The Economics of Collapsing Markets

Frank Ackerman¹ December 2008

Big banks are failing, bailouts measured in hundreds of billions of dollars are not nearly enough, jobs are vanishing, mortgages and retirement savings are turning to dust. Didn't economic theory promise us that markets would behave better than this? Even the most ardent defenders of private enterprise are embarrassed by recent events: in the words of arch-conservative columnist William Kristol,

There's nothing conservative about letting free markets degenerate into something close to Karl Marx's vision of an atomizing, irresponsible and self-devouring capitalism.²

So what does the current wreckage of the global financial system tell us about the theoretical virtues of the market economy?

Competitive markets are traditionally said to offer a framework in which, in the memorable words of the movie *Wall Street*, "greed is good." Adam Smith's parable of the invisible hand, the founding metaphor of modern economics, explains why the attempt by butchers, bakers and the like to increase their own individual incomes should turn out to promote the common good. The same notion, restated in rigorous and esoteric mathematics, is enshrined in general equilibrium theory, one of the crowning accomplishments of twentieth-century economics. Under a long list of often unrealistic assumptions, free markets have been proved to allow an ideal outcome – meaning that the market outcome is "Pareto optimal," i.e. there is no way to improve someone's lot without making someone else worse off.

Although academic research in economics has moved beyond this simple picture in several respects, the newer and subtler approaches have not yet had much influence on non-academic life. Textbooks and mainstream policy analyses – the leading forms through which the economics profession influences the real world – still routinely invoke the imagery of the invisible hand and the notion that economic theory has demonstrated that market outcomes are optimal. Critics (myself included) have written volumes about what's wrong with this picture.³ Broadly speaking, there are four fundamental flaws in the theory that private greed reliably creates social good. The financial crisis highlights the fourth and least familiar item in the list, involving access to information. But it will be helpful to begin with a brief review of the other flaws.

¹ This is a work in progress (with most citations yet to be added); send comments and suggestions to <u>Frank.Ackerman@tufts.edu</u>.

² William Kristol, "George W. Hoover?" New York Times, Nov. 17, 2008.

³ See, among many others, Frank Ackerman and Lisa Heinzerling, *Priceless: On Knowing the Price of Everything and the Value of Nothing* (The New Press, 2004), and Frank Ackerman and Alejandro Nadal, *The Flawed Foundations of General Equilibrium: Critical Essays in Economic Theory* (Routledge, 2004).

Four fundamental flaws

First, the theoretical defense of market outcomes rests on Pareto optimality, an absurdly narrow definition of social goals. A proposal to raise taxes on the richest five percent and lower taxes on everyone else is not "optimal" by this standard, since it makes only 95 percent of the population, not everyone, better off. Important public policies typically help some people at the expense of others: pollution controls are good for those who value clean air and water, but bad for the profits of major polluters. The invisible hand won't achieve such non-consensual results; public goods require public choices.

Second, market competition only leads to the right outcomes if everything that matters is a marketable commodity with a meaningful price. Marxists and others have objected to the treatment of labor as a mere commodity; environmentalists have likewise objected to the view of nature as something to buy and sell. This is not a new idea: in the words of the 18th century philosopher Immanuel Kant, some things have a price, or relative worth; other things have a dignity, or intrinsic worth. Respect for the dignity of labor and of nature leads into a realm of rights and absolute standards, not prices and markets. It doesn't matter how much someone would be willing to pay for the opportunity to engage in slavery, child labor, or the extinction of species; those options are not for sale. Which issues call for absolute standards, and which can safely be left to the market? This foundational question precedes and defines the legitimate scope of market competition; it cannot be answered from within the apparatus of economics as usual.

Third, the theory of competitive markets and the proof of their optimality rest on the assumption that no enterprise is large enough to wield noticeable power in the marketplace. Adam Smith's butchers and bakers operated in a relentlessly competitive environment, as do the small producers and consumers of modern general equilibrium theory. In reality, businesses big enough to wield significant power over prices, wages, and production processes can be found throughout the economic landscape.

