

My apologies, there was no Global IP last week. Below, please find an interesting read on debt which was in a special section of the Economist. Also attached is an editorial from Mohamed El-Erian that might be of interest. Regards, Andy

Repent at leisure

Borrowing has been the answer to all economic troubles in the past 25 years. Now debt itself has become the problem, says Philip Coggan

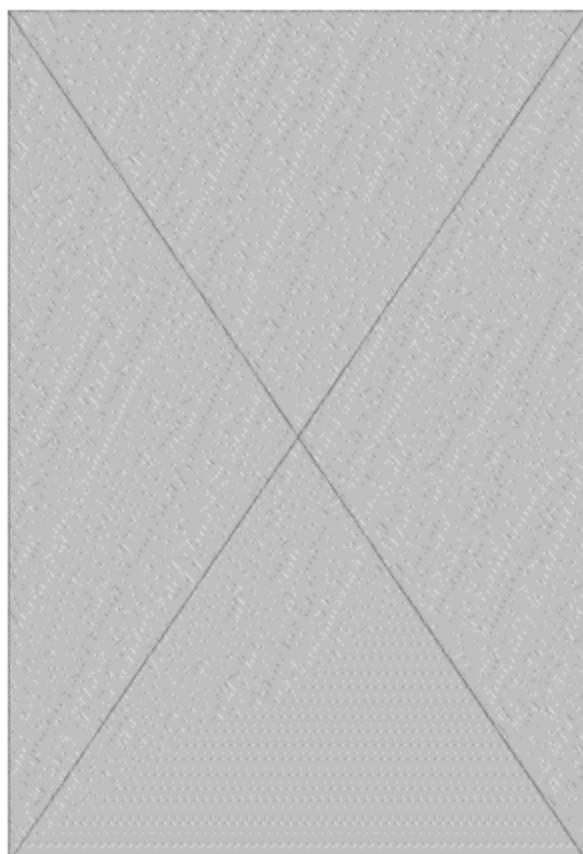
Jun 24th 2010

MAN is born free but is everywhere in debt. In the rich world, getting hold of your first credit card is a rite of passage far more important for your daily life than casting your first vote. Buying your first home normally requires taking on a debt several times the size of your annual income. And even if you shun the temptation of borrowing to indulge yourself, you are still saddled with your portion of the national debt.

Throughout the 1980s and 1990s a rise in debt levels accompanied what economists called the "great moderation", when growth was steady and unemployment and inflation remained low. No longer did Western banks have to raise rates to halt consumer booms. By the early 2000s a vast international scheme of vendor financing had been created. China and the oil exporters amassed current-account surpluses and then lent the money back to the developed world so it could keep buying their goods.

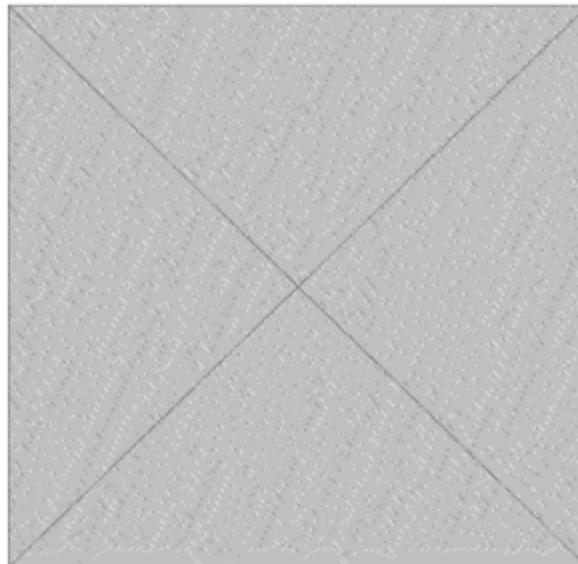
Those who cautioned against rising debt levels were dismissed as doom-mongers; after all, asset prices were rising even faster, so balance-sheets looked healthy. And with the economy buoyant, debtors could afford to meet their interest payments without defaulting. In short, it paid to borrow and it paid to lend.

