The long climb

Also in this section

Acknowledgments
In addition to those mentioned in the text, the author would like to thank Bart van Ark, Vivek Arora, Clive Crook, Nikhil Dey, David Dollar, Keiichiro Kobayashi, Gemila Li, Lori Michaels, Jonathan Ostry, Michael Spence, Yu Yongding and Roberto Zagha.

A list of sources is at
Economist.com/specialreports

An audio interview with the author is at
Economist.com/audiovideo

The world economy is recovering from financial disaster. But it will not return to normal as we know it, says Simon Cox

NEWPORT BEACH, California, is not a bad place to contemplate the future of the world economy. Its information office promises nine miles of pristine sand, fine dining for devoted epicureans and an atmosphere of laid-back sophistication. Yet students of economic turmoil will find their subject matter conveniently close to hand. California's unemployment rate has doubled to 12.2% since the start of 2008. Saddled with the worst credit rating in the country, the "Golden State" is cutting spending on schools, prisons and health care for the elderly, as well as closing parks and laying off staff for three days a month. It will pay its workers a day late at the end of the fiscal year so that the expense will show up in next year's budget. Financial shenanigans are not the sole province of the banking industry.

Newport Beach is also the home of Pimco, the biggest bond manager in the world, which handles $840 billion on behalf of pension funds, universities and other clients. In May the company held its annual "Secular Forum", in which it tries to peer five years into the economic future. After two days of rumination, Pimco's laid-back sophisticates concluded that the financial markets may well "revert to mean", which is a statistician's way of saying that what comes down must go up. But the next five years will not resemble the five preceding the crisis. Not every change wrought by the financial breakdown will be reversed. The world economy is fitfully getting back to normal, but it will be a "new normal".

That phrase has caught on, even if people disagree about what it means. In the new normal, as defined by Pimco's CEO, Mohamed El-Erian, growth will be subdued and unemployment will remain high. "The banking system will be a shadow of its former self," and the securitisation markets, which buy and sell marketable bundles of debt, will presumably be a shadow of a shadow. Finance will be costlier and investment weak, so the stock of physical capital, on which prosperity depends, will erode.

The crisis invited a forceful government entry into several of capitalism's inner sanctums, such as banking, American carmaking and the commercial-paper market. Mr El-Erian worries that the state may overstay its welcome. In addition, national exchequers may start to feel some measure of the fiscal strain now hobbling California. America's Treasury, in particular, must demonstrate that it is still a "responsible shepherd of other countries' savings".

The notion of a "new normal" is convincing, even if you do not agree with every particular. But some forecasters now harbour higher expectations. They think the economy will bounce back to its old self, almost as if nothing had happened. They draw inspiration from the work of the late Milton Friedman, who showed that in America deep recessions are generally followed by strong recoveries. He likened the economy to a piece of string stretched taut on a board. The more forcefully the string is plucked, the more sharply it snaps back.

Friedman's piece of string represents the demand side of the economy: the sum of spending by households, firms, foreigners and the government. The rigid board symbolises the supply side. When spending is strong enough, the economy's resources are fully employed, allowing it to realise its full potential. As the workforce grows, capital accumulates and technology advances, this limit expands over time.

String theory

In a recession demand falls short of supply, leaving a sorry trail of unemployed workers, shuttered factories and unexploited innovations. But when the recovery arrives, Friedman suggested, it is all the more forceful because these resources have been lying idle, waiting to be brought back into production. The economy can grow faster than normal for a period until it reaches the point where it would have been without the crisis, when it reaches its full potential again (see chart 1, scenario 1).

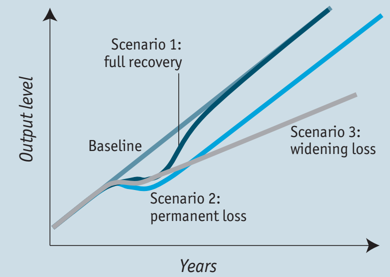
Friedman's story is heartening, but it can come unstuck in two ways. If the shortfall in demand persists it can do lasting damage to supply, reducing the level of potential output (scenario 2) or even its rate of growth (scenario 3). If so, the economy will never recoup its losses, even after spending picks up again.

Why should a swing in spending do such lasting harm? In a recession firms shed labour and mothball capital. If workers are left on the shelf too long, their skills will atrophy and their ties to the world of work will weaken. When spending revives, the recovery will leave them behind. Output per worker may get back to normal, but the rate of employment will not.

Something similar can happen to the economy's assembly lines, computer terminals and office blocks. If demand remains weak, firms will stop adding to this stock of capital and may scrap some of it.

After the fall 1

Scenarios for recovery



Source: European Commission

Capital will shrink to fit a lower level of activity. Moreover, if the financial system remains in disrepair, savings will flow haltingly to companies and the cost of capital will rise. Firms will therefore use less of it per unit of output.

The result is a lower ceiling on production. In the IMF's latest *World Economic Outlook*, its researchers count the cost of 88 banking crises over the past four decades. They find that, on average, seven years after a bust an economy's level of output was almost 10% below where it would have been without the crisis.

This is an alarming gap. If replicated in the years to come, it would blight the lives of the unemployed, diminish the fortunes of those in work and make the public debt harder to sustain. But even worse scenarios are possible. A financial breakdown could do lasting damage to the growth in potential output as well as to its level. Even when the economy begins to expand, it may not regain the same pace as before.

Financial crises can pose such a threat to national incomes because of the way they erode national wealth. From the start of 2008 to the spring of this year the crisis knocked $30 trillion off the value of global shares and $11 trillion off the value of homes, according to Goldman Sachs, an investment bank. At their worst, these losses amounted to about 75% of world GDP. But despite their enormous scale, it is not immediately obvious why these losses should cause a lasting decline in economic activity. Natural disasters also wipe out wealth by destroying buildings, possessions and infrastructure, but the economy rarely slows in their aftermath. On the contrary, output often picks up during a period of reconstruction. Why should a financial disaster be any different?

The answer lies on the other side of the balance-sheet. Before the crisis the overpriced assets held by banks and households were accompanied by vast debts. After the crisis their assets were shattered but their liabilities remained standing. As Irving Fisher, a scholar of the Depression, pointed out, "overinvestment and overspeculation…would have far less serious results were they not conducted with borrowed money."

Japan found this out to its cost in the 1990s after the bursting of a spectacular bubble in property and stock prices. For a "lost decade" from 1992 the economy stagnated, never recovering the growth rates posted in the 1980s. Richard Koo of the Nomura Research Institute in Tokyo calls Japan's ordeal a "balance-sheet recession".

The typical post-war recession begins when the flow of spending in the economy puts a strain on its resources, forcing prices upwards. Central banks raise interest rates to slow spending to a more sustainable pace. Once inflation has subsided, the authorities are free to turn the taps back on.

But in a "balance-sheet recession", what must be corrected is not a flow but a stock. After the bubble burst, Japan's companies were left with liabilities that far exceeded their assets. Rather than file for bankruptcy, they set about paying down their stock of debt to a manageable level. This was a protracted slog which, by Mr Koo's reckoning, did not finish until 2005. In the meantime Japan's economy stagnated. By 2002 its output was almost 23% below its pre-crisis trajectory.

Since Pimco's forum concluded in May, the world economy has palpably improved. In many ways the new normal is beginning to look a lot like the old, vindicating Friedman's plucking model. China is outpacing expectations. Goldman Sachs is making hay. The premium banks must pay to borrow overnight from each other is now below 0.25%, the level Alan Greenspan, a former chairman of the Federal Reserve, once described as "normal". Companies in Europe and America are selling bonds at a furious pace. A few months ago financial newspapers were debating the future of capitalism. Now they are merely discussing the future of capital requirements. Shock has given way to relief.

The persistence of debt

But the relief is likely to be short-lived. Just over a year ago, the day Lehman Brothers filed for bankruptcy, the world economy fell off a precipice. When you are falling, you do not look up. Only when you hit bottom can you stop and contemplate the cliff you must now climb.

This special report will argue that although a "new normal" for the world economy is now in sight, it will be different from the old normal in a number of ways. Demand in rich countries will remain weak and emerging economies will not be able to compensate. The report will explain why many governments will have to keep their stimulus packages going for longer than expected, or face entrenched unemployment that will permanently lower their economic potential. Public debt will rise so that private debt can fall. The banks, the report will show, will remain cautious about lending again, which will slow up the recovery but also make companies more careful about their investment; and the securitisation markets that became so fashionable during the boom will recede, though not disappear altogether.

A persistent shortfall in demand will weigh on supply. By the time this crisis is over, as many as 25m people may have lost their jobs in the 30 rich countries that belong to the Organisation for Economic Co-operation and Development (OECD). The danger is that several million may never regain them. The mobilisation of capital will be fitful as the financial system copes with past mistakes and impending regulation. The travails of finance, in turn, may prevent the recovering economy from backing and exploiting innovations.

Like Japan's bubble years, the years that led to the global financial crisis have left a heavy legacy of debt on the balance-sheets of banks and households, especially in Britain and America. It is this legacy that allows past losses to depress future gains. Fisher, again, put it best: "I fancy that over-confidence seldom does any great harm except when, as, and if, it beguiles its victims into debt." There is no better example of that than American consumers. ■

From Ozzie to Ricky

The crisis was a big setback for American consumers. Will it usher in a new era of thrift?

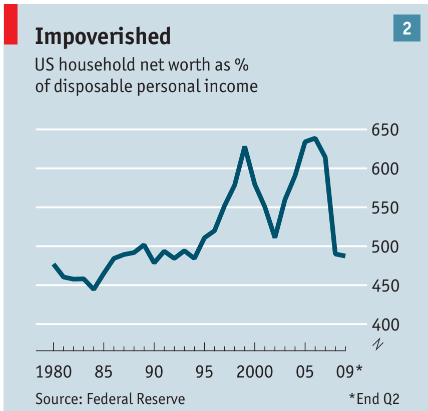
IN "THE Adventures of Ozzie and Harriet", a situation comedy that ran on American television from 1952 to 1966, Ozzie Nelson, his wife and their two sons played fictionalised versions of themselves. Tucked away in their shingled Californian home, the Nelson family became synonymous with the 1950s: happy and square.

Christina Romer, chair of President Barack Obama's Council of Economic Advisors, in a speech in May asked whether America could grow without bubbles. "Yes we can" was her (predictable) conclusion. But it was telling that she had to reach back to the era of Ozzie and Harriet for her best examples. Throughout the 1950s, she pointed out, America experienced "healthy" growth and "sensible asset markets". And from 1962 to 1967, as the show came to an end, America grew by an impressive 5% a year, with a balanced budget and modest trade surpluses.

