THIRD QUARTER 2013

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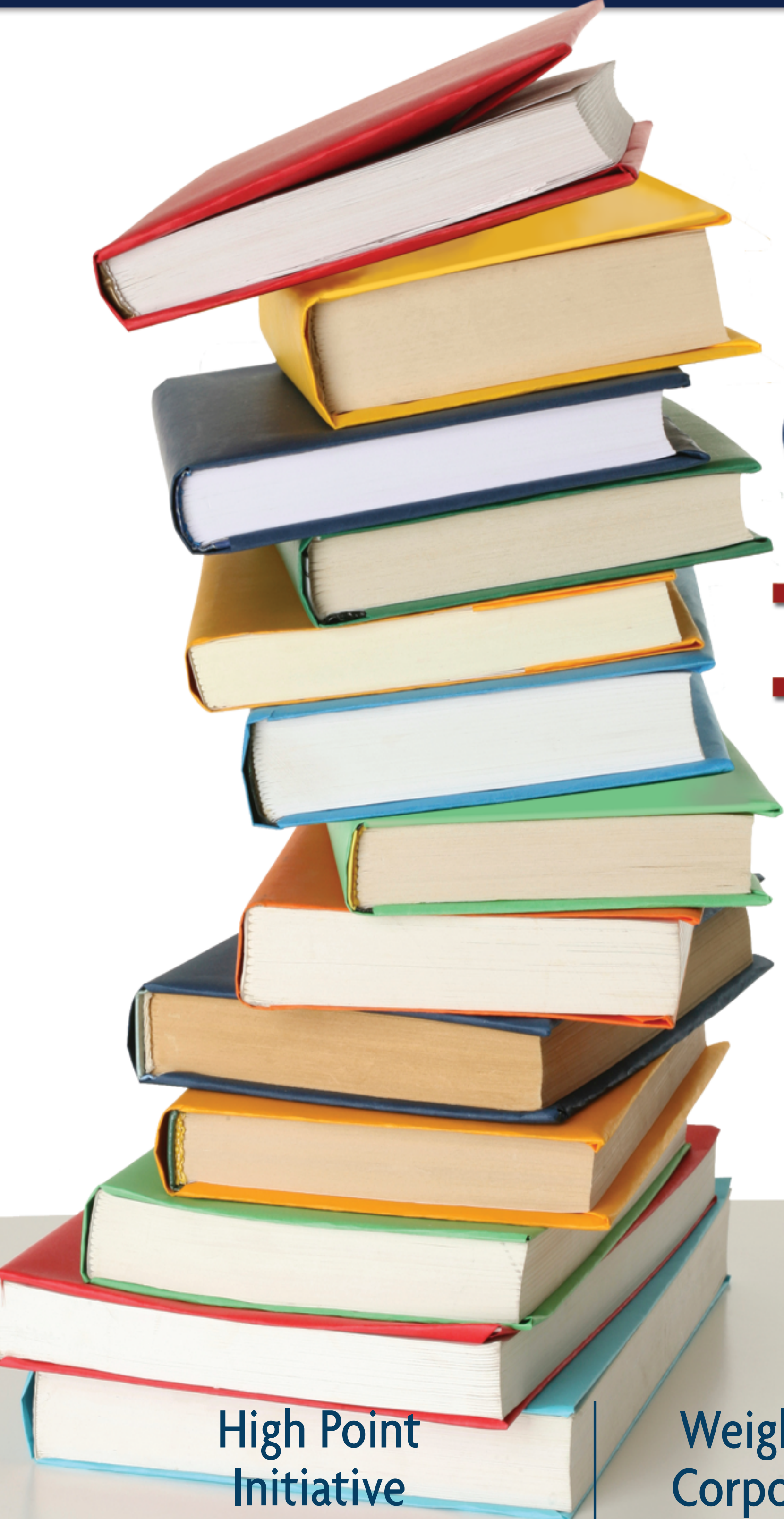

HAS COLLEGE BECOME A RISKIER INVESTMENT?

WHAT HAPPENS WHEN THE PAYOFF BECOMES LESS CERTAIN

High Point Initiative

Weighing the Corporate Tax

Interview with John Cochrane

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President's Message

Hitting the Target

In January 2012, for the first time in its 100-year history, the Federal Reserve announced an explicit inflation target. Naming an explicit target strengthens the Fed's commitment to maintaining price stability, but it also triggers commentary when inflation deviates from that target — in this case, 2 percent. For most of this year, headline inflation has been relatively low, between 1 percent and 1.5 percent. (Headline inflation includes food and energy prices, which tend to be more volatile than the prices of other goods.) This led to speculation that the Fed would — or should — continue to pursue accommodative monetary policy longer than it otherwise might.

But policymakers don't necessarily change course every time inflation strays from the central bank's target, whether that target is implicit or explicit. Our goal is for inflation to average 2 percent over time (within a narrow range), not for inflation to be exactly 2 percent all the time. That's because the inflation rate in any given period can be buffeted by a variety of factors, some of which may prove to be transitory, such as an increase in the price of oil due to political conflict in an oil-producing country or a rise in import prices due to a falling dollar. But, as Milton Friedman famously described it, monetary policy affects the economy only with long and variable lags. If policymakers overreact to temporary factors, their actions are likely to take effect only after those factors have subsided, leading to policy that doesn't match current market conditions.

These examples involve factors that push inflation above its target level, but similar reasoning applies when inflation is below target. One factor in the low inflation rate earlier this year was an unusually slow rise in the price of medical services, a result of cuts in Medicare reimbursements due to sequestration. Falling energy and import prices also dampened inflation. But these factors appear likely to be transitory.

One way for the central bank to gauge future pressures on supply and demand, and thus on prices, is to monitor inflation expectations. People and firms make decisions based on what they think inflation will be in the future; all else equal, the actions they take then have an effect on actual inflation. The textbook example is a labor negotiation: If union members expected an increase in the inflation rate to 5 percent, for example, they would demand a higher wage increase to compensate. The firm would then raise prices in order to cover its higher labor costs.

If long-term inflation expectations are well anchored, however — if the public believes that the central bank is committed to price stability — it's less likely that people will alter their behavior in a way that affects inflation. Currently, the various gauges of inflation expectations suggest that long-term expectations are stable, and that inflation is likely to move back up toward 2 percent over the medium term. One indicator is the difference in yield between inflation-indexed Treasury securities and regular Treasury securities. This measure suggests that market participants expect inflation to average close to 2 percent over the next five years and a bit more than that over the next 10 years.

There also are various surveys that ask people directly about their expectations. From one survey period to another, there is some variation in short-term inflation expectations, but long-term expectations are consistent with the Fed's target. Currently, those surveys indicate that economists and businesspeople expect inflation to return to 2 percent within the next year or two, and to average 2 percent over the next decade. Consumers expect inflation to be a bit higher, around 3 percent, roughly the same level they have expected for the past two decades.

The fact that inflation expectations are stable does not imply that policymakers can be complacent. On the contrary, we must constantly monitor a broad range of data for signs that a persistent change in inflation might be in the offing. Indeed, the stability of inflation expectations is strong evidence that market participants anticipate that the Fed will take the actions necessary to keep inflation close to 2 percent over time.

If changes in inflation do appear to be persistent, then we must adopt appropriate policies to ensure that those changes don't become embedded in expectations. As we learned the hard way in the late 1960s and 1970s, once market participants expect higher inflation, it is difficult and costly for the central bank to change those expectations. By acting promptly — but not precipitously — when economic conditions warrant, we will preserve the price stability that is fundamental to economic growth. **EF**

JEFFREY M. LACKER
PRESIDENT
FEDERAL RESERVE BANK OF RICHMOND

Conceived to Fail?
Bankrupt Patriot Coal Questions Its Origin

Most bankrupt companies don't question the legitimacy of their own existence, but Patriot Coal has done exactly that. Patriot, a St. Louis-based company with most of its mines in West Virginia, filed for Chapter 11 bankruptcy last year. As part of the case, the company and its creditors' committee investigated whether its former owner, Peabody Energy, committed a "fraudulent transfer" by spinning it off in 2007.

One creditor, the United Mine Workers of America (UMWA), made that claim in federal court in January 2013. The union alleged that Peabody created Patriot as a dumping ground for subsidiaries with unsustainable liabilities for retiree health care benefits and other burdensome "legacy obligations."

According to the UMWA, Peabody intentionally undercapitalized Patriot from the start. As a group, the Peabody subsidiaries that moved to Patriot were insolvent at the end of 2006, but as part of the spinoff Peabody agreed to retain the health care liabilities for some of the retired workers. This agreement and some smaller balance sheet transfers were more than enough to make Patriot solvent when its stock debuted on Nov. 1, 2007. (Even so, the spinoff cut Peabody's health care obligations by about $550 million.)

The companies further agreed that if Patriot's retiree health care obligations ever decreased, Peabody's obligations would decline proportionately. But when Patriot asked the bankruptcy court for permission to significantly reduce its obligations, Patriot and the UMWA filed suits seeking to prevent Peabody from reducing its obligations as well. The UMWA and other creditors also asked Patriot to investigate claims that it had been designed to fail.

PHOTOGRAPHY: UNITED MINE WORKERS OF AMERICA

Retired miners took to the streets of St. Louis to protest proposed cuts in funding for health care benefits.

Peabody and Patriot officials declined to be interviewed, but a statement on Peabody's website disputes the charge that Patriot was conceived to fail. "Patriot was highly successful following its launch more than five years ago, with significant assets, low debt levels, and a market value that more than quadrupled in less than a year," Peabody states. Patriot's stock soared from $18.75 on Nov. 1, 2007, to $80.69 on June 18, 2008, and the company earned net income of $142.7 million in 2008 and $127.2 million in 2009.

Peabody's online statement says Patriot should have bolstered its financial position during those good years instead of purchasing Magnum Coal, a spinoff of St. Louis-based Arch Coal. Magnum added about $500 million to Patriot's legacy obligations, but in a conference call with analysts in 2008, Mark Schroeder, Patriot's chief financial officer, downplayed the risk. The Magnum subsidiaries "do have legacy liabilities, like Patriot has legacy liabilities," he said. "We're very familiar with how to work with those, how to control those costs. We are not afraid of legacy liabilities."

Four years later, amid declining demand, lower prices, and higher costs, the company cited "unsustainable labor-related legacy liabilities" as one of the problems forcing it into Chapter 11. When it entered bankruptcy, Patriot reported legacy liabilities of $1.8 billion, including obligations to provide health care benefits to several thousand UMWA retirees and their dependents.

As part of Patriot's reorganization, the bankruptcy court gave the company permission in May to significantly reduce its funding of retiree health care benefits by transferring them to a trust that will be administered by UMWA appointees. Patriot agreed to help fund the trust with an ownership stake in the reorganized company, profit sharing, royalty payments, and "a portion of future recoveries from certain litigation."

Those recoveries materialized in October 2013, when Peabody agreed to contribute $310 million over four years to help fund the trust and settle all Patriot and UMWA claims involving the Patriot bankruptcy. The settlement, however, leaves the question of Patriot's legitimacy unanswered. —KARL RHODES

Back on the Market

IPO Succeeds for Northern Va.-based Hilton

In December, McLean, Va.-based Hilton Worldwide Holdings completed an initial public offering (IPO) of 117.6 million shares priced at $20 apiece. The sale raised $2.35 billion, making it the largest IPO ever for a hotel company, ahead of the $1.09 billion raised by Hyatt Hotels in 2009. At the IPO share price, Hilton has a stock market value of about $19.7 billion.

Private equity firm Blackstone Group, which acquired Hilton in the summer of 2007, did not sell any of its shares and maintains a 76 percent stake in the company. Blackstone's record-setting purchase of Hilton for $26.3 billion during the heady days of the real estate boom gave the firm control of Hilton's portfolio of nearly 3,000 franchised and company-owned hotels, including brands such as Hampton Inn and Embassy Suites, as well as the historic Waldorf Astoria hotel in New York City.

But when the real estate market turned south and the economy plunged into recession just a few months later, Blackstone's acquisition, which had been financed largely by debt, looked much less favorable. Businesses and households alike cut back on travel expenses, and the entire hospitality industry declined.

Since that time, the hotel market has shown signs of recovery, returning to pre-recession levels of growth in occupancy and average revenue per room. Many analysts expect this trend to continue for another three to four years, in part because construction of new hotels largely stalled during the downturn and supply is constrained. According to Hilton's IPO filing, Blackstone has added more than 1,000 new properties and 170,000 new rooms to Hilton's portfolio, largely through franchising, since taking the company private six years ago.

Hilton moved its headquarters from Beverly Hills, Calif., to McLean in 2009; it employs roughly 7,400 people in the Washington, D.C., area. Hilton reported net income of $352 million and total revenue of $9.3 billion for 2012, up 39 percent and 6 percent, respectively, from the previous year. —Tim Sablik

Be Careful Crossing the Street in Maryland

State Upholds Rare Negligence Rule

In July, Maryland's Court of Appeals, the highest court of the state, decided to uphold a rule that bars plaintiffs from winning payouts on negligence lawsuits if they were at fault in any way. That means if you're hit by a car while jaywalking, you might walk (or limp) away empty-handed.

In *Coleman v. Soccer Association of Columbia*, a soccer coach in Fulton, Md., was severely injured when a set of goal posts fell on him — but only after he had jumped on and swung from them. The jury concluded that the soccer association was negligent by failing to make sure the posts were secured to the ground, but the coach was found to be negligent, too, by misusing the equipment. As a result, he was denied all damages.

The legal standard, adopted through judicial action by Maryland's courts in 1847, is called "contributory negligence." The court argued in its recent opinion that the state's legislature had rejected dozens of bills over the years seeking to move away from the standard, so it would be inappropriate for the court to override clear legislative intent.

Meanwhile, 46 other states have abandoned contributory negligence: Outside of Maryland, it survives only in the District of Columbia, North Carolina, Virginia, and Alabama. Elsewhere, damages aren't all or nothing. Instead, damages are reduced by the percentage of the harm a jury determines the plaintiff caused, a newer doctrine known as "comparative negligence." (In most of those 46 states, the plaintiff's recovery is eliminated if he or she is more than 50 percent responsible for the injury.)

The nation's shift away from contributory negligence occurred with stunning speed, at least by tort law standards: Between 1968 and 1985, 38 states adopted comparative negligence. Why the (relatively) sudden change? The widespread adoption of product liability laws after the mid-1960s, which now govern the bulk of negligence lawsuits that manufacturers face, has reduced business groups' interest in opposing the shift to comparative negligence, argued economist Christopher Curran of Emory University in a 1992 article. That may have made room for the legal profession to lobby for comparative negligence, since it increases the need for legal services to quibble in courts over precise margins of negligence, according to Curran.

Another possibility is that courts and legislatures began to view contributory negligence as an outdated standard that harshly punishes victims for minor mistakes — or, in the words of the *Coleman* case's dissenting judges, a "dinosaur" that the court should have extinguished "with the force of a modern asteroid strike."

—Renee Haltom

Wage War
D.C. Living Wage Bill Prompts Retailer Pushback

In July, the Washington, D.C., city council approved a bill requiring large retailers to pay a "living wage" of $12.50 per hour, 50 percent higher than the city's minimum wage of $8.25. The Large Retailer Accountability Act applied only to retailers with gross annual revenues of $1 billion and stores occupying 75,000 square feet or more. Mayor Vincent Gray vetoed the bill on Sept. 12 amid complaints from affected companies.

Since 1994, when Baltimore introduced the nation's first living wage law, more than 140 jurisdictions have enacted such provisions. Living wages typically are higher than the minimum wage and apply only to companies receiving some form of business assistance or contracting with the city or state. (See "Above the Minimum," *Region Focus*, Fall 2004.) The D.C. bill was somewhat unusual in that it was not limited to businesses receiving assistance and it targeted retailers rather than government contractors. The wage requirements would have been waived for large retailers with a unionized workforce.

Wal-Mart, which plans to build at least five stores employing about 300 workers each in D.C., argued that this exemption would unfairly punish it relative to its competitors in the city, such as Giant Food and Safeway, both of which employ union workers. Wal-Mart threatened to cancel its expansion if the law went into effect. In his letter to the city council explaining his veto decision, Gray called the bill a "job killer."

Economic theory predicts that raising the cost of a good (in this case labor) reduces demand for that good, and empirical evidence on wage floors largely confirms this theory. In a review of the data on living wage provisions, David Neumark, director of the Center for Economics and Public Policy at the University of California, Irvine, along with Matthew Thompson and Leslie Koyle of Charles River Associates, a consulting firm, found that, on average, a 50 percent increase in living wages reduces employment for low-skill workers by between 2.4 and 2.8 percentage points.

Artist's rendering of the Wal-Mart under construction at Georgia Avenue in Washington, D.C.

PHOTOGRAPHY: COURTESY OF WAL-MART

"We have a lot of evidence from minimum wages generally, and somewhat less from living wages, that those laws reduce employment for low-skilled workers a little bit," says Neumark.

Still, it's possible that the benefits of higher income for those with jobs could offset the job losses. The data suggest that living wages may lower overall poverty, but not much. "There's very weak evidence statistically that actual urban poverty falls slightly when living wage laws are implemented," says Neumark.

Following the mayor's veto decision, Wal-Mart is moving ahead with its construction plans. It recently opened two new hiring centers and anticipates opening two of the retail stores by year-end.

Meanwhile, the debate over how to encourage job and wage growth continues. In August, Washington had an unemployment rate of 8.7 percent, and nearly a fifth of the population lives below the poverty line.

—Tim Sablik

Reaching for Yield

BY RENEE HALTOM

Are the Fed's low interest rate policies pushing investors toward risk?

It may surprise some people to learn that the Federal Reserve, despite being one of the nation's most important financial regulators, sometimes intentionally encourages investors to take on risk.

That's a key function of monetary policy after a recession. Fed Chairman Ben Bernanke has called it "a return to productive risk-taking." When the Fed lowers the federal funds interest rate, its main policy instrument, other market rates tend to fall, making it more attractive for entrepreneurs to raise money for startups and for existing businesses to expand capacity. That's one way low interest rates help to spur economic recoveries.

But what about people who earn a living by lending money? The world's largest investors are insurance companies, pension funds, and mutual funds, which collectively hold $24 trillion in assets. They invest heavily in bonds, together holding $4.7 trillion in corporate and foreign bonds, among other types, so their returns are very sensitive to interest rates. These investors often owe their clients guaranteed payouts through insurance policies, annuities, and pensions. In those cases, a low interest rate environment doesn't just squeeze profits, it could risk insolvency.

"When interest rates fall, they may have no alternative but to seek out riskier investments," wrote economist Raghuram Rajan, then the chief economist of the International Monetary Fund, back in 2005. He was one of the first to raise concerns that investors are forced to "reach for yield" when interest rates are low. "If they stay with low return but safe investments, they are likely to default for sure on their commitments, while if they take riskier but higher return investments, they have some chance of survival." (Rajan recently left the University of Chicago to head the central bank of India.)

His words were written in what was then a period of remarkably low interest rates. They're even lower today. The Fed's policy rates have been effectively at zero since December 2008, and the Fed has said they'll stay there until unemployment comes down significantly. Not only have short-term rates been lower and for a longer period than in any episode since the Great Depression, but long-term rates are remarkably low as well, thanks to the Fed's unconventional monetary policies like quantitative easing and "Operation Twist." For the world's biggest bond investors, returns have been squeezed at all parts of the yield curve.

This time, some Fed policymakers have also voiced concerns about reaching for yield. Fed Governor Jeremy Stein has been the most vocal, detailing what he views as causes of excessive risk in a February speech, and Bernanke and Vice Chair Janet Yellen have said that the Fed is watching the issue.

They all agree on one thing: Greater risk-taking — and the failure of any one firm if those bets go bust — is not necessarily a concern for policymakers. The problem could be if many investors suffer losses on these risks at the same time, or if they enter into them in ways that could bring other institutions down. With the financial crisis fresh in regulators' memories, should the Fed be concerned that its low rates are planting the seeds for the next crisis?

Rationalizing a Reach

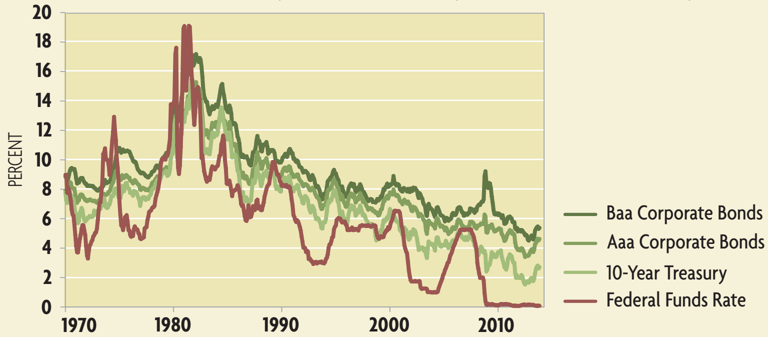
Why would rational, self-interested investors willingly take on too much risk? To be clear, reaching for yield is not about investors making mistakes. Nor is it about the normal competitive forces that make firms anxious to outperform one another. These forces are always present, and there's no reason to believe they change much over time.

There are several reasons investors might suddenly take on more risk than usual. Banks whose capital has been depleted following a financial crisis, leaving them vulnerable in the event of any new losses, might make "Hail Mary" investments to try to restore their financial positions, especially if they think a government safety net is waiting. Financial innovation might create new opportunities to take advantage of gaps in regulation. In fact, Stein said in February, any time the rules of the game change — new regulations, accounting standards, or performance-measurement, governance, and compensation structures — an unintended consequence can be new incentives for risk.

But the kind of reaching for yield that Stein, Yellen, Bernanke, and Rajan have discussed recently stems from low interest rates. When nominal market interest rates are generally high, investment managers have no problem earning enough to cover their liabilities or reach their investment goals. But after a recession, the central bank may cut interest rates to boost the economy. For a while, risk premia remain elevated, pushing overall market interest rates higher, so investors have little need to search for yield. As risk premia recede, however, investors may become desperate for higher returns and shift toward riskier investments.

Life insurers, for example, are a significant chunk of the financial sector. They hold $5.7 trillion in assets, more than a third the size of the entire traditional banking sector, and hold 17 percent of all corporate and foreign bonds outstanding in the United States. Life insurance companies

Interest Rates Are Rarely as Low as They Have Been Recently



SOURCE: Moody's and Haver Analytics. Data through November 2013.

collect payments from their clients that they invest in order to repay under prescribed conditions. When interest rates fall, the insurer falls further from the return that ensures its ability to make those payouts. Moreover, some life insurance products come with riders that guarantee minimum returns regardless of what the insurer can actually earn on its investments. In 2010, nearly 95 percent of all life insurance policies contained a minimum interest rate guarantee of at least 3 percent, and 70 percent of life insurer annuities with such guarantees had a minimum of at least 3 percent — in a period in which long-term Treasuries, a good indicator of insurers' returns, traded close to or below 3 percent, according to a recent Chicago Fed study.

That study found that the low interest environment has been hard on life insurers. The returns of large insurers become more sensitive to interest rates in low-rate environments, they found. The stock prices of insurance companies fell in recent years while the rest of the market rose, and 45 percent of life insurance company CFOs said in a 2012 survey that prolonged low interest rates are the single greatest threat to their business model.

Hedge funds may also have incentive to reach for yield, Rajan argued in 2005. Hedge fund managers are compensated based on the amount by which their nominal returns exceed some minimum threshold. When market interest rates are high, compensation is high without the hedge fund having to gamble excessively for it. If rates are low, the fund may risk missing the threshold entirely. The only way to generate high returns may be to add risk.

But aren't investment managers required by regulations or the preferences of their clients to stay within certain risk buckets? They are. But risk measures, such as credit ratings, are necessarily broad; investments have finer degrees of risk not captured by broad measures. It's not hard for investment managers to take on more risk — through investments that are longer-term, more complex, less liquid, or more leveraged — while staying within requirements.

Risk measurements are like weight classes for boxers, says Bo Becker, professor of finance at the Stockholm School of Economics. "Weight is really important to how powerful you are as a boxer," Becker notes. "There's a lot of gaming around weight classes — it's really ideal to be at the top of the class. You see the same thing with a professional investment manager who is given a risk bucket. They still have scope to take on a lot of risk or a little risk."

Regulators can use judgment to probe beneath objective measures of risk; in fact, the 2010 Dodd-Frank regulatory reform act requires them to do just that, moving away from credit ratings. But that's harder to do in the case of complex securities, such as certain "structured" bonds that are built on other assets rather than being a claim to something real, like a commodity or a stake in a company. The more illiquid or complex the investment, the harder it is to assess risk, which is why reaching for yield may be more likely to occur in opaque areas of financial markets. Ultimately, the Dodd-Frank Act's move to abandon ratings doesn't solve the problem, Becker says, because for any functional definition of risk, there will always be gradation that is hard for regulators to see.

