FALL 2010
Volume 1 Number 3

Forefront

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

The Economic Importance of Being Educated

INSIDE:

Early Childhood Education

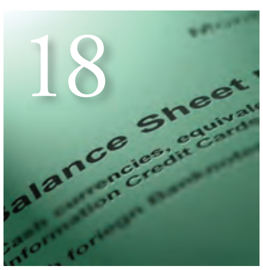
Consumer Finance

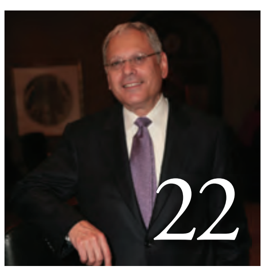
Mortgage Counseling

PLUS:

Q&A with Laurence Meyer

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





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CONTENTS

Forefront
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PRESIDENT'S MESSAGE

Sandra Pianalto
President and Chief Executive Officer
Federal Reserve Bank of Cleveland

Ever since the first signs of economic recovery appeared, I have expected that the path forward will be gradual and bumpy. It certainly has been so far. At this point, our journey to full economic recovery is really just beginning. I can assure you, however, that my colleagues and I at the Federal Reserve are committed to using the tools we have to pursue our dual mandate from Congress — to keep prices stable and to promote maximum employment.

We will do our job as central bankers to help our economy get back on track. It's important to acknowledge, however, that some long-term goals for economic growth require broad commitment from all Americans. Above all, we must not forget education's crucial role in determining economic growth. The results of research in this area, including some by economists at the Federal Reserve Bank of Cleveland, are crystal clear: One of the best ways for cities, states, and countries to increase their per capita income is to raise levels of educational attainment.

Educating people may not sound terribly urgent during difficult economic times, but when it comes to creating jobs and finding people who have the skills to fill them, nothing is more important than education. Incomes are largely determined by how productive people can be, and education plays a crucial role in increasing productivity. Investing in education enables people to produce more valuable services in a given amount of time. On top of that, an educated populace is better equipped to navigate our increasingly complicated financial markets.

That is why this issue of *Forefront* presents a package of articles focused on the compelling returns to education.

We begin with an interview with Art Rolnick, former research director at the Federal Reserve Bank of Minneapolis, who forcefully lays out the unambiguous results of research on early childhood education: Preparing children for kindergarten may be the single most effective way to foster their future success. Rolnick has taken the research a step further and developed a pilot program for early education in St. Paul, Minnesota, which may be expanded statewide. I look forward to seeing the results.

Early childhood education is a first step. Sustained investments in education are likewise important. In "Five Big Ideas about Consumer Finance Education," the Federal Reserve Board's Jeanne Hogarth talks about the intersection between high-level research and street-level results. Rounding out our coverage, we examine financial education about the housing market with a review of the Federal Reserve Bank of Cleveland's 2010 Community Development Policy Summit. In particular, we look at the effectiveness of mortgage counseling in helping borrowers steer through the sometimes-opaque process of buying a home.

The policymakers and shapers in these articles share a passion and a dedication to achieving progress in education. They have moved past agreement on our long-run priorities and dug deeper into the nitty-gritty of achieving those priorities. They are taking an honest look at what works and what doesn't. I am hopeful that their experiences will give others the courage to leave behind programs that do not deliver on achieving our education priorities.

As always, there are no quick fixes. Identifying education investments as sources of progress is easy, but achieving them requires great commitment. These challenging economic times provide an opportunity to make decisions guided by a long-term view. So, as we slowly recover from the recession, let us lay the groundwork for a long-lasting economic expansion. Let's renew our commitment to educating Americans. ■

Reader Comments


A Proposal: Using the CRA
to Fight Vacancy and Abandonment

A Proposal: Using the CRA to Fight Vacancy and Abandonment

*Update: On June 17, 2010, federal regulators, including the Federal Reserve, announced a proposed change to the Community Reinvestment Act (CRA). The change would encourage banks to support the Neighborhood Stabilization Program administered by the U.S. Department of Housing and Urban Development. The proposal is similar to, and was influenced by, the Federal Reserve Bank of Cleveland's recent recommendation aimed at easing the vacancy and abandonment crisis (*Forefront*, Spring 2010). The Bank's proposal would amend the CRA to increase banks' incentives to provide community groups with loans, services, and investments that support neighborhood recovery efforts.*


Mark Willis

I commend the Cleveland Fed for entertaining this proposal for modifying the system for determining the CRA ratings of large retail banks, i.e., those with assets greater than $1 billion. If adopted, the proposal would break new ground in six important ways:

- First, it would demonstrate that CRA can be amended on a timely basis to address changing economic conditions.
- Second, it would set a new precedent, albeit subject to some significant restrictions, for giving these banks full credit for activities regardless of the geography being served.
- Third, it would elevate the importance placed on non-lending activities such as demolition that also help to stabilize and revitalize a community and thus improve the ability of local individuals and institutions to access credit.
- Fourth, it would give these banks the ability to increase the relative importance of the investment and service tests in determining overall CRA ratings.
- Fifth, it would offer, but not mandate, an alternative way for these banks to serve communities that have been particularly hard hit by the current housing crisis.
- Sixth, it would provide an automatic trigger for suspending or reinstating the special rules depending on economic conditions and not contingent on future votes that would require the regulatory agencies to reach consensus in a timely manner.

Adopting the proposed regulatory changes, however, is only part of the battle. Banks will need more details in order to evaluate the relative merits of sticking with the current system or going with the new option. Most banks already have a good idea of what they need to do under the current system to achieve the same rating again at their next exam. For evaluating the new option, banks will need to understand, for example:

- How will credit be determined for REO donations—number of properties donated, the market value of the properties at the time of the donation, or some other measure?
- Will donations of property be given more than the nominal credit now given to philanthropic grants under the investment test?
- Similarly, how much value will technical assistance be given under the service test, which is now mainly about bank branch services?
- How much in "extra points" will be needed to get an *outstanding* rating on one or more of the lending, investment, and service tests, and how will the scores on the three tests be combined to determine the overall rating?

Without clear upfront answers to these types of questions, it may be hard to get banks to make the hoped-for changes in their CRA business plans.

Mark Willis
Resident Research Fellow
Furman Center for Real Estate and Urban Policy
New York University
New York, New York

Janneke Ratcliffe

The Community Reinvestment Act did not cause the current foreclosure crisis, but it might be able to ameliorate some of its consequences. A recent proposal by the Federal Reserve Bank of Cleveland would deploy the CRA to reward banks for resolving the vacant and abandoned stock of real-estate-owned (REO) properties, even if those properties were located outside the CRA assessment areas usually used to measure compliance.

The CRA was created in 1977 to counter the practice of denying access to credit to particular communities. The principle held that if banks were going to set up shop and accept deposits from a community, then they should reinvest those funds in that community. But recent developments in banking and financial services have made this premise outdated.

Not only have a variety of alternative sources of financial services arisen, but the neighborhood-centric concept of traditional banking has given way to large interstate or even multinational banking conglomerates. Consequently, the collapse of the housing market has left banks holding onto foreclosed properties far from their CRA assessment areas.

The proposal would allow banks to receive CRA consideration for donations or sale of REO properties to community development groups, as well as technical assistance and lending to such groups, as long as the investment needs of the assessment area are satisfactorily met. This is an entirely reasonable way to encourage stabilization, even in neighborhoods where the bank does not have a branch office but still has a financial stake due to mortgages made there.

That is not to say that branch offices have lost their importance. In the REO context, a local presence facilitates cooperation with community groups and a better understanding of community needs, which can lead to more productive efforts to stabilize neighborhoods. Efforts to fight the tide of foreclosures should also provide impetus for banks to aggressively and productively resolve REO within existing assessment areas.

What is most significant about this proposal is its recognition of the latent power inherent in the Community Reinvestment Act through regulatory discretion. Flexibility within the statutory framework is vital to the ability of the Act to keep up with changes in the market and address evolving issues, insofar as the spirit of those requirements remains strong.

Janneke Ratcliffe
Associate Director
Center for Community Capital
University of North Carolina
Chapel Hill, North Carolina

Small Businesses: Credit Where Credit Is Due?

I appreciate the information in your new *Forefront* magazine. In the article entitled "Small Businesses: Credit Where Credit is Due?" while good points were made, one significant, troubling area of concern was missed: the negative effects of over-regulation on businesses.

I have been a small-town banker for 25 years, and I understand "burdensome regulations." But talking with small business owners over the last 10 years, I have witnessed an increasingly uphill battle for all businesses to comply with ever-expanding regulations.

I personally know of many businesses in our local community that have closed up shop because they could no longer afford the costs of regulation. As such, prudent bankers understand how these costs directly affect the bottom line of business owners, and we add it to the risk factors when making credit decisions. These concerns become ever more relevant in a stagnant, down economy.

The state of Ohio is particularly tough on both regulations and taxes—as illustrated in its ranking in the top five worst states in the Union in which to do business. In addition to being a banker, I also am involved in the management of two other businesses as well as serve on several boards.

Regulations alone will make one's head swim, but there are so many that are redundant, unnecessary, or just plain ridiculous. And believe me, these are having a very negative effect on nearly every business out there.

Lending to a business to cover regulatory expenses, or to compensate for the cost of complying with regulations—when there is no monetary return on the investment—is risky at best. But many business owners are faced with exorbitant regulatory costs for new installs, upgrades, or remodeling. There is no upside.

Just recently, I helped finance a local fellow opening a very small donut shop. His cost to comply with the various regulatory requirements was $18,000. He'll have to sell a lot of donuts to recoup that money, wouldn't you say?

It's time to consider ALL risks associated with business lending. Perhaps if the Fed would point out the crushing effects of over-regulation, some much-needed changes would be made that most assuredly would increase business profits. And that would bring a smile to bankers' faces.

Thank you for your time.

