Center for American Progress

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Long-Termism or Lemons

The Role of Public Policy in Promoting Long-Term Investments

By Marc Jarsulic, Brendan V. Duke, and Michael Madowitz

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Contents

Introduction and summary

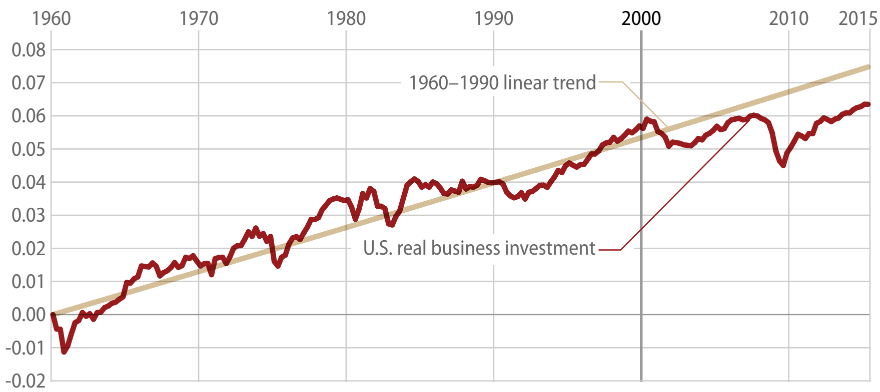
The U.S. middle class is stuck in a rut: The U.S. Census Bureau recently revealed that real median household income failed to grow between 2013 and 2014—the fifth consecutive year in which it either shrank or did not grow.[1] But this is not just the story of a weak recovery; it is also the story of a weak 2001–2007 expansion. Despite six years of economic growth, the share of prime-age workers with a job fell,[2] and real median household income did not grow past its 2000 level during that expansion.[3]

One of the primary reasons for anemic middle-class income growth in both post-2001 recoveries is a retreat in business investment, which has remained well below its historic trend. (see Figure 1) This is especially perplexing because corporate profits are robust and borrowing costs are historically low. (see Figure 2)

FIGURE 1

Real growth of business investment has slowed since 2000

Log index, 1960 = 0

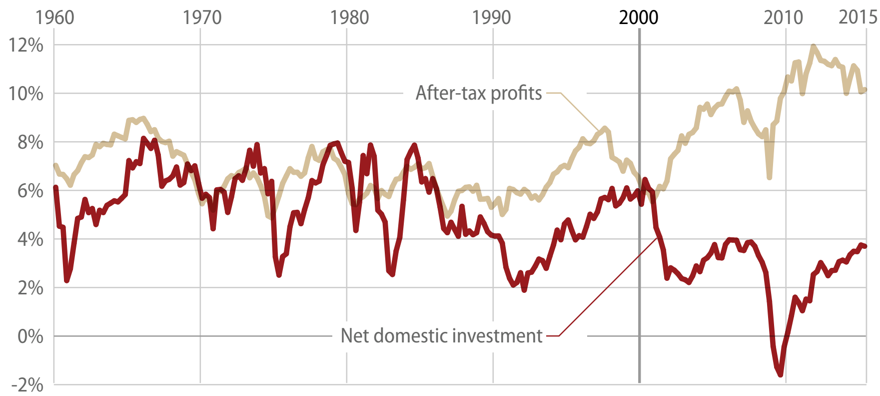


Source: Authors' analysis of Federal Reserve Economic Database, "Gross private domestic investment: Domestic business," available at https://research.stlouisfed.org/fred2/series/W987RC1Q027SBEA (last accessed October 2015); Federal Reserve Economic Database, "Gross Domestic Produce: Implicit Price Deflator," available at https://research.stlouisfed.org/fred2/series/GDPDEF (last accessed October 2015). Analysis adapted from Jason Furman, "Business Investment in the United States: Facts, Explanations, Puzzles, and Policies," Prepared remarks before the Progressive Policy Institute, Washington, D.C., September 30, 2015, available at https://www.white-house.gov/sites/default/files/page/files/20150930_business_investment_in_the_united_states.pdf.

