can support these various concentrations, downtowns that are making a comeback have had to reposition themselves to offer something different, knowing that they can no longer aspire to be the centers of everything. And just as transportation has defined the urban landscape, the renewed interest for downtown is rooted in the most rudimentary form of transportation: walking.

Some say that there is a growing interest in “walkable urbanism,” or the privilege of walking between restaurants, entertainment venues, the grocery, the shops, and possibly to work. Christopher Leinberger, a downtown redevelopment expert and visiting fellow at the Brookings Institution, thinks that there is a very strong demand for a walkable urban environment, including downtowns. Many city and business leaders seem to think so, too, and they’ve been reinvesting in their city centers to capitalize on these trends. Downtowns may be a good place to do this because they are already workplaces, and there

is often a lot of architecture and history there to make them authentic and interesting places. But cities are adding another dimension to their downtowns today. They are remaking them into a place where people can live.

That is perhaps the biggest difference between the downtown of today and yesterday, and one of the keys to sustaining its growth. “The downtowns that we’re building today are being driven by housing,” Leinberger says. In the early days, people didn’t really live downtown. The city center contained offices, warehouses, factories, and stores, but typically not residential dwellings. Those who did reside there often had relatively low incomes. But

today, people who choose to live downtown are often those who can afford to live anywhere they please.

The demand for downtown living seems to be driven by the tastes of those in their 20s and 30s as well as by empty nesters tired of keeping big homes and big yards and wanting the convenience of many things they need close by. A November 2005 Brookings Institution report that analyzes the downtown population in 44 cities, finds that downtowns have a higher percentage of young adults and college-educated residents than the country’s cities and suburbs. (In this study, the city is defined by the political boundaries at the time of the census and includes the downtown. The suburb is the metropolitan statistical area and includes the city.) Twenty-five- to 34-year-olds made up about 24 percent of downtown residents in 2000, closely followed by 45- to 64-year-olds at 21 percent. As baby boomers age, more empty nesters may opt to live downtown.

The report also finds that the downtown population grew by 10 percent during the 1990s, a sharp turnaround following 20 years of overall decline. The same trend is observed in the number of households — an

important driver for the housing market — that grew by 13 percent in the 1990s. In downtown Baltimore, Md., for instance, the number of households grew very rapidly in the 1990s, in spite of a dip in the city's overall household population during the same period.

Downtown residents are important in providing the base needed to support shops and the restaurants as well as to ensure that people will still be around on weekdays after 5 p.m. and on weekends, hence making the streets safer and more pleasant. But how can a city entice potential residents and nonresidents to come to downtown after years of ignoring it? Perhaps by paying attention to the kind of place people are looking for.

A Place Built for People

“Lawrence Halprin loved manipulating water,” says Robert Bainbridge, former director of the South Carolina Design Arts Partnership. Bainbridge is talking about a public plaza that Halprin, one of the finest landscape architects in the country, designed for downtown Greenville around the late 1970s. “Halprin believed in touchable water. There is no railing between you and the water,” says Bainbridge. In a way, the new downtown Greenville is just like that: People can touch it.

This is evident in Halprin's streetscape design of Main Street, the starting point of downtown's reinvention. In 1979, Main Street was narrowed from four lanes to two in order to widen the side walks. This allowed more space for people to walk around and for restaurant patrons to dine outside. Trees were planted and parallel parking spaces were replaced with diagonal ones along the street. The sidewalk pavement blends into the intersection, giving pedestrians a feeling of continuity even while crossing the street. The plans were careful not to exclude the automobile and make the place entirely pedestrian. “Americans come by car,” says Bainbridge. The combination of a narrower street, wider sidewalks, and

a canopy of trees creates a sense of enclosure to what used to be an unfriendly wide-open space.

The streetscape may have created a fresher-looking downtown, but the businesses weren't going to go there just because it looked pretty. “Anchor projects” were needed to spur interest in the area, and these have been planned and placed over a one-mile stretch of Main Street.

The Greenville Commons — a cluster of buildings that includes a hotel, a small convention center, an office building, and a public park — opened in 1982 at the point where the new streetscape begins. Less than half a mile away by the Reedy River is the Peace Center for Performing Arts, which opened in 1991, so that people could get into the habit of going downtown on evenings and weekends. The Westend Market is just a few blocks down, an old cotton warehouse converted into a mixed-use of office, shops, and restaurants in 1994. And at the end of the current concentration of activity on Main Street is a new baseball stadium that opened in 2006, which was modeled after Fenway Park. (The stadium is home to the Greenville Drive, a minor league affiliate of the Boston Red Sox.)

These catalyst projects have spawned other private developments, from the construction of new buildings like the RiverPlace, the largest private investment so far in downtown Greenville, to the rehabilitation of old buildings. Downtown revival has sparked interest in the preservation of many historical structures with fine architecture, which in turn has helped downtown set itself apart from the competition. “It conveys the character of the market,” says Robert Benedict, a historic preservation consultant in Greenville.

Throughout downtown's revitalization efforts, the city has made sure that buildings all come down to a level that engages people walking by. For instance, the Wachovia office building on Main Street used to be set back far from the sidewalk. Following the city's design guidelines, a private developer

built a new low-rise structure that wraps around the part of the office building that faces busy streets, effectively aligning it with the rest of the buildings. Restaurants and shops occupy the ground floor of this new mixed-use structure while apartments were built above.

The city has planned its parking garages in a way that they are, as much as possible, out of sight from the street. A good example is a mixed-use project called the Bookends, which occupies a whole block in a street off Main. The city wanted to rebuild a parking garage that stood there but didn't really need all that space. So it sold off a slice of the property on each side facing the street, while the parking garage was constructed in between, hence the name.

The same mixed-use philosophy repeats in almost all the buildings on Main Street. Restaurants and shops are placed at the street level, residents on the upper floors, and sometimes office spaces in between. It works well because no one wants to live on the ground floor, and many people don't want to walk up a flight of steps to enter a store. The result is an almost continuous row of restaurants and shops on Main Street.

Greenville will say that public-private partnerships, perhaps a fuzzy concept for some, have played an important role in successfully putting together many of the projects downtown. “The public-private partnerships are really what have made downtown Greenville what it is today,” says Mary Douglas Neal, the city's downtown development manager. In the early days, Greenville had a downtown development organization, but it later decided to completely assume the rebuilding efforts within the city's economic development department. Rebuilding downtown required a tremendous amount of coordination from all the departments of the city (police, fire, building codes, planning, public works, etc.).

The city has taken on many roles at different levels of involvement, but it is mainly in charge of making,

facilitating, and following through the plans for downtown. “We promote ideas,” says Mayor Knox White, who has been at the helm of the city since 1995. Sometimes, it will pitch in more investments to take on the risk that a private developer is not willing to bear. The only time that the city developed a project entirely on its own was in rehabilitating the Westend Market. The city could not get a private developer to come. But the old cotton warehouse’s location (the building was donated to the city) was important to the city to anchor that end of Main Street. The Westend Market was eventually sold in 2005 at a profit.

But the city sees its role as stimulating private investment, in doing things that would enable the private sector to do business in downtown Greenville. “The private sector is the real engine here. No matter what you’re doing from the public-sector standpoint, if you don’t get the private sector ... you’re going to stall out,” says Whitworth. In every project, an agreement is reached as to what the city can do for the developer and what the developer can do for downtown. In general, the city builds and operates everything outdoors that is on public grounds, which usually includes the parking garage, while the private developer takes care of everything indoors.

Most of the public infrastructure has been paid for by Tax Increment Financing (TIF), an arrangement designed to capture the tax dollars from an increase in an area’s property value thanks to public investment. The new tax revenue collected is used to pay for development costs of that “TIF district.” Greenville has two such districts. But the city has also been able to tap funds from other sources, such as a 2 percent “hospitality tax” on prepared meals and beverages to pay for a pedestrian bridge in Falls Park. In all, the city has spent about \$150 million in rebuilding downtown, with Greenville leaders believing the investments would benefit residents as a whole.

And it takes time. “One of the key

things is that it really does take 25 years. You have to think that far ahead and commit to doing it. This place will still be a great place in 25 years because it was done right,” says Bainbridge. And if there’s any doubt as to Greenville’s seriousness in rejuvenating its downtown, one need only be reminded of that vehicular bridge on Camperdown Way that formerly crossed Main Street and the Reedy River. A few years ago, a decision was made to tear down that section of the bridge to expose a beautiful 60-foot waterfall, which many residents did not even know was there. An elegant cable foot bridge now stands in its place. Today, Greenvillians not only have a unique piece of nature to enjoy at the heart of downtown, but also something to put on their postcard.

When Does it Make Sense to Rebuild a Downtown?

Rebuilding their centers is understandably on many cities’ wish list. There is something unsatisfying about letting a place just wither away, especially if it is one with much history and great architecture. Also, an eyesore of a downtown may tarnish the city’s reputation. Some think that a vibrant city center can jumpstart — or is an important element of — economic success, while others are more skeptical of pinning a city’s hopes on a downtown. The bottom line of whether efforts to bring downtowns back to life is tricky to find.

Greenville, it seems, has benefited from public-private partnerships aimed at reviving the city center. But such development may have happened organically, without government involvement. Also, it’s unclear that other cities hoping to revive their downtowns could replicate Greenville’s success with similar redevelopment programs. In short, there is no uniform rule, so cities must look hard at whether there is a clear demand for a downtown revitalization or clear benefits from doing so.

Such a demand is probably less likely to be found in struggling cities like

Detroit and Cleveland. “The last thing you want to do is build excess infrastructure in a declining region,” says Glaeser. After all, the hallmark of a moribund area is when there is too much infrastructure relative to demand. A downtown may not be a silver bullet either. Glaeser cites the experience of Buffalo, N.Y., where a snazzier downtown hasn’t done much to stem the population outflow. Job growth in the Buffalo-Niagara area has been dismal for a very long time.

Glaeser also casts doubt on a popular reason why cities want a cool downtown. Cities want to appeal to the “creative class,” but it isn’t clear if that is mostly what these types are attracted to. “There is some confusion about who the creative people are,” says Glaeser. He notes that the cappuccino-sipping young professional is just a small fraction of this group. Creative people may just as likely be highly educated 40-year-olds with two kids. As incomes increase, more amenities are demanded, but safe neighborhoods, good schools, and fast commutes are probably paramount for this group. Thus, if the intention is to recruit those high-value-added workers, it might be best if a city pays attention to those basic amenities first.

But many think that while schools and safety are important factors, a city can capitalize on the growing interest in downtown living and use it as a starting point to uplift an area. “Leaders are starting to realize that while a downtown isn’t a guarantee to a strong economy, it is certainly somewhat of a prerequisite for success,” says Jennifer Vey, a fellow at the Brookings Institution. Leinberger likewise thinks that part of the reason why some metropolitan areas are healthy is because they’ve rejuvenated their downtowns. In this view, a strong downtown can aid in recruiting companies and workers, bolster the regional economy, and help adjacent lower-income neighborhoods.

In Greenville, the economy wasn’t doing badly in the 1980s and early 1990s when the push to turn around

downtown began. Once a textile giant that made the city very prosperous in the early 20th century, Greenville has been trying to make up for that lost manufacturing power by diversifying into services and durable goods. “We didn’t have to make choices about where we would put our emphasis,” says Whitworth. “The natural growth was happening in the suburbs so we focused internally, in downtown.” South Carolina also has very limited annexation opportunities, so the city had to redevelop areas that they already had. Moreover, they hoped that a strong city center would help the low-income neighborhoods around it, by bringing in not only jobs but also the attention and eventual support for these downtrodden areas.

But Greenville leaders say that they are getting much more in return. And Brian Reed, a market researcher at the real estate firm The Furman Company, says that part of the reason why the suburban office market is catching up is because of downtown. This draw of downtown is a selling point for a lot of professional service-type organizations that choose to locate in the Greenville suburbs, Reed notes.

The growing activity there is also why Clemson’s business school decided to locate its Renaissance Center in the historic Liberty Building on Main Street. (Clemson University is about 30 miles from downtown Greenville.) The center serves as a work area and meeting place for students working with companies in Greenville like Michelin, a large French manufacturer of tires, whose U.S. headquarters is based in Greenville. Caron

St. John, director of Clemson’s Arthur M. Spiro Center for Entrepreneurial Leadership, says that the business school wanted to be associated with downtown “because it’s attractive, so dynamic, and a fun place to be.”

Sustaining the Downtown Option

For now, Greenville is a work in progress. It is difficult to get a precise estimate of the number of people living in downtown Greenville, but there are about 1,215 residential condo units and more are on the way. This can be thought of as roughly equivalent to the number of households in downtown. The flurry of residential condo building in recent years has been well-received, with some units going for more than \$1 million. Other projects that have been eager to get off the ground have not yet done so, because construction costs have risen faster than the price that these condos can fetch in the market, says Charlie Whitmire, developer of the Bookends.

There are middle- to upper-income residential neighborhoods around downtown, which some say has helped to support its growth. But unless these Greenvilleans are avid walkers, these households will have a choice on which direction to take the family car: downtown or out to the mall. This makes downtown residents a crucial aspect of the sustainability of downtowns, says Clemson economist Curtis Simon, because these are the people who will likely patronize a downtown grocer, for instance.

Office workers are important, too, as they bring in another aspect of

demand. The office market in the central business district seems to be doing very well, with rents high and vacancy rates low. The restaurants are enjoying good business, partly because of a very strong lunch crowd of office workers. Stores, on the other hand, have not fared as well, and there have been a number of closings. People seem to prefer shopping in the mall, but regional stores like North Carolina-based Mast General seem to be doing well in downtown. The retail space is changing, however. A Publix grocery store and a Staples office-supply store just opened in downtown.

The success of a downtown revitalization depends on a number of factors. Part of it is about commitment, having good leaders, and executing a plan well. But there are other elements that are more uncertain than guaranteed. If you build it, will residents and businesses come? Will it be a center of ideas? Will people have fun there? Will it uplift the neighborhoods around it?

The only thing that is certain is that downtown’s roles have changed and diminished greatly from their once very powerful position. This is what cities must understand. The car remains king, and downtowns might have a hard time competing with that, with other centers of ideas and of consumption. Downtown has become an option that will, like it or not, simply exist side by side with malls, big-box retail strips, and office parks. But a downtown does not have to be obsolete. If the demand is there and if it is done the right way, a downtown may be able to hold up well against its competition. **RF**



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Armed against ARMs

Educating low-income borrowers may be an effective — if oft-overlooked — way to minimize mortgage losses

BY DOUG CAMPBELL

Back in October 2003, Donna Turner had her eye on a house. It was a modest house, priced to sell at \$150,000. For the Raleigh market, that was something of a steal. But Turner had a few financial obstacles to overcome before she could live the American Dream. She was a single mother who worked as a certified nursing assistant, earning about \$23,000 a year. Her credit report was pocked with poor choices and understandable setbacks, from delinquent cell phone payments to unwieldy medical bills.

It added up to a credit score in the mid-500s, putting her somewhere among the 15th percentile of the nation's debt seekers. By all definitions, Turner was a "subprime" borrower, a credit risk so great that mortgage lenders would charge her extra — if they chose to take her on at all — before putting up the funds necessary to close on her dream home.

Turner's story could have gone several different ways at that point. She might have been able to secure a subprime loan, perhaps one of those now much-maligned "adjustable rate mortgages" (ARMs), which would inevitably balloon in the years to come, making it impossible for her to keep up with payments. Turner would end up as another subject in a newspaper article about the hardships consumers face when taking deals from unscrupulous lenders. It's a familiar tale of late.

Or she could have somehow come up with the monthly payments, even after they increased with interest rates. It's less likely you've heard of that story, even though it's actually more commonplace than the first one. Remember: The majority of subprime loans are in fact being repaid on time.

Both interesting stories. But perhaps a better one is what actually happened. Turner didn't take out a home loan in 2003. Instead, she first walked into the Raleigh offices of Downtown Housing Improvement Corp., or DHIC. There she met Sheila Porter, who goes by the title of mortgage manager. Together they spent the next year and a half plotting a turnaround strategy. It entailed Turner taking a new job, low-

ering her expectations about how much of a home she could afford, and paying off her bills.

When she had done that, her credit score had risen about 100 points — right on the border between the ability to obtain a subprime or regular loan. With Porter's help, Turner found the latter, as well as downpayment assistance. She obtained a conventional, 30-year fixed-rate mortgage, originated by a reputable bank. Her monthly payment: \$686, including insurance and property taxes. In March 2005, mortgage loan in tow, Turner closed on a brand-new, 1,500-square-foot, three-bed, two-bath home for \$122,000.

More than anything, Turner says, she came away from her mortgage counseling experience with an appreciation for the commitment she was making. "I mapped out a plan, thought it through, and stayed the course," Turner says today. "I had to sit down and decide whether I wanted to do this. That sense of commitment is one of the best things I took away."

The focus on the role of mortgage brokers and Wall Street — and even on regulators in the recent decline of the subprime housing market — is richly deserved. But another player deserves attention: borrowers. The extent to which subprime borrowers were grossly misled, took calculated risks or simply didn't understand the details of the contracts they entered into, is unclear.

But if there is anything to be learned from Turner's experience, it is that financial education can make a difference. What if all subprime borrowers received the counseling that Turner did? Would we even be talking about the problems in the subprime market?

Subprime Primer

Though standards vary, in general a credit score of 660 (around the national average) or higher may qualify for a "prime" loan. There is also a near-prime, sometimes called "Alt-A," category of loans for borrowers with credit scores between 580 and 660. Subprime borrowers usually are those with credit scores lower than 580 (though by some

measures, scores below 620 qualify). Federal regulators define such borrowers as those with records of delinquency or bankruptcy, and debt-to-income ratios of 50 percent or more.

As of this fall, prime loans were not showing signs of major trouble. The overall delinquency rate (between 30 and 90 days overdue) has stayed close to 4 percent since the early 1990s, according to a Chicago Fed paper, though rising to about 5 percent in the past year. Fixed-rate, 30-year mortgages in fact remain at historical low levels of delinquency, at around 2 percent. The problem has been in the subprime market.

Subprime mortgages didn't gain much attention until recently, but their growth began in the early 1990s. Interest rates were declining, and some high-risk borrowers turned to them as a means to refinance existing mortgages. Meanwhile, technological improvements made it easier and cheaper to "score" borrowers' credit risks, helping to increase volume in the subprime category.

Subprime mortgages (defined here as loans obtained by borrowers with credit scores less than 620) have indeed seen a sharp increase in delinquencies, overall at more than 13 percent in early 2007, with ARMs leading the way at 14 percent. More to the point, the growth in subprime mortgages has been astonishing, rising from 6 percent of all loans as recently as 2002 to 20 percent at the end of 2006. (This 20 percent figure includes a 5 percentage point share for Alt-A loans.) The share of subprime loans that are ARMs — with the highest delinquency rates — stood at 50 percent (or about 7.5 percent of all mortgage loans) at the end of 2006. Not only are subprime loans risky, but half of them are the riskiest possible — ARMs. Meanwhile, the share of prime loans that are ARMs stood at 18.2 percent at the end of 2006.