Delegated investment management — when investors manage funds owned by somebody else — has grown considerably over the last 50 years, starting with the rise of insurance companies and pensions. "The scope for reaching for yield is bigger than ever," Becker says.

But that doesn't mean reaching for yield is always happening. That's where long periods of low interest rates come in. Market interest rates are rarely as low as they have been recently (see chart). From the 1970s until the early 2000s, bond yields were relatively high. After the tech bust in the early 2000s, the Fed's policy rate hit 1 percent in June 2003, near a record low. It stayed there for a year, spurring concerns such as those raised by Rajan. Thus, the Fed has not had to confront the possibility of reaching for yield until the past decade.

Reaching for Evidence

The evidence of reaching for yield is hard to come by, which is one of the challenges for regulators. "It's hard to see in price data because you don't have any reference on what's a fair price," says Viral Acharya, professor of economics and finance at the New York University Stern School of Business.

Observers have been pointing to some market-based signs of excessive risk, but with little certainty about what they mean. A particular concern recently — and a major theme of this year's annual August gathering of prominent economists in Jackson Hole, Wyo. — is that very low interest rates could be fueling speculative asset bubbles around the globe. For example, Christine Lagarde, managing director of the International Monetary Fund, noted that cumulative net flows to emerging markets have risen by more than $1 trillion since 2008, an estimated $470 billion above trend. A recent study from the New York Fed found that low Treasury yields have been the main factor driving excess returns in the U.S. stock market to a historic high.

Sometimes the evidence is not in prices, but in asset managers suddenly doing something new. "You'll see certain kinds of asset managers engage in a lot more of a particular activity than others," Acharya says.

In a study from earlier this year, Becker and Victoria Ivashina at Harvard Business School published some of the limited hard evidence that exists of those activities. Insurance companies are required by regulation to hold a certain amount of capital based on the risk level of their portfolios, to increase the chances that they can meet their liabilities even in bad times. But they systematically buy the riskiest bonds available within the "safe" asset categories that equate to low capital requirements, Becker and Ivashina found. Leading up to the financial crisis, insurance companies held 72 percent of all the issuances of the safest quartile of investment-grade bonds, but 88 percent of the riskiest quartile of those bonds. By comparison, pension and mutual funds, which aren't constrained by capital requirements, did not engage in this behavior. (That doesn't mean pension and mutual funds don't reach for yield; it would just manifest itself differently, Becker and Ivashina argued.)

Both interest rates and risk premia were particularly low by historical standards during this period. Reaching-for-yield behavior disappeared during the crisis, when investors were likely to be more cautious. But as soon as the crisis receded, reaching for yield ramped up again. They also found that reaching for yield is correlated with higher bond issuance by riskier firms, which obtain funding more cheaply than they would under normal conditions.

Another reason reaching for yield is challenging to identify is that it won't necessarily show up in price data at all — for example, yields on junk bonds converging toward risk-free rates. Risk doesn't necessarily appear in rates because it can also be manifested in subtler, nonprice ways, Stein said in his February speech. For example, investors can make loans with fewer "covenants," which are safety thresholds that can protect the bond holder. Or they can agree to low levels of "subordination," which means they are among the last of all investors to be paid out, and thus the first to bear losses.

There is some evidence that reaching for yield may be taking these forms, Stein said. Research by Robin Greenwood and Samuel Hanson at Harvard Business School found these nonprice risks tend to be correlated with the amount of bonds being issued by risky borrowers. The high-yield share of issuances, in turn, has recently been above its historical average, Stein said. Additionally, issuance of "covenant-lite" loans and other nonprice risk characteristics in 2012 were comparable to just before the financial crisis.

For policymakers, the concern is whether the risks have systemic implications. Even if riskier bets turn out badly for a few or even many firms, that doesn't mean we'll experience another financial crisis. For the risks to have systemic implications, they may have to be combined with other risky behaviors. One is leverage — funding risky activities by borrowing. A firm is on the hook for paying those debts back even if its investments go bad, leaving it at risk for insolvency. Low interest rates, of course, make borrowing and therefore leverage more attractive. Another risky behavior could be maturity transformation, or funding long-term investments with short-term instruments, such as repurchase agreements, that are subject to runs as investors quickly pull back at the first sign of trouble. Both behaviors could leave investors especially vulnerable to market reversals, and some economists have argued that they were key sources of systemic risk prior to the recent financial crisis.

Normally, markets should be expected to place limits on risk-taking; investors have an incentive to withdraw funding when things get out of hand — when single firms take excessive risks or when entire asset classes start to look overvalued. Economists have long debated why investors might sometimes think they will be shielded from bad outcomes. Some favor behavioral explanations, such as investors herding into similar risks because they know a bad outcome won't make them look worse relative to competitors who took the same risks. Another possibility is that the market's ability to limit risk-taking is reduced when investors expect the government to step in and prevent losses, as it did during the financial crisis.

What Policy Could Do

Fed policymakers have said the evidence of reaching for yield, especially with the potential for serious systemic effects, is still limited. But since the financial crisis, regulators have become more eager to explore hypotheticals.

That discussion has focused on which of the Fed's tools is most appropriate to fight reaching-for-yield behavior should it escalate. There are two choices: monetary policy or regulation. Before the crisis, central bankers argued that monetary policy should not be used to pop asset bubbles preventatively, a view so widely held that it was dubbed the "Jackson Hole consensus."

Bernanke and Mark Gertler at New York University encapsulated that consensus in a 1999 paper: "policy should *not* respond to changes in asset prices, except insofar as they signal changes in expected inflation." Central banks cannot identify asset bubbles in advance, they argued, and even if they could, monetary policy is too blunt a tool; it could only deflate an asset bubble by taking down the rest of the economy with it. Historically, central banks have tended to use monetary policy only to clean up the residue from bubbles after they burst.

Regulation, instead, has been the preferred tool for managing risk. It is certainly a more precise tool. The 2010 Dodd-Frank Act instructed the Fed and other regulators to take a macroprudential approach to financial regulation — that is, to ramp up their surveillance of risks that spread from one institution to the next, such as those that might result from excessive leverage or maturity transformation. The downside of regulation has always been that examiners will never be able to see every place that risk lies. Stein argued that seemingly innocuous cases of reaching for yield can imply that more of it is happening where we can't see it. "So we should be humble about our ability to see the whole picture," he said.

For that reason, Stein said, regulators might not want to rule out tighter monetary policy as a tool for limiting risky behavior. "[W]hile monetary policy may not be quite the right tool for the job, it has one important advantage relative to supervision and regulation — namely that it gets in all the cracks."

Would using monetary policy in this way be trying to exert too much influence over investor behavior, causing market distortions? Some policymakers, including Richmond Fed President Jeffrey Lacker, have argued — though not in the context of reaching for yield — that trying to affect markets through monetary policy in anything other than a broad-based way is not an appropriate role for the Fed. In several 2013 appearances, Bernanke said that while reaching for yield was a risk, it didn't appear to be prevalent enough to outweigh the benefits of easier monetary policy to support the economic recovery — which itself can aid financial stability.

A Moot Point For Now?

Longer-term market rates have risen recently following discussion from Bernanke about the Fed's potential exit from the stimulative policies it employed during the recession that have kept interest rates low. On May 22, Bernanke said the Fed could slow, or "taper," its monthly $85 billion purchases of new assets by the end of the year if the economic recovery remained on track. Long-term Treasury yields immediately jumped in response, reaching as high as they had been in more than two years. Investors quickly fled from emerging market equities, and their currencies fell.

The market volatility in response to the tapering discussion is a sign of reaching-for-yield behavior being unwound, Acharya says. "It's clear that there will be dislocations if they are unwinding with even the hint of a taper," he says.

Slowing down new asset purchases is a less strong step than selling the stock of assets the Fed already holds, which is itself a far cry from actually raising the federal funds rate. But even if interest rates don't return to their record lows for a while, regulators may continue to view reaching for yield as a concern as monetary policy moves into a less aggressive phrase — and as bond investors continue to struggle with low returns. **EF**

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Getting the Word Out

BY CHARLES GERENA

Thanks to blogs, online databases of working papers, and other outlets on the Web, an economist doesn't need a Nobel Prize and hundreds of articles in academic journals to make a big splash.

Take a paper written in 1999 by economists John Lott, now of the Crime Prevention Research Center, and William Landes at the University of Chicago. It challenged the relationship between concealed weapons laws and the incidence of mass shootings. More than a decade later, the paper remains among the most downloaded works on the Social Science Research Network (SSRN), a free online repository. It also continues to be widely cited, despite the fact that it has never been published in an academic journal.

The Internet has created more outlets for research economists to disseminate their work in progress and participate in policy discussions. Still, getting published in top-tier journals remains an achievement that is valued in the academic world. In fact, it may grow in importance. Faced with information overload, people turn increasingly to sources that they know and trust, and top-tier journals have long been relied upon to separate the wheat from the chaff.

Traditionally, if economists wanted to disseminate their work widely, the usual route would be to present a working paper at conferences or seminars at universities, gather feedback, and make refinements. Then the work would be submitted to a well-known, peer-reviewed academic journal like the *American Economic Review*, where it would be refereed by other economists before its acceptance. With this seal of quality, the paper would be more likely to get cited in other research and in economics textbooks — and being widely cited helps economists gain tenure at universities, get promoted, and win grants.

Things are changing now, according to Daniel Klein, an economics professor at George Mason University. Klein edits *Econ Journal Watch*, which critiques journal articles and follows trends in the economics profession. "Getting ideas out there is a lot easier. You've got these other types of discourse that can gain attention and do have some cultural power" outside of academia, he notes. "It's all part of much broader communications, information technology, and cultural changes."

From the 1970s to 1990s, the average length of the review process at economics journals increased — editors were taking longer to review submissions and requiring more revisions. Although editors are working to reduce production lags, Klein believes some economists are weary of jumping through hoops to get published. "Some of these new outlets don't confine themselves the way the most prestigious journals tended to do," he notes.

Last April, Klein used SSRN to circulate a paper based on his recent experiments with a feature of Google Books that graphs how often a selected word or phrase is mentioned in published work. Less than a month later, Tyler Cowen talked about the paper in his Marginal Revolution blog and David Brooks quoted it in his *New York Times* column.

Will Internet publishing ever become a viable alternative to traditional journals? David Laband, chair of the School of Economics at Georgia Tech, is optimistic. Laband has studied publication trends in academic journals and the economics field in general. "The nature of the outlets from which we can choose to indicate relevance to the scientific community and beyond has broadened very considerably," he notes. "I'm quite certain that unpublished manuscripts attract a larger share of citations now than 30 years ago."

Yet there is a downside risk of having more options for circulating economic research, particularly the new crop of journals that are only published online and haven't established a reputation.

"There is increased uncertainty that work published in an online journal that you may not have heard of before is actually significant research," Laband says. Hence, he suggests, economists increasingly use the reputation of top journals as a proxy for quality.

In addition, posting an unpublished paper on a personal website or getting cited by a popular blog doesn't get the author far in academia. "It's hard for material published outside of the established journals to get a lot of establishment respect, even if it is widely read and influential," Klein notes.

As a result, top journals remain a magnet for research economists. A January 2013 study of the top five economics journals by economists David Card and Stefano DellaVigna of University of California at Berkeley found that submissions have almost doubled since 1990, growing fastest since 2000.

Getting the attention of the blogosphere may not get the attention of a university tenure committee or push the frontiers of economic research. For economists who value the role of the public intellectual, however, the online revolution is a breakthrough. Not everyone can have a *New York Times* column, but anyone can opine in a blog.

Also, Laband believes that the profession will benefit from the greater ability of researchers to reach out to lay audiences. "One of our functions as academics is not just to conduct research and contribute to the corpus of scientific knowledge," he explains. It is also to "inform nonscientists about the importance of economics in their everyday lives. We teach." **EF**

Jargon Alert

Present Value

BY KARL RHODES

The Jumbo Lotto jackpot hit $500 million, and someone bought the winning ticket, but no one has come forward. A week goes by and still no winner emerges. What's taking so long?

West Virginia billionaire Lucky Ducky has the winning ticket, but he's trying to determine the best way to collect his money. Should he take one lump sum of $334.1 million now — or 30 annual payments of $16.67 million that would add up to $500 million over 29 years? (The 30 payments would span 29 years because he would receive the first payment on day one.)

Ducky's analysis begins with the Jumbo Lotto's calculation of present value, an estimate of how much the 30 payments over time would be worth on day one. The lottery has determined that the present value of the 30 payments is $334.1 million. Using the present-value formula, Ducky discovers that the lottery has based its calculation on an interest rate of 1.4 percent. In other words, if he took the lump sum and invested it at 1.4 percent compounded annually, he would end up with $500 million in 29 years.

"When accountants compute the present value of future cash flows, all they are really doing is mathematically backing out the interest for that period of time," says Joe Hoyle, an accounting professor at the University of Richmond. The key is deciding which interest rate to employ.

Ducky feels certain he can do better than 1.4 percent. His portfolio of corporate bonds has been generating an average annual return of 6 percent over many years. So it would seem clear that he should take the lump sum. But Ducky realizes that the lottery's present-value calculation is only a starting point. What about income taxes? What about the potential returns on investing the 30 annual payments as he receives them? When he factors in combined federal and state taxes of 49.9 percent and expected annual returns of 6 percent, the 30-payments option generates $397.6 million over 29 years, while the lump-sum option produces $395.1 million during that time. So the 30 payments generate $2.5 million more, but is that worth the wait?

At this point, Ducky turns to his team of accountants, attorneys, and economists, but they only raise more questions. Does he want to make large charitable contributions at some point? Does he expect taxes to go up or down? What about interest rates? What about inflation?

Present-value analysis can be tricky, even when the future income stream being discounted is as predictable as annual lottery payments. Most people will never win the lottery, but present-value analysis helps individuals and corporations evaluate trade-offs between receiving payments now versus receiving them later. Decisions about pension plan payouts, for example, are similar to Ducky's dilemma. A prospective retiree could use present-value analysis to help her determine whether it would be better to take a lump sum now or monthly payments for the rest of her life. In this context, the analysis raises a vitally important question: How long does she expect to live?

Life expectancy also is important when corporations use present value to evaluate potential investments. For example, if a regulated utility is thinking about building a nuclear power plant, the company would estimate the annual cash flows that the plant would produce over the course of its useful life. The utility would choose a life span and an interest rate (perhaps its regulated rate of return) to determine whether the present value of the proposed plant's cash flows would exceed the cost of building it.

But in the nuclear power plant example, yet another important consideration looms. How much would it cost to clean up the plant at the end of its useful life? This question takes the capital-budgeting exercise beyond mere present value to the more comprehensive concept of net present value. To calculate the net present value, the utility must compare the present value of the plant's future cash inflows to the present value of its future cash outflows — including the costs of building, operating, and winding down the plant.

"If the present value of the cash inflows is greater than the present value of the cash outflows, then the proposed plant has a positive net present value, and you assume that it is a good investment," Hoyle says.

Compared with the uncertainties of investing in a nuclear power plant, Ducky's present-value analysis seems pretty simple. Ultimately, he decides to take the lump sum and pay the taxes up front because he thinks the top federal income tax rate is likely to increase during the next 29 years. He also expects greater inflation and higher real interest rates. Ducky's analysis shows that if historically low rates of interest, inflation, and taxation persist, the 30 payments would generate $2.5 million more than the lump-sum distribution, but he is willing to wager that one or more of those rates will rise significantly, making the lump-sum option the better bet. **EF**

ILLUSTRATION: TIMOTHY COOK

Agricultural Policy and Market Distortions

BY CAROLINE TAN

Governments around the world have intervened heavily in the agricultural sector. When governments do so — whether through tariffs, export subsidies, import quotas, or high taxes on farmers — they distort trade markets by interfering with normal supply and demand. For example, when an advanced country imposes a tariff on a foreign good to protect local producers, it encourages consumers to buy more of a domestically produced product than they otherwise would. Such policies can disadvantage farmers in developing countries, who then face a harder time selling their crops on the global market. Since three-quarters of the world's poorest people derive their income from agriculture, according to the World Bank, measures that reduce world trade can worsen poverty.

The prospects for reform of agricultural policies depend on what motivates such policies to begin with. In a recent article, Kym Anderson of the University of Adelaide in Australia, Gordon Rausser of the University of California, Berkeley, and Johan Swinnen of the University of Leuven in Belgium provide a comprehensive overview of evolving agriculture policies to understand what causes some countries to change their protective stance toward agriculture as they develop.

"Political Economy of Public Policies: Insights from Distortions to Agricultural and Food Markets." Kym Anderson, Gordon Rausser, and Johan Swinnen. *Journal of Economic Literature*, June 2013, vol. 51, no. 2, pp. 423-477.

Their first task is to identify where countries have stood historically. They measure price distortions by the "nominal rate of assistance" (NRA), which assesses the effect of government policy on nominal returns to agriculture, and the "relative rate of assistance" (RRA), which measures the extent of a government's intervention in agriculture relative to other sectors. They find that richer countries have tended to adopt a pro-agricultural bias (higher NRAs and RRAs), while developing countries have had an anti-agricultural bias (lower NRAs and RRAs). In other words, wealthier nations have typically enacted trade policies that protected domestic farmers from foreign competition, while developing countries have tended to tax their farmers more heavily than producers in other sectors.

Since the 1980s, the average RRAs of both groups have been converging toward zero — meaning that governments have started treating agricultural and non-agricultural sectors more equally. Still, in both rich and poor countries, a strong anti-trade bias persists in agricultural policy despite efforts to open markets for other goods.

What causes a country to change policy as it develops? The authors survey the political economy literature, looking at income distribution, economic and governance structures, ideology, and political organization. In poorer nations, where agricultural taxes are usually the most substantial source of revenue, policymakers tend to place more of the tax burden on farmers. But over the course of development, political and other factors tend to produce a less anti-agricultural stance. Historically, officials have exchanged redistributive policies for political support during times of economic growth, when income gaps between rural and urban populations typically widen, prompting farmers to lobby politicians for favorable measures. Not surprisingly, sectors with a comparative disadvantage are more likely to seek government help.

Political democratization, which often comes with development, tends to further this process. Theory suggests that countries will adopt more redistributive policies as they democratize, simply because there tend to be more have-nots to vote for redistribution. The authors note that the very factors that make it difficult for farmers to organize politically — namely, geographic dispersion — can render them more powerful in a democracy. There are, however, no rules of thumb that apply to every country; notably, the authors argue, China has moved away from taxing farmers in the last 40 years without broadly liberalizing its political system.

Social and political developments have created a new range of forces that could determine the shape of future agricultural policy, though it's not always clear how. For example, research has only begun to illuminate the effects that international developments in the last 20 years — the North American Free Trade Agreement, the World Trade Organization, and enlargement of the European Union, among others — have had on agricultural policy. In light of new social trends, farmers have increasingly sought political support from food producers as a way to offset the burden of regulations concerning animal welfare, genetically modified foods, and the environment. In addition, the rise of two new major players in the global market, China and India, creates new opportunities to understand how agricultural policies shift as countries develop.

Studying agricultural policy through the economics of political decision-making can illuminate barriers to the reform of distortive policies. The authors argue that better understanding these barriers — and thus, perhaps, how to overcome them — provides a sense of "cautious optimism" for the future course of agricultural policy. **EF**

First Designations of 'Systemically Important' Firms

BY DAVID A. PRICE

The Dodd-Frank Act, passed in 2010, created an interagency group called the Financial Stability Oversight Council, or FSOC, to identify risks to the country's financial stability. Among its tasks is designating nonbank financial institutions as systemically important financial institutions, or SIFIs — that is, determining which institutions, in the event of distress, would pose a threat to the stability of the financial system. FSOC has recently made its first three designations: In July, it designated General Electric Capital Corp. and American International Group (AIG), and in September, it designated Prudential Financial, Inc.

Following the designations, the institutions become subject to supervision by the Fed and must comply with certain financial standards. They must also undergo periodic stress tests and develop a "living will" (a plan for winding down without government aid). Prudential had sought to head off designation; it was designated after it unsuccessfully appealed a preliminary decision by FSOC. GE Capital and AIG did not object to their designations.

FSOC has stated that it uses a three-stage process to flag institutions that may be systemically important. Its first stage, highly preliminary, is to use publicly available data and regulatory data on various quantitative factors to narrow the list of firms; among these are asset size, credit default swaps (CDS), outstanding debt, and leverage. (In looking at CDS, the Council considers all CDS for which the firm is the reference entity.) In stage two, it further analyzes the threat posed by each of the remaining firms to financial stability using both quantitative and qualitative information. Each company that proceeds to stage three is notified that it is under consideration and is offered the opportunity to provide information before FSOC reaches a decision.

For each of the designations, the Council released detailed analyses of what it saw as the relevant facts. With regard to GE Capital, a General Electric subsidiary with $539 billion in assets, FSOC emphasized that the scale of its activities as a provider of credit and as an issuer of commercial paper and other debt gave it strong interconnections with financial markets. It suggested that because money market mutual funds are major purchasers of GE Capital's commercial paper, financial distress at the firm could cause those funds to "break the buck," leading to a run on money market funds in general.

In addition, if distress at GE Capital impaired its ability to borrow, it might have to liquidate assets rapidly, possibly leading to a fire sale that would drive down the prices of assets held by other large financial firms. FSOC also noted that some 52 percent of GE Capital's assets were based abroad and 42 percent of its revenues came from abroad, making it more difficult to resolve rapidly and thereby increasing the threat to U.S. financial stability.

In designating AIG, the Council determined that AIG's traditional insurance and annuity products could be the basis of systemic risk. (AIG was rescued by the federal government during the 2007-2008 financial crisis after suffering major losses on CDS, a nontraditional insurance product.) It found that the traditional products offered by AIG could give rise to systemic risk in several ways. First, many firms are connected to AIG in its role as insurer. FSOC acknowledged that losses to policyholders would be reduced by state guaranty associations, but noted that distress at AIG could put "unprecedented strain" on that system.

Second, many of AIG's life insurance and annuity products "have features that would make them vulnerable to rapid and early withdrawals by policyholders," creating a possible need for AIG to liquidate assets quickly. Finally, AIG's critical role in certain commercial insurance markets would be difficult to replace within a short time. FSOC also noted that holders of CDS for which AIG is the reference entity would be at risk from distress at the company, as would holders of its securities.

FSOC set out rationales for its designation of Prudential similar to those for its designation of AIG. Several FSOC members dissented. The dissenters were two voting members of the Commission — Edward DeMarco, acting director of the Federal Housing Finance Agency, and S. Roy Woodall, a former Kentucky insurance commissioner and a former president of the National Association of Life Companies — and one nonvoting member, John Huff, head of the Missouri Department of Insurance. They argued that FSOC had misunderstood the business of insurance and overstated Prudential's risks to the financial system.

The effect of designation on the firms and their markets remains an open question, observes Richmond Fed bank structure manager Sabrina Pellerin. For some firms, designation as a SIFI could prove beneficial in that it may be interpreted by investors and customers as an implicit federal guarantee — despite provisions in the Dodd-Frank Act limiting federal rescues. For other firms, new capital, leverage, and liquidity requirements from designation may create a net burden.

"The idea of insurance companies being regulated similarly to banks raises questions about whether they will be at a competitive disadvantage next to other firms in the industry," Pellerin says.

Whatever the effects, FSOC's rationales for its first designations will likely be studied by insurers, asset management companies, and other nonbanks that may become candidates for SIFI-hood. **EF**

The IT Revolution

BY CHARLES GERENA

"Is the Information Technology Revolution Over?" David M. Byrne, Stephen D. Oliner, and Daniel E. Sichel, Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series Working Paper No. 2013-36, March 2013.

Labor productivity is an important indicator of economic growth. If workers can produce more output within a given time, there is room for expansion without sparking higher prices. That's one reason economists have been trying to figure out why growth in labor productivity has slowed since the mid-2000s.

Researchers from the Board of Governors of the Federal Reserve System, the American Enterprise Institute, and Wellesley College look at this complex question in a working paper published last spring. They focus on whether advances in computer hardware, software, and communication equipment continue to boost labor productivity. Their conclusion: The use of information technology (IT) and efficiency gains in the production of IT still contribute to productivity growth, but less so than during the tech boom of the late 1990s and early 2000s. At the same time, semiconductor technology has continued to advance rapidly, promising to return productivity growth to its long-run average.

There are other possible explanations for the slower growth in labor productivity in recent years. "The economy has taken a long time to recover from the financial crisis and Great Recession," the authors note, "as the repair of balance sheets has proceeded slowly and as uncertainty about the pace of the recovery has held back investment." Another explanation is that the economy "has entered a long period of stagnation as the easy innovations largely have been exploited already."

