

# Forefront

New Ideas on Economic Policy from the FEDERAL RESERVE BANK  
*of* CLEVELAND

## Public Finances: Shining Light on a Dark Corner

State and local pension plans illuminated

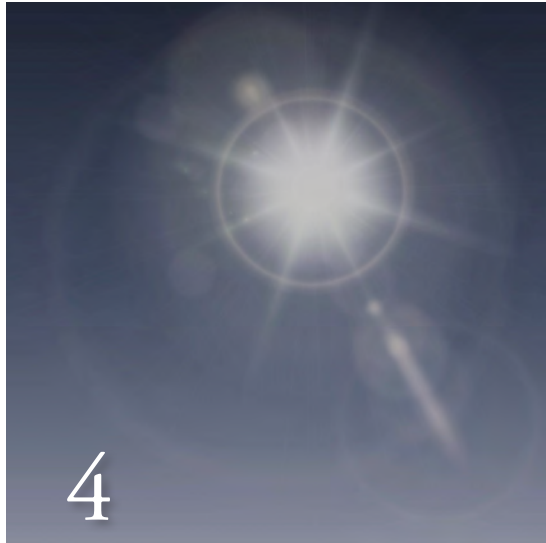
### **INSIDE:**

How economics can  
help design a tax code

Why flexibility is  
key to neighborhood  
stabilization

### **PLUS:**

Interview with  
Cleveland Fed  
President Sandra Pianalto



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# PRESIDENT'S MESSAGE

**Sandra Pianalto**

President and Chief Executive Officer

Federal Reserve Bank of Cleveland



As we enter the spring of 2012, the national economy continues to improve on a slow but upward path. Unemployment remains elevated and will likely

be that way for some time, but it too is improving. I expect the moderate pace of growth to continue over the next few years.

Much has been written about the various headwinds restraining economic activity over the near term. However, our economy also has other headwinds to confront over the medium- to-longer-term. Households are still in the process of repaying debt and seeking a better balance between spending and saving—an essential adjustment for building an adequate financial buffer for unplanned expenses and retirement. The federal government's budget deficit is still on an unsustainable path, and uncertainty over its future course hinders economic growth. Finally, the finances of some state and local governments are also under stress and in need of serious adjustments.

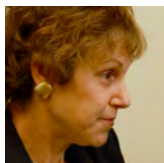
In this issue of *Forefront*, researchers at the Cleveland Fed shed some light on the sometimes overlooked sector of budget-crunched state and local governments. We are analyzing two categories of risk. First, we consider the risk that weak finances may weigh down growth in certain regions of the country; second, we examine the risk that defaults on their debt obligations could—at some point—threaten broader financial stability.

Also in this issue, I talk with the Cleveland Fed's Mark Sniderman, our chief policy officer, about some of my monetary policy views. During my 28-year tenure at the Bank, I have had the opportunity to experience a wide range of economic conditions and to learn many lessons. In my almost 10 years of participating in the Federal Open Market Committee, I have come to strongly support the power of open and transparent communications with the public as the Federal Reserve pursues its dual mandate of stable prices and maximum employment. I hope that our conversation helps you understand more about how I balance the objective of low and stable inflation with the objective of more Americans finding jobs. The more you understand and anticipate how the Federal Reserve operates, the more effective our policies can be. ■

# Bank Capital Requirements: A Conversation with the Experts

On November 18, 2011, the Federal Reserve Bank of Cleveland invited three academic experts on bank capital requirements to talk with Bank economists and officials about their research. During a break in the presentations, Executive Vice President and Chief Policy Officer Mark Sniderman sat down for this interview with the experts.

*Sniderman: Anat, maybe you can talk with us a little about bank capital—what it is and some of the most common misunderstandings about it.*



**Anat Admati**, the George G.C. Parker Professor of Finance

and Economics at Stanford University: People don't know quite what that word [capital] means. People use this word differently elsewhere. Basically, capital should be thought of as equity, first and foremost. Think of buying a house with, more or less, a down payment of your own money, and how much you use that versus borrowing. The capital question is whether the bank should fund with just borrowing, borrowing, borrowing, and how much of the total investment should be funded with what's called "own money," or equity. That's what capital is.

The confusion arises when people sometimes say that the banks have to "hold capital" or "set aside capital" in a reserve. They use these words, "reserve" and "hold" and "set aside," that suggest this money is somehow a rainy day fund, as if the money cannot be lent or cannot be used. And that's the big fallacy.

What we're talking about is not promising as much, not taking on as much debt to fund your lending—it's how you raise your money. It's all about the funding; it's not what you do with it. So on the side of the bank, there is no holding or setting aside of any sort. It's basically just forcing the banks to borrow less to fund what they do.



**Richard (Rick) Carnell**, Professor of Law at Fordham

Law School: It's just the amount by which your assets exceed your liabilities. It's like your equity in the house is the amount by which the value of the house exceeds what you owe on it.

**Admati:** It's your cushion. It's your retained earnings plus equity that you have. And if the value of the assets goes down, you won't go into distress or trouble; you might still be able to pay your debt back.

*Sniderman: Bob, maybe you can tell us about whether there are differences in terms of how banks have debt and equity versus other kinds of companies that are not banks?*



**Robert (Bob) McDonald**, Erwin P. Nemmers Professor

of Finance at Northwestern University: When you compare banks to companies that are not banks, you see very different patterns of debt and equity usage. You have companies like Apple, which essentially has no debt, whereas most banks will have something like 90 to 95 percent of their assets financed by debt. If you were to ask why that's the case, one consideration is that some of banks' debt basically serves as money. If you have a deposit, for example, then that takes the place of money for you. And if you look at banks as a whole, something like 80 percent of assets are deposits.

But at the same time, there are other reasons for banks to be so highly levered. One of them is the fact that the banking system is heavily regulated, heavily protected by the government. This reduces the cost to banks of raising funds as debt and causes them to increase their usage of debt. That's one of the reasons you see high debt-to-asset ratios.

**Sniderman:** *There's a lot of talk these days about what the right amount of debt for banks ought to be. There's a general perception that banks should have more equity and less debt.*

**Rick,** *how should we be thinking about the proper ratios of equity for banks? Where do we begin?*

**Carnell:** I think we need to begin with first principles, which is how much equity, how much of a shareholder's investment, would market participants expect if there were no federal deposit insurance and there were no expectations of government bailouts. If we were in a fully free market with our banking sector, except that we have the Federal Reserve there to meet immediate needs for cash, how much equity would market participants be looking for?

That's very different from the usual debates about capital, where the starting point is the capital levels that we're used to. Bankers are used to capital levels where bank debts can amount to 96 percent of the bank's total assets. So you have \$24 in debt for each dollar of equity. That's in terms of the regulatory minimums; what you actually see is higher than that.

But the question is whether required capital levels are high enough. The failures and near failures that we've seen in the banking system suggest that they're not. The fact that the taxpayers had to come forward with guarantees and cash bailouts is an indication that we have been subsidizing the banking system by not demanding high enough capital in banks.

What we want to do is get bank capital up to where it would be without the subsidy.

**Sniderman:** *If we look at the nonbank sector—the Apples of the world are the extreme with no debt at all, all equity—we'd be talking about 50 percent debt to equity, because that's kind of the average for nonbanks.*

**Carnell:** That's a different business, though.

**Sniderman:** *But we're not talking as high as 50 percent; we're not talking as low as 4.*

**Carnell:** That's right. Historically, people have said that the return on bank assets is more predictable than the return on the assets of an industrial company. But the nature of banking is such that I would not expect 50 percent equity in the usual bank. But it ought to be a challenging question.

**Sniderman:** *History suggests that we should be thinking about higher equity standards. One of the common refrains you hear is that equity is very expensive and that asking lenders to have a lot more equity in their financing structure is going to lead perhaps to less lending, and it's not a good time to be doing this. Anat, you've written a lot about this. What are your thoughts?*

**Admati:** There's no restriction, as I said before, about lending. So the issue becomes whether the cost of doing business will somehow increase. Now, bankers talk about return on equity and they seem fixated on this concept, which other companies are not fixated on. The thing about return on equity is it doesn't really measure anything unless you adjust for risk. And risk includes how much debt you take. The risk per dollar invested is much higher the more you 'lever' on it. With leverage, you have a higher risk on the equity and therefore a higher required return because the equity holders bear more risk.

If you were to reduce the amount of leverage, reduce the dependency on debt, then the appropriate return on equity *should* go down, and that would be the appropriate return. If shareholders want to take the risk, they can borrow on their own account, they can buy the margin, they can get their own leverage and their own higher return on equity if they're willing to take risk. That's how it works in the financial markets.

There is no entitlement for anybody to get a particular return on equity. If they generate value on their assets, then the equity—however leveraged it is—will earn the appropriate return.

There isn't anything magical about an unadjusted return on equity. The return on equity is supposed to represent the risk to which the equity is put. The more risk and leverage there is, the more should be the expected return on equity. If you can do better than that, then you're probably generating a better return than the next guy. That's what you want to do—generate the higher return on equity relative to the risk that your equity is exposed to.

**McDonald:** If we're talking about anything, we should be talking about return on assets.

**Admati:** Right, or some risk-adjusted return on assets. In other words, investors cannot be looking at raw return on equity, because when they do that, they encourage managers to take on risk, not necessarily bring in value. That's a very dangerous yardstick to use. No matter who the shareholder is, that's not a good way to compensate managers. It's not used anywhere else. Investors, if they are diversified, should look at their return on their entire portfolio. And if banks have a lot of indebtedness, it makes the system very fragile. Then all investors lose on their entire portfolio, which I think we've all experienced in the last few years! If you look at your overall portfolio, we did not do very well allowing the banks to be so thinly capitalized. I suggest we do a little better next time.

**Sniderman:** *Thank you.* ■



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James Thomson and Joe Haubrich. 2011. "Keeping Banks Strong: Countercyclical Capital Requirements." *Forefront*, Federal Reserve Bank of Cleveland (winter).  
[www.clevelandfed.org/forefront/2011/winter/ff\\_2011\\_winter\\_07.cfm](http://www.clevelandfed.org/forefront/2011/winter/ff_2011_winter_07.cfm)

The financial crisis has made it all too clear that regulators failed to see into the dark corners of the financial system. With that in mind, the Federal Reserve Banks of Cleveland and Atlanta have formed a Financial Monitoring Team to study pension funds and municipal finance with an eye

toward implications for the wider economy and financial system. What concerns should we have? In this package of articles, we explain where risks could be building and how reforms might help forestall their impact on the broader economy and financial system.

# Public Pensions Under Stress



**John B. Carlson**  
Vice President and  
Research Economist

Since 2007, state and local governments have been caught in a perfect storm. The confluence of the severe recession and the collapse of the housing bubble dramatically slashed tax revenues. Although some revenue sources have rebounded with the economy, the decline continues for others. Property values, a major source of funding for local governments, remain especially depressed.

The toll has been particularly heavy on public pensions, whose troubles with chronic underfunding predate the financial crisis. By one estimate, the nation's 126 largest public pensions were underfunded by at least \$800 billion in 2010. By another, 54 percent of the country's state and local plans will have exhausted their funds as early as 2034.

It now seems inevitable that sacrifices will be required from current employees, employers, and in some cases, retirees. What remains unclear is the extent to which changes in future investment returns and pension plan designs can close the funding gap.

On that count, one key question is this: Without strong remedies, at what point would pension plans run out of money, leaving financially impaired state and local governments on the hook? That question is not quite settled.

The answer hinges on complex economic and legal questions. The potential implications of adding financial stress to already overburdened state and local governments are all too clear. Up to this point, the consequences of local pension plan insolvencies—though they inflict hardship on citizens—have been isolated enough not to become epidemic.

How it all shakes out depends on the success of future reform efforts, not to mention the investment returns on pension-fund portfolios.

### **The Scope of the Problem**

First, a little background on pensions: About 80 percent of public pensions are *defined-benefit* plans, meaning that the plan's sponsor promises to pay a specified income that is predetermined by years of service, final average salary, and other factors. To fund the promised income, both the employee and employer typically contribute to a pension trust. The trust invests these payments in a portfolio of assets whose returns are expected to pay the lion's share of the benefit obligation.

Unfortunately, these expectations are not always met. Historically, public pension plans have invested a large share of funds in stocks, which have offered relatively high returns when averaged over long periods. Since the stock

market's peak in 2000, however, equity returns have been sharply lower than expected. As a consequence, the value of assets held in public pension trusts has not kept pace with the growing promises the plans have made, leaving them substantially underfunded.

How far under is a matter of debate. According to the funding-status measure prescribed by the Government Accounting Standards Board (GASB), the largest 126 pension plans were underfunded by around \$800 billion in 2010. On the other hand, some critics of GASB's accounting methods estimate the aggregate pension fund shortfall to be as much as \$4 trillion. (See sidebar, "The Widely Ranging Estimates of Pension Underfunding.")