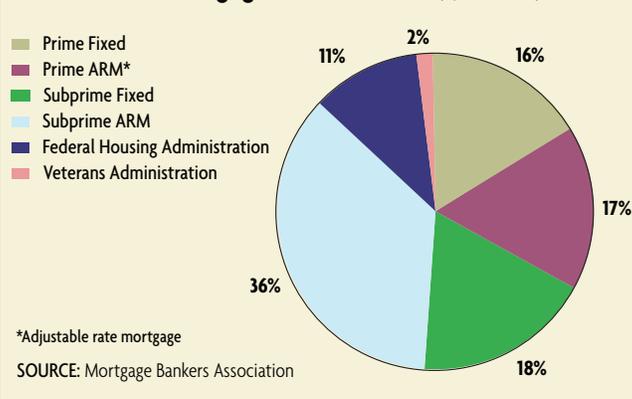
Subprime borrowers of any type will pay between 2 and 3 percentage points more than the prevailing prime rates. For example, a hypothetical subprime loan originated this fall might carry an

annual rate of 8.4 percent, compared with 6.4 percent for a prime borrower. (Historically, the subprime spread has been between 200 and 300 basis points, but in recent months has widened.) A 30-year, \$250,000 loan at the subprime rate would require monthly payments of \$1,904 compared with \$1,563 for a prime loan — a difference of more than \$4,000 a year. Economists with the St. Louis Fed put it this way: "At its simplest, subprime lending can be described as high-cost lending."

Many of the largest originators of subprime loans are not banks. New Century Financial Corp., for example, is a real estate investment trust and was the nation's second-largest subprime originator before seeking bankruptcy protection this spring. Other nonbanks are parts of bank or thrift holding companies. Also in the top 10 are banks like Wells Fargo and CitiFinancial, as well as thrifts like Countrywide Financial. But what distinguishes a subprime from a prime loan is the perceived credit risk of the borrower. A subprime loan may include features like interest-only payments or zero downpayment or adjustable rates, but it doesn't have to. All these features are also available to prime borrowers. So when we discuss subprime loans, we are generally considering mortgages to high-risk borrowers, or those who fail to provide adequate documentation on their income, or to those with high debt-to-income ratios.

Unquestionably, the subprime revolution extended credit to those who in previous decades were shut out of the homeownership market. On the other hand, it may seem like asking for trouble by charging the poorest, or the most debt-ridden borrowers extra. Or, as others have postulated, it may be perilous to offer complicated financial instruments to relatively unsophisticated consumers — and low-income borrowers tend to fall into that category.

Share of U.S. Mortgages in Foreclosure, June 30, 2007



Does it Work?

Therein lies the motivation for thinking about the power of financial education. Reliable data are difficult to find on the impact of pre-homeownership counseling. With mortgage loans being sold to investors, tracking them over time is difficult. There are also many different forms of counseling (from workshops to intense, months-long individual programs), and a dearth of formal tests matching different programs with different outcomes.

In a survey of the literature on credit counseling, Richmond Fed economist Matthew Martin draws some conclusions that may be quite pertinent to the subprime market's decline. Based on his reading, Martin says it's clear that some households make mistakes in personal financial decisions, and that "mistakes are more common for low-income and less-educated households." As such, low-income households tend to benefit the most from financial education.

A widely discussed study found that, for low-income borrowers, there is a connection between prepurchase counseling and avoiding delinquency. In 2001, researchers with Freddie Mac showed that borrowers have a 19 percent lower delinquency rate after counseling. Of the different sorts of counseling, one-on-one was found to be most effective, with a 34 percent decrease in delinquency compared with 26 percent for group sessions and 21 percent for home study. Similar studies have tried to adjust for self-selection — the problem that results will be skewed because people who seek counseling in the first



place are likely those committed to improving their credit. These studies found little difference between self-selectors and others in terms of the difference that counseling made on their behavior.

In a 2006 paper, economists Valentina Hartarska of Auburn University and Claudio Gonzalez-Vega of Ohio State University found that counseling has a significant effect on borrowing behavior, as it makes low-income borrowers more aware of all their financial options — from refinancing to default. Counseled borrowers grow more “ruthless” in their decisionmaking, an outcome that may not always be so great for lenders. Borrowers, for example, would now understand that it might make more sense for them to default than to refinance.

Hartarska notes in an interview that her study was fairly limited. It drew from the experience of an Ohio bank that provided counseling services as part of its Community Reinvestment Act requirements from 1996 to 2000. The authors looked at a total of 1,338 loans over three papers, comparing those that occurred before counseling (1992 to 1995) and those in the post-1996 period. That said, Hartarska believes the results to be quite robust, and perhaps useful to lenders.

“It means that you can educate and then you can price your risk based on the experience that borrowers will behave slightly differently from what you would have expected of people with their income and credit score,” she says. Hartarska also adds that much more study needs to take place, a process that could be aided if lenders made more data available to researchers.

It may help outcomes, but mortgage counseling isn’t free. It is supported in part through government grants. NeighborWorks America is the main backer of local nonprofit housing organizations, with 240 members across the country. It distributes much of its \$115 million annual (federally supported) budget to groups like DHIC in Raleigh. The local organizations can do a number of things with the money,

from developing properties to hiring financial educators.

Most NeighborWorks-backed organizations offer some sort of prepurchase counseling, says Douglas Robinson, NeighborWorks spokesman. Perhaps because of that, local nonprofit housing groups see better results from their clients: The default rate on subprime mortgages taken out by their clients is less than 3 percent, Robinson says, compared with about 13 percent for all subprime loans.

“If more families and more households had taken advantage of prepurchase counseling, whether prime or subprime borrowers, they would have been better armed,” says Robinson. “Mortgages can seem to be perfect that day but with any instant gratification, if you think about it, maybe it’s not a good thing.”

“Mortgage Ready”

The sort of homeownership counseling that Donna Turner received at DHIC is fairly rigorous — up close and personal, and not cheap to provide. In 2006, the center shuttled about 480 people through its program, and 210 ended up buying homes that year. A big chunk of DHIC’s clientele exists because of lender requirements. The city of Raleigh, for example, offers some low-income residents up to \$20,000 in downpayment assistance, but orders first that they complete a DHIC counseling program. Charlotte-based Bank of America instructed dozens of its clients in the past year to attend DHIC seminars as part of their mortgage qualification process.

Almost everyone who comes to DHIC, initially, would be considered a subprime borrowing candidate. The counselors here talk about getting clients “mortgage ready.” The charge for this service is \$25.

Like a lot of nonprofit housing organizations, DHIC derives most of its operating revenues from development projects, where it builds low-income housing. Grants provide cash for services that don’t pay for themselves, including homeownership

counseling. DHIC owns rental housing and in 2004 and 2005 sold 54 homes at its MeadowCreek subdivision, where Turner now lives.

There is a class on adjustable rates. The counselors walk their clients through “good-faith” estimates point by point, highlighting potential trouble spots like high upfront fees or the possibility of ballooning rates down the road. For many, there is subsequent one-on-one counseling to improve credit scores before even trying to secure a loan.

Are some brokers trying to sell products that borrowers probably can’t handle? Probably, DHIC counselors say. “A lot of our clients are told, ‘Do it now and then you can refinance in a year,’” says Porter, who was Turner’s main mortgage counselor. “But they probably have to come up with more out-of-pocket money to do that because they won’t have enough equity built up to cover all the costs. I’ve had clients come in with a good-faith estimate, and with their credit score, and I’m thinking, ‘Why are you being offered this?’”

And yet, some borrowers simply act on what they want to hear, ignoring what they know is true.

“It’s more complicated now,” says Sandra Harper, a sales manager and counselor at DHIC. “You’ve got so many different products that have come on board, like interest-only loans. I’ve seen lenders come up with some unbelievable things.”

DHIC does not keep track of its clients in a systematic way after they complete their counseling, so there is no way to say how effective the programs have been. Anecdotally, DHIC staffers offer up evidence like Turner. And they wonder why there isn’t a bigger push to support pre-homeownership counseling for low-income borrowers. “We’ve been asking that question for a long time,” says Gregg Warren, DHIC president. He attributes some of the lack of motivation to the way mortgages are sold to investors, seemingly reducing the risk that lenders carry, and thus

continued on page 39

Previous Consensus Forecasts

Consensus Forecasts For 2007

	Real GDP Chained (2000\$)	GDP Price Index	Nominal GDP (Cur. \$)	Consumer Price Index	Indust. Prod. (Total)	Dis. Pers. Income (2000\$)	Personal Cons. Exp. (2000\$)	Non-Res. Fix. Inv. (2000\$)	Corp. Profits (Cur. \$)	Treas. Bills 3-mo.	Treas. Notes 10-Year	Unempl. Rate (Civ.)	Housing Starts (Mil.)	Auto/Truck Sales (Mil.)	Net Exports (2000\$)
January 2006 Consensus	3.1	2.1	5.3	2.4	3.3	3.3	3.0	6.2	5.2	4.5	5.0	4.9	1.82	16.9	-636.2
February 2006 Consensus	3.1	2.2	5.3	2.4	3.4	3.2	2.9	6.2	5.0	4.6	5.0	4.9	1.83	16.9	-637.0
March 2006 Consensus	3.0	2.2	5.2	2.4	3.4	3.2	2.9	6.3	4.6	4.7	5.0	4.9	1.82	16.9	-647.0
April 2006 Consensus	3.0	2.2	5.2	2.5	3.4	3.3	2.8	6.4	4.8	4.8	5.1	4.8	1.81	16.9	-652.7
May 2006 Consensus	2.9	2.3	5.2	2.6	3.4	3.2	2.7	6.4	4.5	4.8	5.2	4.8	1.80	16.8	-667.3
June 2006 Consensus	2.8	2.3	5.2	2.7	3.3	3.2	2.7	6.5	4.3	4.9	5.2	4.9	1.77	16.7	-655.0
July 2006 Consensus	2.7	2.4	5.1	2.7	3.3	3.2	2.7	6.5	4.3	5.0	5.2	4.9	1.76	16.7	-646.6
August 2006 Consensus	2.7	2.4	5.1	2.7	3.3	3.2	2.7	6.5	4.3	5.0	5.2	4.9	1.74	16.4	-622.8
September 2006 Consensus	2.6	2.4	5.1	2.7	3.3	3.2	2.7	6.5	4.3	5.0	5.2	4.9	1.70	16.4	-613.2
October 2006 Consensus	2.6	2.4	5.1	2.7	3.3	3.2	2.7	6.5	4.3	5.0	5.2	4.9	1.70	16.4	-613.1
November 2006 Consensus	2.4	2.2	4.8	2.0	2.0	2.0	3.4	3.1	4.3	4.8	4.9	4.9	1.64	16.4	-622.3
December 2006 Consensus	2.4	2.1	4.8	1.9	2.4	2.4	3.4	3.1	4.3	4.2	5.0	4.7	1.62	16.4	-615.4
January 2007 Consensus	2.4	2.1	4.8	1.9	2.0	2.0	3.3	3.1	3.2	4.8	5.0	4.7	1.55	16.3	-606.2
February 2007 Consensus	2.7	2.2	4.7	2.1	2.1	2.1	3.2	3.1	3.1	4.8	5.0	4.8	1.53	16.3	-585.4
March 2007 Consensus	2.7	2.2	4.7	2.1	2.1	2.1	3.2	3.1	3.1	4.8	5.0	4.8	1.53	16.3	-588.2
April 2007 Consensus	2.6	2.2	4.7	2.1	2.1	2.1	3.2	3.1	3.1	4.8	5.0	4.8	1.50	16.4	-582.5
May 2007 Consensus	2.6	2.2	4.7	2.1	2.1	2.1	3.2	3.1	3.1	4.8	5.0	4.8	1.48	16.4	-590.3
June 2007 Consensus	2.7	2.2	4.7	2.1	2.1	2.1	3.2	3.1	3.1	4.8	5.0	4.8	1.46	16.4	-602.8
July 2007 Consensus	2.7	2.2	4.7	2.1	2.1	2.1	3.2	3.1	3.1	4.8	5.0	4.8	1.45	16.3	-600.0
August 2007 Consensus	2.0	2.7	4.7	2.7	2.8	2.2	3.2	2.8	4.5	-1.4	-0.1	-0.4	1.44	16.4	-587.2
September 2007 Consensus	2.0	2.7	4.7	2.7	2.8	2.2	3.2	2.8	4.5	-1.4	-0.1	-0.4	1.44	16.4	-580.8
October 2007 Consensus	2.2	2.6	4.8	2.8	2.8	2.4	3.2	2.8	4.5	-1.4	-0.1	-0.4	1.44	16.1	-579.4
November 2007 Consensus	2.2	2.6	4.8	2.8	2.8	2.4	3.2	2.8	4.5	-1.4	-0.1	-0.4	1.44	16.1	-568.9
December 2007 Consensus	2.2	2.6	4.8	2.8	2.8	2.4	3.2	2.8	4.5	-1.4	-0.1	-0.4	1.44	16.1	-562.2
BY DOUG CAMPBELL															
Difference	-0.9	0.5	-0.4	-0.4	2.8	3.4	3.4	3.1	3.1	3.4	4.4	4.6	-0.47	-0.47	-0.8
Forecast High	3.1	2.7	5.3	4.6	3.3	3.3	3.0	6.2	5.2	4.5	5.0	4.9	1.82	16.9	-636.2
Forecast Low	2.0	2.1	4.6	1.9	1.9	1.9	3.1	2.7	3.1	4.2	4.7	4.7	1.46	16.4	-602.8

Professional Prognosticators

Is Forecasting a Science or an Art?

Jim Smith tells the story this way: It was the summer of 1971. Smith was the director of credit market research at Sears, Roebuck and Co. One day the chief executive, a man named Gordon Metcalf, strolled into Smith's office and talked about his recent visits with international suppliers. Overseas, Metcalf said, there was growing sentiment that the dollar was overvalued. Metcalf realized that if the dollar decreased in value, it could hurt Sears' business. Sears needed a clearer picture of the future impact of such a change.

"Get together with your friends and see what you can do," Metcalf ordered. So Smith dialed up his friends at the University of Pennsylvania, where the famed Wharton Econometric Forecasting Associates (WEFA) was housed. At the time, the notion that the gold-backed dollar might ever float in value was still considered far-fetched by some. But WEFA spent a few weeks tweaking a short-term model and ran some simulations for Smith, who duly reported the results to the executive suite.

It turned out to be highly valuable information, especially after Aug. 15, 1971, when the Nixon administration brought an end to the Bretton Woods Agreement of 1944 that fixed exchange rates worldwide. From then on, the dollar would float, its value determined by the constantly changing balance of supply and demand. While most other firms were caught off guard, Sears was ready.

"We saved and made a ton of money as a result of forecasting," Smith says today from his office in North Carolina, where he is chief economist with Parsec Financial in

Asheville. "That model pretty well played out with all that happened over the next two to three years."

This tale underlines the worth of a good forecast. In his time, Smith has made a few. In fact, after Sears he went on to become one of the nation's most celebrated economic forecasters. Since the late 1990s, the *Wall Street Journal* has three times named him the nation's most accurate forecaster.

But is there such a thing as a "star" forecaster? Are there a handful of prognosticators whose abilities consistently surpass the crowd? If so, then you would think they are either in possession of superior instincts or superior mathematical models. Perhaps it's a little of both.

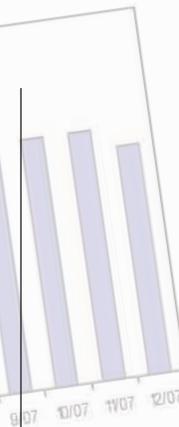
Models of all stripes can never perfectly predict the future because they are not exact replicas of the actual economy. To get an accurate forecast, you need information that gets closer to the current state of affairs. Maybe a certain forecaster is friends with a banker who provides the tip that more loans are going past due. That's information the forecaster would want to incorporate. Of course, information can be wrong. The loan problems might have been limited to that single bank.

"It takes a great deal of tender, loving care to get the forecasts to run properly," Smith says. "Nobody is perfect every time."

Stars

Forecasters are constantly being ranked. Besides the *Wall Street Journal*, there are rankings and surveys in *USA Today* and *BusinessWeek*, as well as in the monthly *Blue Chip*

Consensus Forecasts Of Y1Y % Change In Real GDP In 2008



Economic Indicators, a must-read for chief economists at Fortune 500 firms. The surveyed forecasts encompass firms ranging from Morgan Stanley to FedEx on measures ranging from GDP to housing starts, usually predicting changes to a tenth of a percent. Over time, a handful of forecasters stand out. These are the star forecasters, and it's fair to say that Stuart Hoffman is among them.

Hoffman is chief economist at Pittsburgh-based PNC Financial Services Group. *The Wall Street Journal* named him one of the nation's top forecasters from 1988 through 2006, a remarkable run. And *Business Week* named him the most accurate forecaster for 2004.

Hoffman develops his forecasts the way many others do. He uses a basic model and monitors data ranging from consumer spending to productivity. He lets the model run for four to six quarters out to "see what the key economic trend looks like." Then he makes adjustments "based partly on intuition and conversations with other economists, particularly people in the business who are contacts I have." This talking-and-listening approach is most useful for short-term estimates. It is this network of contacts to which Hoffman attributes his success. That and his distance from Wall Street, where there is a tendency, Hoffman believes, for economists to get too caught up in the state of financial services and ignore other sectors of the economy.

Though there are more data available today, which are quicker both to obtain and to process, and models are more intricate, Hoffman isn't so sure his forecasts are much superior to what they were 20 years ago. "Forecasting is still as much of an art as it ever was," he says.

Smith agrees with that assessment. Though he is skilled in econometrics — a leading tool of forecasters, which uses both theory and statistical techniques to evaluate data — Smith believes that good forecasts are the result of good information. He attributes his predictive success to his

ability to listen. "I have never found a substitute in my 35 years of doing this for asking people what they think is going on," Smith says. "There's always somebody who knows more than you do, and you're well-advised to listen."

Building Crystal Balls

Modern-day forecasting history begins with Jan Tinbergen and Lawrence Klein, who both received Nobel Prizes primarily for their work in building multi-equation econometric models. In the 1950s Klein's models of the U.S. economy became the most widely used. In 1963, he established WEFA, which used a model bearing the association's name. Smith was tapping into a more evolved version of this model helping Sears anticipate the impact of a floating dollar. As the cost of computer power declined, forecasting models grew richer and more complex.

For a time, there were three major economic forecasting models — one used by WEFA, another by Chase Econometrics, and a third by Data Resources Inc., developed by its founder Otto Eckstein. All three of these entities later merged to become Global Insight, today the largest economic forecasting firm in the world, with 600 employees and about \$100 million in annual revenue. Leading rivals to Global Insight include Macroeconomic Advisers, founded by former Federal Reserve Governor Laurence Meyer, and Moody's Economy.com.

If you had models that could perfectly predict the future, then that would be one thing. But as Robert Lucas acknowledged with rational expectations theory, the world is an uncertain place. Changes in economic conditions can be no more easy to predict than the next roll of the dice. People are forward-looking. As government policies and economic conditions change, so do people's expectations about the future and hence their actions; moreover, people's actions respond both directly to present conditions — today's prices,

holding future expectations constant — and to expectations of the future. It is difficult to build a model capable of incorporating all these factors. Certainly, it is impossible to make predictions on measures like GDP with precision to even the tenth decimal place.

"As long as you take the model forecast for what it is, models are very useful tools," says Roy Webb, a senior economist with the Richmond Fed who has studied forecasting accuracy. "The danger is you assign these numbers more significance than you should."

There is considerable academic debate about which sort of models are the best — for various purposes one might choose among econometric models, or simpler vector autoregressive (VAR) models. Among the key differences is that structural models use economic theory to constrain the possible relationships among variables, while VARs are often considered "atheoretical" because they tend to let the data speak for themselves.