"Big Banks in Small Places: Are Community Banks Being Driven Out of Rural Markets?" R. Alton Gilbert and David C. Wheelock, Federal Reserve Bank of St. Louis *Review*, May/June 2013, pp. 199-218.

One economic sector that has been transformed by the IT revolution is financial services. Community banks traditionally have had the upper hand over large banks in rural markets thanks to knowledge of their local customer base. Technological advances increasingly have enabled the nation's largest banks to serve those markets effectively. Still, according to a recent paper from the Federal Reserve Bank of St. Louis, community banks remain competitive.

In addition to government policies that have allowed the consolidation of banking assets and deposits into the vaults of fewer institutions, advances in information-processing technology may have favored larger banks. "Such advances have lowered the costs of obtaining 'hard' information about potential borrowers, such as audited financial statements and standardized credit reports," note the researchers. "At the same time, these changes have also lowered the cost to banks of monitoring deposit and loan accounts and managing large branch networks."

Indeed, the smallest banks with less than $1 billion in assets saw their share of deposits in rural counties and small towns shrink during the 1980s and 1990s, according to Federal Deposit Insurance Corporation data. Their share of rural county deposits changed little between 2001 and 2012, however, as did the share held by the largest banks with more than $50 billion in assets.

Why? Rural counties may be less profitable for large banks, explain the paper's authors. "[They] have generally experienced slower population and economic growth than urban areas in recent years, and large banks may have chosen to focus their operations in urban markets and cede business to smaller banks in slower-growing and less-profitable rural markets."

"Urban Decline in Rust-Belt Cities." Daniel Hartley, Federal Reserve Bank of Cleveland, Economic Commentary 2013-06, May 2013.

Imagine a city losing more than 40 percent of its population, going from a thriving metropolis to a shell of its former self. Buffalo, Cleveland, Detroit, and Pittsburgh endured such population losses between 1970 and 2006.

Some neighborhoods in these Rust-Belt cities emptied at a slower rate than others, according to research published by the Federal Reserve Bank of Cleveland. Economist Daniel Hartley finds that the areas with the lowest house prices had the steepest population declines.

Hartley also finds that in Cleveland and Detroit the steepest drops in income occurred in communities in the middle range of home prices, likely the result of lower-income families moving into these areas to take advantage of lower overall prices for housing. In contrast, the neighborhoods with the highest priced homes in Pittsburgh and Buffalo saw their average incomes surge between 1970 and 2006, something that did not happen in the highest priced communities in Cleveland or Detroit.

"This reflects the fact that these [Pittsburgh and Buffalo] neighborhoods are situated near centers of higher education, which have attracted highly skilled residents," surmises Hartley. "By contrast, some of the neighborhoods closest to Cleveland's major higher education institutions are outside the city limits." **EF**

COVER STORY

Has College Become a RISKIER Investment?

The payoff has become more uncertain — but you're probably still better off going

BY RENEE HALTOM

Countless studies over 50 years nearly all say the same thing: Going to college will probably make you richer. You don't even need a fancy study to see it. It's visible in the basic data: The median person with a bachelor's degree earns about $48,000 per year, compared with $27,000 for a high school graduate, according to the U.S. Census Bureau. College grads also have lower unemployment — as of November, 3.4 percent for people with a bachelor's degree or more, and 7.3 percent for people with only a high school diploma.

But not everyone earns the median. Some college graduates become CEOs, while others can't even find jobs in their field of major.

Unequal outcomes from college have always been a fact of life, but there is evidence that the dispersion of outcomes has increased. Economists have known this to be true at the top of the ladder for some time. In the late 1970s, the most fortunate 10 percent of graduates made around $963,000 more in their lifetimes than the median, but they now make $2.3 million more, adjusted for inflation, according to a recent study by Christopher Avery at the Harvard University Kennedy School of Government and Sarah Turner at the University of Virginia. And according to new evidence, there is now more variance on the downside too.

For example, in 1970, just 1 percent of taxi drivers and roughly 3 percent of bank tellers had a college degree. The number rose to about 15 percent in 2010, even though the key skills in those professions did not change much over time, according to a study by Richard Vedder, Christopher Denhart, and Jonathan Robe at the Center for College Affordability and Productivity, a Washington, D.C.-based nonprofit. A survey by consulting firm McKinsey & Company suggests that as many as 120,000 of the nation's 1.7 million 2012 college graduates who wanted to work elsewhere took jobs as waiters, salespeople, cashiers, and the like.

There's also the fact that graduates are having an increasingly hard time repaying their student loans. Delinquency rates on student loans have jumped in the last year, and are now higher than those for mortgages, auto loans, and credit cards. Student loans are hard to discharge even in bankruptcy, suggesting that many of these people are truly unable, not just unwilling, to pay them.

Some of the increased downside risk can be chalked up to the Great Recession, but other new research suggests it may be a longer-term trend. And it is becoming scarier to take the college gamble: The cost of college has grown more than twice as fast as inflation in the last 30 years. An investment adviser would say that risk, not just return, should determine your investments. If the cost of college is rising and the payoffs are more uncertain, should fewer people be going?

Betting on Brains

The labor market has always paid a premium for college graduates, and that premium has grown sharply over the past 30 years or so. Economists say that is mostly due to "skill-biased technical change" — technology has been reshaping the distribution of skills needed by employers. For example, employers have demanded a larger number of highly educated workers to match their increasingly sophisticated technologies, as well as shrewd thinkers to function in increasingly complex and connected global markets. A college degree can serve as both proof of learned skills and a signal of innate analytical ability. Skill-biased change aids most those already at the high end of the distribution of ability and preparedness, which is why it is widely viewed as one of the leading explanations for growing income inequality.

The gains add up over a lifetime: The median college graduate makes almost $2.3 million over their lifetime, compared with $1.3 million for someone with only a high school diploma, according to a study by Anthony Carnevale, Stephen Rose, and Ban Cheah at the Georgetown University Center on Education and the Workforce.

But recent research indicates that skill-biased technical change may have hit a plateau. In a working paper this year, Paul Beaudry and David Green of the University of British Columbia and Benjamin Sand of York University found that the demand for skilled workers has actually been falling since the tech bust in 2000. But you can't see this by comparing the earnings of college graduates with nongraduates. Their study follows a branch of research that says it is the tasks you perform, not the education you have, that determine your income: whether you are performing cognitive, routine, or manual work.

PHOTOGRAPHY: GETTY IMAGES/E+

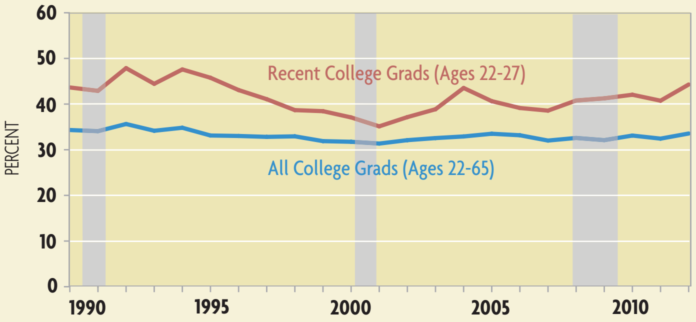
The reason that distinction matters is that it shows that skill-biased technical change hasn't necessarily left low-skilled workers in the dust. Work by Daron Acemoglu and David Autor, both at the Massachusetts Institute of Technology, among others, has shown that technology has increased opportunities for people at the top and bottom of the skill distribution — that is, people performing both highly cognitive work and manual or service-based tasks. Who's been hurt are people in the middle — those performing routine tasks like clerical, office support, and some sales work — whose jobs have been automated or outsourced out of existence.

What Beaudry and his co-authors found is that the demand for cognitive skills — the managerial, professional, and technical jobs typically held by college graduates — reversed around 2000. They can't say for certain that it's because skill-biased technical change has run its course for now, but "the timing on all fronts just fits so closely with the 2000 tech bust that we think that's the most credible way of reading it," Beaudry says. They looked at young workers, for whom emerging labor market trends are often most visible. In the 2000s, high-skilled workers have increasingly taken manual jobs — they've gone into household services, physical labor, and other jobs typically held by people without a college degree — bumping many low-skilled workers out of the market entirely. For a while this phenomenon was unfelt because of the housing boom, Beaudry says, but real wages for high-skilled workers have actually been falling for a decade or more.

Their story meshes with a recent study from Jaison Abel and Richard Deitz at the New York Fed. They found that young college graduates are taking low-skilled jobs now more than any time in recent history. The proportion who are "underemployed" dropped dramatically over the course of the 1990s as the tech boom readily absorbed new high-skilled workers (see chart). But during each of the jobless recoveries in the 2000s, underemployment of recent college grads rose sharply, Deitz says. It is now as high as it was in 1995, before the tech boom really amplified the effects of skill-biased technical change.

Underemployment Hits Young Grads Hardest

Percent of grads in a job not requiring a bachelor's degree



NOTE: Data through 2012. Gray bars denote recessions.
SOURCE: Original chart by Abel and Deitz (2013)

All About the Benjamins

Before 18-year-olds start burning their acceptance letters, however, they should know that the college premium is still very much intact.

How is that possible? The true value of an investment takes into account the opportunity cost — what you could make under the best alternative. Beaudry says graduates taking low-skilled jobs are flooding that market, pushing down wages for jobs typically held by people with only a high school education. So even though real wages for cognitive tasks have fallen by 2 percent since the 2000s due to declining demand, they have fallen by 8 percent for manual tasks due to an abundance of labor.

College graduates even tend to earn more if they take the same job as someone with only a high school education. The average college-educated food service manager earns $1.5 million over his lifetime, but just $1 million with only a high school diploma, according to the Georgetown study that calculated lifetime earnings. The average college-educated cashier makes $300,000 more over his lifetime than with just a high school diploma.

In short, the income you can expect to earn out of college may be falling, but it's an even better investment nowadays compared with stopping at high school. The college premium is actually rising, Beaudry says, "just not for a nice reason."

In fact, only 14 percent of people with a high school diploma earn more than the median worker with a college degree, the Georgetown researchers found. That the percentage is even that high is due largely to the occupations they choose. A high school-educated firefighter makes more than a college-educated museum curator on average, but that is because of factors like physical ability and risk.

What appears to be happening is that the gains from college that Gen Xers experienced are taking longer for millennials to achieve. Between 2009 and 2011, a startling 56 percent of 22-year-old college graduates took jobs that didn't require a bachelor's degree. The proportion falls rapidly from there, however. For 30-year-old college graduates, underemployment in that time frame was at the historical norm for all college grads. That number is about one-third — and has been remarkably steady over the last two decades, across booms and recessions alike (see chart). In Beaudry's estimates, too, the wages for older college graduates have kept up pretty well, he says.

Beaudry's advice to students? Be patient. "The process after college might be very long and hard, and you might take some jobs that don't seem very attractive, but eventually you might get into the areas where you want to be working," he says. "It's about having your expectations aligned so that afterward you're not completely disappointed and saying, 'Wow, I was told this would pay off quickly.'"

College Dropouts

There is one group for whom college may not be worth the investment: people who aren't likely to finish.

That is actually a sizeable group. Though college enrollments have been climbing steadily for decades — rising from one-third of 18- to 24-year-old high school graduates in 1980 to one-half in 2010 — completion rates have been stagnant for about 50 years. Only half of Americans who enroll in college get a degree, compared with more than 70 percent in many other developed countries. (The Fifth District performs well relative to the rest of the country. See chart. The University of Virginia has the highest completion rate among flagship universities at 92.7 percent of students graduating within six years.)

If you don't graduate, the labor market basically treats you as if you hadn't attended college at all, a phenomenon known as the "sheepskin" effect. You'll earn a bit more for each additional year of college, but the large bump only comes with a diploma. According to U.S. Census figures, the average college graduate earns $26,922 more per year than the average high school graduate, but the average college dropout earns only $3,092 more.

Indeed, it's possible for the dropout to end up financially worse off than the student who never attended. Of everyone who enters college expecting to get a bachelor's degree, more than half leave with no degree and an average of $7,413 in debt, according to the study by Avery and Turner. Among only students who borrowed, the average debt burden for dropouts is $14,457.

Although the labor market doesn't heavily reward fractions of a college experience, those years still might not be a waste. Most students don't enter college knowing everything about their aptitude, tastes, and labor market prospects. Time in college provides that, even if it doesn't result in a degree. The financial worth of the option to drop out at will, which can save one from the investment toward a career path they wouldn't be better off taking, is called the "option value" of college.

The option value is especially important for students who are on the fence between low and high abilities, whose returns from college are the most uncertain. Kevin Stange at the University of Michigan Ford School of Public Policy recently estimated that the option value is worth 14 percent of the total expected return to college enrollment and is greatest — up to 35 percent — for marginal students. Without the option to drop out, some people who today have degrees despite entering college unprepared may never have enrolled in the first place, forgoing the primary engine of economic mobility.

It's somewhat puzzling that the proportion of dropouts has remained steady over time despite the rising college premium. One reason, according to many critics of our educational system, is that too many students arrive unprepared. Another is that students have increasingly complicated lives, says Cecelia Rouse, dean of the Woodrow Wilson School of Public and International Affairs at Princeton University, and an economist who has studied the returns to education. "If you're 18 and dependent on your parents, that really frees your mind and time to focus on your studies. But if you're 25 with two children and an ex-husband, there are physical limits to the time you can spend on school."

Rouse argues that our student population has gotten older and more nontraditional. The fraction of full-time students at four-year schools who work rose steadily from 1970 to 2000, according to Judith Scott-Clayton at the Teachers College at Columbia University. The average working student put in 22 hours per week before the Great Recession, when the number fell to eight hours per week.

The dropout phenomenon also matters to people not personally at risk. A student who graduated at the top of his high school class can't assume he'll do as well in college; for one thing, the least-qualified students may drop out or not matriculate at all. An average performer could easily end up closer to the bottom in college, Avery and Turner noted, which means he may need to expect less than the average salary — or be willing to work harder than he did in high school to compete.

Making Smart Investments

On balance, students still seem to think that college is the right choice, because they keep pouring in and taking on debt. Student loans are the only type of consumer debt that continued to grow during the recent recession, and they now stand at roughly $1 trillion — second only to mortgages.

Even though college is still a good risk, the payout has become less certain and, if Beaudry is right, smaller. In light of rising college costs, that means the investment has to be approached more carefully than in the past. One of the most important decisions is how much to pay for college, especially if debt is going to be a factor. Not only does financing increase the total cost of education, but monthly payments hit in the years of lowest earnings.

The *New York Times* recently profiled a 26-year-old woman who graduated from New York University with an interdisciplinary degree in religious and women's studies. She was earning $22 per hour as a photographer's assistant, but had $97,000 in student loan debt. She acknowledged that, in retrospect, she could have made different choices or she could have pursued that field at a less expensive school. Humanities majors are the lowest earners, with starting salaries of just $37,000 in 2012, barely above the wages of the average high school graduate. The McKinsey study found that more than half of recent college graduates would choose a different major or school if they could do it all over again. In that study, as well as others, graduates were more likely to be working in their field of choice if they studied health, education, or STEM fields — and less likely if they studied liberal arts, humanities, or communications.

Fortunately, debt burdens like the NYU student's are rare. Only 10 percent of bachelor's degree recipients leave college with more than $40,000 in debt, according to the College Board. Graduates of for-profit colleges have the highest debt burdens of any sector, and still only one-quarter of them have debt above $50,000, Avery and Turner calculated. Among all graduates who took out student loans, the median debt burden was $20,000 as of the 2007-2008 school year.

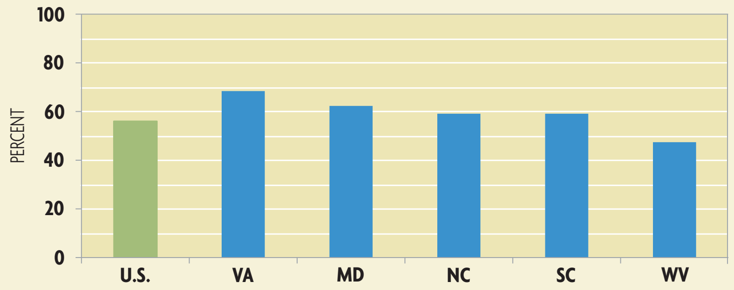
Part of the reason debt burdens don't seem as high as the headlines suggest they should be is that the average price that students actually face is much lower. The average in-state tuition at a public four-year school was $8,660 in the 2012-2013 school year. But thanks to student aid, which almost 80 percent of full-time undergrads receive, and tax benefits, the average student paid just $2,910, according to the College Board. For private nonprofit colleges, the published cost was $29,060, but the average net tuition cost faced by students was $13,380.

What really matters for choosing how much debt to incur is your ability to pay it back. Personal finance experts suggest that a manageable threshold for student debt payments is about 10 percent of income. Avery and Turner calculated what that would mean for the median student, who, as of 2008, graduated with about $20,000 in student debt. That equates to a $212 monthly payment over a 10-year period, so they would need to earn just over $25,000 to keep payments under the 10 percent threshold. The median earnings of a bachelor's holder is nearly twice that.

Economists are used to sorting through the data on payoffs and debt, but can students? They might understand that college graduates tend to have better labor market prospects, Avery says. "It's intuitive that they would understand that because they've had summer jobs." But he says they're less able to understand the right debt burden to undertake. "Long-term financial planning isn't something that 18-year-olds are going to be good at," he says. "They've never confronted the repayment of a loan, and even if they had, the behavioral impulse is to borrow, to downweigh the future and overweigh present consumption."

Fifth District Scores on College Completion

Percent of students at four-year institutions who graduated within six years, 2010



SOURCE: Chronicle of Higher Education, http://collegecompletion.chronicle.com

At the same time, he says, some students even underinvest. Half of students who work more than 20 hours per week don't have federal Stafford loans. These students not only potentially forgo the federal interest subsidy but also place themselves at greater risk of dropping out. "If I wanted to point to an area where students are not doing what they should be doing, that's where I would start," he says.

The complexity of the loan process is one common deterrent. Turner and Caroline Hoxby at Stanford University found that a program helping low-income students with information about financial aid and applying to college not only increased their application rates, but also their matriculation and academic success in higher-ranked programs — at a cost of just $6 per student.

That such small interventions can make the difference between going to college or not suggests students don't always follow the straight-forward investment model when deciding whether and how to pursue higher education, wrote Philip Oreopoulos and Uros Petronijevic at the University of Toronto in a recent survey piece on the returns to college. "There is more than just a financial cost-benefit analysis to look at," Deitz says. "There are preferences, what people want to do."

On that subject, students know something economists don't. **EF**

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Editor's Note: Facts and figures for this article are as of Dec. 16, 2013.

DIGITAL CURRENCY

New Private Currencies Like Bitcoin Offer Potential — and Puzzles

BY TIM SABLIK

It all started with a pizza delivery. On May 18, 2010, a Florida programmer named Laszlo Hanyecz posted in an online forum that he was interested in buying a couple of pizzas with bitcoins. Bitcoins were a new digital currency that had launched about a year and a half earlier. They existed only inside computers; the underlying software generated more virtual coins at a fixed rate and relied on cryptography to prevent fraud.

Software experts, unable to find any major flaws in the system, were intrigued. So were individuals looking for alternatives to government-issued currencies in the wake of the financial crisis and subsequent bailouts, which they viewed as an example of the kind of government excess that led to devalued currencies. While the bitcoins themselves had many of the trappings of real money, ultimately they were just bits of data in cyberspace. Could they really be used to buy anything?

Hanyecz wanted to find out. He offered 10,000 bitcoins to anyone willing to bring him two large pizzas. Some bitcoin trading among enthusiasts had occurred prior to Hanyecz's offer, but there hadn't been any real market for them. A few days later, Hanyecz triumphantly posted evidence of his successful transaction: a picture of two Papa John's pizzas. It was an important moment for the currency, leading to the creation of a "Pizza Index" to track the dollar value of the 10,000 bitcoins Hanyecz used for his purchase. Bitcoin's value has exploded since. In late November 2013, the Pizza Index breached $12 million, when a single bitcoin was briefly worth more than an ounce of gold. Growing value has also meant increased recognition and use.

According to CoinMap.org, a site that tracks Bitcoin acceptance, there are more than 400 physical stores in the United States that accept bitcoins as payment, and hundreds more worldwide.

"I've accepted bitcoins as payment in my legal practice," says Patrick Murck, general counsel for the Bitcoin Foundation, a nonprofit working to promote wider use of the currency. "Sometimes you'll go to a restaurant and split the check, so I'll reimburse somebody in bitcoins. There's a sushi joint in San Francisco that takes bitcoins. And the list is growing every day."

But Bitcoin has also raised a number of questions. For regulators, the fact that transactions in digital currencies are virtually anonymous, like cash, raises the concern that these systems could be used to mask illegal activities. In May, the Financial Crimes Enforcement Network (FinCEN), which is part of the Treasury Department, designated Liberty Reserve, another digital currency, a "financial institution of primary money laundering concern" under Section 311 of the Patriot Act. This allowed authorities to shut down Liberty Reserve's alleged $6 billion money laundering operation, the biggest in United States history, according to FinCEN director Jennifer Shasky Calvery.

So what is Bitcoin? A vehicle for criminal activity or the next step in the evolution of money? Or both?

The Origins of Money

Money has taken many different forms throughout history. Some early societies valued goods in terms of cattle, Native American tribes used shells, and for a time Roman soldiers were paid in salt (from which we get the word "salary"). Later, societies turned to precious metals like gold and silver for use as money. But how did goods like these become money?

Classical economists recognized that money arose out of a need to address the inefficiency of barter, which requires that each party has something the other wants. In his 1776 book *The Wealth of Nations*, Adam Smith observed that money arose initially as a commodity that "few people would be likely to refuse in exchange for the produce of their industry." Having a good that everyone wants makes trading much easier; over time, such goods became universally accepted as media of exchange. Gold and silver, to take a common example, were initially valued for their beauty, and their natural scarcity meant they were always in demand, which helped them retain value. This made them useful as media of exchange. They also had a number of other properties that made them well-suited for use as money: They were durable, portable, and divisible into smaller units (it was much easier to make change out of gold than cows).

In the 19th century, British economist Henry Thornton observed that coined money came to be valued more as a measure of the value of other goods than for its inherent value as a precious metal. Therefore, it was more efficient for societies to convert to paper notes to track the value of exchange. These notes were originally "IOUs" that were redeemable for the precious metals, but eventually governments suspended redeemability in favor of fiat money — paper currency not backed by any valuable commodity at all.

So what gives modern money its value? One argument sometimes advanced by economists is that the value of fiat money comes from a memory of the value of commodity money. Under this explanation, if a country initially had a convertible commodity-based currency, and then the government discontinued convertibility (as the United States did in 1971), the currency would continue to circulate because the infrastructure and assumption of value were already in place. Other explanations stress the importance of users' faith in the issuing entity. Legal tender laws could also be the key, since governments can create their own demand for paper money (through "fiat") by making it the legal form of payment for public debts, or taxes. But these arguments all suggest that establishing a private currency with no past tie to a commodity or any government backing, like Bitcoin, should be difficult.

"Say you're going around this primitive economy and you want to trade," explains George Selgin, a professor of economics at the University of Georgia. "Someone shows up in the marketplace with a handful of little paper notes with a portrait and some numbers on them. You're not going to look at those notes and say, 'Oh, I bet everyone wants these.' Until they're adopted as money, they're not anything. If they were money, then it would make sense for people to accept them. But who wants to go first?"

Getting off the Ground

At first glance, bitcoins lack the inherent value or government authority to get them off the ground as an accepted currency. But in surprising ways, they resemble the gold and silver coins of ancient times.

Upon registering, Bitcoin users are given a unique address and a computer file in which to store their bitcoins — their "digital wallet." To send bitcoins to other users, you just need to know their address. Members of the community known as "miners" use computer resources to solve complex problems and verify transactions by adding them to the public record. Roughly every 10 minutes, this process generates new bitcoins, which are awarded to the miners. The difficulty of the problems scales to ensure that this rate remains constant even if the number of miners increases. The number of coins generated in these intervals decreases over time, however, such that the total supply will ultimately cap at about 21 million.

In that sense, one could think of bitcoins like gold and silver, which are discovered and mined over time and have a finite total quantity on the planet. And in terms of volatility, bitcoins more closely mirror the larger price swings of gold and silver than smaller movements of dollars and yen. The price of a single bitcoin soared from around $13 in January to $1,200 in November, an increase of more than 9,000 percent. In between, prices have fluctuated wildly, sometimes rising and falling by hundreds of dollars a day (see graph).