During the Ozzie and Harriet era, America's households saved over 8% of their disposable income. In the decadent years from 2002 to 2007, by contrast, that rate averaged only 2.7%. Americans had an alibi for their meagre saving: the rising value of their homes. To take just one example, Ozzie and Harriet's house in Los Angeles, where the family lived and the show was set, jumped in value from about $2m in 2002 to over $3.5m in 2007, according to zillow.com, a property site.

American households sat and watched their wealth grow without straining to add to it. Their collective net worth increased from $42.1 trillion in 2001 to $63.9 trillion in 2007. But since then they have looked on in horror as their wealth plunged to $51.1 trillion in the first quarter of 2009. According to Martin Baily and his colleagues at the McKinsey Global Institute, a think-tank, the crisis destroyed a bigger proportion of household wealth, in real terms, than was lost during the Depression.

These epic losses produced a "behavioural convulsion", in the phrase of Bruce Kasman of JPMorgan Chase. Households cut their spending abruptly at the end of last year. By the second quarter of 2009 their saving had risen to 5% of disposable income. Every extra percentage point of saving reduces annual spending by about $109 billion, so aggregate demand contracted violently. The question now is whether the convulsion is over.



Proceed with caution

There are reasons to hope so. Households whose members are still working, but stopped spending anyway, should resume shopping. The economy should also benefit from some catch-up purchases. But even households that kept their jobs lost some of their savings. By the end of the first quarter 14m American households (27% of mortgage-holders) owed more than their homes were worth, according to estimates by Deutsche Bank.

As these facts sink in, household saving rates will return to Ozzie and Harriet levels and beyond, according to analysts such as David Rosenberg of Gluskin Sheff. He thinks the saving rate could exceed 10%. According to this view, the past decadent decade will give way to a new era of thrift, reminiscent of the strait-laced 1950s.

Will American consumers pick up where they left off two years ago, or 50 years ago? The most likely answer lies somewhere in between. If Mr Rosenberg is right that American households now intend to save over 10% of their disposable income, the obvious question is: what are they waiting for? To be sure, consumers often respond sluggishly to events, but this crisis has not suddenly crept up on people. Surveys reveal a collapse in consumer confidence last winter. Whatever economies people mean to make, they should already be in train.

Consumers may take another quarter or two to back down from spending commitments that are hard to revoke instantly. If you have a year-long contract on your fancy mobile phone, one economist points out, you will have to wait to replace it with a cheaper model. Taking such delays into account, the saving rate may still be shy of its peak, but not by much.

There is a second reason why American households will not retreat all the way back to the Ozzie and Harriet era. The high saving in those decades was partly involuntary: people suffered from credit constraints imposed by a sleepier financial system that was not bent on lending against every dollar of household wealth or future income.

By the early 1980s Americans had large amounts of equity locked away in their houses. In 1982 their property was worth 106% of GDP and their debts amounted to less than 50% of that sum. Two pieces of legislation, the Monetary Control act of 1980 and the Garn-St Germain act of 1982, unlocked this wealth. The new laws made it easier for households to refinance their mortgages and borrow against the value of their homes.

What followed was a "borrowing shock of huge macroeconomic magnitude", according to Jeffrey Campbell of the Federal Reserve Bank of Chicago and Zvi Hercowitz of Tel Aviv University. Shortly after the legislation was passed, household debt began to rise much faster than take-home pay. Ozzie Nelson's youngest son, Rick, who pursued a career in country rock music after the show ended, was a trendsetter, sinking into debt in the early 1980s after an expensive divorce.

By one measure the borrowing shock continued for 25 years: household debt peaked at 138% of disposable income in 2007. But the shock came in two distinct waves. In the first, households took advantage of the lifting of credit constraints to borrow more freely. They purposefully increased their debt relative to the value of their assets. In the second wave, which began in the mid-1990s, asset bubbles tempted households to borrow more heavily as first their shares and then their homes rose in value. It was only after the value of their property holdings plunged from 2006 onwards that their debts became so onerous. The first wave of borrowing, then, was a rational response to a liberalising policy. The second was a regrettable response to an unsustainable bubble.

Consumer spending, according to a model laid out by Christopher Carroll, now on Ms Romer's Council of Economic Advisors, reflects the push and pull of impatience and anxiety. Impatience pushes households to spend. Anxiety leads them to build up a "buffer stock" of wealth, which will be some multiple of their normal income, as a hedge against misfortune. The crisis has depleted that buffer. Households' net worth now amounts to 487% of their disposable income, down from a peak of 639% in 2006 and a historical average of about 500% (see chart 2, previous page). To restore their wealth to this long-run average, households would have to repay about $1.4 trillion of debt. At their present rate of saving, these balance-sheet repairs will not be finished until 2012.

Buffing up

But households may not be satisfied with a 500% buffer. Now that credit is tighter and employment less secure, they may feel they need a fatter cushion to calm their forebodings. This cushion would take even longer to accumulate, and would require a permanently higher saving rate to maintain. According to Mr Carroll's theory, households' saving rates should jump in response to the crisis. As their buffer of wealth slowly builds up again their saving rate will gradually subside, but it will not return to the negligible rates witnessed before the crisis.

Consumption accounts for over 70% of American spending. Thus even if households do not go back to 1950s saving rates, their balance-sheet repairs will still weigh heavily on demand in the economy as a whole. An increase of five percentage points of saving would leave the economy with a $545 billion gap to fill.

America's housebuilding industry has left another hole. Residential investment in the second quarter of 2009 was 56% below its peak. The industry will not, and should not, return to its pre-crisis size, when it accounted for 6.1% of GDP. But if homebuilding recovers about half of the ground it has lost since then, it will be about $216 billion below its peak.

Crudely put, therefore, American spending is about $760 billion short of the amount required to return the economy to full employment. Martin Feldstein of Harvard University, who makes a similar calculation, calls this shortfall a "black hole". If no other source of spending takes over to fill the gap, then sales will stagnate, employment will fail to recover and household incomes will falter.

There is no secret about the other potential sources of demand. Government spending and business investment accounted for 18% and 12% of GDP respectively at the economy's peak in 2007. This report will examine both in later sections. Exports contributed 12%, but American spending on imports subtracted all of that and more. For many years before the crisis the world economy revolved happily around the American consumer. But to escape this slump, it will have to look elsewhere. Many eyes now turn to China. ■

The hamster-wheel

The more China spends, the more it saves

HOW hot is Hohhot? A city of 1.5m and counting, Hohhot is the capital of Inner Mongolia, the fastest-growing region in China. High-rise buildings are marching across the flatlands and swish malls are springing up, offering global favourites (Häagen-Dazs ice cream) and local ones (Genghis Khan wine). Near the 16th-century Xilituzhao *lamasery*, home to Buddhist monks for over 400 years, one street appears untouched. But behind the brick shopfronts, the houses have been demolished to make room for blocks of flats. Even the teenaged Buddhist monk greeting visitors to the *lamasery* owns a touch-screen phone he bought in Shenzhen.

This is what "rebalancing" is supposed to look like. Economic activity migrates from the coasts to inland regions, such as Inner Mongolia. Investors throw up houses instead of factories, and the economy relies less on investment spending and more on consumer demand. But despite the best efforts of Hohhot's shoppers, China's demand still falls well short of supply. The country's current-account surplus may be $297 billion this year, according to the Economist Intelligence Unit (EIU), a sister company of *The Economist*. That would amount to half of Asia's surpluses and 30% of those around the world.

The counterparts to these surpluses are deficits in places such as Britain, Spain and most notably America. But since the crisis took hold, the macroeconomic gyroscope has begun to level out dramatically. America's external deficit has halved from $804 billion in 2006, the equivalent of 6% of GDP, to $395 billion (at an annual rate) in the second quarter of 2009, about 2.8% of GDP. And China's surplus, though hefty, is not as big as it was.

Unfortunately this is mostly the wrong kind of rebalancing. Countries are levelling down, not up. Rather than increasing its exports to match its prodigious imports, America is squeezing its foreign purchases. Between the fourth quarter of 2007 and the second quarter of 2009 its exports fell by $215 billion (in 2005 dollars, at an annual rate) and its imports fell by $440 billion.

In its boom years, America spent more than enough to keep itself fully employed. Its cutbacks in spending since then have fallen more heavily on foreign than on domestic production. Foreigners have borne about 30% of the blow.

To adjust upwards, the surplus countries would have to expand their spending to fill the vacuum left by American consumers and housebuilders, but that does not seem likely. For China's exporters to fill this gap, its $297 billion surplus would have to swing to a $463 billion deficit. That would require a dramatic fall in its saving rate, which amounted to over half of GDP in 2008. Spending more and saving less is not the worst macroeconomic imperative a country might face. But China's thrift is well entrenched.

Households make the biggest contribution (see chart 3). According to Eswar Prasad of Cornell University and Marcos Chamon of the IMF, the thriftiest among them are the young and the old. Urban households headed by 25-year-olds save almost 30% of their disposable income, as do those headed by 60-year olds. This pattern is quite different from that in most countries, where the young borrow against future income and the elderly run down the savings they accumulated in their high-earning middle years.

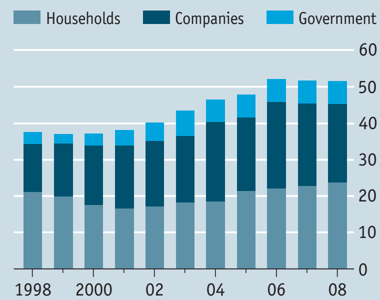
One reason why the Chinese save is because they have to pay for things such as education and health care which in other countries are provided by the state. "It's not saving; it's self-taxation," says Paul French of Access Asia, a consumer-research firm in Shanghai. The government has promised to spend 850 billion yuan ($125 billion) in 2009-11 to widen health-insurance coverage and improve public clinics and hospitals. It is also reforming the pension system which now leaves out over half of urban workers and 90% of their rural counterparts.

Another reason why the Chinese save is because they find it hard to borrow. Only a small proportion (11% of younger households) have a mortgage, and those that do scrimp and save to try to pay it off in five years. Mr French has been invited to dinners celebrating a couple's last repayment.

He has another, more novel theory to explain young people's thriftiness. In a country where young men considerably outnumber young women, a bachelor needs a car and a flat before a girl will even look at him, Mr French says. In Shanghai, the first question about a suitor is, "How many square metres is his apartment?"

An excess of thrift 3

China's domestic saving as % of GDP



Source: Louis Kuijs, World Bank

There is some scholarly evidence to support Mr French's hunch. According to Shang-Jin Wei of Columbia University and Xiaobo Zhang of the International Food Policy Research Institute, households with sons accumulate assets, especially houses, in order to compete in the marriage market. This bids up asset prices for everyone else, forcing them to save more as well. The two authors reckon that this competition accounts for about half of the increase in the household saving rate in 1990-2007.

China's elephantine industry

A long queue of lorries laden with coal is waiting to pass through the toll booth to Zhuo Zi Shan, a town not far from Hohhot. "Every day is like this," says the toll operator. A road sign tells drivers not to exceed the permitted load limit. It shows a lorry buckling under an elephant.