Joe Wachtel
President
Monitor Bank
Big Prairie, Ohio

Battling the Next Phase of the Housing Crisis

Anne O'Shaughnessy,
Community Development
Project Manager

The foreclosure crisis is breeding a new one: a crushing load of REO, or real-estate-owned, properties. These are the foreclosed homes that banks and other lenders have on their books after failing to sell them at sheriff's auctions. In weak housing markets, including many in the Fourth District, these unsold houses too often stand vacant and neglected.

A new volume published by the Federal Reserve Banks of Cleveland and Boston and the Federal Reserve Board of Governors highlights the latest research and on-the ground efforts to attack the REO problem on several fronts. The collection of articles, ***REO & Vacant Properties: Strategies for Neighborhood Stabilization***, was released in September to coincide with a summit hosted by the Federal Reserve in Washington. The summit aimed to help communities and practitioners find the most promising practices for addressing neighborhood stabilization and the disposition of REO properties across the country.

Among the Cleveland-area contributors to the volume were researchers at Case Western Reserve University. The researchers reported a worsening scope to the problem in northeast Ohio, offering new evidence of how REO properties further drag down communities.

In "REO and Beyond: The Aftermath of the Foreclosure Crisis in Cuyahoga County, Ohio," Claudia Coulton, Mike Schramm, and April Hirsh found:

- Since 2007, *almost all* properties in Cuyahoga County (home to Cleveland) that come out of foreclosure sales have ended up as REOs.
- The number of REOs in the county peaked in 2008 at just over 10,000 properties and had declined to about 7,300 by late 2009.
- REOs are disproportionately concentrated in lower-income communities.
- From 2004 to 2008, the percentage of properties on Cleveland's east side that sold out of REO at extremely distressed prices—$10,000 or less—shot up from 4 percent to almost 80 percent.

What does this mean for the area's already-battered neighborhoods? REOs are often vacant and subject to vandalism and further devaluation. Their presence lowers the values of neighboring properties and destabilizes neighborhoods.

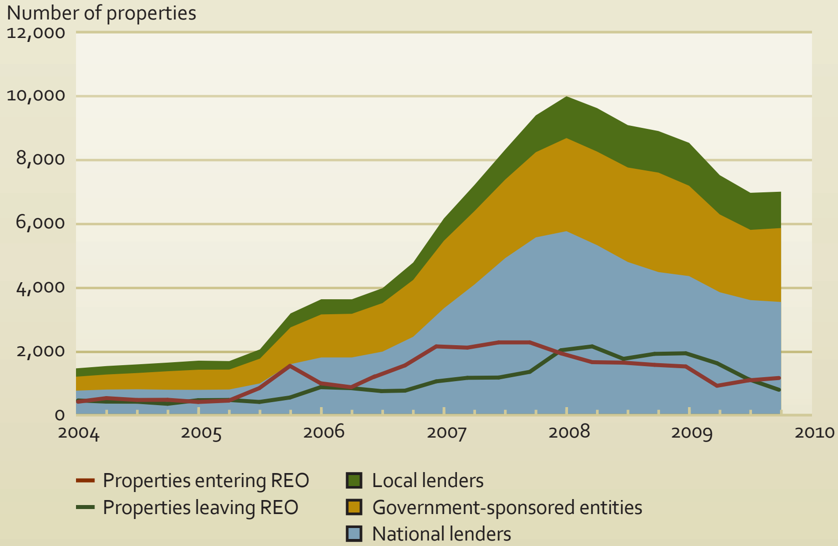
The authors' findings also indicate that most REO properties in the county are owned by national lenders, some with no local branches. Buyers include many out-of-state investors, who may purchase these properties sight unseen and take a let-it-sit-I'll-wait-till-the-market-rebounds approach. They tend not to make any improvements, and maintenance suffers.

By 2009, REO properties on Cleveland's east side were *selling at just 13 percent of their pre-foreclosure market value*. Given already-low housing prices and the large volume of REO transactions, the authors wrote, "these post-REO sales price figures have disastrous effects on the values of neighboring properties not in foreclosure and on the tax bases of neighborhoods and communities."

Though solutions are hard to come by, one promising local effort is the Cuyahoga County Land Bank. That's the subject of Federal Reserve Bank of Cleveland economist Tom Fitzpatrick's article in the REO publication. Fitzpatrick explores how modern land banks have developed into powerful tools: Communities acquire REO properties as a way to stabilize, and in some cases revitalize, at-risk neighborhoods. Modern land banks tend to have broader geographic coverage and to wield wider powers to acquire, deconstruct, demolish, and rehabilitate inventory, and keep dedicated revenue streams—all improvements on traditional land banks.

Rising Tide

Properties Entering and Leaving REO in Cuyahoga County



Prepared by: Center on Urban Poverty and Community Development, Mandel School of Applied Social Sciences, Case Western Reserve University.

Source: NEO CANDO (http://neocando.case.edu), Tabulation of Cuyahoga County Auditor data.

Other approaches highlighted in the volume, such as the public–private partnership spearheaded by Boston Community Capital in specific neighborhoods of the city, show the distinct ways that communities deal with the challenge of their REOs.

The REO volume represents the Federal Reserve's effort to listen to stakeholders, analyze various policy options for dealing with important public problems, and then make information available. ■

Related link

REO & Vacant Properties: Strategies for Neighborhood Stabilization, the name of both a national summit and its companion publication, focuses on how policymakers and community development practitioners can help stabilize the neighborhoods most at risk for decline. The publication contains 17 articles that shed light on the scope of the problem in specific areas of the country and showcases some methods for dealing with the challenge of vacant and REO properties.

www.clevelandfed.org/Community_Development/publications/REO/index.cfm

Stop Investing in Stadiums… Start Investing in Kids

An interview with Art Rolnick, whose research on behalf of the Minnesota Early Learning Foundation aims to spur long-term economic growth

Every metro area in the United States has one—an economic development agency. The agency typically spends its time and money putting together bids to woo manufacturing plants or Fortune 500 headquarters. Sometimes, it supports tax initiatives to build luxury sports stadiums. Representatives travel to other cities to get ideas on how to grow jobs and wealth—with waterfront developments, tourist attractions, and downtown condos.

Although sometimes these efforts create jobs, often they come at the expense of jobs lost somewhere else. Or the promised "spillover benefits" never arrive. But a growing number of experts are advocating for another kind of economic development that is uniquely effective—early childhood education. The main questions are how best to design the program and how to build greater public support.

Art Rolnick, an economist and former research director at the Federal Reserve Bank of Minneapolis, thinks he has the answer. Over the next few years, people across the nation will be able to see the results for themselves.

Mark Sniderman, executive vice president and chief policy officer with the Federal Reserve Bank of Cleveland, interviewed Rolnick via videoconference on June 30. An edited transcript follows.

Sniderman: ***We're here this morning to discuss early education. How did you first become interested in this topic?***

Rolnick: My involvement was serendipity. A group of us used to meet about once a month for lunch here in downtown Minneapolis—some lawyers, businesspeople, academics, and media people. About nine years ago, we invited the executive director of an organization called Ready for K [kindergarten], which was established

Arthur J. Rolnick

Position:
Senior fellow at the Humphrey Institute in Minnesota

Past Position:
Senior vice president and director of research at the Federal Reserve Bank of Minneapolis

Essays:
Include the nationally recognized "The Economics of Early Childhood Development"

Education:
Wayne State University, BS, mathematics;
University of Minnesota, PhD, economics

Bio:
Rolnick joined the Federal Reserve Bank in 1970. He served as senior vice president and director of research from1985 until his retirement this summer. In 2003, Rolnick and colleague Rob Grunewald wrote a policy proposal that advocates providing high-quality early childhood education to at-risk children. That effort has grown into a pilot program supported by the Minnesota Early Learning Foundation.

by a former governor of the state, Al Quie, and a former mayor of Minneapolis, Don Fraser. The organization was advocating for early childhood education and development.

I listened to the talk. They presented what I thought was a fairly weak argument. It was basically a moral argument, and it's not that I disagreed with it. But it was weak from an economic point of view. I felt that if they were going to really push this issue forward, they should look at the economics of investing in early childhood education. Policymakers need a way to rank a plethora of reasonable-sounding initiatives. They need a way to figure out how much to invest in each. And that's where economics comes in.

I made that comment, and that was my mistake! Because the board of Ready for K, in particular the former governor and mayor, started calling and asking if I would come on the board and write the background paper.

So I agreed to look into the economics of early childhood education. I went to work with my colleague Rob Grunewald, who was our education outreach person at the Federal Reserve Bank of Minneapolis. After three months we sent our report to Ready for K. I thought I was done and could resume my research on pre–Civil War banking.

I was wrong. Since that report, over the last nine years, almost every week, Rob and I have received at least one call or written invitation to speak somewhere on this issue. We have been to almost every state.

Sniderman: ***What are the critical differences in the way the issues are framed and how you evaluate some of the choices that need to be made from the economist's perspective?***

Rolnick: We argued that early childhood development ***is*** economic development, and the research shows it's economic development with a high public return — very high.

We looked at four well-known longitudinal studies. I'm going to talk about one in particular, the Perry preschool study. That was back in the early 1960s in Ypsilanti, Michigan. In this study, 123 at-risk kids and their parents were enrolled and randomly divided into two groups. One group got a very high-quality early education program, including master's-level teachers, small classroom size, and home visiting. So there was a program group and a control group. Reports were produced every 10 years and we now have a 40-year report, comparing the children who eventually became adults who were in the program, to the control group.

Rob and I asked a very simple question: What was the return on that investment? It hadn't been asked quite that way before.

That's what economists would normally ask about any proposed public investment. We know the cost of the two-year program; in today's dollars it was $22,000 per child. Now we need to know the benefits. Well, children that were in the program were less likely to be retained in the first grade, and that's a significant saving. They were less likely to need special ed. That's a significant saving. They were more likely to be literate by the sixth grade, graduate high school, get a job, pay taxes, stay off welfare. And the largest benefit of all, for the children who were in the program, the crime rate went down 50 percent relative to the control group.

We found that in the Perry preschool study, the annual rate of return, inflation-adjusted, was 16 percent. I don't think you could find a better public investment.