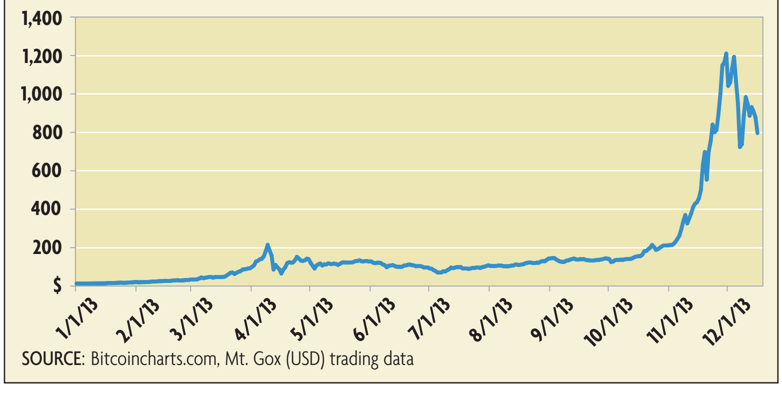
But unlike gold and silver, bitcoins have no nonmonetary use or value — they're just bits of computer data. This quality aligns more closely with fiat money, which also has no nonmonetary use or value — it's just bits of paper. Bitcoins are not issued or backed by any government or central authority, however. The program is open-source and maintained by the entire community of users. And unlike a government, those users don't have the ability to expand the money supply.

So how should economists think about Bitcoin? In an April working paper, Selgin suggested that there should be four categories for money rather than just two. He argues that even the traditional categories of commodity and fiat rely on two characteristics: scarcity and nonmonetary use. "A commodity money has nonmonetary use *and* is naturally or inevitably scarce; a fiat money has no nonmonetary use value *and* is scarce only by design," writes Selgin.

This leads to two other possible forms of money: money with nonmonetary use that is not naturally scarce but can be made scarce by a central authority, and money that has no nonmonetary use but is naturally scarce. Selgin calls items in this latter category "synthetic commodities." Prior to the first Gulf War in 1990, Iraq's currency, the dinar, was printed in the United Kingdom using Swiss-engraved plates. After the war began, sanctions on Iraq prevented importation of these Swiss dinars, freezing their supply in Iraq's economy. In response, Saddam Hussein's government severed ties with the old dinars and issued its own dinars, which were of poorer quality and easier targets for counterfeiters. People preferred to keep using the Swiss dinars, despite the fact that they had no nonmonetary use and were no longer accepted or designated as legal tender by any government.

Selgin classifies bitcoins as synthetic commodities like the Swiss dinars, but even that currency had the benefit of government backing to get it off the ground. What led anyone to accept Hanyecz's pizza offer? They may have simply believed that enough people would eventually accept bitcoins as money to make the transaction worthwhile. Recent developments in economic theory contend that the value of money comes in part from its ability to function as a recordkeeping device. But, more fundamentally, the value of money as a medium of exchange depends on individuals'

Bitcoin Market Price



SOURCE: Bitcoincharts.com, Mt. Gox (USD) trading data expectations that it will be widely accepted by other people in the economy. In a 1989 paper, Nobuhiro Kiyotaki of Princeton University and Randall Wright of the University of Wisconsin-Madison analyzed economic models in which certain goods arose naturally as media of exchange. They concluded that "the value of any medium of exchange, and especially fiat money, ultimately depends at least partially on faith."

Building Bitcoin Business

Bitcoin's growing value has started to attract the attention of entrepreneurs outside the original core of supporters. In July, Cameron and Tyler Winklevoss, known for their involvement in the history of Facebook, filed with the Securities Exchange Commission to create an exchange-traded fund for bitcoins. Their aim is to make it easier for people to invest in the currency. In a December report, Bank of America Merrill Lynch noted that Bitcoin could "emerge as a serious competitor to traditional money transfer providers."

While Bitcoin seems to be generating new business opportunities each day, many investors still have questions. Chief among them: What are the actual financial rules that govern digital currencies?

"We don't know that much," says Reuben Grinberg, an associate in the financial institutions group at the law firm Davis Polk & Wardwell. Grinberg wrote one of the earliest academic papers on Bitcoin while in law school and now works with business clients interested in the digital currency. "To some extent, we're in the same place we were when the Internet first started and people weren't sure what laws were going to apply. Would we take existing laws and just apply them or come up with a whole set of new laws?"

Bitcoin is not the first digital currency to raise this question. E-gold, created in 1996 by Douglas Jackson, was a digital currency backed by real gold and other precious metals. It allowed users to instantly and largely anonymously send payments via the Web using commodity-backed cash. E-gold gained popularity with people seeking an alternative to fiat money, but it also attracted those who were interested in anonymously conducting illegal transactions and laundering money. In 2005, the FBI and Secret Service raided Jackson's offices, and in 2007, he was indicted on federal charges of money laundering and operating an unlicensed money transmitting business.

Some similarities between Bitcoin and e-gold have made authorities and potential users wary. Like e-gold, Bitcoin users do not have to provide identifying information when they register. And like e-gold, Bitcoin has a history of being used to facilitate illegal transactions. In October, the FBI shuttered Silk Road, an online marketplace for illegal goods and services. Transactions on the Silk Road were conducted exclusively in bitcoins, and according to the FBI report, the site generated sales revenue of more than 9.5 million bitcoins during its lifetime.

As digital currencies become more prevalent, financial regulators have expressed concern that they could be used to hide illegal activity. The Bank Secrecy Act, as enforced by FinCEN, requires that financial institutions register with the government and follow certain anti-money laundering precautions, such as collecting data on users and transactions and reporting suspicious activity. According to guidance released in March, FinCEN expects administrators or exchanges of digital currencies to comply with these rules as well. To make the point clear, in May the Department of Homeland Security temporarily froze assets held by Mt. Gox, one of the primary Bitcoin exchanges, on charges that it was operating as a money transmitter without a proper license. Mt. Gox has since registered with FinCEN as a money transmitter and has taken steps to collect identification information from users.

Murck, the Bitcoin Foundation general counsel, thinks it is a good thing that regulators are clarifying their expectations for digital currencies, but he says there are still many misconceptions about Bitcoin.

"Bitcoin isn't really anonymous," he says. "It's pseudonymous, and that means private. The difference is that there is a Bitcoin address, and that doesn't necessarily tie to any identifiable information by its nature. But somebody could very easily link a person to a Bitcoin address, and once they've done that, they have full transparency to all the activity that's ever happened on that address because the ledger is public."

Murck's biggest worry is that regulators move to clamp down on digital currencies before they have all the facts. In late May his organization was issued a cease-and-desist order from the California Department of Financial Institutions. Although he says the letter appears to have been a misunderstanding (the Bitcoin Foundation does not actually buy or sell bitcoins), it does raise the specter of oversight by state-level financial regulators — a potentially expensive proposition for a currency with global reach.

"Say there's a big crackdown on Bitcoin from the regulatory and law-enforcement community here in the U.S.," Murck says. "Most likely what that means for Bitcoin is that U.S. consumers and all the companies will go somewhere else. But if regulators and law enforcement drive all the good players out of the states, how much more difficult does their job become when everything moves overseas and goes dark on them?"

Calvery, the director of FinCEN, has said repeatedly that it is not their intention to regulate digital currencies out of existence.

"I think innovation in the financial services industry holds out great promise on so many levels for commerce and for social reasons like providing services to the unbanked," she said in an American Banker interview following the issuance of FinCEN's guidance. "But like any financial services, it comes with an obligation, and those obligations to protect the U.S. financial system from money laundering need to be taken seriously."

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THE HIGH POINT INITIATIVE

Can giving drug dealers a second chance actually reduce crime?

BY JESSIE ROMERO

Charles Myres started dealing drugs when he was 11 years old. He was arrested for the first time when he was 15 and was in and out of court for the next four years. In many cities, he would be a statistic today, one of the nearly 800,000 black men who are currently in prison or jail. But instead, Myres — a tall, slim 23-year-old who wears his hair in neat braids — has started a landscaping business with his brother and is raising three children with his girlfriend.

Myres happened to be a drug dealer in High Point, N.C., a city of about 100,000 people between Greensboro and Winston-Salem. In 2004, fed up with decades of high crime and drug violence, the police embarked on a new strategy to combat the city's open-air drug markets: Instead of locking up all the dealers, they would offer some a second chance.

The plan worked. Violent crime decreased dramatically and the drug markets remain closed. Inspired by the success, in 2008 the Department of Justice (DOJ) began a drug market intervention program that provided grants and training to implement the High Point model in more than 30 cities nationwide, including six in the Fifth District. As the country debates the best way to combat drugs and drug violence, the High Point initiative offers an alternative to the traditional model of arrest and imprisonment.

The High Point Model

The traditional model wasn't working in High Point, where open-air drug markets — dealers standing on corners and in parking lots to sell drugs to people who drove up in cars — had developed in several neighborhoods throughout the city. "We made dozens of arrests every month," says Marty Sumner, chief of the High Point Police Department (HPPD). Sumner was assistant chief when the drug market initiative began. "And as soon as we arrested someone, there were five more people to take his place."

Crack cocaine arrived in High Point in the 1980s, as it did in many other areas of the country. In neighborhoods that used to house workers for the region's textile and furniture mills, vacant homes became hideouts for dealers and addicts. Businesses moved away, the dealers became more brazen, and over time, the remaining residents became resigned to the conditions. "You had total disinvestment in the community," Sumner says. "Nobody cared and nobody called, because they saw it every day. They'd given up hope that we could change anything."

In the mid-1990s, the HPPD had worked with David Kennedy, then a researcher at Harvard's Kennedy School of Government, on a program to reduce gun violence. Kennedy is currently the director of the Center for Crime Prevention and Control at John Jay College of Criminal Justice. The program had been successful, but in 2003 there was a noticeable rise in violent crime; the number of murders, rapes, robberies, and assaults increased more than 10 percent over the year before, from 784 to 867. At that point, the city had the second-highest per capita violent crime rate in the state. Chief Jim Fealy believed that the open-air drug markets were the primary source of the violence and decided to ask Kennedy for help shutting them down.

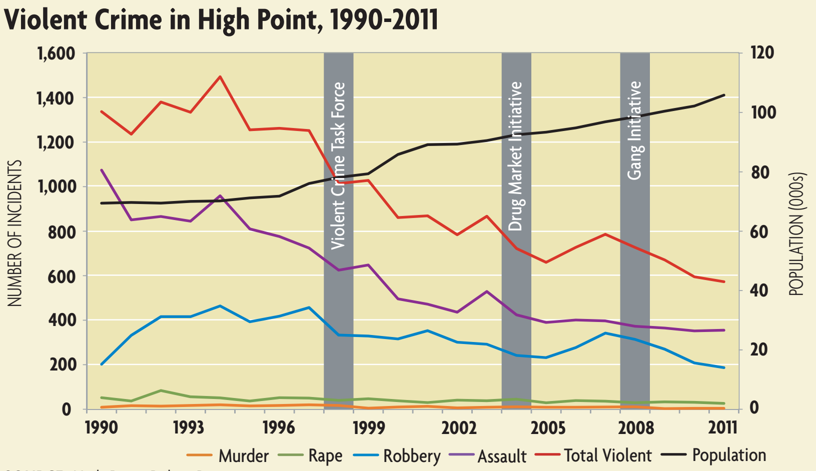
Kennedy was the architect of a new method of policing called "focused deterrence," which involves carefully targeting a select group of chronic offenders in a crime hot spot.

The basic model is that police, prosecutors, and the community work closely together to identify the offenders who are the source of the problem. Then, the police inform the offenders at a group meeting that law enforcement is aware of their activities and watching them closely. If the dealers change their behavior, they won't be arrested, but if they continue, they will be prosecuted harshly. Community leaders are present at these meetings to inform the offenders that their behavior will no longer be tolerated by their families and neighbors and to offer social services. Kennedy describes three basic messages: "First, your own community needs this to stop. They care about you but they hate what's going on and it has to stop. Second, we would like to help you. And third, this is not a negotiation. We're not asking."

The first application was in 1995 in Boston, where there was a very high youth homicide rate. Police realized that the violence was a gang problem, and that although a small number of gang members actually did the killing, all the members committed lots of other crimes. So the police informed the gang members that "the price to the group for a killing will be attention to every crime that everybody in the group is committing. Using drugs, selling drugs, violating probation, driving unregistered cars, everything," Kennedy says. "It turned out that when all the groups were put on prior notice, the killing dropped off really quickly and dramatically." Operation Ceasefire reduced gun violence by 68 percent within a single year, according to the National Institute of Justice, the research branch of the DOJ.

A New Day in High Point

The key to implementing the model in High Point was to decide that the problem was not drugs per se but rather how they were being sold. Open-air drug markets breed "complete chaos in the public space," Sumner says. Buyers come from out of town, prostitutes know they can find both drugs and clients, and dealers battle each other for turf and customers. "It used to look like a McDonald's drive-through here. You couldn't even turn on to the street because of all the cars lined up to buy drugs," says Lt. Anthro Gamble, who



SOURCE: High Point Police Department

was a narcotics officer at the time. If the city could shut down the markets — even if they didn't get rid of drugs completely — they could reduce the violence and create stability in the affected neighborhoods.

After analyzing the city's crime data, the police decided to target the West End neighborhood first. They held a series of public meetings to explain the initiative to the community and ask for their support, and then the narcotics agents went to work. They spent months observing the drug market to identify the dealers, and built cases against them using informants and undercover drug purchases.

One surprise was that the problem was limited to a relatively small number of dealers. "I figured there would be over 100 people that were really involved in the drug dealing. It seemed like they were everywhere," says Jim Summey, a former minister in the West End and the executive director of the High Point Community Against Violence (HPCAV), a nonprofit organization that works closely with the police department. But when police analyzed the data, there were actually only 16 active street dealers in that market.

Of those 16, four were arrested right away because police and prosecutors thought that they were too violent or had too many pending charges to be offered a second chance. The remaining 12 dealers were each sent a letter explaining that they had been the subject of an undercover investigation, and that they were invited to a "call-in" where they would be offered help in exchange of quitting dealing. "You will not be arrested," the letter read. "This is not a trick. You will receive a one-time offer of help and hear how the rules are being changed for you."

On May 18, 2004, nine of the invited 12 dealers showed up. They were shown the evidence against them, as well as arrest warrants lacking only a judge's signature. Pictures of the men who had already been arrested were taped to empty chairs. The police informed them if they stopped dealing immediately, they wouldn't be arrested, but if they were caught again, they would be zealously prosecuted.

Social workers, ministers, family members, and other citizens were also at the call-in to share the message that the community cared about the dealers, but that it would no longer tolerate their behavior. The HPCAV offered to help them connect with social services or job training programs.

The gamble the police and the community were making was that the dealers would respond rationally to the change in their cost-benefit calculation. Before the meeting, the dealers perceived the risk of being caught as very small; low-level drug dealers can conduct hundreds of transactions between arrests. But now, the dealers were being told that they would be arrested and they would go to prison. "They had to make a different decision when they left there that night. They couldn't walk out of here and go right back to work tomorrow," says Sumner.

The calculation changed for Myres, who was part of a 2010 initiative in the Washington Drive neighborhood. "You've got to weigh out your options," he says. "So I just walked out and started a new day."

He wasn't the only one — the West End drug market closed down overnight. One hundred days after the call-in, violent crime in the West End was down 75 percent; four years later, it was still down 57 percent. Over the next six years, High Point repeated the intervention in four additional neighborhoods with the same success. Citywide, the number of violent crimes has decreased 21 percent since 2004, even though the population has increased 14 percent. (See chart.) The recidivism rate among called-in dealers is about half the North Carolina average. (In 2008, the city saw an uptick in violence that was associated with gangs; the police re-enlisted Kennedy's help to develop a focused-deterrence program for gang violence and saw the crime rates come back down.)

Before the initiative, some feared that the drug markets would simply reopen in other parts of the city. But there are several reasons that hasn't happened, according to Sumner. First, most of the customers were people who drove in from out of town. Once the market was gone, they couldn't wait around for it to be re-established. In addition, it takes years for the conditions to develop that allow an open-air drug market to take hold; it isn't the kind of business that can easily pick up and move.

Other cities that have tried the High Point model, such as Seattle, Nashville, Tenn., and Rockford, Ill., have had similar results. In Rockford, for example, nonviolent crime decreased 31 percent and violent crime decreased 15 percent following the drug market initiative. In the Fifth District, cities including Durham, N.C., Roanoke, Va., and Baltimore are currently undergoing training on the process.

A Nation of Inmates

Nationwide, however, incarceration is still the preferred method of law enforcement. The United States has the highest incarceration rate in the world: About 720 people per 100,000 are in prison or jail, for a total of 2.3 million. (Prisons are operated by state governments and the Federal Bureau of Prisons. Jails are operated by sheriffs and local governments and are designed for people awaiting trial or serving short sentences, typically under one year.) In Russia, the rate is 477 per 100,000; in China, it's 121 per 100,000 (or 170 per 100,000 if people held in administrative detention are included). In most European countries, the rate is less than 150 per 100,000.

The rate hasn't always been so high; until the early 1970s, it was only about 100 people per 100,000. But in 1975, an influential study concluded that efforts to rehabilitate criminals were failures, a finding that helped to shift the goal of imprisonment from rehabilitation to simply incapacitation. At the same time, the country was ramping up its war on drugs and citizens wanted politicians to get tough on crime. Incarceration rates were further increased by the introduction of mandatory minimum sentencing in the 1980s and "three strikes" laws in the 1990s. As a result, the prison population has increased by about 500 percent over the past 35 years, compared with 45 percent for the population as a whole.

Maintaining that population is expensive: The average annual cost to keep a single person in prison is about $29,000 per year. In 2012, the Federal Bureau of Prisons spent $6.6 billion. The states spent nearly $50 billion on corrections in 2010, the most recent year for which data are available, according to the Bureau of Justice Statistics.

Spending time in prison is costly for the inmates as well. Prisoners disproportionately have low levels of education — about half haven't completed high school or its equivalent — and going to prison further decreases the likelihood that they will eventually earn a high school diploma or GED. Once they have been released, former inmates have lower earnings and higher unemployment rates than people with similar work experience and education, according to research by Becky Pettit at the University of Washington and Bruce Western at Harvard University. In addition to the fact that convicted felons are barred from working at many companies and government agencies, there is a strong stigma associated with prison, as Devah Pager of Princeton University has found. She sent pairs of fake job seekers out to apply for real jobs with identical resumes, except that one was randomly assigned to have a criminal record. The job seekers with records were 50 percent less likely to receive a call back from prospective employers.

High incarceration rates also affect entire communities, particularly black communities. Although black people make up 13 percent of the U.S. population as a whole, they are 37 percent of the prison population. One out of every nine black men between the ages of 20 and 34 is in prison, compared with one out of every 57 white men, according to Pettit and Western. "There are neighborhoods where virtually all the men end up going to lockup," Kennedy says. Not only does that create hardship for the women and children of those communities, it also can breed antagonism toward law enforcement, which makes it difficult to police those neighborhoods effectively.

Reducing that antagonism was a major goal of the High Point model, says Kennedy. "The initiative was designed to get rid of the overt drug market, in a way that didn't lead to all these men going to prison, and in a way that could reset relationships between the residents and the police."

From Drug Market to Suburb?

Resetting those relationships required the High Point police to change the way they respond to complaints. Previously, if someone called and said they thought there was a crack house next door, a detective would start investigating, but that investigation would be invisible to the person who made the call; the caller would think that the police were unresponsive. Now, an officer goes out, knocks on the door immediately, and maintains a visible presence until the issue is resolved. That puts criminals on notice, but perhaps more important, it creates a two-way street between the police and the community, with citizens involved in enforcing community standards. "I remember one community meeting where people wanted to take the police's head off," says Gretta Bush, president of the HPCAV. "But when the question was asked, 'How many times did you call the police?' nobody raised their hand. It really evened the playing field for the community to realize, it's just as much me and what I'm not doing."

Critics of the High Point model say that it doesn't actually solve the drug problem; it just pushes it underground. That's okay with Kennedy, who says that eliminating all drugs isn't the goal. Instead, it's to create basic safety and stability. "I know neighborhoods where young men are selling drugs and using drugs, but they're not carrying guns and they're not selling drugs on people's front lawns. And the name for those neighborhoods is the suburbs."

It's also true that despite the HPCAV's offers of help, most of the former drug dealers have not gone back to school or found jobs. But from the law-enforcement perspective, Sumner says, as long as the violence has stopped, the community has won, regardless of the outcomes for the individual dealers.

The former drug market neighborhoods have not turned into the suburbs. The people who live there are still poor; the homes have sagging porches and peeling paint, and unemployment is high. But some businesses have returned, and the city is tearing down former crack houses and building new homes. Where children once weren't allowed to go outside, a young girl pushes her baby sister in a stroller and a group of boys play basketball in the street. Myres has one word to describe the neighborhood these days: "Quiet." **EF**

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USAID distributes food commodities worldwide through Food for Peace, the largest food aid program in the United States. Here, USAID supplies arrive in Tunisia to benefit Libyan refugees.

TIES THAT BIND

In U.S. Food Aid Efforts, Humanitarian Relief and Domestic Interests Both Hurt and Help Each Other

BY CAROLINE TAN

In November 1996, more than 100 government leaders convened in Rome for the World Food Summit, a five-day conference called to address widespread nutrition problems and global capacity to meet future food needs. After nine meetings, the summit ended on Nov. 17 with a pledge to cut the number of chronically undernourished people — then at 841 million — in half by 2015.

In his closing remarks, Romano Prodi, prime minister of Italy and chairman of the summit, was optimistic. "If each of us gives his or her best, I believe that we can meet and even exceed the target we have set for ourselves," he declared. "Twenty years from now, that is how history will judge."

But just under two decades later, the world is far from meeting that objective. Thanks in part to the global recession and rising food prices, the number of hungry has gone up, not down: According to the Food and Agriculture Organization of the United Nations, there were nearly 870 million hungry people from 2010 to 2012.

One way the United States tries to help reduce hunger is through food aid. As the world's largest donor country, the United States allocates about $1.4 billion a year toward food aid, roughly half of the world's total. Sub-Saharan Africa is by far the largest recipient region of U.S. food aid, followed by Asia. (See charts.)

But not all of that money is spent on food itself. Because of the "tied aid" approach, in which a set amount of donated food must be grown in the United States and transported on U.S.-flagged ships, a large portion of the federal food aid budget goes toward shipping and storage costs. According to the U.S. Agency for International Development (USAID), less than 40 percent of food aid funding from 2003 to 2012 actually went toward food commodities. The rest covered storage and transportation costs — 25 percent each — as well as general administrative activities.

Rising transportation costs have caused the volume of food delivered to dip significantly over the last decade, falling from 5 million cubic tons to 1.8 million cubic tons annually. Even as food aid budgets increased, the number of starving people assisted by American food aid abroad dropped during the last three years from 15.5 million to 10.7 million.

Economists generally agree the tied aid policy makes the U.S. food aid program slower and less efficient. But they also agree that the program seeks to accomplish more than just humanitarian objectives. Tied aid benefits American producers, who enjoy the added business and guaranteed overseas markets for their crops. In a practical sense, it's unclear whether these two goals — supporting the domestic sector and pursuing a humanitarian mission — are at odds with one another: If donating food did not provide any benefits to the domestic economy, would Congress authorize it at all?

Origins of Tied Aid

The genesis of American food aid, says economics and agriculture professor Christopher Barrett of Cornell University,

PHOTOGRAPHY: USAID

was really "surplus disposal." Thanks to a policy of price support for agricultural commodities — in which the government bought large amounts of grain to stabilize markets when food prices were low — the United States faced huge agricultural surpluses by the 1950s. Food aid presented an easy way to clear that excess supply and save on storage costs.

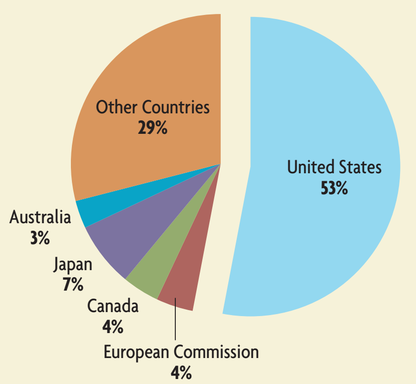
The current food aid program was officially established in 1954 through the Agricultural Trade Development and Assistance Act, better known as Public Law 480. Seven years later, President John F. Kennedy renamed the program Food for Peace, declaring, "Food is strength, and food is peace, and food is freedom, and food is a helping hand to people around the world whose good will and friendship we want."