China's industry is heavier than it should be. Energy and capital are both artificially cheap. Fuel is subsidised explicitly; capital implicitly by a repressed banking system that remunerates savers poorly. Because it overuses these inputs, Chinese industry underemploys labour. Despite the country's reputation as the workshop of the world, employment has grown by just 1% per annum in recent years, even as the country's GDP has raced ahead at double-digit rates. So the share of wages and other household income in GDP has fallen from 72% in 1992 to 55% in 2007. This is perhaps the biggest single reason why China's consumption accounts for only 35% of GDP. It is not because households save so much of their income (although they do), but because household income accounts for such a small slice of the national cake.

The other side of this equation is the large share of national income that flows to capital, in the form of profits. Corporate profits amounted to 22% of GDP in 2007. These earnings mostly stay with the companies that generated them. Almost 45% of listed companies did not pay a dividend last year, according to Wind Info, a financial-information firm. China's state-owned enterprises now provide a modest pay-out to the government, but until last year they paid nothing at all.

China's big corporations can hold on to their profits because aggrieved shareholders have little clout with them. China's small firms retain earnings because they need them. They are neglected by China's banks, which prefer to make big loans to large companies. This forces underserved small companies to rely on their own savings to finance their ventures.

It is saving by companies, not households, that accounts for most of the increase in China's thrift over recent years. They plough these savings back into investment, which keeps profits high as a share of national income, thereby adding further to corporate saving. The economy scampers along in a hamster's wheel of high investment and high thrift.

The government's stimulus package announced last November has rescued China from the global downturn. It has also included some welcome spending on social infrastructure, from clinics to passenger trains. But it has not liberated China from its investment cycle. In the first half of this year investment accounted for 87% of China's growth, according to Standard Chartered Bank.

This cycle unbalances China's economy, but why should it also unbalance the world economy? After all, capital spending adds to domestic demand. If investment is strong enough, it will suck in imports and narrow China's current-account surplus. Other countries can provide the coal to fill China's lorries and the architects to design its futuristic cityscapes.

Yet investment eventually bears fruit, adding to the economy's capacity to produce things which Chinese companies then struggle to sell at home. China's policymakers solve this problem by keeping the yuan competitive and selling their excess output on world markets instead. Overinvestment leads to underconsumption, which the Chinese authorities solve through undervaluation of the currency.

The exporters that benefit from the cheap yuan provide a disproportionate share of China's jobs. Many are small firms lacking access to bank loans, which forces them to rely on labour more than capital. These firms gravitate towards the export market by default because their larger, better-connected rivals often have the lucrative domestic markets sewn up.

What would happen if the government repealed these cosy monopolies and freed entry into services? In the short run such reforms might cost jobs, according to Kai Guo and Papa N'Diaye of the IMF. They might draw resources away from labour-intensive export industries such as clothing. But after six or seven years employment would more than recover. The authors reckon that services could usefully employ another 70m people.

Don't mention exchange rates

Instead, China's policymakers are trying hard to coax the country's coastal exporters back to life. They have prevented the yuan from appreciating against the dollar for over a year. The country's currency policy has long been a source of frustration for its trading partners, particularly in America. But in recent diplomatic exchanges between the two countries the "exchange-rate question" was quietly dropped. America's government is now being careful about what it wishes for. It must calculate whether it really wants China to stop buying dollars or whether it wants China to keep buying its debt. It is, after all, issuing rather a lot of it. ■

A fine balance

The ins and outs of stimulus packages

PASSENGERS pose for photographs in front of the bulbous "Harmony" train, which will whisk them from Beijing through neighbouring Hebei Province at almost 300km an hour. All the seats on board are taken. One man sits on a collapsible stool, another makes do with a folded sheet of newspaper.

China has the busiest railways in the world, according to the World Bank. It carries a quarter of the world's traffic on 6% of its track. With a bit of help from the bank, the government is extending the high-speed line by 355km to Zhengzhou in Henan Province and then all the way to Guangzhou, 2,100km from Beijing on the South China Sea. The scope of the project is "breathtaking", says John Scales of the bank's Beijing office. But an official at the Ministry of Railways shrugs. "We have so many big projects," he says, "why are you looking at the small ones?" He is more excited about the Beijing-to-Shanghai line, which will cut the journey time between the two cities from ten hours to four.

In China no one wonders if the government's 4 trillion yuan ($585 billion) stimulus package, announced last November, is working. Some 1.5 trillion yuan of the total is devoted to transport. The package will raise China's investment in rail to $90 billion a year for two years. America's stimulus package, by contrast, musters only $8 billion for high-speed rail, with some extra requested in this year's budget.

Only 30% of China's stimulus will come from the central government. Most of the rest will be financed by the country's banks, which are only too happy to help. Before the crisis hit, the government was trying hard to restrain runaway lending. To stimulate the economy, all it had to do was to remove those restraints. Banks lent 7.3 trillion yuan in the first half of this year, about 50% more than in the whole of 2008. Together with the government's own spending, this push accounted for 75% of China's growth in the first quarter, according to Louis Kuijs of the bank.

In the G20 as a whole, budget deficits have swung from 1.1% of the group's collective GDP in 2007 to 8.1% in 2009, says the IMF. The G20's economies are already benefiting from tax cuts, but spending is ▸▸

taking longer to feed through. By mid-July, the IMF calculates, Canada had paid out 81% of its planned stimulus for this year, France 60% and America 41%.

To make a positive contribution to growth, stimulus spending must increase each year (in dollar terms, if not as a percentage of GDP); otherwise the economy will suffer from "fiscal drag", which reduces growth. America, for example, will face a fiscal drag of 2.5% of GDP in 2011, according to Alec Phillips of Goldman Sachs, if lawmakers let the 2001 tax cuts expire.

The crisis will place a heavy toll on the public finances, according to the IMF. Economic decline and fiscal rescues will increase gross government debt in the advanced G20 countries from an average of 79% of GDP before the crisis to 120% forecast for 2014.

These gloomy projections raise the risk that governments will "find it more convenient to repudiate their debt or to inflate it away", the IMF's researchers note. The same thought has occurred to the rating agencies. Ireland, where the government's guarantees to the financial sector amount to 250% of GDP, has been stripped of its triple-A rating by Standard & Poor's.

For America, the rating agency that really matters is in Beijing. "We have lent a huge amount of money to the US. Of course we are concerned about the safety of our assets," said China's prime minister, Wen Jiabao, in March.

In assuaging these worries, governments will have to balance two risks. They may tighten their purse-strings too soon, withdrawing a stimulus that is still needed. But if they keep spending heedlessly, they will saddle the economy with a heavy burden of public debt which may crowd out private investment.

According to Richard Koo of the Nomura Research Institute, the first risk is the greater. Governments, he argues, have to borrow the money that banks, businesses and households save or repay because no other part of the economy is willing to do so. If the funds go unborrowed, the flow of income will be interrupted, and anything that weakens GDP only makes the government's liabilities harder to sustain.

Mr Koo is right that the public finances should not be considered in isolation from the rest of the economy. If households are determined to save and businesses are not prepared to invest, it falls to the government to borrow and spend. The government's debt must rise so that the private sector's can fall. They are on opposite sides of a see-saw.

Putting public and private borrowing together, it becomes clear that America as a whole is no more improvident now than it was before. The dramatic increase in government borrowing since 2007 has been more than offset by the reversal of borrowing by households and businesses.

This give-and-take between public and private debtors helps explain why the yields on government bonds in many rich countries are still well below their pre-crisis levels. Indeed, economists find it surprisingly hard to demonstrate the clear link between heavy public debt and higher bond yields that would justify fears of crowding out. There may be a threshold of debt beyond which bond markets suddenly take umbrage. And buyers may also balk at so much borrowing from so many governments at once. Nonetheless, a recent study by Silvia Ardagna of Harvard and her co-authors showed that an increase in public debt from about 120% of GDP to 145% raises long-term interest rates by a mere 0.86%.

A government will find it easier to handle its debt if it can convince markets that it will succeed in doing so. So it should lay out a strategy for restoring the public finances to calm the markets and forestall a rise in bond yields. The commitments should oblige the government to tighten the budget when the economy improves.

A sliver of cheese

By 2014 only two advanced economies—South Korea and Norway—will have primary budget surpluses (before interest payments) big enough to ensure fiscal sustainability, according to the IMF's projections. Everyone else will have to tighten. The IMF reckons that in order to reduce America's gross debt from 112% of GDP in 2014 to 60% in 2029, the government will have to tighten its primary balance from minus 12% of GDP in 2009 to a surplus of over 4%.

The scale of these repairs is daunting. Only a handful of countries have ever accomplished such a fiscal feat, and it has never been tried by so many countries at once. In Sweden, a left-leaning government achieved a dramatic fiscal turnaround between 1994 and 1999. In a paper for Bruegel, a Brussels think-tank, Jens Henriksson, a former official in the Swedish finance ministry, lays out the lessons. He recommends cutting spending the way the Swedes cut their hard cheeses, slicing a fine layer off the top of the whole budget. That is better than cutting it like a cake, because deep slices cause resentment among the sliced and complacency elsewhere.

Governments will not be able to close their fiscal gaps through spending cuts alone. Mr Henriksson's government also raised revenues by 1.7% of GDP from 1994 to

A sea of red ink 4

As % of GDP, forecasts

Country	Debt 2009	Debt 2014	Budget deficit* 2009	Budget surplus required† in 2014
United States	88.8	112.0	-12.3	4.3
Japan	217.4	239.2	-9.0	9.8
Germany	79.8	91.4	-2.3	2.8
France	77.4	95.5	-5.3	3.1
Britain	68.6	99.7	-10.0	3.4
G20	**100.6**	**119.7**	**-8.6**	**4.5**

Source: IMF

*Before interest payments
†To keep public debt under control

1998. Raising taxes will be necessary, but it is also tricky. A premature increase in Japan's consumption tax in 1997 may have aborted that country's recovery.

Higher taxes can pose a threat to supply as well as demand. According to Peter Lindert of the University of California, Davis, America gets away with its clumsy tax code only because its overall tax burden is relatively low. In the new normal, America's tax take will move closer to European levels and the mix will have to become more efficient.

Jens Arnold of the OECD has ranked taxes according to the damage they can do to growth. He finds that taxes on immovable property harm growth the least and those on corporate profits hurt it most. Consumption taxes are better than income taxes, and flatter rates are better than steeply progressive ones.