Big businesses thrive, in part, thanks to economies of scale in technology and work organization: bigger boilers and furnaces are physically more efficient than small ones; assembly lines can make labor more productive than individual craft work; computers are often more productive when they run the same software used by everyone else. Economies of scale are also important in establishing and advertising well-known brands: since no one ever has complete information about the market, as discussed below, there is a value to knowing exactly what to expect when you walk into a McDonald's or a Starbucks.

Bigness can also be based on unethical, even illegal manipulation of markets to create monopoly or near-monopoly positions. Manipulation constantly reappears because the "rules of the game" create such a powerful incentive to break the rules. The story of the invisible hand, and its formalization in the theory of perfectly competitive markets, offers businesses only the life of the Red Queen in *Alice in Wonderland*, running faster and faster to stay in the same place. Firms must constantly compete with each other to create better and cheaper products; as soon as they succeed and start to make greater profits, their competitors catch up with them, driving profits back down to the low level that is just enough to keep them all in business. An ambitious, profit-maximizing individual could easily conclude that there is more money to be made by cheating.

In the absence of religious or other extra-economic commitments to play by the rules, the strongest incentive created by market competition is the search for an escape from competition, legitimately or otherwise.

Opportunities to cheat are entwined with the fourth flaw in the theory of perfect competition: all participants in the market are assumed to have complete information about products and prices. Adam Smith's consumers were well-informed through personal experience about what the baker and the butcher were selling; their successors in conventional economic theory are likewise assumed to know the full range of what is for sale on the market, and how much they would benefit from buying each item. In the realm of finance, mortgage crises and speculative bubbles would be impossible if every investor knew the exact worth of every available investment – as, stereotypically, small-town bankers were once thought to know the credit-worthiness of households and businesses in their communities.

So many choices, so little time

The assumption of complete information fails on at least two levels, both relevant to the current crisis: a general issue of the sheer complexity of the market; and a more specific problem involving judgment of rare but costly risks. In general terms, a modern market economy is far too complex for any individual to understand and evaluate everything that is for sale. This limitation has inspired a number of alternative approaches to economics, ranging from Herbert Simon's early theories of bounded rationality through the more recent work on limited and asymmetric information by Joseph Stiglitz and others. Since no one ever has complete information about what's available on the market, there is no guarantee that unregulated private markets will reach the ideal outcome. Regulations that improve the flow of information can lead to an overall improvement, protecting the unwary and the uninformed.

When people buy things about which they are poorly informed, markets can work quite perversely. If people trust someone else's judgment more than their own – as, for instance, many do when first buying a computer – then decisions by a small number of early adopters can create a cascade of followers, picking a winner based on very little information. Windows may not have been the best possible microcomputer operating system, but a small early lead in adoption snowballed into its dominant position today. Investment fads, market bubbles, and fashions of all sorts display the same follow-the-leader dynamics (but without the staying power of Windows).

When people have to make excessively complex decisions, there is no guarantee that they will choose wisely, or pick the option that is in their own best interest. Yet in areas such as health care and retirement savings, individuals are forced to make economic decisions that depend on detailed technical knowledge. The major decisions are infrequent and the cost of error is often high, so that learning by experience is not much help.

The same overwhelming complexity of available choices exists throughout financial markets. The menu of investment options is constantly shifting and expanding; financial innovation, i.e. creating and selling new varieties of securities, is an inexpensive process, requiring little more than a clever idea, a computer programmer, and a lawyer. Such innovation allows banks and other financial institutions to escape from old, regulated markets into new, ill-defined, and unregulated territory, potentially boosting their profits. Even at its best, the pursuit of financial novelty and the accompanying confusion undermines the traditional assumption that buyers always make well-informed choices. At its worst, the process of financial innovation provides ample opportunity to cheat, knowingly selling new types of securities for more than they are worth.