Like alcohol, a debt boom tends to induce euphoria. Traders and investors saw the asset-price rises it brought with it as proof of their brilliance; central banks and governments thought that rising markets and higher tax revenues attested to the soundness of their policies.



The answer to all problems seemed to be more debt. Depressed? Use your credit card for a shopping spree "because you're worth it". Want to get rich quick? Work for a private-equity or hedge-fund firm, using borrowed money to enhance returns. Looking for faster growth for your company? Borrow money and make an acquisition. And if the economy is in recession, let the government go into deficit to bolster spending. When the European Union countries met in May to deal with the Greek crisis, they proposed a €750 billion (\$900 billion) rescue programme largely consisting of even more borrowed money.

Debt increased at every level, from consumers to companies to banks to whole countries. The effect varied from country to country, but a survey by the McKinsey Global Institute found that average total debt (private and public sector combined) in ten mature economies rose from 200% of GDP in 1995 to 300% in 2008 (see chart 1 for a breakdown by country). There were even more startling rises in Iceland and Ireland, where debt-to-GDP ratios reached 1,200% and 700% respectively. The burdens proved too much for those two countries, plunging them into financial crisis. Such turmoil is a sign that debt is not the instant solution it was made out to be. The market cheer that greeted the EU package for Greece lasted just one day before the doubts resurfaced.



From early 2007 onwards there were signs that economies were reaching the limit of their ability to absorb more borrowing. The growth-boosting potential of debt seemed to peter out. According to Leigh Skene of Lombard Street Research, each additional dollar of debt was associated with less and less growth (see chart 2).

Stopping the debt supercycle

The big question is whether this rapid build-up of debt—a phenomenon which Martin Barnes of the Bank Credit Analyst, a research group, has dubbed the "debt supercycle"—has now come to an end. Debt reduction has become a hot political issue. Rioters on the streets of Athens have been protesting against the "junta of the markets" that is imposing austerity on the Greek economy, and tea-party activists in America, angry about trillion-dollar deficits and growing government involvement in the economy, have been upsetting the calculations of both the Democratic and Republican party leaderships.

To understand why debt may have become a burden rather than a boon, it is necessary to go back to first principles. Why do people, companies and countries borrow? One obvious answer is that it is the only way they can maintain their desired level of spending. Another reason is optimism; they believe the return on the borrowed money will be greater than the cost of servicing the debt. Crucially, creditors must believe that debtors' incomes will rise; otherwise how would they be able to pay the interest and repay the capital?

But in parts of the rich world such optimism may now be misplaced. With ageing populations and shrinking workforces, their economies may grow more slowly than they have done in the past. They may have borrowed from the future, using debt to enjoy a standard of living that is unsustainable. Greece provides a stark example. Standard & Poor's, a rating agency, estimates that its GDP will not regain its 2008 level until 2017.

Rising government debt is a Ponzi scheme that requires an ever-growing population to assume the

burden—unless some *deus ex machina*, such as a technological breakthrough, can boost growth. As Roland Nash, head of research at Renaissance Capital, an investment bank, puts it: "Can the West, with its regulated industry, uncompetitive labour and large government, afford its borrowing-funded living standards and increasingly expensive public sectors?"

Sovereign default is far from inconceivable. Many people are forecasting that Greece, despite its bail-out package from the EU and the IMF, will be unable to repay its debts in full and on time. Faced with the choice between punishing their populations with austerity programmes and letting down foreign creditors, countries may find it easier to disappoint the foreigners. Defaults have been common in the past, as Carmen Reinhart and Ken Rogoff showed in their book, "This Time is Different". Adam Smith, a founding father of economics, noted in "The Wealth of Nations" that "when national debts have once been accumulated to a certain degree, there is scarce, I believe, a single instance of their having been fairly and completely paid."