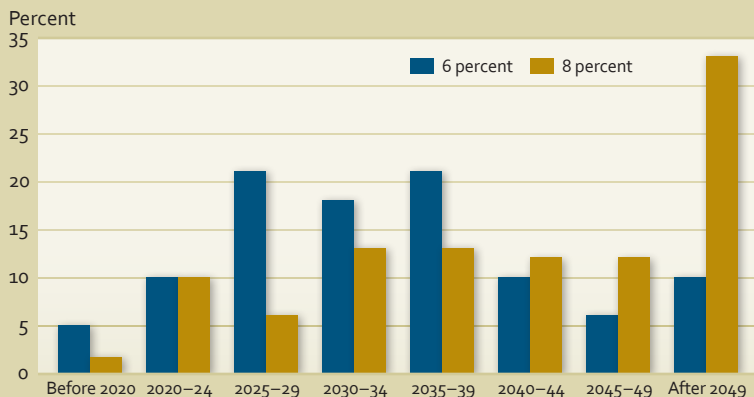
Embedded in those aggregate estimates are individual plans' funding ratios—the amount of assets held relative to the amount deemed necessary to pay for a fund's promised retirement packages. The funding ratio, however, does not tell the whole story of a plan's sustainability. It does not take account of potential supplemental contributions that could help restore a plan to fully funded status over some reasonable period.

A recent study by the Center for Retirement Research argues that judging the adequacy of pension funding requires more than looking at a snapshot of the funding ratio. A key issue is whether the sponsor has a funding plan and is sticking to it. Under GASB rules, plan sponsors must report an *annual required contribution* (ARC). Effectively, this is the annual amount a plan sponsor would have to pay to eliminate any shortfall over a period of 30 years.

Although public pension plans' annual reports must publish the percentage of ARC payments they are making, not all states legally enforce such payments. Since 2008, the average share of ARC paid has declined from 92 percent to 87 percent, according to the Center for Retirement Research, even though the same payments as a percentage of payroll have actually *increased*.

Most state budgets have been under too much stress to make full ARC payments voluntarily. Without mandatory ARC payments, the funding status of many pensions will continue to deteriorate unless reforms increase employee contributions or reduce benefits.

### Percent of State and Local Plans Exhausted Under Assumptions of 6 and 8 Percent Investment Returns



Source: Alicia H. Munnell, Jean-Pierre Aubry, Josh Hurwitz, and Laura Quinby. 2011. "Can State and Local Pensions Muddle Through?" Center for Retirement Research (March).

### Estimating Plan Exhaustion Dates

The question then becomes how much time a plan has before it runs out of money—the fund's exhaustion date. A pension plan with a 60 percent funding ratio, for example, may not run out of funds for 12 years. This stretch of time would give this plan's administrators some breathing room to implement necessary reforms.

How much breathing room do the more severely underfunded plans have? One study estimated exhaustion dates for the 126 largest pension plans, assuming the plans are ongoing. Simply put, this means that employers and employees continue to make contributions while benefits are paid out of the trust fund. Of course, the exhaustion date also depends on investment returns on assets. The study considered funding situations for returns of both 6 percent and 8 percent. Its results show that although several plans will become insolvent in the next decade, most would have some time to work out their difficulties (see figure above).

Other estimates paint a bleaker picture. Joshua Rauh, Northwestern University professor, finds that seven states would run out of money by 2020, and 30 more would run out in the following decade, even assuming 8 percent

investment returns. Unlike the study mentioned earlier, Rauh assumes that employers make only enough contributions to the pension funds to pay for the present value of newly accrued benefits, and no more. On the other hand, a recent GAO study concludes that Rauh's projected exhaustion dates are not a realistic estimate of when the funds might actually run out of money.

### The Urgency of Pension Reform

If there is any hope that future investment returns will offset losses following the financial crisis, it is slim indeed. Most plan sponsors recognize this and have supported reforms that increase new employees' contributions and reduce their future benefits. Between 2008 and 2011, the National Conference of State Legislatures counted 40 states that have implemented pension reforms.

But most of these changes have only a limited effect on plan funding. Until recently, few states have attempted to alter benefits or contribution levels of vested employees or retirees, which could have a far greater positive impact on pension funding. Although some state legislatures have passed reforms that were upheld in the courts, the fate of other efforts remains to be decided by the courts. (See related article, "Navigating the Legal Landscape for Public Pension Reform.")

When funding ratios fall, the amount of cash generated by interest and dividends from investments declines relative to the amount needed to pay benefits. Without sufficient contributions to offset the lower cash flow from investments, the process becomes self-reinforcing—that is, assets must be sold to pay benefits, further reducing the cash generated by investments. This becomes especially problematic when the funding ratio falls below 50 percent.

For example, the Rhode Island Employee Retirement System recently recognized that its funding process could not be sustained without urgent action. In late 2011, the state legislature responded with sweeping pension reforms that passed by an overwhelming bipartisan majority. Under the new law, current employees' benefits will be frozen, modified, or even reduced, and retirees' cost-of-living adjustments will be suspended until the funding ratio improves enough to satisfy sustainability conditions. Whether these actions will be sufficient remains to be seen, especially since they will probably be challenged in the courts.



# The Widely Ranging Estimates of Pension Underfunding

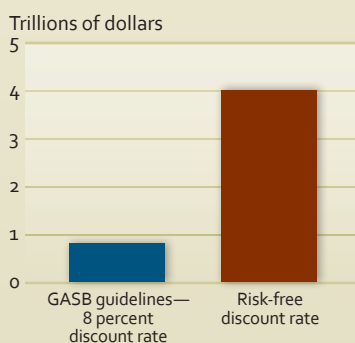
Just how underfunded are America's public pension plans? It depends who you ask.

In the language of economics, a pension plan's promised benefits are liabilities. They will have to be paid for someday with funds from the asset side of the fund's balance sheet. These future liabilities should be "discounted" so that they are expressed in present-value terms. That way, you can compare the present value of the pension obligations to the current level of plan assets — essentially, a way to measure whether today's funds on hand will be sufficient to pay for all those retiree benefits when they come due in the future. Often this comparison is expressed as the ratio of the present value of assets over the present value of obligations.

Which method to use in discounting future liabilities — that's the crux of the issue. Public pension plans follow Government Accounting Standards Board (GASB) guidelines. This allows those plans to use the expected return on their portfolio for determining the present value of their promised payments.

Following GASB guidelines, public pension funds are allowed to discount their future pension obligations by their expected rate of return, which has been in the neighborhood of 8 percent — approximately the average return of their portfolio over the past 30 years.

## How Underfunded Are the 126 Largest Public Pensions? It depends on the discount rate



Sources: Munnell, Aubrey, and Quinby, 2010; Rauh, 2011.

According to that formula, the nation's largest 126 public pensions have liabilities with a present value (meaning they were discounted at their assumed rate) in 2010 of \$3.5 trillion. The amount of assets they held was \$2.7 trillion in 2010, leaving a shortfall of \$800 billion.

Some economists, however, have come up with a \$4 trillion shortfall. They have pointed out that for most state and local plans, promised pension benefits are protected by constitutional, statutory, or common law guarantees. (See related article, "Navigating the Legal Landscape for Public Pension Reform.") By definition, this ought to make them riskless obligations to the pensioners. Thus, the appropriate valuation methodology should discount promised benefits using the risk-free interest rate, usually calculated as the yield on long-term U.S. Treasuries.

This method, argued cogently by Jeffrey Brown and David Wilcox in "Discounting State and Local Pension Liabilities" (2009), has the virtue of being supported by both economic and legal principles. It also produces substantially higher estimates of the present value of pension liabilities. Given the currently low yields on Treasury bonds, this approach implies a present value of accrued obligations as high as \$6.7 trillion, leaving an unfunded liability of \$4 trillion.

—John Carlson

## Is a Liquidity Crisis Imminent?

At this point, it seems unlikely that any major pension fund will run out of cash in the next few years, barring a general worsening of economic and financial conditions. Indeed, increased public attention on the underfunding problem has motivated pension plan sponsors to work with state legislators to implement substantive reforms.

But we are not out of the woods yet. Many funds will require significant reforms to reduce underfunding levels, with painful new contributions from employers and employees. Over the long term, a stronger, steadier economy would help a lot by supporting higher asset returns. Meanwhile, an imminent collapse of several large funds, accompanied by a shock to the financial system, remains improbable — though not impossible.

## Pension Glossary

*Terms that any public pension reformer should know. Changes in any of these areas could make a meaningful difference in a plan's funding level.*

**Average final salary:** The salary on which the employee's benefits are based. To prevent pension spiking (see below), the final salary is often the average of the last few years of the employee's career.

**Base benefit:** The funds the member can receive at retirement based on the factors in the benefit formula (often years of service, final salary, and so on).

**Cost-of-living adjustment (COLA):** A strategy intended to preserve what economists call the "real" value of the base benefit, ideally by adjusting for inflation. Unfortunately, some COLAs are not indexed to inflation; they are simply nominal escalators (like a 3 percent increase each year, which may or may not be in line with inflation changes) that can quickly increase a pension fund's liabilities.

**Deferred-benefit pension:** A form of deferred income payable during one's life after retirement.

**Increases in required retirement age and years required to vest:** A potent tool in the pension-reform toolkit. Lengthening the time it takes for pension benefits to vest is usually less contentious than increasing employees' contributions.

**Pension spiking:** The practice of inflating employees' salaries to increase their benefit base. This can be accomplished through a last-day "promotion," where the employee receives a new title and a salary far above what he earned in the previous 364 days, or where an employee nearing retirement receives the lion's share of available overtime.

—Moirá Kearney-Marks,  
Research Analyst

Over the longer term, the current low-interest-rate environment may be cause for concern. Fund managers will struggle to achieve 8 percent yields without shifting their portfolio composition toward higher-yielding assets, which are inherently riskier. Managers' "reach for yield," if practiced widely, would make pension plan sustainability particularly vulnerable to another negative shock to equity prices.

Another concern is that some states' legal protections may be too strong to give reforms enough time and flexibility to put plans on sustainable paths. In that case, states would ultimately be on the hook for covering pension benefits out of general revenues. This scenario, by creating crisis conditions in those states, could stress economic conditions more generally. But we have by no means reached that point yet. ■



### Recommended reading

Robert L. Clark, Lee A. Craig, and John Sabelhaus. 2011. *State and Local Retirement Plans in the United States*. Cheltenham, UK; Northampton, MA: Edward Elgar.

Alicia H. Munnell, Jean-Pierre Aubrey, and Laura Quinby. 2010. "The Impact of Public Pensions on State and Local Budgets." Center for Retirement Research (October). [http://crr.bc.edu/briefs/the\\_impact\\_of\\_public\\_pensions\\_on\\_state\\_and\\_local\\_budgets.html](http://crr.bc.edu/briefs/the_impact_of_public_pensions_on_state_and_local_budgets.html)

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# Monitoring the Risks of State and Local Government Finance



**Jean Burson**  
Policy Advisor

The finances of many state and local governments are in a somewhat precarious condition. First came the financial crisis and recession, which sapped tax revenue and stretched budgets. Then came the painfully slow recovery, which ramped up demand for social safety net services, especially unemployment benefits. Despite some modest improvements, the blows to state and local governments have been heavy. According to the Center on Budget and Policy Priorities, 29 states will be facing budget shortfalls for fiscal year 2013. On top of all this, governments are struggling to address chronic underfunding of their pension plans.

Just how much should most Americans worry that some state and local governments could go into default? That's what a team of researchers from the Federal Reserve Banks of Cleveland and Atlanta has been studying over the past year. The Municipal Financial Monitoring Team has been looking at how shocks to the municipal bond market, continued problems with pension funding, and general fiscal stress could ripple into something much larger — either in the form of a (rather unlikely) threat to financial stability or perhaps as an aggravation of regional economic woes.

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**While municipal bankruptcies are rare, Jefferson County, Alabama, filed for financial reorganization last year, which was the largest municipal bankruptcy in U.S. history.**

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To understand these issues, the Monitoring Team has been exploring a number of areas where risks may be building. These include:

- **Connections to the financial system:** Chronic underfunding of public pension funds and the effects of the recession are straining municipal budgets. While widespread default appears unlikely, should the financial system's exposure to municipal budget problems be cause for concern?
- **Investment portfolios:** What are pension funds invested in? Those that are counting on high investment returns to close their funding gaps may be edging into riskier bets, which in the long run may imperil them further.
- **Defined-benefit versus defined-contribution plans:** Although the private sector has mostly moved into defined-contribution — usually 401(k) — plans, the public sector is dominated by defined-benefit plans. This puts state and local governments on the hook for providing the promised benefits. Would conversion to defined-contribution plans be a step in the right direction?
- **Contagion in the municipal bond market:** Downgrades of municipal debt or shocks to sectors of the municipal bond market could increase borrowing costs across the board, further deepening fiscal distress and creating additional headwinds for the recovery.