Information about the reliability of many potential investments is ostensibly provided by bond rating agencies. One of the minor scandals of the current financial crisis is the fact that the rating agencies are private firms *working for the companies they are rating*. Naturally, you are more likely to be rehired if you present your clients in the best possible light; indeed, it might not hurt your future prospects to occasionally bend the truth a bit in their favor. The Enron scandal similarly involved accounting firms that wanted to continue working for Enron – and reported that nothing was wrong with the company's books, at a time when the top executives were engaged in massive fraud.

Preparing for the worst

There is also a more specific information problem involved in the financial crisis, concerning the likelihood of rare, catastrophic events. People care quite a bit about, and spend money preparing for, worst-case outcomes. The free-market fundamentalism and push for deregulation over the last thirty years, however, have rolled back many older systems of protection against catastrophe, increasing profits in good years but leaving industries and people exposed to enormous risks in bad years. These risks occur infrequently or irregularly enough that it is difficult, perhaps even literally impossible, to discover their true probabilities. Nonetheless, responding correctly to rare, expensive losses is crucial to many areas of public policy.

In the U.S., the risk that your house will have fire next year is 0.4%. In effect, the average housing unit has a fire every 250 years; the most likely number of fires you will experience in your lifetime is clearly zero. Does this inspire you to cancel your fire insurance? You could, after all, spend the premium on luxuries that you have always wanted – an excellent plan for raising your standard of living, in every year that you don't have a fire. Life insurance, frequently bought by parents of young children, addresses a similarly unlikely event: the overall U.S. death rate is less than 0.1 percent per year in your twenties, 0.2 percent in your thirties, and does not reach 1 percent per year until you turn 61. The continued existence of fire insurance and life insurance thus provides evidence that people care about catastrophic risks with probabilities in the tenths of a percent per year. In private life, people routinely spend money on insurance against such events, despite odds of greater than 99 percent that it will prove unnecessary.

For catastrophic risks to individuals, demographic data are readily available, making the frequency of worst-case outcomes predictable (which is why insurance companies are willing to cover individual losses). For the most serious crises in agriculture, industry, or finance, there is no such database; the public events of greatest concern are very rare, and are dependent on complex social forces, making it virtually impossible to predict their timing or frequency.

There is, however, a strong desire to protect against potential crises, frequently through the accumulation of reserves; it is striking how often the same word is used in different contexts. Storing reserves of grain to protect against crop failure and famine is an ancient practice, already known in Biblical times and continuing into the twentieth century in many countries. Electricity regulation, as it existed throughout the United States until the 1980s (and still does in some states), required the regulated utilities to maintain reserve capacity to generate more electricity than is normally needed, often 12 to 20 percent above peak demand. And financial regulation requires banks and other lending institutions to hold reserves, either in cash or in something similarly safe, equal to a fixed fraction of their outstanding loans.

All of these forms of reserves look expensive in good years, but prevent or limit losses in bad years. How often will those bad years crop up? In non-crisis times, the potential price volatility and risks of losses in the housing and stock markets can appear to be pleasantly and misleadingly low. By many standards, the crash of 2008 is the worst that U.S. and world markets have seen since 1933, some 75 years earlier. No one has much first-hand knowledge of such crashes.

How could society maintain awareness and preparedness for catastrophic risks that exist in the historical record, but not in this generation's experience? As Henry Paulson, Jr., the Treasury Secretary during the last years of the Bush administration, said after several months of floundering, unsuccessful responses to the financial meltdown of 2008,

"We are going through a financial crisis more severe and unpredictable than any in our lifetimes... There is no playbook for responding to turmoil we have never faced."⁴

There used to be a playbook, dating from the days when we (or our grandparents) did face similar turmoil. A system of financial regulations, enacted in the aftermath of the 1930s Depression, drew on the lessons of that painful episode and provided some protection against another crash. Yet the experience of some decades of relative stability, in an era of anti-regulatory, laissez faire ideology, has led to loss of collective memory and allowed the rollback of many of the post-depression regulations.