Higher taxes on wages can deter some people, especially second-earners and lone parents, from working. Orsetta Causa of the OECD has estimated that a one-percentage-point increase in the marginal tax rate reduces the hours worked by women by about 0.7%. In their determination to restore fiscal stability, governments must be careful not to undermine growth. In its latest *Economic Outlook* the OECD shows that a 1% increase in underlying unemployment increases public debt by up to 3% of GDP over ten years. One way to keep the bond market quiet is to keep the labour market healthy. ■

Separation anxiety

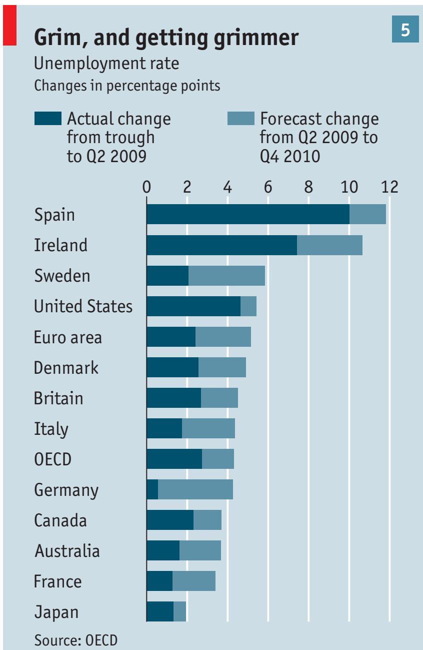
The crunch may entrench unemployment

MITHU SINGH, from the district of Rajsamand in Rajasthan, used to polish diamonds in Surat, the centre of India's gem industry, which processes 90% of the world's diamonds. In better times he earned over 300 rupees ($6) a day. But last summer the industry came to a standstill. Mr Singh became one of perhaps 200,000 gem and jewellery workers laid off in the wake of the global slowdown.

The "third wave" of this crisis, which began in the financial markets and quickly moved to the broader economy, is now striking the labour market, according to Dominique Strauss-Kahn, the head of the IMF. In Cambodia 30,000 workers were laid off in the clothing industry as the collapse in trade took hold, according to the World Bank. In South Africa the closure of mines and smelters has cost 40,000 people their jobs. In China an estimated 670,000 small firms went out of business in the coastal cities of Guangzhou, Dongguan and Shenzhen.

Mr Singh went back to his village in Rajasthan with about 200 others returning from Surat. He thought he would work in the fields. Instead, like many of his colleagues, he found a job building roads under India's National Rural Employment Guarantee act (NREGA), which is meant to offer 100 days of work a year, at the minimum wage, to any household that needs it. Last year the government spent almost twice what it had budgeted on the scheme.

Its budgetary battle against joblessness is being repeated the world over. The OECD reports that 16 of its members have introduced wage subsidies, hiring bonuses or jobs on the public payroll to stem the sharp rise in unemployment. Spain, for example, has introduced an €8 billion public-works programme. Britain will give "golden hellos" of up to £2,500 to firms that recruit people who have been unemployed for more than six months.



The OECD fears unemployment in its member countries will keep rising until well into next year, by which time it will have risen by up to 25.5m since the crisis struck. So far the damage is greatest in America, Britain, Ireland and Spain, where the collapse in housebuilding cost many construction workers their jobs. In Sweden and Germany the worst is yet to come. And mass unemployment could be here to stay for some time. It took America nine years to restore employment after the 1979 oil-price shock, the OECD points out. France never recovered completely.

The danger is that higher unemployment will become entrenched. Milton Friedman argued in 1968 that economies gravitate towards a "natural" rate of unemployment, pinned down by slow-moving supply-side factors such as the strength of unions or the geographical mobility of households. In the short run joblessness will follow the ups and downs of the business cycle. But once swings in demand have played themselves out, the natural rate will gradually reassert itself.

Iron law

In 1986 Mr Friedman's thesis was contested by Olivier Blanchard, now at the IMF, and Lawrence Summers, now head of President Obama's National Economic Council. The labour market, they said, may suffer from "hysteresis", a term taken from physics. Just as iron remains magnetised long after a magnet is removed, so employment may suffer lasting effects from swings in demand. The two economists suggested that a protracted rise or fall in actual unemployment might also shift the underlying natural rate.

The potential causes of hysteresis are poorly understood. Messrs Blanchard and Summers argued that pay deals are negotiated by the workers who keep their jobs (the "insiders "), who will demand wages that are too high to make the newly jobless (the "outsiders") attractive to employers, but not so high as to threaten their own positions. Others have argued that workers' skills atrophy and they become more detached from the world of work the longer they remain jobless.

Economists have not, however, wholly embraced the concept of hysteresis. Willem Buiter of the London School of Economics points out that if you take the idea to its logical conclusion, today's natural rate must depend on the entire history of unemployment. Messrs Blanchard and Summers themselves have been "poor stewards" of the idea, notes Laurence Ball of Johns Hopkins University. "When even the creator of an idea doesn't seem to believe it, the idea loses credibility."

Making short work of it

Governments, for their part, seem to recognise the danger posed by hysteresis. But the problem is easier to point to than to solve. The best way to fight it is to stop unemployment rising in the first place.

In Germany policymakers have encouraged firms to cut hours rather than jobs. If an employee agrees to shorter hours (*Kurzarbeit*), the government subsidises his wages to offset 60% of the loss of income. The number taking advantage of the *Kurzarbeit* scheme has soared since last autumn, from under 80,000 to over 1.4m in June. This seems to have slowed the rise in unemployment, which has edged up from 3m in November 2008 to 3.5m now.

Kurzarbeit now has a long list of imitators. The OECD counts 22 member governments that subsidise a shorter working week. These schemes can be costly and may only delay the inevitable closure of some unviable companies, says Stefano Scarpetta of the OECD. In the Netherlands firms are required to return half the money if they eventually fire the subsidised worker. *Kurzarbeit* schemes may also deprive rival companies of a chance to put workers to better use elsewhere in the economy. Rival firms will, after all, struggle to tempt a worker earning 80% of a full-time wage for 50% of the work. Nonetheless, in this crisis, argues Mr Scarpetta, *Kurzarbeit* may have spared some illiquid but solvent companies from laying off workers simply to preserve cash.

The traffic in ideas is also flowing in the other direction. Germany's Council of Economic Advisers thinks its government should learn from America's system of unemployment insurance. It points out that most such systems make layoffs artificially cheap for firms. Companies can offer less generous severance packages because they know that the state will pick up part of the tab. The solution some American states have pioneered is to require higher contributions from companies with a track record of heavy layoffs. This is justified because their redundant employees make the biggest demand on the scheme. In effect, this method of "experience-rating" imposes a tax on layoffs, forcing companies to carry the cost of their firing habits.

Not all layoffs can be stopped. So the next line of defence against hysteresis is to keep the jobless in the labour force, actively looking for work. After the oil-price shocks of the 1970s, several European governments tried to cut the unemployment rolls by letting older workers collect early pensions or draw sickness and disability benefits for which they did not strictly qualify. By thinning the senior ranks of companies they hoped to free up jobs for young people. But the policy was an "abject failure", the OECD points out. Many older people were lost to the labour force for ever, at the state's expense, and few young people were hired to replace them.

In the latest crisis older workers have lost their jobs, but they have not dropped out of the labour force. This is partly because governments have learnt from their mistakes by restricting disability benefits and closing loopholes in the early-retirement rules. In countries such as Britain and America, older workers are also reluctant to retire until they have replenished the pension savings they have lost in the financial meltdown.

The desire of many governments to keep older people at work fits in with a broader rethink of their jobs strategy. Over the past 15 years governments have started urging the jobless of all ages to find work or get retrained as a quid pro quo for receiving benefits. The aim is to keep beneficiaries motivated to find work and to keep them in close contact with the job market.

Even asking the unemployed to attend an interview with a job counsellor seems to raise their chances of finding work. A study in the American state of Maryland found that a compulsory four-day workshop on looking for a job reduced unemployment before the course was even held. The prospect of attending was enough to persuade some claimants to get a job.

Even so, the record of such "active" labour-market policies is mostly dispiriting. Britain's Youth Training Scheme, introduced in 1983, probably did more harm than good. America's Job Training Programmes of the same era also seemed to scar those that took part in them. Some European variants have done better, but the benefits they confer on their participants may come at the expense of other job-seekers.

Yet many countries have persisted with these policies. Shortly after it came to power in 1997, Britain's Labour government introduced the "New Deal", requiring young people on benefits for more than ten months to sign up for full-time education, charity work or a subsidised job in the private sector. If they refuse, they lose their benefits. The government has since added New Deals for lone parents, people over 50, disabled people and even musicians. But studies of these programmes offer only lukewarm support, according to David Bell of the University of Stirling and David Blanchflower of Dartmouth College.

As a group, OECD countries in 2007 spent 0.6% of GDP on services to get the jobless back into work. The Danes spent over 1.3%; the Americans only a tenth of that. Since the crisis, 23 OECD members have provided extra training for job-seekers and 21 extra help with looking for work.

The principal virtue of these policies is to offset the effects of generous and extended unemployment benefits. These benefits can tempt the jobless into welfare dependency. But that fate is less likely if the jobless are simultaneously obliged to keep on actively seeking work. Active labour-market policies are a way to minimise the moral hazard that goes hand-in-hand with comprehensive insurance. They become more important in a full-blown crisis when governments want to pay bigger benefits for longer to relieve distress and shore up demand.

Mr Scarpetta believes that such programmes may work better during a recovery than in more tranquil times. When the labour market is strong, he points out, the people who remain unemployed tend to be the most difficult to place. They will struggle to find employment whatever the government does. After a recession, however, many motivated, employable people will be looking for work and may benefit from government help to find it.

However, a study of Britain's New Deal policies by Duncan McVicar of Queen's University, Belfast, and Jan Podivinsky of the University of Southampton reaches the opposite conclusion. It shows that these schemes were less effective when local labour markets were weak, serving only to push the unemployed off benefits but not into work. The authors conclude that these policies "may be least effective where and when they are most needed".

In today's bleak labour market the government will find it harder to police benefits and monitor effort. After all, if there are no vacancies, the agency cannot punish job-seekers for failing to apply. It becomes harder to distinguish between conscientious job-seekers and dilatory ones. Such programmes work best when job-seekers believe they are masters of their own fate, rather than flotsam on a macroeconomic wave. That belief becomes harder to sustain during a severe downturn.

As a last resort, the OECD suggests governments create jobs in the public sector for workers who might otherwise become detached from the labour market. These job schemes are costly and have a poor record of preparing people for unsubsidised employment. But in the current downturn, says the OECD, they may be the only way to salvage the ethos of mutual obligation that its member governments have tried so hard to instil over the past 15 years.

In its projections for continental Europe the OECD assumes that two out of every three workers who remain jobless for more than a year will be lost to the labour market thereafter, adding to the country's natural rate of unemployment. By the end of next year, it calculates, that rate will be 9% in the euro area, undoing more than a decade's-worth of progress.