Some observers argue that all the subjective fiddling that goes onto modeling strips them of any scientific legitimacy. "Add factors" introduce an extra degree of human error into the process, inevitably fouling it up.

Despite such concerns, that's how most forecasters operate. They use a model to get a sort of baseline, and then add in factors that may not yet be either showing up in the data or for which the model may ignore. Take the U.S. macroeconomic model used at Global Insight. It has about 1,900 variables, with data points coming from national income and product accounts, price indexes, and 25 different interest rates. Then economists take over.

"Forecasts are a combination of econometrics and judgment," says Sara Johnson, a managing director and economist at Global Insight. "The econometrics help us to draw statistical relationships based on the historical record. Economists can then insert their judgment based on how current conditions might differ from the past, based on factors

that the models cannot, or do not, fully incorporate.”

Which Way?

The apparent slow of economic activity from the third to the fourth quarter led some to wonder whether the economy was approaching a turning point. This is when forecasters really earn their keep. “Whenever there’s volatility, demand for our services increases,” Johnson says. “Our clients are watching our forecasts and analyses even more closely and having more frequent contact with us.”

For an industry strategist trying to figure out what to do next, this might seem a tempting time to rely on an aggregate of multiple forecasts of the aggregate economy. That is because the average consistently beats individual forecasters. An Atlanta Fed study examined forecaster rankings in the *Blue Chip Economic Indicators Survey*. It found that the consensus forecast performed better over time than any individual forecaster — although several forecasters did quite well. “This result is a ‘reverse Lake Wobegon’ effect: none of the forecasters are better than the average forecaster,” the authors wrote. “There are superior forecasters, but no individual has access to all of the independent information from all of the forecasts that is incorporated into the consensus forecast.”

This underlines a truth that will come as no surprise to fans of *The Wisdom of Crowds* by James Surowiecki — who argues that collective information tends to be more reliable than individual assessments. And yet, some individual firms and forecasters do consistently outshine others. For example: *Blue Chip*

Economic Indicators hands out an annual award to the best forecasting record over the past four years based on projections of real GDP, the consumer price index, three-month Treasury bills, and the unemployment rate. A few firms, including Global Insight and Macroeconomic Advisers, are dependably in the upper echelons of the rankings. (Notably, the rankings don’t point out forecasters who consistently miss; there is no “Most Inaccurate Forecaster” award.)

Randell Moore, editor of the *Blue Chip* survey, notes that DuPont has won the annual honor three times in the past three decades — but each time with a different chief economist. “I don’t detect that any individual is particularly good over long periods of time at forecasting,” Moore says. “That’s why using the consensus appears to make the most sense.”

An interesting exception may be the Federal Reserve’s “Greenbook.” Certain economic projections from the Greenbook are released to the public after a five-year lag, and studies have shown that those projections are quite reliable compared with private forecasts. The Greenbook process is a back-and-forth between the large Federal Reserve Board model and subjective add-ons by staff experts.

In the most cited study, economists Christina Romer and David Romer with the University of California at Berkeley attributed the Greenbook’s accuracy to the finding that the Fed “appears to possess information about the future state of the economy that is not known to market participants.” Princeton University economist Christopher Sims found that the Greenbook even beats most of the Fed’s own model-based forecasts. Sims

agrees that there is some evidence, though not complete, that “the superiority of the Fed forecasts arises from the Fed having an advantage in the timing of information — even with the view that this might arise entirely from the Fed having advance knowledge of its own policy intentions.”

Shrinking Industry

For all the potential payoff that a good forecast can deliver, the business of economic forecasting has been contracting. In the heyday of the 1960s and 1970s, it was customary for big companies to keep economics departments, with several analysts reporting to a chief economist. But cost-cutting began in the 1980s, as many firms saw they could simply contract for forecasting services, or rely on published consensus forecasts. Bank mergers also led to consolidation of economic research departments.

Smith believes that businesses which give up in-house forecasters will see it reflected in their bottom line. “There’s no way to cope with all the changes that come up and have a feel for whether something is a major shift, or a tempest in a teapot that will pass, unless you have your own internal group,” Smith says. “You won’t find a consensus for steel demand, or for vehicle output, and that’s of huge importance to many industries. It’s a small investment and you only have to get a few things right to pay for themselves.”

Of course, even in-house forecasters get things wrong, as Smith readily admits about his own career. This is why Smith likes to quote perhaps his field’s oldest of axioms: “He who lives by the crystal ball must learn to love the taste of broken glass.” **RF**

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Runs Make the Bank

The fragile capital structure of banks makes them inevitably prone to runs, and that's a good thing

BY VANESSA SUMO

Banks are one of the most powerful and enduring institutions of all time. They have survived runs and panics and the Great Depression. They have folded, divided, and merged. They have withstood and participated in the parade of financial innovation. And even flourishing capital markets could not make them obsolete.

The persistence and pervasiveness of banks suggests that they provide a unique service. Companies, for example, overwhelmingly prefer banks when seeking financing outside their own coffers. “Bank loans are the predominant source of external funding in all the [industrialized] countries,” note economists Gary Gorton of the University of Pennsylvania and Andrew Winton of the University of Minnesota, authors of a survey on financial intermediation. Instead of borrowing from banks, firms could secure the funding they need through the sale of a stock or bond, by going directly to the capital market. However, “in none of the countries are capital markets a significant source of financing,” Gorton and Winton note. “Equity markets are insignificant.” Their observations come from a 1990 study that looks at the sources of net financing by nonfinancial enterprises from 1970 to 1985. In the United States, about 24.4 percent of investment by firms was financed by bank loans, 11.6 percent by bonds, and only 1.1 percent by shares.

Studies have also found that the stock market price of a firm responds more favorably to the announcement of a new

bank loan or the renewal of an existing one, compared with news of an offering of company securities in capital markets. Others have shown that if a borrower's bank fails, it can cause a substantial loss to the borrower because his valuable relationship with a bank is destroyed. In other words, it won't be easy for a borrower to switch financiers if his bank shuts down.

But what specifically makes banks so special? What is it about the way they organize themselves that sets them apart from other businesses? The fact is, as dominant as banks are, their basic structure is actually quite fragile. On the asset side, banks make loans to borrowers that are typically long-term and are inherently illiquid, not easily converted to cash. On the liability side, depositors expect that they can withdraw their money anytime they need to. However, this may force banks to sell their assets, possibly at a much lower price, if depositors demand more money than what the bank has readily available. Thus, the bank's activities on both sides of the balance sheet, although valuable, appear to be ruinously incompatible.

To protect banks and their clients from this apparent vulnerability, financial regulators have typically responded with supervision, safety nets, and even proposals to downsize and restrict banks' activities. However, University of Chicago Graduate School of Business economists Douglas Diamond, who is also a visiting scholar at the Richmond Fed, and

Raghuram Rajan say that there is actually a good reason for a bank's choice of such a delicate arrangement.

Far from being a concern, a bank's distinctive asset and liability structure is precisely what allows the bank to provide liquidity at all times; that is, to make funds available to both long-term borrowers and short-term depositors whenever a need arises. The explanation for this surprising result comes from a rather catastrophic prospect built into a bank's fragile capital structure: the threat of runs.

Bank Runs

When the public suspects that a bank may become insolvent, depositors will rush to take out their money in desperate hope that they won't be last in line. The sudden demand for cash can force a bank to sell assets prematurely at a loss and, consequently, may cause that bank to fail, whether or not it was healthy prior to the run. On a scale that affects many banks, runs can disrupt economic activity and cause financial distress to many people.

Perhaps paradoxically, the possibility of bank runs arises from a valuable service that banks perform: transforming illiquid assets or bank loans into liquid liabilities or deposits, according to a 1983 paper by Diamond and Washington University economist Philip Dybvig, considered the most important and well-known analysis on bank runs. In other words, the ability to provide funds to depositors on demand even if the bank holds mostly illiquid assets on its balance sheet is what makes a bank a bank. But it is also why they are vulnerable to runs.

A depositor may want to invest his money but is worried that tying up his funds will make it difficult to withdraw, except at a considerable loss, when a personal need suddenly arises. Banks — as opposed to another investment vehicle — can improve upon this situation by getting all the depositors together and pooling everybody's risk of holding an illiquid asset. This works well because banks know with some certainty that for a given pool of depositors, only a fraction will ordi-

narily take out their money at any given time. Thus, banks can offer depositors a way to get out on better terms than would have been available to them had they invested individually.

But this solution also opens up the possibility that things may not go according to plan. If depositors panic and turn up earlier than expected, then those who will come to the bank later know that they may not get as much as they were promised, and indeed may not get anything at all because the bank will not have sufficient resources. Thus, a "first-come-first-served" rule induces the very real possibility that if some depositors ever get a whiff that a bank may be in trouble, even those who were previously not concerned about the bank's health will rush to withdraw their money. "If a run is feared, it becomes a self-fulfilling prophecy," says Diamond. Whether the rumor was true or not and whether depositors believe it or not, no depositor wants to be the last one to line up at the bank's door. This summer, depositors at British bank Northern Rock raced to take out their money when news leaked out that the central bank would provide emergency funds to the troubled bank.

Deposit insurance is one way to prevent runs and is provided in many countries. The purpose and terms may differ, but deposit insurance in general assures that no matter what happens to the bank and no matter how many people come to withdraw, depositors will always get the amount that they were promised. The government is a natural insurance provider because it has the authority to tax, say Diamond and Dybvig, so it can guarantee to come to the bank's rescue without having to hold a large amount of liquid assets to back up that claim. A deposit insurance law commits the government to insure banks, which is a stronger pledge than more discretionary policies such as suspending the convertibility of deposits to cash.

Runs as a Commitment Device

One would think that a bank's fragile structure is surely a weakness, for how

can bank runs be a good thing? But according to Diamond and Rajan, this weakness is also its strength. In a series of papers written in 2000 and 2001, Diamond and Rajan argue that banks as we know them today choose such a structure because the possibility of a run is what gives them the power to provide liquidity, which is the very thing that makes banks unique.

The story begins in a theoretical environment where banks don't exist. An entrepreneur needs to finance a project and a lender has money to invest in it. Only the entrepreneur has the specific skill to generate the highest cash flow possible from this undertaking, so once the investment is made, the project would be worth much less in somebody else's hands. In this case, a lender's investment in that project is said to be illiquid. One could think of a top-rated chef who wants to open a restaurant. If he decides to quit before the restaurant opens, then the lender can seize the restaurant, but he would have difficulty finding another chef of the same caliber to operate it.

The plot gets thicker if the lender himself needs cash at some interim date. To obtain the money, the lender can opt to borrow against the loan he made to the chef, by promising to collect the cash flows generated from the restaurant venture on behalf of a new investor. However, the investor knows only too well that the lender might be tempted to pay back less than what they agreed upon. If the investor thinks that the lender cannot commit to being honest, then it would be impossible for the lender to borrow an amount equivalent to the full value of the loan. The consequence of this chain of illiquidity is clear: Either the loan to the chef will not be made in the first place or the cost to him of borrowing money will be very high, because the lender will need to be compensated for the illiquidity of the loan.

The way to resolve this dilemma is for the lender to write a contract that guarantees investors can take out their money at any time they please. In this way, if the lender tries to extract more

money by renegotiating the contract and offering investors less than what had been promised, then investors will quickly withdraw all their funds because they assume others will do the same, leaving the lender empty-handed. A run is painful for the lender because his income depends primarily on the service he provides as an intermediary between the entrepreneur and the investors, so a run will drive his income to zero. Therefore, the lender would never attempt to renegotiate the contract and will always strive to give investors what he promised.

As it turns out, this type of “relationship” lender is exactly the kind of bank we have today, one that lends money for long-term projects but at the same time collects short-term deposits. A delicate capital structure that is vulnerable to runs is what makes the bank’s commitment credible and effective. This ensures that depositors will always be willing to put their money in the bank, and that there will always be a steady supply of funds for the bank to lend to entrepreneurs. If the bank ever misbehaves, then the depositors will run and the bank will shut down.

Thus, if depositors couldn’t run on the bank, then there would be no way to create liquidity. While it may seem counterintuitive to think of a bank run as a good thing, it is actually only the possibility of one that is desirable. “The threat of a run, great; the fact of a run, that’s bad,” says Diamond.

The commitment to discipline banks is convincing because it promises to punish even if the punishment is painful for the depositors themselves. “This is going to hurt me as much as it is going to hurt you, but I will do it anyway. Therefore, you know that if you mess around, you’re going to get the sanction imposed on you,” explains Diamond by taking the depositor’s perspective. Even if it is not in the depositors’ collective interest to pull their money out, they will rush to the bank anyway when they spot a crime in progress.

The Narrow Banking Alternative

Stuart Greenbaum, former dean and professor emeritus of finance at Washington University, thinks that while Diamond and Rajan’s proposal has some merit, “building in a weakness because the weakness will make you strong” sounds a bit like “hotel music.” It’s pleasing, but it makes too much of a bank’s delicate capital structure. “It’s one of those arguments where you find virtue in a weakness, developing compensating strengths for some sort of disability you might have,” says Greenbaum.

It could be desirable to avoid a fragile structure altogether, according to economists who believe that a 100 percent reserve requirement should be imposed on deposits that can be withdrawn on demand (this group includes Milton Friedman). Such a proposal would effectively narrow a bank’s activities by requiring it to invest demand deposits solely in “safe” short-term assets like Treasury bills, as opposed to illiquid assets such as loans. Putting deposits in very liquid assets makes the banking system run-proof. It precludes a bank run because depositors know with certainty that their deposits are backed by investments the bank can quickly convert into cash. A narrow bank could be chartered separately, while other institutions that lend to longer-term projects would be forbidden to finance these projects with demand deposits.

Narrow banking would make the financial system a more stable place because it would provide greater safety against bank runs, says Greenbaum. But it would come with a cost. Under a narrow banking arrangement, deposit-taking banks would lose that special ability to turn illiquid assets into liquid liabilities. “It provides a greater degree of safety, at a cost of the production of liquidity through mismatching [of assets and liabilities],” Greenbaum says. In other words, banks would not be able to use the rich mass of demand deposits to fund projects that have a much longer duration. Economists agree on this, but disagree on just how large that cost is.

An analysis by Neil Wallace, an economist at Pennsylvania State University, attempts to quantitatively compare these opposing worlds, by extending the original Diamond and Dybvig model of fragile banking to include the possibility of a narrow banking system. Overall, he finds that the narrow banking alternative is undesirable. “It eliminated any role for banking,” says Wallace. History is rife with episodes of panics and runs, and perhaps narrow banking can prevent that, but at what cost? Wallace thinks it might be substantial. “Using narrow banking to cope with the potential problems of banking illiquidity is analogous to reducing automobile accidents by limiting automobile speeds to zero,” writes Wallace in his paper. Diamond and Rajan agree. They think that narrow banking would essentially “kill liquidity creation and result in lower credit availability to borrowers.”

Greenbaum, however, thinks otherwise. “It doesn’t preclude the production of liquidity,” Greenbaum says. He says that there are other ways of creating liquidity without using demand deposits, in particular by “mismatching” other financial instruments on the bank’s balance sheet. For instance, instead of using the money from checking accounts and transforming these funds into loans, another institution can take a one-year time deposit and lend out a three-year loan. Hence, in this view, banks do not need the threat of runs to create liquidity. (However, some ways of creating liquidity may not be immune from run-like events. Recently, “structured investment vehicles,” which issue commercial paper backed by longer-term assets such as mortgages, had trouble rolling over their paper when investors started doubting the quality of the underlying assets.)

Nonetheless, no country has ever experimented with narrow banking and Greenbaum says it will probably never happen. And so in the existing banking system where banks’ long-term assets are backed by mostly demand deposits, regulators have

responded with oversight, stops, and safety nets. “We make the best of it. We do it with regulation, we do it with monitoring, and all sorts of restrictions in order to avoid the worst instability. That’s the basic fact of the case,” says Greenbaum.

The Implication for Safety Nets

The threat of runs, say Diamond and Rajan, keeps banks from misbehaving, because if they ever do anything that people perceive might impose a loss on depositors, the bank would be closed immediately. If so, then certain safety nets like deposit insurance, which is often thought to prevent jumpy depositors from running on the bank, may actually reduce the incentive for banks to behave well because it removes the depositors’ commitment to run. So why have deposit insurance?

In the real world, unexpected events can cause losses, even if they have nothing to do with a bank’s behavior. For instance, if the economy is hit by a recession, a bank’s investments may not generate as much return as expected, and as a result, the bank may not be able to deliver what it promised to its depositors. Thus, while the threat of runs keeps banks from misbehaving, the real-world uncertainty might make it excessively susceptible to panics.

In this case, deposit insurance could be helpful by tempering depositors’ nerves, but where to draw the line is tricky. On the one hand, bank panics

and their dire consequences should be avoided, but on the other, a fully insured bank will lose the disciplining mechanism that was built in its capital structure — it would make banks more likely to take big risks. As a result, deposit insurance would require additional financial regulation because the onus to impose the appropriate penalties now lies with the regulator. “Deposit insurance is only going to work well if regulators are good at actually closing banks whenever they misbehave,” Diamond says.

But if there is a sense that some banks may be too big to fail, regulators may be hesitant to carry out that punishment. Diamond thinks that having limited deposit insurance likewise disciplines the regulators themselves, because if they intervene to bail out a bank, then this very public event will receive scrutiny by the political process, which can subsequently improve regulation. Hence, in assessing how much of a bank’s deposits should be insured, regulators must try to get as much as possible of the good and very little of the bad. They would have to weigh the importance of enforcing discipline against ensuring financial stability.

The implications of Diamond and Rajan’s proposal for deposit insurance also hold true for capital adequacy rules. Bank capital includes long-term claims such as equity and long-term debt, “softer” claims that are not subject to runs. As such, too high an amount of bank capital is not desirable

because it impairs the bank’s ability to create liquidity by removing the depositors’ incentive to punish. But if banks keep too low a buffer, then they might fail too often. Indeed, banks themselves will choose some amount of capital, regardless of government regulation.

The question, then, is whether regulators want to stipulate an amount other than that level, keeping in mind the trade-off between creating liquidity and stability in the financial system. If stability is considered the more important goal and a higher minimum capital requirement is stipulated, then regulatory standards ought to be more intense to keep the banks in check. If these standards are good, then a higher level of capital requirement won’t compromise too much of the bank’s unique ability to provide funds to those who need it and at the same time will make the bank less vulnerable to the vagaries of the business cycle.

Despite their apparent fragility, banks have persevered through centuries and continue to be integral to the economy. Indeed, one can recognize the might of banks by the grandeur of their buildings and marble interiors, just as the palaces of the past were iconic of the stature of kings and queens. And just as the power of the monarchies relies on the allegiance of their subjects, the strength of banks depends mostly, as it turns out, on even the slightest of their depositors. **RF**

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CRASH

In Virginia, private insurers test vehicles for safety. Isn't that the government's job?

BY DOUG CAMPBELL

Even without the painful screams, the sound of screeching tires and busting glass is sickening. On Tuesday, July 24, a compact, pointed sled cruising at 31.1 mph hit a 2007 Ford Explorer carrying two BioSIDs, or “small-stature female side-impact” dummies. The impact, centered just between the driver-side doors, threw the vehicle back 10 feet, shattered the windshield, and violently whipped the seat-belted dummies about the passenger cabin.

For a moment afterward, it was dead silent. Then the lights went up. A polo-shirted man stepped up to the crash scene and quickly began sweeping away the tiny shards of glass. A team of at least 12 engineers descended, pushing computers on wheeled trays. Now it was time to learn the extent of the dummies' injuries.