The program was revised under President Lyndon Johnson by the Food for Peace Act of 1966 (FPA). Since its inception, FPA has been the main legislative vehicle for authorizing food aid, making up 50 percent to 90 percent of total annual food aid spending from 2002 to 2011. (To a lesser extent, the U.S. government also provides food assistance through other channels, including the Food for Progress Program, which is aimed at promoting development.) FPA consists of four primary programs, the most widely used of which is Title II, the "emergency and private assistance" program. Through Title II, U.S. food commodities are donated to meet emergency and nonemergency needs, including promoting economic development, typically in response to cases of malnutrition, famine, natural disaster, and civil strife. All U.S. food aid given under Title II must be grown within this country. (A small exception existed from 2009 to 2012, when the United States donated locally grown food through a $60 million pilot program.) Moreover, under the Cargo Preference Act, 50 percent of food aid must be delivered on U.S.-flagged ships; from 1985 to 2012, that requirement was 75 percent.

Initially, FPA seemed like a win-win situation: Friendly developing countries in need of food would receive free supplies from the United States, and in turn the United States would have somewhere to send its agricultural surpluses. Officials also reasoned that donating food would support foreign policy goals, improve America's image, and help develop strategic partnerships in the Cold War era.

In addition, policymakers believed tied aid could help capture new markets by introducing American goods into recipient countries. "It was officially and explicitly an objective of USAID to change food habits in developing countries," says Frederic Mousseau, consultant for international relief agencies and policy director at the Oakland Institute, an international policy research and advocacy group. "After years of aid, people change food habits and become used to American food. And when that aid stops, they will become clients of food production in the U.S." As an example, Mousseau's research has pointed to South Korea, which he says was one of the largest beneficiaries of U.S. food aid in the 1950s and 1960s and has since become among the biggest buyers of American agricultural goods.

Top Food Aid Donors, 2011



NOTE: Percentages based on contribution to total volume of food aid donated
SOURCE: World Food Programme

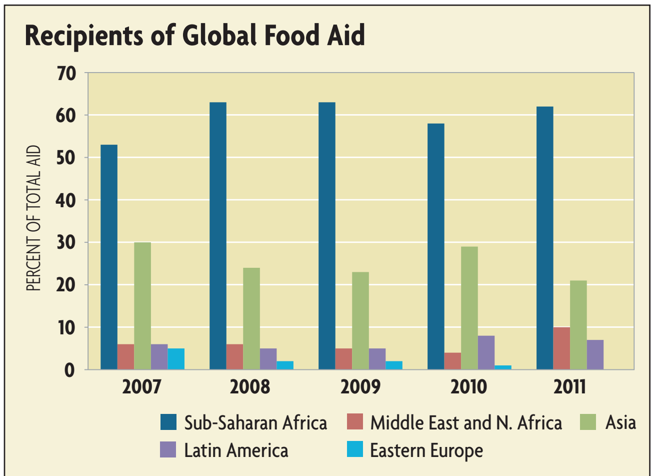
A Subsidy That Slows

The environment that prompted the tied aid system in the 1950s is no longer present. Food surpluses shrank in the late 1980s when the government began rolling back its aggressive price support policies. To justify keeping food aid tied, lawmakers have argued that the existing program helps American farmers and shipping companies, ensures higher-quality food donations, and enhances America's reputation abroad.

Indeed, though food aid accounted for less than 1 percent of total U.S. farm income in 2011, it has been important to the overall output of certain American food producers and shippers. According to a report by Mousseau, food aid from the mid-1980s to the mid-2000s made up about 34 percent of total American dry milk powder exports, 16 percent of rice exports, and 12 percent of wheat exports, as well as more than half of U.S. soybean oil exports. Thanks to the Cargo Act, the shipping industry received about $260 million from food aid transportation in 2002, a number that the charity organization Oxfam International says made up more than one-third of total program costs that year.

Tied aid might also be a way to subsidize American producers without upsetting U.S. trade partners. Subsidies, which often come in the form of cash grants, interest-free loans, tax breaks, or depreciation write-offs, have received pushback in the international sphere because of their tendency to distort markets by crowding out other exporters and causing prices to fluctuate. (See also "Agricultural Policy and Market Distortions," page 11.) During the 2005 Doha Round negotiations — an ongoing series of trade talks that began in 2001 among members of the World Trade Organization — participating nations, including the United States, discussed ways to correct trade distortions in global agricultural markets. The effort ended with an agreement to eliminate all export subsidies by 2013. Mousseau, though, argues that food aid has become a means for the United States to circumvent free trade norms because it "is seen not as a subsidy, but as humanitarian relief and a way to help poor countries."

Because transporting food abroad takes time, the tied aid system slows down America's overall food donation efforts. The Congressional Research Service reported that the tied aid



SOURCE: World Food Programme

system delays food shipments by at least four months. A study by Barrett and Cornell University colleagues Elizabeth Bageant and Erin Lentz concluded that it cost taxpayers an extra $140 million in 2006 to ship food on U.S.-flagged ships, while the Oakland Institute estimated that tied aid more than doubles the overall cost of the food assistance program.

In a separate study, Barrett, Lentz, and Simone Passarelli, also at Cornell, found that procuring the food locally — meaning in or near the recipient country — reduced transportation time by nearly 14 weeks. For Barrett, that improvement is a worthwhile trade-off. "As soon as you recognize that the main thing food aid can do is meet humanitarian objectives, then what you most want is flexibility, because time matters, and your budgets are limited."

Reliance on tied aid among other donor countries has declined in part to reduce these inefficiencies and increase flexibility. In the past 15 years, the European Union (EU), Canada, and Australia have all untied their food aid programs, and the amount of global food aid that is tied has declined from 60 percent in the 1980s to less than 25 percent today. In fact, Mousseau says, the United States is the only country still legally required to tie food aid.

Political Economy

Given the recent trend among donor countries to untie food aid programs, why has the United States not chosen to follow suit? According to political economist Jennifer Clapp at the University of Waterloo, the answer lies partially in the structures of the federal authorities responsible for food assistance. For the EU, Australia, and Canada — which have all untied their food aid programs — untying occurred when food aid was run by foreign assistance and development ministries instead of agricultural agencies, which Clapp says insulated it from agricultural lobby groups. Both Australia and Canada also have parliamentary government systems, which means the legislature's ruling party and prime minister enjoy a more unified relationship, enabling more rapid policy change and facilitating reform. Making changes to the U.S. food aid program is much more difficult.

Some observers have wondered whether inefficiency is simply the price to pay for any food aid. Concerns that untying aid would hurt American producers could make it difficult for Congress to do so, especially for representatives from agricultural and shipping districts. It's hard to maintain support for food aid programs, Rep. Gerald Connolly, D-Va., told the *Washington Post* in May, unless they also benefit powerful stakeholders. President George W. Bush recommended untying food aid in every budget from 2006 to 2009, and he was rebuffed each time by Congress. Research supports the idea that food aid flows are linked to the composition of political parties represented in government: Economist Jared Pincin of The King's College found that the greater the variety of political parties in the donor government's legislature, the higher the allocation of food aid, suggesting food aid has been used as a tool to promote the needs of divergent interests.

If hunger relief and domestic concerns are inextricably bound, this would hardly be the first time that political realities made strange bedfellows in the world of food policy. For 40 years, Congress tied the provision of food stamps to its recurring farm bill, seen as the only way to amass enough support to pass either. The two were separated for the first time this summer, when controversial proposed cuts to the food stamps program held up the farm bill vote.

For people focused only on humanitarian gains, the question is whether untying the United States' food aid program would significantly reduce the volume of its food donations. When the European Union untied food aid in 1996, it saw a decline in total food aid delivered, according to data from the World Food Programme. Though Clapp points out that this trend has been one of the most powerful arguments among tied aid advocates for keeping aid tied, she cautions that there may be other factors at play. European governments have been gradually shifting focus from providing food commodities to funding infrastructural improvements that expand long-term access to food — causing total food shipments to decline but not necessarily indicating reduced government support for combating hunger. Neither Australia nor Canada have observed declines in food aid output after untying aid in 2006 and 2008, respectively.

Trying to Untie

In his 2014 budget, President Barack Obama proposed partially untying food aid to allow up to 45 percent of aid authorized under USAID's International Disaster Assistance (IDA) account to be procured locally or provided through cash transfers and vouchers. Obama's proposal also recommended expanding the food aid program by almost 30 percent to $1.8 billion; dividing FPA funding across three USAID-controlled accounts, the majority of which would go to IDA; creating new emergency food assistance funds; and eliminating food aid monetization — a practice in which food is donated to a country's government or to nongovernmental organizations that sell the commodities below market value to finance their development programs. The Obama administration said it expected these changes to expand the food aid program's reach to 4 million more people annually, increase the total volume of food delivered, and speed up delivery by up to 14 weeks.

Though it remains to be seen whether Obama's budget will pass, its sentiments have some bipartisan support on Capitol Hill. Reps. Ed Royce, R-Calif., and Eliot Engel, D-N.Y., proposed a joint amendment to the House of Representatives farm bill in June 2013 that would have allowed up to 45 percent of all U.S. food aid to be bought in or near recipient regions. The amendment was rejected last June, though the vote was close. Royce has also partnered with Rep. Karen Bass, R-Calif., to introduce the Royce-Bass Food Aid Reform Act, which would eliminate requirements that food aid be grown in the United States and transported on U.S.-flagged ships.

There are other ways that researchers suggest food aid policy could be changed to maximize benefits to recipient countries. One would be to focus on promoting "food sovereignty" — in other words, reducing a recipient country's reliance on international aid, similar to what the European Union has been doing recently. The United States could also switch to a cash vouchers and transfers system, donating money instead of food commodities in a system similar to the domestic food stamp program. This transition could give recipients more flexibility in deciding where and what kind of food to purchase, and would reorient the program more exclusively toward humanitarian objectives, even if at the expense of domestic benefits.

Barrett is optimistic that such reforms are on the horizon. "I have a very hard time believing that the American people and Congress are not willing to contribute anything to humanitarian relief if nobody in the United States is making money off it," he says. On the other hand, if 60 years of history are any indication, the U.S. government may well continue to structure food aid to benefit both humanitarian relief and domestic interests, especially in times of slow economic growth. **EF**

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BITCOIN *continued from page 20*

Grinberg believes that the businesses now involved with Bitcoin are taking those obligations seriously. "The grown-ups have entered the room, and they are trying to follow the rules. On top of that, they often have a deep well of experience in the financial services industry, which should give some comfort to the regulators that it's not just a bunch of money launderers," he says.

Currency Evolved

For regulators and many businesses, this is still a learning period. The European Central Bank released a study on digital currencies in October 2012, concluding that "authorities need to consider whether they intend to formalise or acknowledge and regulate these [currencies]." In the United States, regulators have thus far been cautiously optimistic about Bitcoin. In written testimony submitted to a November Senate hearing, Fed Chairman Ben Bernanke said that digital currencies "may hold long-term promise, particularly if the innovations promote a faster, more secure and more efficient payment system." Other countries, such as China, have restricted the use of Bitcoin, seeing it as a potential threat to financial stability.

Murck thinks Bitcoin still has some more growing to do before it is ready for mass consumption, but he is optimistic. Even if Bitcoin doesn't end up as the digital currency of choice, there could be others. Litecoin, a digital currency "mined" like Bitcoin but with a higher virtual stock of 84 million coins, has been billed as the "silver" to Bitcoin's "gold." And there are others springing up seemingly every week.

Selgin sees potential opportunities for monetary policy using money based on a synthetic commodity, like Bitcoin. If economists and central bankers could agree upon optimal monetary rules, then it might be possible to design a digital currency that carries out those rules automatically.

"It does provide some interesting food for monetary thought," he says. **EF**

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Taxing the Behemoths

Many policymakers say that corporations aren't paying their fair share, but corporate taxes may have hidden costs

BY TIM SABLIK

On May 21, Apple Inc. CEO Tim Cook appeared before the Senate Permanent Subcommittee on Investigations. Committee members praised the innovative products developed by the California-based computer giant, but they were less pleased with the achievements of its accounting department. They took turns grilling Cook on why the company had shifted billions of dollars in profits to its overseas subsidiaries, thereby avoiding payment of U.S. corporate taxes on those gains.

Concern over declining corporate tax revenues has been mounting for some time. In 2012, the corporate income tax brought in $242 billion in revenue, but as a share of federal revenue, it has fallen from about 30 percent in the 1950s to around 10 percent today — making it a distant third to the individual income tax and the payroll tax. It has also declined as a share of GDP, from 6 percent in the mid-1950s to about 2 percent (see chart). Some policymakers have argued that the income shifting practiced by multinational corporations is a major reason for the decline in corporate income tax revenue.

But others have said that U.S. companies have good reason to avoid the tax. After accounting for average state taxes, the United States has the highest corporate tax rate in the developed world at 39 percent, compared with a GDP-weighted average of about 30 percent among other developed nations. Thus, some argue the U.S. rate should be much lower. How much lower? According to many economists, it should be zero.

"The only reason not to eliminate the corporate tax would be if there were no way to raise the amount of revenue you need without it, and I personally believe it would be easy to raise as much revenue as we need without taxing things that don't cause harm," says Robert Frank, an economist at Cornell University. Frank has proposed replacing the tax on corporate income with taxes on things that cause externalities, such as pollution or traffic congestion.

Ultimately, analyzing the merits and flaws of the corporate income tax boils down to two questions: Who pays and at what cost?

Who Pays?

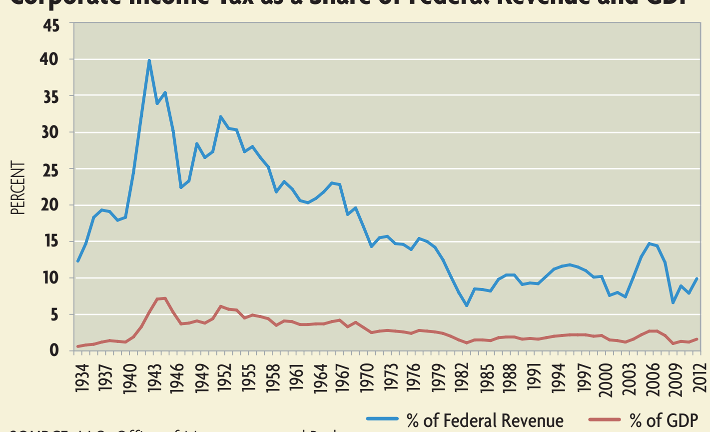
One reason economists have suggested abandoning the corporate income tax is that it's not entirely clear who actually bears the burden. It's tempting to say that the corporation pays. It is, after all, a tax on company profits. But a corporation is just a legal entity, and ultimately only people can pay taxes. So who pays the corporate tax?

There are a few possibilities. The shareholders, as owners of the corporate capital, could pay. Alternatively, the workers might pay if the tax is passed on in the form of lower wages. Finally, the consumers could pay if the tax is passed on in the form of higher prices. Early research on the subject by economist Arnold Harberger, now at the University of California, Los Angeles, seemed to suggest that capital owners were the ones who paid. In a 1962 paper, Harberger modeled a closed economy (one with no international trade) with two economic sectors, corporate and noncorporate. He found that the burden of the corporate income tax would fall entirely on capital. In response to the tax, capital would move from the corporate sector to the noncorporate sector seeking higher returns, which would reduce the productivity of capital in that sector. In this way, the tax would affect all capital in the economy. Since the owners of capital tended to be individuals with higher income, a corporate income tax was seen as making the tax code more progressive.

In the time since Harberger's paper, commerce has become much more global, allowing capital to move not just within the domestic economy but across borders. According to a 2010 McKinsey Global Institute report, while less than 1 percent of all U.S. companies are multinational, they have accounted for 31 percent of growth in real private sector GDP since 1990. This has made it even trickier to determine who pays the corporate tax in the long run. If capital moves abroad to lower-tax jurisdictions in search of a higher return, workers in the home country are left with less capital, making them less productive. As a result, wages may decline.

R. Alison Felix, an economist at the Kansas City Fed, studied the effect of corporate taxes on wages at the state level. She found that a 1 percentage point increase in the marginal state corporate tax reduces wages by between

Corporate Income Tax as a Share of Federal Revenue and GDP



SOURCE: U.S. Office of Management and Budget

0.14 and 0.36 percent. Studies of international data have also indicated that labor may bear some of the burden of the corporate tax, but estimates of how much vary wildly from less than half of the tax to all of it. Moving to a larger scale, it becomes more difficult to accurately measure the effects of the corporate tax on wages because they make up vastly different proportions of the economy. Labor income makes up about 63 percent of GDP, while corporate income is only about 2 percent.

Jane Gravelle, a senior specialist in economic policy at the Congressional Research Service (CRS), says some of the empirical studies that found that labor bore a significant portion of the burden of the corporate tax yielded implausible results, suggesting that they suffered from statistical errors. In a paper with Thomas Hungerford, a public finance specialist at CRS, she reran the studies and found no conclusive evidence that wages suffered under higher corporate taxes.

At What Cost?

Although it is not entirely clear who pays the corporate tax, nearly all taxes create some market inefficiency in the form of deadweight loss. This inefficiency arises because taxes create a wedge between what buyers pay and what sellers receive, which leads to an outcome in which both parties would gain from more production. In the case of the corporate income tax, the effect of the tax can strongly influence the decisions companies make, such as how to finance growth.

In general, corporations raise funds in two ways, by issuing new stock (equity) or by borrowing money, and the corporate tax affects this choice. If a company raises money through debt, it can deduct the interest on that debt. But if a company raises money by issuing stock, any dividends paid out on the newly issued shares are not deductible. In fact, dividends are taxed twice: once at the corporate level, and once at the individual level when paid out to shareholders. As a result, the effective tax rate on equity financing ends up being much higher than the tax on debt. In a 2007 report, the Treasury Department estimated that equity financing has an effective marginal tax rate of about 40 percent, while debt has an effective rate of -2 percent.

"Debt financing ends up being much preferred," says David Kautter, director of the Kogod Tax Center at American University.

This set of incentives has consequences: All else equal, firms that are highly leveraged have a greater risk of bankruptcy if they fall on hard times than companies that finance with equity.

"When the economy turns down, you're carrying around all this weight with you, and your margin for error becomes narrower," explains Kautter.

In addition to encouraging debt financing, the corporate tax may also incentivize companies to retain earnings rather than pay out dividends. Because dividends are taxed twice, a company may retain earnings to keep shareholders' overall tax liability lower. This could deny shareholders the ability to reinvest those funds in other projects, potentially creating market inefficiencies.

In fact, because of the double taxation, one might expect that companies would not pay out any dividends at all. But that isn't the case. In 2010, companies paid out 60 percent of post-tax profits in dividends. Economists are divided in explaining why so many corporations choose to pay dividends when the tax treatment is less favorable. It could be that dividends signal strength to investors, and not paying them out could make it difficult for a company to retain or attract investors.

Finally, the tax code gives multinational corporations an incentive to keep earnings abroad rather than bring them home. If a U.S.-based corporation has a subsidiary in another country, it pays taxes at that country's rate on any profits made by that subsidiary. But unlike a company based in that country, U.S. corporations must also pay the U.S. tax on that income when it is "repatriated," or paid out as dividends by the parent company. The companies are given a tax credit equal to the difference between the U.S. rate and the foreign rate, but they also have the option to defer paying the U.S. tax by keeping the money in foreign subsidiaries and investing it abroad. Many multinationals choose to do just that. According to estimates by the Joint Committee on Taxation, deferral is one of the largest sources of lost corporate tax revenue, equaling $36.8 billion in 2012. This behavior can lead to economically inefficient choices.

"It might be that your best investment of foreign earnings is back here in the United States. But when you factor in the cost of bringing the money back, it's not. So this money gets trapped, basically," says Kautter.

The data reveal the inefficiency of U.S. multinational profit shifting. In a 2013 CRS study, Gravelle looked at the profits of U.S. foreign subsidiaries in a variety of countries. In large developed nations, such as France or Germany, U.S. multinational profits constituted less than 1 percent of GDP on average. But in notable tax havens such as Bermuda or the Cayman Islands, profits were many times total GDP. "These numbers clearly indicate that the profits in these countries do not appear to derive from economic motives related to productive inputs or markets," wrote Gravelle.

One of the reasons such profit shifting has become a problem recently has to do with the growth of companies that derive much of their profit from intangibles, such as patents, trademarks, or advertising. U.S. tax law requires companies that transfer components to subsidiaries to pay the "arm's length" price. This means the companies can't charge their subsidiary a discounted price in order to

U.S. Company Foreign Profits Relative to GDP, 2008

Country	Profits as Percentage of GDP
Canada	2.6
France	0.3
Germany	0.2
Japan	0.3
United Kingdom	1.3
Bahamas	43.3
Bermuda	645.7
British Virgin Islands	354.7
Cayman Islands	546.7
Marshall Islands	339.8

SOURCE: Gravelle, CRS Report "Tax Havens: International Tax Avoidance and Evasion" declare less taxable income from the sale; they have to charge the going market price. For physical goods, it is easy to come up with comparisons to ensure the company is playing by the rules. But with intangibles, it gets trickier. If Apple or Google sell a patent to their subsidiary, what is the going market price for that patent? Without easy market comparisons, companies can shift intangibles to tax-free countries at low prices, avoiding taxes in the United States.

"I have come to believe that the big problem is not the inefficient allocation of capital between domestic and foreign uses, but the profit shifting," says Gravelle.

Repeal or Reform?

So how should the United States solve its corporate tax woes? Should the tax just be eliminated and replaced, as Frank and other economists suggest? That could create additional problems if other taxes remained unchanged.

Most businesses in the United States don't pay corporate income tax directly; instead, their income is taxed at the individual level. These flow-through enterprises allocate their income among owners who include it in their individual income tax filings. But in the case of publicly traded corporations, Eric Toder, a co-director of the Urban Institute-Brookings Institution Tax Policy Center, argues that this method is difficult to apply because it is harder to allocate income among owners when shares change hands frequently. In this case, if there were no corporate income tax, shareholders would be able to escape tax by retaining profits within a corporation.

"If you want to have an income tax, you have to tax corporate income," Toder says.

To address this problem, some have suggested combining the individual and corporate income taxes. In 1992, the U.S. Treasury Department released a report on a proposed Comprehensive Business Income Tax (CBIT). Under the CBIT, shareholders would exclude dividends and interest received from corporations from their individual taxable income. Corporations, on the other hand, would not be able to deduct interest and dividends from taxable income. This would, in theory, remove the incentive to finance using debt rather than equity and also avoid the double taxation of dividends. There have been other integration proposals as well, such as giving shareholders a tax credit for corporate taxes paid on dividends. Tax integration has thus far not had legislative success in the United States, however.

Regarding profit shifting overseas, some legislators have advocated switching from a worldwide corporate tax to a territorial tax, which means only domestic corporate income is taxed. As of 2012, more than 80 percent of Organization for Economic Cooperation and Development countries had a territorial tax. If corporations with foreign subsidiaries repatriate income, those profits are taxed only by the country where the subsidiary operates. In theory, this policy would lead multinational corporations to invest more of their income at home, since they don't have to pay an additional tax when they bring the money back. In 2009, Japan became one of the latest developed nations to switch to a territorial tax system. But according to a 2013 research paper by the Research Institute of Economy, Trade, and Industry, a Japanese think tank, the change may not have had the desired effect. If corporations already repatriated earnings before the switch, they increased such activities after the territorial tax went into effect. But companies that did not repatriate earnings under the old system did not start doing so under the territorial tax.

Another proposal is to lower the U.S. corporate tax rate to something more in line with other developed nations, providing a greater incentive for corporations to repatriate foreign earnings. This might not change the behavior of companies interested in profit shifting purely to avoid taxation, though.

"If a company is trying to reduce its income tax rate from 35 percent to zero, I don't know why it wouldn't do the same at a 28 or 25 percent rate," says Toder.

A 2010 Senate bill proposed financing a reduction in the tax rate by eliminating a number of deductions, including deferral. Under that system, companies headquartered in the United States would be taxed on income immediately, regardless of where that income is earned.

"If you eliminate deferral, you'd eliminate the repatriation problem and the profit shifting problem," says Gravelle.

But Gravelle notes that even if the United States were to drastically lower its rate, other countries could respond by lowering theirs, minimizing the impact. In the end, solving corporate tax problems may take a team effort.

"It's hard for one country to solve this problem on its own," says Kautter. "But if you can get the global community to focus on it, then maybe you can keep the profit shifting to a minimum, which would allow you to compete without a lot of the complexity and distortion." **EF**

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The Rise and Fall of Circuit City

BY JESSIE ROMERO

The Richmond-based retailer became wildly successful — and then disappeared

Circuit City got its start as Wards TV, which had a bustling showroom in Richmond, Va., in 1960.