FIGURE 2

Profits have been rising while investment has been falling since 2000

Net domestic business investment and net
after-tax profits as shares of net domestic product



Source: Authors' analysis of Federal Reserve Economic Database, "Net domestic investment: Private: Domestic business," available at https://research.stlouisfed.org/fred2/series/W790RC1Q027SBEA (last accessed October 2015); Federal Reserve Economic Database, "Corporate Profits after Tax with Investory Valuation Adjustment (IVA) and Capital Consumption Adjustment (Ccadj)," available at https://research.stlouisfed.org/fred2/series/CPATAX (last accessed October 2015); Federal Reserve Economic Database, "Shares of gross domestic product: Net exports of goods and services," available at https://research.stlouisfed.org/fred2/series/A019RE1Q156NBEA (last accessed October 2015).

Slow business investment growth predates the Great Recession and presents a major challenge to both the demand and supply sides of the U.S. economy. For the demand side, lower investment means that companies are purchasing fewer goods and services, which in turn reduces employment and wages. For the supply side, less investment means slower productivity growth. As White House Council of Economic Advisers Chairman Jason Furman has shown, lack of investment is the primary driver behind the recent productivity growth slowdown.[4] While the failure of middle-class compensation to keep up with economy-wide productivity demonstrates that higher productivity does not automatically translate into middle-class income growth,[5] economists and policymakers almost universally acknowledge that it is still necessary for long-term growth in living standards.

Some policymakers and analysts have argued that the key to increasing investment is cutting taxes on capital since that would boost the incentive to save and invest in new capital goods.[6] This argument misses that higher after-tax returns also allow investors to do just as well in the future while saving and investing at a lower rate. Moreover, tax cuts themselves can lead to higher deficits, which reduce national saving. The balance of research on tax policy changes over the past four decades suggests that lower taxes on capital do not increase investment.[7] Unfortunately, the nation's decades-long experiment with tax cuts for the wealthy has produced only lackluster economic results at an exorbitant fiscal cost.

There are several public investments the country could make that would actually boost future productivity. A robust public investment agenda would include spending $100 billion per year on infrastructure investment,[8] making college debt free,[9] and increasing families' access to high-quality child care, as the Center for American Progress previously proposed.[10] These are important physical and human capital investments that would pay dividends down the road.

But another challenge is motivating the private sector to invest when the cost of borrowing money has never been lower.[11] One possible explanation for the 15-year business investment drought is that managers and investors have become so focused on short-term profits that they are not making long-term investments that will increase the value of their companies. BlackRock CEO Larry Fink recently wrote a letter to the CEOs of the Standard & Poor's 500 index companies arguing that this so-called short-termism has become a real problem:

> *As I am sure you recognize, the effects of the short-termist phenomenon are troubling both to those seeking to save for long-term goals such as retirement and for our broader economy. In the face of these pressures, more and more corporate leaders have responded with actions that can deliver immediate returns to shareholders, such as buybacks or dividend increases, while underinvesting in innovation, skilled workforces or essential capital expenditures necessary to sustain long-term growth.*[12]

This report examines the evidence of short-termism among publicly traded firms, finding that Fink's worries are well founded. It next examines the role of three important players in modern equity markets—managers, short-term traders, and institutional investors—in the growth of short-termism.

The threat that short-termism poses to inclusive prosperity is a form of the "lemons market"—or asymmetric information—problem described by Nobel Prize winner George Akerlof.[13] In a market, sellers know a product's quality and try to fool buyers into paying full price for low-quality "lemons." Savvy buyers refuse to pay top dollar because doing so no longer guarantees top-quality products. This generates a cascading effect in which sellers who cannot get top dollar stop selling their high-quality products until only the low-quality lemons remain on the market. Similarly, managers of public companies know more than investors do. Since higher short-term earnings signal higher long-run value, some managers may attempt to fool investors by engaging in short-termism to raise current earnings.

This poses the danger that investors will believe the stock market is a lemons market, forcing even long-termist managers into short-termism in order to appear as profitable as short-termist firms. Taken to its logical extreme, this dynamic could cause growing firms to forgo or even exit public markets entirely.

Properly functioning markets are a powerful agent for inclusive prosperity, but properly functioning markets do not simply fall from the sky and cannot be taken for granted. The Center for American Progress proposes a policy agenda that would nudge financial markets toward a focus on the long term while paying dividends for managers, shareholders, and the middle class.