Getting a handle on the likelihood and severity of these outcomes can be a difficult task. Up-to-date, comparable data are scarce, especially at the county and city level. Most public pensions report only on an annual basis; even then, comprehensive data to support meaningful financial and risk analysis are limited. Despite these challenges, our team has made enough progress to arrive at some preliminary findings.

### **The State Scenario**

At the state level, the bottom line is that the probability of a government defaulting on its financial obligations is extremely low. After all, state governments maintain the authority to raise taxes (however politically unpopular) to cover any shortfalls. And these entities are subject to the market discipline of higher borrowing costs should they fail to meet their financial obligations.

Even so, as the financial crisis demonstrated, improbable events can occur. So it's a useful exercise to think through what might happen if a government did fail, triggering a contagion that could spread to players ranging from banks to money market mutual funds. Or how investor concerns that lead to higher borrowing costs might compound a region's economic struggle.

Under what circumstances might the default of a large state government shock the financial system? It depends primarily on the exposure of large, complex financial institutions to the default. Our preliminary analysis suggests that an isolated default is unlikely to trigger a systemic event, but it might cause a temporary contraction of credit as financial institutions reallocate their holdings and divest downgraded municipal debt. And we're still digging into what might happen if more than one default were to take place at the same time.

### **The Local Scenario**

Trouble in the municipal bond market is another possible risk to financial stability. It's a difficult market to assess: its transaction volume is typically low, since most investors buy bonds and hold them. This lack of liquidity makes it more difficult to accurately judge fair market prices. Also, the availability of information on issuers' financial condition varies greatly. While it's fairly easy to get reliable information at the state level, disclosures by municipalities or by other issuers, such as school and sewer districts, are provided inconsistently and with considerable lags. A sudden, unanticipated municipal bond default could cause a sharp decline in investor confidence, potentially leading to a rapid selloff. If investors thought that defaults among multiple issuers were highly correlated, growing uncertainty could fuel a downward spiral of selling and investor losses.

Yet the potential for systemic risk seems low. To be sure, a material decline in any given municipality's debt would put its taxpayers under stress and perhaps dampen the local economy. And financial institutions with exposure to those municipal bonds would take losses. Furthermore, the financial crisis taught us that the context in which an unanticipated default takes place matters greatly.

But the municipal bond market's reaction to recent events confirms some of our preliminary assessments. Several municipal securities were downgraded last summer after one credit-rating agency lowered its AAA rating on U.S. sovereign debt. A flight-to-quality strategy, however, actually increased investors' demand for municipal bonds more generally, producing yields that in some cases reached record lows. Despite its opacity and low trade volume, the market is clearly resilient. That's not to say there is no need for careful monitoring, particularly in light of the significant fiscal challenges many state and local governments face.

While municipal bankruptcies are rare, Jefferson County, Alabama, filed for financial reorganization under Chapter 9 of the U.S. Bankruptcy Code last year because of \$3.1 billion in defaulted sewer bonds, which made it the largest municipal bankruptcy in U.S. history. This filing followed the bankruptcy of the small town of Central Falls, Rhode Island. Although neither of these events

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**Given the complexities of municipal bankruptcies, our team concludes that filings will likely remain rare, isolated, and last-resort events.**

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had a spillover impact on municipal bond markets, they highlighted both the legal challenges associated with municipal bankruptcy and the political and legal realities of undertaking meaningful fiscal and public pension fund reforms. All the same, given the complexities of municipal bankruptcies, our team concludes that filings will likely remain rare, isolated, and last-resort events.

Assessing the mounting pressures on state and local government finance and evaluating the resulting implications for the stability of our financial system and regional economies is a complex, but important, challenge. While the conclusions of preliminary analysis do not suggest the risk of systemic threats, we remain vigilant in monitoring conditions that could shock the financial system or threaten the economy's footing on its path to recovery. ■



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## State by State

# Navigating the Legal Landscape for Public Pension Reform: Travel at Your Own Risk



**Moira Kearney-Marks**  
Research Analyst

Meaningful reform of public pensions can happen in a number of ways: You can alter cost-of-living adjustments. You can reduce future benefits. Or you can raise the retirement age, to name just a few.

Before the 1970s, public pension reform along any of those lines would have been a snap compared with today. Back then, public pension plans were generally treated as gratuities, gifts from the state. Legally, they could be easily modified or terminated at any time (though politically might be another matter).

Those days are over. Today, nearly all states protect public pensions to varying degrees, working in a complicated legal environment. As a result, reform-minded policymakers have to tread carefully, treating each state as a separate case. By no means is public pension reform out of the question, but legal precedent in a given state determines what reforms are realistic there.

It is comparatively easy to modify pension plans in Texas, where they are still treated as gratuities. This is also true in Indiana and Montana, where employees are required to participate in pension plans.

Everywhere else, the law is far murkier. Legal experts describe the area of public pension law as “unsettled,” which makes it difficult to spell out what reforms can be accomplished.

In at least 27 states, pension members’ past and future accruals are protected, <sup>1</sup> but to different degrees. (Past accruals are benefits for services already performed, and future accruals for benefits yet to be earned.) These varying degrees of protection complicate the task of modifying current members’ pension plans.

These states treat public pension plans as contracts that must conform to constitutional, statutory, or common law (the last of these was developed through court decisions interpreting statutes or constitutions).

1

### Past and Future Accruals Protected

Alabama	Kansas	North Dakota
Alaska	Kentucky	Oregon
Arizona	Massachusetts	Pennsylvania
California	Mississippi	South Carolina
Colorado	Montana	Tennessee
Delaware	Nebraska	Utah
Georgia	Nevada	Vermont
Idaho	New Hampshire	Washington
Illinois	New York	West Virginia

2

### Past and Future Accruals Protected by Constitution

Alaska	Arizona	Illinois
	New York	

3

### California Rule Followed

Alaska	Mississippi	Oklahoma
California	Nebraska	Vermont
Kansas	Nevada	Washington

4

### Only Past Accruals Protected

Massachusetts	Ohio	Wyoming
New Mexico	Wisconsin	

(and possibly New Jersey)

At least four of these states base this protection on their own constitutions, which provide the strongest form of legal protection possible. The other 23 states base this protection on statutes or common law.

2

Under the contract approach, any modification to a public pension plan must be scrutinized under the Contracts Clause in the state and federal constitutions, which can set a high standard. The Clause prohibits states from passing legislation that substantially impairs an existing contract, but even a substantial impairment does not violate the Contracts Clause if it is reasonable and necessary to achieve an important public purpose.

The “reasonable” bar is not set high. A modification is deemed reasonable if it bears some material relation to an important public purpose. “Necessary” is another matter. To establish that a modification is necessary, the state must show that it could not achieve its intended outcome through either a less drastic measure or no action at all. This is a more difficult legal standard to satisfy; a financial crisis might be one of the few events providing a “necessary” motivation for reform, but this is untested in courts.

At least nine states follow the California Rule, an important variant of the contract approach. Adopted first in the California courts and then in other states, this rule provides contractual protection for both past and future accrued pension benefits from the time employment begins. In other words, public pensioners in states following the California Rule cannot have their benefits reduced at any point.

3

Of course, the California Rule has an exception: “Reasonable” changes, as defined by the courts, are allowed. A modification is considered reasonable if it “bear[s] some material relation to the theory of a pension system and its successful operation,” and if any benefit reductions are offset by comparable increases. To complicate matters further, some states require a federal Contracts Clause analysis—in addition to the analysis provided in the California Rule—to determine whether the proposed modifications would deprive members of their contractual rights.

Different courts offer different opinions, of course.

For example, lower courts in Minnesota and Colorado recently upheld legislation that reduced cost-of-living-adjustments (COLAs) for public pensions. The Colorado Supreme Court had previously adopted the California Rule, but it did not rule on whether the COLA was a part of the contract. The lower court found that the COLA was not a part of the contract and therefore could be modified by the state legislature. In Minnesota, the court held that pensioners had no reasonable expectation of a particular COLA, and therefore the legislature could modify it.

This is an important issue—COLAs are expensive to fund, and reducing them would help public pensions close their funding gaps. In light of these recent opinions, other states may also find that COLAs are not part of the public pension contract. But these cases are not controlling; only higher courts can bind lower courts, and decisions in one state are not binding on others.

In states where only past accruals are protected, current plan members’ future accruals can be modified. At least five of the states where only past accruals are protected, including Ohio, view public pension benefits not as contracts, but as members’ property. Once members’ rights in a public pension plan are considered property, they are entitled to protection under the U.S. Constitution’s Due Process (Fifth and Fourteenth Amendments) and Takings (Fifth Amendment) clauses, and relevant state constitution equivalents. But this tends to work in favor of reformers. Employees’ challenges to pension plan modifications on due process grounds and under the Takings Clause are usually unsuccessful. (Takings occur when the government seizes property, either physically or by inhibiting its use.)

4

Despite increases in public pension plans’ unfunded liabilities, constraints on unilateral public pension modifications may make meaningful pension reform difficult or impossible. The most immediate cost savings would come from modifying retired members’ pension plans, but this is usually prohibited. In many instances, it is also difficult to modify the terms for current employees. Modifying plans for only new hires may not provide all the financial relief that states and municipalities need today.

The bottom line is that the law is bound by considerations that are completely different from those reformers might have in mind. And that may be the ultimate legal lesson: If you want to help public pension plans close their funding gaps by reducing benefits, the law will probably work against you. ■

#### Recommended reading



Amy Monahan. 2010. “Public Pension Plan Reform: The Legal Framework.” University of Minnesota Law School, *Legal Studies Research Paper Series*, Research Paper No. 10-13 (March). <http://ssrn.com/abstract=1573864>

# New Consumer Watchdog Stands Guard: Q&A with Leonard Chanin



**Leonard Chanin**  
Associate Director, Regulations  
Consumer Financial Protection Bureau

The Consumer Financial Protection Bureau is up and running. Created under the Dodd–Frank Act of 2010, the Bureau—an independent agency, funded through the Federal Reserve—is the American people’s watchdog over financial services companies. Former Ohio Attorney General Richard Cordray took over as the Bureau’s director in January. As required by the Dodd–Frank Act, a string of proposed new rules covering mortgage lending practices is set for rollout.

Among the Bureau’s top officials is Leonard Chanin, the former deputy director of the Federal Reserve’s Consumer and Community Affairs Division. He now heads the regulation unit, which is responsible for developing new consumer finance protection rules in coordination with the Bureau’s market analysts and economists, and others at the Bureau. We interviewed Chanin on February 13, 2012. Here is an edited transcript.



**Q:** Why do we need a consumer finance regulator? Aren’t our existing regulators adequate?

**Chanin:** We used to have seven agencies responsible for different consumer finance laws. The problem was that no one agency had responsibility for all of those laws, so it was difficult to assess the best approaches. That also made it a challenge to address events in a quick fashion. Now, with one entity responsible for developing rules, supervising institutions, enforcing rules, and educating consumers, we can have consistency and continuity across the board.

**Q:** What is unique about financial products compared with other consumer products?

**Chanin:** Financial products are usually not an end in themselves. They are a means of getting someplace else. A mortgage loan is used to buy a house. A home equity line of credit allows people to engage in significant major expenses; things like education, medical treatment, and home repairs. And a credit card is the same thing. These products exist to help people achieve other goals or needs. That makes financial products different.



What's also unique is that consumers use these products for different purposes. With credit cards, for example, some use them as a month-to-month convenience and pay them off every month. Those consumers are looking for very different features than consumers who use credit cards as a true loan and make just the minimum payment every month and keep a running balance.

A consumer who pays a credit card balance off every month may not care about the interest rate, but he or she *may* care about any annual membership fee. The other household would definitely be concerned about the interest rate. This makes choosing a financial product a complex decision, increasingly so due to technological changes that have opened up more ways to access products.

**Q:** What role do you see for disclosures in the Bureau's rule-making efforts?

**Chanin:** One of the things that the Bureau seeks to achieve is to make information clear so that consumers can understand the costs and main features of products. The way to do that is with clear and meaningful disclosures. We don't want disclosures that distract people from determining what things are most important in their choices.

As a result, the Bureau is committed to consumer testing of disclosures. We're conducting one-on-one testing with consumers for several of our projects to see what they understand. This helps us know what information consumers need and how they use that information. That will help us do a better job.

**Q:** Are you concerned that increased regulation of consumer finance products will dampen innovation? Is there a risk that your office will actually make it harder for consumers to obtain the financial services they need, now and in the future?

**Chanin:** We are mindful of how regulations can affect the options that consumers have. For example, we want to ensure that people have the ability to use emerging or recent technological developments with financial products.

Some consumers use mobile phone apps to send remittances; the issue that arose here was that the underlying statute generally requires written disclosures, but that doesn't make sense for mobile phones. If a consumer is able to send a remittance via his or her phone, requiring written disclosures before a transaction can be made would delay the ability of a consumer to send the funds quickly.