The venue for this staged accident was the Insurance Institute for Highway Safety's (IIHS) Vehicle Research Center in Ruckersville, Va., just outside of Charlottesville. The VRC, for short, conducts about 70 of these side-impact crashes each year. Each is attended by representatives of the crashed vehicle's manufacturing company, in this case Ford. After all the data are processed, the IIHS will issue a report card of sorts, grading the Explorer on how effectively it protected the dummies. The very best models earn a “Top Safety Pick” designation, a Good Housekeeping Seal of Approval for the automobile industry. Companies often use IIHS-produced video footage of the most successful crashes in their TV commercials.

A “poor” rating, on the other hand, can translate to slumping sales and costly redesigns. This was the case with the Pontiac Transport, a minivan whose poor safety designation in 1997 prompted an overhaul that resulted in the newly dubbed Uplander, which garnered a good rating from the IIHS in 2005. It goes to show the sometimes powerful influence IIHS ratings can have. “There is no question that our ability to do these crash tests and show the differences among vehicles and their different amounts of protection is forcing the automakers to change their designs,” says Adrian Lund, IIHS president.

In the institute's early days, rear-end tests were the staple. A slim minority of vehicles back then were gathering “good” safety ratings. Today, the institute rarely bothers with rear-end tests because the clear majority of vehicles are performing so well on that standard. Instead, it relies on spot checks and data provided by the automakers themselves.

An important thing to understand about the IIHS is that it was created by and still funded by insurance companies. It is a nonprofit, private-sector organization performing functions that one might otherwise assume would be done by the government. It does so perhaps in part because of the goodwill it generates with improving vehicle safety. But it is also true that the insurers who fund the institute see returns on their investments in other ways.

With safer vehicles, claims are reduced. Minimizing losses is obviously useful to insurance firms, in so much as it reduces potential payouts from claims. Even more useful are the data gleaned from IIHS crash tests. With information about the expected severity of injuries — to both vehicle and human bodies — insurers can fine-tune premiums to maximize profits. It is an instance of private-sector initiative in performing a role — improving automobile safety — ordinarily assigned to government.

“We're bullish enough on the outcome of what the institute has done and the data that comes out that it's well worth the investment,” says Dave Skove, an executive with Progressive Insurance who served as IIHS chairman in 2005. Like many insurers, Progressive has a target underwriting profit margin, in its case 4 percent. “We're interested in the margin. So if cars tend to be safer and we can help that, then great.” By extension, it is often in the interest of automobile companies to reveal information about the safety of their products, as positive reviews can have a positive impact on sales. For this reason, automakers are quite cooperative with IIHS' efforts.

Early Days

The Insurance Institute for Highway Safety was born in 1959. Some of the nation's biggest insurers — Allstate, State Farm, and Nationwide among them — initially put their money into research on driver-education programs. After a time, the research produced some surprising findings: Driver-education programs *don't* help reduce crashes among teens, because they tend to help youths get licensed at younger ages. So IIHS leaders decided to take a new approach, turning away from the focus on drivers themselves toward the cars they drive. They recruited William Haddon, the former head of what is now the National Highway and Traffic Safety Administration, to study the safety features of automobiles.

The government first started consumer car crash tests in the late 1970s. Until that time, automakers disputed the notion that “safety sells.” But with the crash data, consumers for the first time could compare vehicle ratings based on objective data. Increasingly, safety features became standard-issue selling points.

For years the institute relied on government data or performed crash tests on a limited basis. But the cavernous building in Ruckersville allowed IIHS researchers to conduct their own tests on a vast scale in a controlled environment. Besides side-impact tests, they perform (with decreasing frequency) rear-end and frontal crashes. The standard barrier that slams into tested vehicles aims to replicate the sort one often finds on the road in the early 21st century; namely, sport-utility vehicles or large trucks. While certainly not perfect stand-ins for real-world crashes, IIHS tests provide objective, easily comparative results that consumers and others can use in making purchasing decisions.

Today, IIHS announcements make headlines the world over. On Aug. 15, for example, came side-impact results for luxury sedans. Acura and Volvo were among the manufacturers claiming the coveted highest ratings, while BMW came out as the worst performer. A BMW spokesman explained to the Associated Press that test results can vary based on a number of factors: “This was one test on one day on one car.”

The side-impact test is IIHS’ biggest. The institute says that side-impact crashes are the most common type of fatal crash in the nation, killing about 9,000 people each year. With its \$14 million annual budget, IIHS can afford about 70 side-impact crashes a year. Its expenses include buying vehicles right off dealer lots. (Though auto firms might be quite happy to provide cars for free, IIHS seeks to ensure that the cars it tests are identical to the cars consumers actually buy.) At the VRC, teams of engineers must be paid, dummies built and refurbished (a fully

instrumented dummy costs about \$125,000), and the antiseptically clean building itself maintained.

Payoff

Insurers pay prorated amounts to keep IIHS running. Membership accounts for about 70 percent of the private passenger insurance market. The IIHS accomplishes a number of goals for insurance companies. Among them is positive PR from nonprofit efforts to reduce traffic fatalities. Another is the pecuniary benefit of all the data captured by the VRC as well as those collected by the institute’s sister organization, the Highway Loss Data Institute (HLDI). Vehicles with side airbags, better stability control, or less susceptibility to crushed bumpers may get discounts when premiums are considered.

The HLDI is a huge trove of valuable information for insurance companies. Basically, participating firms furnished their own loss information, which is then processed and mined by the HLDI, which in turn makes public much of its studies, such as loss rates by vehicle make and model. Insurance firms can use some of the same data to precisely price their premiums.

The weekly, sometimes twice-weekly, side-impact crash is a veritable spectator event. Usually on hand are representatives of various insurance agency claims departments. On the day of the Ford Explorer crash, a group of State Farm adjusters joined engineering students from the nearby University of Virginia. A viewing deck overlooks the crash spot, where a fresh-off-the-lot Explorer has been wheeled into place.

The crash aims to replicate one of the most common accidents: a relatively slow-moving vehicle gliding through an intersection getting hit on the side by a faster-moving car. In the hour before the test, engineers make sure all the sensors are working and the vehicle is properly prepped. The Explorer’s original fluids have been drained with something nonflammable. Its sides are strapped in tape. The

two small-stature female dummies — a driver and a passenger directly behind — have different colors of paint applied to different parts of their bodies. That way, it’s easier after the crash to see where their bodies came into contact with the vehicle. (Females aren’t always tested — the IIHS stable of dummies includes men, women, and children of various sizes. But females are used most often because their injuries tend to be the worst in side-impact crashes, the IIHS says.)

With four minutes to the crash, everybody clears the floor. The stage area is lit by 750,000 watts of light-bulbs. A bay door rises. Two football fields away, a sled sits. The countdown begins, and then the sled begins its short trip, being pulled along on a belt. It sounds like a small aircraft about to take off. It reaches 31.1 mph just before impact, but watching live it seems much faster. Then the crash.

Cameras of both the still and motion variety capture every angle. Images of the crash immediately begin to replay in a loop on TV monitors posted about the hall. The sled hit just where it was supposed to. The dummies are still in their seats, a bit slumped. Paint is visible on airbags where the dummy heads were slapped. Damage to the vehicle will be assessed later. (In a nutshell, it’s totaled.) But information about the extent of the dummies’ injuries is quickly forthcoming: The rear passenger came out virtually unscathed, with good protection for her head and neck, torso, and pelvis and legs. The driver was also in good shape overall, though the pelvis/leg measure earned a “marginal” rating because of the indication that “a fracture of the pelvis would be possible in a crash of this severity.”

Aftermath

The results were not exactly surprising to Ford, a company that has earned more Top Safety Pick designations in the past year than any other automaker. Ford spokesman Dan Jarvis points out that the company’s own tests include

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Susan Athey

Every two years, the American Economic Association awards the John Bates Clark Medal to “that American economist under the age of 40 who is adjudged to have made the most significant contribution to economic thought and knowledge.” Susan Athey of Harvard University was awarded the Medal in 2007. Past winners include a host of economists who have gone on to greatly influence the profession, including Paul Samuelson, Milton Friedman, Kenneth Arrow, Robert Solow, and Gary Becker; more recent recipients include Paul Krugman, Kevin M. Murphy, and Andrei Shleifer.

Athey’s research is hard to sum up in a few words. She is perhaps best known for her methodological work. But as she describes in the interview, many of her methodological contributions stem from looking at applied problems, finding the existing tools to answer those questions, and then developing new methods to solve them.

Her applied work has touched many fields, from the economics of organizations, where she has looked at how firms might improve their mentoring systems for talented young employees, to auction design, where she has examined how the government could more efficiently run procurement auctions and auctions for natural resources such as timber. She also has helped us better understand the conditions under which collusion among firms might be expected and the possible welfare effects of such cartelization. And, of interest to monetary economists, she has considered why it is often desirable to limit the discretion of the central bank so that price stability can be achieved.

Athey has long ties to the Fifth District, having grown up in Maryland and then attending Duke University as an undergraduate. Aaron Steelman interviewed Athey at her office on the Harvard campus on Oct. 9, 2007.

RF: You have worked across several fields using many different approaches to answer important questions. Can you explain how your basic and applied work fit together or complement each other?

Athey: What I find most exciting about economics is the fact that real policy issues and problems always can point the way to interesting research questions. But I also tend to be an abstract thinker and I like to understand the limits of an answer — and how particular or general that answer is, depending on different circumstances. That tends to take me from a situation where I am, on the one hand, immersed in a policy problem and trying to understand the answer, to where another part of my brain is trying to find the abstractions which that problem fits into — for instance, what other problems might be like this one. So while working on the policy paper I might have learned something along the way that is more broadly applicable and that might bring me to write a methodological paper subsequently. I haven’t tended to take a tool and apply it to lots of different applications. I tend to have an application



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and then develop the tool. To me, it's a natural process of trying to understand a problem, recognizing the shortcomings of the existing methods, and then developing new tools to better answer similar problems.

RF: Can you give an example of the interplay between your methodological work and your work on policy problems?

Athey: Probably the best example comes from a case where I started working on a very applied problem — collusion in auctions. To get at that problem, I developed tools for analyzing ongoing relationships in dynamic models with private information. That methodological work led me to connect with macroeconomists who were interested in the issue of discretion in monetary policy. I knew nothing about that issue from an applied perspective, but I did understand a lot about providing incentives to privately informed agents. So that was an example where I got to learn about a new applied problem but my contribution was more on the methodological side. So, ultimately, it came full circle — from one applied problem to another. And that's a bit unusual for me. But it can work well, because if you have different conceptual insights, you might attack a long-standing problem in a different way. Plus, in this case, I got a great chance to learn a little bit about macroeconomics.

RF: How did you become interested in the topic of mentoring from a research perspective?

Athey: The question of how mentoring affects diversity in organizations was the first problem that I posed independently as a scholar. I started on it in my second year of grad school. The work was motivated by a simple observation. A lot of male graduate students played in regular basketball games with male faculty members. But women and nonathletic males were not particularly welcome. It turned out that a pretty high share of the students who played in these games got plum research assistant positions over the summer. So I started thinking about why that was happening and what the impact was on eventual outcomes for students, schools, and the profession. I also thought that a lot of things I was seeing weren't really entering the debate about affirmative action and why firms might want to actively manage the process of diversity.

I developed a model that included the idea that people might have more effective mentoring relationships with people of the same type. The model had competing forces. On the one hand, if people are more efficient at mentoring people of the same type, then there could be some benefit to having a homogenous organization. On the other hand,

talent is scarce and so it could be that your star student or your star young employee is of an opposite type, and if that is the case, you might lose out on that talent. It also seemed that there were probably diminishing returns to

having a huge majority of one type. For instance, even if men were more effective at mentoring men, the last man you add to your faculty might not add that much value to mentoring the existing men.

So we looked at these trade-offs and how both a myopic organization might fare, as well as how a farsighted organization might evolve. We derived conditions under which there might be multiple steady states for a profit-maximizing organization. If it

started out relatively homogeneous, the firm might find it profitable to discriminate against the minority because they will have a hard time succeeding. But if they happen to find someone of the minority type who is so talented and such a good fit that they do succeed, then that might make it worthwhile to hire more employees of the minority type and move toward a diverse steady state. At that point, the organization might implement a voluntary and profit-maximizing affirmative action program as an investment in the ability to mentor future minorities. One of the key assumptions in such a model is that there is a scarcity of talent for people who match an organization's needs. To find that talent, firms might have to look for people who by some characteristics do not tend to fit the profile of their existing workers. Initially, that can cause some problems but ultimately be beneficial to the firm. So you might take some short-term hit in profits but over the long-run it can be a good investment.

This goes beyond my model, but I think it's important to note that social conventions are often arbitrary. For instance, a Southern law firm might have a hunting trip for its annual retreat. But young associates, and perhaps especially young female associates, might have no interest in hunting. So if they changed the retreat to something that was more gender-neutral, in a couple of years, only a few of the long-standing partners might care and you would appeal to a broader pool of talent. So that's outside of my model, but my model does have these trade-offs in diversity, where you are not as effective at mentoring majorities of either type when you are diverse. In the long run, though, my belief is that people get better mentoring those from another type as social norms change and they get a little experience doing it.

RF: How did you get interested in auction design?

Athey: When I was heading off to college I needed a summer job, so I worked as a receptionist for a company that sold computers to the government at auction. My family also

I haven't tended to take a tool and apply it to lots of different applications. I tend to have an application and then develop the tool.

sells timber and cattle at auction. So I had some exposure already, but it was while working at that summer job that I recognized that the way the government ran its procurement auctions led to some inefficient behavior. One of my friends introduced me to Bob Marshall, a professor at Duke who was working on defense procurement. I shared with him what I had observed, because while I knew that the procurement process could be improved, I did not know how to put this issue into formal models or how to conceptualize what was happening. I wrote a paper about the topic that gathered a lot of the institutional information and with his guidance put it into an economic framework.

I was fascinated by observing Bob's work on theory models that seemed to hit the nail on the head: They were right, insightful, and I learned something that I hadn't known before. As a result of this research, he was asked to testify before Congress about changes in the procurement system. A lot had happened in the few years since I took that summer job as a receptionist. Senators were listening to the suggestions we had to reform to the process and that was very gratifying.

RF: What were some of the flaws in the bidding process that you observed?

Athey: With auctions, the problems are often not just in the design of the auction itself. You have to design a market, and there are a whole set of rules in a market — for instance, who can participate, what gets sold, and how it is divided to be sold. So the design decisions of a market are much broader than the auction itself. In this particular context, there was no problem with the auction; there was a problem with the regulatory environment. The government had created a very streamlined process for protesting a procurement. If a bidder thought that a procurement had been misallocated — perhaps a procurement official had been biased or there was some error in the process — the costs to appeal were very low and the procurement would immediately be delayed for 45 days while a board reviewed the protest. This seemed like a good idea, but what they hadn't taken into account was that many of the smaller procurements had very short delivery dates, and you had to immediately start delivering on the procurement when it was awarded. So a small business might have brought in a couple of million dollars worth of inventory, and then 20 days into the procurement, the award would be protested, at which point everything would be frozen with the company sitting on this relatively large amount

of inventory for 45 days with an uncertain resolution to the protest.

This could potentially pose some serious problems for the company with the winning bid, which everyone knew. So the protesting bidder would often approach the awardee and ask for a settlement. This type of side payment

was encouraged by procurement officials because they just wanted their computers and from their perspective, the faster a protest was resolved, the better. A few companies came into existence that were not legitimate — they saw how the protest system was handled and made money just by asking for bribes, in effect, from legitimate companies that had been awarded procurement contracts. These protesting companies could have never fulfilled the contracts themselves.

So it was a very inefficient system where companies were regularly being held up and pressured into side payments. We saw that we could develop a model which could capture what was going on and guide policies for improving incentives while preserving the original intention of the protest system.

The tools of economics allowed us to develop a formal analysis of the issue. That was what really got me interested in auctions. The theme that emerged from this case runs through a lot of my applied work. In the end, yes, the auction rules are important but you also have to get the broader context correct.

RF: Can you discuss your work on timber auctions? What did the U.S. Forest Service do incorrectly that the Canadian government seemed to improve upon?

Athey: My papers are not directly about that second question, but I think they can help shed some light on it. The U.S. Forest Service doesn't raise revenue, generally. That's a problem. But that's not a problem of auction design. It's a problem of market design and incentives facing the agency. Because the Forest Service has not been run with the goal of revenue maximization, lots of tracts get sold that do not generate much revenue for the government. In many cases, the government would reimburse the firms for road construction and essentially the value of the timber was not much more than the cost of building the roads. There also have been a lot of issues of regulatory capture.

In Canada, timber is such an important natural resource that the government cannot afford to essentially subsidize the timber industry in this way. The government needs the

Susan Athey

► Present Position

Professor of Economics, Harvard University

► Previous Faculty Appointments

Massachusetts Institute of Technology (1995-2001) and Stanford University (2001-2006)

► Education

B.A., Duke University (1991); Ph.D., Stanford University (1995)

► Selected Publications

Author or co-author of papers in such journals as the *American Economic Review*, *Quarterly Journal of Economics*, *Journal of Political Economy*, and *Econometrica*

► Awards and Offices

Winner, John Bates Clark Medal, 2007; Fellow, Econometric Society; Co-Editor, *American Economic Journal: Microeconomics*

revenue and there is significant public interest in the program, so it does operate a revenue-generating enterprise. The Canadian problem is that the government owns a very large fraction of the resource. So they have worked hard to design a system that could deliver the best possible incentives for efficient behavior, such as getting the right trees cut at the right time, getting the right timber replanted, and getting the right mills built, as well as bringing in revenue for the government.

To illustrate the issues that have to be solved regarding market design, nobody is going to build a mill if they don't have some idea of future supply. So the Canadian government engaged in various forms of long-term contracting, which is a very sensible thing to do. But once you have the mills built, you have to find a way to price the timber that is going to those mills. Historically, they used various forms of administered prices. The United States complained about that. So British Columbia introduced a system where they used auctions to create spot markets for timber, and the prices on that spot market were used to calibrate prices for timber harvested under long-term contracts.

RF: In which industries — or types of industries — is collusion most common? And how can policymakers respond to such noncompetitive behavior to improve the functioning of those markets?

Athey: Collusion often occurs in markets where you tend to have homogeneous products, fairly inelastic demand, and high fixed costs and low marginal costs. Examples include the lysine and vitamin industries. There is a small number of firms that have made big investments in plants. They need a markup to survive and they are continually bidding on business from big customers.

There have been some firms that have been in a number of markets where collusion might be desirable and they got very good at colluding. For instance, Archer Daniels Midland (ADM) was in both the lysine and vitamin markets and they helped to organize fairly effective cartels. In those kinds of environments, you expect strong pressure for those firms to find some way to soften up their price competition because the underlying conditions of the marketplace are so severe.

It is common in procurement to have a fairly small number of firms consistently bidding against one another. So we have seen it in school milk and road construction. And some things that the government does can actually make it easier for firms to collude. In order to maintain transparency, the government tends to reveal a lot of information about procurement and also tends to break things up into smaller procurements, creating lots of auctions. That creates the conditions where firms can more easily arrive at tacit collusion.