Governments now face a tricky period when they have to deal with the debt overhang, decide how quickly to cut their deficits (and risk undermining growth), and try to distribute the pain of doing so as equitably as possible.

Debt is often treated as a moral issue as well as an economic one. Margaret Atwood, in her book of essays, "Payback: Debt and the Shadow Side of Wealth", notes that the Aramaic words for debt and sin are the same. And some versions of the Lord's Prayer say "Forgive us our debts" rather than "Forgive us our trespasses".

The Live 8 campaign in 2005 tried to shame developed nations into forgiving the debts of poor countries, particularly in sub-Saharan Africa. Economists have developed the concept of "odious debt" in which citizens should not be forced to repay money borrowed by tyrannical or kleptocratic rulers. Interest payments on debt are often regarded as an onerous burden placed on the poor; interest is seen as an unjustified reward for capital, a concept that goes back to Aristotle and is implicit in the Christian idea of usury. Islam forbids it altogether. The book of Deuteronomy suggested a debt amnesty every seven years, which survived into later Jewish custom.

But conventional morality has not always been on the side of the borrowers. Some regard debt as the road to ruin and the failure to repay as a breach of trust. In the 18th and 19th century debtors in Britain were often thrown into jail (as in Charles Dickens's "Little Dorrit"), though Samuel Johnson spotted the flaws of the practice: "We have now imprisoned one generation of debtors after another, but we do not find that their numbers lessen. We have now learned that rashness and imprudence will not be deterred from taking credit; let us try whether fraud and avarice may be more easily restrained from giving it."

Movable morals

In the past 100 years the moral battle has moved in favour of the debtors. Bankruptcy is no longer stigmatised but simply regarded as bad luck. When consumers borrow beyond their means, the blame is laid on lax lending practices rather than irresponsible borrowing. Governments have encouraged more people to become homeowners and thus to take on debt. And defaulting on one's debts has become much less cumbersome; in the current housing slump many American homeowners have resorted to "jingle mail", dropping their keys through the lender's letterbox and walking away from their property.

In business, a few failed directorships are a sign of entrepreneurship rather than incompetence. America's Chapter 11 process allows the managers of companies to remain in place and the business to be protected from its creditors. The number of companies with safe AAA credit ratings has collapsed as more have acted on the theory that a debt-laden balance-sheet is more efficient (because interest payments are tax-deductible in most countries).

The recent crisis has also diminished belief in the judgment of the financial markets. The role of banks in the credit crunch and the cost of the financial sector bail-out has undermined the idea that the markets assess risk fairly and rationally. Instead, higher borrowing costs are seen as the result of unscrupulous speculation.

The role of sovereign credit-default swaps (CDS), a way of betting on the likelihood of a country's failure to repay the money it has borrowed, has proved particularly controversial. Southern European nations, which have been at

the heart of the recent market turmoil, have been quick to blame an Anglo-Saxon conspiracy, brewed up by hedge funds, credit-rating agencies and even newspapers like this one, for unfairly pushing up their borrowing costs. The German government moved to ban short-selling of government bonds and some CDS transactions last month. As Charles Stanley, a stockbroking firm, cynically puts it, EU nations are saying: "Please fund our lifestyles, but don't hold us to any commitments."

Why it matters

If a husband borrows money from his wife, the family is no worse off. By extension, just as every debt is a liability for the borrower, it is an asset for the creditor. Since Earth is not borrowing money from Mars, does the debt explosion really matter, or is it just an accounting device?

During the credit boom of the early 1990s and 2000s the conventional view was that it did not matter. Not only were asset prices rising even faster than debt but the use of derivatives was spreading risk across the system and, in particular, away from the banks, which had capital ratios well above the regulatory minimum.