The final regulation adopted by the Bureau allows remittance providers to send the disclosures via an app or text directly to the consumer's phone. They do have to follow up with a written disclosure, but that's after the fact, confirming the deal. This is one example of how we look at technological innovations and balance the costs and risks of limiting consumer preferences with the need for consumer protection.

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## We keep in mind the impact that regulations have on community banks and small institutions.

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**Q:** Even though the Bureau's authority extends mainly over institutions with more than \$10 billion in assets, many community bankers are concerned about regulatory overstep. How will the Bureau's existence affect community banks?

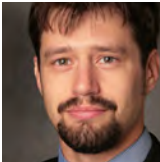
**Chanin:** Our *supervision* authority extends to depository institutions with over \$10 billion in assets, and, of course, certain nondepository institutions, such as finance companies. But the regulations generally apply to nearly all institutions, subject to certain exceptions established by Congress in the Dodd–Frank Act.

We keep in mind the impact that regulations have on community banks and small institutions. If it is feasible to have special rules or limited rules, or even exceptions for community banks and for smaller institutions more generally, we will look at those possibilities. We know that community banks have quite limited ability to absorb additional compliance costs and to hire people to manage those matters. If they can't do these things, they may not offer the products covered by the regulations, which can pose hardships for consumers in rural areas where there are fewer providers. So within the overall process of rule-making, we are looking to see which rules will have impacts on community banks and where flexibility can be built into the process. ■

**Interviewed by**  
**Doug Campbell, Editor**



# The Economics of Taxation



**Daniel Carroll**  
Research Economist

*Sure we need taxation—but how much?  
An economist ponders the tradeoffs in tax system design.*

America faces tough choices on fiscal policy. Pressures from years of deficits have been amplified by the Great Recession, which reduced taxable income and strained social safety nets. Nonpartisan agencies like the Congressional Budget Office report that our aging population and rising medical costs make current policy unsustainable. Add 40 years of worsening income inequality, which has raised cries for income redistribution, and our tax system is more burdened now than it has been for a long time.

Yet our tax code is less able than ever to meet these demands. Fresh exemptions and deductions shrink revenue and favor some households, often for no clear economic reason. Meanwhile, public debt keeps mounting. Although still manageable, it will grow substantially unless we address our projected fiscal imbalances. The current European crisis shows the grim result of ignoring imbalances.

Deficits can be closed by either raising taxes or cutting spending, or some combination of both. On the tax side, some basic economic principles can help get us there, and can even help ensure continued economic growth. But even though economics can tell us plenty about how to build a good tax code, the decision is ultimately political.

## **Purposes of Taxation**

Economists say taxation fulfills one or more of these purposes:

- to discourage/encourage behavior whose social costs/benefits are not priced by a market
- to raise revenue to pay for government spending
- to redistribute resources

Sometimes market prices do not fully account for behavior's social costs, so people engage in behaviors that are sub-optimal for the economy. Pigouvian taxation (named after the English economist Arthur Pigou) corrects market prices by raising people's costs. Take the carbon tax: People buy gas at a market price that reflects the pressures of supply and demand. But that price does not reflect externalities, the costs that drivers impose on society but do not bear directly or fully—in this case, air pollution and traffic congestion. Because drivers fail to internalize the costs of their behavior, we get more traffic and pollution than we would like to see. A carbon tax increases the price everyone pays and encourages people to reduce overall consumption by driving less, carpooling, or switching to vehicles with better gas mileage.

### Understanding Efficiency

Pigouvian taxes can take us only so far. They cannot be relied upon all by themselves to fully finance government spending.

We know that taxes change people's behavior, partly by reducing the income available for consuming and saving. This is unavoidable—if any given public project is desirable enough, people find it less painful to hand that income over to the government. But taxes can also change behavior another way. They may influence people to trade consumption for leisure by working fewer hours, or to consume more and save less. Theoretically, one way to raise revenue without imposing such distortion is through a lump-sum tax. Such a tax is best for a public project because everyone pays a fixed amount whatever their earnings, amassed wealth, or consumption. The amount they pay does not depend on their decisions, so they behave as they would in a perfect, distortion-free world.

Unfortunately for those not living in a stylized model (that is, everyone), a lump-sum tax is totally impractical. Setting aside the political blowback from taxing the very poor as much as the very rich, the numbers simply do not add up. Given the amount to be raised, the poorest individuals could not afford the required tax. Though impractical, lump-sum taxes provide a useful benchmark for judging how much an alternative tax scheme distorts the economy.

### Not All Tax Bases Are Created Equal

So how can we raise revenue while minimizing distortions?

There are multiple options using different bases. The primary U.S. tax bases are general income, labor income, capital income, consumption, and wealth (like property and estate taxes). We also tax international trade, but this contributes relatively little to total revenue. Each tax incentivizes certain behaviors and discourages others, distorting the economy. Labor income taxes, like those for Social Security and Medicare, distort work decisions by making leisure more attractive. Consumption taxes (such as a sales tax) operate like a labor tax by reducing the consumption value of an hour of labor. Capital income taxes, based on returns from investments, discourage investment and saving and encourage consumption.

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**Unfortunately for those not living in a stylized model (that is, everyone), a lump-sum tax is totally impractical.**

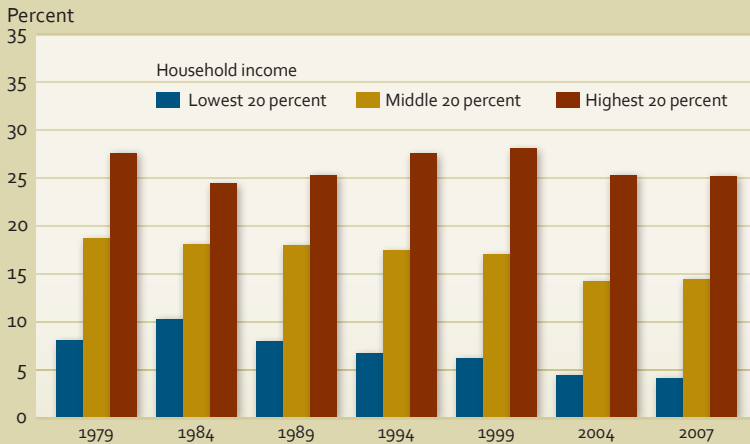
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Capital income taxes impose especially severe distortion because returns to capital accumulate over time, and distortion from capital income taxes is compounded (much like interest in a savings account). Small distortions are magnified over time.

Wealth taxes introduce yet another wrinkle—time inconsistency. What if the government decided to finance its operations by suddenly appropriating all automobiles in the country, selling them abroad, and then using the proceeds to pay for projects, redistributing the remaining revenue, and promising to never do it again? Does this introduce distortions? It depends.

The key idea is that the current stock of automobiles is what economists call *inelastic*, meaning that it cannot be changed in an instant. It takes time for people to sell their cars in response to changes in policy. However, if the government were to forewarn people that it was going to tax away 100 percent of all automobiles, drivers would attempt to sell their cars and convert them into other assets, or if possible, spend resources to hide their cars. That's why the last feature of the government's plan is critical: Unless it vows to never use this type of tax again, car ownership will shrink drastically and remain low.

## Average Federal Tax Rates for U.S. Households



Source: Congressional Budget Office Study, 1979–2007.

Whether this scheme is distortionary depends on whether people believe the government's promise. If they do, incentives shouldn't be distorted. Nonetheless, the scheme is likely to be distortionary because rational people will recognize that if they believe the government's promise and buy new cars, they will give the government an incentive to repeat the appropriation process. So they will either reduce the effect of the tax by buying very low-quality cars or avoid the tax altogether by arranging for other transportation methods (such as public transit, for example). Either way, the value of the stock of cars in the economy will shrink.

Most taxes on wealth are very distortionary, but that doesn't put them off limits. Although the United States uses property and estate taxes, their effect on the capital stock may be less severe because these two types of asset aren't easily shifted. It's hard to move your house where the government can't find it, and a deceased person cannot hide her wealth (though she may have saved less or paid handsomely for advice on shielding it).

### Redistribution

Redistribution is a politically charged issue, and fairness is a subject more suited for social philosophers than for economists; however, economists can help quantify the tradeoffs from redistribution.

For instance, there is a widespread misconception that income inequality, as measured by the share of before-tax income held by a small percentage of the people, should be corrected by taxes and transfers. Altering the before-tax

income distribution is a proper goal for policies designed to increase people's opportunities to generate income (through education reform, say). But it should not be the target when the subject is how to reallocate income. In fact, the extent to which redistributory tax policy alters before-tax income distribution is actually a measure of the *cost* rather than the *benefits* of redistribution.

For tax policy to change the distribution in the before-tax income, the rich must respond to redistribution by working less and saving less. This would have two consequences: a loss of productive economic activity, since both capital and labor are reduced; and, because the rich have less income, less will be available for future redistribution. Instead, redistributory policy should focus on changing the income distribution *after taxes and transfers have been applied*. Success is best measured by how the little before-tax income distribution is altered to meet the redistributory target.

### Policy Guidelines

What should we look for in a tax policy? First, it should focus on the long run. Knowing what fiscal policy will be for years to come allows households and businesses to make long-term investment decisions. Frequent policy changes create uncertainty. Typically, economists think of optimal fiscal policy as setting the course for the long run, and monetary policy as stabilizing the economy over the business cycle.

The second general guideline is that, all else equal, a simpler code is preferable to a more complicated one. Because we are constrained to using distortionary taxes, good fiscal policy should err on the side of simplicity. Each caveat, exemption, and loophole encourages one behavior and discourages another. Most often these complications are rooted in short-term political calculations rather than long-term economic ones. And as the tax code becomes more complicated, it also becomes more confusing. This unnecessarily generates large industries where highly skilled labor is diverted toward helping people correctly file (and avoid) taxes and toward helping the government monitor taxpayers for compliance. Thus, a complicated tax code introduces a greater "deadweight loss" because the labor it requires could be better used to solve problems that government has no direct power to control.

## Two Types of Optimal Taxes

So what is the optimal tax? Yes, it's complicated. And even though economists have not discovered the perfect tax policy (and almost certainly never will), several schemes have proven optimal within wide classes of research efforts.

The first is a consumption tax. When constant over time, a consumption tax has the desirable quality of not distorting savings. It may seem counterintuitive at first, but consider a person who gets some income today and is weighing whether to spend it now or save it. If she spends it today, she pays a consumption tax of  $x$  percent, reducing the amount she can consume with the money. On the other hand, if she saves the income for tomorrow, then when she decides to spend it, the consumption she can afford is reduced by the same  $x$  percent. The consumption tax, then, does not favor consuming now or waiting and consuming tomorrow. The only thing our hypothetical person must consider is whether the interest paid on her savings justifies the wait.

But the consumption tax is distortionary in its effect on the labor/leisure decision. The tax makes consumption costlier, so a dollar earned from working does not go as far. Leisure becomes more attractive.

The biggest problem with a consumption tax is that it is regressive. Poor households consume a much larger fraction of their income than rich ones, so a consumption tax is particularly onerous for them. Of course, a consumption tax need not be flat. Rates that increase with total consumption and sizeable tax rebates are two ways to get the efficiency benefits of a consumption tax while addressing progressivity concerns.

When economists limit available tax policies to income taxes only, another prominent optimal tax emerges: a flat income tax with a large exemption for initial earnings. For all households, income below a given level would not be taxed. Income above that would be taxed at the same marginal rate. A flat tax at the upper end causes less distortion for households that tend to save, compared to a progressive schedule that keeps raising rates at higher income levels. The exemption also makes this tax more attractive to lower-income households that, under any proportional tax, are likely to suffer a greater welfare loss than their more affluent counterparts.

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**A tax policy should focus on the long run. Knowing what fiscal policy will be for years to come allows households and businesses to make long-term investment decisions.**

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## That Said ...

A good fiscal policy should be no more complicated than necessary. It should generally be focused on longer horizons and be credible, so that people can make long-term decisions with confidence. Good fiscal policy should seek to meet policymakers' goals while imposing minimum distortion on people's economic decisions. Policies that distort savings are particularly costly, and policymakers should give these costs added weight in balancing the distortion of capital taxes against the benefits of broader policy objectives.

Economics, however, can take us only so far in designing a tax code. It can help whittle down the set of possibilities to taxes that meet policy aims with less distortion, but ultimately, the final choice is political. People disagree about which behaviors should be incentivized or discouraged, how much government spending is necessary, and whether (and to what degree) resources should be redistributed.

These disagreements may be very difficult to resolve. While economics cannot settle this conflict, it can at least focus the debate by highlighting the tradeoffs inherent in any tax proposal. ■

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## Resources



Daniel Carroll and John Linder. 2011. "Reducing the Federal Deficit: Approaches in Some Other Countries." Federal Reserve Bank of Cleveland, *Economic Commentary* (October).