Growing signs of short-termism in public markets

BlackRock CEO Larry Fink is not the only U.S. executive who thinks that publicly traded corporations are giving up long-term value in exchange for boosting current earnings. In one survey of financial executives, 78 percent said they would give up economic value in exchange for smooth earnings; 55 percent said they would avoid initiating a very positive profitable project if it meant falling short of the current quarter's consensus earnings.[14] In another survey of more than 1,000 board members and C-suite executives around the world, *McKinsey Quarterly* found that 63 percent felt pressure to generate strong short-term results had increased over the previous five years. In addition, 86 percent said that using a longer time horizon would strengthen corporate performance, including financial returns and innovation.[15]

Bank of England Chief Economist Andy Haldane has pointed out several signs that corporate behavior is becoming increasingly short-termist[16] in both the United States and the United Kingdom.[17] First, the period an investor holds a stock has fallen from around six years in 1950 to less than six months today.[18] A second sign is a shift in firms' dividend behavior. Traditionally, firms' dividend payout ratios—the ratio between a firm's dividends and income—fell as often as they rose. Since 1980, however, they almost never fall, regardless of actual performance.[19]

A third piece of short-termist evidence Haldane offers is the rise of share buybacks—when firms use their earnings to buy their own stock and raise its price. The 454 companies that consistently stayed in the S&P 500 from 2004 to 2013 spent $3.4 trillion buying their own stock, accounting for 51 percent of their net income. Combined with the 35 percent of net income they spent on dividends, that leaves very little for investment.[20]

Haldane's most rigorous piece of evidence, however, is a statistical analysis by himself and others that estimates "impatience" across U.S. and U.K. industrial sectors—in other words, how much markets excessively penalize a dollar of profit tomorrow relative to a dollar of profit today.[21] While Haldane and his co-authors find no evidence of short-termism between 1985 and 1994, they do find evidence between 1995 and 2004. This points to short-termism as a recent, systemic phenomenon. Indeed, Haldane and his co-authors found that markets excessively discounted future earnings between 5 percent and 10 percent per year, an effect that compounds strongly over time: A project that is valued as a $56 gain over 50 years becomes an $11 loss using the 10 percent excessive discounting. These results imply that short-termist distortions are preventing companies from making profitable investments.

Another piece of evidence that public markets have become excessively focused on the short term is a comparison between public and private firms' investment patterns since private firms are not subject to the pressures of public markets. One study by University of California, Los Angeles, economist John Asker and others found that U.S. public firms invest 3.7 percent of their assets while private firms in the same industry and of the same size invest 6.8 percent.[22] The study also found that public firms are less likely to respond to a new investment opportunity. This is especially striking since public firms should have access to cheaper capital, which reduces the cost of investments. Haldane and his co-authors have found similar results among U.K. firms.[23]

What causes short-termism?

This section examines the roles of three different participants in modern equity markets—managers, short-term traders, and institutional investors—in the rise of short-termism. It finds that managers' incentives push them toward a focus on the short term; the role of hedge funds engaging in short-term strategies is more ambiguous; and institutional investors are a force for long-term focus.

Management and short-termism

Any evaluation of the causes of short-termism's rise must start with managers; they are the ones who ultimately make the decision to reinvest earnings or return them to shareholders.

Over the past 40 years, a major change in corporate management has been the shift from primarily compensating managers with salary to primarily compensating them with equity, either directly or in the form of options. This shift was a deliberate solution to a long-standing issue in corporate governance that managers are agents acting on behalf of principals—that is, the shareholders. Problems can arise when the incentives of the agent deviate from those of the principal. The solution has been to turn the agent into a principal by compensating executives mostly in stock.

Unfortunately, equity-based compensation appears to have failed to solve the main principal-agent problem: risk-averse managers. In the seminal paper on the principal-agent problem, Michael Jensen and William Meckling wrote, "It is likely that the most important conflict arises from the fact that as the manager's ownership claim falls, his incentive to devote significant effort to creative activities such as searching out new profitable ventures falls." The problem is that share buybacks and dividends are more appealing to risk-averse managers than inherently risky "creative activities" that raise share prices in the long term.[24] A simple shift to equity compensation only gives conservative managers a way to profit more from these share repurchases unless pay packages are structured with an acute focus on long-term incentives.