The problem with debt, though, is the need to repay it. Not for nothing does the word credit have its roots in the Latin word *credere*, to believe. If creditors lose faith in their borrowers, they will demand the repayment of existing debt or refuse to renew old loans. If the debt is secured against assets, then the borrower may be forced to sell. A lot of forced sales will cause asset prices to fall and make creditors even less willing to extend loans. If the asset price falls below the value of the loan, then both creditors and borrowers will lose money.

This is particularly troublesome if the economy slips into deflation, as happened globally in the 1930s and in Japan in the 1990s. Debt levels are fixed in nominal terms whereas asset prices can go up or down. So falling prices create a spiral in which assets are sold off to repay debts, triggering further price falls and further sales. Irving Fisher, an economist who worked in the first half of the 20th century, called this the debt deflation trap.

Another reason why debt matters is to do with the role of banks in the economy. By their nature, banks borrow short (from depositors or the wholesale markets) and lend long. The business depends on confidence; no bank can survive if its depositors (or its wholesale lenders) all want their money back at once. If banks struggle to meet their own debts, they have no choice but to reduce their lending. If this happens on a large scale, as it did in the 1930s, the ripple effect for the economy as a whole can be devastating.

Both of these effects were seen in the debt crisis of 2007-08. Falling property prices caused defaults and a liquidity crisis in the banking system so severe that the authorities feared the cash machines would stop working. Hence the unprecedented largesse of the bank bail-out.

Hyman Minsky, an American economist who has become more fashionable since his death in 1996, argued that these debt crises were both inherent in the capitalist system and cyclical. Prosperous times encourage individuals and companies to take on more risk, meaning more debt. Initially such speculation is successful and encourages others to follow suit; eventually credit is extended to those who will be able to repay the debt only if asset prices keep rising (a succinct description of the subprime-lending boom). In the end the pyramid collapses.

In the aftermath of the latest collapse it is clear that the distinction between debt in the private and public sector has become blurred. If the private sector suffers, the public sector may be forced to step in and assume, or guarantee, the debt, as happened in 2008. Otherwise the economy may suffer a deep recession which will cut the tax revenues governments need to service their own debt.

If the Western world faces an era of austerity as debts are paid down, how will that affect day-to-day life? Clearly a society built on consumption will have to pay more attention to saving. The idea that using borrowed money to buy assets is the smart road to riches might lose currency, changing attitudes to home ownership as well as to parts of the finance sector such as private equity.

This special report will argue that, for the developed world, the debt-financed model has reached its limit. Most of the options for dealing with the debt overhang are unpalatable. As has already been seen in Greece and Ireland,

each government will have to find its own way of reducing the burden. The battle between borrowers and creditors may be the defining struggle of the next generation.

The morning after

A \$3 trillion consumer hangover

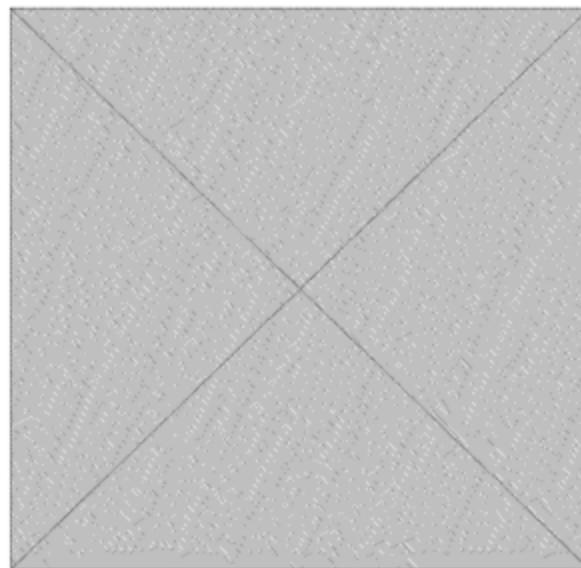
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IN THE autumn of 2009 Jonathan Mitchell, a British software developer, realised he had a problem. He had been running up his credit-card bills for years after his partner got sick and was unable to work. He ended up owing £30,000. "You think if they are going to give it to me, I must be able to afford it," he recalls.