[www.clevelandfed.org/research/commentary/2011/2011-22.cfm](http://www.clevelandfed.org/research/commentary/2011/2011-22.cfm)

Daniel Carroll. 2011. "The Demand for Income Tax Progressivity in the Growth Model." Working Paper No. 11-06. Federal Reserve Bank of Cleveland, (February).

[www.clevelandfed.org/research/workpaper/2011/wp1106.pdf](http://www.clevelandfed.org/research/workpaper/2011/wp1106.pdf)

Congressional Budget Office. 2010. "Average Federal Tax Rates by Income Group." (June 1).

[www.cbo.gov/publication/42870](http://www.cbo.gov/publication/42870)

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# Meeting the Demand for Cash



Nelson Oliver  
Research Analyst



Dan Littman  
Economist

When it comes to using cash, it's like the flip of a coin: Americans still use cash roughly one out of every two times they buy something. And for transactions of less than \$10, physical currency—banknotes and coins—rules. Although less popular for higher-value transactions and rarely used in the fast-growing realm of online commerce, cash remains the most common method of payment for goods and services the world over.

It takes a pretty big infrastructure to keep cash flowing. Behind the scenes, players in the “cash cycle” include the Bureau of Engraving and Printing, armored carriers, cash vaults operated by financial institutions and armored carrier companies, bank branches and ATM networks, retailers—and yes, the Fed.



## How Much Cash Are We Talking About?

Most U.S. paper currency by volume (number of notes) is used in the United States, with the \$1, \$5, \$10, and \$20 notes making up the lion's share of all transactions. But because the dollar is widely trusted abroad, most U.S. currency (by value) is held in foreign countries, primarily in \$50 and \$100 denominations. The Federal Reserve Board of Governors reports that the volume of cash in circulation has more than doubled (from 13.5 billion to 31.3 billion) in the past 20 years, and the value of that cash has more than tripled (from \$268.2 billion to \$1.03 trillion).

Cash is used as a medium of exchange in virtually all aspects of the economy. In some minority and low-income communities, whose residents are disproportionately unbanked, cash is used exclusively. In fact, a recent FDIC study shows that 25.6 percent of all U.S. households (30 million) are unbanked or underbanked. So even though cash accounts for only 0.2 percent of the total *value* of transactions in the United States, the *volume* of cash transactions clocks in at 49 percent.



## Value and Volume by Payment Type

Payment type	Volume	Percentage of volume	Value	Percentage of value
ACH	19.1 billion	9.0%	\$37.2 trillion	3.3%
Cash	107 billion	49.4%	\$1.8 trillion	0.2%
Checks	24.4 billion	11.3%	\$31.1 trillion	2.8%
Credit and debit cards	65.5 billion	30.2%	\$3.44 trillion	0.3%
Wire transfer	222 million	0.1%	\$1,046 trillion	93.4%

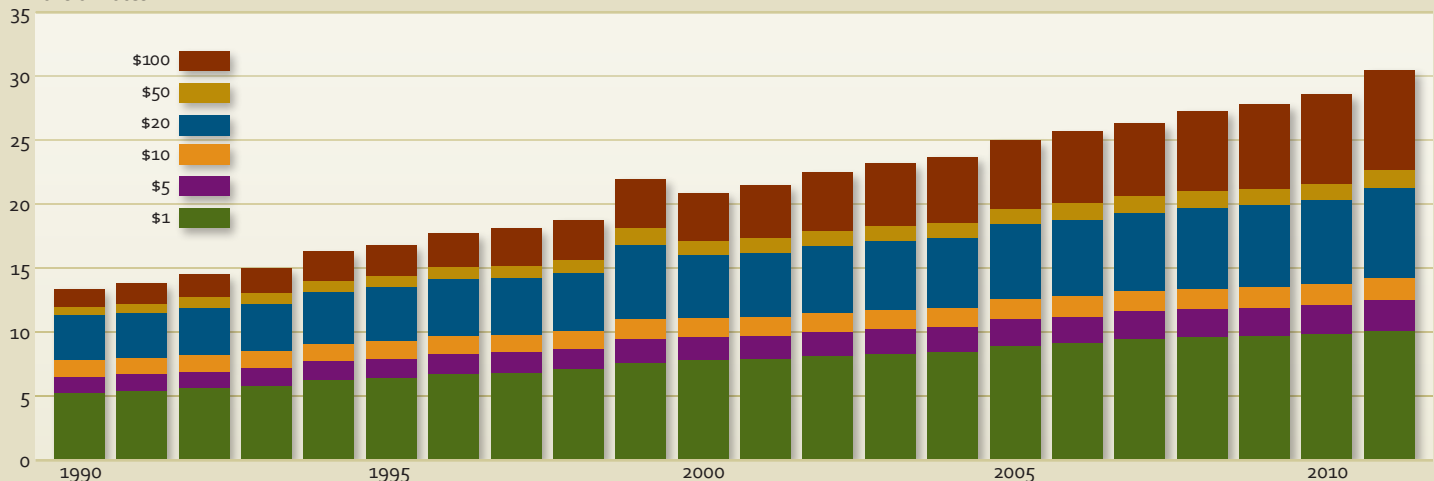
Sources: Federal Reserve Payments Study; McKinsey Payments Map.

## How Does the Cash Cycle Work?

With such large-scale demand, the cash cycle—and the Federal Reserve's role in it—continue to be vital to the economy. Although the Fed doesn't actually print money (that is the job of the Bureau of Engraving and Printing, or BEP), it is responsible for maintaining enough notes in circulation to meet public demand. Each year the Federal Reserve negotiates a print order with the BEP to fulfill the next year's anticipated demand for cash, replace worn currency, and accommodate the production demands associated with introducing new currency designs. The Federal Reserve Board's 2011 fiscal year print order was 6.4 billion notes, with a face value of \$165.3 billion. The Fed also ensures the integrity and fitness of notes, destroying those that come into the Fed dirty, torn, limp, worn, or defaced.

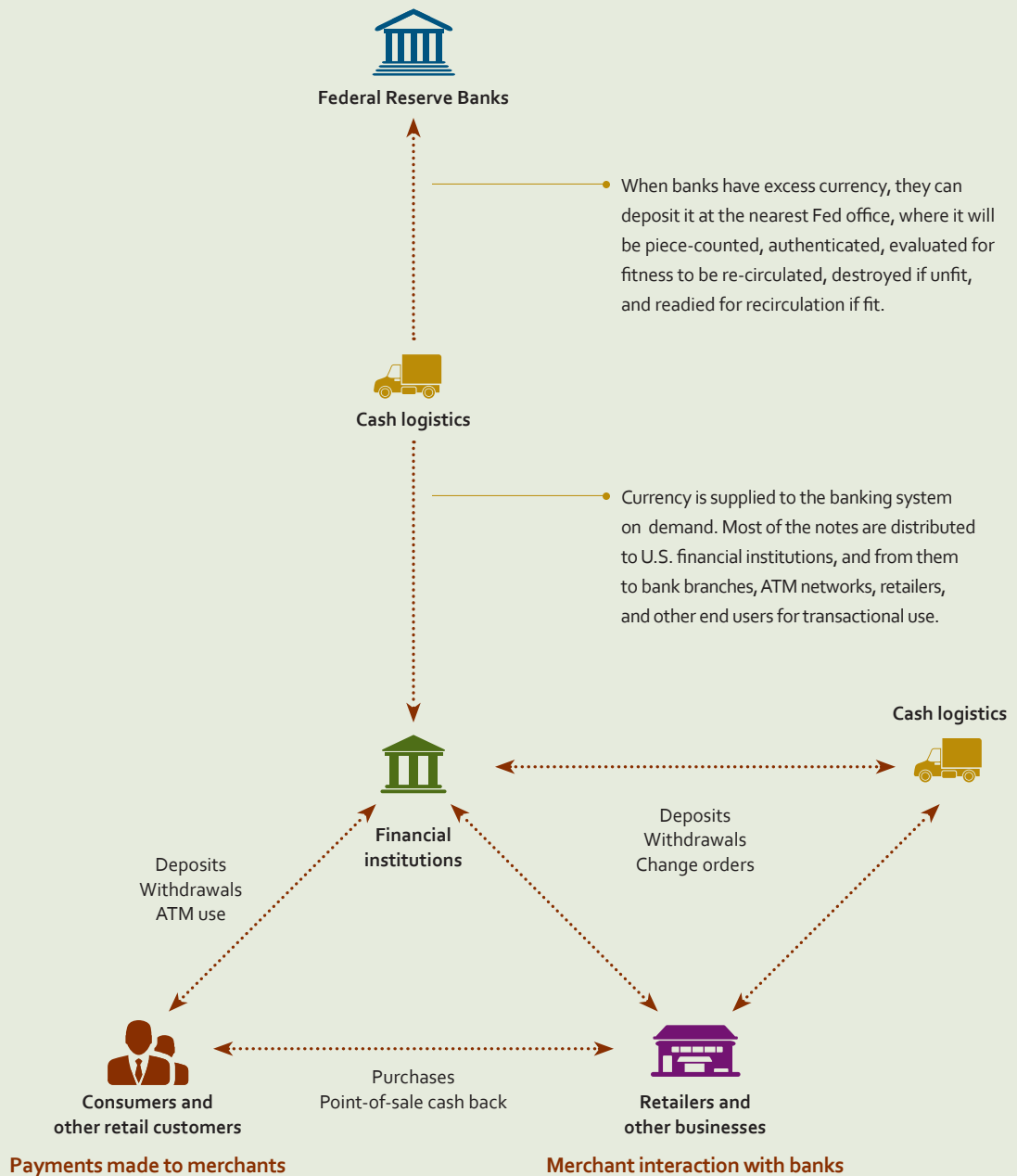
## Volume of Cash in Circulation

Billions of notes



Source: Federal Reserve Board.

# The Cash Cycle





## Five Key Methods the Fed Uses to Distribute Cash

1. The 12 Federal Reserve Banks operate 28 **cash-processing facilities** housed in 11 main offices, 15 branch offices, and two satellite offices.
2. Ten **cash depots** temporarily store cash supplied by the nearest full-service Fed office. This reduces the costs and transit time to depository institutions located far from a full-service Fed cash operation.
3. The Federal Reserve Banks have contractual obligations with 168 **coin terminals** that store, process, and distribute new and used coins to depository institutions.
4. The **Custodial Inventory** program provides an incentive to depository institutions, 92 of which are currently participating, to hold \$10 and \$20 notes in their vaults to meet customers' demand. The higher denominations continue to be filtered through Fed Banks to help reduce the circulation of counterfeit currency.
5. The **Currency Recirculation** policy requires depository institutions to pay a fee for making a deposit of \$10s or \$20s and ordering the same denomination during the same business week (a practice known as cross-shipping).



Since the Fed began operations in 1914, its cash services have provided security and storage, verified deposits from financial institutions, identified suspected counterfeit notes, differentiated fit from unfit notes, and prepared fit and new notes for shipment to banks. For many years, the Federal Reserve Banks provided these services only to their member banks, but the Monetary Control Act of 1980 gave all depository institutions direct access to Fed cash services.

The evolution of cash continues, and the Federal Reserve System must keep pace. It has already implemented operational changes to improve the efficiency and flexibility of cash services. The Fed uses three principal methods to distribute and process currency and coin in the United States—its own network of processing facilities, cash depots in other cities, operated under contract with armored carriers, and coin terminals—and two methods to reduce the unnecessary movement of cash between financial institutions and the Fed (see the five key methods above).

### The Future of Cash

In a mixed economy of competing payment methods, we believe that cash will continue to be a vital part of both the U.S. and the global economy in the foreseeable future. But cash is no longer the king it once was. Just 50 years ago, cash was used in 80 percent of domestic payments. Now that number is just 50 percent. From the invention of

credit cards in 1950, ATM and debit cards in 1970, and ACH in 1974, to the emergence of online commerce and online banking in the 1990s, competition in the payments marketplace has eroded the dominance of cash. Debit transactions since 1990 have soared by 2,700 percent, and ACH by 680 percent, while cash volume has grown by only 4 percent annually. Checks have been the hardest hit: Usage has declined by more than 50 percent.

Cash still has one important advantage—a sense of control and anonymity that many other payment forms cannot offer. One of the major aims of central banking is to sustain people's confidence in the overall payments and financial system. Cash, by providing a stable, safe form of physical currency, remains an important component of the Fed's ability to maintain public confidence.

Cash isn't going away anytime soon. Nor is the Fed's role in the cash cycle. ■

#### Want to learn more?



Check out a blog dedicated entirely to cash, with regular posts from the Cleveland Fed, at [www.countingoncurrency.com/wp/cash-per-diem](http://www.countingoncurrency.com/wp/cash-per-diem)

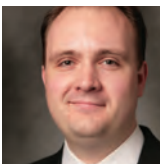
# Three Reasons Why Converting Vacant Homes to Rentals Will Be a Challenge in Some Places...