The auction design can make a difference. For instance, it's much easier to collude in an open-bid auction than in a sealed-bid auction. That's something my empirical research

confirms. In my work, open auctions do not yield as much revenue as you would expect, and that is consistent with the theory that collusion is easier in that environment. It's certainly possible to collude in sealed-bid auctions. But it's especially easy to collude in open auctions, because there really isn't much gain from deviating today. To see why, imagine that a bunch of bidders have all agreed to bid low in an auction and then you show up and you deviate. As soon as you start bidding above the agreed price, your competitors can respond. They can outbid you. In a sealed-bid auction, however, a firm can deviate and their competitors cannot immediately respond. They can only respond in the future.

In an open auction, if you are not the most efficient firm, you cannot gain at all by deviating to win the auction. If you are the most efficient firm but you were not designated by the cartel to win, then you can gain in the present day by deviating. But you might not gain that much, because your opponents can bid you up. At best, you can gain the competitive profit today while in a sealed-bid auction you can gain the collusive profit today.

RF: In your opinion, how effective is antitrust policy in preventing collusion?

Athey: Typically, tacit collusion, where firms do not make formal agreements, tends not to get prosecuted. The prosecutions that take place typically occur because firms have gotten together and done something explicitly illegal — like fixed a bid or met in a smoke-filled room and exchanged side payments. My research addresses the following questions: If that's the main way firms get caught, why do they take that risk? Why can't they do pretty well with tacit collusion? My research suggests that bribes and communication can be helpful for firms in achieving the most efficient cartel. So, in principle, if they are very patient and sophisticated, they may be able to arrive at a scheme of tacit collusion that does allocate efficiently. But if firms are less patient, they may not get there. Bribes can help them settle up today to compensate those who give up market share. So if one firm is more efficient than the others or has extra inventory, it can pay the other firms to hold back production. If you do not have transfers to do that, you just have to make some promise that in the future you will take a turn and let the other firms produce. But that's a long way off, it's not clear that people will follow up on the promise, and things become murky without the side payments.

Tacit collusion also becomes easier when there are many rounds of bidding. If you give firms a lot of opportunity to interact and if any particular action they might take does not have a huge impact on final outcomes, then firms are able to communicate through the marketplace and don't necessarily need to get together to talk. For example, in Federal Communications Commission auctions, Firm B may bid against Firm A in some city that Firm B does not have a natural interest in to signal to Firm A to stay out of those areas that Firm B considers to be its core markets. If it's early

in the process, those prices are not going to be the final prices. So the firms are able to communicate in the early stages of the price discovery process and divide up the markets to decide how the licenses are allocated. Firms can use other techniques, such as putting signals in the trailing digits of their bids. Instead of bidding a round number, they would use patterns of numbers to communicate with each other. But if you have less frequent, larger auctions where there are not a lot of opportunities to communicate through action, firms tend to need to get together and explicitly communicate to arrive at a similar arrangement.

RF: I would like to return to your research on discretion in monetary policy. Can you discuss your work on inflation targeting — about the possible virtues of and problems with limiting central bank autonomy?

Athey: You might ask: Why does the central bank need discretion at all? Why can't we make rules that depend on publicly available information? You can think of different motivations for having central bank autonomy. A leading motivation must be that you believe the central bank understands something that is difficult to quantify or write down as a function of public observables. It's not that the central bank has access to better raw information, but perhaps there is a lot of subjectivity in evaluating publicly available data and because of that, reasonable experts would arrive at different conclusions based on the same data. If the central bank has some expertise in analyzing those data — and if it has access to some nonpublic data, which it does — then there can be an argument for discretion. The problem is they also have a classic time inconsistency problem. There can be a benefit to a surprise inflation. So the question becomes, how do you provide incentives in a world where the agency you are trying to incentivize has a social objective at heart, but they have private information and a time inconsistency problem?

The fundamental economic insight is that in an environment like that, where the mechanisms you have for providing incentives have social costs, it is often not worth the cost to provide incentives. If the central bank decides it is optimal to increase inflation a little bit today, inflation expectations may go up in the future. How do you weigh the future costs with today's benefits? The answer is not self-evident. In fact, it depends on the nature and distribution of the private information. But for a wide set of circumstances, it is not worth it to try to provide incentives. It is desirable, much more often than you might expect, to simply establish an inflation cap and limit autonomy. The reasons for that are fairly subtle. But that same kind of idea has also arisen in my work on collusion.

In some circumstances, firms collude best by just setting a

fixed price and sharing the market evenly rather than attempting to divide up the market in an efficient way. You need pretty efficient instruments for providing incentives to make it worthwhile to provide those incentives. When resolving the trade-off between suboptimal decisions and inefficient instruments for incentives, you have to account for the indirect effects of the decision policy, because you will have to distort what happens in some states of the world to preserve incentives to make the best decisions in other states of the world. Those indirect spillovers wind up pushing you toward less efficient decisions.

RF: What would you consider your most important contribution to econometrics or methodology more generally?

Athey: I would not say that my most important methodological contribution is in econometrics. I think that I, among other people,

have influenced applied practice in industrial organization and the analysis of auction data by paying a lot of attention to non-parametric identification. I have been able to push the ball forward in delineating what kinds of auction environments you could possibly learn the primitives of models and in which kinds of environments that is just not possible. I think that is an important set of facts to know when you go to start a project.

I also have emphasized specification testing to provide more systematic ways to justify assumptions that you make. Rather than just marching forward with a set of assumptions for a structural model, I have emphasized ways to test those assumptions and have more confidence in your work. I hope that I have focused more attention at the beginning steps of a project, when you are conceptualizing which question you can ask and what assumptions you should make.

Let's assume that you have a very large and good data set, there is a lot of value in determining early on whether you can answer your question with a minimum of extraneous simplifying assumptions. Could I answer the question just using the assumptions that I believe to be good approximations for reality or that are testable, rather than relying on assumptions of functional form or unrealistic assumptions about the environment? I hope that by doing that early work, people will abandon projects to which the answer is no or focus their attention on what additional piece of data would turn the answer from no to yes. For example, if you want to do structural work on common-value auctions, you are going to need some data beyond bidding data, such as information about the underlying value of the object obtained from observations after the auction ends (e.g. how much oil was extracted from an oil lease). So before you even begin a project, you should find that kind of data, otherwise the project will not be fruitful.

Economics allows you to think several layers deeper. Without that structure, you just get lost in a muddle.

RF: I read on your Web site a short article that you wrote for middle-school students about applying math to real-world problems. How do you think economists can help students become more interested in economics and not necessarily scared off by the sometimes very technical nature of the discipline?

Athey: I think a big issue is finding the problems that will engage students and showing them that economics can provide real insights. One thing that has made it easier for me to engage undergraduate students is eBay. It is still a relatively new company; someone not much older than the students founded it; they can see how it allows them to buy something they otherwise might not be able to get; and they are forced to think a little bit about bidding strategy and market design when they interact with the system. It allows them to think about which kind of economic institutions you might like and which might be more appropriate for certain goods. There are many things on eBay that might initially seem puzzling but that conform quite well to economic theory. So through this example you can get students engaged and improve their understanding of something they have already encountered and puzzled over. That is quite powerful.

I think another example is the economics of social networking sites like facebook.com and myspace.com. These are also institutions they interact with, yet the design decisions are evolving and the dominant market structure has not yet been determined. They can see how market design matters.

There are other broad topical areas that can get students engaged, such as the economics of sports or the economics of the entertainment industry. Finding the applications that resonate with the students or the population in general and then showing them how a little bit of structured thinking can substantially improve their understanding — I think that's where you get the power of economics. I'm still amazed that in the business world how having a coherent and structured way of approaching problems can allow someone like me to walk into an industry meeting and talk to people who are brilliant people managing large companies and still have unique insights for them. That's because I have these really powerful tools at my disposal. Economics allows you to think several layers deeper. Without that structure, you just get lost in a muddle.

RF: You are the co-editor of the *American Economic Journal: Microeconomics*, one of four new journals launched by the American Economic Association. What niche do you aim to fill that is not currently served by the many and varied academic journals already in existence?

Athey: There are a lot of journals, but there are not a lot of really good journals. Most of them are fairly secure in their position. So there is not a lot of competition on service. An enormous amount of time is wasted with slow refereeing



processes and revisions that may improve the paper but are not worth the time required to make them. So a big goal for me is to have an outlet for the kind of work that I like, where people can get good service in a general-interest outlet. A secondary issue is that for more technical work there are not that many options from a general-interest perspective. Your papers fall to the field journals very quickly. Basically, what I want is a journal that gets the cost-benefit analysis on revisions right, that turns around papers fast, and that reaches a broad audience with technically rigorous work.

RF: How has winning the John Bates Clark Medal affected your life, both personally and professionally?

Athey: Receiving an honor like the Clark Medal puts me in the position of being an ambassador for economics to the general public. Given how passionate I am about economics, I view that as an exciting opportunity. Also, when you win the Clark Medal, you get a lot of media attention — and with that, a lot of correspondence from people you may know only slightly or not at all. As the first female winner, I received hundreds of e-mails from women in other male-dominated professions. These people felt compelled to tell their own stories and it made me realize the power of being a role model. Whether you like it or not, graduate students are looking ahead at the people who are leading the profession and it appears to have affected a substantial number of them to look at me. That's not something that I chose — or even can control — but it has happened, and it has been gratifying to know that I may have inspired more women to jump into mathematically oriented professions such as economics. **RF**

The Great Southern Migration

BY BETTY JOYCE NASH

Throughout much of the 20th century, people streamed out of the South, rearranging the social, political, and economic landscape

The Great Migration brought families like this to Chicago and other industrial economic magnets in the Midwest and Northeast. For blacks, the migration promised not only job opportunities but also escape from the segregated South.



James Macbeth moved to New York from Charleston, S.C., in the boom years of the Great Migration. It was the 1950s, a decade when some 1.1 million blacks left the South. His father had departed many years before, too many for him to remember just which year it was. The elder Macbeth worked for the postal service in New York City. By the time Macbeth was ready for college, he moved to Pennsylvania and his mother later joined his father in New York. The elder Macbeths also worked at the Carolina Chapel of Mickey Funeral Service in Harlem, founded in 1932, far from its original Charleston, S.C., home base. Macbeth works there now.

Macbeth is but one of 8 million black and 20 million white Southerners who streamed to cities in the North or West, with the heaviest flows between about 1915 to 1970. Blacks migrated in higher percentages than whites, and so this “Great Migration” redistributed the racial population. It changed job markets, politics, and society. And culture. For blacks, the exodus urbanized a formerly agricultural and dispersed people, allowing them visibility in accomplishing social goals. Effects of white migration were less dramatic and,

in many cases, temporary, coinciding with the wartime and post-war industrial boom.

Migration: A Sorting Mechanism

People migrate in search of better living conditions. Sometimes freedom from war and oppression supplies the necessary energy required to overcome the inertia inherent in the status quo.

Sometimes it’s a better job. Or both.

Migrations affect jobs, wages, geography, housing, education — all economic activity. Migrations also reveal how workers sort themselves into jobs in different locations.

“It’s a complex process in which workers and employers match up, and it’s absolutely essential in an economy that changes rapidly over time,” says economist William Collins of Vanderbilt University. “In other words, migration — the movement of workers from place to place — is a key part of the story of how labor markets work.”

The Great Migration ebbed and flowed with the world wars. The first period dated from about 1915 to 1930 — World War I and after — and slowed with the Depression. Migration picked up again as military production — steel and aluminum plants, shipyards, aircraft plants, and military installations — for World War II created jobs in the Great Lakes corridor from New York to Chicago as well as on both coasts. People kept moving even after the war, as the economy grew.

While the migration north and west from Southern states began in earnest in the century’s first decade, more than 40 years before Macbeth’s personal odyssey, the exodus was growing even stronger at the time of his departure.

Macbeth, like most black immigrants, laughs when he says his father headed north because “everybody said the streets were paved with gold.” But the laughter subsides when he talks about segregation, the “Jim Crow” laws that prevented blacks from voting and more.

In all former Confederate states, less than 5 percent of eligible blacks were registered to vote as late as 1940, according to historian David Kennedy.

PHOTOGRAPHY: CHICAGO DEFENDER, SEPT. 4, 1970

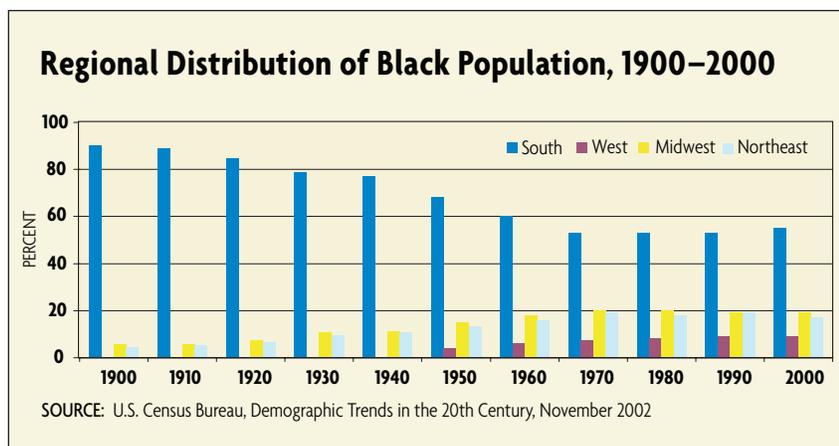
(Women, black and white, did not receive voting rights until 1920.) By 1900, Southern states had instituted racial separation: drinking fountains, schools, waiting rooms. Few industrial jobs existed in the South, and Jim Crow affected those too. For instance, in 1915, South Carolina required segregated workrooms in textile mills. Infant mortality rates for blacks were nearly double those for whites in 1930 (10 percent and 6 percent, respectively). Blacks could expect to live 15 fewer years than whites, 45 compared with 60.

Moving destinations varied. Southerners aimed for meccas like Chicago or Detroit if they were from Mississippi or Alabama. But the goal was New York, Philadelphia, or Boston if they hailed from the Carolinas and elsewhere along the Eastern Seaboard. Historian Spencer Crew, who has studied the migration, says that blacks in the early years followed whatever rail routes crossed their towns. Trains pulled into Southern stations filled with goods and pulled out filled with the people who could afford to go.

Economists have been curious about why blacks waited some 50 years after the Civil War to exit the South in significant numbers. By the early 1900s, only a couple hundred thousand blacks (and about 716,000 whites) were leaving. The Great Migration peaked in the 1970s when some 1.5 million blacks and 2.6 million whites left the South.

Theories have pointed to European immigration as a “deterrent” to black migration, especially in those early years. Data show that blacks “moved at times and to places where foreign-born immigrants were less prevalent ... the Great Migration would have gotten under way earlier than it did if strict immigration controls had been adopted earlier,” Collins wrote in a paper on the subject. As World War I stifled that European flow, it simultaneously created demand for workers to fill industrial jobs previously available only to whites.

While blacks were not hired into skilled jobs in the Northern industries



until mid-century, they did find lower-level jobs, according to Crew, who now directs the Underground Railroad Museum in Cincinnati. “In the North, because of the war, there was a real shortage of labor, and as a consequence, opportunities for African Americans opened up, mostly in the iron mills and slaughter houses.” Crew notes that the better-paid, higher-skilled jobs were not available to blacks until the post-World War II years — and even then, they were hard to get.

In 1920, for instance, 70 percent of Southern black men worked in unskilled or service jobs compared to 22 percent of Southern white men. By 1970, according to historian James Gregory, that number had fallen to 35 percent for Southern-born black men and a barely changed 24 percent for Southern-born white men.

The agricultural depression of the 1920s, sparked by wartime overproduction and rock-bottom crop prices, accelerated immigration even further during that decade. The cotton for which the Southern states were famous was devastated by the boll weevil. In 1920, South Carolina farmers produced 1.6 million bales, the biggest in the state’s history, but two years later they counted 493,000, the fewest since the Civil War. Add to that an agricultural deflation in which peanut prices fell from \$240 to \$40 per ton in one season, corn from \$1.50 to 50 cents.

That and mechanization forced many white and black agricultural laborers off Southern fields for good.

“The 1922 harvest season was followed by the largest wave of migration in the history of black Carolina,” according to *Black Carolinians: A History of Blacks in South Carolina from 1895 to 1968* by I.A. Newby. Some 59,000 blacks left rural areas of 41 South Carolina counties between November 1922 and June 1923.

Migrant Characteristics

Blacks who migrated tended to be more educated than those who stayed, while the reverse was true of whites, according to Duke University economist Jacob Vigdor. He has studied changes in migration patterns and migrant characteristics. Before World War II, educated blacks were more likely to migrate north because they could better afford it. (Families who could afford the opportunity costs of sending their children to school, he notes, could more likely pay for a move.)

Plus, they valued the educational opportunities they heard about up North. It’s not that the North always turned out to be a “promised land” for blacks, Crew says. But there was hope, the brightest of which was better education. “People [were] bringing their kids with them in the hopes they [would] have a better future,” he says. Vigdor reports median years of schooling completed among black migrants from most Southern states as eight or nine in 1940 among those born from 1913 to 1922.

Early migrants were, on average, younger as well as better educated

than non-migrants. They could read newspapers, letters, or flyers that described the migration. "In each age cohort, highly educated blacks living outside their state of birth were more likely to reside in the North than in the South," Vigdor writes. "In the oldest cohort, highly educated black interstate migrants were 35 percent more likely to reside in the North." In 1940, educated blacks were likely to choose a Northern destination, but that trend began to change in 1970, with more educated blacks turning back to the South.

These patterns might have implications for human capital and economic outcomes of later generations of native-born blacks. Economics literature, Vigdor notes, links outcomes with characteristics of fellow ethnic or racial group members, especially in segregated environments.

As decades passed, life for black youth who remained in the South was still tough. An article published in 1967 in a New York biweekly newspaper, *The Reporter*, noted that the poorest county in South Carolina, Williamsburg, lost 14,636 blacks from 1950 to 1960. That was more than half its black population. Among those who stayed, even black students with some college lacked opportunity. Here's how the author describes the situation, based on interviews with black families: "But when the time came for them to find jobs, there were none. One by one, Davis' four sons and three daughters packed up and left for New York."

Chain Migration

Migrants drew on the help of friends, relatives, and friends of friends in the search for a new life up North. Sometimes industrial recruiters, desperate for labor and sometimes strikebreakers as World War I and immigration policy choked off the flow of whites from other countries, trolled Southern towns for would-be migrants, some offering free train tickets.

Northern cities' newest Southern arrivals, white and black, didn't always find the welcome they sought, and they tended to stick together. Some natives

derided "hillbilly" and Southern accents. Entire blocks of Chicago and Detroit were known as little Appalachia. There is still a faint legacy of "Bronzeville," a black district just now undergoing a renaissance of sorts, also in Chicago.

Early on, new migrants were often "portrayed in unflattering terms by contemporary observers," according to University of Washington sociologist Stewart Tolnay. Even sociologists like W.E.B. Du Bois wrote, of the earliest migrants to Philadelphia, that their Southern backgrounds were a handicap as they tried to adapt to life in the Northern city. And, at first, even Northern black newspapers such as the *Chicago Defender* discouraged blacks from settling in Northern cities.

But by 1918, the *Defender* was selling 130,000 copies, three-fourths of those outside Chicago in cities like Richmond, Norfolk, and Savannah, Ga., with smaller circulations in towns dotted throughout the South. Much of this was in response to the Southern press, which "built into a crisis story about potential labor shortages for Southern agriculture," according to Gregory in *The Southern Diaspora*.

The black-owned newspapers in the South warned whites of an "exodus," should whites fail to open doors to change. Meanwhile, white publishers pondered what to do about the out-migration, worrying in headlines about labor shortages. White-owned Northern newspapers often focused on the negatives of the influx, Gregory wrote.