Mr Mitchell tackled his problem before the bailiffs arrived. He took advice and applied for an IVA (individual voluntary arrangement), a British scheme that allows the borrower to negotiate a plan for dealing with his debts. After allowing for essential spending, he now pays £280 a month to his creditors. If his house rises in value over the next five years, he will have to take out a further mortgage to pay back other creditors. But his life is not too constrained: he still has a mobile phone and satellite TV.

Mr Mitchell is one of millions of consumers across the developed world who are struggling to deal with their debts in reduced economic circumstances. By the standards of past centuries he has got off lightly. A failure to repay debts was once seen as a sign of moral laxity. Nowadays it is the lender as much as the borrower who is perceived to be at fault for extending credit to those who should never have been granted it.

The idea that debt is a shameful state to be avoided has been steadily eroding since the 1960s, when a generation whose first memories were of the Depression was superseded by one brought up during the 1950s consumer boom. People were already used to buying houses and motor cars on credit, but suddenly a whole range of durable goods—TVs, fridges, washing machines—could be had on easy terms. Credit cards and charge cards came into widespread use. Buyers no longer had to scrimp and save to get what they wanted; they could have it now. As the range of desirable products grew, from Nintendo Wiis to iPhones, the urge to buy first and find the money later increased. "Consumers' attitudes have changed incredibly over the past 15 years," says Steve Rees of Vincent Bond, a debt-management agency. "They have gone from aspiring to be just above their pay bracket to aiming a long way above their pay bracket."



All this meant that growth in consumer credit regularly outstripped growth in GDP in the Anglo-Saxon countries and saving ratios fell to historic lows. At the end of the second world war in 1945 consumer credit in America totalled just under \$5.7 billion; ten years later it had already grown to nearly \$43 billion, and the party was just getting started. It reached \$100 billion in 1966, \$500 billion in 1984 and \$1 trillion in 1994, or around \$4,000 for every man, woman and child. The peak, so far, was almost \$2.6 trillion in July 2008. Household debt approached 100% of GDP in 2007, a level seen only once before, rather ominously in 1929.

America was not alone in embarking on a debt spree. In Britain household debt rose from 105% of disposable income in 2000 to 160% in 2008, according to the McKinsey Global Institute, and in Spain the ratio rose from 69% to 130% over the same period. Only in the past couple of years have consumers paused for breath. In America the volume of consumer credit in 2009 declined by 4.4%. By March this year the annual growth rate had crept up only to 1%. In Britain credit-card lending fell in eight of the 16 months between January 2009 and April 2010.

In part, this is because consumers in many countries have become more frugal in response to the recession and the decline in house prices. In America houses turned into cash machines during the credit boom as people remortgaged to release equity and boost their spending. Mortgage equity withdrawal rose from less than \$20 billion a quarter in 1997 to more than \$140 billion in some quarters of 2005 and 2006. After 2007 it slowed abruptly and even went negative (homeowners paid down debt) in 2009. Consumers are also more cautious about borrowing in view of sluggish wage growth and rising unemployment in most of the developed world.

In part, too, borrowing has slowed down dramatically because lenders have become much more chary about extending consumer credit. A survey by the Federal Reserve in October 2008, when the financial crisis was at its peak, found that 60% of banks had reduced credit-card limits for both new and existing customers. Like mortgage lenders, credit-card companies found they had allowed lending standards to drop too far. This spring the default rate on American credit cards was a record 13%, according to Fitch.

How do lenders decide whether consumers are creditworthy? In America one of the key determinants is an individual's FICO score, named after the Fair Isaac Corporation, which devised it. The idea goes back decades, to a time when small retailers, which needed to offer credit, pooled information on which customers were good and bad payers. These days the bulk of the information is provided by banks and lenders such as credit-card companies. This is translated into a score ranging from 350 to 800, with the most creditworthy customers getting the highest rating.