Hysteresis has historically been a bigger threat in the euro area than in America or Britain. But America's labour market may not be quite as flexible this time. With 14m households owing more than their homes are worth, moving house to take a new job will be much harder.

Those made redundant by the crisis will not be the only ones who leave their jobs in the next year or two. Every year on average about a third of the workers in the 30 member countries of the OECD part from their employers, and roughly the same number find new ones. In America the proportion is 45%. Even in bad times millions of jobs are created, just as in good times millions are destroyed. It is this process of churn that allows economies to renew themselves.

Keep churning

The entry and exit of firms accounts for about a third of this turnover in jobs. The rest is due to successful firms expanding their payrolls at the expense of their rivals. The OECD notes that new hiring goes hand in hand with the deployment of more capital. The prospects for jobs, then, depend on the prospects for investment.

Mr Singh weathered the diamond-industry downturns of 1987, 1992 and 1999. He even saved enough money to set up a unit of his own, employing 60 people. But that venture fell victim to the crisis, costing him about 200,000 rupees in losses. This time he has had enough. He will turn his hand to something else. One day he hopes to open a *dhaba*, a roadside restaurant. But to do that, he will need a loan. ■

Rolling the hoop

Banks will take a long time to recover. So will investment

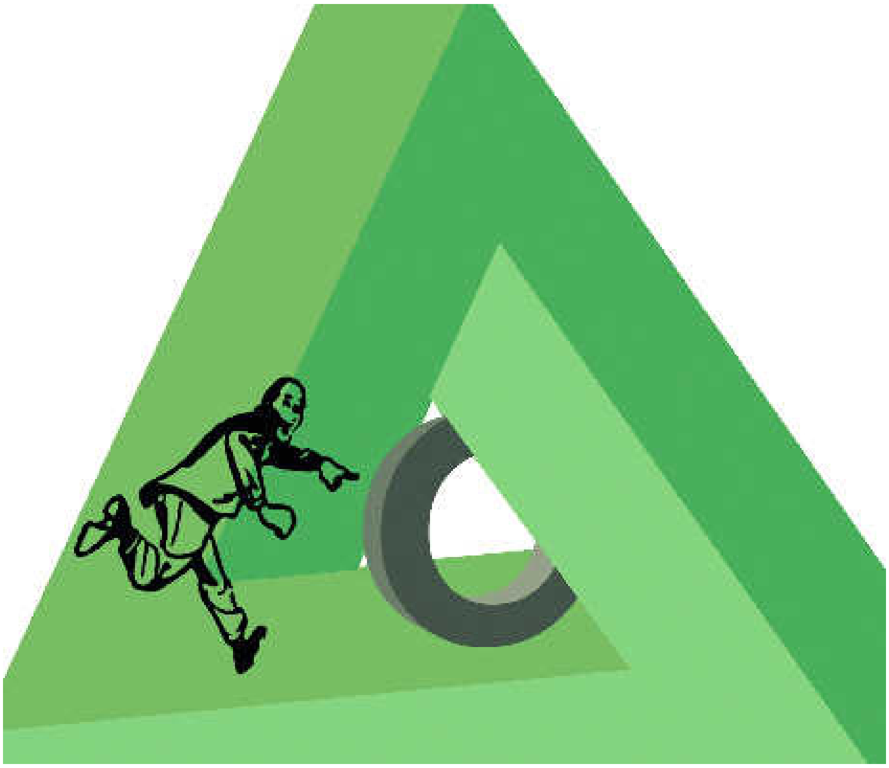
WHAT year is it? Since the crisis broke, economists have cast about for the best historical analogies for the world's predicament. Predictably, most pick the 1930s. Others turn to the panic of 1907, the fourth crash in four decades, which prompted one European banker to describe America as a "great financial nuisance". It also led to the creation of the Federal Reserve. But Takatoshi Ito, an economist at the University of Tokyo, thinks we are now in the spring of 1999.

In March of that year Japan's government injected ¥7.5 trillion ($63 billion) of capital into 15 troubled banks, its second big effort to repair their balance-sheets. It seemed to work. Japanese banks soon found it easier to borrow and became more willing to lend. "Everyone breathed a sigh of relief," says Mr Ito. "They thought the worst was over."

The same relief is now palpable in America. In May the country's regulators unveiled the results of their "stress tests" of 19 banks, having gone through their books and assessed their vulnerability to future losses. These tests revealed a capital shortfall of just $75 billion. That rallied the stockmarket, and the rally, in turn, made the gap easier to fill. Several of the stress-tested banks issued fresh equity, and by the summer eight felt confident enough to repay the $63 billion of capital the government had injected into them last year.

The banks themselves now seem to have more faith in each other. The premium, or spread, between their overnight borrowing costs and the Fed's interest rate is one measure of their creditworthiness. In June 2008 Alan Greenspan, a former chairman of the Federal Reserve, said that a spread of about 0.25% would show things were getting back to normal. In August this year the spread fell below that.

But in Japan the period of complacency did not last. The country remained overbanked and its banks remained chronically undercapitalised. After a slide in the stockmarket halved the value of the banks' shareholdings, the capital shortfall widened again. Because they were short of ▸▸



capital, Japan's banks were reluctant to own up to losses. But until they acknowledged the bad assets on their books, they could not get rid of them. Instead, they continued to roll over loans to zombie companies that had little prospect of repaying them, according to Takeo Hoshi of the University of California, San Diego, and Anil Kashyap of the University of Chicago. Even by the banks' own reckoning, their non-performing loans increased from ¥29.6 trillion in the optimistic spring of 1999 to ¥42 trillion three years later.

When Heizo Takenaka took office as minister of state for financial services in 2002, he decided that recapitalisation was a necessary but not a sufficient condition for recovery. Also required was a ruthless examination of the assets on the banks' books and the rapid disposal of any bad loans. Under Mr Takenaka's leadership the regulator recapitalised one bank and cajoled many others to clean up their books and raise capital.

Does the West now need a Takenaka plan of its own? America's regulators think they already have one. Their "stress test" was an attempt to put a number on the potential dangers lingering on banks' books. But not everyone is convinced. Mr Ito thinks Mr Takenaka would have been much tougher.

Mr Takenaka himself thinks the American stress test was "meaningful". But "honestly speaking, it is very difficult from outside to judge whether they have done it accurately." If the economy recovers, non-performing loans will automatically disappear and all will be well, he says. But if not, a second round of stress tests may be needed in the future.

In America, the worst losses probably now lie in traditional "whole" mortgages. These were never spliced, diced and bundled up into marketable securities, so they have not been marked down to reflect a depressed market price. They will bleed slowly instead.

America's stress test allowed for up to $185.5 billion of red ink on residential mortgages, no small sum. But worse is still to come, argues Daniel Alpert of Westwood Capital, an investment bank. He thinks America's banks, like Japan's, will be in no hurry to recognise these additional losses. As time passes, house prices may recover, or banks' own accumulated profits may help them withstand the damage. It is like the child's game of rolling a hoop with a stick, Mr Alpert says. Skilled players can keep the hoop going for a long time.

Outside America many banks remain in denial, according to Adrian Blundell-Wignall of the OECD and his co-authors. Either they do not want to tell the markets how bad things are, or they themselves do not really know. By the authors' calculations, Europe's banks need to raise $357 billion to restore the capital they have lost in the crisis. That is less than six months of projected profits, but it ignores potential losses in south-east Europe and the Baltics, as well as the risks buried in collateralised synthetic obligations.

Moreover, adding that much capital would still leave the banks with highly leveraged balance-sheets, holding over $36 of assets for every dollar of equity. To match America's gentler leverage ratios, Europe's big banks would need to raise $2.8 trillion of capital, an amount that represents three-and-a-half years-worth of projected earnings.

Swedish model

Critics of Japan compare it unfavourably with Sweden, which suffered its own banking bust in the early 1990s. Sweden's authorities resolved to identify potential losses up front so they could distinguish between sturdy banks and failed ones. They took control of one insolvent bank in addition to one that was already partly state-owned, separated their good assets from bad and recapitalised them. As the Swedish economy recovered, the eventual cost to the taxpayer turned out to be less than originally feared.

But in a recent report the IMF takes a second look at the "Swedish model". It acknowledges that the country's willingness to face its banking losses got the bad news out of the way, but it also points out that those losses were never very big. It puts the gross fiscal cost of the crisis at 4% of GDP, as against Japan's 14%. The smaller the problem, the easier it is to face it squarely.

Moreover, the report concludes that Sweden's recovery owed more to a buoyant world economy than to a revival of the banks. The devaluation of the krona and the resurgence of Sweden's trading partners led to an export boom in 1993. Bank lending did not start growing again until two years later.

Tetsuro Sugiura of Mizuho Research Institute reaches a similar conclusion about the Takenaka plan. He thinks it helped, but only because the economic circumstances were propitious. It is easier to be uncompromising in a forgiving economy.

Perhaps the true lesson of Japan and Sweden is that governments should insist on honesty from their banks only if they are prepared to pick up the bill. And they should get tough with the financial institutions only when the economy is getting easier on them.

Mr Sugiura thinks America and Europe are following in Japan's footsteps. Restoring the banks to health "could be a long and patient process", he says. It was not until March 2006, seven years after the crisis was declared over, that Japan's banks at last had enough capital. But Western banks tend to be far more profitable than their Japanese counterparts, which should allow them to earn their way out of their losses more quickly. They can roll the hoop at four times the speed.

Gandhian banking

Governments will remain big stakeholders in banks

IN THE final chapter of his "General Theory", Keynes foresaw "a somewhat comprehensive socialisation of investment". In a capitalist society investment depends on the animal spirits of entrepreneurs and the constancy of investors, who must commit their funds to uncertain ventures for extended periods. Keynes doubted that either force would reliably ensure enough investment to keep the economy fully employed, especially during turbulent times.

In the thick of the crisis his prediction appeared to be coming true. By the spring of this year the world's governments had injected $432 billion of capital into their banks, according to the IMF, and guaranteed bank debts worth $4.65 trillion. America now holds a 34% stake in Citigroup, or "Citigov", as the financial blogs call it. The British government owns 43% of Lloyds Banking Group and 70% of Royal Bank of Scotland.

State-owned banks in India have increased their share of lending to 74% of the country's total (excluding the regional rural banks). Sonia Gandhi, the president of India's ruling Congress party, says that "every passing day bears out the wisdom" of her mother-in-law's decision, as prime minister 40 years ago, to nationalise the banks. Brazil's state development bank, the National Bank for Economic and Social Development, expects its disbursements to grow by over 40% this year. China's prodigious investment this year is largely at the government's behest. According to calculations by Louis Kuijs of the World Bank, investment steered by the state in the first four months of 2009 was 39% up on the same period last year.

The end of a neoliberal era

The heavy infusion of public money into private banking was shocking at the time. But perhaps people should not have been so surprised. Banks are inherently fragile institutions, borrowing short and lending long. When they break, the damage is never confined to them alone, so governments cannot afford to remain aloof.