Rolling back the reserves

The free-market fundamentalism of the Reagan-Thatcher-Bush era sought to deregulate markets wherever possible. This included efforts (frequently successful) to eliminate the reserves that protected many industries and countries against bad times, in order to boost profits in non-crisis years. Starting in the 1980s, structural adjustment programs, imposed on developing countries by the IMF and the World Bank as conditions for loans, called for elimination of crop marketing boards and grain reserves, and for abandonment of the pursuit of self-sufficiency in food. It was better, according to the "Washington consensus" that dominated the development discourse of the day, for most countries to specialize in higher-value cash crops or other exports, and import food from lower-cost producers. Again, this is a great success in normal times, when nothing goes wrong in international markets for grain and other crops; in years of crop failures or

⁴ As quoted in *New York Times*, Nov. 18, 2008.

unusually high grain prices, the "inefficient" old system of grain reserves and self-sufficiency looks much better.

At about the same time, the notion became widespread in U.S. policy circles that electricity regulation was antiquated and inefficient. Under the old system, utilities received a local monopoly in exchange for accepting the obligation to provide service to everyone who wanted electricity, at reasonable, regulated rates, while maintaining a mandated margin of reserve capacity. Deregulation, introduced on a state-by-state basis in the 1980s and 1990s, eliminated much of the previous regulations in order to allow competition in the sale of electricity. The pursuit of profit, in theory, would lead to ample capacity to generate electricity, while competition would keep the prices as low as possible. Yet none of the competitors retained the obligation to maintain those expensive, inefficient reserves of capacity.

California enjoyed 40 years of rapid growth without major blackouts or electricity crises under the old regulatory system. In the five years after deregulation, the demand for electricity grew much more rapidly than the supply, eliminating the state's reserve capacity. The combination of an unusually hot summer, a booming economy, and intentional manipulation of the complex new electricity markets by Enron and other trading firms then led to the California electricity crisis of 2000-01, with extensive blackouts and peak-hour prices spiking up to hundreds of times the previous levels.

Parallel trends occurred in the world of finance. Before the 1980s, residential mortgages typically were issued by savings and loan associations (S&Ls). These community-based institutions were strictly regulated, with limits on the types of loans they could make and the interest rates they could offer to depositors. Squeezed by high inflation and by competition from money market funds in the late 1970s, the S&Ls pushed for, and won, extensive deregulation in the early 1980s. Once they were allowed to make a wider range of loans, freed of federal oversight, the S&Ls launched a massive wave of unsound lending in areas outside their past experience. Hundreds of S&Ls went bankrupt during the 1980s, leading to a federal bailout that seemed expensive by pre-2008 standards.

The regulation of S&Ls was part of the Glass-Steagall Act, enacted in 1933 to control speculation and protect bank deposits. While provisions affecting S&Ls were repealed in the 1980s, other key features of Glass-Steagall remained in effect until 1999. In particular, the 1999 repeal of Glass-Steagall allowed commercial banks to engage in many risky forms of lending and investment that had previously been closed to them. Then in 2004, the Securities and Exchange Commission (SEC) lowered the reserve requirements on the nation's biggest investment banks, allowing them to make loans of up to 40 times their reserves (the previous limit had been 12 times their reserves). The result was the same as with the deregulation of S&Ls: taking on unfamiliar, new, seemingly profitable risks destroyed some of the nation's biggest banks within a few years.

There is a similar explanation for the unexpected news that Iceland was among the countries hardest hit by the financial crisis. Privatization and deregulation of Iceland's three big banks in 2000 allowed the country to become an offshore banking haven for British and other international investors, offering high-risk, high-return (in good times) opportunities to the world.

This led to some years of rapid economic growth, and to a banking industry with liabilities equal to several times the country's GDP – which did not look like a problem until the international financial bubble burst.