Life's new essentials

Andy Jennings of FICO says that customers' rankings remain remarkably steady over time; the best payers remain the best payers. What does change is the level of bad debts across all categories when the economy hits a recession. During the subprime-lending boom mortgages were offered to borrowers with lower FICO scores than in the past. An updated version of the FICO model, to reflect the subprime crisis, was released last year.

The crisis has brought about one big change in consumer behaviour. The mortgage used to be the last debt people would default on. They did not want to lose their homes or to forfeit the substantial deposit they had had to find. But during the subprime boom many borrowers were able to buy homes without putting down any money, which changed their attitude. In effect, they were renting with an option to profit from higher house prices.

In the current recession some borrowers have given priority to their credit-card and car loans rather than their mortgages. After all, they can usually find a new home to rent. But without a car many of them cannot get to work and without a credit card they find it hard to shop.

Perhaps the housing crash will change attitudes towards home ownership. For a long time it seemed like a one-way bet, with homeowners able to buy an appreciating asset with cheap debt. Having realised that prices can fall as well as rise and that houses are illiquid assets, many more people may opt for the greater flexibility of renting and hold their wealth in more diversified forms. That is what happens in Germany, which has a much lower rate of home ownership than Britain or America.

Meanwhile, those who have maxed out their credit cards have been forced to turn elsewhere. One very expensive route is payday loans. As Jean Ann Fox of the Consumer Federation of America explains, this involves the borrower writing a cheque to the lender for the sum borrowed, plus the financing cost, which the lender cashes on payday. Over two weeks the cost works out at around \$15 of interest for every \$100 borrowed, which amounts to an annual interest rate of 400%. People who use the facility average nine payday loans annually, so they can end up paying more in interest than they have borrowed.

The outcome is predictable. According to the Centre for Responsible Lending, a quarter to half of all payday borrowers default every year. Congress has restricted access to such loans for the families of members of the armed services. But why do consumers choose such an expensive way of borrowing money? "A lot of people opt for a payday loan because it's easy and the lenders don't run a credit check," explains Ms Fox.

For many, debt has become a necessity, not a choice. In real terms, the median wage of American workers has barely shifted since the 1970s. Thomas Schoewe, chief financial officer of Wal-Mart, says that "more than ever, our customers are living pay cheque to pay cheque. They're very concerned about their own personal finances." Consumers got by because both husbands and wives went out to work and they borrowed heavily, as described by Raghuram Rajan, an American economist, in his book "Fault Lines".

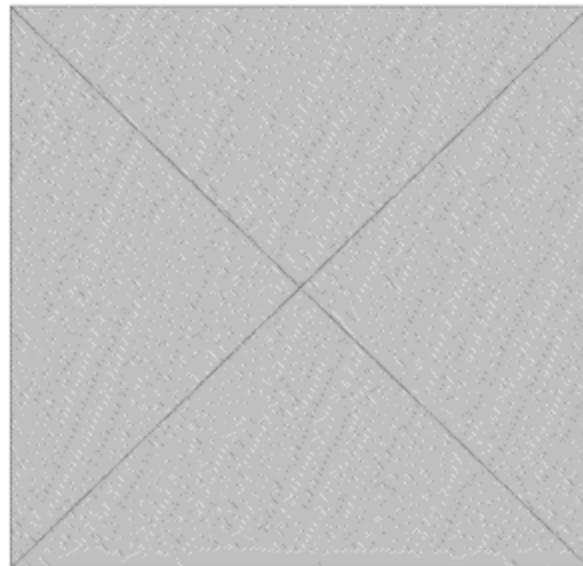
A fate worse than debt

After the financial crisis it briefly looked as if consumers were becoming more cautious. Between the first quarter of 2008 and the second quarter of 2009 the saving rate surged from 1% to 5% of personal disposable income. But then it fell back again, perhaps because people found they simply could not afford to save. Consumption held up because the Obama stimulus plan boosted incomes. But that boost will be strictly temporary. And then what?