Economists can put dollar values on all these benefits and back out the return on investment based on the benefits and the costs. We thought it would be high. We compared it to the stock market. The annual yield in the stock market, post–World War II, is about 5.8 percent, so we thought we would be doing well if we could beat 5.8 percent. We found that in the Perry preschool study, the annual rate of return, inflation-adjusted, was 16 percent. I don't think you could find a better public investment. (In a more recent study, James Heckman finds a somewhat lower, but still high, 10 percent return.)

Sniderman: ***What have you learned about what it takes for a program to be successful? Does it extend beyond the classroom?***

Rolnick: Let me clarify. When we're talking about early childhood development and education, we're talking prenatal to five years old. Learning begins right away. The neuroscientists show

Minnesota Early Learning Foundation

Established in 2005, the Minnesota Early Learning Foundation is a nonprofit organization dedicated to developing cost-effective strategies to prepare children for success in kindergarten. Over the last three years, MELF has raised more than $19 million privately to fund an early childhood education program called Scholarship Plus. In the foundation's pilot program, low-income parents in a St. Paul community are eligible for no-strings-attached scholarships worth $13,000 to enroll three- and-four-year olds in highly rated preschools. This summer, 625 parents were signed up. Now, the foundation is working to expand the program across the state. Participants also are assigned a "mentor" to work with them on an array of parental issues, including nutrition and health.

www.melf.us

that if the child is in a stressful environment during these early years, the brain doesn't develop properly. There was a famous study by Dr. Bruce Perry on the orphans in Romania. They were put in cribs and virtually ignored, except for feeding time. At age three, their brains were about a third smaller than what they should have been.

I think we have the research on our side. I think we have the economic case on our side.... Unfortunately, we still have a long way to go politically to make all this happen.

One of my mentors, Dr. Jack Shonkoff at Harvard, makes a strong case that the debate between nature and nurture is over. We know that environment matters a lot for normal brain development, starting at prenatal. In other words, there is a critical mental and physical health component to early childhood education.

We have a lot of research that says if a child is in a healthy and loving environment, in which there's bonding between the parents and the child, where there's positive interaction, so the child starts out cognitively and socially ready for school, there's a high probability that the child will succeed in life. If not, there's a high probability she will not.

Here is my frustration. We have a lot of information that there is an extraordinary public return to early childhood education and a small return to investing in professional sports teams. Indeed, we spend billions of public dollars around this country building sports stadiums and arenas. There is virtually no return on these investments, because they would have been built without public subsidies. I think we have the research on our side. I think we have the economic case on our side. I think we have the healthcare case on our side. Unfortunately, we still have a long way to go politically to make all this happen.

Sniderman: ***You have stirred up some controversy in terms of the program design that you had in mind. I wonder if you could describe the more unusual approach that you've been advocating.***

Rolnick: You're right; some have questioned our second essay.

When we looked at the research, a number of challenges were suggested:

- One is that if we're going to come up with a public policy, it would have to be one that we could scale up so we apply it to all at-risk kids.
- Another challenge is we didn't think we could get sustainable results if we didn't engage and empower the parents.
- A third challenge is that you've got to be able to measure results. You can't just tell the public, "Trust us." You have to be able to show that these kids are actually benefiting.
- Finally, there was the challenge from the neuroscientists who said you can't just start at three—you've got to start at prenatal or birth.

Based on those challenges, Rob and I came up with a policy proposal that focused on the demand side of this market. As economists, we've been taught that markets are powerful forces. If you've got customers with economic power, the market will make things happen. We proposed a simple idea—scholarships. We advocated for providing two-year scholarships to families living in poverty so they could send their children to high-quality early childhood programs for three- and four-year olds. That's where we began our proposal.

Then critics said that's fine, but it doesn't start early enough. Well, we actually call our program "Scholarship Plus," and the plus is a mentor, a home-visiting mentor that begins prenatal. We advocate that this home-visiting mentor, the first one coming to the door, is a home-visiting nurse because of the health aspects. That mentor stays with the family, or triages if necessary, so the family has an ongoing mentor who works with them on nutrition, prenatal care, and parenting skills. Studies show that when you have home-visiting mentors working with teenage moms especially, you can reduce infant mortality and the number of low-birth-weight babies. So you get at that health component, you get at that initial bonding component, you make sure there is positive interaction between the baby and the mom. That's the beginning of our program. Then when the child turns three, the child receives a two-year scholarship.

The conventional approach is more top-down. It focuses on programs, not on parents. However, I don't care how many good programs you have out there. If you haven't engaged the parents in the program, you've failed. Start with the parents, focus on the parents, and empower the parents with resources; the market will provide the quality programs.

We actually have a pilot project that is testing these ideas, and what we're showing is that, sure enough, the market responds. We have a four-star rating system; you have to be a three- or four-star-rated program to get our scholarship kids; our scholarships pay up to $13,000 a year. Our critics said there wouldn't be enough capacity; they were wrong. Capacity of high-quality programs has grown with demand, as predicted. (See the Minnesota Early Learning Foundation website for a description and evaluation of this project.)

Some private early ed programs have moved into the neighborhood, very good programs. Head Start and Montessori have expanded their programs; in the St. Paul schools, early ed capacity is growing. The market is responding. Our parents are not having a problem finding programs. There were some issues when we were first handing out the scholarships, but once the word got out, capacity started to increase. We're getting the kind of results that we hoped for, and we're getting engaged parents involved in the process.

Sniderman: ***Can you describe some of the challenges early ed is facing in gaining more acceptance and funding?***

Rolnick: We think from an education perspective, the case for early ed is strong. But if you were just looking at early childhood development from a health perspective, you would wonder why more public resources are not being invested in our most at-risk children. The research is overwhelming. So why are resources not increasing, especially in a state like Minnesota? We're an education state, very progressive state, very wealthy state. The problem politically is that these kids don't vote, at least not in our state! Their parents generally don't vote. These problems are long-term, they're opaque; you don't really see them until many years down the road. If I build a stadium, you see that tomorrow. It looks like you're creating jobs even though you're really not; you're just moving them around. So it is an interesting political issue.

More generally, there is a disconnect between our public priorities and the research. There is the research that shows there's a high public return to making sure our at-risk kids start healthy and ready to learn at kindergarten, versus the research that shows that investing public money in entertainment and other private businesses has a very low public return. And it's not just sports teams that pit one city or state against another. But in the name of creating jobs, we use public subsidies to try to lure one company from one state or one city to another. This kind of economic development, which seems to dominate conventional practice, is winning the day. That's where most of our economic development dollars go across the country—and it's billions of dollars—while early ed struggles just to maintain its funding.

Sniderman: ***As you mentioned, Art, some of the programming is very challenging to find funding for. What sense do you have about federal-level support and interest in early care and education for kids in the areas that we've been talking about?***

Rolnick: On both sides of the political aisle, there's an understanding of the latest research on early childhood education and the potential return to society. I say both sides of the aisle because during the campaign, both candidates cited James Heckman's work out of the University of Chicago, who has done path-breaking research on the importance of investing early in children's education, and cited the Minneapolis Fed's research as well. The Obama Administration has made a strong commitment to early childhood education. They're supporting something called a "challenge grant" that's working its way through Congress. In addition, there is money in the health-care bill for home-visiting nurses.

So I think there is a lot of encouraging movement in Washington. I do think, though, it's up to the cities and states, the local communities, to be more aggressive in this area. I think there could be federal dollars if they are.

I think it's going to take a partnership, the private sector with the local communities and the federal government. But I think it's important for communities to get their priorities in order to make it clear that this is an area we can't afford not to invest in.

In the name of creating jobs, we use public subsidies to try to lure one company from one state or another city to another. This kind of economic development, which seems to dominate conventional practice, is winning the day....while early ed struggles just to maintain its funding.

Sniderman: ***I think it will be fascinating to come back five years down the road. There will be a lot more children who've had the opportunity to participate in the programs in Minnesota and some of the other places that you've mentioned. We'll certainly be in a position to know quite a lot more than we do today about how effective these programs are and what some of the critical elements are that go into making up high-quality programs. I know you're excited about what the future is going to bring as well.***

Rolnick: I hope five years from now we'll be out of business! We'll have convinced the public that this is what you should do, the scholarships and mentors will be there for all poverty kids, and then I can go back and finish some of my pre–Civil War banking papers.

Sniderman: ***Thanks a lot for your time this morning; I really appreciate it.***

Rolnick: Thank you, Mark. ■

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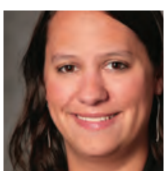


Amy Koehnen,
Associate Editor

It's no secret that the housing crisis still has a hold on America: New foreclosure filings rose 8 percent during the first six months of 2010 compared with the same period in 2009. What may be less clear is that international, national, and local housing experts are striving to break that hold. These efforts were top of mind at the Federal Reserve Bank of Cleveland's 2010 Community Development Policy Summit—Housing Policy: Who Pays, Who Plays, and Who Wins?—held on June 10 and 11.

The summit convened top administrators from the Department of Housing and Urban Development and other regulatory agencies; researchers from universities and think tanks; and community development experts. They put on the table such topics as the cultural ideal of the American Dream and ways to build wealth in the wake of the housing crisis.

As the experts merged data and anecdotes to frame the crisis, one theme stood out: the importance of financial information for consumers. Conversations centered on three key ways to help people make better decisions about their money:

- Use clear language
- Ensure that consumers achieve broad financial literacy
- Provide targeted education programs as necessary

How much better off would Americans be if policymakers moved on all three fronts? At the Policy Summit, several speakers described how consumer finance education efforts are likely to take shape in the near future.

The Fine Print

If you've ever bought a house, you've probably felt the anxiety of many prospective homebuyers: What did that say? How much do I owe? What did I just sign? Mortgage documents are enough to boggle the mind of the best-educated lawyer. Indeed, federal officials have attributed the mortgage crisis in no small part to people's failure to understand the fine print.