One of the great success stories of American retailing, Circuit City got its start in 1949 as a tiny storefront in Richmond, Va. From that modest beginning, founder Sam Wurtzel quickly built the company into a national chain, and his son Alan turned it into a household name. By 2000, Circuit City employed more than 60,000 people at 616 locations across the United States.

Circuit City is also one of American retailing's great failures. In November 2008, the 59-year-old company filed for bankruptcy. Within months, it closed its stores and liquidated more than $1 billion worth of merchandise, and on March 8, 2009, the last Circuit City store turned off its lights for good. Today there are few reminders of the groundbreaking retailer; the company's 700,000-square-foot headquarters complex outside Richmond is filling up with new tenants, and the empty stores have been taken over by new retailers.

In part, Circuit City was just one of the many victims of the financial crisis and recession, which also brought down other large national retailers such as Linens 'n Things and The Sharper Image. And businesses fail even during the best of economic times, as part of the natural process of "creative destruction" that is the engine of capitalism. But at business schools across the country, Circuit City's story is taught as an example of what can happen when success breeds complacency.

From Tire Store to Fortune 500

In 1949, New Yorker and serial entrepreneur Sam Wurtzel was having his hair cut in Richmond on his way to a family vacation in North Carolina. The barber mentioned that the first television station in the South had opened in Richmond less than a year earlier. Wurtzel, fresh from a failed import-export business, thought this new entertainment device might be his next opportunity.

The first experimental television stations began operating in the early 1940s, and commercial broadcasting began after World War II. Few households owned sets at the time of Wurtzel's barbershop visit, but the medium was growing rapidly: The number of TV stations in the United States nearly tripled in 1949, from 27 to 76. Through a friend, Wurtzel knew someone at Olympic Television, a small manufacturer in Long Island City; through relatives, he had connections to bankers and businesspeople in Richmond. Within a month, Wurtzel had moved his family from New York to Virginia and was selling televisions out of the front half of a tire store on Broad Street, a few blocks west of downtown Richmond.

Wurtzel thought his last name might be hard for people to pronounce, so he named his store Wards, an acronym for his family's names: W for Wurtzel, A for his son Alan, R for his wife, Ruth, D for his son David, and S for Sam. Rather than try to compete directly with the big department stores, he catered to lower-income consumers by offering installment payment plans. He also developed a unique sales technique: free in-home demonstrations. A salesman would drop off a television at a customer's home for the night, free of charge, and offer to pick it back up the next day. Once the set was in a family's home, they nearly always bought it.

Wurtzel had correctly foreseen the growing consumer demand for televisions — the number of households with sets grew from under 1 million in 1949 to 20 million by 1953 — and Wards TV grew quickly. In 1952, Wurtzel started selling appliances to capitalize on the post-war demand for refrigerators, washing machines, and electric stoves. Richmond was soon home to four Wards TV locations.

Wurtzel soon decided to join another retail trend: discount stores. The first discount store — a huge retail space offering a smorgasbord of merchandise below the manufacturer's list price — opened in New England in 1953, and the format spread quickly. In 1960, the discount chain National Bellas Hess invited Wurtzel to open a store-within-a-store called a "licensed department" at their new Atlanta location. Wurtzel quickly followed up with licensed departments in Norfolk, Va., and Camden, N.J., and in December 1961 he took Wards TV public to finance a nationwide expansion.

Excited by its success, the company embarked on a brash

PHOTOGRAPHY: COURTESY OF ALAN WURTZEL

expansion strategy and nearly went bankrupt in 1975. But led by Wurtzel's son Alan, who had become CEO in 1972, the company closed or sold a number of unprofitable outlets, and by the late 1970s it was ready to start expanding again. It did so with a new name and a new retail model inspired by the early discount stores: the Circuit City "superstore." The superstores featured a large showroom attached to an even larger warehouse, with custom-built display areas to show off the merchandise. Most significantly, there was no central checkout area and customers couldn't pick up merchandise themselves. Instead, there were multiple sales terminals throughout the store and commissioned salespeople helped the customers make their purchases.

Those sports-jacketed salespeople were central to Circuit City's business model, which depended on selling big-ticket, high-margin items and lots of extended service plans. They were also what customers wanted at the time. "Circuit City was at their strongest when consumers didn't really understand what they were buying and were nervous about it," says Doug Bosse, a strategy professor at the University of Richmond. "When my family bought our first VCR, it was $600. That was a pretty big chunk of a family's discretionary budget. You would go into Circuit City and talk to a salesperson and ask for advice, and have them teach you on the floor how it would work in your family room."

Circuit City superstores, which sold both electronics and appliances, spread rapidly, from just eight in 1983 to 53 by 1987, in addition to the company's 37 smaller electronics-only stores.

Just like Wards TV, Circuit City was in the right market at the right time. As the baby boomers came of age and the country entered the 1980s boom, consumer demand for VCRs, CD players, and microwave ovens exploded. Factory shipments of consumer electronics doubled between 1980 and 1986, and the share of households with a VCR grew from 1 percent in 1980 to nearly 70 percent by the end of the decade. As Alan Wurtzel wrote in his memoir *Good to Great to Gone*, "I often thanked my lucky stars that Sam had decided to go into the retail electronics business and not the retail shoe business."

Wurtzel stepped down in 1986 and was succeeded by Rick Sharp, an executive vice president, who served as CEO until 2000. During Sharp's tenure, sales increased from $1 billion to $12.6 billion, earnings increased from $22 million to $327 million, and the number of stores increased from 69 to 616. In 1995, Circuit City entered the Fortune 500 at number 280, climbing as high as 151 by 2003. Circuit City was so successful that management expert Jim Collins featured the company in his 2001 book *Good to Great*, a study of the country's most profitable companies.

But Sharp championed two projects that might have been the beginning of the end, according to Collins, who wrote about Circuit City again in his 2009 book *How the Mighty Fall*. The first project was CarMax, which applied "big box" retailing to used-car sales. The initial CarMax opened in Richmond in 1993 and was immediately successful, and the chain expanded to 40 outlets by 2000. Circuit City spun off CarMax in 2002, and today there are more than 120 locations.

Less successful was a new DVD technology, called DIVX, which launched in 1998. The premise was that consumers could buy a DIVX-encrypted movie and then watch it on a special DVD player as many times as they wanted within a 48-hour period. In theory, DIVX was more convenient than renting tapes from a video store, but consumers didn't like it and other electronics stores refused to stock DIVX movies. Circuit City abandoned the idea within a year.

The issue was not the success or failure of these projects per se; CarMax was a great move, and DVIX was "costly but not critically wounding," according to Wurtzel. But in Collins' analysis, the attention paid to these projects meant that the management team and the board weren't paying attention to the company's core business — or to the growing threat of Best Buy.

Sacking the City

Best Buy got its start in 1966 as Sound of Music, an audio specialty store with several locations in Minnesota. In 1981, the Roseville, Minn., store was destroyed by a tornado, so founder Richard Schulze and his employees gathered up the merchandise, stacked it on tables in the parking lot, and advertised a huge "Tornado Sale." Customers lined up around the block, and the success prompted Schulze to pursue a discount sales strategy. Sound of Music changed its name to Best Buy in 1983 and opened its first of many superstores in Burnsville, Minn.

While the basic model was similar to Circuit City, Best Buy stores had a central checkout and allowed customers to pick out their own merchandise on the floor. And unlike Circuit City, Best Buy carried a wide variety of low-margin products to get customers in the door, such as computer peripherals, videogames, and CDs. Best Buy's store and staffing models were a better fit for consumers' changing preferences; as consumer electronics became cheaper and more ubiquitous, customers no longer needed or wanted a salesperson to help them with many of their purchases. Circuit City, on the other hand, stuck to its commission-based sales force and its reliance on high-margin products, and watched Best Buy take over its market share.

But Circuit City didn't see Best Buy as a threat. "We thought we were smarter than anybody," says Alan Wurtzel, who remained on the board of directors until 2001. "But the time you get in trouble is when you think you know the answers."

In 2000, Circuit City's earnings and stock price were at their all-time high — but Best Buy's earnings were higher, and it was also beating Circuit City in profit per store, total sales, and U.S. market share. Under the new CEO, Alan McCollough, the company began making changes, but the moves appeared to backfire. For example, in 2001 Circuit City stopped selling appliances, which made up between 10 percent and 15 percent of the business. Appliances were expensive to move and store, and getting rid of them freed up space for new products. But getting rid of them also meant Circuit City missed out on the residential real estate boom, when appliance sales soared.

In addition, the move was confusing to both employees and customers, and it might have helped the competition. "Best Buy still sold major appliances, and guess what, they also had TVs and computers and videogames," says Tom Wulf, a former Circuit City manager and trainer who directed the 2010 documentary *A Tale of Two Cities: The Circuit City Story*. "We were basically pushing our customers out the door, saying we don't want to sell to you anymore."

In 2003, Circuit City finally decided to eliminate its commissioned sales force. In one day, the company fired 3,900 of its highest-paid salespeople, with plans to replace them with 2,100 hourly associates. The move crushed employee morale and productivity. "Anyone who was working in the store thought, gee, if I'm too successful they're going to fire me, because I'll be making too much money," Wulf says. "So there was no incentive anymore to take good care of the customer."

In Wurtzel's opinion, it was "economically essential to reduce the cost of sales and to reduce commissions as a percentage of sales," but the change was badly mismanaged. "The preferable way to have done it is to be open and honest with the salespeople, to do it sensitively and reluctantly," he says. "Instead, it was done secretly and behind their backs, and they walked into work one morning and were told they were out of work."

Over the next five years, Circuit City's management made a series of questionable decisions, including buying a Canadian electronics chain, embarking on a round of store expansions, and laying off 3,400 more of the company's most experienced salespeople in 2007. "It's not a story where they did one thing really badly," says Bosse. "It's a story of hundreds and hundreds of smaller decisions that added up to be destructive."

Perhaps the most damaging move was a series of stock buybacks. Despite declining sales, Circuit City had a lot of cash on hand from spinning off CarMax in 2002 and selling a private-label credit card bank in 2003. Under pressure from shareholders, Circuit City spent almost $1 billion between 2003 and 2007 buying back stock at an average of $20 per share. But the purchases couldn't offset the fact that Circuit City's business was failing, and the stock was worth only $4.20 per share by the end of 2007. The ultimate result was that Circuit City didn't have any cash on hand to weather the economic storm that was coming.

Everything Must Go

Circuit City filed for Chapter 11 bankruptcy on November 10, 2008, and announced a restructuring plan that included closing 155 stores. But in the midst of the financial crisis, the plan wasn't enough to satisfy the company's creditors, and when Circuit City couldn't find a buyer, a bankruptcy judge ordered the company to liquidate.

At the time of the filing, Circuit City had 567 stores and about 34,000 employees nationwide. And although layoffs had begun at headquarters several years earlier, the company was still one of Richmond's largest employers, with about 2,000 people. Many employees remained hopeful that Circuit City would find a way to bounce back; the company had rebounded from near bankruptcy once before. "Up until the day they announced the liquidation, there was still a group of associates that were quite hopeful about the Phoenix rising again, the company being reborn and coming out of the ashes," Wulf says.

When that didn't happen, many of those same employees lost their life savings. Circuit City had offered an employee stock purchase program, whereby employees could invest up to 10 percent of their salary in company stock — which became worthless. "All those years of investing meant nothing in the end," says Wulf. "It really ruined some people's lives."

Circuit City's departure left a huge hole in the commercial real estate market as well, which was a loss not only for the landlords but also for the nearby coffee shops and restaurants that catered to Circuit City employees. Other Richmond companies also suffered or closed.

While business failures are painful for the people affected, however, they are an inevitable and even a necessary feature of capitalism, which the late Joseph Schumpeter, an Austrian-American economist, described as "the perennial gale of creative destruction." Circuit City isn't the only company to have been surpassed by a similar competitor, and in the long run the economy and consumers might be better off with Barnes & Noble instead of Borders or Kroger instead of A&P — or eventually with an online retailer instead of any of them.

If Circuit City had done things differently, would it still be around today? Maybe. It's possible the company could have found a way to "combine the strengths of Circuit City, which was very high touch, with the strategic vision of Best Buy, which was low prices and mass merchandising," as Wurtzel says. But it's also possible that the company was bound to be swept aside by Schumpeter's "perennial gale," leaving behind only bittersweet memories for ex-employees and a cautionary tale for everyone else. **EF**

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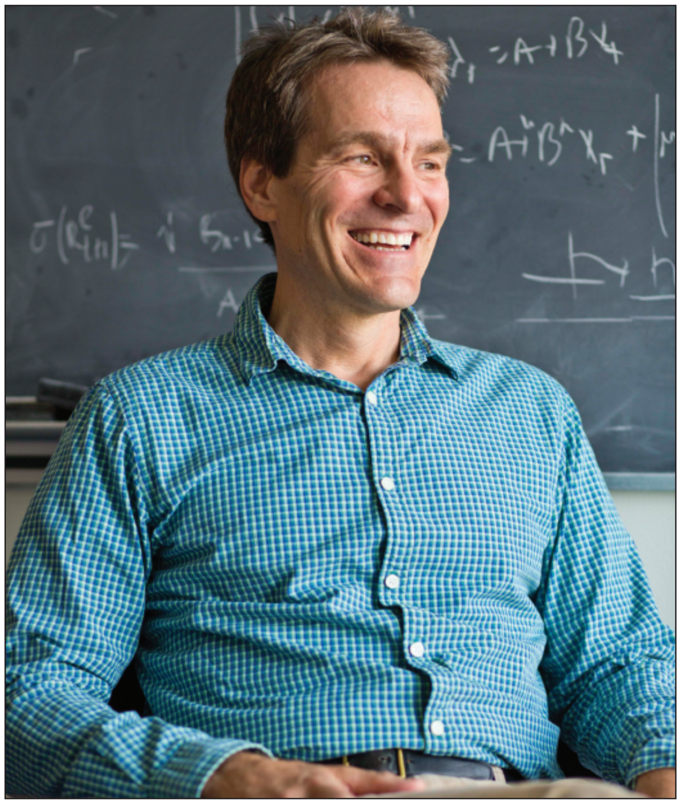
Interview

John Cochrane



PHOTOGRAPHY: DUSTIN WHITEHEAD, THE UNIVERSITY OF CHICAGO BOOTH SCHOOL OF BUSINESS

Editor's Note: *This is an abbreviated version of EF's conversation with John Cochrane. For the full interview, go to our website: www.richmondfed.org/publications*

There are many similarities between physics and economics. Both fields explore movement — of objects in one case, and economic variables in the other — and they use many of the same mathematical tools and techniques. It is not uncommon for economists to follow theoretical physics as a hobby.

Economist John Cochrane takes his interest in physics up a level — or, more accurately, several levels: He flies unpowered planes, known as gliders, competitively. Many people would find that hobby less daunting than another way Cochrane spends his nonresearch time: discussing reforms to the financial system, the tax code, and health care in newspaper and magazine articles and on his blog, The Grumpy Economist.

Cochrane is known for arguing against the popular view that more regulation is needed to fix the financial system; typically, he says, regulation ends up encouraging risk-taking. He has also studied the fiscal theory of the price level, the somewhat controversial view that large fiscal deficits can overpower the central bank's attempts to control inflation. His wide-ranging work has made Cochrane a key voice in the public policy debates of the last several years.

Cochrane joined the faculty of the University of Chicago's economics department in early 1985, and moved to its Booth School of Business in 1994. He is also a Senior Fellow at the Hoover Institution, and is the author of *Asset Pricing*, one of the most commonly used graduate textbooks for finance. Aaron Steelman interviewed Cochrane at his office in Chicago in late August 2013. Renee Haltom and Lisa Kenney contributed to the interview.

EF: Does the 2010 Dodd-Frank regulatory reform act meaningfully address runs on shadow banking?

Cochrane: It tries, but I don't think it actually does much about runs. I think Dodd-Frank repeats the same things we've been trying over and over again that have failed, in bigger and bigger ways. The core idea is to stop runs by guaranteeing debts. But when we guarantee debts, we give banks and other institutions an incentive to take risks. In response, we unleash an army of regulators to stop them from taking risks. Banks get around the regulators, there is a new run, we guarantee more debts, and so on.

The deeper problem is the idea that we just need more regulation — as if regulation is something you pour into a glass like water — not smarter and better designed regulation. Dodd-Frank is pretty bad in that department. It is a long and vague law that spawns a mountain of vague rules, which give regulators huge discretion to tell banks what to do. It's a recipe for cronyism and for banks to game the system to limit competition.

Runs are a feature of how banks get their money, not really where they *invest* their money. So a better approach, in my view, would be to purge the system of run-prone financial contracts — that is, fixed-value promises that are payable on demand and cause bankruptcy if not honored, like bank deposits and overnight debt. Instead, we subsidize short-term debt via government guarantees, tax deductibility, and favorable regulation, and then we try to regulate financial institutions not to overuse that which we subsidize.

EF: So what do you think is the most promising way to meaningfully end "too big to fail"?

Cochrane: You have to set up the system ahead of time so that you either can't or won't need to conduct bailouts. Ideally, both.

On the first, the only way to precommit to not conducting bailouts is to remove the legal authority to bail out. Ex post, policymakers will always want to clean up the damage from crises and worry about moral hazard another day. Ulysses understood he had to be tied to the mast if he was going to ignore the sirens. You also have to let people know, loudly. The worst possible system is one in which everyone thinks bailouts are coming, but the government in fact does not have the legal authority to bail out.

On the second, if we purge the system of run-prone financial contracts, essentially requiring anything risky to be financed by equity, long-term debt, or contracts that allow suspension of payment without forcing the issuer to bankruptcy, then we won't have runs, which means we won't have crises. People will still lose money, as they did in the tech stock crash, but they won't react by running and forcing needless bankruptcies.

EF: Do you think there's any reason to believe recessions following financial crises should necessarily be longer and more severe, as Carmen Reinhart and Kenneth Rogoff have famously suggested?

Cochrane: Reinhart and Rogoff only showed that recessions following financial crises have been, on average, longer and more severe — not even "always," let alone "necessarily." I don't believe they advanced a theory, either, so they really just documented a historical regularity, a correlation and not a cause. So no, I don't believe that, at least not yet. Lots of people tell a story in which it takes a long time to "deleverage," "restore balance sheets," and to work "excess debt" out of the system, but just what that means and why it takes a long time hasn't been adequately modeled and tested yet.

An alternative explanation for the correlation is that governments tend to do particularly bad things in the wake of financial crises. They tend to bail out borrowers at the expense of lenders, overregulate finance, pass high marginal tax rate wealth transfers, alter property rights, and introduce other distortions. Mortgage foreclosure used to take a few months, and now it can take two years. And then people wonder why lenders aren't willing to lend at low rates anymore. The Great Depression seems like a classic case of counterproductive policies being put in place after a financial crisis that made the whole episode much deeper and longer.

EF: What are your thoughts on quantitative easing (QE) — the Fed's massive purchases of Treasuries and other assets to push down long-term interest rates — both on its effectiveness and on the fear that it's going to lead to hyperinflation?

> Just as people say a certain branch of economics is a dead field with all the big questions answered, it is in fact poised for revolutionary changes. It's a really exciting moment to be working in finance.

Cochrane: In my opinion, QE has essentially no effect. Interest rates are zero, so short-term bonds are a perfect substitute for reserves. QE creates a minor change to the maturity structure of government debt — and doubly minor because the Fed's effort to shorten maturity is essentially matched by the Treasury's new sales of long-term bonds. We've had much larger changes in the quantity and maturity structure of debt in the past with no big effect on the level of interest rates. You have to buy some new theory of very long-lasting flow effects, but I think coming up with new theories to justify policies ex post is a particularly dangerous kind of economics.

So I don't think the theory suggests QE can have a big effect. What about the evidence? Most of it comes from announcement effects. Even there, it's pretty weak: a 15-or-so basis point change in interest rates in return for a pledge to buy trillions in Treasuries. But interpreting announcements is tricky, and tells you a lot less about QE's effectiveness than you might think.

Markets tell you what they think will happen — mixed with what risks they're willing to take — but not why. If the Fed announces more QE or delayed tapering of QE and bond prices rise on that announcement, is that because QE itself is moving the markets? Or is it because bond investors think, "Wow, the Fed is scared, so it will keep interest rates low for a lot longer than we expected"? Without a solid economic reason to believe QE on its own has much of an effect, the latter interpretation seems more likely.

Also, the market's reaction to an announcement doesn't tell you for how long QE could have an effect. QE advocates take these reaction estimates, assume they are causal, and assume they are permanent. There are more than $17 trillion in U.S. Treasury bonds outstanding, and another $1 trillion are being issued every year. Why would the Fed buying even $1 trillion of them — in exchange for reserves, which are really just floating-rate overnight debt — have a permanent effect? Microstructure studies might see price pressure in Treasury markets but for a day, not for years. Also, if market reactions prove anything, they prove that markets think QE has an effect. But this is a policy we've never seen before, so we don't have much rational expectations-based reason for believing markets are right about it. Markets are great at correlations and unconditional forecasting, and less so at structural cause and effect for things they have never seen before.

So neither the theory nor the evidence make me think QE is effective. But the good news is that we therefore can't worry too much about its reversal. It's neither going to cause hyperinflation, nor need it cause much trouble when the Fed "tapers."

EF: Both fiscal and monetary policies have been on extreme courses recently. What are your thoughts on how they might affect each other as they move back to normal levels?

Cochrane: This is my main research focus right now, fiscal-monetary interactions. In the United States, we've had 50 years of experience without severe fiscal problems, so we've kind of forgotten about the fact that over longer spans of history, fiscal policy and monetary policy were always linked. Big inflations have tended to follow bankrupt governments.

Monetary policy will be different in the shadow of huge debts. For example, suppose the Fed wants to raise interest rates to 5 percent tomorrow. The Treasury would then have to start rolling over its debt at that higher interest rate, which means a net flow of about $800 billion of extra deficit that has to come from somewhere — more taxes or less spending eventually. Will Congress still say, "Sure, go ahead and tighten"? After World War II, we had a similarly huge debt and Congress simply instructed the Fed to keep interest rates low to finance the debt. That could happen again. How independent can monetary policy be in the shadow of huge debts?

EF: That relates to the fiscal theory of the price level, the theory that inflation ultimately comes from government debt, as opposed to the central bank printing money. Why do you find that theory attractive?

Cochrane: In some sense, the fiscal theory of the price level is still about money. A government that borrows in its own currency will print money rather than default. That will cause inflation. But inflation can rise long before the money gets printed, and that's what I mean by fiscal inflation. People see the central bank's eventual bailout coming, and they run from the government's debt. First they buy alternative assets, such as stocks or houses. When those prices rise, people buy goods and services, driving up prices. In that situation, there's nothing a central bank can do; fiscal events take over. People don't want debt of any maturity or liquidity, so exchanging one type of government debt for another — that's all a central bank does — loses its effectiveness.

More deeply, the fiscal theory of the price level is an answer to the question of why money has value. That's the most fundamental question of monetary economics. Why can I give the store a piece of paper and get a cup of coffee in return? As Adam Smith argued, it's because the government takes those pieces of paper, and only those pieces of paper, for your taxes.

I've been searching all my professional life for a theory of inflation that is both coherent and applies to the modern economy. That might sound like a surprising statement, especially from someone at Chicago, home of MV=PY. But although MV=PY is a coherent theory, it doesn't make sense in our economy today. We no longer have to hold an inventory of some special asset — money — to make transactions. I use credit cards. We pretty much live in an electronic barter economy, exchanging interest-paying book entries, held in quantities that are trillions of dollars greater than needed to make transactions. The gold standard is a coherent theory too, but it doesn't apply today either. The prevailing theory of inflation these days has nothing to do with money or transactions: The Fed sets interest rates, interest rates affect "demand," and then demand affects inflation through the Phillips Curve. That theory isn't coherent either. So I've been looking for a new theory: What is the basic theory of inflation? Where do we start before we add frictions and complications? I became attracted to the fiscal theory of the price level because it is the only theory that answers that question in a clean, compelling way that is compatible with modern institutions.

We've got the big picture of the fiscal theory, but it turns out that its predictions are quite subtle. Figuring out how it can plausibly account for what we see, before we even begin more formal testing, is hard. There is a lot of work to be done there, so that's my big research agenda.

EF: Switching gears to finance specifically, what do you think are some of the big unanswered questions for research?

Cochrane: I'll tell you about the ones I work on, but there surely are others. And often you don't know there was a big question until you've answered it.

One big unresolved issue in finance is why risk premiums are so big and why they vary so much over time. You can look at the spread between what you have to pay to borrow and what the U.S. government pays in order to see that risk premiums are big and varying.

There is a good macroeconomic story. In a business cycle peak, when your job and business are doing well, you're willing to take on more risk. You know the returns aren't going to be great, but where else are you going to invest? And in the bottom of a recession, people recognize that it's a great buying opportunity, but they can't afford to take risk.