**FORECLOSED**



**FOR RENT**

## ...and Three Ways It Can Succeed



**Thomas Fitzpatrick IV**  
Economist

When a lender takes ownership of foreclosed property, it gets a new name — real estate owned — and goes back into the hands of the lender. And for scores of lenders and neighborhoods, that's a problem. More often than not, real-estate-owned properties (or REOs, for short) in weak housing markets sit empty. For the lender, that means steep carrying costs. For communities, that means increased crime and decreased values for houses nearby.

The largest holders of REOs are Fannie Mae, Freddie Mac, and the Federal Housing Administration. Last summer, the government put out a call for possible solutions to the mounting REO problem. One approach that has gathered momentum is developing incentives to help turn REOs into rentals.

In some cases, the properties would be sold to investors who intended to convert them to rentals; in others, new programs would be set up to allow lenders to rent out their stock of REO homes, at least ensuring they are occupied. Decay is less likely, and communities get a fighting chance to stabilize themselves.

Unfortunately, REO-to-rental isn't a one-size-fits-all solution. My research, along with that of my colleagues at the Cleveland Fed, underlines three big reasons why converting REOs to rentals in the industrial Midwest may prove difficult. But our research also points to three other ideas that could go a long way toward achieving the main goal of neighborhood stabilization, while lowering REO carrying costs.

## Why REO-to-Rental Will Be a Challenge in Weak Markets

### 1. There's probably not enough demand in weak markets to effectively or profitably convert significant numbers of REO homes into rentals.

In the Fourth Federal Reserve District, which encompasses all of Ohio and parts of Pennsylvania, Kentucky, and West Virginia, population loss has been a long-term trend. Many of the region's older cities are distressed, and new residential building has outpaced household growth. This has produced a significant oversupply of housing, which depresses home values and leads to an abundance of vacant and abandoned properties.

In this kind of environment, it's hard to see sufficient demand at prices high enough to make renting profitable. Consider the severity of the vacancy problem: Five years after auction, foreclosed homes in high-poverty areas of Cuyahoga County (home to Cleveland) are about 20 percent more likely to be vacant than foreclosures in low-poverty areas of the county. If there were strong rental housing demand, we would expect people to buy these homes and make them available for rent, not let them stand vacant. And since REO portfolios consist mostly of single-to-four-family units, there are few economies of scale that might make the financial numbers work for larger-scale rental buildings.

Finally, recently foreclosed properties, including REOs, are often in poor condition. Coupled with the already weak housing demand, it would cost new owners more to bring the homes up to code than they could reasonably expect to recoup in rent.

### 2. Compliance is a headache.

Converting bulk REO holdings to rentals all but guarantees an operational nightmare of complying with numerous local laws, depending on where the properties are located across the United States. REO homes will have to be inspected and brought up to code, and licenses will have to be issued.

For both the lender and the buyer, this process makes bulk transfers burdensome. They each will have to comply with different local laws in different cities. They will have

to wait, sometimes months, for cash-strapped and under-equipped municipalities to inspect the homes. And they may face further delays or even fines and lawsuits if the inspections reveal substantial property distress. These delays might be lengthy with bulk transfers of REOs being converted together.

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**Five years after auction, foreclosed homes in high-poverty areas of Cuyahoga County are about 20 percent more likely to be vacant than foreclosures in low-poverty areas of the county.**

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### 3. Some bulk buyers are slow, and historically, many are not dependable homeowners.

My Bank's research has found that bulk property purchasers tend to occupy homes — with themselves, renters, or even friends and family — more slowly than people who buy individual homes or small batches of them. The strategy bulk buyers follow is either to make only cosmetic improvements to distressed properties with the expectation they will be quickly rented or resold, or to abandon the homes when sale is impossible.

In weak markets, such homes often remain empty eyesores. They might technically be converted to rentals, but they will be no less vacant.

## Three Promising Strategies for Weak Markets

### 1. Use a high-capacity "land bank."

A land bank is a way for governments to acquire and amass vacant and abandoned, tax-foreclosed properties. From there, the land bank managers can make strategic choices about the properties' future — be it demolition, rehabilitation, or repurposing. The main idea with a land bank is that homes are not a permanent fixture in the portfolio — they flow back into productive use in private, nonprofit, or public hands.

Some properties may be in such a sorry state of decline that the land bank needs extra funding to cover demolition costs. Granted, REO holders may be reluctant to foot the bill for demolition. But when demolition costs are fully covered, it's easier to scale demolition projects. This results in faster disposition, which can substantially lower the REO holder's carrying costs.

For reference, those carrying costs are heavy. Property maintenance alone can cost more than \$1,000 per property per year, not to mention possibly thousands more for taxes and transaction costs. Rehabilitation adds on even more — potentially a lot more — for homes that need repairs before they can sell to an owner-occupier. Demolition costs can seem minor in comparison.

## 2. Screen potential purchasers.

Given the high stakes, an extra level of scrutiny is warranted with purchasers of REOs. Screening the potential purchaser's history of code compliance and tenant complaints is a good first step. Some states forbid anyone who has outstanding code violations from purchasing foreclosed homes. Local governments, nonprofits, and real estate brokers are good sources of information about property manager track records. One promising screening practice is placing the property deed in escrow, to be released to the purchaser once agreed-upon maintenance has been completed.

## 3. Categorize REO homes based on physical condition and neighborhood characteristics.

Assuming there are ready and qualified purchasers for REOs, a final useful step is dividing the homes into categories. This can help lenders and government agencies determine what should be done with the homes before they are released.

The home's condition should play a role in deciding whether to dedicate REO homes to sale or rental. A poorly maintained home is a good candidate for a land bank, as are those in need of moderate repair.

Neighborhood characteristics come into play in determining the vibrancy of the local market. The more demand in the market, of course, the better. Otherwise, bulk sales may encourage harmful speculation that merely prolongs vacancy and causes further blight.

## The Bottom Line: Flexibility

The strategies outlined in this article are nothing new to community development practitioners and housing policymakers. But they do reinforce the fundamental importance of allowing for local market customization in neighborhood stabilization efforts. We know housing markets are not identical and there is no one-size-fits-all approach for any of the problems housing markets currently face. But solutions in weak markets should be focused on reducing supply rather than creating it. ■



### Recommended reading

For more on the impact of foreclosures on vacancy rates, see Cleveland Fed Economist Stephan Whitaker's "Foreclosure-Related Vacancy Rates, *Economic Commentary*.  
[www.clevelandfed.org/research/commentary/2011/2011-12.cfm](http://www.clevelandfed.org/research/commentary/2011/2011-12.cfm)

Also see this proposal to harness the Community Reinvestment Act in the fight against speculative housing transactions: "Slowing Speculation: A Proposal to Lessen Undesirable Housing Transactions" *Forefront*, Winter 2011.  
[www.clevelandfed.org/forefront/2011/winter/ff\\_2011\\_winter\\_11.cfm](http://www.clevelandfed.org/forefront/2011/winter/ff_2011_winter_11.cfm)

## POLICY SUMMIT



## Housing, Human Capital, and Inequality

June 28–29, 2012

InterContinental Hotel & Conference Center  
Cleveland, Ohio

With neighborhoods and entire regions struggling to regain their footing in the wake of a housing crisis and economic recession, now is a critical time to implement community rebuilding strategies that work.



What are the most effective strategies, particularly in older industrial cities and the weak-market regions that surround them?



How is the impact of programs best measured?



Where should community leaders direct ever-scarcer funds to gain the greatest effect?

The Policy Summit will delve into these and other key questions. This year's event also features Federal Reserve Bank of Cleveland President and CEO Sandra Pianalto as the opening keynote speaker. In 2012, President Pianalto again became a voting member of the Federal Open Market Committee.

The Federal Reserve Bank of Cleveland's annual Policy Summit draws several hundred academics, bankers, practitioners, funders, elected officials, and policymakers from across the Great Lakes region for two days of interactive sessions aimed at illuminating key community development issues.

[www.clevelandfed.org/2012policysummit](http://www.clevelandfed.org/2012policysummit)

Sponsored by the Community Development and Research departments of the Federal Reserve Bank of Cleveland

# Closing the Region's Education Gaps: Community College as a Bridge to Business



**April McClellan-Copeland**  
Community Relations  
and Education Coordinator

Who says that higher education and business don't mix?

- Cuyahoga County Community College in Cleveland has allied health and bioscience programs that send graduates to jobs in area hospitals and pharmaceutical companies.
- Butler County Community College in western Pennsylvania boasts a training program that prepares students to drill for natural gas buried deep within Marcellus shale.

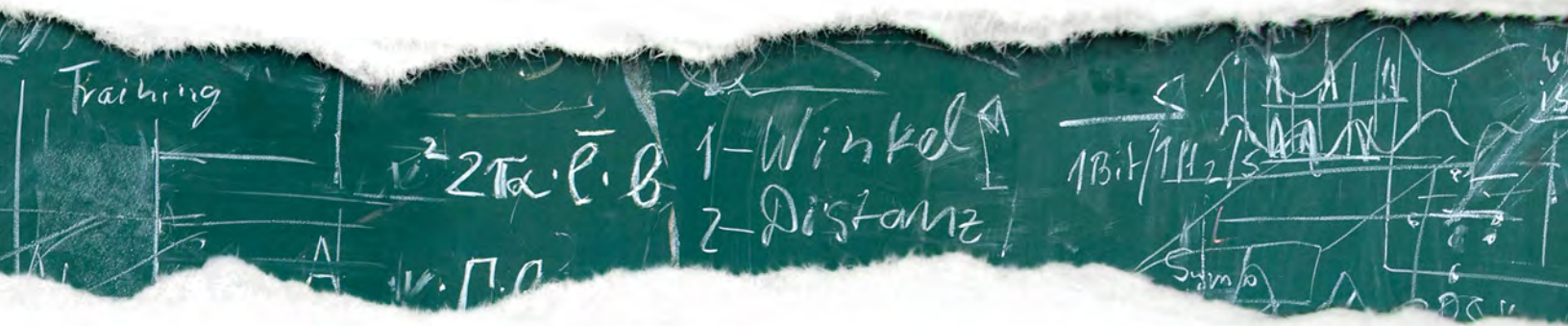
- And Sinclair Community College in Dayton—home of Wright–Patterson Air Force Base—just rolled out a certificate program in the field of unmanned aerial vehicles.

With programs like these, community colleges are doing more than ever to identify the types of workers that businesses need and to train students for them. But these colleges walk a fine line: On one side is their wish to encourage enrollment to meet the needs of the business community. On the other side is the reality that some would-be students aren't necessarily prepared for the rigor of these new programs or the jobs they are intended to fill.

Of particular concern are gaps between points of transition — from high school to college, then from college to the workforce. Many are expecting community colleges to play an important role in filling those gaps.

### From Partnerships to Programs

Through the years, the mission of community colleges has remained unchanged: to provide education for people in all segments of society through an open admissions policy. But that doesn't mean that community colleges haven't altered their tactics to fit a changing world: Many have strengthened existing ties—and forged new ones—with their business communities. They aim to increase students' chances for employment and give local employers access to a skilled pool of job candidates.



Cuyahoga Community College (Tri-C) has strong ties with Greater Cleveland hospitals, which in turn support the college's bustling allied-health-careers programs.

"We work very closely with the health-careers programs, and students are placed very quickly," says Karen Miller, vice president of enrollment management and student affairs at Tri-C. "We have many partnerships, internships, and clinicals. It's booming."

Partnerships with Pura Vida restaurant and the Rock and Roll Hall of Fame and Museum have also helped strengthen Tri-C's programs in Cleveland's growing culinary and film industries.

Efforts to match employment needs with education are widespread. Butler County Community College is an approved training provider for ShaleNET, a coalition of community colleges in Ohio, Pennsylvania, West Virginia, and New York, which provide a comprehensive program for high-priority occupations in the natural gas drilling and production industry.

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**Experts say community college enrollment is "counter-cyclical," that is, when the economy is bad and jobs are scarce, community college enrollment increases. Enrollment has been booming since the recession.**

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In southwestern Ohio, Sinclair Community College's new certificate program in unmanned aerial vehicles (UAVs) stands to boost the region's economic development. Adam Murka, director of public information, believes that UAVs, which are currently used for missile strikes in the military, will soon be strong in the civilian market as well.

In fact, the use of UAVs has already expanded into many non-military roles, such as disaster response, search and rescue operations, and geographic information services.

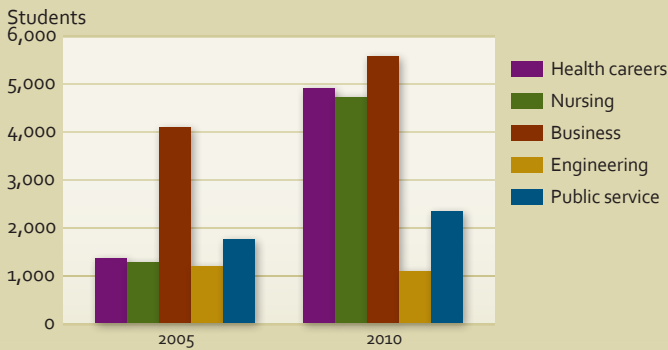
"We have all become well aware that in the last five to 10 years, workers' skill sets have become inextricably linked to workforce development," Murka says. "The four-year colleges have been part of that, and so have we."