One thing that the movement to reward executives with stock gets right, however, is that managers respond strongly to the incentives that their compensation provides. In fact, there is substantial evidence that executives even engage in value-destroying behavior that hurts their companies' overall performance because the executives' compensation provides them incentives to do so:

- One study shows that CEOs time the release of favorable news when their options vest—they release 5 percent more discretionary news when their options vest than in prior months.[25] This generates favorable media coverage and a short-run increase in stock price that CEOs then take advantage of by selling their shares.

- Another study finds that top executives' stock ownership influenced whether they increased dividends in response to the 2003 dividend tax cut.[26] Executives with large stock holdings—meaning they would personally benefit more from dividends than before—were more likely to increase dividends than executives who did not.

- The average CFO of a large public firm believes that 18 percent of firms report earnings in a misleading way.[27] Ninety-three percent said that misrepresentation occurred because of outside pressure to hit benchmarks; 89 percent believed it was to influence executive compensation; and 80 percent believed it was to avoid adverse career implications.

- Another study shows that firms that just meet or beat analyst forecasts have far lower research and development growth relative to firms that just miss the forecasts—2.5 percentage points less growth per year.[28] The author suggests that these firms manipulate their research and development, or R&D, growth to meet earnings forecasts. And they have strong reason to meet them: CEOs who just miss earnings targets earn 7 percent less than CEOs who just meet or beat them.

The above evidence underscores the importance of incentives in shaping the behavior of managers. Their apparent responsiveness to the incentives created by compensation structure shows that it could be a powerful lever for improving long-term performance.

Short-term investors and short-termism

Another important trend in equity markets has been the rise of institutions, such as hedge funds, that hold large quantities of stock but can engage in short-term trading strategies. A critical debate is occurring among lawyers, economists, and business leaders about whether these short-term traders reduce firms' long-run value.

Several leading corporate governance experts, including Delaware Supreme Court Chief Justice Leo Strine and corporate lawyer Martin Lipton, have argued that short-term, transient investors such as activist hedge funds—and their role in corporate governance—have been responsible for the rise of short-termism.[29] They have suggested measures to curb their influence, such as giving long-term investors a stronger voice in corporate governance than short-term investors and insulating boards of directors from shareholder activism.

Strine and Lipton's main opponent in this debate, Harvard Law School professor Lucian Bebchuk, argues against insulation and for further shareholder involvement in public corporations. Bebchuk and others have tested the effect of hedge fund activism on the performance of companies up to five years later.[30] They found that while the stock does experience a short-term gain at the time of the activism, those gains do not come at the cost of long-term performance.

Bebchuk's conclusion that short-term trading increases long-term value should nevertheless be greeted with some skepticism. It is important to distinguish between the direct effects of hedge fund activism on the individual firms targeted by hedge funds and their potential effects on the market as a whole. It could be that the specific firms targeted by activist hedge funds perform no worse than nontargets, but this is because all managers feel pressure to meet analysts' quarterly earnings projections for fear of being targeted. This would mean that activist hedge funds encourage short-termist behavior that destroys value in a way that the econometric methods employed by Bebchuk and his co-authors cannot detect.

Institutional investors and long-term focus

Not every trend, however, has pushed markets toward short-termism. One of the most important trends in public markets is the rise of institutional investors such as pension funds and nonprofit endowments. Unlike many small-time investors, these are sophisticated shareholders with the resources to invest in analysis and the time horizon to stay patient with the companies whose shares they own. Evidence suggests that they have provided a bulwark against increasing short-termism.

A study by three leading economists—Philippe Aghion of Harvard University, John Van Reenen of the London School of Economics, and Luigi Zingales of the University of Chicago—shows a positive relationship between institutional ownership and a commonly used measure of innovation: citation-weighted patents. They find an even stronger relationship between institutional ownership and the efficiency of R&D spending—citation-weighted patents per dollar of R&D spending.[31] Another study finds that managers are more likely to reduce R&D spending in response to an earnings decline when institutional ownership is low.[32]

Aghion, Van Reenen, and Zingales argue that there is more innovation under institutional ownership because innovation is risky—the payoff comes years away, if at all—and managers may avoid it since they can be held responsible for even a single bad quarter of earnings.[33] Institutional investors make it safer for managers to invest in innovation because their incentives push them toward patience. Relatedly, institutional investors do not need to rely on external analysts, who appear to cause firms to innovate less.[34]

This is not to say that institutional investors are a panacea. A longer time horizon does not mean that institutional investors can ignore short-term benchmarks, especially when modern risk-management practices require even far-sighted investors to adjust their positions in response to short-term share price fluctuations.