Although migrants to Northern cities were better educated than their Southern counterparts, their new Northern neighbors, white and black, described them as illiterate. "And their growing numbers were sometimes viewed as a potential threat to the racial status quo that offered Northern blacks a relatively comfortable coexistence with whites, if not actual racial equality," according to Tolnay. Later anecdotal portraits of migrants, however, are kinder — perhaps native Northerners had gotten used to the new migrants. Still, race riots erupted

in Chicago, Detroit, and Harlem, while Ku Klux Klan terrorism and lynching marred life in the segregated South.

Black migrants tended to settle together, and they organized themselves socially, according to Newby. "In every city where significant numbers of them settled, there were Palmetto College Clubs or Palmetto state societies, which, in purely social matters at least, eased the transition to urban living for many migrants."

Until migration picked up in World War I, there was little separation of the races in neighborhoods. For instance, the 5,000 blacks who lived in Detroit in 1910 had lived among other immigrants. But with the influx of new migrants, blacks were channeled into the city's slums. Even if migrants could afford a home, there were the tools of zoning and restrictive covenants that prevented them from purchasing in certain neighborhoods until government intervened with housing laws.

Going Home

By 1970, blacks who were educated were more likely to head for a Southern destination than their less-schooled counterparts, a trend that continues. Economists and historians suggest by way of explanation that discrimination had begun to ease in the South, with conditions for blacks being more hospitable as civil rights gained ground. It's also possible that the Northern cities to which they had moved had become less desirable as industrial strength of the Great Lakes region waned and joblessness eroded neighborhoods.

As late as the tail end of the 1960s, the 14 states with the largest number of blacks leaving were all in the South. But a decade later, migration had leveled off, and reversed.

For whites, the entire migration tended to be more of a "circulatory" trend. For instance, in the late 1950s, according to Gregory, for every 100 white Southerners who migrated north or west, 54 returned home, and that number increased to 78 by the late 1960s.

"Turnover was the key dynamic of

the white diaspora,” writes Gregory. “Fewer than half of the nearly 20 million whites who left the South actually left for good. That means that the white diaspora is best understood as a circulation, not as a one-way population transfer.”

But black return migration was only about a third of the rate of white migration during most decades. Some did come back even as others departed. For instance, in 1949, some 43,000 black Southerners returned, about 1.7 percent of all Southern-born blacks living in the North and West.

Still, in the 1970s, the return flow of blacks to the South was evident — more moving in than moving out. Between 1975 and 1980, Virginia, the Carolinas, and Maryland were among the states gaining the most black in-migrants, according to demographer William Frey.

Frey analyzed migration data from

four decennial censuses. Among other findings, the South netted black migrants from all other U.S. regions during the 1990s, completely reversing the migration stream. Charlotte, Norfolk-Virginia Beach, Raleigh-Durham, and Washington-Baltimore were among the 10 most-preferred destinations during that time. Atlanta, however, was the strongest magnet. New York, Chicago, Los Angeles, and San Francisco lost blacks during the same period. Also noteworthy: Blacks were more likely than whites to pick Southern destinations. Maryland, North Carolina, and Virginia were among the 10 states that gained the most black college graduates during the late 1990s.

Black reverse migration reflects economic growth, improved race relations, “and the long-standing cultural and kinship ties it holds for black families,” according to Frey.

James Macbeth, who is 71 and beginning to think about retirement, may move back to Charleston. His parents, both dead, are buried in South Carolina, and his siblings have scattered throughout Southern cities in a return migration of their own.

Over his lifetime, Macbeth witnessed the chain of events that people like his father set in motion. The migratory tide, once it began going out, forced change as it rearranged population, employment, education, attitudes, art, music, sports, transportation, recreation, housing, and more. The Great Migration was driven by more than the opportunity to improve working conditions — at least for blacks. James Macbeth’s father didn’t leave Charleston just for a good job in New York at the post office. “He just couldn’t get along with segregation in the South.” **RF**

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ARMED AGAINST ARMS • continued from page 20

causing them to lack incentive to ensure that borrowers are “mortgage ready.” (It should be pointed out that lenders do carry risk even when they sell their mortgages because over the long term, if defaults are widespread, then they are certainly worse off in terms of their future ability to originate loans and sell them.) “Are we

going to expect Wall Street investors to support homeownership counseling?” he asks rhetorically.

Almost three years after her purchase, Donna Turner is keeping up with her monthly payments and tending a small garden out back. She is the very picture of a happy, responsible homeowner. “I had always lived with

somebody. And after you pay your part of the bills, they say get out,” Turner says. “So I was determined to get to the point where nobody could ever tell me to get out again.”

Turner did it. Economic research suggests that, while it won’t come close to working for everyone, she needn’t be the only exception. **RF**

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Analyst of Change

PROPHET OF INNOVATION: JOSEPH SCHUMPETER AND CREATIVE DESTRUCTION

BY THOMAS K. MCCRAW

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REVIEWED BY THOMAS M. HUMPHREY

Moravian-born, Vienna-educated Professor Joseph Alois Schumpeter, who liked to say of his aspirations to be the world's greatest economist, horseman, and lover that only the second had given him problems, was a study in contrasts. He relished his fame as one of the interwar years' premier economic theorists, yet modestly declined to mention his work in his Harvard classes or in his exhaustive book on the history of economic thought. (Citations to his work were inserted into that book by his wife after his death.) An obsessively hard-working, morose (indeed often depressed) writer in private, he affected a public image of carefree, cheerful ebullience. A notoriously easy grader to his students, he often gave himself low marks in his diary. A one-time banker, he relied upon the women in his life to balance his checkbook. He chronicled the evolution of the auto industry but never learned to drive. He admired mathematics but failed to employ them in his work. A harsh critic of the static, steady-state equilibrium thinking of the neoclassical marginal utility/marginal productivity school, he nevertheless declared one of its founders, the French neoclassical equilibrium theorist Leon Walras, the greatest economist of all time.

All of his life Schumpeter championed capitalism yet was an expert on Marx, Marxist economics, and the entire socialist literature. A Marxist economist, Paul Sweezy, was among his closest Harvard friends. He was a political conservative and antisocialist who notwithstanding served as Finance Minister for a socialist government in post-World War I Austria. He lauded capitalism's superior performance while predicting the system's death from too much success. He preached *creative destruction* — the incessant tearing down of old ways of doing things by the new — as capitalism's inescapable iron law, yet he was unprepared when his own work fell prey to it.

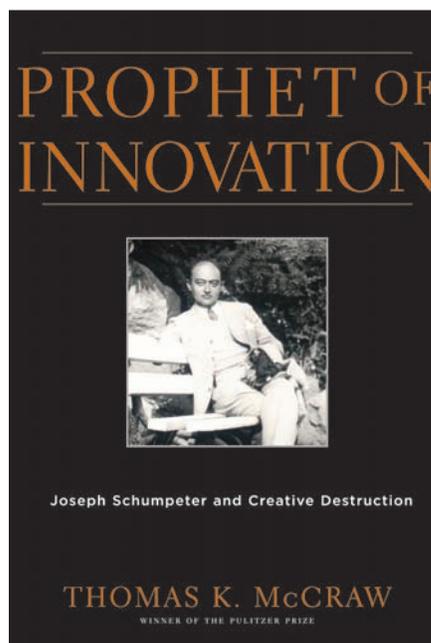
The 1990s saw the publication of at least three biographies of this complex,

paradoxical figure. Now comes Thomas McCraw's definitive and elegantly written study to top them all. Drawing upon Schumpeter's diary, correspondence, early drafts, and published works, McCraw, a Pulitzer Prize-winning emeritus professor of Business History at Harvard, paints a vivid picture of Schumpeter's life and times, his loves and achievements. Readers will choose their favorite parts of the book. Most enlightening to this reviewer is McCraw's survey of Schumpeter's scholarly contributions. Ironically, McCraw writes that he is "not concerned with Schumpeter's economic thinking, narrowly construed," but with his "life and his compulsive drive to understand capitalism." But that is a false dichotomy because Schumpeter's theories cannot be divorced from his attempts to come to grips with capitalism: Each guided and shaped the other. In any case, McCraw provides a perceptive and accurate account of Schumpeter's academic greatest hits and misses.

Greatest Hits

Hits include first and foremost the path-breaking and seminal *The Theory of Economic Development*, published in 1911 when Schumpeter, then 28, was in what he called his scholar's "sacred third decade" of peak creativity. Other hits followed including the subtle and provocative *Capitalism, Socialism and Democracy*, and the mighty *History of Economic Analysis*, which Schumpeter worked on throughout the whole decade of the 1940s, and which was edited and published by his third wife, Elizabeth, four years after his death in 1950.

Schumpeter pushed one idea all his life: that capitalism means growth and growth requires innovation. The book that put him on the map, *The Theory of Economic Development*, states for the first time his vision of capitalism as the economic system that delivers faster growth and higher living standards (especially of the middle- and lower-income classes) than any other system, albeit in a disruptive, jerky fashion. Like a perpetual motion machine, capitalism generates its own momentum internally without the need of outside force. Even technological change, seen by some as an exogenous propellant, is treated by Schumpeter as a purely endogenous matter, the product of economically motivated human ingenuity.



Breaking from received wisdom, Schumpeter replaces the static equilibrium analysis of his neoclassical marginalist predecessors and contemporaries with a dynamic disequilibrium theory of cyclical growth. His key building blocks are profits, entrepreneurs, bank credit creation, and innovation. Profits (supplemented perhaps with a desire to create a business dynasty) motivate entrepreneurs, who, financed by bank credit, innovate new goods, new technologies, and new methods of management and organization. These innovations fuel growth and generate cycles.

Why cycles? They arise when the first successful entrepreneur overcomes the stubborn resistance of incumbent interests and eases the path for other entrepreneurs. The resulting bunching of innovations (not to be confused with mere inventions, which Schumpeter saw as occurring more or less continuously over time) boosts investment spending, which bids prices above costs and raises profit margins thereby triggering the upswing or *prosperity* phase of the cycle. The high profit margins then attract swarms of imitators and would-be competitors into the innovating industries. Output over-expands relative to the demand for it, prices fall to or below costs thus eliminating profit margins, and the downswing or *recession* phase begins. The recession continues, weeding out inefficient firms as it goes, until the economy absorbs the innovations and consolidates the attendant gains thus clearing the ground for a fresh burst of innovation.

If the upswing has been accompanied with speculative excesses nonessential to innovation, the downswing may overshoot the new post-innovation equilibrium. Then the cycle enters its *depression* phase where the excesses are expunged and the economy returns via a *recovery* phase to equilibrium. Schumpeter stressed that the latter two phases and the phenomena that generate them are unnecessary for cyclical growth and could be prevented by properly designed policy. It's not speculative bubbles but rather the discontinuous clustering of innovations in time plus their diffusion across and assimilation into the economy that produces real cycles of prosperity and recession.

Profits, entrepreneurs, bank credit, innovation — all are essential to the growth of per-capita real income in Schumpeter's model. Remove any one and the growth process stops. Innovation, for instance, is abortive in the absence of bank credit creation necessary to effectuate it. Cash-strapped entrepreneurs cannot build their better mouse traps from thin air. They require real resource inputs and loans of newly created bank money to hire them away from alternative employments. In highlighting this

observation, Schumpeter effectively abandoned the classical dichotomy notion that loan-created money is a mere sideshow, a neutral veil that together with metallic money determines the nominal, or absolute, price level while leaving real economic variables unaffected. Not so, said Schumpeter. For him, money and credit are integral to the process of real economic growth and so have real effects.

Schumpeter preached *creative destruction* — the incessant tearing down of old ways of doing things by the new — as capitalism's inescapable iron law, yet he was unprepared when his own work fell prey to it.

Schumpeter's most popular hit was his 1942 book *Capitalism, Socialism and Democracy*. In it he coins the term "creative destruction" to denote capitalism's incessant killing off of the old by the new. The book contains his famous end-of-history prediction that capitalism's very successes, not its failures and contradictions as prophesied by Karl Marx, will produce social forces — the routinization and depersonalization of innovation, the destruction of the image of the entrepreneur as romantic hero, the creation of a class of intellectuals hostile to capitalism — which under-

mine the system and lead to its demise.

If capitalism cannot survive, can one rely upon its successor, socialism, to deliver the goods and amenities of life efficiently and fairly? Yes, said Schumpeter, who proceeded to provide the supporting argument. Many readers took him at his word, but not McCraw. He sees Schumpeter's "defense" of socialism as a devastating satire that mocks the system instead of bolstering it. Schumpeter, in other words, comes not to praise socialism, but to bury it. In the end, Schumpeter's case for socialism rests on extremely abstract theoretical conditions unlikely to be realized in practice. All of which creates a problem: If Schumpeter sought to show that socialism was a practical impossibility, then why did he predict its ultimate triumph over capitalism? One wishes that the real Schumpeter would please stand up.

As for democracy, Schumpeter viewed it as a political market in which politicians compete for the votes of the electorate just as producers compete for consumers' dollars in markets for goods and services. Always skeptical of consumer rationality, he believed that market power resides more with vote seekers than with the electorate, whose apathy, ignorance, and lack of foresight enable politicians to set the policy agenda and to manipulate voter preferences. Even so, he felt that capitalism, as long as it operates within a proper legal framework, is largely self-regulating and so requires little intervention. It thus constrains politicians' market power more than does socialism. McCraw fails to note that these ideas mark Schumpeter as a forerunner of the modern public choice school.

The last hit in the Schumpeter canon is his *History of*

Economic Analysis, whose title expresses his contention that the rise of analytic techniques in economics is part of the economic growth process and must be studied as such. The *History*, in terms of its scholarship, breadth of coverage, richness of content, originality of interpretation, and wealth of resurrected valuable ideas, ranks with Jacob Viner's 1937 book *Studies in the Theory of International Trade* as the finest history of thought ever written. Scholars still mine it for ideas today. Among other things, it provides sparkling accounts of the quantity theory, the gold standard, Say's Law, the development of production and utility functions, and much more.

Greatest Misses

Apart from an unfinished book on money, Schumpeter's misses include his massive, two-volume *Business Cycles* (1939), which he wrote entirely by himself with no research assistance. Seven years in the making, it emerged stillborn from the press. McCraw, however, values the book for its historical narrative of the vicissitudes of firms in five industries and three countries. But Schumpeter's contemporaries saw only the book's prolixity, discursiveness, and lack of focus. Most of all, they rejected its contrived, mechanistic analytical schema composed of three superimposed cycles — the 50-year Kondratieffs, 9-year Juglars, and 4-year Kitchens, all named for their discoverers — into which Schumpeter forced his data. As if these flaws weren't enough to sink *Business Cycles*, it had the bad luck, and bad timing, to appear when J. M. Keynes' celebrated *General Theory* was sweeping the field. Everybody talked about Keynes' book, few about Schumpeter's.

Schumpeter and Keynes

Schumpeter fumed when Keynes and Keynesian economics upstaged him in the 1930s and 1940s. Economists preferred Keynes' theory to Schumpeter's because it seemed to offer a better explanation of and remedy for the Great Depression, and because it possessed greater policy relevance and was more amenable to the mathematical modeling, econometric testing, and national income accounting techniques just beginning to come into vogue in the '30s.

Schumpeter should have foreseen this state of affairs. It was consistent with his doctrine of creative destruction in which new theories, like new goods and new technologies, displace the old in a never-ending sequence. Here Keynes was the innovator whose analysis of capitalism rested on such novel concepts as the multiplier, marginal propensity to consume, marginal efficiency of capital, and liquidity preference function. Taken together, these Keynesian innovations were bound, according to the creative destruction doctrine, to have supplanted Schumpeter's old-fashioned theory.

Instead of accepting this outcome, Schumpeter reacted exactly as he had described entrenched interests doing when threatened by an innovation that disrupts their

accustomed status quo: He put up stubborn resistance. His resistance, however, was motivated not so much by simple self-interest, or desire to protect his own theory, as by his scientific judgment that Keynesian economics was fundamentally unsound.

Schumpeter accused Keynes of assessing capitalism on the basis of a short-run, depression-oriented model when only a long-run growth-oriented one would do. He scorned Keynes' claim that capitalistic economies tend to be perpetually underemployed and in need of massive government deficit spending to shore them up. He attacked the "secular stagnation" notion that capitalists face vanishing investment opportunities and slowing rates of technological progress when the opposite is true. He rejected the contention that income must be redistributed from the rich (who save too much) to the poor (who cannot afford to save) in order to boost consumption spending and aggregate demand. Nonsense, said Schumpeter. The insatiability of human wants ensures that income, regardless of who receives it, will be spent in one way or another.

McCraw does a fine job discussing Schumpeter's criticisms, all of which were valid, penetrating, and correct. He fails, however, to note that Schumpeter essentially attacked the wrong target. For it was not so much Keynes as his British and American disciples — people like Joan Robinson, R. F. Kahn, Abba Lerner, Schumpeter's Harvard colleague Alvin Hansen, and others — who were largely responsible for the doctrines, especially their extreme versions, that Schumpeter countered. But McCraw rightly points out that Schumpeter slipped when he opined that the Keynesian-style permanently mixed economy, or public sector-private sector partnership, was unsustainable and could not last. The private sector, Schumpeter reasoned, would become addicted to government expenditure stimulus and demand ever-increasing amounts. In this way, the public sector would expand relative to the private one and the economy would gravitate to socialism. Time has proved Schumpeter wrong. Private and public sectors have coexisted in a fairly stable ratio in most developed countries for the past 60 years.

Controversial Issues

Schumpeter held politically unpopular opinions in the 1930s when New Deal activism and populist anti-business sentiments were on the rise. He opposed President Roosevelt's New Deal reforms on the grounds that they hampered entrepreneurship and growth. For the same reason, he opposed Keynesian macro demand-management policies designed to tame the trade cycle. In his view, because growth is inherently cyclical, one flattens the cycle at the cost of eliminating growth. Other controversial opinions, all corollaries of his work on innovation and creative destruction, flowed from his pen.

Of income inequality he wrote that the gap between rich and poor is a prerequisite to and a relatively harmless byproduct of growth in a capitalistic system. The rich are

necessary since it is they and not the poor who save and invest in the innovation-embodied capital formation that lifts the living standards of all. Moreover, high incomes provide both incentive and reward for the entrepreneurs who propel growth. No one need fear that an unequal distribution will condemn them to poverty. The Italian economist Vilfredo Pareto's notion of the "circulation of the elites" assures that. The ceaseless rise and fall of entrepreneurs into and out of the top income bracket means that it will be occupied over time by different people, many of them drawn from the ranks of the poor. The poor replace the rich and the rich the poor in never-ending sequence.

In assuming a high degree of mobility across income groups, Schumpeter may have overlooked an education barrier. He failed to acknowledge that a superior education, increasingly a prerequisite to entrepreneurship and wealth in today's high-tech world, is more affordable by the rich, enabling them and their offspring to stay on top.

Monopolistic firms and monopolistic profits hardly worried Schumpeter. He thought that monopolies, unless protected by government, are short-lived, inherently self-destroying, and require no antitrust legislation. Their high profits attract the very rivals and producers of substitute products that undercut them. For the same reason, he regarded antitrust laws aimed at breaking up large, nonmonopolistic firms as ill-advised. Not only are big firms often more efficient than small ones, but their research and development departments house teams of specialists functioning collectively — and routinely — as an entrepreneur who creates innovations that drive growth. Indeed, the very existence of R&D departments indicates that big firms realize they must continually innovate to stay alive.