Putting the pieces back together again

I suspect that free-marketers need to be less doctrinaire and less simple-mindedly utilitymaximizing, and that they should depend less on abstract econometric models. I think they'll have to take much more seriously the task of thinking through what are the right rules of the road for both the private and public sectors. They'll have to figure out what institutional barriers and what monetary, fiscal and legal guardrails are needed for the accountability, transparency and responsibility that allow free markets to work.⁵

When the most doctrinaire of the free-marketers – William Kristol, again – start talking about rules of the road, institutional barriers, and guardrails for the market economy, the moment has arrived for new ideas. What follows is not the way that I would design an economic system if starting from scratch – but neither I nor anyone else has been invited, alas, to start over and build a sensible economy from the ground up. The immediate challenge that we face is to repair what's there without further jeopardy to jobs and livelihoods.

The four fundamental flaws in the traditional theory suggest the shape of the barriers and guardrails needed to keep the market economy safely on the road and headed in the right direction. The first two flaws point to large categories of decisions and values that should be permanently off-limits to the market. The definition of efficiency in terms of Pareto optimality – endorsing only those changes to the status quo that can win unanimous support – is a profoundly anti-democratic standard that is taken for granted in much of economic theory.⁶ There are many public goods and public decisions, which cannot be handled purely by consensus in any jurisdiction larger than a village. Markets cannot decide what we want to do about education, infrastructure, defense, and other public purposes; nor can they decide who should pay how much for these programs.

The existence of important values that cannot be priced, rooted in the dignity of humanity and nature, requires a system of rights and absolute standards, not prices and market incentives. Reasonable people can and do disagree about the extent of rights and standards, but this is unquestionably a large, and perhaps growing, sphere of decisions. Many of the things we care most about are too valuable to have prices; they are not for sale at any price.

These straightforward points only came to seem remarkable and controversial under the onslaught of market fundamentalism in recent years, with its relentless focus on expanding the sphere of market efficiency, prices, and incentives. Conservatives, securely in power for most of the years from 1980 through 2008, repeated endlessly that government is the problem and the market is the solution – at least until the crash of 2008, when the roles were abruptly reversed.

⁵ Kristol, "George W. Hoover?"

⁶ Pareto himself was an elitist, anti-democratic Italian aristocrat, whose lectures were much admired by Mussolini; see Ackerman and Heinzerling, *Priceless*, Chapter 2.

Meanwhile, it has become common to hear the argument, in environmental policy debates, that rational policy-making must be based on setting the correct price for human lives saved by regulations. (A less common, but by no means unknown, next step is the morally indefensible conclusion that the value of a life saved should be lower in poorer countries.)

The third flaw in the theory of the invisible hand, the existence and importance of big businesses, leads to a need for ongoing regulation. Many industries do not and cannot consist of small businesses whose every action is disciplined by relentless competition. As a result, they have to be disciplined by society – that is, by regulation. Recognition of this fact inspired the traditional treatment of electric utilities, prior to the recent wave of deregulation. Since some aspects of electricity supply are natural monopolies (no one wants to see multiple, competing electric lines running along the same street), the firms holding this monopoly power had to accept limits on their prices and continual oversight of their investment plans – including the requirement to build reserve capacity – in order to ensure that they served the public interest.

While utility regulation is an interesting model, it is not the only approach to the governance of big business. The general point is that the invisible hand only ensures that greed is good for society when the greedy enterprises are small and powerless. Larger, more powerful greed must often be directed by the visible hand of government in order to prevent it from subverting the common good.

The fourth flaw, the impossibility of complete information about markets, leads to lessons more directly focused on the financial crisis. The staggering complexity of many decisions in today's financial and other markets undermines the strongest pragmatic argument in favor of market mechanisms. Even when markets are not perfectly competitive, and do not achieve the theoretical optimum of the invisible hand (or of general equilibrium theory), they can still excel at decentralized information processing, as Friedrich Hayek pointed out long ago. All the information about the supply and demand for steel is brought together in the steel market; all the information about the supply and demand for restaurant meals in a city is brought together in that market; and so on. No one has to know all the details of all the markets – which is fortunate, since no one could.