By contrast, consider what happened in Canada during the past few years. Unlike the United States, Canada did not undergo a dramatic increase in mortgage defaults, and none of its banks required a government bailout. One major reason, according to Virginie Traclet, a researcher in the Bank of Canada's Department of Monetary and Financial Analysis, is the way financial disclosures are written in Canada — clearly and plainly. Lenders are bound by disclosure requirements as well as banks' voluntary codes of conduct to use plain language. The fine print is there, but it is not nearly as fine as what American borrowers must try to decipher. (To be sure, many other factors contribute to the difference in default rates. A paper written at the Federal Reserve Bank of Cleveland, for example, suggested that comparatively lax lending standards in the U.S. probably played a critical role.)

In 2000, the Canadian federal government proposed the *Cost-of-Borrowing Regulations*, requiring banks to disclose credit product information, such as interest rates and fees, to consumers. In the same year, the Canadian Bankers Association (CBA)adopted a voluntary code of conduct — the Plain Language Mortgage Documents CBA Commitment — regarding the use of clear writing in mortgage documents. In September 2009, the federal government amended its disclosure regulation to include a plain-language provision requiring that "all disclosure under the Regulations be made in a manner that is clear, concise, and not misleading."

As many have observed, buying a home is the biggest investment most people will make in a lifetime, and mortgage documents are the most complex. Mortgage debt accounts for the largest share of household debt. So making informed choices is imperative.

Straight Talk

"Plain language," says Traclet, "can have a significant effect on households' making an informed decision when they choose a mortgage product and, ultimately, this can contribute to financial stability."

Arguments against simplifying disclosures abound, with the most strident coming from lenders. They include the objections that creating and testing new disclosures costs money; requiring disclosures is a market intervention, and interventions do not always improve market outcomes (that is, result in better decision-making); and if more borrowers understood the terms of their loans, some might decide not to take out those loans or would demand terms more favorable to themselves. In this last point, it is argued that the revenue, profits, and stability of financial services providers would decrease (although it is hard to see how giving borrowers bargaining power could hurt society).

Federal officials have attributed the mortgage crisis in no small part to people's failure to understand the fine print.

But improving disclosures can also help lenders. Plain language can reduce staff time by eliminating confusion and improving communications. "[If] the performance of mortgages is linked to borrowers having chosen a mortgage product whose risk characteristics they understand and can thus service over the lifetime of the mortgage, then banks would have a natural interest in providing such easy-to-understand facts and risks," Traclet says.

Itzhak Ben-David, an assistant professor of finance at the Ohio State University's Fisher College of Business, agrees: "It is important to explain to borrowers about interest rate resets in adjustable-rate mortgages, and latent fees, like prepayment penalties," he explains. "It is also important to inform borrowers of the likelihood of default given their debt-to-income ratio (DTI). For example, 'One out of five borrowers with DTI of 40 percent at origination could not make his payments and had to give up his house.'" What if that language appeared prominently in mortgage documents? How many borrowers would line up for a mortgage if they're told they have a one-in-five chance of defaulting on it?

Financial Education Matters

So plain language is a start. But we probably need more to help consumers make sound financial decisions. For example, research suggests that households do not necessarily understand how higher interest rates would affect their mortgage payments. In June 2009, the Organization for Economic Co-operation and Development noted that insufficient financial education tools were partly to blame for the financial crisis and that the consequences of uninformed credit decisions can be "disastrous."

Michal Grinstein-Weiss, an assistant professor at the School of Social Work at the University of North Carolina at Chapel Hill and a participant of the Cleveland Fed's 2010 Policy Summit, points out that homebuyers, especially minority and low-income ones, often lack information when it comes to the home-buying process. In fact, one survey found that 40 percent of African American and Latino respondents incorrectly believed that a 20 percent down payment was mandatory to qualify for a mortgage, and more than 50 percent of this same group believed that holding the same job for five or more years was required.

Grinstein-Weiss has been studying the effects of financial education on participants in the American Dream Demonstration, a longitudinal, randomized controlled experiment conducted in Tulsa, Oklahoma, from 1998–2003. Conceived, organized, and implemented by the Corporation for Enterprise Development in Washington, DC, and funded by 12 private foundations, this experimental program helped low-income people save for a home, school, or business through Individual Development Accounts (IDAs) by matching their savings deposits with public and private funds. In addition, IDA participants attended free classes on general financial education, such as budgeting and money management, as well as asset-specific financial education classes, such as what to look for in a mortgage.

The results were positive: The number of financial education hours each participant clocked was associated with a 99 percent increase in average monthly net deposit and a 1 percentage point increase in deposit frequency. Participants claimed that it was the financial education—not the monetary incentive of the IDA program's match rates—that made the most difference in their success. "If one part of the program was eliminated," Grinstein-Weiss quotes a participant, "eliminate the match."

Other studies support the importance of financial education: One found a significant correlation between the level of financial knowledge and sound management practices. People who were familiar with financial concepts and products were more likely to balance their checkbook every month, budget for savings, and maintain investment accounts. Another study determined that financial knowledge is the single best predictor of such behaviors as budgeting, saving, and shopping responsibly. (For additional examples, see related story: "Five Big Ideas about Consumer Finance Education," page 14.)

The Effects of Mortgage Counseling

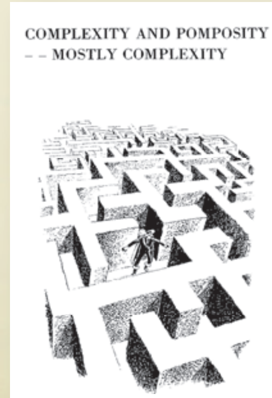
But some other studies, including work from the Federal Reserve Bank of Cleveland, suggest that general financial education programs do not tend to change people's financial behavior. Many researchers contend that programs should target a specific audience or area of financial activity and that this education should be completed just before the person needs to use it (for example, just before buying a home).

Nonprofit organizations have been offering home-buying programs and credit counseling for years, with generally beneficial effects. One study that analyzed nearly 40,000 affordable mortgage loans targeted to lower-income borrowers found that pre-home-purchase counseling reduced 90-day delinquency rates by 19 percent on average. In another study, researchers found that credit counseling had a positive effect on creditworthiness, especially for those with the lowest credit scores. Another preliminary study found that new or recently delinquent credit card holders were more likely to pay on time and to have lower revolving balances after receiving online instruction in credit management.

Grinstein-Weiss asserts that the content of the financial training should be tailored to building the skills of low-income people so they can overcome the challenges of trying to save. Asset-specific financial education and homeownership counseling, she says, may also improve participants' loan performance.

Getting Basic

The emphasis on plain language is not new. Interest in making government documents clear has a history in the United States, dating back at least to 1966, when federal employee John O'Hayre wrote *Gobbledygook Has Gotta Go*. But until recently, the use of plain language remained voluntary. Part of the *U.S. Credit Card Accountability, Responsibility, and Disclosure Act of 2009* is the Plain Sight/Plain Language Disclosures: "Credit card contract terms will be disclosed in language that consumers can see and understand so they can avoid unnecessary costs and manage their finances." But this legislation does not apply to mortgage documents, even though it's been demonstrated that a large portion of homeowners do not understand their mortgages and that modest efforts to simplify mortgage disclosures increase consumers' understanding.



An image from the 1966 book *Gobbledygook Has Gotta Go*.

Should Counseling Be Mandatory?

Itzhak Ben-David set out to discover whether mandatory asset-specific counseling—in this case, mortgage counseling—does in fact affect loan choice and performance. He came up with some surprising results.

Ben-David's study was based on an experiment in which high-risk mortgage applicants in 10 Chicago ZIP code areas were required to receive financial advice from HUD-certified counselors. The results show that a few months of financial education improves financial decisionmaking. And when mortgage counseling is mandated, the default rate for borrowers with low credit scores declines by 4.5 percent.

Here's the surprising part: When borrowers who want to take risky mortgage products are required to attend counseling, the demand for risky products drops sharply. "Borrowers choose less-risky products to avoid going to counseling," Ben-David notes. "In a way, the legislation achieves its goal (to restrict the quantity of risky products) by threatening borrowers with counseling, not by the information included in the counseling itself."

So it seems that mortgage counseling—or even its threat—can be effective. But should it be mandatory? Not for everyone, says Stephan Whitaker, an economist with the Federal Reserve Bank of Cleveland. "It would waste the time of a lot of people who don't need it," he maintains. "Targeted requirements triggered by something (location in CRA assessment area, unusual loan product, or receipt of federal/state/local subsidy) seem more plausible."

What's Next?

Not all of the chips have fallen when it comes to determining what types of consumer financial information work best. In Canada, the government has launched a task force on financial literacy that will deliver its findings in December. Here in the United States, the Financial Literacy and Education Commission launched an enhanced financial literacy website, www.mymoney.gov, last April. The nation's new Consumer Financial Protection Bureau is also likely to make education a key part of its agenda.

What the experts made clear at the Policy Summit is that plain language, broad financial education, and mortgage-specific counseling are each beneficial in their own way and serve to complement each other. "Looking forward," notes Ruth Clevenger, Community Affairs officer for the Federal Reserve Bank of Cleveland and the chief architect of the summit, "improved access to, and raised levels of, financial education will be critical to a sustained recovery from the financial crisis for individuals and communities." ■

2010 Policy Summit

For the agenda and bios of participants at the Federal Reserve Bank of Cleveland's 2010 meeting, see ***www.clevelandfed.org/Community_Development/events/PS2010/index.cfm***

Resources

For links to resources mentioned in this article, go to ***www.clevelandfed.org/forefront***

Five Big Ideas about Consumer Finance Education

April McClellan-Copeland,
Community Relations and Education

Educating consumers on how to make better financial decisions may seem simple: Provide the information, and better decisions will follow. But Jeanne Hogarth, a former high school teacher turned national expert on consumer finance education, knows better. Developing financial education programs that make a difference in people's lives is challenging work. It's not always clear why some of these programs improve outcomes and others don't.