### Bringing In—and Catching Up—Students

Experts say community college enrollment is "counter-cyclical," that is, when the economy is bad and jobs are scarce, community college enrollment increases. Enrollment has been booming since the recession, says Miller.

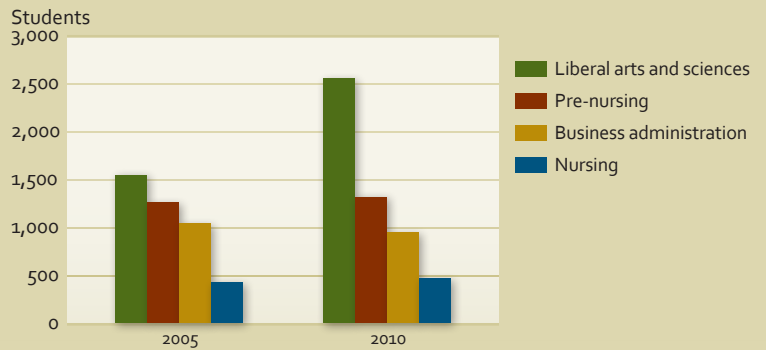
But the accessibility of community colleges can also attract students who are unprepared for the demands of new programs. In fact, while community colleges have gained 21.9 percent more students since fall 2007, they have found that more students need to brush up on skills that they should have learned in high school.

### Cuyahoga Community College Enrollment: Selected Programs



Source: Cuyahoga Community College.

### Sinclair Community College Enrollment: Selected Programs



Source: Sinclair Community College.

**While community colleges have gained 21.9 percent more students since fall 2007, they have found that more students need to brush up on skills that they should have learned in high school.**

“Community colleges across the nation are seeing more students who struggle,” Tri-C’s Miller says. “We put a lot of emphasis on wraparound services for the students who are coming in unprepared. We have significantly reallocated funds for mentoring programs and increased tutoring.”

For the last four years, Tri-C has been part of a national initiative called Achieving the Dream, which measures the effectiveness of mentoring programs and supplemental instruction. Since the college began keeping stats on its mentoring programs in 2008, retention from term to term has increased anywhere from 4 to 24 percent, Miller adds.

Butler County Community College also reports that some of its students lack math skills when they arrive, so the school provides tutoring and other services to bring them up to speed. “Sometimes it comes down to basic organizing skills, such as teamwork, showing up on time—from basic levels to more sophisticated levels,” says Stephen Catt, Butler’s executive director of workforce development.

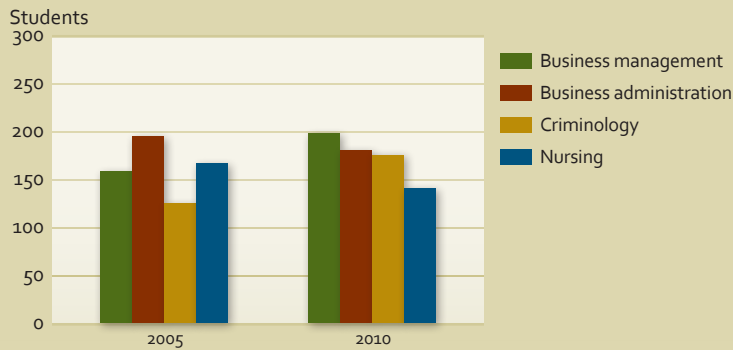
### Moving On

It may be too soon to say whether these programs and partnerships have been successful, but the potential is exciting.

Butler County Community College has a contract with an extraction company to help fill entry-level positions working the Marcellus shale fields in Pennsylvania. The school has also formed collaborations and partnerships with world-renowned training agencies in the extraction industry.



## Butler Community College Enrollment: Selected Programs



Source: Butler Community College.

And the emerging energy industry is hiring as many accountants as laborers. The training agencies with which Butler is partnering already have an oil/gas accounting program. “Now [students] will have the vocabulary to understand the industry,” Catt says. He thinks this is only the beginning of workforce development in this field.

Catt believes the top 10 percent of students in America are headed for success, and the bottom 10 percent may get some sort of services to help them. Community colleges aim at the middle 80 percent, who might otherwise fall through the cracks. “That’s where we excel,” says Catt, “taking unprepared students and preparing them to be successful in the workforce.” ■

### Recommended reading



Dionissi Aliprantis and Mary Zenker. 2011. “Recent Changes in the Relationship between Education and Male Labor Market Outcomes.” Federal Reserve Bank of Cleveland, *Economic Trends* (September). [www.clevelandfed.org/research/trends/2011/1011/01houcon.cfm](http://www.clevelandfed.org/research/trends/2011/1011/01houcon.cfm)

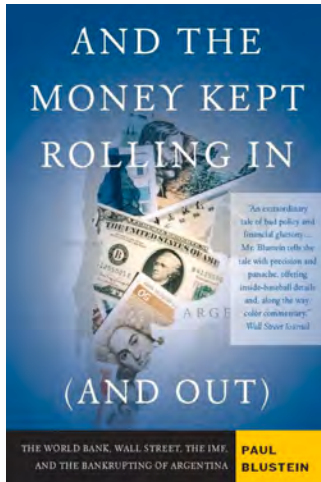
Dionissi Aliprantis, Timothy Dunne, and Kyle Fee. 2011. “The Growing Difference in College Attainment between Women and Men.” Federal Reserve Bank of Cleveland, *Economic Trends* (October). [www.clevelandfed.org/research/commentary/2011/2011-21.cfm?DCS.nav=RSS](http://www.clevelandfed.org/research/commentary/2011/2011-21.cfm?DCS.nav=RSS)

### Speech



[www.clevelandfed.org/For\\_the\\_Public/News\\_and\\_Media/Speeches/2011/Pianalto\\_20111020.cfm](http://www.clevelandfed.org/For_the_Public/News_and_Media/Speeches/2011/Pianalto_20111020.cfm)

## Book Review



# And the Money Kept Rolling In (and Out): The World Bank, Wall Street, the IMF, and the Bankrupting of Argentina

by Paul Blustein  
Public Affairs Press, 2005



Reviewed by  
**Dan Littman**  
Economist

Sovereign-debt crises are nothing new. Indeed, Greece — at the center of the current European meltdown — has defaulted on its state debts five times since it became independent of the Ottoman Empire in the 1820s. So it is not hard to imagine that Greece’s difficulties could have been predicted, or that remedies could have been put in place ahead of time to short-circuit the crisis, or that lessons from other debt crises could have been applied to prevent this one from threatening the survival of the European Union.

Economic policymakers need not stray too far back in history for relevant examples. Argentina has endured seven of its own sovereign-debt crises since it became independent of Spain in 1816. In fact, it is remarkable how much Argentina’s crisis of the 1990s has in common with Greece’s crisis and with the related problems in Portugal, Ireland, Italy, and Spain.

Greece and Argentina found themselves in self-imposed straitjackets. They couldn't devalue their currencies — Greece because it abandoned the drachma when it joined the European Union in 2000; and Argentina because it linked its peso in lockstep with the dollar after a default in 1989 and hyperinflation in the early 1990s. The Greek and Argentine experiences show how complex it can be to come to terms with sovereign debt. Nations have to overcome a mixture of seemingly intractable political, economic, structural, domestic, and international relations issues.

Learning about a past sovereign-debt crisis can provide useful perspective for understanding the current situation in Europe. An excellent account of the Argentine crisis comes from a book that predated the latest crisis: *And the Money Kept Rolling In (and Out)* by Paul Blustein, once a journalist at the *Washington Post* and now a fellow at the Brookings Institution. Blustein provides a narrative of the Argentine economic crisis of 2001–02, which ended traumatically—with the abandonment of the peso–dollar peg, the resignation of the president, the closure of the banking system, and dramatic increases in unemployment and poverty.

While the immediate aftermath was horrible, Argentina staged a remarkable economic recovery later in the decade. Sovereign-debt default did not end up being the end of the world for Argentina, but rather a necessary and painful adjustment so the country could start over with a blank slate.

Two interesting aspects of the Argentine case have particular resonance to the current situation in Europe: First, the degree to which Argentina was viewed as having been an *economic miracle* in the mid-1990s, just before the crisis began. And second, the involvement of international organizations like the IMF and the World Bank and of other countries like the United States, working with Argentine authorities to try to avoid default, and then helping the country get through to the other side.

Although Greece was not considered an economic miracle during the past decade, its underlying economic and fiscal problems were ignored by the rest of the EU, much as Argentina's problems were ignored by its trading partners and foreign lenders while it was on the dollar peg. Once the underlying problems were revealed, both Greece and Argentina were subjected to intense rescue negotiations, Argentina's ending in failure, Greece's still underway at this writing.

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**Sovereign-debt default did not end up being the end of the world for Argentina, but rather a necessary and painful adjustment.**

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Blustein's argument, that concerted effort by many parties is necessary to make a successful rescue, is persuasive. The most important party is always domestic—in Argentina, the national government, provincial government, central bank, and political apparatus. If accommodations cannot be achieved among domestic institutions, then no amount of accommodation on the part of foreign (and domestic) lenders, and no amount of financial aid by international organizations, can bring off a successful rescue.

It is fair to say that the Argentine crisis of 2001–02 is not identical to that of Greece today, or to those of Portugal, Ireland, Italy, and Spain. But Blustein provides helpful perspectives on Europe from an analogous situation, and does so with much narrative drive and interesting anecdotal detail.

It may also be worth remembering that *And the Money Kept Rolling In* has a relatively happy ending. We can only hope that today's world economic leaders take note of Blustein's lessons and use them to help their own countries. ■



## Interview with Sandra Pianalto

Sandra Pianalto was named president and CEO of the Federal Reserve Bank of Cleveland in 2003. Today she has the most consecutive years of service among participants on the nation's monetary policymaking body, the Federal Open Market Committee. And in 2012, she has one of the 10 votes on the Committee.

Alan Greenspan was chairman of the Federal Reserve when Pianalto started her current job. Now, Ben Bernanke presides over a group that has navigated the financial crisis and Great Recession. The tools of monetary policy have changed over the past few years, and so has the sense of urgency in employing them. We asked Pianalto to talk with *Forefront* about a range of issues—how she develops her policy views; her current economic outlook; and the differences between Greenspan's Fed and Bernanke's. Mark Sniderman, executive vice president and chief policy officer of the Cleveland Fed, interviewed Pianalto on March 7, 2012.

**Sniderman:** *You have been a participant on the Federal Open Market Committee since 2003. How has the FOMC changed since then?*

**Pianalto:** Probably the biggest change has been in the tools that we use to conduct monetary policy. Our country has been through the deepest recession since the Great Depression. We went through a financial crisis, and monetary policy responded very aggressively and creatively, with some new ways of accomplishing traditional objectives.

Also, we've changed the way we communicate. We've continued to look for ways to enhance our communication with the public. We've increased the number of times we share our economic projections with the public to four times a year. The chairman holds press briefings following those meetings where we release our projections.

In January, we took some truly historic steps in the way we communicate. We issued a statement on our longer-term goals and strategies for monetary policy and we also, for the very first time, shared with the public our forecast for the federal funds rate. I think these are tremendous strides in the way we communicate with the public.

Finally, I would note the change in chairmen since I joined the committee in 2003. Alan Greenspan was chairman then, and now Ben Bernanke is chair. And Ben has changed the way we conduct our meetings. You can read the transcripts—I'm not sharing anything that's confidential—but when Alan Greenspan was chair, he would usually go first in our policy go-round, when we take turns explaining our views.

If you look at the transcripts, you'll see that oftentimes the conversation following his recommendation on policy would be, "I agree, Mr. Chairman," "I agree, Mr. Chairman," "I agree, Mr. Chairman." By contrast, Ben goes last on the policy go-round. That requires each one of us to give our views on appropriate monetary policy, and Ben listens to our views and then presents his own perspective. He then puts forward a recommendation that he believes best reflects the appropriate course for policy, consistent with the views of the Committee. We then act on that recommendation.

**Sniderman:** *Let me follow up on something else you mentioned—the statement the Fed issued about its longer-term goals and strategies for monetary policy. I know this is a topic that you've been interested in for a while. Can you share some more thoughts about it?*

**Pianalto:** In that statement we, for the very first time, agreed on a numerical objective for inflation. We said that the Committee believes our mandate for stable prices translates into an objective for inflation of 2 percent over the longer term. I have been a longtime proponent of establishing a numerical objective for the Committee. It helps anchor inflation expectations. It provides more certainty around the types of actions and policies the Committee would deem appropriate to achieve that numerical objective of 2 percent for inflation.