As market choices become more intricately and technically detailed, the potential for decentralized information processing disappears. Markets that are too complex for many of the participants to understand cannot do a reasonable job of collecting information about supply and demand. Overly complex markets are often ones that have been artificially created, based on an ideological commitment to solving every problem through the market rather than a natural evolution of trading in existing commodities. The market for health care in the U.S. is a case in point: a service that is more efficiently and cheaply provided as a public good has been forced into a framework of private commodity purchases, with mountains of unnecessary paperwork and vast numbers of people employed in denying medical coverage to others. Medicare coverage of prescription drugs is the epitome of this problem, a "market mechanism" that will never convey useful information about supply and demand because no one understands the bizarre complexity of what they are buying, or how the alternatives would differ.

Other invented, ideologically inspired markets also suffer from the curse of complexity; California's deregulation of electricity was an unfortunately classic example. Our current system of retirement funding, in which everyone manages their own savings, has higher overhead costs and higher risks of mismanagement than a public system such as Social Security; many people have little or no understanding of the process of managing their retirement funds. In financial markets, innovation that creates complexity is often profitable for the innovating firms and bewildering to others. Cynics might guess that this could be the goal of financial innovation; but even with good intentions, the worsening spiral of complexity defeats any potential for the market to accurately assess the supply and demand for loans.

The policy implication is clear: keep it simple. If training or technical assistance is required to comprehend a new market mechanism, it is probably too complex to achieve its intended goals. Another approach – think of single-payer health care – may offer a more direct, lower-cost route to the same objective, without the trouble of inventing a convoluted new market apparatus. Making public choices about public goods is simpler than squeezing them into the ill-fitting costume of individual market purchases.

In financial markets there is a clear need for independent, publicly funded sources of information about potential investments, to do the job that we always imagined the bond rating companies were doing. Regulation has to apply across the board to new as well as old financial instruments; waiting for signs of trouble before regulating new financial markets is a recipe for a crash.

Precaution vs. cost-benefit analysis

The importance of infrequent, catastrophic risks, and the lack of information about their timing or frequency, highlights the need for a precautionary approach to public policy. In several recent (and very technical) papers, Martin Weitzman shows that both for financial markets and for climate change, the worst case risks can be so disastrous that they should dominate policy decisions. In complex, changing systems such as the world's climate or financial markets, information will always be limited; if the system is changing rapidly enough, old information may become irrelevant as fast as new information arrives. If, for example, we never have more than 100 independent empirical observations bearing on how bad the market (or climate) will get, then we will never know anything for certain about the 99th percentile risk.

In a situation with unlimited worst-case risks but limited information about their likelihood, Weitzman proves that the expected value of reducing the worst-case risks is, technically speaking, infinite. In other words, nothing else matters except risk reduction, focused on the credible worst case. This is exactly the idea that has been advocated in environmental circles as the "precautionary principle."

For example, the latest climate science suggests that the likely sea level rise over this century will be in the neighborhood of one meter; in addition, if the Greenland ice sheet, or the similarlysized West Antarctic ice sheet, collapses into the ocean, the result will eventually be another seven meters of sea level rise. One meter of sea level rise is an expensive and difficult problem for islands and low-lying coastal areas; seven meters is enough to destroy most coastal cities and the associated industries and infrastructure around the world. It is irrelevant, therefore, to worry about fine-tuning the "most likely" estimate of one meter, or to calculate the precisely appropriate policy response to that estimate. Rather, the goal should be to do whatever it takes to prevent the collapse of a major ice sheet and the ensuing seven meters of sea level rise. This is true even in the absence of hard information about the probability of collapsing ice sheets; the risk is far too ominous to take any chances with trial and error.

Financial markets are directly analogous – although one might claim that in finance, the ice sheets have now melted and the markets are already underwater. The worst case risks are so painful that nothing else matters in setting public priorities. With the benefit of hindsight, who among us would have objected to somewhat slower growth in stock prices and housing prices over the last decade or two, in exchange for avoiding the recent economic crash? It was not, it turns out, a brilliant idea to lower the reserve requirements and remove other restrictions on the risks that financial institutions could take, even though it boosted short-run profits at the time.