Even so, Hogarth, manager of the Consumer Education and Research Section of the Federal Reserve Board's Consumer and Community Affairs Division, puts great stock in the virtues of financial literacy. Her research strongly suggests that knowledge has a positive effect on financial behavior. Yet she wants to see results from more studies. "Nowadays there is more of a push to have evidence-driven, empirically based programs," she says. "That gives the research community an opportunity to do a lot more of the experimental studies that allow us to tease out what's effective."

Hogarth, a native of Northeast Ohio, recently visited the Federal Reserve Bank of Cleveland and shared some of her perspectives.

Money Management Is Partly Psychology

In thinking about how people manage their money, economists tend to imagine a population of rational beings who base all of their decisions on expectations for the future. Hogarth disagrees. Midway through her career, she says, she had an "aha" moment that made her rethink the traditional approach to consumer finance research.

About Jeanne Hogarth

Jeanne M. Hogarth is a native of Northeast Ohio. She earned a bachelor's degree in education at Bowling Green State University in 1971 and then taught high school in Olmsted Falls. She left the area in 1981 after earning a master's degree and a doctorate in family and consumer economics from the Ohio State University.

Today Hogarth manages the Consumer Education and Research Section of the Division of Consumer and Community Affairs at the Board of Governors in Washington, DC.

During the 2009–10 academic year, Hogarth was a visiting professor at Iowa State University. She is a member of the Association for Financial Counseling and Planning Education and the American Council on Consumer Interests.

"One of the most interesting things I've learned is that a lot of financial education isn't about economics—and that might be heresy!" Hogarth said. "It's really about psychology; it's about how people think and feel."

Behavioral economists have explored how psychology affects whether people participate in 401(k) plans. The optimal choice for a worker's financial well-being is always the same: to participate. But studies have shown that when companies make "opting in" automatic—meaning that workers must actively decline 401(k) participation—more people participate. That's the sort of result that traditional economists might not have predicted.

This realization has encouraged Hogarth to think about how to help people deal with the psychological issues they confront when they make home loans and retirement and investment decisions. "Your risk tolerance is not a financial thing; it's a psychological thing. And yet it has a huge impact on what happens. Because if you're not tolerant of risk, you're not going to get a very high rate of return," she says.

Financial Education Seems to Work

Hogarth's faith in financial education has grown over the years, thanks to some of her own research. In 2003, Hogarth and two of her colleagues at the Board of Governors, Casey Bell and Dan Gorin, began studying the effectiveness of a two-day financial education program for military personnel at Fort Bliss in El Paso, Texas. Staff from the San Diego City College taught the course, which covered budgeting, credit, consumer awareness, car buying, insurance, and retirement savings.

For the study, the soldiers were split into two groups—those who took the financial education course and those who did not. Both groups had to come from the same population and had to be tracked over many years; these are hard-to-satisfy requirements in natural experiments. To determine the effect of financial education, the researchers monitored13 positive behaviors (such as comparison shopping and starting an emergency fund) and 15 negative behaviors (such as paying bills late). They found that soldiers who participated in the financial education group showed more positive behaviors and fewer negative behaviors than those who did not.

Hogarth has been generally pleased with the study and its findings. "Financial education did seem to have an effect on specific financial management behaviors," she wrote in a paper presented at the 2009 Federal Reserve System Community Affairs Research Conference.

"The bottom line is that we want good financial outcomes for consumers," Hogarth said. "We want them to have financial security. We want them to feel comfortable about managing their money."

The Earlier the Better

Not only should consumers have access to financial education programs, but the earlier the better. In a 2006 paper, for example, Hogarth cited a study (Bernheim, Garrett, and Maki) that showed that consumers who graduated from high schools in states with mandated financial education averaged higher savings rates and higher net worth.[1]

The benefits also persisted over time. The research on soldiers stationed at Fort Bliss showed that those who had bank accounts when they were growing up became better money managers as adults, as did those whose parents talked with them about family finances early in life.

Financial Literacy Doesn't Always Mean Financial Capability

But being knowledgeable about financial management does not guarantee that people will put that knowledge to good use. Hogarth pointed out that educators have spent a lot of time and effort trying to distinguish between financial literacy and financial capability without reaching a consensus.

Hogarth has her own take on the difference: "I think that literacy connotes a certain level of knowledge," she said. "Capability takes it one step beyond knowledge to actions. I might know intellectually how to play baseball, but if I've never gotten onto a field and tried to swing a bat at a ball, I wouldn't necessarily be capable. But when I actually get out there and start practicing, my capability kicks in. That's how I differentiate literacy from capability."

"The bottom line is that we want good financial outcomes for consumers," Hogarth said. "We want them to have financial security. We want them to feel comfortable about managing their money."

Focus Future Research on Behaviors and Outcomes

Hogarth has seen research nail down a connection between consumers' knowledge and behavior—if you know more, you do better. But another question looms large for Hogarth and others who study consumer behavior. Sometimes people exhibit all the "correct" financial behaviors, but their outcomes are underwhelming.

Hogarth illustrates the point with an example: "Let's say I max out my 401(k) every year. With the recent decline in stock market values, I've actually lost money. I'm doing all the right things, but my outcome isn't so great.

"Sometimes the outcome isn't caused by the things you do or don't do," she explains. "It's because of external factors such as unemployment or a decline in housing values. The struggle for researchers is connecting behaviors to outcomes while also controlling for external factors. I don't know that we've figured out how to do that."

Hogarth acknowledges that it is difficult to track financial outcomes five to 40 years in the future. She points to the Social Security Administration, which has set up three centers for financial security research. The Financial Literacy Research Consortium, as the centers are collectively called, will create innovative materials and programs for Americans at various phases of their lives. For example, mid-career professionals and near-retirees will be helped to understand the role of Social Security benefits and to plan for retirement.

"I think the centers will really help financial educators provide evidence-based research to policymakers," Hogarth said. "There are many, many projects that have been funded through the three centers that will bring some fresh insights on the links between financial knowledge, financial capability, and financial outcomes." ■

1. Bernheim, B. Douglas, Daniel M. Garrett, and Dean M. Maki. 2001. "Education and Saving: The Long-term Effects of High School Financial Curriculum Mandates." *Journal of Public Economics* 80(3): 435–65.

Q&A with Jeanne Hogarth

Interviewed by Jennifer Ransom,
Community Relations and Education

Forefront: ***Do you think the field of behavioral economics is helping to marry psychology and economics?***

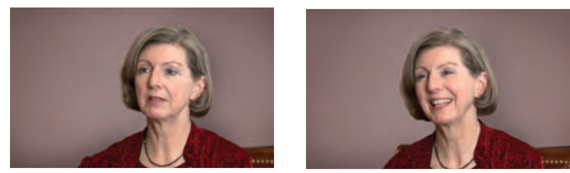
Hogarth: Behavioral economics has been tremendously important in raising our awareness of how people operate, what they're thinking, what they're doing. But we also know that default options can be set up. One of the classic ones, the major tenet of financial management, is pay yourself first. The idea of using payroll deductions to save into a retirement or savings account is good behavioral economics. You get automated savings; you build up your emergency fund, your college fund, your new car fund, or whatever it is; and you use some of the "out of sight, out of mind" psychology to the help your economic situation.

Forefront: ***Can you talk about the tension that can arise when banks or other private-sector firms want to go into schools to help educate students about finance?***

Hogarth: There's an interesting conflict here. Research shows that kids who have bank accounts while they're growing up are better money managers as young adults. It's obviously very important for kids to open accounts, but the question is how to do that without coming across as a giant marketing attempt by a bank. I don't know if there's a really good answer to that. You could partner with multiple banks in your community. Or you could work through your local bankers' association or trade association to raise awareness in the schools, and then invite the students to do some comparison shopping for a bank account.

Forefront: ***What's your thinking on the highest and best role of the Federal Reserve System in helping to achieve good financial outcomes for consumers?***

Hogarth: In marketing, there's an interesting model for creating awareness and then creating comprehension, and having that feed into decision-making. I think that's actually a pretty good model for the Federal Reserve System. In many of our initiatives, we're at the awareness level. We're just trying to alert people that there's something out there that they might want to be paying attention to. The Fed also has a lot of resources that can help people deepen their comprehension. But in the end, you have to realize that most people's decisions are personal. ■



Jeanne Hogarth discussed her research during a visit to the Federal Reserve Bank of Cleveland in June. Watch video clips of our interview at www.clevelandfed.org/forefront.

Published works

Jeanne Hogarth's webpage, which includes published works, at the Federal Reserve Board of Governors.
www.federalreserve.gov/research/staff/hogarthjeannem.htm

Q&A

Watch clips of our interview with Jeanne Hogarth.
www.clevelandfed.org/forefront

Overextended, Underinvested: The Debt Overhang Problem

Doug Campbell
Editor

Too much corporate debt can be a bad thing. This rather obvious intuition is backed up by mounds of research, not to mention ample observations from the recent financial crisis. In the run-up to the meltdown, for example, Wall Street investment banks ratcheted up leverage ratios to $30 in debt for every $1 in equity. We all know how that strategy turned out.

Economists have long studied how unwieldy debt levels can kill businesses: Steep interest payments siphon off available cash; highly leveraged firms face higher borrowing costs because of the increased possibility they will default, and so on. If experts can develop accurate predictions of how companies will behave in different over-indebted situations, policymakers might be better able to take appropriate policy actions during financial crises.

More than 30 years ago, economist Stewart Myers wrote the first formal theory of how excessive corporate debt can lead firms to underinvest in projects that otherwise might be profitable. As Myers described it, firms with large debt loads are likely to see their existing debt trade at less than face value. So most proceeds from new investments will flow not to the firm's *owners* but to the firm's *creditors*. An owner's line of reasoning thus becomes distorted: Why bother to pursue costly new projects if most of the future benefits accrue to someone else?