Schumpeter's politically unpopular opinions continued into the wartime years of the 1940s. He distrusted Roosevelt, suspecting him of trying to establish a dictatorship. And he had mixed emotions about the Axis nations, Germany and Japan. He despised their military establishments, leaders, and advisors. But he admired the people and cultures of the two countries and feared that the United States would impose punitive reprisals at war's end. Most of all, he saw the United States' wartime ally, the Soviet Union, as its chief long-term foe, and thought

that it would need Germany and Japan to serve as buffers against the communist nation. These views found little sympathy among Schumpeter's friends and associates in the ultrapatriotic environment of the early 1940s, a circumstance that caused him much unhappiness.

Schumpeter Today

The new improves upon and kills off the old. True enough. But what's new and what's old may lie in the eye of the beholder. Today's cutting-edge theorist and mathematical modeler may regard Schumpeter's analysis as older than old, a pre-Keynesian, pre-monetarist, pre-new classical/rational expectations relic. Accordingly, Schumpeter's name is stricken from required reading lists in many top graduate economic programs where theory is king. To businessmen, journalists, and historians seeking not abstract theory but rather practical understanding of global capitalism, however, his work is as fresh and insightful as the day he penned it. Journalists speak of a renaissance of Schumpeterian economics and of a reversal of his relative ranking with Keynes. Although McCraw does not say so, Schumpeter undoubtedly would be pleased, but hardly surprised, by the revival of his work. It fits his description of the zigzag path of doctrinal history in which sound economic ideas get lost or forgotten only to be rediscovered and restored to their proper place.

A Complaint

A great book deserves a great index, or at the very least an adequate one. McCraw's book has neither. Lacking comprehensiveness and precision, the index creates problems for readers searching for particular items in the text. It is inexcusable that the index fails to cover the 188 pages of endnotes containing valuable scholarly information and constituting a fourth of the book. One can fault the publisher, not the author, for this oversight. Luckily, it does little to mar McCraw's outstanding text. Elizabeth Schumpeter wrote that her husband "loved to read biographies." It's a sure bet that he would have enjoyed this one. **RF**

Thomas M. Humphrey, a retired senior economist at the Richmond Fed and long-time editor of its *Economic Quarterly*, has written extensively about the history of economic thought. He can be reached at: moneyxvelocity@comcast.net

CRASH • continued from page 29

component-level examinations as well as simulations with dummies and sometimes cadavers (the latter led by universities). "It's a lot more complex when we're doing the testing," Jarvis says. "We have to design for 1,001 different scenarios and we have to design so that occupants have the best level of protection in every one of those scenarios." With regards to the possible injuries to the pelvis of Ford Explorer passengers, Jarvis says that even with multiple crash tests in

consistent settings, there will be variation. Also, injuries suffered by dummies don't always translate to injuries suffered by real people.

That said, Jarvis says Ford sees value in IIHS testing, as well as that conducted by governments around the world. "All of the public domain testing has upped the ante and increased the debate in the level of design and safety testing," he says. "We certainly learn things from them." **RF**

DISTRICT ECONOMIC OVERVIEW

BY MATTHEW MARTIN

Fifth District economic activity advanced at a moderate pace in the second quarter as continued declines in housing market activity constrained growth. In contrast, labor market conditions remained strong as District services firms maintained a brisk pace of hiring and posted healthy revenue gains. Also, District households experienced solid income growth during the second quarter.

Housing Markets Retreat

Overall, Fifth District housing market activity declined further in the second quarter. The pullback in residential construction activity deepened a bit, with building permit issuance down 16.2 percent compared to last year. Existing home sales were lower as well. Sales in the District fell 11.1 percent since the second quarter of 2006.

Slower home construction and sales were accompanied by slower home price growth during the period. While the pace of growth lessened in the second quarter, appreciation in every District jurisdiction — with the exception of West Virginia — remained in positive territory. After peaking at 14.3 percent in the second quarter of 2005, overall, year-over-year price growth in the District has drifted lower since, settling at 4.0 percent

in the second quarter of this year. Considerable variation in home price performance remains, however. Rates of appreciation have pulled back sharply along the coast and in the Washington, D.C., metro area, while

Fifth District economic activity advanced at a moderate pace in the second quarter.

holding steady or even accelerating modestly in many markets across the Carolinas.

Labor Markets and Services Sector Activity Steady

District labor market conditions remained generally healthy in the second quarter. Employment growth was steady at 1.5 percent compared to a year earlier — matching the first-quarter mark — with payroll expansions recorded in all District jurisdictions. Reports from the household survey also indicated solid labor market fundamentals. The Fifth District's unemployment rate held steady at 4.2 percent, keeping the region's rate lower than the national rate by 0.3 percentage point.

The majority of the employment growth during the quarter occurred in the District's services sector. Job gains were particularly strong in education and health services and business services with year-over-year increases of 3.3 percent and 2.5 percent, respectively. Other assessments of the services sector were also upbeat. The revenue index from the Richmond Fed's survey of service-providing firms rose two points in the second quarter to finish at 9. Additionally, the retail revenues index rebounded in the second quarter, climbing into positive territory at 5, up from -9 in the first quarter. Survey readings on services employment in the District were positive as well.

Goods-producing industries did not fare as well in the second quarter, however. Our survey of manufacturers indicated generally lower levels of new orders and shipments since the end of March, though the index for overall activity rebounded into positive territory in the June survey. On the employment front, District factories continued to shed workers during the second quarter. Our manufacturing employment index finished the quarter at -6. By contrast, employment in the District's construction industry continued to increase despite the pullback in home building activity, buoyed by solid nonresidential activity.

Households Faring Well

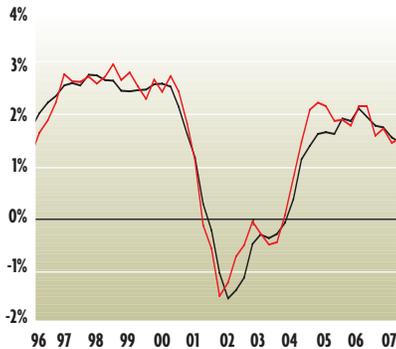
Steady job and income growth helped strengthen household financial conditions in the second quarter. Overall, real personal income in the District was up 3.9 percent compared to last year, with solid growth in most District jurisdictions. Other measures of household financial conditions were mixed. Mortgage delinquency and foreclosure rates were moderately higher in the second quarter, though in many parts of the District they were below recent peaks. **RF**

Economic Indicators

	2nd Qtr. 2007	1st Qtr. 2007	Percent Change (Year Ago)
Nonfarm Employment (000)			
Fifth District	13,872	13,816	1.5
U.S.	137,864	137,447	1.4
Real Personal Income (\$bil)			
Fifth District	942.7	940.0	3.9
U.S.	9,882.0	9,867.3	3.9
Building Permits (000)			
Fifth District	53.9	50.5	-16.2
U.S.	404.4	361.5	-23.6
Unemployment Rate (%)			
Fifth District	4.2%	4.2%	
U.S.	4.5%	4.5%	

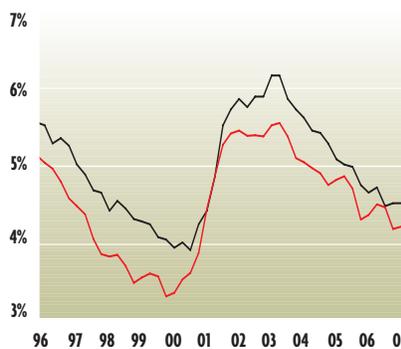
Nonfarm Employment

Change From Prior Year
First Quarter 1996 - Second Quarter 2007



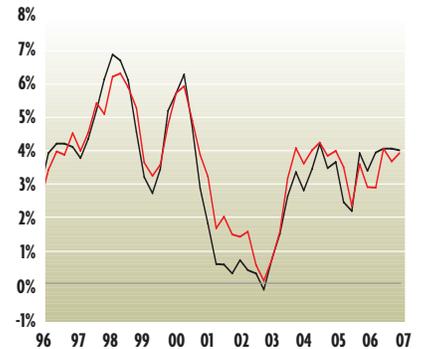
Unemployment Rate

First Quarter 1996 - Second Quarter 2007



Real Personal Income

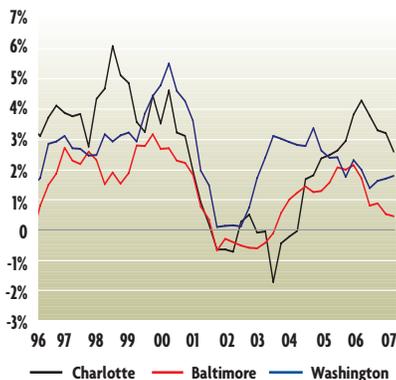
Change From Prior Year
First Quarter 1996 - Second Quarter 2007



— Fifth District — United States

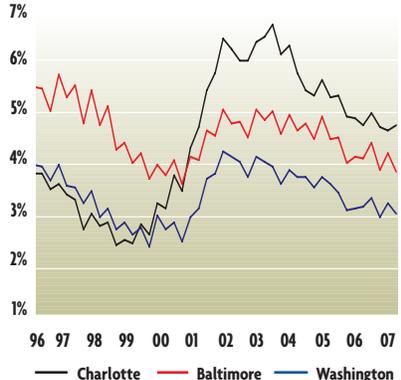
Nonfarm Employment Metropolitan Areas

Change From Prior Year
First Quarter 1996 - Second Quarter 2007



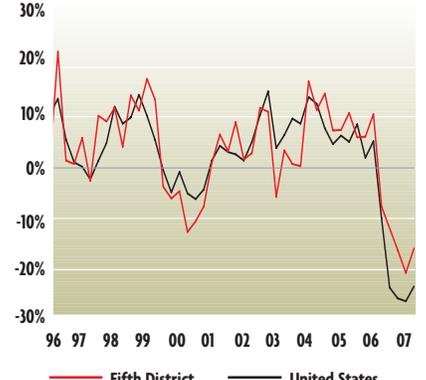
Unemployment Rate Metropolitan Areas

Change From Prior Year
First Quarter 1996 - Second Quarter 2007



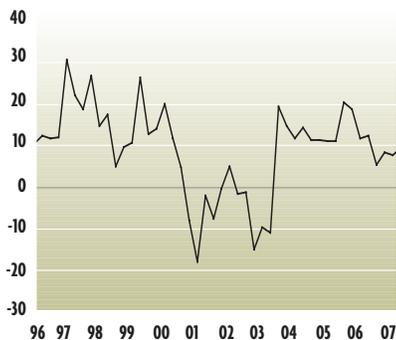
Building Permits

Change From Prior Year
First Quarter 1996 - Second Quarter 2007



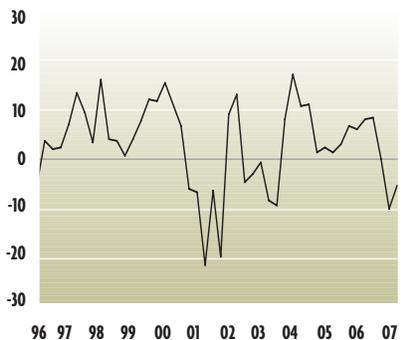
FRB—Richmond Services Revenues Index

First Quarter 1996 - Second Quarter 2007



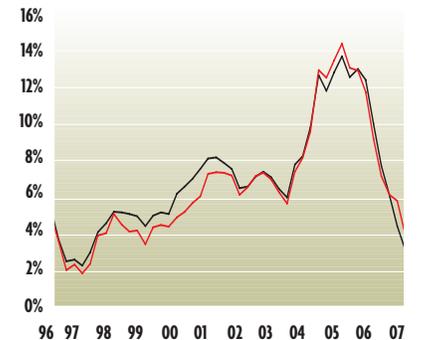
FRB—Richmond Manufacturing Composite Index

First Quarter 1996 - Second Quarter 2007



House Prices

Change From Prior Year
First Quarter 1996 - Second Quarter 2007



— 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: Office of Federal Housing Enterprise Oversight, <http://www.ofheo.gov>.

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STATE ECONOMIC CONDITIONS

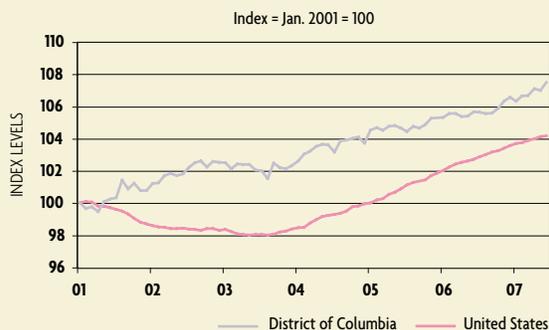
BY MATTHEW MARTIN

➤ District of Columbia

Economic conditions in the District of Columbia remained generally healthy in the second quarter as strong payroll growth outweighed softening residential real estate activity. Employment growth accelerated during the period, advancing at a 2.4 percent annual rate compared to last quarter's 1.1 percent mark. The region's housing market pullback deepened, however, as both existing home sales and new construction declined, while delinquency rates edged higher.

Overall, labor market conditions improved in the second quarter, propelled by a 7.1 percent increase in professional and business services employment. Government payrolls

U.S. and D.C. Employment Growth Since Jan. 2001



also posted solid gains during the period. Employment in the sector was up 3.4 percent at an annual rate, on the heels of two consecutive quarters of decline. Turning to household conditions, the District of Columbia's unemployment rate dipped 0.2 percentage point to finish at 5.6 percent — its lowest point in nearly seven years. However, even with the improvement, the unemployment rate remained the Fifth District's highest mark.

On the residential real estate front, housing market conditions deteriorated further since the end of March. After a slight uptick to begin the year, existing home sales reversed course in the second quarter, falling 10.3 percent. Home sales were also lower compared to the previous year, with sales activity down 7.1 percent since the second quarter of 2006. The decline in sales contributed to continued softness in home prices. The District of Columbia's House Price Index (HPI) — published by the Office of Federal Housing Enterprise Oversight (OFHEO) — was unchanged in the second quarter. On the other hand, the region experienced mild appreciation over the past year as its HPI was up 4.6 percent compared to a year earlier.

Slowing residential real estate activity during the period coincided with slightly higher mortgage delinquency and foreclosure rates. The District of Columbia's delinquency rate increased 0.5 percentage point during the second quarter to finish at 3.7 percent, though it remained well below its recent peak of 6.0 percent. The region's foreclosure rate edged up 0.1 percentage point to settle at 0.6 percent.

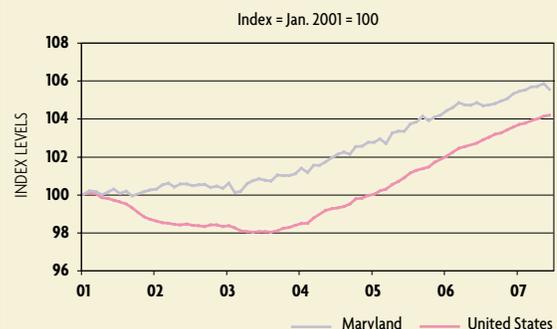
➤ Maryland

Maryland's economy slowed a bit in the second quarter as mild employment growth and continued weakness in residential real estate markets tempered growth prospects. Payroll employment growth moved lower during the quarter, advancing at a 0.6 percent annual rate versus 1.7 percent last quarter. Job gains were limited due to further declines in manufacturing payrolls and a slight dip in professional and business services employment. Employment performance in the state was also sluggish compared to a year earlier; payrolls expanded by less than 1.0 percent since the second quarter of 2006.

The report on household economic conditions was a bit more upbeat, however. Maryland's unemployment rate was unchanged during the second quarter at 3.7 percent and 0.2 percentage point lower than a year ago, though a portion of the stability in unemployment can be attributed to a slight reduction in the state's labor force. The readings on income growth were mixed. Although real-income growth remained positive in the second quarter, the rate slowed to just 0.6 percent at an annual rate down from 4.8 percent in the first quarter. However, real income in the state increased 3.5 percent over the past year, up from last quarter's mark of 3.2 percent.

In housing markets, activity in the state declined in the second quarter spurred by a drop-off in sales and

U.S. and MD Employment Growth Since Jan. 2001



construction activity. Existing home sales declined by a wide margin during the second quarter, falling 19.7 percent compared to the first quarter and 21.1 percent compared to a year earlier. Additionally, building permit issuance fell 27.8 percent over the past 12 months. Both declines were the largest among District jurisdictions.

Despite a weaker housing market, home prices continued to move higher in the second quarter. Maryland's HPI rose at a 3.2 percent annual rate, a full percentage point higher than the first-quarter mark. In addition, its HPI was 4.7 percent higher than a year ago, though the increase was the state's smallest since 1999. On a less rosy note, Maryland's mortgage delinquency rate moved higher in the second quarter. The state's overall delinquency rate rose to 4.2 percent, but remained well below the recent peak of 6.4 percent registered in the third quarter of 2001. The delinquency rate for subprime mortgages set a new high watermark, however, climbing to 13.8 percent, up from 11.2 percent in the first quarter.

North Carolina

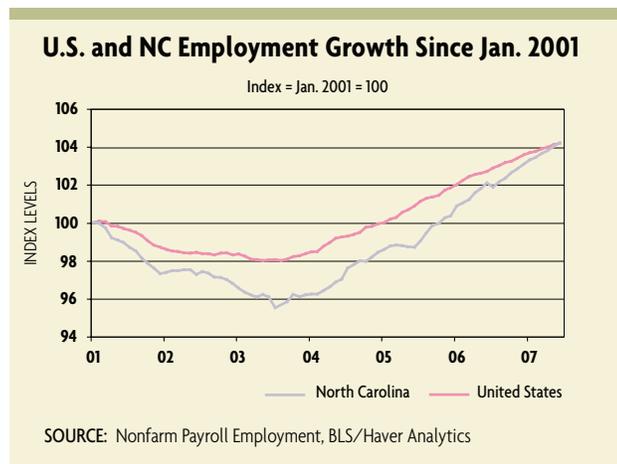
The North Carolina economy remained on generally solid footing during the second quarter, though labor market growth was less robust. Compared to a year earlier, total employment was up 2.2 percent versus 2.4 percent in the first quarter. Job gains were centered in the state's services industries, but an increase in the rate of

rate rose 0.3 percentage point to finish at 4.8 percent. Additionally, labor force growth in the state slowed to 1.6 percent over the past year, down from 2.4 percent in the first quarter.

On a brighter note, household financial conditions improved in the second quarter as North Carolina posted solid income growth. In fact, the state experienced the strongest income growth among District jurisdictions during both the second quarter and the past 12 months. Furthermore, the state's 4.8 percent increase in personal income was nearly a full percentage point above the national mark over the same period.

As in most other jurisdictions, North Carolina's housing sector continued to slump. Building permit issuance across the state declined 16.7 percent compared to the same quarter last year, while existing home sales declined 4.5 percent over the same period. Soft construction and sales activity in the second quarter accompanied a slowdown in home appreciation. North Carolina's HPI increased 0.8 percent during the three-month span compared to a 1.7 percent increase last quarter. Nonetheless, the state saw housing prices increase 7.1 percent since the second quarter of last year — the largest year-over-year gain in the Fifth District.

In other housing news, North Carolina's overall mortgage delinquency rate edged higher in the second quarter to 5.5 percent compared to 5.3 percent a year earlier. The subprime delinquency rate also rose during the quarter, increasing 2.1 percentage points to 15.5 percent.



manufacturing job losses constrained overall growth. Professional and business services employment increased by 3.7 percent over the past 12 months, while manufacturing payrolls contracted 1.3 percent.