Restoration of the earlier, discarded regulations on banking is not a complete answer to the current crisis, although it is hard to see how it would hurt as a starting point. What is needed is a more comprehensive regulation of financial investments, covering new varieties as well as old. Charging a (very small) percentage fee on all security transactions, plus a first-time registration fee for introducing new types of securities, could fund an expanded regulatory system, and might also slow down the worst forms of speculation. (Some states have employed a comparable system in electric utility regulation; a trivial percentage fee, amounting to a tiny fraction of a cent on each kilowatt-hour of electricity, supports the state's oversight of the system as a whole.)

In general, the accumulation of reserves guards against unexpected bad times and market fluctuations. In a volatile and uncertain world, financial and other systems have to be run in a manner that allows such reserves. It is the social equivalent of insurance against individual losses; likewise, the regulatory rollbacks of recent years are the equivalent of cancelling your insurance and spending the premiums on a few more nights out on the town. Maintaining a bit of slack in the system is essential for accumulating reserves that protect against worst cases; squeezing the last bits of slack out in order to maximize profits when everything works according to plan leaves us all more vulnerable to deviations from that plan.

Globalization, new deals, and old economics

The final argument against stringent regulation is that in an increasingly globalized economy, capital will simply move to less regulated countries. Extensive research and debates have found little support for this idea in the sphere of environmental regulation; the "pollution haven" hypothesis, claiming that industry will subvert regulation by moving to countries with weaker environmental standards, is not supported by the bulk of the evidence.⁷

⁷ See, for instance, Frank Ackerman, "The Unbearable Lightness of Regulatory Costs," *Fordham Urban Law Journal*, May 2006, reprinted in Ackerman, *Poisoned for Pennies: The Economics of Toxics and Precaution* (Island Press, 2008).

Financial capital, however, is more mobile than industry; huge sums of money can be transferred electronically across national boundaries with minimal transaction costs. Thus it should be easier to create "speculation havens" than pollution havens; a handful of small countries are already known for welcoming unregulated offshore financial investments. The push for deregulation of banking, from the S&L episode of the 1980s to the present, has come not only from ideology and the desire for short-run profits, but also from the pressure of competition with newer, less regulated financial institutions.

The process of financial innovation will continue to challenge any simple attempts to curtail the flight of capital. The ultimate answer to this problem is not only to regulate existing financial markets and institutions, but also to create new, socially useful opportunities for investment – to steer capital toward better purposes, as well as policing its attempts to steal away.

Lurking behind the failure of financial markets is the lack of real investment opportunities, as seen, for instance, in the near-bankruptcy of the U.S. auto industry. GM, Ford, and Chrysler have engaged in their own form of gambling on good times, over-committing their resources to SUVs and other enormous, energy-inefficient vehicles. Paralleling the risky financial ventures that fell apart in 2008, the "all big cars all the time" strategy produces big profits if (and only if) consumer incomes stay high and fuel prices stay low. When incomes fall and oil prices rise, it turns out to be a shame to have bet the company on endless sales of vehicles much larger than anyone actually needs. A new initiative is needed to reshape and redirect this industry and others; left to its own devices, the free market only leads deeper into the ongoing collapse of U.S. manufacturing. If a bailout in the auto industry, finance, or elsewhere gives the government a share of ownership, as it should, then public priorities can be implemented as a condition of public assistance.

At the end of 2008, profitable investment opportunities are vanishing across the board, as the U.S. and the world economies are sliding into the worst economic downturn since the 1930s. That decade's depression helped inspire the theories of John Maynard Keynes, explaining how deficit spending helps to cure economic slumps and put unemployed people back to work. Keynesian economics has been out of academic fashion for nearly thirty years, banished by the same market fundamentalism that pushed for deregulation of financial and other markets. Yet when a big enough crisis hits, everyone is a Keynesian, favoring huge increases in deficit spending in order to provide an economic stimulus.