Now, two Federal Reserve economists have taken a potentially important step forward in understanding the debt overhang problem. Filippo Occhino and Andrea Pescatori suggest an even greater role for public spending and perhaps monetary policy to offset the investment aversion that develops among debt-saddled firms.[1]

1. Occhino is with the Federal Reserve Bank of Cleveland; Pescatori was formerly with the Federal Reserve Bank of Cleveland, and is now with the International Monetary Fund.

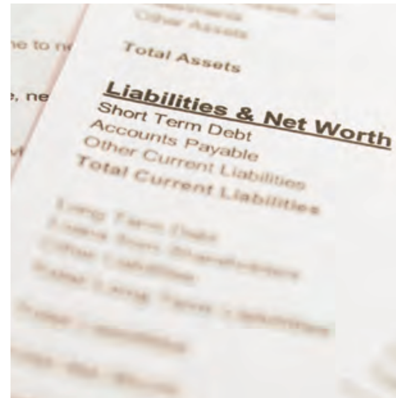
The Case for Debt Relief

The debt overhang distortion sometimes provides a compelling case for at least selective debt forgiveness. When a lender realizes that a firm is very likely to default, it may decide to offer the borrower a break in an effort to recoup more of its loan than it otherwise would in the event of liquidation.

The key is to reduce the distortion enough so that the borrowing firm decides it would benefit by continuing to invest in new projects. As with the example of distortion below, $1.5 million of the benefit from new investment will go directly to the creditors, and only half a million goes to the firm's equity owners, making it a money-loser.

But if the creditor sees this distortion, it may decide to provide some forgiveness on the firm's debt, perhaps decreasing the liability values to $8 million. In that case, the $1 million project makes sense for both sides—with the project, the firm gains $1.5 million. Meanwhile, the debt holders collect $8 million, whereas they would have received only $7.5 million in the event of default. This logic is behind much of the debt relief efforts seen on behalf of faltering sovereign nations.

"Without forgiveness, firms may have no hope and give up," Occhino says. "But if part of the debt is forgiven, then you give firms hope, they put in effort, hire, invest, and the value of the firm increases. So both benefit."



The Debt Overhang Distortion

Debt has developed a poor reputation, but it is usually quite useful. It allows firms to take on projects they otherwise couldn't, ultimately adding value to the economy. In fact, debt is a positive feature of developed financial markets. But too much debt—that's another matter.


Filippo Occhino


Andrea Pescatori

The financial crisis speaks to the peril of the debt overhang distortion. Through most of the past two decades, the level of credit market debt in the U.S. economy grew at about the same pace as the level of corporate assets. Then, in the latter part of 2007, debt and assets forked in different directions, with debt continuing to rise but assets nose-diving. The problem wasn't so much that businesses were taking on more debt; it was that their assets were fast becoming worthless. The mortgage securities market was the first to plunge, eventually taking down asset values across the board.

Unleashed were the problematic channels through which high leverage ratios wreak havoc—the overwhelming interest payments, the difficulty in securing new financing, the impulse to save more and spend less, and the irresistible urge of distressed firms to underinvest in the face of crushing debt. This last channel piqued the interest of Occhino and Pescatori.

Because debt and credit affect business investment decisions within their model, the economists can study what happens when the value of a firm's assets abruptly falls, as in the recent financial crisis.

Here is how the debt overhang distortion works: Consider a firm whose asset values plunge from $10 million to $7.5 million. The value of its liabilities remains at $9 million. Along comes an opportunity with a projected cost of $1 million and projected benefit of $2 million. The problem is that $1.5 million of that benefit will go directly to the creditors, and only half a million will go to the firm's equity owners. In other words, it's a money-losing scenario for the equity owners, even if pursuing the project keeps the firm alive. (See "The Case for Debt Relief" above for a possible solution to the problem.)

Limitations of Standard Models

A leading critique of traditional business cycle models—particularly in the wake of the financial crisis—is that they don't address the financial side of the economy—the flow of funds from investors to firms through banks and markets.

Because the financial side has no relevance, standard macroeconomic models allow firms to accumulate huge sums of debt with no need for policy prescriptions to keep the economy from suffering. That's because in these models, the frictions caused by excessive debt don't exist. Instead, the economy automatically adjusts to new equilibriums.

The real economy—employment, output, and so forth—registers no change from frictions when financial variables like debt and equity get out of whack. This failure to replicate the real world obviously limits the utility of such models in helping guide policy.

Efforts to address this shortcoming began during the late 1990s. Federal Reserve Bank of Cleveland economists Chuck Carlstrom and Tim Fuerst were among the first to study how firms with weak balance sheets paid higher borrowing costs and how this "external finance premium" affected the business cycle.

Realistically, the equity holders are performing a simple cost-benefit analysis, and even after weighing the firm's goodwill, future growth potential, and revenue opportunities, the project still doesn't add up. The pragmatic decision is to skip or postpone the project and default on the debt. It's the same motivation that leads homeowners to walk away when their mortgage debt far exceeds the value of their homes. (Although the firm defaults in the example, this is not necessary for the distortion effect to persist. The underinvestment problem happens when there is a *substantial risk* of default, even if default does not necessarily occur.)

What's more, crushing debt may persuade firms to pursue far riskier projects than optimal. If the project pays off, then the owners see a benefit; but if it crashes and burns, then the creditors take the biggest hit.

This particular distortion can be devastating. A recent study on the effect of the debt overhang distortion found that every 10 percent increase in leverage decreases the amount firms invest in projects by up to 20 percent. In other words, businesses become zombies—they continue to exist, but no longer expand. This can have a dampening effect on the wider economy.

A New Way to Look at the Problem

Traditional macroeconomic models are limited by their failure to account for financial frictions (see "Limitations of Standard Models" above). To get a better handle on the size of the distortion, Occhino and Pescatori looked at debt overhang from a new angle.

The innovation in Occhino and Pescatori's work is to explain how the debt overhang distortion affects interactions between the business cycle and *balance sheet variables*. Because debt and credit affect business investment decisions within their model, the economists can study what happens when the value of a firm's assets abruptly falls, as in the recent financial crisis. While it is not a be-all-end-all solution to the lack of financial markets in macroeconomic modeling, it is a step toward better establishing the linkages.

Occhino and Pescatori show how a macroeconomic shock to, say, productivity, finds its way onto firms' balance sheets in the form of damaged asset values. This increases firms' risk of default, which triggers the debt overhang problem. Now, firms have smaller incentives to invest, knowing that proceeds from investments will go first and foremost to creditors. Decreases in investment further raise the probability of default, creating a vicious circle in which the initial effects of the adverse shock to productivity become both amplified and more persistent over time.

Policy Implications

The model results square with the general thrust of the data. In the model, as in the real business cycle, credit spreads widen and default rates mount as the economy nosedives. And, as in the data, the model suggests that corporate balance sheets remain impaired for a long time. What's more, crushing debt may persuade firms to pursue far riskier projects than optimal. If the project pays off, then the owners see a benefit; but if it crashes and burns, then the creditors take the biggest hit.

In many macroeconomic models, that would be the end of the story. The efficient response would be to do nothing and simply wait for the market to reallocate resources and find a new equilibrium. But Occhino and Pescatori's model recognizes the impact of financial frictions. This opens the door to policy prescriptions, because investment is dropping more than it should. If this disinvestment becomes contagious, the economic harm could become widespread.

At a macroeconomic level, a straightforward way to address this problem is with expansionary fiscal policy. Increased public spending and decreased tax rates could spur increased production, strengthening firms' balance sheets and at least partly offsetting the debt overhang distortion. A similar approach could be considered with expansionary monetary policy, but Occhino and Pescatori do not explore this option as there is no money, strictly speaking, in their model. That's something for future work.

"In an economic downturn, if you move to expansionary policy you can eliminate this extra decrease caused by debt overhang," Occhino says.

Other reforms are being debated in the aftermath of the financial crisis. Caps on the levels of leverage that firms can carry on their balance sheets might seem like another approach to limiting the debt overhang distortion. Occhino thinks the risk of overstepping here is significant. "For most firms, borrowing is beneficial," he stresses. "What is needed is something to ease the distortion, something to keep firms from avoiding investments during downturns."

The pace of the current economic recovery will depend in no small part on how well policymakers can address the distorting impact of debt, to mop up the mess left behind by the financial crisis. Understanding why overburdened businesses behave the way they do is pretty important, and that is why steps like Occchino and Pescatori's could prove valuable. ■

More on debt overhang

See our dedicated webpage for a short video and links to additional articles on debt overhang.

www.clevelandfed.org/forefront/2010/09/debt_overhang_landing.cfm

Recommended readings

Carlstrom, Charles, and Fuerst, Timothy. 1997. "Agency Costs, Net Worth, and Business Fluctuations: A Computable General Equilibrium Analysis." *American Economic Review* 87(5): 893–910.

Myers, S.C. 1977. "Determinants of Corporate Borrowing." *Journal of Financial Economics* (5): 147–75.

Occhino, Filippo, and Pescatori, Andrea. 2010. "Debt Overhang and Credit Risk in a Business Cycle Model." Federal Reserve Bank of Cleveland Working Paper 10.03.


CHRIS PAPPAS

Interview with Laurence Meyer

"By the time I completed my first economics class in college, I knew I wanted to be an economist." The college was Yale and the narrator was Laurence Meyer, writing in his 2004 book, *A Term at the Fed: An Insider's View*. Meyer did indeed go on to become an economist. And not just any economist, but a top-flight academic, a central banker, and a principal of one of the globe's leading economic forecasting firms.

What may separate Meyer from so many other economists is his ability to communicate well. The *Boston Sunday Globe* noted that "Meyer writes about complex economic issues in a clear style."

Meyer was a professor of economics for 27 years and former department chairman at Washington University. In 1982, he launched the economic consulting firm Laurence H. Meyer and Associates and earned a reputation as one of the nation's leading forecasters. He was named to the Federal Reserve Board of Governors in 1996. His term on the Board lasted until 2002, after which he rejoined his old firm, now called Macroeconomic Advisers.