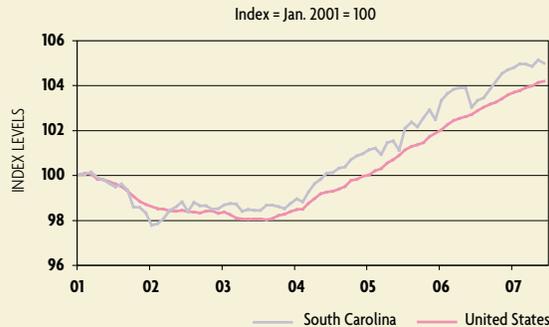
The household survey provided a less optimistic view of labor market conditions as North Carolina's employment

South Carolina

Economic conditions in South Carolina deteriorated a bit in the second quarter amid softening labor markets and continued housing woes. Employment growth moderated during the period as payrolls expanded just 0.1 percent since the end of March. The weak employment performance was due, in part, to the state's first decline in construction payrolls in two years in concert with an intensification of manufacturing job losses. On a brighter note, education and health services employment was up 7.1 percent compared to the previous year. State professional and business services firms also posted solid payroll gains — employment in the sector expanded 1.9 percent during the quarter, the largest increase in the District over the period.

On the household side, South Carolina's unemployment rate fell 0.5 percentage point to finish at 5.6 percent — a mark which, despite the drop, tied the District of Columbia for the highest rate in the Fifth District. Household financial conditions were boosted by solid income growth over the

U.S. and SC Employment Growth Since Jan. 2001



SOURCE: Nonfarm Payroll Employment, BLS/Haver Analytics

second quarter. Real personal income increased 3.7 percent compared to the same quarter last year. Nonetheless, solid income growth coincided with increased mortgage delinquencies. Delinquency rates among both conventional and subprime borrowers moved higher since the end of March, finishing at 3.3 percent and 15.7 percent, respectively.

Like the rest of the District, South Carolina's recent housing woes persisted in the second quarter. Cumulative building permits through the second quarter were 19.8 percent lower than 2006 levels. Additionally, existing home sales were down 9.3 percent from a year ago with especially large declines in coastal markets. Soft housing market activity contributed to lower rates of home price appreciation. South Carolina's HPI was up 6.3 percent over the last 12 months versus last quarter's mark of 7.6 percent. As was the case with sales, home price growth was slower near the coast due in part to sharp reductions in demand for second homes. The HPI for the Charleston metro area, for example, was down slightly in the second quarter.



Virginia

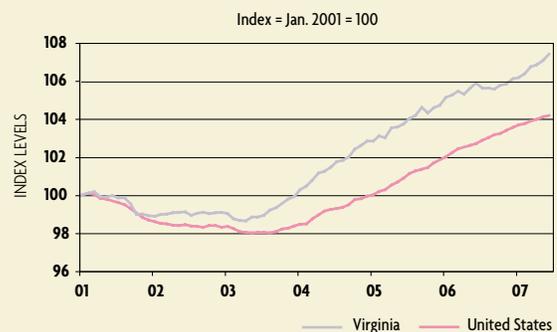
On balance, economic conditions in Virginia improved during the second quarter of 2007 as healthy labor market conditions more than offset growing weakness in the residential real estate markets.

Payroll employment growth was strong across Virginia. Nonfarm payroll employment increased at a 2.6 percent annualized rate in the second quarter and 1.4 percent since March of 2006. Most of the gains occurred in the services sector, led by a 5.5 percent jump in professional and business services employment. The state also experienced an increase in manufacturing employment during the second quarter. The expansion marked the second consecutive quarterly gain in factory payrolls following 10 quarters of losses.

The economic conditions of Virginia's households were also solid during the second quarter. The unemployment rate inched higher by 0.1 percentage point to finish at 3.0 percent, but remained the lowest rate in the Fifth District. The unemployment rate has hovered near the 3.0 percent mark over the past 12 months even amid a sizable 1.6 percent increase in the labor force. Solid job prospects in the period accompanied stronger personal income growth across the state. Virginia's real income growth over the past year accelerated to a 3.5 percent annual rate, up from 3.1 percent in the first quarter.

On the other side of the coin, Virginia's residential real estate market remained a weak spot in the state's economy during the second quarter. Existing home sales dropped

U.S. and VA Employment Growth Since Jan. 2001



SOURCE: Nonfarm Payroll Employment, BLS/Haver Analytics

sharply compared to the first quarter and a year earlier. Home sales fell 15.3 percent over the past year, while building permit levels dropped 17.6 percent over the same period. The decline in both sales and construction corresponded with a further deceleration in home price appreciation as year-over-year growth in the HPI slowed to 3.7 percent.

Adding to the less upbeat housing report, Virginia's overall mortgage delinquency rate increased to 3.7 percent compared to last quarter's 3.1 percent mark. Increased delinquencies among subprime borrowers accounted for much of the second-quarter jump as that rate moved higher from 11.0 percent to 13.4 percent. Nonetheless, both overall and subprime delinquency rates remained well below recent peak levels.



West Virginia

The pace of West Virginia economic activity waned a bit in the second quarter as weak employment performance and slower residential real estate activity weighed on growth.

U.S. and WV Employment Growth Since Jan. 2001



Labor market conditions in the state softened further in the second quarter. West Virginia's unemployment rate increased 0.2 percentage point during the period to settle at 4.4 percent, though the mark was below the state's 4.9 percent rate a year ago. Additionally, payroll growth in the state was weak. Total nonfarm employment expanded just 0.6 percent over the past year — the smallest percentage increase among Fifth District jurisdictions. Steep manufacturing job losses weighed on overall job gains, while employment growth in both the mining and construction sectors decelerated somewhat.

The weak job growth in West Virginia accompanied softer income growth in the second quarter. Real personal income increased at an annual rate of 0.4 percent during the period compared to last quarter's 3.5 percent increase. Over the past year personal income levels grew just 2.8 percent, the lowest mark among all Fifth District jurisdictions.

Residential real estate remained a soft spot in West Virginia's economy during the second quarter. Activity continued its retreat as the number of building permits issued during the period fell 7.3 percent short of year-earlier levels. Existing home sales were off more sharply, declining 17.4 percent for the quarter and 13.6 percent over the previous year. Moreover, West Virginia was the only state in the Fifth District whose HPI contracted during the second quarter. The state's HPI edged lower at a 0.9 percent annual rate, though the index remained 4.4 percent higher than a year earlier. Additionally, the overall mortgage delinquency rate increased to 6.8 percent — 0.6 percentage point above the second-quarter level. The increase in the overall rate was due in large part to a substantial jump in the number of subprime delinquencies. The state's subprime delinquency rate swelled 2.3 percentage points to finish at a District-high of 18.1 percent. **RF**

Behind the Numbers: Consumer Confidence

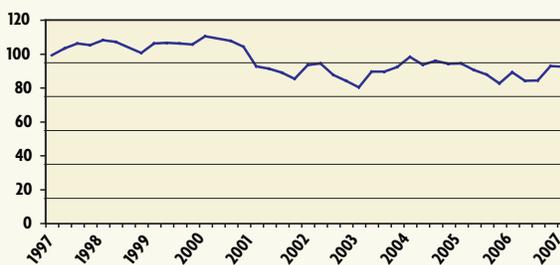
A leading consumer confidence index is released once a month by an independent research organization called the Conference Board. It is a survey of 5,000 households (returned by about 3,500), asking participants whether they are positive, neutral, or negative about a short list of economic conditions in the present and near future. Out of the responses the Conference Board builds indexes tied to the base year of 1985. The method is similar to that used by the other main consumer confidence index provider, Reuters/University of Michigan Surveys of Consumers.

These indexes may be useful in forecasting what consumers will spend in the future and perhaps provide insights into current economic conditions not captured in other data. In fact, studies have shown a strong correlation between consumer confidence and consumer spending.

But do consumer confidence indexes do more than confirm or support other data? That was the question posed by economist Dean Croushore with the University of Richmond.

Croushore noted that previous research has shown that forecasts are not improved with adding consumer confidence

Index of Consumer Sentiment



indexes. To double-check, Croushore tapped into a real-time data set developed by the Federal Reserve Bank of Philadelphia. This allowed him to take the view of a forecaster operating at the time those forecasts were made. Even then, consumer confidence indexes don't seem to add much: "The bottom line: If you are forecasting consumer spending for the next quarter, you should use data on past consumer spending and stock prices and ignore data on consumer confidence." **— DOUG CAMPBELL**

State Data, Q2:07

	DC	MD	NC	SC	VA	WV
Nonfarm Employment (000's)	698.0	2,609.6	4,101.2	1,924.4	3,779.4	759.4
Q/Q Percent Change	0.6	0.1	0.5	0.1	0.6	0.1
Y/Y Percent Change	1.6	0.9	2.2	1.3	1.4	0.6
Manufacturing Employment (000's)	1.6	134.3	546.8	244.8	286.8	59.5
Q/Q Percent Change	2.1	-0.3	-0.4	0.3	0.2	-0.2
Y/Y Percent Change	-9.3	-1.6	-1.3	-3.9	-1.3	-2.6
Professional/Business Services Employment (000's)	159.8	401.7	488.4	218.1	647.2	60.9
Q/Q Percent Change	1.7	-0.1	0.5	1.9	1.4	1.4
Y/Y Percent Change	4.4	2.0	3.7	0.0	3.4	1.4
Government Employment (000's)	233.9	471.1	686.9	333.0	680.8	144.6
Q/Q Percent Change	0.8	0.1	1.2	0.4	0.9	0.0
Y/Y Percent Change	0.5	0.0	1.1	0.5	1.0	0.3
Civilian Labor Force (000's)	319.9	2,998.6	4,529.3	2,148.8	4,051.0	814.0
Q/Q Percent Change	-0.3	-0.9	0.2	-0.5	0.0	0.2
Y/Y Percent Change	1.4	-0.2	1.6	1.3	1.6	1.1
Unemployment Rate (%)	5.6	3.7	4.8	5.6	3.0	4.4
Q1:07	5.8	3.7	4.5	6.1	2.9	4.2
Q2:06	5.9	3.9	4.7	6.4	3.0	4.9
Real Personal Income (\$Mil)	30,053.1	220,350.4	259,680.9	115,348.7	271,749.4	45,529.6
Q/Q Percent Change	0.3	0.2	0.4	0.3	0.3	0.1
Y/Y Percent Change	4.0	3.5	4.8	3.7	3.5	2.8
Building Permits	501	6,280	23,103	12,015	10,804	1,157
Q/Q Percent Change	-39.9	15.1	-0.2	14.3	12.0	31.3
Y/Y Percent Change	136.3	-27.8	-16.7	-9.2	-17.6	-7.3
House Price Index (1980=100)	665.3	547.4	339.4	322.3	477.6	232.5
Q/Q Percent Change	0.0	0.8	0.8	0.2	0.7	-0.2
Y/Y Percent Change	4.6	4.7	7.1	6.3	3.7	4.4
Sales of Existing Housing Units (000's)	10.4	92.8	231.2	113.6	124.0	30.4
Q/Q Percent Change	-10.3	-19.7	-5.2	-2.7	-12.9	-17.4
Y/Y Percent Change	-7.1	-21.1	-4.5	-9.3	-15.3	-13.6

NOTES:

Nonfarm Payroll Employment, thousands of jobs, seasonally adjusted (SA) except in MSA's; 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 MSA's; 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®

Metropolitan Area Data, Q2:07

	Washington, DC MSA	Baltimore, MD MSA	Charlotte, NC MSA
Nonfarm Employment (000's)	2,437.6	1,314.2	843.7
Q/Q Percent Change	1.7	2.0	1.4
Y/Y Percent Change	1.8	0.4	2.6
Unemployment Rate (%)	3.0	3.8	4.7
Q1:07	3.2	4.2	4.6
Q2:06	3.1	4.1	4.7
Building Permits	7,311	1,644	6,312
Q/Q Percent Change	14.4	-5.6	12.0
Y/Y Percent Change	-5.5	-27.5	-6.6

	Raleigh, NC MSA	Charleston, SC MSA	Columbia, SC MSA
Nonfarm Employment (000's)	498.9	294.9	365.8
Q/Q Percent Change	2.1	1.1	0.6
Y/Y Percent Change	2.5	2.9	1.3
Unemployment Rate (%)	3.7	4.2	4.7
Q1:07	3.6	4.9	5.5
Q2:06	3.7	5.0	5.4
Building Permits	4,214	2,197	2,313
Q/Q Percent Change	3.7	-54.3	38.2
Y/Y Percent Change	21.3	-3.0	14.0

	Norfolk, VA MSA	Richmond, VA MSA	Charleston, WV MSA
Nonfarm Employment (000)	783.6	638.3	151.9
Q/Q Percent Change	2.8	1.5	2.2
Y/Y Percent Change	1.2	1.7	1.0
Unemployment Rate (%)	3.1	3.0	4.1
Q1:07	3.3	3.2	4.5
Q2:06	3.2	3.1	4.6
Building Permits	1,574	2,136	70
Q/Q Percent Change	-25.5	18.1	-6.7
Y/Y Percent Change	-19.3	-12.7	-19.5

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When Disclosure is Not Enough

BY BORYS GROCHULSKI

Amid the recent spike in the mortgage defaults, the Federal Trade Commission reported this summer that consumer disclosure forms used in mortgage lending fall short in conveying vital information to borrowers, and that improvements were both desirable and achievable. This might well be true. Better-informed consumers will often make better purchasing decisions, and loan disclosures currently in use very well may be less than perfect. But for reasons I will explain, even the fullest of consumer disclosures won't get to the heart of a perhaps more fundamental problem facing the U.S. mortgage market.

It is quite clear that mandatory, government-enforced disclosures play an important and positive role in consumer lending. Market forces alone are probably not enough to determine the proper form of disclosure, as consumer credit markets are not free of search costs and asymmetric information. These so-called market frictions impede the efficiency of the laissez-faire outcome and can justify government intervention. What exact shape and form this intervention should take is an important question.

However, even if borrowers perfectly understand the terms of contract and the trade-offs involved in all mortgage products available, there still exists another force pushing borrowers toward taking too much risk: an expectation of a taxpayer-funded government bailout in the event of an adverse economy-wide shock.

An important example of such a shock is a housing market slowdown. If the government is expected to offer a bailout to borrowers in the case of a collapse in property values, we face the so-called moral hazard problem, in which borrowers take on too much risk. Under this scenario, if the property values grow, borrowers win the prize of appreciated home values; if they collapse, taxpayers lose. If a bailout is likely, borrowers have an incentive to take on risky mortgage products (putting zero money down, keeping the monthly payment as low as possible, and buying into as big a house as possible) so as to maximize their capital gain in the good outcome. The lenders are happy to oblige, as the losses that result in the bad outcome will be sustained by the bailout. No amount of disclosure can change this.

How can this problem be dealt with? Ex post, i.e., once enough borrowers are under water, it is too late to prevent moral hazard. The government cannot abandon distressed primary-residence homeowners. However, measures could be taken to eliminate the moral hazard issue going forward.

Just instituting the "no-more-bailouts" policy will not work, for the public can correctly perceive that this policy will likely be abandoned next time enough households are in dire straits, and moral hazard will continue. The problem

can, however, be eliminated at the ex-ante stage, i.e., before households get into risky borrowing, with direct controls put on the amount of risk that households can take.

An outright ban of some of the riskiest mortgage products is almost certainly not a part of an efficient solution. There may always be a borrower for whom, when properly disclosed and priced, a "Ninja" mortgage actually is optimal. What would, however, be the cost of finding out who is a suitable borrower for a risky loan and who is not before the deal is made? If this cost is not too high, relative to the benefit of mitigating the moral hazard problem, then perhaps a suitability check for some of the risky mortgage products could be instituted. After all, mandatory suitability checks are already in place in other markets affected by the government's general inability to commit to *not* bailing out ex post.

The way we regulate medications in this country is instructive. For many medications, particularly those risky ones with strong and variable side effects, consumers must obtain a prescription before purchasing. If consumers were allowed to just read a disclosure and make their own medication choices, they might take unnecessary risks and later end up in the emergency room. The treatment that a self-medicated patient would receive in an emergency room is akin to a government bailout — a guarantee of help even when the consumer took on excessive risk.

In a sort of preemptive strike, we require licensed intermediaries (doctors) to determine which prescription medications consumers can use partly because the government cannot commit to *not* bailing out consumers who recklessly self-medicate. This is an explicit restriction on consumer freedom of choice in this particular market, but one that has been deemed necessary because of the alternative-scenario consequences.

Could the commitment problem in the mortgage market be solved in a similar way? We might well consider suitability checks for some mortgage products. Perhaps for certain exotic loans, we might require the lender, or an independent third party, to check and certify the suitability of the loan for the borrower before the loan is made. To be sure, we would then face other costs and problems. A sound cost-benefit analysis of this solution is needed. If, however, a government bailout is perceived by the public as a real possibility, a mandatory suitability check may be necessary to prevent moral hazard. Disclosures are important, but we should not expect even perfect ones to be sufficient. **RF**

Borys Grochulski is a research economist with the Richmond Fed. The views expressed here are his own and not necessarily shared by the Federal Reserve System.

Private Equity

Many people associate the private equity industry with the sometimes ruthless way firms go about getting results, and the considerable profits pocketed by managers. But private equity is not just about the splashy deals and headline-grabbing returns. Studies find that private equity firms often improve the companies they invest in. And most deals are relatively small. However, even those who believe in the importance of private equity worry that some of the firms' practices may be weakening the very attributes that have made them successful.

Massively Multiplayer Online Games

Online games like World of Warcraft and Second Life have attracted millions of players. Now, economists are looking at virtual worlds for insights into real-world policies. Unlike mathematical models or small-scale experiments, virtual worlds provide venues for scenario-testing that might otherwise be impractical, unwise, or unethical, and there is no need for abstract assumptions about human behavior. For economic policymakers in particular, massively multiplayer online games may become an invaluable research tool.

Mechanism Design

Transactions often don't yield the best possible outcome when one party has more information than the other. Mechanism design is about understanding how the rules of the game can be set up to lead to a more desirable result, knowing that people will typically act for their own gain. The theory received much attention with this year's Nobel Prize for economics, but its applications have been around for a long time. We look at research by economists, including those at the Richmond Fed, who use concepts in mechanism design to study financial contracts and institutions.

Revenue Sharing

In 2007, the New York Yankees spent \$189 million on talent. The Tampa Bay Devil Rays spent \$24 million. To address this discrepancy, which arguably distorts on-field play, baseball has devised revenue-sharing plans, giving poorer teams the resources to compete with richer teams. But research suggests that revenue sharing has failed to restore competition in baseball. The only salient effect appears to be a significant reduction in player salaries.

Interview

We talk with Christopher Ruhm of the University of North Carolina, Greensboro, a former senior staff economist for the Council of Economic Advisers whose research centers on early childhood education.

Economic History

Rice cultivation built South Carolina into the wealthiest colony in the New World. But mechanization ultimately drove efficient production elsewhere and eventually eroded the culture of the lowcountry rice planters.

Federal Reserve

Central banks around the globe have long cooperated with each other. In recent years, collaborative efforts have included coordinating objectives on exchange rates and in monetary policy. But cooperation is difficult and sometimes controversial, given political considerations as well as the complexities of global finance. The scope of future cooperation between central banks remains in question.

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