Inflation is a monetary phenomenon. That's why we're actually able to set a numerical objective for it, and we should be held accountable for achieving it. Maximum employment, which is the other half of our dual mandate, is *not* primarily a monetary phenomenon. The maximum level of employment that our economy can achieve is determined by other factors, such as demographics, technology, and regulations.

Therefore it's not appropriate for the central bank to set a numerical objective for maximum employment. The Federal Reserve can estimate the maximum level of employment given the economic circumstances we face and then set policy that's appropriate for achieving an unemployment rate that is consistent with maximum employment.

**I have been a longtime proponent of establishing a numerical objective for the Committee. It helps anchor inflation expectations. It provides more certainty.**

**Sniderman:** *Let me ask you about the way many people characterize FOMC members, labeling some people as hawks and others as doves. Do you think that's a handy, simple way for the public to understand policymakers' views? And where would you put yourself on that spectrum?*

**Pianalto:** I've been part of the Federal Reserve for a long time, more than 28 years. Those labels actually came into play when there wasn't agreement around an inflation objective. There were some members of the Committee who felt a higher rate of inflation was appropriate. Those individuals were dubbed doves. And there were some that felt that we needed a lower rate of inflation. In fact, one of my predecessors, Lee Hoskins, was focused on achieving zero inflation. And he was considered a hawk.

## Sandra Pianalto

### Position

President and Chief Executive Officer,  
Federal Reserve Bank of Cleveland

### Former Positions

Economist, Federal Reserve Board of Governors  
Economist, U.S. House of Representatives Budget Committee

### Education

The University of Akron, BA in economics, 1976  
The George Washington University, MA in economics, 1985

### Select Civic Associations

Past Chair and Life Director, United Way of Greater Cleveland  
Board Member, Cleveland Foundation  
Board Member, Greater Cleveland Partnership

We now have agreement and a statement by the Committee that 2 percent is the appropriate level of inflation. So I don't think the titles of hawks and doves are useful when the Committee has stated that we have a 2 percent inflation goal.

If there are titles that people want to use, I would like to be labeled someone who is open-minded. Or someone who is pragmatic. We've been through some very unusual circumstances. We've had a lot of unexpected changes in economic circumstances that have required us to think differently about the appropriate path for monetary policy. So I tend to feel very comfortable being open-minded and not dogmatic or being an ideologue on appropriate policy. I've been open-minded to changes in policy as economic circumstances have changed.

**Sniderman: *Let's talk more directly about current circumstances. If inflation is near our goal right now, why not try to go faster and get that unemployment rate down sooner?***

**Pianalto:** We always have to stay focused on a balanced approach. I would be concerned that if we were to provide even more policy stimulus, given my current outlook, we could risk an unwelcome rise in inflation. On the other hand, if we were to remove our policy accommodation too quickly, I would be concerned that we would risk slowing the economy and causing an unwelcome disinflation.

I think we have to strike a balance, and I think we have a good balance with our current policy.

**Sniderman: *It's clear the economy is growing and the unemployment rate is coming down, but the pace of improvement is still slow. You've said in speeches that you think the Fed's extraordinary actions have been successful. What gives you that confidence that the policy approach is actually making a difference?***

**Pianalto:** In more normal times, the main tool we use in conducting monetary policy is adjusting the federal funds rate, our target rate. Back in 2007, when the economy was entering into a recession, we began to lower the fed's fund rate, and we continued to lower it until 2008 when we brought it down to near zero, where it stands today. We felt that the economy still needed further accommodation, so we used some new tools [such as long-term asset purchases, otherwise known as "quantitative easing"] in providing accommodation.

When we adjust the federal funds target rate, the rates at which consumers and businesses borrow are also affected. When we were bringing down the fed funds rate, medium-term and longer-term rates also came down. In using our new tools, we have the same objective of lowering rates at which consumers and businesses borrow.

When you ask how I can determine whether our policy accommodation has been effective, you can look at the path of medium- to longer-term interest rates, and they have been brought down significantly. On the mere announcement that we were going to be purchasing mortgage-backed securities, mortgage rates fell almost 100 basis points. Those are the rates at which consumers and businesses borrow. By bringing those rates down, we are providing stimulus to the economy by encouraging consumers and businesses to borrow money, and that translates into more spending.

**Sniderman: *Is there any way from history to try to get a sense of whether that was the right thing to do or not?***

**Pianalto:** I think we have a very good example of *not* having been accommodative at a time when the economy needed more accommodation. That was the Great Depression. It took us quite a bit of time, a lot of studying, to understand that the Federal Reserve was not providing enough policy accommodation during that time. The Federal Reserve's restrictive monetary policy contributed to making what might have been a severe recession into the prolonged, 10-year downturn that we now know as the Great Depression. That was a good lesson for us. And I think we learned from that episode, and we have responded more aggressively to the most recent severe recession.

Sniderman: *You suggested that maybe it's not such a good idea to be pushing so hard on monetary policy because there's an inflation risk. But clearly the unemployment rate is very high. Are there some other factors at work keeping that unemployment rate up?*

Pianalto: I still believe that our current high unemployment is a cyclical problem and not a structural one. There's been a longstanding relationship between the amount of growth in the economy and the improvement that it translates into in terms of job creation. We've had a very weak recovery that hasn't created a lot of jobs. So the slow pace of this recovery is causing that unemployment rate to move down more slowly than we'd like.

I'm reassured that this issue is cyclical and not structural when I look at job openings. Prior to the recession, there were two individuals looking for every job that was open, so it was a 2-for-1 ratio. During this recession, that number has jumped to four people looking for every one job opening. So we just have a very slow pace of job openings, which, again, is cyclical, in my thinking.

But we're also finding that it's taking longer to match the skills that people have to the skills that are needed in available jobs. It may be that because these jobs require more training, more skills, more education, it is taking a little more time to make a match. That's another reason why it's taking longer to bring the unemployment rate down.

Sniderman: *It is remarkable the number of employers who will tell you that the jobs they have open used to be filled by high school graduates. Now, at a minimum, those jobs require an associate degree or something like that.*

Pianalto: Yes, in fact, even the manufacturers I talk with say that for entry-level jobs, they're requiring at least two years of post-high school education; some additional training. The data show that where we've seen gains in manufacturing jobs, it's been in occupations that require a four-year college degree. And in occupations that require high school or less, jobs have actually declined. So yes, this is another important factor that's affecting our labor markets.

Sniderman: *Let's turn attention to another place that's a notable headwind in the expansion, and that's the housing sector. Do you think it's appropriate for the Fed to be purchasing government-guaranteed, mortgage-backed securities to strengthen the housing sector? What are some other roles the Fed can play to try to get the housing sector to heal more quickly?*

Pianalto: In almost all previous recoveries, investment in housing has been positive and has helped the recovery. Unfortunately, in this recession, investment in residential construction has actually declined, so it's been a drag.

Monetary policy has helped the situation by bringing down mortgage rates, and that has made housing more affordable to many consumers. But we're in an unfortunate circumstance in that not everyone can take advantage of these lower interest rates. Because of depressed housing markets, we've had consumers lose a lot of wealth that was associated with housing. And because



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of the very challenging economic environment that we've been through, consumers have more difficulty obtaining credit. Their credit scores may have been lowered. So this transmission mechanism that monetary policy operates through has been blunted somewhat.

We have to look at other ways of addressing some of these issues. The Board of Governors recently sent Congress a white paper with some options about how we can address some of the challenges that we're facing in the housing market. The options range from some loan modification programs that might be available, to taking homes that are in foreclosure and now owned by banks and turning them into rental properties. I hope that Congress can have some debates around these various options and come to some policy decisions that will help the housing market.

## My forecast for either economic growth or inflation would have to change for me to want to make a change in the stance of monetary policy.

*Sniderman: Some of the most recent indicators show some signs of improvement in the pace of the expansion.*

*Are you feeling more upbeat today than you were a year ago or even six months ago about the economy's prospects?*

**Pianalto:** I want to see more evidence that the good economic data that we're seeing is more than transitory, that it is sustained. We've seen two other episodes in this recovery—in early 2010 and then again in 2011—where we thought the economy was gaining some momentum only to be disappointed later on by additional factors, such as the European debt crisis, and issues around the tsunami in Japan that disrupted supply chains in the auto industry, and so forth. I'm being a little cautious about saying that this stronger economic data that we're seeing is going to be sustained. I'd like to see a little more evidence of that strength.

Having said that, one difference that I'm seeing this year from the two previous episodes where we started to see some strengthening in the economy is that the employment picture does look to be stronger. We've now had several months of good employment numbers. In conversations I've been having with businesspeople, they sound more optimistic. This time the optimism is being supported—it's not just a feeling; they're actually seeing stronger orders, and they are responding to those orders by doing more hiring. That's why I think we're seeing stronger numbers on the employment front.

*Sniderman: If we get into the summer and begin to see another one of these patterns of the economy slowing down, do you think that would be the time to support further easing in policy and maybe be willing to take a little more risk on the inflation side of things in order to get the economy moving again?*

**Pianalto:** Right now my forecast is for the economy to grow a little more than 2.5 percent this year and 3 percent next year, with inflation staying close to 2 percent. My forecast for either economic growth or inflation would have to change for me to want to make a change in the stance of monetary policy. Given my current outlook for the economy, the current stance of monetary policy is appropriate. If my forecast were to change significantly, then I would want to look at the appropriate policy response, and perhaps make an adjustment to my monetary policy stance in response to a change in my forecast.

*Sniderman: In that context, some people say the Committee is being maybe way too conservative about the inflation risk and that the emphasis on price stability is holding the economy back from getting this unemployment rate down. What is your view?*

**Pianalto:** I think it's important for us to maintain low and stable inflation in order for the economy to grow. I think our two objectives are complementary. We've learned over a long period of time that a low and stable inflation rate actually is necessary for longer-term economic growth. So I think it is appropriate for the Fed to stay focused on maintaining a low and stable inflation rate near our 2 percent objective in order to provide an environment for the economy to grow, and therefore for employment to grow, for jobs to be created.

*Sniderman: Well, it's certainly been a challenging period for the Fed, as you've mentioned—unconventional actions, unconventional economic circumstances. And certainly the Federal Reserve has attracted its share of skeptics and critics, it seems, on a number of different dimensions. Policy is too tight, too easy, too much risk of inflation, not willing to take enough risk to get the unemployment rate down, and so on. How do you feel about all of the controversy surrounding you as a voting member this year?*

**Pianalto:** When you are in such unusual circumstances and you've been through the challenges we've been through as a country, it's not surprising that you're going to have diverse views on how to address these issues. As I mentioned earlier, I want to have an open mind about the appropriate policy approach, so I do read various people's views and opinions about our policy actions. I listen very carefully to my colleagues' views on appropriate policy responses given current economic circumstances and our current outlook. And then I make a judgment about what I believe should be the appropriate monetary policy response.

*Sniderman: What are some of the things you've learned over time in terms of how you approach decision making?*

**Pianalto:** When you're part of the process that creates these new tools and implements them, you clearly are much more familiar with them. It's almost like, rather than going back and reading a textbook, you're actually writing the textbook. Therefore, because you're actually doing it, you feel much more knowledgeable about it—you're the expert.





**Sniderman:** *Maybe it's the difference between someone handing you a tool and saying, "Here, use this," versus having a problem and then you have to create the tool to help you solve the problem?*

**Pianalto:** With the first couple of years on the Committee, I recall thinking about what other Committees did when they faced these types of circumstances. But in the past few years we have been facing a set of circumstances that very few previous Committees had to deal with. So I no longer had the luxury of thinking about what other Committees did. I turned my attention more towards creating the policy response to these circumstances.

It's a different approach. I spent less time thinking about, "what do I need to learn from others?" Rather, I had to focus on being helpful in creating the response. I'm sure that I've gained wisdom by going through this episode. That wisdom will be helpful, I'm sure, in responding to challenging circumstances in the future. ■



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**Recommended reading**

Sandra Pianalto. 2011. "Price Stability: Why We Seek It and How Best to Achieve It." *Forefront*, Federal Reserve Bank of Cleveland (Spring).



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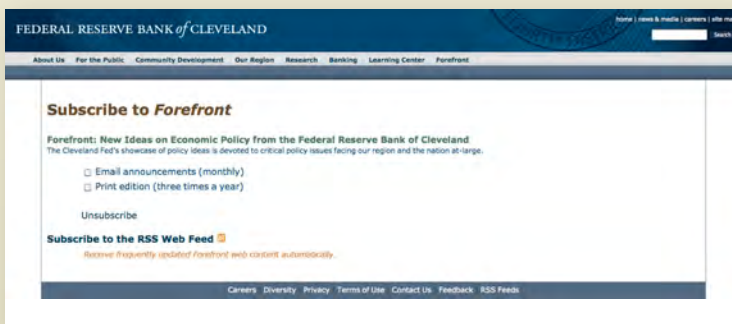
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