Meyer is a fellow of the National Association of Business Economics, a director of the National Bureau of Economic Research, a scholar with the American Council on Capital Formation, and a member of the Panel of Economic Advisers for the Congressional Budget Office. He received a BA from Yale University and a PhD from the Massachusetts Institute of Technology.

Mark Sniderman, executive vice president and chief policy officer at the Federal Reserve Bank of Cleveland, interviewed Meyer on June 9, 2010, in Cleveland. An edited transcript follows.

Sniderman: ***Larry, thanks so much for talking with me this afternoon. I'm looking forward to a great conversation. Let me start with the financial crisis. I'm interested in your views at a big-picture level. How did this all happen?***

Meyer: It's probably not a good idea to think that there's one single flaw in the system that was exposed. I think that there were several factors. One was rapid financial innovation—new financial products that weren't tested by market downturns and that changed or morphed as they were being developed. This is the explosion of subprime. It morphed from being one thing to being something completely different and much riskier later on.

And the same thing with securitization, a new technique, very valuable, and a very good idea, but then it morphed again into very complex forms of structures that nobody could understand. I think those financial innovations are very important, and they set up the system with expanding risk and concentrated risks that weren't well understood.

Second, there's always a trigger that happens, and the trigger was declining home prices. Many of us believed that home prices never fall. There's a good historical record of that. I think we all appreciate now that the subprime market was not viable if home prices fell. But since we didn't think home prices would fall, we didn't worry about it.

Then third, we just took too narrow a view of the subprime problem. I myself, and I think more generally many macroeconomists, had this focus that it's about subprime—relative to total mortgages, housing relative to the economy—we're talking about tenths [fractions]. How can that be a problem?

We didn't see the fundamental connection between property busts and collateral in the banking system, bringing the banking system toward insolvency, toward the edge of the abyss. Put on top of that the buildup of leverage in the system—this acts as a multiplier. All these things were going to happen, and now they happened, and the unwinding was much uglier than it otherwise would have been. Practices evolve more quickly than knowledge. Maybe we weren't humble enough about what we understood as bankers, as supervisors, as rating agencies, or as macroeconomists.

Sniderman: ***What does that tell us about the state of macro modeling?***

Meyer: It tells us something very important—something we certainly should have learned—that macro modeling should not be static. It has to evolve over time, and we're continuously learning. We find holes, and we try to close those holes.

But we know in the future there will be crises coming, or shocks in areas that we didn't anticipate. We'll find new holes that we have to fill. In this case, there were really so many. This notion of the financial accelerator wasn't just a cute idea that the [Federal Reserve] chairman [Ben Bernanke] came up with. It was central to our understanding of how the macroeconomy works, particularly when there are intense changes in financial conditions. So you do get these adverse feedback loops that the financial accelerator is all about.

Most of us as macro modelers came out of a tradition in which the transmission of monetary policy, the financial sector, is about real interest rates, about equity values, about the dollar, with virtually no variables that we would call credit variables—they just weren't there. In milder times, that was OK. That probably got the job done. But when the situation was the drying up of credit markets, dysfunctional credit markets, you simply had to give the model more information than otherwise.

Two things seem valuable that we've tried to integrate into our models. First would be "willingness to lend variables" from the senior loan officer survey. Imprecise as it may be, it is a measure of lending terms beyond rates. That's very important and that wasn't there, and I think we can integrate that. And the other is credit spread variables—Baa corporate rate relative to, say, a Treasury rate. The reason that's important is that a risk variable gives an indication of the risk appetites and risk aversion that come into the system when there are financial crises. And that variable tends to be very important in spending equations as well.

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Sniderman: ***Should we expect to be living with our mainstream workhorse macro models for some time, and should we feel good about that? Is there enough progress there?***

Meyer: I love that question! So I think we have two kinds of modeling traditions. First there is the classic tradition. I was educated at MIT. I was a research assistant to Franco Modigliani, Nobel laureate and the director of the project on the large-scale model that was used at the time at the Federal Reserve Board. This is the beginning of modern macro-econometric model building. That's the kind of models that I would use, the kind of models that folks at the Board use.

Laurence H. Meyer

Current Position:
Vice Chairman, Director, and Co-Founder, Macroeconomic Advisers

Past Positions:
Professor of Economics, Washington University
Federal Reserve Governor, 1996–2002

Associations:
Board of the National Economic Bureau of Economic Research
Fellow of the National Association of Business Economists

Economic Forecasting Awards:
Business Week, 1986
Blue Chip Economic Indicators, 1993 and 1996

Education:
Yale University, BA, 1965
Massachusetts Institute of Technology, PhD, 1970

There's also another tradition that began to build up in the late seventies to early eighties—the real business cycle or neoclassical models. It's what's taught in graduate schools. It's the only kind of paper that can be published in journals. It is called "modern macroeconomics."

It's very simple. It's one part science; that's the model. One part art, that's your judgment. And one part luck. That's how you become a really good forecaster!

The question is, what's it good for? Well, it's good for getting articles published in journals. It's a good way to apply very sophisticated computational skills. But the question is, do those models have anything to do with reality? Models are always a caricature—but is this a caricature that's so silly that you wouldn't want to get close to it if you were a policymaker?

My views would be considered outrageous in the academic community, but I feel very strongly about them. Those models are a diversion. They haven't been helpful at all at understanding *anything* that would be relevant to a monetary policymaker or fiscal policymaker. So we'd better come back to, and begin with as our base, these classic macro-econometric models. We don't need a revolution. We know the basic stories of optimizing behavior and consumers and businesses that are embedded in these models. We need to go back to the founding fathers, appreciate how smart they were, and build on that.

Sniderman: ***Wouldn't inflation expectations be a counter-example? That has become an important variable in many classical macro models that policymakers use to help them construct their inflation forecasts. Isn't that at least one place where we see this interplay between the research agenda in macro modeling and the practical use of models?***

Meyer: A brilliant question! And you're absolutely right. This is a good example of interplay between the classic and modern macro approaches. It is true we had a push toward smaller models. This happened because if you want to use these forward-looking expectations, in the form in which modern macro does, forward-looking expectations that are model-consistent, it's really hard to do if you have a huge macro-econometric model. It's very easy to do in the smaller, modern macro models. But I think what you saw is exactly what you are suggesting, that it jumped out of those models and became a key area for research and integration into the large-scale macro-econometric models.

But that doesn't mean policymakers should say, "I like these modern macro models because they treat expectations the way we should." The Federal Reserve Board's classic econometric model treats expectations the way you think they should, but it's a richer, more valuable model for policymakers, number one. And number two, do you really think that you want to model individuals as having their forward-looking expectations based on solving a model out 20 years? I don't think that makes any sense at all. You need small models to do that, but the reality is that expectations are formed, they're forward-looking, but we don't have any idea what the true world looks like.

Our models are caricatures. Everyone has got a different model in his head. I think we learn something about trying to get forward-looking expectations into our model. We model the Phillips curve in a way that is very important. We have long-term expectations directly in the model, playing a very important part. That's something that we didn't used to do. That's the way the profession advances in these classical models as they become refined.

Sniderman: ***One thing models can do is provide different scenarios about what the future might look like; models that provide simulations thousands of times to give us a distribution of outcomes that could help us understand the future possibilities a little more richly. Should we as policymakers be looking for more modeling of that spirit, that spirit of scenario-planning and distributions about outcomes?***

Meyer: I think the answer is absolutely yes. It's not such a simple task to build a sensible, interesting, alternative scenario. I think we should be constantly refreshing and coming up with sensible ideas in each forecast round of what are clearly risks that are on the horizon we want to work into our alternative scenario.

Even more important, we've got to sit down every once in a while and say, "Hmm. What's the worst thing you could think of happening? Tell me something really bad. Find a hot spot." Maybe it's something nobody is thinking about. Maybe we could have thought about this incredibly rapid growth in subprime and structured products and said, "Whoa, what could that mean?" Or we could have thought about sovereign debt developments that were going on and were percolating in Europe. It's not just looking at these incremental things—what happens if this fiscal plan is changed? what happens if oil prices go up?—but looking at these worst-case scenarios.

Sniderman: ***Of course, that's not the model itself issue; that's the human element.***

Meyer: Absolutely. You always have to come back to that. So many times people ask me, "What are the rules for forecasting, what are the ingredients?" And I say, "It's very simple. It's one part science; that's the model. One part art, that's your judgment. And one part luck. That's how you become a really good forecaster!"

Sniderman: ***We've seen a lot of innovations during the financial crisis in terms of monetary policy. Are there any features in monetary policy design that you think should remain more permanently?***

Meyer: To begin to address this question, it's useful to make a distinction between what I call liquidity policy on the one hand and monetary policy on the other. By liquidity policy, I mean providing enough liquidity when there's a panic and the market just wants to hold a lot more liquidity. To prevent that from having powerfully negative impacts on the economy, you give it to them.

The Federal Reserve and central banks around the world acted as liquidity providers of last resort. They all found ways to do that. The Fed was extraordinarily creative, very aggressive. You have to give an A-plus to all those operations. They saved the day. You also have to give high marks to the fact that the liquidity programs were designed so they would naturally go out of business as the panic dissipated. And now the Fed has closed the door on them because no one was there anymore.

So that's gone—beautiful. Central banks all around the world did a great job. Now we're talking about monetary policy and we say, "That's just a lot more complicated!" And we have a disagreement about what's really part of this. Does it matter what the size of the balance sheet is? Does it matter how many reserves you have in the system? Or do you just need to raise rates, using interest on reserves? I'm sure you and I could have a nice debate on that.

We've never had this superabundant level of reserves. We've never had this size of a balance sheet. So, for reasons I think we can understand, there's a desire to do all of these things—shrink the balance sheet, drain reserves, and raise rates. But we've never taken these things away. We put them in, and now we're trying to take them away. We've never done that before.