There is no shortage of important public priorities that are in need of attention. Thirty years of relentless tax-cutting and penny-pinching in public spending have left the U.S. with perilously crumbling and underfunded infrastructure, from the failed levees of New Orleans to the fatal collapse of a major highway bridge in Minneapolis. The country is shockingly far away from adequate provision of health care and high-quality public education for all, among other social goals. In terms of prevention of worst-case risks, addressing the threat of climate change requires reinventing industry, electric power, and transportation with little or no carbon emissions – a task that calls both for widespread application of the best existing techniques, and for discovery, development, and adoption of new breakthrough technologies, in the U.S. and around the world. What would it take to structure an economy in which these objectives were more attractive to capital than repackaging subprime mortgages and inventing esoteric con games?

A focus on ambitious new public priorities no longer appears to be absent from American politics. Barack Obama's speeches invoke the goal of a "green new deal," representing an enormous improvement over the previous occupant of the White House in this and so many other ways. The reality, however, seems likely to lag far behind the rhetoric. Practical discussion has focused on the size of the one-time stimulus that might be needed, treating it as an expensive cure for a rare ailment rather than a new, healthier way of life. The economic advisors for the new administration represent the cautious mainstream of the Democratic Party, an improvement relative to their immediate predecessors in office, but far from offering what is really needed.

Recognizing the new popularity of Keynesian ideas and analogies to the 1930s, a few conservative critics have begun to object that the New Deal should not be taken as a model because it failed to end the Depression. Despite the ambitious, well-publicized initiatives of the Roosevelt administration, unemployment remained extremely high and the economy did not fully recover until the surge of military spending for World War II. This is literally true, but implies a need to do more, not less, than the New Deal. Programs that put hundreds of thousands of people to work, some of them building parks and bridges that are still in use today, were not misguided; they were just too small. A premature lurch back toward balanced budgets caused a painful interruption in the recovery in 1937-38, prolonging high rates of unemployment.

Indeed, as Keynes himself said in 1940, "It is, it seems, politically impossible for a capitalistic democracy to organize expenditure on the scale necessary to make the grand experiments which would prove my case — except in war conditions." The grand experiment of mobilizing for World War II did succeed in reviving the market economy; it involved massive, ongoing government redirection of spending toward socially determined priorities.

The need for a pervasive, permanent role of government in directing investment also emerges from more recent studies of economic development. As documented in the research of Alice Amsden, Ha-Joon Chang, Dani Rodrik, and others, the countries that have grown fastest have ignored the advice of the World Bank, IMF, and other advocates of free trade and laissez-faire. Instead, successful development has been based on skillful, continual government involvement in nurturing promising industries, supporting education, research, and infrastructure, and managing international trade. The government's leading role in development can certainly be done wrong, but it can't be done without.

The New Deal was on the one hand much larger than any recent government initiatives in the U.S., and on the other hand too small for the crisis of the 1930s – or for today. Rebuilding our infrastructure and social programs, while reducing carbon emissions to a sustainable level, will not be finished in a year, or even one presidential term. An ongoing effort is required, more on the scale of wartime mobilization or the active engagement of governments in successful development strategies. With such an effort, there will be a reliable set of investment opportunities in the production of real, socially useful goods and services, as well as a much-strengthened government empowered to regulate and prevent dangerous forms of speculation and undesirable financial "innovations."

In such a world, the market still plays an essential role, coordinating the numerous industries and activities, engaging in the decentralized processing of information about supply and demand (which is its indispensable task). It will not, however, be stretched to fit other problems that are better handled through the public sector; and it will not be bowed down to as the source of wisdom and policy guidance. There is a clear need for smoothly functioning financial markets, but adult supervision is required to avoid a repetition of recent events.

To close by way of analogy, the market may be the engine of a socially directed economy, indispensable for forward motion. There are limits, however, to its capabilities: it cannot change its own flat tires; and if we let it steer, we are sure to hit the wall again.

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