One potential danger posed by institutional investors is that they can seek ownership of multiple firms that compete in the same industry, encouraging them to raise prices. For example, a recent study showed that in the airline industry, concentration resulting from common ownership may be 10 times higher than the level at which the U.S. Department of Justice believes firms can raise prices.[35] As a result, "ticket prices are approximately 3–5 percent higher on the average U.S. airline route than would be the case under separate ownership." Less competition not only means higher consumer prices today, but also less innovation.[36]

Short-termism as a market failure

It is not the role of the government to prevent individual firms and investors from making bad decisions. In theory, markets provide the discipline to reward firms that maximize long-run profits, which in turn produces the most efficiency and most economic growth. But markets are not always perfect and those imperfections—known as market failures—can provide an incentive for firms and investors to make the wrong decision for themselves and society. An important role of government is to create conditions that ensure markets have the information and incentives to provide that discipline.

Perhaps the market failure most relevant for short-termism is the asymmetric information between managers and investors. Managers have far more information about the firm's future performance than investors do, which may provide them with an incentive to mislead investors about the firm's performance. Depending on other factors, markets can either discourage or reinforce these incentives, producing very different economy-wide outcomes.

Harvard economist Jeremy Stein developed a model showing how the asymmetry of information reduces long-term investment and growth.[37] The value of a stock is determined by the expectation of future earnings, and current earnings serve as a signal of future earnings—if earnings are high today, all else equal, investors can expect earnings to be high tomorrow. In Stein's model, managers reallocate money from future investments into current earnings as a way to trick markets into believing the firm is more profitable than it really is.

The problem is that this behavior does not fool the market; if some managers fudge their earnings, the market then expects all managers to fudge their earnings and interprets reported earnings with a big grain of salt. Now, both investors and managers are stuck in what Stein calls a "prisoner's dilemma": Managers must reallocate investments into current profits because investors may no longer believe it when managers say they are investing in the long term, and investors will assume profits are far worse than they really are. Both markets and managers would be better off if the managers did not behave myopically and markets did not expect them to, but the incentives for managers to defect and boost current earnings are too great.

Nobel Prize-winning economist George Akerlof showed how information asymmetries such as those described above can throw a market into a death spiral.[38] For example, someone selling cars knows which car is an unreliable lemon while the car buyer does not; buyer skepticism then drives down prices to the point that the only cars left on the market really are lemons. Relatedly, the Bank of England's Haldane argues that short-termism in finance threatens its own "Gresham's law" in which impatient money could drive out patient money.[39] He points to two different possible outcomes—one in which "patience wins the day," "those pursuing long-term strategies flourish," and "the fraction of long-term investors rises." Under the other, "prices deviate persistently from fundamentals," and "the speculative balance of investors rises, increasing the degree of misalignment in prices."

The danger of the stock market becoming Akerlof's lemon car market is that firms with ample growth opportunities could disappear from public markets altogether because of the pressure to forgo long-term investment opportunities. Investors would push the remaining public firms to focus further on short-term earnings rather than long-term value as belief spreads that firms that sell their shares publicly have limited growth opportunities. This would make it harder for already squeezed middle-class families to save for college or retirement since most of them only have access to public equity markets, which growing firms would abandon. This could exacerbate the dynamic identified by Thomas Piketty, in which wealthy households earn a higher rate of return on their investments than middle-class households.[40]

Notably, these dynamics cannot be solved by completely aligning the incentives between investors and managers. There is also a lack of credibility that makes long-term investments mutually unattractive to shareholders and the executives managing their firms. It is the role of public policy to attempt to ameliorate the information asymmetries that reward short-termism and nudge markets toward the outcome in which rational, patient money wins. Importantly, asymmetric information between managers and investors cannot be eliminated entirely, but the role of public policy is to promote better-structured markets that reduce the role of asymmetric information and lead to better economy-wide outcomes.