State interventions in this crisis were different in degree from previous rescues, but not in kind. In America the government has long been prepared to take over and recapitalise failing institutions if necessary. For example, in 1984 America's Federal Deposit Insurance Corporation seized control of the country's seventh-largest bank, Continental Illinois. The state also stepped in to save a number of Texan financial institutions in the 1980s and the Bank of New England in 1991.

Germany's government now owns 25% of Commerzbank and 90% of Hypo Real Estate. Even before the crisis over 40% of the banking system's assets were owned by various levels of government. Yet the state's visible hand did not keep banks out of trouble. Germany's *Landesbanken*, wholesale banks owned by regional governments, hold about a fifth of the banking system's assets but suffered 43% of the write-downs in the crisis.

By this summer 33 American banks had repaid the capital the government had injected into them. The new era of state ownership seemed to be passing almost as quickly as it had arrived. But the state still has a large stake in the financial system beyond its explicit ownership of shares. It now owns the risk of any of the bigger institutions failing. Governments will do their utmost to avoid a repeat of anything like the bankruptcy of Lehman Brothers and the ensuing chaos.

This means that large, complex financial institutions operate with an implicit state guarantee, giving them an edge in borrowing money and expanding their business. That will only make them a bigger liability for the government in the future. The IMF points out that it was the top five American banks, with the biggest assets, which also had the lowest capital ratios. These same banks suffered the biggest loan losses in the crisis. They received almost two-thirds of the government's capital injections as they increased their market share to 63.5%. For them, the risk of insolvency has been somewhat comprehensively socialised.

If banks in Europe and America spend the next two or three years licking their wounds, they will be reluctant to expand their loan books. This is bound to hamper the recovery. Of the 54 banks surveyed by the Federal Reserve in July, 19 said they had tightened their lending standards for large and medium-sized companies over the past three months. Only two said they had eased them.

Some industries are more vulnerable to tighter credit than others. Cash-rich companies with short investment cycles can grow by ploughing their profits back into their business. Even in countries with sophisticated financial systems most investment is self-financed. Some companies, however, rely heavily on outside money. Their business may require large investments that are slow to bear fruit, forcing them to borrow heavily up front.

The manufacturing industries most vulnerable to financial disruption are computers and electronics, electrical equipment, plastics and chemicals, according to a recent study by the IMF. These industries finance less than half of their investment from their own profits. Prakash Kannan of the IMF has calculated that firms in these industries grow about 1.5 percentage points more slowly after a financial crisis than firms which rely on internal funds. This is particularly true of firms that lack tangible assets which might serve as collateral for a loan.

Self-employed entrepreneurs are also heavily exposed. Many rely on their houses as their main collateral. A second mortgage is probably the biggest single source of start-up finance in Britain and America. Between 2005 and 2007 the number of self-employed people in Britain, for instance, rose by 227,000, to 4.15m. Perhaps half of that increase is due to rising house prices, say David Blanchflower of Dartmouth College and Chris Shadforth of the Bank of England.

In the post-crisis period, it seems safe to say, companies will rely more heavily on their own resources. On the face of it, that may be no bad thing. Profitable firms will grow, and since they will be borrowing less of the money they invest, they will be less likely to default on their loans. But the companies richest in cash are not always those with the best investment opportunities, whereas promising firms may struggle to raise the money they need.

The problem shows up most clearly in developing economies, where the financial system often fails to channel funds to companies that could make the best use of them. Indeed, financial self-reliance is a hallmark of underdevelopment, which condemns firms to the "drudgery of generating funds internally," as Raghuram Rajan and Luigi Zingales of the University of Chicago put it. In Mexico, for example, small firms with less than $200 invested in them had rates of return as high as 15% a month (an annualised return of over 400%), according to one 2003 study, suggesting they were starved of capital. By contrast, rates of return for firms with more than $900 invested were often negative, suggesting they had overinvested in themselves.

Working it off

Many companies in the rich world must now feel the same way. Given their greatly diminished sales, their investment in capacity now looks excessive. In the euro area manufacturing in July was operating at only 69.5% of its full capacity, far below its long-run average of 81.5%, according to the European Commission. In America it was running at 66.6% of potential in August, 13 percentage points below normal. Entrepreneurs will see little reason to invest in extra plant and machinery when so much existing capacity lies idle. According to Jan Hatzius of Goldman Sachs, fixed investment in America will not stop falling until the last quarter of 2010.

Even when Europe's and America's economies recover, they may operate at a lower level of capital intensity. This is because the cost of capital is unlikely to fall back to its pre-crisis levels, even after the banks recover. As the OECD points out, the real cost of borrowing for American companies with a BBB credit rating averaged under 3% in the five years before the crisis. This easy money was backed by overpriced assets and overextended banks. The OECD expects borrowing costs to settle down at about 4.5% in the new normal, similar to their level in the 1990s.

If capital is costlier, companies will economise on it. They will neglect to replace plant and machinery, allowing it to depreciate over time. The capital stock of American companies will have to fall by about 6.5%, the OECD calculates, to reflect the post-crisis world. This shrunken stock of capital will, in turn, lower America's potential output by about 2%, it reckons.

If firms go slow on investment, their demand for credit after the crisis may be even weaker than the supply. According to the Fed's survey of loan officers in American banks, the most important reason for the decline in commercial and industrial lending is "lower loan demand from creditworthy borrowers because their funding needs had declined". Of the banks questioned, 57% said that demand for loans from big firms had weakened over the previous three months.

Mr Sugiura says that Japan also suffered from weak loan demand, not just impaired supply. The country's banks tried hard to find takers for their loans during the lost decade, but with little success, because Japan's firms were trying to cut their debts as quickly as possible. Mr Koo of Nomura agrees. According to the Tankan survey, companies themselves said their bankers were willing to lend for much of the period, except during the credit crunch of 1998 and the years after the Takenaka plan in 2002-03. "The real problem isn't bankers not lending but borrowers not borrowing," says Mr Koo.

For companies still eager to borrow, the banks are not the only option. Non-financial companies sold $1.1 trillion-worth of bonds in the first eight months of this year, according to Dealogic, a financial-analysis firm, far more than the $898 billion they sold in the whole of 2007, itself a record year. Some of these companies turned to the capital markets because the banks spurned them. They chose to raise money from investors directly, cutting out the middleman. This is one of the strengths of liberal financial systems which allocate capital in arm's-length markets as well as through banking relationships. The market for corporate bonds has emerged from the crisis in rude health. But not all of these financial markets will rebound as easily. ■

Market fatigue

The Anglo-Saxon model has taken a knock

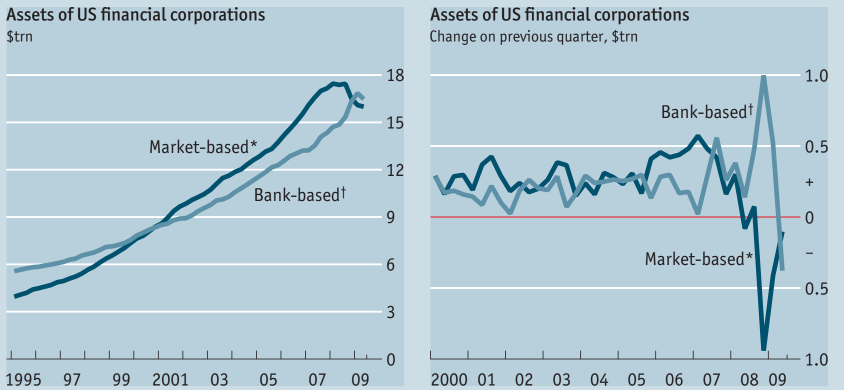
THE past two years have rather obscured the charms of the free market. For those seeking to restore their faith, a trip to the Kashmir Valley provides some unlikely solace. The floating vegetable market that assembles at dawn on Dal Lake is perhaps the easiest market in the world to romanticise.

Shortly after the call to prayer sounds from the lakeshore shrine, farmers and traders cast off on narrow skiffs to truck, barter and exchange. Their boats bob and sway as bids and offers rise and fall. Sellers bump gently into buyers, putting a foot in the customer's boat to ensure that the deal does not drift away. Sprigs of mint, red coils of lotus root and bundles of knotted cabbage change hands for a few rupees, tossed from one boatman's lap to another. The terms of exchange float freely—and, best of all, the traders do not need bailing out.

The market, it is worth remembering, is just a form of human exchange. "To be generically against markets would be almost as odd as being generically against conversations between people," notes Amartya Sen, a Nobel prize-winning economist. The recent crisis was not a generic failure of markets but a specific failure of finance. The meltdown did no discredit to markets that exchange goods and services as opposed to assets and securities. On Dal Lake, the traders know what they are getting; a buyer picks out the bad beans and tosses them overboard before money changes hands. And the goods are perishable, leaving little time for speculation.

Nonetheless, for many observers the retreat of Anglo-Saxon liberalism is one of the most telling parts of the new normal. Pimco's Mr El-Erian argues that the crisis has broken the spell of the "mystical Anglo-Saxon model of liberalisation and deregulation". Australia's prime minister, Kevin Rudd, recently heralded the overthrow of neoliberalism, "the economic orthodoxy of our time". In the run-up to Japan's recent election, Yukio Hatoyama, the victorious candidate for prime minister, campaigned against "unrestrained market fundamentalism".

Not normal



Source: Federal Reserve

*Asset-backed securities issuers, broker-dealers, finance companies, GSEs (government-sponsored enterprises) and GSE mortgage pools †US commercial banks, credit unions and savings institutions

Liberal reforms designed to increase the supply-side capacity of an economy, for example by removing barriers to entry, lose some of their urgency when the economy is too weak to achieve the potential it already has. And when financial markets are subdued, a reforming policymaker cannot count on a stockmarket rally to reward him.

But in most industries the underlying logic of the Anglo-Saxon model is no more or less obvious today than it was two years ago. No one who believed, before the crisis, that manufacturing, telecommunications or steelmaking was the private sector's job should have changed their mind since. It is the Anglo-Saxon model of deregulated and liberalised finance that has lost its mystique. Bunches of swaps, sprigs of auction-rate securities and bundles of subprime loans—these are perhaps the hardest markets in the world to romanticise.

Arm's-length or hands-on?

In the Anglo-Saxon model deep capital markets compete with banks, which also compete vigorously with each other. Transactions are carried out at arm's length, on the basis of public information, at competitive prices, and under contracts enforceable by third parties.

Before the crisis this model was gradually gaining ground. Subir Lall of the IMF and his colleagues have documented the growth in "arm's-length" finance in countries traditionally dominated by hands-on banks, such as Germany and France. Ten years ago, in the wake of Japan's stagnation and the Asian financial crisis, Mr Rajan and Mr Zingales of the University of Chicago noted the "slow but steady ascendance of the public markets" and wondered if it heralded "the eventual supremacy of the arm's-length, market-based, Anglo-Saxon system".