Another view is that time-varying risk premiums come instead from frictions in the financial system. Many assets are held indirectly. You might like your pension fund to buy more stocks, but they're worried about their own internal things, or leverage, so they don't invest more.

A third story is the behavioral idea that people misperceive risk and become over- and under-optimistic. So those are the broad range of stories used to explain the huge time-varying risk premium, but they're not worked out as solid and well-tested theories yet.

The implications are big. For macroeconomics, the fact of time-varying risk premiums has to change how we think about the fundamental nature of recessions. Time-varying risk premiums say business cycles are about changes in people's ability and willingness to bear risk. Yet all of macroeconomics still talks about the level of interest rates, not credit spreads, and about the willingness to substitute consumption over time as opposed to the willingness to bear risk. I don't mean to criticize macro models. Time-varying risk premiums are just technically hard to model. People didn't really see the need until the financial crisis slapped them in the face.

Large time-varying risk premiums might also change how we think about monetary policy. It has become a common argument that too-low interest rates cause risk premiums to decline. I'm pretty skeptical: I don't know of any economic model that links Fed-induced changes in the level of short-term interest rates to risk premiums, and it smacks of new theories to justify preconceived policies. Still, the "reach for yield" story is bandied about so much, we should get to the bottom of it. [See "Reaching for Yield" on page 5.]

I'm seeing a new enthusiasm for work on the trading process, and there are deep questions to be answered. How does information get incorporated into prices? How does trading work? Is high frequency trading helping or hurting? Is the extensive regulation of trading helping or hurting?

And of course, the financial crisis spurred a whole new research agenda — or maybe the revitalization of an old agenda — in finance. The crisis, the run, the evolution of shadow banking, financial innovation, real estate finance, banking regulation are all hot topics on which we're making a lot of progress.

As often happens, just as people say a certain branch of economics is a dead field with all the big questions answered, it is in fact poised for revolutionary changes. It's a really exciting moment to be working in finance.

EF: You've written a lot about health care recently. What is the problem with that sector? If you could start from a clean slate, what would you do?

Cochrane: The big problem is vast overregulation and fundamentally misguided regulation. Like Dodd-Frank, the Affordable Care Act (ACA) just layers on more of the same regulatory approach that failed before.

Health insurance should be there to protect your wealth against large, unanticipated shocks. There is no more reason it should pay for routine expenses than your car insurance should pay for oil changes. Insurance should be individual, not tied to your job, guaranteed-renewable (meaning, once you buy it, you keep it, without premium increases, when you get sick), portable across jobs, marriages, and states, transferable to other insurance companies, and accompanied with large deductibles.

There is no market failure preventing this from happening. People want this, and companies want to sell it to them. But the market has been killed by regulation, including the tax deduction for employer-provided group plans but not employer contributions to individual insurance, state regulations, the prohibition against selling insurance across state lines, and others. The kind of private health insurance I described is now effectively illegal under the ACA.

So I would start by simply allowing the economically ideal insurance to exist, and rebuilding this individual market from there, for example, converting employer-based group plans to individual policies. Then, we could pay for health care the way we pay for vet care, home repair, car repair, or anything else. If the dog is sick, bring her in. Don't wait six weeks to get a referral. There's no state board saying that your vet insurance must include "free" toenail clipping and ear trimming.

EF: Do you think something like medical savings accounts have any hope of being adopted on a large scale?

Cochrane: Medical savings accounts are a great idea, although the need for special savings accounts for medicine, retirement, college, and so on is a sign that the overall tax on saving is too high. Why tax saving heavily and then pass this smorgasbord of complex special deals for tax-free saving? If we just stopped taxing saving, a single "savings account" would suffice for all purposes!

There are too many other distortions right now for medical savings accounts to work all by themselves. Medical savings accounts give you cash, so they are predicated on the idea that if you show up with dollars, there will be a competitive supplier offering you efficient, well-priced services at a competitive price. And that doesn't exist right now. If you walk into a hospital without insurance, they're going to charge you $500 for a Band-Aid.

That's part of the deeper problem, and it's the other half of my answer to, "If you could start with a clean slate." We need supply competition. There is no point in having people pay with their own money if the Southwest Airlines

John Cochrane

➤ Present Position

AQR Capital Management Distinguished Service Professor of Finance at the University of Chicago Booth School of Business

➤ Previous Appointments

University of California, Los Angeles; Anderson Graduate School of Management Visiting Professor of Finance (2000-2001); University of Chicago Department of Economics (1985-1994); Junior Staff Economist, Council of Economic Advisers (1982-1983)

➤ Other Positions

Research Associate, National Bureau of Economic Research; Senior Fellow, Hoover Institution; Co-Director, Fama-Miller Center for Research in Finance; Adjunct Scholar, Cato Institute

➤ Education

S.B. (1979), Massachusetts Institute of Technology; Ph.D. (1986), University of California at Berkeley

➤ Selected Publications

Author of *Asset Pricing*, a widely used textbook, and numerous articles in such journals as the *American Economic Review*, *Quarterly Journal of Economics*, *Econometrica*, *Journal of Finance*, *Journal of Monetary Economics*, and *Journal of Economic Perspectives* and Wal-Mart of medicine can't disrupt big, entrenched, inefficient providers. Instead, our government protects incumbent insurance companies and hospitals from this kind of innovation and competition.

As for "hope," the ACA is phasing health savings accounts out, so the "hope" would have to be that major parts of the ACA are repealed. That's a question of politics, not economics.

EF: You wrote an op-ed on an "alternative maximum tax." What's the idea there?

Cochrane: The alternative maximum tax is not my favorite nor a perfect tax code. It's a Band-Aid. Our current tax code is a chaotic mess and an invitation to cronyism, lobbying, and special breaks. The right thing is to scrap it. Taxes should raise money for the government in the least distortionary way possible. Don't try to mix the tax code with income transfers or support for alternative energy, farmers, mortgages, and the housing industry, and so on. Like roughly every other economist, I support a two-page tax code, something like a consumption tax. Do government transfers, subsidies, and redistribution in a politically accountable and economically efficient way, through on-budget spending.

But that isn't going to happen anytime soon. In the meantime, our tax system puts in place much higher marginal rates than most people acknowledge. People keep focusing on federal income taxes alone, where marginal rates top out around 40 percent. But that leaves out state, county, and local income taxes, plus sales taxes, estate taxes, excise taxes, property taxes, corporate taxes, and many others. If you earn an extra dollar for your employer, how much do you actually get when it's all added up? I have not been able to find any decent comprehensive calculations of marginal tax rates. In a *New York Times* column, Greg Mankiw came up with 90 percent for himself, and he left out sales taxes and a bunch of other taxes.

The idea behind the alternative maximum tax is this: Choose any rate, even say, 50 percent or 70 percent. Whatever we decide is the "enough is enough" point. If someone could show they've paid that percentage of their income in tax to some level of government, they don't have to pay any more. If the people who say that nobody pays that much are correct, great, then it can't hurt.

Like I said, it's not perfect. This is an average rate, and marginal rates really matter. It doesn't address the large effective marginal tax rates that poor people feel from means-tested benefits. But it's a way to check that all of the creeping, extra things don't add up to a horribly distortionary tax code even though each individual element may not seem excessive.

We have an alternative minimum tax to make sure clever taxpayers don't exploit the insane complexity of the tax code and escape. Given that same insane complexity, why not have an alternative maximum too?

EF: Which economists have influenced you the most?

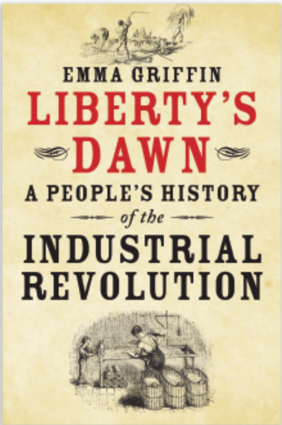
Cochrane: There are many; I'm reluctant to answer because I'll forget to mention someone. So with that proviso, Bob Lucas, Tom Sargent, Lars Hansen, and Gene Fama stand out as enormous intellectual influences. Lucas and Sargent are masters of mixing theory and facts, thinking hard about what the equations mean, and reading historical episodes. Writing theory that matters. I was floundering around thinking about random walks when I first got to Chicago, and Lucas walked into my office and pointed out that decade averages were very stable; he handed me my first big paper on a silver platter. People think of Lucas as a theorist, but he has a talent for organizing facts in a really revealing way.

I learned most of what I know about asset pricing by running back and forth between Gene Fama's and Lars Hansen's offices and trying to put it all together. They are each absolutely brilliant but in different ways. Hansen has an unjustified reputation for writing hard papers. In fact, once you spend a few months figuring it out, you see that he has brilliantly simplified the problem, just in a different space. And Gene is the Darwin of finance. He has this amazing talent for putting all the facts together and finding the simple story underlying them. He makes it all look so easy in the rearview mirror.

I was also very influenced by my days in grad school. George Akerlof, Tom Rothenberg, and Roger Craine taught me things that ring to this day. Akerlof and Craine both got me thinking about money and where inflation comes from. Akerlof wrote and taught about how MV=PY doesn't make sense; the "Irving Fisher on his Head" paper, for example. He was after a different point — slopes of the LM curve, and the effectiveness of fiscal policy — but his critiques of MV=PY were deep. I would not have run into that at Chicago, which was still kind of the home of monetarism. That's really what began my search for the foundations of inflation that is now expressing itself in work on the fiscal theory of the price level. Learning from Tom Rothenberg was a life-changing experience on how to do empirical work that all of his students remember.

My heroes also taught me, by example, a lot about how to be an economist. Think about the facts and the theory, with no party or academic politics. Debates are sharp but never personal. Don't play games or try to impress people. Relentlessly simplify and clarify your work. Turn in your referee reports on time. Cite generously. Value people for their ideas, and pay no attention to academic rank. And so on.

Most of all, always remain open to new ideas. I still remember the moment I became an economist: when my first micro classes overturned some of the common ideas I had at the time. There is no better moment than when I make some pronouncement, and a colleague says "No, John, you're totally wrong, and here's why," and convinces me. My heroes are all like this, and I'm attracted to people with that attitude. **EF**



BookReview

Reconsidering a Revolution

LIBERTY'S DAWN: A PEOPLE'S HISTORY OF THE INDUSTRIAL REVOLUTION
BY EMMA GRIFFIN
NEW HAVEN, CT.: YALE UNIVERSITY PRESS, 2013, 295 PAGES

REVIEWED BY DAVID A. PRICE

The British Industrial Revolution, the burst of developments in manufacturing that lasted from 1760 to the mid-18th century, has often been treated harshly by historians and others. The Oxford economic historian Arnold Toynbee, who popularized the term, called the Industrial Revolution "a period as disastrous and as terrible as any through which a nation has ever passed." Charles Dickens' *Oliver Twist* and *Hard Times* were literary mortar rounds aimed at it. The poet William Blake referred to the factories of the era as "dark Satanic Mills."

Yet it seems many of the working poor did not share the view that times were rotten. In *Liberty's Dawn*, University of East Anglia historian Emma Griffin sifts through hundreds of personal histories left behind by workers of the time (almost all of them men) and finds a record of growing economic opportunity and political engagement.

"He is a misanthrope indeed," wrote one, "who would wish the old days or customs back again."

While conceding that the abuses during the Industrial Revolution were real — including long hours, dangerous conditions, and child labor — Griffin draws from the workers' accounts to create a portrait of the improvements that the revolution brought to them. Foremost among these was the availability of employment. In Britain's allegedly idyllic preindustrial age, work could be hard to come by, and farm jobs commonly brought bare subsistence wages. The economic growth that came with industrialization, however, brought not only abundant and steady factory jobs, but also easier entry into the skilled trades.

Beyond lifting many Britons out of subsistence, Griffin reports, the Industrial Revolution "changed the balance of power in the master-servant relationship." Abundant jobs made it tenable for workers to respond to petty oppressiveness from their employers by moving on to work elsewhere. A worker who became fed up with humble submission could reject it. Among the rebels she cites is a farmhand, George Mitchell, who resolved to leave after a hard day's work ended in an argument with his employer; he gave two weeks' notice and took a job at a stone quarry in the next town, doubling his income in the process.

Industrialization may have also made it easier for couples to marry. Studies of church records have suggested that the average marriage age of men, which was 27 before the Industrial Revolution, fell to 25 by the 1800s; that of women fell from 26 to 23. Griffin finds in the workers' memoirs that the decision to marry was tied closely to personal prosperity and surmises that the economics of the times enabled young men and women to marry earlier. Young marriage, no longer the privilege of a few, was common in industrial areas, while it appears to have remained rare in the agricultural countryside.

Perhaps the most far-reaching effect of industrialization, on Griffin's account, was the spread of literacy among workers. To be sure, the Industrial Revolution, with its use of child labor, blunted any growth that might have otherwise taken place in elementary education; on average, the workers in her study started work at the age of just 10. Yet literacy was more common than might be expected. It seems puzzling at first. Of one worker, Emanuel Lovekin, who went to the coal mines as a child, Griffin asks: "How was a man whose schooling ended at the age of seven and a half able to write an autobiography of 7,000 words?"

The answer is that industrial Britain produced educational opportunities for teens and adults. After Lovekin as a teen "began to feel very Strongley the desieries to learn to read," in his words, he attended a local night school. He also became involved in a Methodist Sunday school, first as a student and later as a teacher. Others like him took part not only in night schools (both commercial and charitable), but also in mutual improvement societies. The latter were small groups of workers who pooled their money to buy books and then discussed or debated them. For some men, mutual improvement societies became a means of gaining the skills for political organizing and served as a route into politics.

In contrast to the gains made by men, it is clear that women generally did not share in the new employment or educational opportunities (apart from access to Sunday schools) — no doubt a result, in large part, of cultural attitudes toward women's work and roles.

If taken as a scientific study, Griffin's account is open to methodological objections, especially as to the unrepresentative nature of the memoirs. By definition, only the workers who grasped the opportunities for literacy left behind written accounts of their lives. In addition, her book would have been strengthened by a fuller account of other historical work that has been sympathetic to the Industrial Revolution and its effects on the lower classes, such as that of the late R. M. Hartwell. Still, *Liberty's Dawn* offers fascinating and colorful first-person views of the period that, at least in material terms, launched the modern age. **EF**

Workforce Investment in Times of Need and Fiscal Constraint

BY JAMIE FEIK, RICK KAGLIC, AND ANN MACHERAS

The Great Recession profoundly impacted the Fifth District's labor markets. From the peak in the region's employment in February 2008 to its low point two years later, almost 850,000 jobs in the district were lost, and nearly a quarter of those jobs have yet to be recovered. In addition to the safety net of the unemployment insurance program, laid-off workers and those struggling to enter the job market were able to use federally funded workforce programs to receive job searching assistance, job training, and even help with other social services to support their participation in the labor market. Although most dislocated workers re-enter employment without the support of government assistance, the federal government has long been in the business of helping to train workers to meet the needs of employers, with the added benefit of simultaneously reducing affected workers' reliance on government aid.

Current concerns over federal government spending, however, will inevitably affect workforce programs, whose funding has already declined on balance over the past 15 years. The Workforce Investment Act (WIA), the primary source of funding for workforce training, is intended to bring control and accountability for workforce programs to the state and local level and improve coordination with various social programs that benefit job seekers. With the exception of additional short-term funding through the 2009 American Recovery and Reinvestment Act (ARRA), allocations of WIA funds have been declining fairly steadily since program year 2002. Furthermore, the peculiarities of the formulas for allocating WIA funds among the states led to changes in funding levels during the recession and its aftermath that perhaps seem counterintuitive given the high levels of unemployment. Using the Fifth District to illustrate, one of the hardest-hit states, South Carolina, lost WIA dollars while Virginia gained, due to relative changes in unemployment and the formula-driven allocation scheme for WIA funding.

Analysis of the net impact of WIA for several states has shown a positive return on the investment over the lifetime of program participants. Despite evidence of the program's benefits, funding for the WIA has remained a challenge since its inception. Demand for participation in the nation's workforce development programs remains high, even as continued budget constraints make future funding even more uncertain.

Federally Funded Workforce Efforts

The three main components of workforce development services in the United States are the job search assistance and job matching program, adult workforce training program, and dislocated worker program. The job matching program provides a structure by which workers can find employers who may be looking for someone with their particular skill sets, and vice versa; this structure benefits the economy more generally in that it reduces frictions in labor markets. The workforce training programs are designed to build up the knowledge and skills of participants by providing resources to help them attain the skills that are in demand by employers in their areas, helping to close the skills mismatch and get those workers into (or back into) suitable employment. Workforce training programs primarily serve economically disadvantaged adults over the age of 21 who face barriers to employment, and dislocated workers who have lost jobs due to changes in technology or industry trends. In addition, some programs focus specifically on at-risk youth between the ages of 14 and 21, and provide job readiness assessment in addition to training.

The WIA is the latest federal initiative designed to prepare workers for employment or re-employment. There are several key aspects of WIA that differ from its predecessor program (the Job Partnership Training Act of 1982). One key difference lies in the way services are provided to workers and employers. According to the Department of Labor, the agency that oversees the WIA on the federal level, the programs work through a nationwide network of "One Stop Career Centers" where job seekers are offered "training referrals, career counseling, job listings, and similar employment-related services" in a single location.

Another key difference is a higher level of state and local control over the program, as well as more private sector representation on local workforce investment boards, which are composed of local elected officials, private industry representatives, and workforce training providers. WIA funds are allocated to the states and, in turn, distributed to the local investment boards that are in the best position to recognize the skill shortages within their areas and to foster relationships with the workers and employers.

A third important difference is the way that training is delivered to workers. WIA introduced Individual Training Accounts (ITAs), which is a training voucher program for eligible participants, and required states to vet training providers and compile Eligible Training Provider (ETP) lists. The ITAs provided states and beneficiaries more flexibility in their training options, while the ETP lists added an element of accountability for states and training services providers by requiring documented success in offering training that leads to unsubsidized employment and meets local employer needs.

One may think of WIA outlays as investments in human capital, investments that ultimately pay returns to program participants, employers, and society more generally. The goal of workforce development efforts is to make workers more employable and productive. Individual workers then earn returns from jobs and higher compensation. Employers benefit from better trained and presumably more productive employees. And society profits from increased availability of goods and services, reductions in income supports (such as unemployment insurance payments, food stamps, Medicaid, etc.), and greater tax revenues over the long run.

Attempts to measure the return on investment (ROI) from these outlays have been limited by the availability of data and the uncertainty in quantifying the benefits derived by society, among other factors. One analysis that provides a compelling framework has been set out by Kevin Hollenbeck of the Upjohn Institute for Employment Research. In a 2012 working paper, Hollenbeck weighed the costs of postsecondary job preparation training in Washington state against the benefits derived by program participants and the public (taxpayers), together constituting the benefit to society as a whole. Hollenbeck's efforts suggested that after absorbing a slightly negative return over the first 10 quarters of the investment (-0.11 percent), the ROI over the worker's lifetime was between 4.8 percent and 6.7 percent. Earlier work by Hollenbeck reached similar conclusions with regard to programs in Indiana and Virginia.

Allocating Funds Among the States

The WIA program has been continuing more or less unchanged since its inception in 1998, although it has been awaiting reauthorization since 2003. There have been several attempts at reauthorizing the Act, but none has succeeded. Congress continues to appropriate funds annually to support it, however. In program year 2001 (the program year starts on July 1 and ends on June 30 of the following year), $3.3 billion was appropriated for the WIA, but by program year 2007, the funding level had fallen to $2.9 billion — a decline of 11.4 percent.

The funds Congress provides through WIA flow into three major programs — youth activities, adult activities, and the dislocated workers program. Funds for these programs are allocated to the states using formulas based on need. The first two of these funding streams are geared toward helping economically disadvantaged individuals. Thus, when determining a state's allotment for youth and adult programs, the Department of Labor takes into consideration such factors as areas of substantial unemployment (contiguous areas with an average unemployment rate of 6.5 percent) and the state's share of economically disadvantaged youth and adults using decennial Census data and standard poverty thresholds. One must keep in mind that when the WIA was enacted and these rules were written, sustained unemployment rates of greater than 6.5 percent were far rarer than they became in the wake of the Great Recession, so the threshold may seem low by today's standards.

The dislocated worker program is geared more toward putting idled workers back to work. Its funding formula therefore uses more cyclical measures of labor market conditions to determine the level of duress in the state's labor market and, consequently, how much of the appropriated funds the state will receive. The first formula input is the state's share of total nationwide unemployment. The second criterion is the state's share of excess unemployment, that is, its share of unemployed workers in excess of 4.5 percent of the labor force. (Again, one must keep in mind the unemployment rates that prevailed at the time the rules were written.) The third determinant is the state's share of total long-term unemployment, which the WIA defines as 15 weeks of unemployment or longer.

WIA Spending Since the Recession

Congress responded to the sharp run-up in the ranks of the unemployed in the early stages of the Great Recession by allocating additional funding to WIA programs through ARRA. This funding included a supplemental $2.9 billion in combined funding for WIA's youth, adult, and dislocated worker programs for program year 2008, even though the program year was nearly 75 percent over. Congress tucked the additional funding into the 2008 program year in order to keep with the spirit of ARRA spending more generally, which was to get the funds working in the economy as quickly as possible. Since states have the flexibility to spread their program year allotment over the subsequent two program years (if conditions warrant), the placement of the ARRA funds in the nearly finished 2008 program year meant that states had just two years and three months to spend the funds rather than the standard three years. Most of those funds were used by the time program year 2010 rolled around. Fifth District jurisdictions received about $220.4 million in supplemental WIA funding through allocations from the ARRA in program year 2008. That nearly doubled the roughly $238.7 million regular allotment.

QUICK FACT

The need for labor matching and training services remained high in the Fifth District and in the rest of the nation, but the funds available to provide those services did not keep pace.

Long after the ARRA moneys had been spent, the need for labor matching and training services remained high in the district and in the rest of the nation, but the funds available to provide those services did not keep pace. The number of unemployed workers in the United States increased by roughly 110 percent between 2007 and 2010 — yet the funds dedicated to all WIA programs in the 50 states and the District of Columbia were 10.4 percent lower in program year 2011 than in program year 2008 in nominal dollars (outside of the emergency funding in the ARRA).

In the Fifth District, unemployment increased much more than in the United States as a whole during the same timeframe (125 percent), which resulted in a relatively smaller decline in WIA funds. In program year 2011, nominal WIA funding to the jurisdictions covered by the Richmond Fed was 4.7 percent lower than in program year 2008 (see chart below).

Of the Fifth District's jurisdictions, Virginia, Maryland, and North Carolina showed the most significant increases in the number of unemployed workers during this period, with the growth rate in each far exceeding the nationwide average. In contrast, the rise in the ranks of the unemployed fell below the nationwide average in the District of Columbia, South Carolina, and West Virginia (see adjacent table). Given their particularly sharp rise in unemployment, it is not surprising that Virginia, Maryland, and North Carolina saw WIA funding climb through the Great Recession, although the gains in funds did not keep pace with the increases in unemployment.

While funding in these three states did not keep pace with the surge in unemployment, consider the plight of workforce development programs in the other three Fifth District jurisdictions. WIA funding actually fell in nominal terms in the District of Columbia, South Carolina, and West Virginia. So despite the fact that these three jurisdictions saw a combined net increase of 101 percent in their unemployment levels, WIA funding fell by a total of 37 percent in nominal dollars — far more than the overall decline in WIA funding at the national level.

Because the amount of WIA funding a state receives is not a function of the absolute deterioration in the area's labor market, but rather a function of how it performs relative to nationwide averages, jurisdictions where labor market deterioration exceeded the nationwide average saw an increase in their WIA allotment. In contrast, those jurisdictions "fortunate" enough to experience less (but still significant) deterioration in labor market conditions saw their funding decline.

A look at the funding formula for the dislocated workers program illustrates the math. A state's allocation for this program is based on its share of total unemployment, its share of excess unemployment, and its share of long-term unemployment. Each variable is assigned equal weighting in the dislocated worker formula (one-third). Comparing the two extreme cases of funding changes in the district (South Carolina and Virginia) before and after the recession shows why some states saw increased funding while others experienced declines.

In the 12-month period used to calculate dislocated worker allotments for program year 2008, unemployment in the United States was very low by historical standards, averaging 4.5 percent, which coincides with the "excess unemployment" standard. Rates varied considerably by state, however. South Carolina was one of many in which the unemployment rate exceeded the BLS's excess unemployment threshold, while Virginia was one of many where the unemployment rate fell below it (see chart on next page). In fact, despite having a workforce that was only one-half the size of Virginia's, South Carolina had more unemployed workers for program year 2008 (see table on next page). Revisiting the first two funding formula factors — share of total unemployment and share of excess unemployment — it is readily evident that South Carolina was receiving disproportionately large multiples for both. (The other component of the funding formula, long-term unemployment, did not affect the relative comparison between South Carolina and Virginia that year.)