So we don't know, really, what the impact is if we begin to do asset sales today. How can we unwind that balance sheet without having such adverse circumstances on the markets that we regret it? We're learning about that, too. I think views have changed dramatically even over the last six months or so with market participants

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much less concerned about the market consequences of asset sales. There are three things that we have to get done, and we have tools for every one of them. For draining reserves, we have reverse repos and term deposits. For shrinking the balance sheet, we can just let it run off or we can sell assets. And for raising rates, even there we have complementary roles of both raising interest on reserves and managing reserves at the same time.

The Fed was more aggressive and more effective than any other central bank in the monetary policy dimension. That's because other central banks, whether they admitted it or not, were doing what we call quantitative easing. They were just pushing reserves into the system.

What the Fed did and other central banks didn't do, because the Fed was in unique circumstances, was make use of the mortgage-backed securities, or MBS, market. The Fed was allowed to hold MBS in its portfolio, and yet MBS was a market that had become illiquid and distressed. It was tied to the housing market, which was under incredible pressure. The Fed was able to go into that market and have big impacts because the market was so distressed and illiquid.

I think it's important for the public to understand two things: the responsibilities of the Fed—what you should be holding it responsible for and what you shouldn't be holding it responsible for—and then the limits of what any central bank can do.

That's the good news. The bad news is now we've still got all those assets on the balance sheet. How do we get rid of them? Being the most aggressive and effective during the stimulus means that you're the most challenged when it comes to exiting.

Sniderman: ***There's been a long-running debate about how central banks should deal with asset bubbles. One of the issues that's come out in the wake of the financial crisis has been the interplay between using regulatory tools and techniques as opposed to, or in conjunction with, monetary policy. Do you have thoughts on that spectrum?***

Meyer: This is a very important and evolving area of thought among central banks. We really should start by making a distinction between types of bubbles, between equity bubbles and property bubbles. We lost something like $7 trillion in the bust of the tech bubble. Sounds like a lot, but the economy just shrugged it off—with a very shallow and very short recession.

Equity bubbles are just not a big deal. But property bubbles are absolute killers. We know that from historical experience. The difference is that property is held by leveraged institutions, are the collateral of the banking system, and if you make your banking system insolvent, you've got real problems.

The good news here is that although we don't have good supervision and regulation procedures for dealing with equity bubbles, we do for property bubbles. We've got a lot of ways of handling that. We could lower the loan-to-value ratio—essentially increase the down payment that people have to have on their homes to build a better capital cushion. We could do a whole variety of things on the regulatory side. We could increase capital requirements against those properties that seem to

be more risky because of bubble-like conditions. We could do a whole variety of things that in principle should be, could be, effective.

The question is, would we recognize that a bubble was emerging in time to implement supervisory and regulatory policies that could have some effect? My views have changed a lot since I was on the Board. I'm a firm believer now that you *can* always catch bubbles and identify them in time to do something about them before they get dangerous. The question is, what to do? The first line of defense—and this is certainly what the chairman [Bernanke] and others have said—is supervisory and regulatory policies.

But we have to be realistic. It might work; it might not. And so the big question for central bankers is therefore, what do you do if it doesn't work? Do you have to do something in addition? That's the real issue—do you want to use monetary policy itself, and do you want to lean against bubbles even when the broader macroeconomic conditions would not lead you to, for example, want to tighten? That is a taxing issue.

The issue is less whether you *can identify* a bubble than *what do you do* if you think it's emerging. I've come away with a very different understanding of the risks of allowing bubbles to go unchecked. But that's property bubbles. I'm not so concerned with equity bubbles. Property bubbles—that can be handled to some extent by supervision and regulation, but I think we should be very open minded here. We're searching, we're debating, we're not sure what monetary policies should or could do in those circumstances. If we come to that place again, I'm sure there will be a very good debate in the Federal Reserve System, as there should be, before deciding whether to be more pre-emptive than was the case before.

Sniderman: ***What is it that you wish the general public would better understand about central banks and their role in the economic system in which we live?***

Meyer: What should the public know? First of all, the public has its representatives in Congress. And Congress has a very important job overseeing the Fed. I've said this many times—wouldn't it be good if Congress learned a little bit more about monetary policy and how it works? I'm always amused and distressed about how poor the questions are during Congressional oversight committee hearings. The first part of the public I'd like to see understand more about monetary policy is the Congress, particularly members of the oversight committees.

Other than that, I think it's important for the public to understand two things: the responsibilities of the Fed—what you should be holding it responsible for and what you shouldn't be holding it responsible for—and then the limits of what any central bank can do.

It's partly the limitations of our knowledge. It's partly the limitations of what central banks' tools can accomplish in the real world. But I would say to understand what they do, what their responsibilities are, and then understand *how* they try to achieve those objectives and appreciate that there are limits. When you want to hold central banks accountable, understand that perfection in central banking is no more possible than it is in any other profession.

Sniderman: ***Maybe you can leave us with some thoughts on things you've been reading these days?***

Meyer: My wife and son always warned me that if anybody asked me that question, I shouldn't even answer it because they view my reading list as, shall we say, not intellectual enough to go along with my reputation.

I have two sets of readings on my night table. One is books on the financial system and recent history in particular. *Too Big to Fail* [Andrew Ross Sorkin], is like a story unfolding before you, and I'm in the middle of that one. *The Black Swan* [Nassim Nicholas Taleb] has fascinating stories about the weight that should be given to improbable events, brainstorming on catastrophic things that could happen, and how to protect yourself in advance from those possibilities. And then I've got the book by Michael Lewis, *The Big Short* [reviewed on page 28 of this issue], that's on my list.

Finally, I read mysteries, spy novels, and my current group is by the author from Sweden, Stieg Larsson, *The Girl with the Dragon Tattoo* and all the ones that followed. Fantastic reading. These books are insanely popular all around the world. This is a series that has really caught my attention, and I've got one more of those to go.

Sniderman: ***Thanks for taking the time to talk with us today.*** ■

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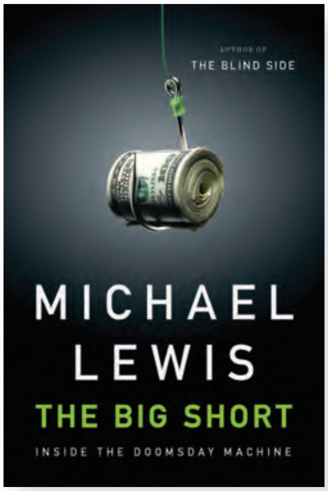
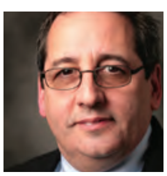


The Big Short: Inside the Doomsday Machine

by Michael Lewis
Norton 2010



Reviewed by
Dan Littman,
Economist
Federal Reserve Bank of Cleveland

In the past year, at least 20 books on the financial crisis have crossed my desk. I have read parts of all of them. Some are excellent—insightful, behind-the-scenes looks at the people and policies that contributed to and then reacted to the crisis. Other books, alas, are not so splendid—way too technical, so inside baseball that they make no sense to the lay reader.

So if you are only now getting around to deciding which tales to read about the financial crisis, I am here to help. A good place to start is *The Big Short: Inside the Doomsday Machine.* Michael Lewis, an editor at *Vanity Fair*, writes a novelistic account of the crisis that follows four hedge fund managers who predicted the housing market crash as early as 2004. The quartet aggressively took "short" positions on mortgage-backed securities through the purchase of a type of insurance called a credit default swap (CDS). Essentially, they were betting the market would tank, and how right they were.

The protagonists initially met resistance from investors and bankers: Why were they wagering against a market that was seemingly going so well? They also faced difficulty in getting CDSs offered on mortgage-backed securities in the first place. At the time, CDSs were not widely used as insurance against mortgage-backed securities.

Said one of the money managers: "Nobody we talked to had any credible reason to believe the failure of subprime CDOs [collateralized debt obligations] was going to become a big problem; no one was really thinking about it."

It didn't take long for the investors to prove their doubters wrong. Their bets against the market would eventually pay off in the form of hundreds of millions of dollars. At the same time, of course, others were losing hundreds of millions with the tailspins of Bear Stearns, Lehman Brothers, Freddie Mac and Fannie Mae, and AIG.

The Big Short is strong in conveying the drama in the midst of the crisis. And it is so effective at telling the human story that the "hard stuff" is much easier to understand than in other texts. Lewis excels in explaining the complicated investment strategies of those buying mortgage-backed securities and selling CDSs, and, conversely, those buying CDSs and shorting mortgage investments. On top of it all, Lewis is effective in describing the often complex and arcane investment instruments themselves. Readers will learn a lot from reliving the crisis from an insider's point of view.

Yet *The Big Short* is not a perfect book. While Lewis provides important evidence about what happened in the run-up to the financial crisis, he is not terribly helpful in explaining the underlying historical forces in housing, finance, and government policy that brought us to the brink. Nor is his book deep in discussing the effectiveness of the immediate policy response in the context of other choices the Federal Reserve, the Treasury, and others had available.

Translating the dramatic action in *The Big Short* to how regulators ought to change their behavior and their rules to forestall a future crisis requires wider reading of the available literature.

With that in mind, here are some other good books you might consider to fill out your knowledge about the financial crisis:

- Gillian Tett, *Fool's Gold: How the Bold Dream of a Small Tribe at J.P. Morgan Was Corrupted by Wall Street Greed and Unleashed a Catastrophe*. Tett, the U.S. editor of the *Financial Times*, summarizes how the credit default swap was "invented" and how it evolved to become a key contributor to the financial crisis.

- Carmen Reinhart and Kenneth Rogoff, *This Time Is Different: Eight Centuries of Financial Folly*. The authors—both economists—provide a rigorous and indispensible historical perspective on the recent crisis.

- Sebastian Mallaby, *More Money Than God: Hedge Funds and the Making of a New Elite*. The hedge fund industry is the focus of this author, an official at the Council on Foreign Relations.

- David Wessel, *In Fed We Trust: Ben Bernanke's War on the Great Panic*. Wessel, economics editor at the *Wall Street Journal*, delivers a fly-on-the-wall account of Federal Reserve actions during the financial crisis. ■

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