That advance has dramatically reversed in the past two years (see chart 6). In the crisis, companies that had relied on selling marketable securities to raise working capital turned in desperation to their banks instead, tapping pre-arranged credit lines to keep afloat. At the same time many off-balance-sheet investment vehicles, supposedly at arm's length from the banks that sponsored them, quickly returned to their sponsors' bosoms when the markets failed to fund them.

The traditional alternative to arm's-length finance is a more intimate system dominated by banks that maintain long-term relationships with their borrowers. In Japan, for example, companies traditionally turn to the same one or two banks for their financing. In Germany banks traditionally have block shareholdings in the companies they serve and put representatives on their boards.

This clubbier finance offers three important advantages over the stand-offish Anglo-Saxon model. The banks know their customers better; they can smooth their lending to them during periods of misfortune; and they have "skin in the game", retaining some responsibility for the loans they extend.

But a financial system based on stable relationships has its own drawbacks. In such a system a small cluster of banks comes to a committee decision on whether a venture is worth backing or not. The process requires bankers "to submerge their disagreements and accept a compromise", as Franklin Allen and Douglas Gale point out in their book, "Comparing Financial Systems".

The market, on the other hand, "allows investors to agree to disagree". Thousands can place their bets, based on their own hunches and insights. Markets, therefore, have an edge whenever diversity of opinion matters. When it comes to financing new technologies or fresh ideas, it is often better to leave the job to the "wisdom of crowds" (the title of a book on markets by James Surowiecki) than to the conventional wisdom of loan officers in a bank.

Mr Lall of the IMF and his co-authors have tried to show this empirically by looking at the industries that contributed the most to world growth from 1980 to 2001. Countries that specialised in those industries in 1980 duly prospered over the subsequent 20 years. Countries that had the "wrong" industrial mix did less well. But the researchers found that starting out with the wrong industries was less of a problem for countries with arm's-length financial systems. Mr Lall reckons these systems do a better job of reallocating resources from declining to growing sectors.

The worst of both worlds

The markets most damaged by the crisis are those for securitised assets. Securitisation is supposed to turn a long-term banking relationship, ie, a loan, into an arm's-length transaction, the sale and purchase of a security backed by loans. But it ended up caught halfway between the two. Banks, as many commentators have noted, kept a surprising share of subprime securities on their balance-sheets rather than selling them on. According to a study by Hyun Shin of Princeton University and his co-authors, they suffered over 30% of the subprime losses in 2008.

This cross-bred model provided none of the advantages of arm's-length securitisation, which was supposed to move default risk away from the banking system, spreading it widely to those best placed to bear it. Nor did the model provide any of the advantages of "intimate finance". The banks had no relationship with the mortgage-holders or companies from whose borrowings their mincemeat securities were reconstituted.

Why did banks keep these securities, rather than sell them on? Mr Shin argues that banks held mortgage-backed securities so that they could borrow against them. The demand for securitised assets was, in essence, a demand for leverage.

If banks could not borrow from pension funds or other investors, they turned to other banks instead. In this way they wove a cat's cradle of cross-claims on each other: one bank's liability was another bank's asset. This made the banking system more fragile, not less. If one bank took the precaution of trimming its assets, it deprived another bank of funding. Prudence in one institution might then inspire panic in another.

Low-octane fuel

The banks' freedom to borrow will be regulated more tightly in the new normal. They will be required to hold more capital "once recovery is assured", the G20 finance ministers and central bankers said in September. Mr Shin argues that these capital requirements should tighten in booms, when banks become more eager to borrow, and ease in busts.

Regulators in Europe and America may also oblige the creators of these securities to hold on to 5% of the value of the assets they distribute to others. Five per cent does not sound like much, but in 2007 they held an average of just 1.5%, according to the IMF's latest Global Financial Stability Report. The fund's calculations suggest that a 5% requirement would be enough to close some securitisation markets for good.

For its part, the IMF does not want to see securitisation return to its "high-octane levels" of 2005-07. But it nonetheless thinks regulators should mend securitisation, not end it. The banks, it points out, cannot fill the lending gap left by these markets. And the securities the banks now borrow against will need replacing with fresh ones as they mature. "In light of the current constraints on lending capacity, restarting securitisation could help get credit growth moving again," it notes.

The IMF is right that the securitisation market's misery is hurting credit and therefore demand. But it need not do lasting damage to the economy's longer-run prospects. These markets are a dominant provider of mortgage finance and an important source of car loans and consumer credit. That is a good thing, as far as it goes. But home- and car-ownership are hardly the engines of economic growth. Indeed, the acceleration of credit during the securitisation era was not matched by an acceleration in economic output.

In the long run growth depends on replacing obsolete methods of production with better ones, and supplanting old industries with new ones. Repackaging subprime mortgages does not further that cause, but other arm's-length markets do. As Messrs Allen and Gale note, the Anglo-Saxon stockmarkets have been conspicuously successful at sponsoring new industries and reallocating resources to them. For all its excesses and eccentricities, these feats of economic reinvention are the Anglo-Saxon model's saving grace—and they remain vital to the process of industrial renewal, the subject of the next article. ■

Industrial design

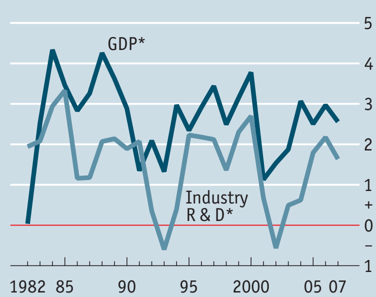
Can governments help revive innovation and trade?

AN ECONOMY's potential output depends on the amount of labour and capital available, and on the ingenuity with which those resources are put to use. Of these three factors ingenuity is by far the most important. It accounted for about 88% of the growth in output per man-hour between 1909 and 1949, according to a 1957 paper by Robert Solow which helped bag him a Nobel prize. Mr Solow labelled this all-important factor "technical change", a catch-all term for anything that yields more output from the same inputs of labour and capital. It could include breakthrough inventions, like the internal combustion engine, or organisational improvements, like the assembly line or the traffic roundabout.

At a conference in April Mr Solow was optimistic that technical change would proceed apace despite the crisis. These "fundamental determinants of the growth of potential output do not seem to have deteriorated at all," he said. Mohamed El-Erian of Pimco is equally confident: "The secular forces of productivity gains and entrepreneurial dynamism will not disappear." But many of the companies responsible for making this change happen seem less sanguine. Of almost 500 big business-

In lockstep 7

OECD countries, % change on previous year



Source: OECD *Divided by standard deviation

es recently surveyed by McKinsey, a consultancy, 34% expect to spend less on R&D this year and only 21% think they will spend more. Historically, R&D spending has fluctuated with income, but more strongly: when growth declines by 2%, R&D spending drops by 3%. According to the OECD, it is the more speculative, longer-term projects that are cut first. But these are precisely the ones that lead to the biggest breakthroughs.

As big-company R&D spending is dropping, investment in new and innovative firms has collapsed. One dollar of venture capital yields as many patent applications as $3 of R&D spending, say Samuel Kortum of the University of Minnesota and Josh Lerner of Harvard Business School. But investment by venture capitalists in America in the second quarter of this year was 51% down on the same period last year.

Roads to riches

Cutting-edge economies like America's make progress by inventing new products and techniques. Developing countries, on the other hand, grow by assimilating know-how from elsewhere. Even if the flow of invention slows, there remains a deep pool of existing knowledge for developing economies to drink from. Thus the crisis would seem to pose little threat to the advancement of technical change in developing countries. But that conclusion may be too hasty.

Developing economies typically "learn by doing", as economists put it, mostly in industries that make tradable goods which can be sold on world markets. These industries provide a lot of scope for advancement because the size of world markets allows for a finer division of labour and greater benefits from specialisation.

An emerging-market government can therefore promote this learning process by keeping its currency cheap, which raises the domestic price of traded goods relative to others and thus encourages firms to produce more. This is a tried-and-trusted growth strategy promoted in the past by economists such as Bela Balassa and lately championed by Dani Rodrik of Harvard, among others. In a recent paper Caroline Freund and Martha Denisse Pierola of the World Bank show that sustained export surges in the developing world are often associated with sharp currency depreciations, which encourage entry into new markets and products.

Unfortunately, cheap currencies also discourage the consumption of traded goods by making imports more expensive. The result is a trade surplus, which can get out of hand. Even before the crisis, William Cline of the Peterson Institute for International Economics, a think-tank in Washington, DC, worried that the combined surplus of all the countries pursuing this strategy was too much for the rich world, especially America, to absorb comfortably. As America and Europe struggle to pick themselves up after the crisis, their policymakers may get tougher with countries they accuse of mercantilism and currency manipulation.

Thus productivity growth in the world economy is doubly endangered. In the rich world it is threatened by a lack of resources for innovation, and in the developing world it is threatened by the loss of tolerance for export-led growth. It is a sign of the times, perhaps, that in response to both problems people are turning to the state for an answer.

Cleaning up a dirty word

If developing countries are forced to abandon their cheap currencies, Mr Rodrik argues, they could replace them with explicit industrial policies instead. The state could subsidise the transition from traditional businesses such as commodity exports to new and more lucrative activities. Mr Rodrik thinks the industrial policies of the 1960s and 1970s were more successful than they are now given credit for.

Like an undervalued exchange rate, an industrial policy can encourage the production of traded goods. But unlike a cheap currency, it need not discourage their consumption. Some of the extra production will find its way abroad, adding to the country's exports. But if the exchange rate is allowed to strengthen, it will eliminate any trade surplus and ward off foreign accusations of currency manipulation. That will keep the traded-goods sector slightly smaller than under full-blown mercantilism, but still bigger than the market alone would dictate.

Even before the crisis, Mr Rodrik was working to rehabilitate industrial policy in the eyes of his colleagues. It had earned a bad name, he thinks, because governments in the past have tried to pick winners, singling out the industries or firms they think deserve their backing. Sometimes they succeeded, but too often they squandered scarce resources on boondoggles. A modern industrial policy, Mr Rodrik argues, should be agnostic, promoting industries or techniques the country has never tried before. If they fail, there will still be lessons from the experiment. The government should spread its bets widely, monitor the results rigorously and cut its losses ruthlessly. Industrial policy cannot pick winners, but it must be quick to shed losers. One outstanding success will pay for many failures. Mr Rodrik is, in effect, asking technocrats in emerging economies to emulate the venture capitalists of Silicon Valley.

Meanwhile, back in America, the government is being urged to emulate technocrats from the developing world. America should learn from Taiwan, South Korea and China, says Kevin Gallagher of Boston University. Its public interventions in carmaking, green technologies and banking may now be called "bail-outs", but "we'll soon call them the new US industrial policy." In August Noam Scheiber of the *New Republic* took stock of America's dismal prospects for exports, consumption and investment and concluded that an industrial policy was the last hope to rekindle the country's animal spirits.