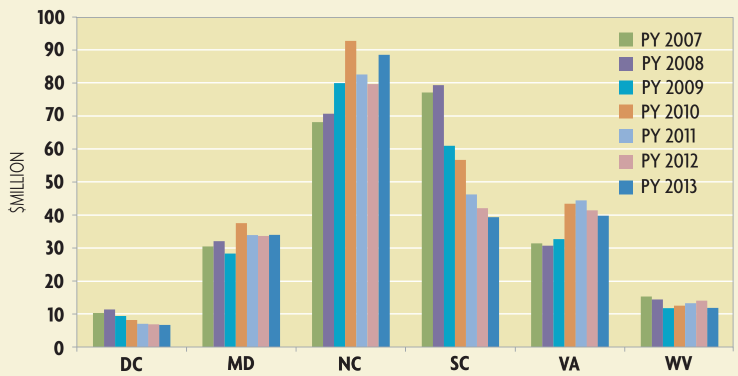
The Great Recession altered the landscape as unemployment rose dramatically across the nation, with significant implications for states' WIA funding formulas. No longer were unemployment rates higher than the excess threshold in some states while lower in others; in the 12-month period used to calculate WIA allotments for program year 2011, every state except North Dakota saw its unemployment rate surge beyond 4.5 percent. For South Carolina, a state with higher-than-average unemployment prior to the recession, this resulted in a reduction in its share of the nation's total unemployment. But for states like Virginia with lower-than-average unemployment before the downturn, it meant a higher share. Similar trends played out with the

Number of Unemployed Workers (Thous.)

	2007	2010	Percent Change
United States	7,077.7	14,824.8	109.5
Fifth District	611.8	1,379.7	125.5
District of Columbia	17.8	34.7	95.1
Maryland	103.0	240.7	133.7
North Carolina	214.6	501.0	133.4
South Carolina	119.1	241.5	102.8
Virginia	123.1	293.8	138.7
West Virginia	34.3	68.0	98.3

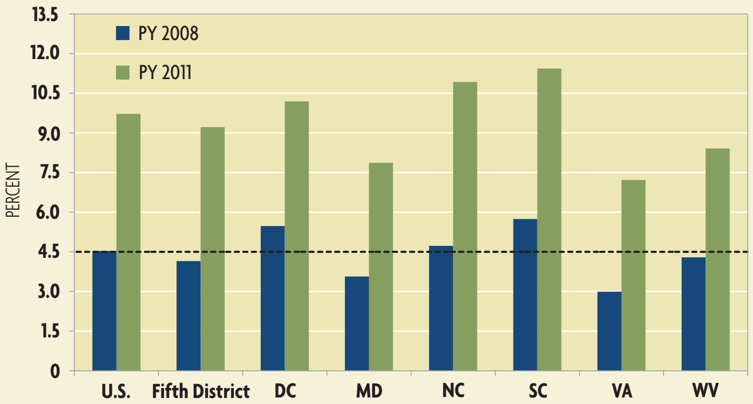
SOURCE: Bureau of Labor Statistics/Haver Analytics

Allocation of WIA Funding



NOTE: PY=Program Year
SOURCE: U.S. Department of Labor, Employment and Training Administration, State Statutory Formula Funding. http://www.doleta.gov/budget/statfund.cfm

Unemployment Rates



NOTE: PY=Program Year
PY 2008: avg 12 months ending 9/30/07; PY 2011: avg 12 months ending 9/30/10
SOURCE: Bureau of Labor Statistics/Haver Analytics

other two funding formula factors as well.

In an environment where the budget pie isn't expanding and the measures of distress are relative, a state with high unemployment levels to begin with can see funding levels decline, even though labor markets have worsened everywhere. In the Fifth District, that means states like Maryland, North Carolina, and Virginia received more WIA dollars during the recession at the expense of states like South Carolina and West Virginia, even though labor market conditions deteriorated there, too.

What Happens Next?

Economists and analysts who follow government finances long ago recognized that the wide gap between revenue collections and public expenditures that came out of the Great Recession would ultimately lead to hard decisions regarding spending priorities. A primary concern was whether governments would choose, or be forced, to cut spending in programs that have the potential to enhance society in the long term. To be sure, WIA costs money in the form of program administration and tuition. But for all the costs associated with preparing disadvantaged and dislocated workers to enter or re-enter the labor force, there are benefits to the individuals who receive training and services through WIA and benefits that accrue beyond those individuals.

For the individuals, studies have suggested that the benefits come in the form of reduced spells of unemployment, increases in lifetime earnings, and better fringe benefits associated with better jobs. For society, shorter spells of unemployment translate into less expenditure on unemployment insurance benefits. Higher earnings bring in more tax revenues for the government and a reduced reliance on taxpayer-funded programs like Medicaid, Temporary Assistance for Needy Families, and food stamps. The cost-benefit analysis of state WIA programs assessed by Upjohn Institute researchers found that the benefits to society appeared to outweigh the costs. In other words, the return on taxpayers' investment in workforce development programs appeared to be a good one.

Despite that, the environment facing workforce development entities is an increasingly challenging one in which the need for skills matching remains high even as federal funding for workforce training is dwindling. (Despite elevated levels of unemployment, employers frequently cite a dearth of workers with the skills needed to fill open positions.) In addition to the longer-term trend toward fewer budget dollars, sequestration has reduced total WIA funding for program year 2013 by 5.2 percent in the United States. In the Fifth District, only Maryland and North Carolina have received an increase in their WIA allocations for program year 2013, while Virginia, Maryland, West Virginia, and Washington, D.C., face a reduction in funding. In addition, the U.S. Department of Labor applied the full sequester to the base allocation (composed of half of the adult and dislocated worker allotments) that is paid on July 1, resulting in a severe reduction in funds available for the first quarter of the program year (starting July 1, 2013). Meanwhile, participation in WIA programs grew by 53.7 percent in the Fifth District from program years 2008 to 2011 and remains high. Local workforce investment boards must meet the challenge of reduced funding by careful cost management, more strategic investment in training options, and, where possible, additional sources of funding for outside grants and corporate support. **EF**

Data Factors for PY 2008 and PY 2011 State Formula Allotments (Thous.)

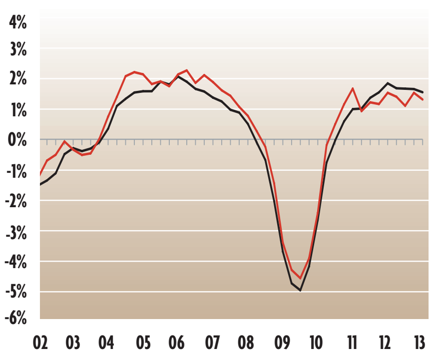
	Regular Unemployment		Excess Unemployment		Long Term Unemployment	
	PY 2008	PY 2011	PY 2008	PY 2011	PY 2008	PY 2011
United States	7,084.8	15,155.3	579.3	8,178.1	2,290.0	8,865.8
District of Columbia	18.4	36.0	4.0	21.0	7.0	21.0
Maryland	114.3	219.6	0.0	86.4	36.0	135.6
North Carolina	216.4	474.5	12.7	270.7	76.0	306.7
South Carolina	129.2	251.7	32.4	154.3	50.0	165.3
Virginia	120.2	291.5	0.0	104.0	35.0	179.0
West Virginia	37.7	70.8	1.0	35.5	14.0	34.1

NOTE: Formula for state allotments is:
1/3: State relative share of total (regular) unemployed (PY 2008: avg 12 months ending 9/30/07; PY 2011: avg 12 months ending 9/30/10)
1/3: State relative share of excess unemployed (PY 2008: avg 12 months ending 9/30/07; PY 2011: avg 12 months ending 9/30/10)
1/3: State relative share of long-term unemployed (PY 2008: Calendar year 2006; PY 2011: average 12 months ending 9/30/10)
SOURCE: U.S. Department of Labor, Employment and Training Administration, State Statutory Formula Funding.
http://www.doleta.gov/budget/statfund.cfm

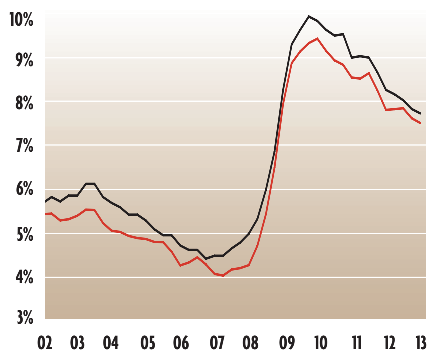
State Data, Q1:13

	DC	MD	NC	SC	VA	WV
Nonfarm Employment (000s)	**734.2**	**2,604.1**	**4,047.9**	**1,878.1**	**3,753.3**	**768.4**
Q/Q Percent Change	0.0	0.7	0.6	0.3	0.3	0.2
Y/Y Percent Change	0.5	1.3	2.0	1.4	0.9	0.1
Manufacturing Employment (000s)	**0.9**	**105.8**	**446.0**	**220.8**	**233.9**	**48.8**
Q/Q Percent Change	0.0	0.3	0.9	-0.1	0.6	-0.6
Y/Y Percent Change	-12.9	-4.2	1.8	1.0	0.6	-2.1
Professional/Business Services Employment (000s)	**155.3**	**419.9**	**543.4**	**227.3**	**679.2**	**64.8**
Q/Q Percent Change	0.5	1.4	0.9	-2.0	-0.5	-0.7
Y/Y Percent Change	1.7	3.0	2.7	-1.4	0.6	0.5
Government Employment (000s)	**241.0**	**505.4**	**716.1**	**349.8**	**717.7**	**154.2**
Q/Q Percent Change	-0.3	0.1	0.1	-0.3	0.4	-0.3
Y/Y Percent Change	-1.3	-0.2	0.4	1.5	1.0	-0.2
Civilian Labor Force (000s)	**372.8**	**3,141.5**	**4,761.0**	**2,176.7**	**4,228.2**	**808.6**
Q/Q Percent Change	1.0	0.1	0.1	0.4	0.3	0.1
Y/Y Percent Change	5.3	1.0	1.3	0.4	0.3	0.8
Unemployment Rate (%)	**8.6**	**6.6**	**9.4**	**8.6**	**5.5**	**7.2**
Q4:12	8.5	6.7	9.4	8.7	5.7	7.5
Q1:12	9.3	6.7	9.5	9.4	5.9	7.0
Real Personal Income ($Mil)	**44,580.5**	**298.0**	**349.6**	**155.8**	**373.5**	**61,232.1**
Q/Q Percent Change	-1.1	-1.1	-0.9	-1.4	-1.5	-0.9
Y/Y Percent Change	0.1	0.0	1.4	0.2	0.7	0.2
Building Permits	**335**	**3,819**	**11,274**	**5,207**	**6,938**	**514**
Q/Q Percent Change	-78.6	-1.7	-12.4	13.9	1.3	5.8
Y/Y Percent Change	28.8	26.8	1.3	17.9	5.6	33.9
House Price Index (1980=100)	**609.4**	**407.7**	**301.2**	**304.7**	**396.5**	**2214.2**
Q/Q Percent Change	1.9	0.1	-0.2	0.0	-0.2	-0.2
Y/Y Percent Change	5.9	0.7	0.3	0.4	0.9	0.9

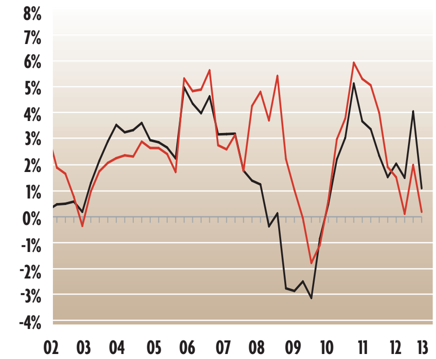
Nonfarm Employment
Change From Prior Year
First Quarter 2002 - First Quarter 2013



Unemployment Rate
First Quarter 2002 - First Quarter 2013

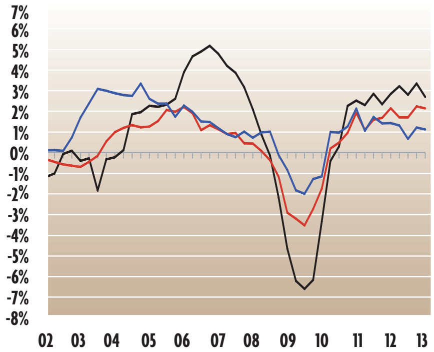


Real Personal Income
Change From Prior Year
First Quarter 2002 - First Quarter 2013



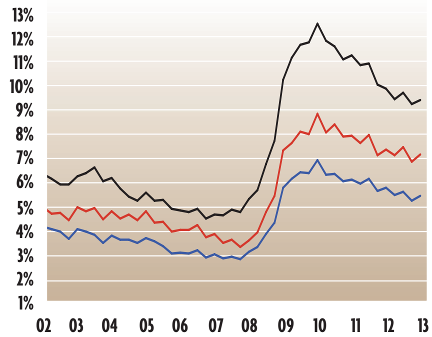
Fifth District   United States

Nonfarm Employment Metropolitan Areas
Change From Prior Year
First Quarter 2002 - First Quarter 2013



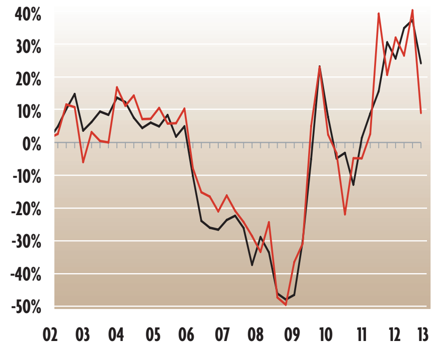
Charlotte   Baltimore   Washington

Unemployment Rate Metropolitan Areas
Change From Prior Year
First Quarter 2002 - First Quarter 2013



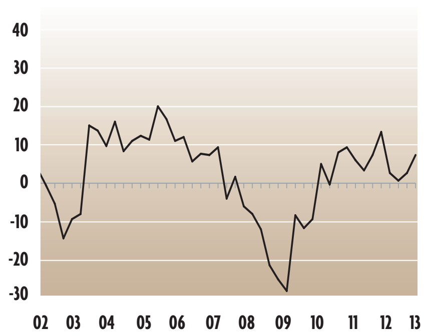
Charlotte   Baltimore   Washington

Building Permits
Change From Prior Year
First Quarter 2002 - First Quarter 2013

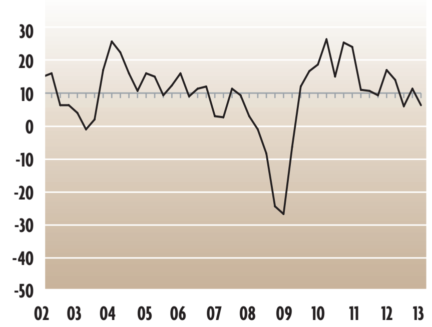


Fifth District   United States

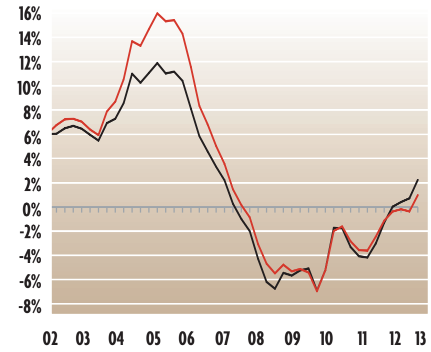
FRB—Richmond Services Revenues Index
First Quarter 2002 - First Quarter 2013



FRB—Richmond Manufacturing Composite Index
First Quarter 2002 - First Quarter 2013



House Prices
Change From Prior Year
First Quarter 2002 - First Quarter 2013



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) Building permits and house prices are not seasonally adjusted; all other series are seasonally adjusted.

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

Metropolitan Area Data, Q1:13

	Washington, DC	Baltimore, MD	Hagerstown-Martinsburg, MD-WV
Nonfarm Employment (000s)	**2,466.2**	**1,322.2**	**102.0**
Q/Q Percent Change	-1.3	-1.4	-2.3
Y/Y Percent Change	1.1	2.1	1.1
Unemployment Rate (%)	**5.4**	**7.0**	**7.5**
Q4:12	5.5	7.1	7.7
Q1:12	5.6	7.2	8.0
Building Permits	**4,268**	**1,810**	**173**
Q/Q Percent Change	-33.3	5.6	-31.3
Y/Y Percent Change	8.1	36.8	38.4

	Asheville, NC	Charlotte, NC	Durham, NC
Nonfarm Employment (000s)	**172.7**	**858.0**	**286.3**
Q/Q Percent Change	-1.0	-1.2	-0.1
Y/Y Percent Change	3.8	2.7	2.3
Unemployment Rate (%)	**7.5**	**9.4**	**7.2**
Q4:12	7.6	9.4	7.2
Q1:12	7.8	9.7	7.5
Building Permits	**276**	**3,571**	**518**
Q/Q Percent Change	4.2	14.8	-0.2
Y/Y Percent Change	23.8	27.7	-50.0

	Greensboro-High Point, NC	Raleigh, NC	Wilmington, NC
Nonfarm Employment (000s)	**339.6**	**522.9**	**136.5**
Q/Q Percent Change	-1.8	-1.0	-2.3
Y/Y Percent Change	-0.3	2.1	2.7
Unemployment Rate (%)	**9.9**	**7.6**	**9.7**
Q4:12	9.9	7.6	9.6
Q1:12	9.9	7.9	9.9
Building Permits	**374**	**2,623**	**693**
Q/Q Percent Change	-5.6	-45.7	2.8
Y/Y Percent Change	-48.4	13.6	-7.7

	Winston-Salem, NC	Charleston, SC	Columbia, SC
Nonfarm Employment (000s)	**205.4**	**302.6**	**354.4**
Q/Q Percent Change	-1.3	-1.2	-0.9
Y/Y Percent Change	0.5	1.0	1.1
Unemployment Rate (%)	**8.8**	**6.9**	**7.6**
Q4:12	8.9	7.0	7.6
Q1:12	9.1	7.8	8.2
Building Permits	**271**	**1,491**	**935**
Q/Q Percent Change	70.4	43.1	6.6
Y/Y Percent Change	-20.5	44.5	11.8

	Greenville, SC	Richmond, VA	Roanoke, VA
Nonfarm Employment (000s)	**306.7**	**622.7**	**157.6**
Q/Q Percent Change	-1.4	-1.0	-1.7
Y/Y Percent Change	0.9	1.8	1.1
Unemployment Rate (%)	**6.9**	**6.1**	**5.8**
Q4:12	7.1	6.1	5.9
Q1:12	7.7	6.6	6.2
Building Permits	**700**	**953**	**109**
Q/Q Percent Change	3.2	-23.5	3.8
Y/Y Percent Change	34.1	-6.7	32.9

	Virginia Beach-Norfolk, VA	Charleston, WV	Huntington, WV
Nonfarm Employment (000s)	**742.8**	**145.5**	**112.2**
Q/Q Percent Change	-1.1	-1.5	-2.7
Y/Y Percent Change	1.8	-1.1	0.1
Unemployment Rate (%)	**6.1**	**7.1**	**7.3**
Q4:12	6.3	7.1	7.3
Q1:12	6.8	6.6	7.5
Building Permits	**1,981**	**45**	**10**
Q/Q Percent Change	76.9	18.4	25.0
Y/Y Percent Change	4.4	45.2	-67.7

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OPINION

A Different Recovery for Household Spending

BY JOHN A. WEINBERG

Economic statistics tell us that the bottom of the Great Recession — and, thus, the starting point of our current recovery — took place in June 2009, four years ago. Things have been getting better during the recovery, but they're still not that great. Growth has been anemic, averaging about 2 percent per year since the recovery began, compared with more than 3 percent from 1950 to 2000. While unemployment has fallen to 7 percent, its lowest rate since November 2008, much of that decline has been the result of people dropping out of the labor force, making it harder to gauge just how much improvement in labor market conditions we've actually seen.

The fact that growth in economic output is still relatively slow invites a closer look at its largest component: household spending on goods and services. Consumption spending by households represents nearly 70 percent of GDP. What hints can it give us about our recent past — and, perhaps, our future?

Like GDP, household consumption spending settled into a new, lower trend rate after the recession, at least for now. It has been growing, but weakly. In terms of constant (inflation-adjusted) dollars, it has averaged 2.2 percent annual growth during the recovery, markedly less than the 2.9 percent growth it saw from 2001 to 2007.

To be sure, there are a number of reasons why this is unsurprising. The scale of the dislocation during the Great Recession — in terms of both unemployment and loss of wealth — was bound to leave an impression. Indeed, some have wondered whether the Great Recession scarred an entire generation, in much the same way a generation was scarred by the Great Depression. Milton Friedman and Anna Schwartz, in their book *A Monetary History of the United States*, noted that the Depression instilled "an exaggerated fear of continued economic instability, of the danger of stagnation, of the possibility of recurrent unemployment." The Great Recession will surely not have a long-term effect of the same magnitude, but it is reasonable to assume that it is part of the reason for the trend in household spending that we are seeing today.

In addition, household spending is likely influenced by a pattern of greater volatility in income, a pattern that was in place before the recession. Research by Karen Dynan of the Brookings Institution, Douglas Elmendorf of the Congressional Budget Office, and Daniel Sichel of Wellesley College has found that the volatility of household income increased about 30 percent, on average, between the early 1970s and the 2000s. Women's earnings became less volatile while men's became more so. Although the findings are skewed by increased variability at the top of the income distribution, there is also evidence that volatility has increased for lower-income workers.

Finally, a swath of workers in the middle of the income and skill distribution has been affected by technology trends and other trends that have left the demands for their skills relatively stagnant or declining as their jobs become automated. At the same time, these trends have resulted in increased relative demand for high-skill workers and some low-skill ones. This relative decline of the middle tier of workers is sometimes referred to as a "hollowing out" of the workforce. Like the increase in income volatility, hollowing out began in earnest well before the Great Recession; it dates to around 1980.

> It seems likely that it will be a considerable time before consumers again treat their housing equity as a source of spending money on the scale that they did during the boom years.

But if rising income volatility and hollowing out both preceded the recession, why didn't we see negative effects on spending earlier? Why did spending continue to grow during the 1990s and 2000s (up to the financial crisis) at roughly its historical pace?

The answer may be that those years were exceptional in ways that masked the downward spending pressures. Normally, we expect consumption spending to be driven by people's labor incomes and their beliefs about their future labor incomes. In the 1990s and 2000s, households seem to have drifted away from this principle.

One likely reason is the run-up in house prices, contributing to rising household wealth, which buoyed consumption growth. Another plausible reason is the expansion of consumer credit during this period. Moreover, these two effects probably reinforced one other; people felt wealthier, and therefore used tools such as credit cards and home equity lines of credit to tap into that wealth.

Today, in most parts of the country, it seems likely that it will be a considerable time before consumers again treat their housing equity as a source of spending money on the scale that they did during the boom years. Thus, the longer-term trends affecting income growth and volatility prospects for many households may well continue, for some time, to keep household spending on its present track of relatively slower growth. **EF**

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

Next Issue

Canadian Stability
As most of the financial world was engulfed by crisis in 2007 and 2008, Canada had no large failures, no bailouts, and only a mild recession. In fact, Canada has tended to avoid financial crises altogether. Some credit Canada's tighter regulation and smaller number of subprime loans. But economists say the real source of its resiliency is its banking system's structure, established centuries ago.

Mass Transit
Now that Charlotte, N.C., and Norfolk, Va., have light rail lines, has the reality of light rail lived up to the promise?

Credit Scoring
Credit scores are so pervasive that it seems like we've never been without them. But computerized credit scoring became widespread only in the late 1980s and early 1990s. Since then, it has had major effects on the market for small-business credit. It also has improved households' access to credit — though driving up the rate of personal bankruptcies in the process.

Federal Reserve
In the summer of 1914, the onset of war sparked a financial crisis in the United States. It was the perfect opportunity to test the mettle of the newly formed Federal Reserve System. There was just one problem: It wasn't up and running yet. Instead, the nation turned to a set of emergency measures, stemming the panic and demonstrating that the Fed might not have been the only viable system for preventing bank runs.

The Profession
Over the past several decades, economic history has increasingly been weeded out of the training of economists. Did the Great Recession bring a new appreciation for that field as we learn from past mistakes?

District Digest
What do we know about the economics of crime in the Fifth District? As job opportunities improve in the District, the effect on crime is surprisingly inconsistent among different types of offenses and different places. So is the effect of law enforcement.

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