An obvious example is laws against insider trading. Economist Ross Levine of Haas Business School at the University of California, Berkeley, along with Lai Wei and Chen Lin of The University of Hong Kong, recently documented the benefits to markets and the economy from insider-trading enforcement.[41] Using international data on insider-trading convictions, the authors find that "enforcing insider trading laws spurs innovation—as measured by patent intensity, scope, impact, generality, and originality."[42] The authors also find companies issue more equity as insider-trading enforcement rises, suggesting that better enforcement leads to better functioning markets. Investors, innovators, and economies all win when the role of asymmetric information in equities markets falls.

Policy recommendations

While this report focuses on explaining the evidence for short-termism and its causes, below are a few policy proposals that the Center for American Progress believes would push markets toward a better equilibrium in which long-term investors, and the U.S. economy as a whole, win.

Nudging managers

Executive compensation clearly has a strong effect on the behavior of executives themselves. Congress should tweak the provision making performance compensation more than $1 million tax deductible in ways that motivate CEOs to focus on the long term, such as requiring that options take longer to vest.

Insider trading erodes public confidence in markets, reduces incentives for managers in innovative industries to make long-term investments, makes it more difficult for young firms to raise the capital they need from the public, and reduces economy-wide innovation. Greater efforts to both enforce existing laws and publicize enforcement actions would require no action from Congress, reduce the influence of asymmetric information, and improve the incentives for managers to make productive investments.

One of the reasons for the explosion of share buybacks is a regulatory change—adjustments to rule 10b-18 of the Securities Exchange Act in 1982 gave firms a safe harbor protection from insider-trading charges when firms purchase stock on the open market.[43] The U.S. Securities and Exchange Commission, or SEC, should repeal this rule as it gives managers an opaque way to manipulate stock prices. Firms would still be able to make tender offers to buy back shares at a certain price by a certain date, which is much less susceptible to manipulation.

The SEC should require more frequent and comprehensive reporting on share buybacks, including transacted prices relative to share prices at different time horizons. Since there is currently no detailed longer-term reporting on how buybacks occur, it is difficult for investors to tell when firms are buying shares in a way that transfers money from shareholders to management. Buyback dates should also be more easily compared to executive option exercise dates. Bringing more transparency to this process would make buybacks a better deal for shareholders and less subject to insider manipulation.

Nudging investors

The tax code currently rewards investments by giving investors a preferred rate on capital gains when investors hold the asset for at least one year. The purpose of this tax code provision is to reward long-term investors, but one year is not nearly long enough. A sliding capital gains tax—a tax rate that falls the longer the asset is held—would provide greater rewards to long-term investment relative to short-term speculation.

Large CEO pay slices—the share of compensation among the top five executives paid to the CEO—are associated with worse performance and lucky option grants for the CEO.[44] Since the slice may reflect the economic rents—or excess compensation—that the CEO is extracting from the firm, the SEC should consider requiring its prominent disclosure, as well as benchmarking of similar firms to reduce monitoring costs for investors.

Given that executives' incentives push them so strongly toward focusing on the short term, companies should take affirmative steps to empower longer-term investors. One measure would be to give long-term shareholders proxy access, which would put independent, long-term focused nominees on equal footing to fill a vacancy on a company's board of directors. Another proposal is to adopt minimum holding periods and time-based vesting of shareholder voting rights.[45]

Conclusion

There is clear evidence that firms are excessively focused on boosting current earnings and have sacrificed long-term investment to do so. The incentives that managers face clearly play an important role in generating this outcome. The effect of hedge funds pursuing short-term trading strategies is more ambiguous, while institutional investors do appear to nudge firms to focus on the long term.

Importantly, there is a clear rationale for public policy to encourage management and investors to focus on the long term by improving access to information and nudging their incentives toward the long term. A longer-term focus means more investment, which in turn means more jobs, higher wages, and greater innovation.

About the authors

Marc Jarsulic is the Vice President for Economic Policy at the Center for American Progress. He has worked on economic policy matters as deputy staff director and chief economist at the Joint Economic Committee, as chief economist at the Senate Banking Committee, and as chief economist at Better Markets. He has practiced anti-trust and securities law at the Federal Trade Commission, the Securities and Exchange Commission, and in private practice. Before coming to Washington, he was professor of economics at the University of Notre Dame. He earned an economics Ph.D. at the University of Pennsylvania and a J.D. at the University of Michigan. His most recent book is *Anatomy of a Financial Crisis*.

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