America has never been entirely faithful to the ideal of laissez-faire. In his forthcoming book "Boulevard of Broken Dreams", Mr Lerner points out that even Silicon Valley in its early years depended more heavily on military contracts than its current denizens care to admit.

Mr Lerner has no theological objection to industrial policy and believes that bureaucrats can help entrepreneurs. But as the title of his book suggests, they mostly do not. One reason is that bureaucracies need a steady stream of quick wins to reassure their political sponsors. They do not cope well with a long series of defeats, interrupted by sporadic flashes of success.

From Silicon Valley to Bretton Woods

If they work as planned, Mr Rodrik's industrial policies would remove one motivation for the emerging world's trade surpluses. But that still leaves another. Many such economies run surpluses as a precaution against financial turmoil. Their export earnings allow them to accumulate large cushions of foreign-exchange reserves. The crisis has only strengthened that motive. Hoards of dollars that seemed wasteful before last autumn's panic no longer seem quite so excessive. Old rules of thumb which said that countries should keep enough reserves to cover only short-term foreign debt now look hopelessly out of date. Before the crisis South Korea had a stash of $240 billion-worth of reserves. Even so, last autumn the won fell precipitously against the dollar.

If central banks in emerging economies insist on buying dollar reserves, their purchases will prop up the greenback, denying America the devaluation it needs. America may find itself absorbing their surpluses by running large deficits of its own again. But instead of relapsing into the global imbalances that prevailed before the crisis, a new modus vivendi is possible: America could offset the inflow of capital from foreign central banks with an outflow of capital of its own. It can borrow "short" from emerging countries, satisfying their demand for safe, liquid securities, even as it invests "long" in riskier but more rewarding assets overseas.

The world's venture capitalist

To some extent it already does. It held $6.6 trillion-worth of foreign shares and direct investments at the end of 2008, even as foreigners held $4.1 trillion-worth of American government securities. Indeed, Pierre-Olivier Gourinchas of the University of California, Berkeley, and Hélène Rey of the London Business School have described America as the world's "venture capitalist", issuing fixed-income liabilities and putting lots of money into shares and direct investments abroad. Its role as a venture capitalist is not merely a metaphor. The country accounts for the bulk of cross-border venture-capital deals. Between 2003 and 2007 the number of deals America carried out abroad exceeded the number that foreigners carried out in America by an average of 3,000 a year.

America now needs to increase this foreign investment to match the inflows it attracts. Given that its households are saving again, it will have more capital to provide. And risky but rewarding emerging markets may seem more appealing now that risky and unrewarding securitised assets have been exposed as a triple-A sham.

As for the potential recipients of this extra American capital, some would be more grateful than others. Many are wary of capital inflows, having been hit by their reversal in the past. But foreign direct investment is relatively stable. And the money Americans might venture in emerging stockmarkets would be an equity investment, creating no obligation to repay. Developing economies such as India's prevent foreigners from buying debt but freely allow them into the stockmarket. India has been able to accumulate over $250 billion of reserves in the past few years without ever running a trade surplus.

This suggests an alternative to industrial policies in both the rich and the poor world. Many of the market failures that might justify industrial policies can equally well be remedied by foreign direct investment or foreign venture capital. Foreign multinationals can, for example, alleviate the chicken-and-egg problem that plagues many new industries. The entry of a large foreign firm can rally the investments of buyers and suppliers.

Moreover, greater outflows of capital from America would weaken the dollar, allowing America's trade balance to improve. An export boom would do more than anything else to rekindle America's animal spirits and get companies spending on R&D again. In short, if emerging economies were able to import American venture capital, there would be less need for them to invent their own. And if America were able to emulate the emerging economies' export-led growth, it would not need to borrow their industrial policies. The result would be a more balanced recovery in America and the emerging economies. ■

A dull, heavy calm

The world economy has stopped falling. Now what?

"TO BOUNCE without breaking." That is how one ecologist defined "resilience" in Aaron Wildavsky's classic treatise on risk, "Searching for Safety". Wildavsky argued that resilience was sometimes a greater virtue than prescience. Not every danger can be foreseen, and even if it can be predicted it cannot always be averted.

The stewards of the world economy failed to foresee or avert the crisis from which it is now slowly recovering. But how resilient will the economy prove to be? Will it bounce, or is it broken?

The answer is both. The world economy will no doubt bounce in the next few quarters. Households that had braced themselves for the next Depression will resume spending, albeit modestly. Companies that have depleted their inventories will restock them. Some new homes will be built. The economy will grow quite briskly, though from a depressed level.

But even as it recovers, it will remain under repair. The stock of debt that banks and households still carry will take years to pay off. The hole in the balance-sheet must be sealed before the economy can regain its bounce.

Because of this overhang of debt, America's consumers cannot lead a sustained recovery. American exports could do the job instead, but emerging Asia is not yet ready to absorb them. That leaves America with two unpalatable choices. It could impose tariffs, like the 10% import surcharge President Richard Nixon introduced for four months in 1971. That panicked America's trading partners and spelled the end of the Bretton Woods regime of fixed exchange rates. President Barack Obama's decision last month to slap tariffs on Chinese tyres stirred faint memories of that incident. But in the main America, along with many other countries, will probably have to rely on its fiscal stimulus for longer than it would like.

That may have lingering consequences. In his book "Crisis and Leviathan", Robert Higgs, an economic historian, argues that crises have a ratchet effect on the reach of government. In each crisis the state extends its authority. When the crisis passes, the government's scope recedes, but it never quite returns to its previous limits.

In China, the expansion of government into health care and pensions is welcome. In America, too, many people hope the stimulus spending on roads and other infrastructure will narrow the gap between private opulence and public squalor that some economists think has only widened since John Kenneth Galbraith identified it in 1958. But the crisis has not made the case for big government per se. It has instead demonstrated the importance of an elastic government that can spend freely in downswings because it is careful to repair its finances in upswings. Chile's government, for example, set aside 12% of GDP in a stabilisation fund when the copper price was high so it could muster a stimulus of almost 3% of GDP when the economy was laid low, contributing greatly to the country's resilience. Elsewhere politicians have shown they can run countercyclical poli-

cies in bad times. They have yet to prove they can run them when things go well.

To avoid a repeat of financial disaster, governments are appointing "systemic-risk" regulators, hoping that prescient overseers will ward off trouble. Because financial crises are recurring events, it is tempting to think that regulators can anticipate and prevent them. The best regulators understand that financial history does not repeat itself word for word. And even if they can see trouble coming, they are not always free to act on their hunch. The political backing for financial curbs is strongest in the immediate aftermath of a crisis, when it is least needed.

Alan Greenspan, a former Fed chairman, understood this. He never expressed much faith in his own ability to foresee systemic risks, even though he acted swiftly after crises such as the 1987 stockmarket crash, the 1998 implosion of Long-Term Capital Management and the terrorist attacks of September 11th 2001. Instead, he relied on the prescience of individual financial institutions, hoping that if they looked out for themselves, the financial system as a whole would take care of itself.

Unfortunately the financial firms themselves had too much faith in their own foresight, believing themselves capable of modelling and containing the risks they were running. This tempted them to neglect the simpler quality of resilience. They assumed that at a pinch they could always borrow funds and sell their assets. They borrowed too heavily in general, and too much from each other in particular. This left their balance-sheets tightly interlocked and woefully undercapitalised.

The systemic-risk regulators may not spot crises coming, but there is plenty they can do to make the system a little bouncier when it falls. Imposing tighter capital requirements, as the G20 countries have promised to do, should increase resilience in two ways. It will make banks themselves more robust, because they will have a bigger cushion against unexpected losses. And it will prevent them from borrowing so heavily from each other, helping to disentangle their interwoven balance sheets. This will make each bank less vulnerable to the distress of every other bank.

The introduction to this special report laid out three possible patterns of recovery for the world's biggest economies. It argued that America will not repeat the economic rebound it enjoyed after previous recessions because its banks and households face years of balance-sheet repair. Instead, events since the crisis have been alarmingly reminiscent of Japan, which took more than a decade to start recovering from its balance-sheet recession.

But America is unlikely to suffer that fate, for three reasons. Both the bubble and the bust were smaller relative to the size of its economy. Partly as a result, the government has acted with greater dispatch to recapitalise the banks. "America is doing everything we did, but at four times the speed," says Takatoshi Ito of Tokyo University. And America's banks tend to be more profitable than their Japanese counterparts, so they should take less time to earn their way out of trouble.

The banks' troubled debtors are also different. In Japan the banks' books were full of loans to zombie companies with debts they could not repay. America, by contrast, suffers from "zombie households". Both types of zombies save remorselessly, draining the economy of demand. But corporate zombies do more lasting damage. Companies, after all, are meant to invest other people's money in fruitful ventures that help expand the economy. Households, on the other hand, provide the money for firms to invest. So if households become significant savers, they merely exercise their natural role as providers of funds to the rest of the economy. As long as those funds are put to good use, the economy can thrive. Yet if companies stop investing for long periods, capitalism will have the life snuffed out of it.

The indebted countries of the West should escape this predicament. They are likely to return to familiar rates of growth per worker, though not all laid-off workers will benefit from the upturn. The longer that demand remains subdued, the worse their chances of finding jobs will become. They may become demoralised, a few will become depressed and too many of the young may turn delinquent.

The morning after

For everyone else the new normal will be less bleak. The world economy will not, it seems, relive the 1930s. It should also avoid Japan's lost decade of the 1990s. Instead, the future of many Western economies will look more like continental Europe in the 1980s, with large deficits, heavy public debts and stubborn unemployment. After the fear and panic of the past two years, that may come almost as an anticlimax. But that is the way crises often end. "The commercial storm leaves its path strewn with ruin," observed the Victorian economist Alfred Marshall and his wife Mary in 1879. "When it is over there is calm, but a dull, heavy calm." ■

Offer to readers
Reprints of this special report are available at a price of £3.50 plus postage and packing.
A minimum order of five copies is required.

Corporate offer
Customisation options on corporate orders of 100 or more are available. Please contact us to discuss your requirements.

Send all orders to:

The Rights and Syndication Department
26 Red Lion Square
London WC1R 4HQ
Tel +44 (0)20 7576 8148
Fax +44 (0)20 7576 8492
e-mail: rights@economist.com

For more information and to order special reports and reprints online, please visit our website

Economist.com/rights

Future special reports
China and America October 24th 2009
Business and finance in Brazil November 14th 2009
The art market November 28th 2009
The carbon economy December 5th 2009
Social networking January 23rd 2010
Financial risk February 13th 2010

Previous special reports and a list of forthcoming ones can be found online

Economist.com/specialreports