Betting the balance-sheet

Why managers loaded their companies with debt

Jun 24th 2010



COUNTRIES may be desperate to hang on to their AAA ratings to keep their borrowing costs down, but companies do not necessarily share that concern. The median rating of the companies assessed by Standard & Poor's has fallen from A in 1981 to BBB- today (see chart 4). That rating is the lowest possible "investment grade" or, to put it another way, is just one notch above "junk" bond status.

By itself, this suggests that creditors as well as borrowers have had a change of heart. Traditionally the institutions that held the bulk of corporate bonds were not allowed to buy anything but investment-grade securities. Bonds might have become junk because of a deterioration in the issuing company's finances, but they did not start that way.

However, in the 1970s and 1980s Michael Milken at Drexel Burnham Lambert realised there was a group of investors who were willing to take the risk of a diversified portfolio of junk bonds because of the extra yield on offer. And indeed over time the extra yield offered by these bonds more than compensated investors for the risk of default. Mr Milken's lesson endured even though Drexel collapsed.

In the 1990s and early 2000s more and more people wanted to trade higher risk for higher rewards as the returns on cash and government bonds dwindled. Specialist "distressed debt" funds emerged that looked for undervalued bonds, rather as value investors combed the stockmarket for bargains. After the dotcom bubble burst, actuaries

encouraged pension funds to diversify their risk so that their portfolios were no longer dominated by equities. At the same time a long period of low interest rates and occasional mild recessions helped fuel the growth of hedge funds and private equity, which rely on the use of borrowed money to enhance their returns.

The advent of these new investors may have been responsible for some wild swings in credit spreads (the excess yields paid by companies to reflect the risk of default). At the height of the credit boom in 2006 spreads had fallen to historic lows. Jay Ritter of the University of Florida says the market sometimes underestimates the default risk on junk bonds. Investors tend to look at recent default rates, which may be misleading. A boom in junk-bond issuance leaves companies with large pools of cash. It takes them a few years to drain these pools and get into trouble.

By pushing down spreads, investors reduced the cost of capital and encouraged companies to take on more debt. At the same time the desire for high credit ratings was going out of fashion. Managements that hoarded cash were told to return it to shareholders so it could be invested elsewhere rather than being frittered away on value-destroying acquisitions.

Standard corporate finance theory, first expounded by Franco Modigliani and Merton Miller, states that whether a firm is financed by debt or equity should make no difference to its value; the cashflow is simply parcelled out in different ways. But the theory leaves out the tax treatment of different kinds of finance. In most countries interest payments are tax-deductible but dividend payments are not. The tax system may have encouraged companies to take on debt, although Mr Ritter says studies have found little relationship between corporate tax rates and debt.

A stronger motive for borrowing more may have been executive pay. Most incentive payments these days come in the form of share options, which if the share price rises rapidly can soon turn executives into multimillionaires. The strongest driver of a company's share price, in the short term, is the ability to meet quarterly targets for earnings per share. And using spare cash to buy back a company's equity tends to increase earnings per share.

Managers should have been deterred from taking on too much debt because a leveraged balance-sheet is more risky, but that did not seem to worry them. Chief executives these days come and go almost as quickly as managers of football clubs. A high-risk strategy may pay off in the short term; higher debt levels may sink the company only in the longer term, after the executive has left. Moreover, the value of the option is related to the volatility of the underlying share price; a riskier strategy makes that price more volatile and thus increases the executive's putative wealth. Even if the option expires unexercised, the executive is no worse off.

However, the increased use of debt across the corporate sector has not been uniform. American companies learned some lessons in 2000-02 when the bursting of the dotcom bubble brought down giants such as Enron and WorldCom. Quoted companies were more cautious about taking on debt in subsequent years. A report by the McKinsey Global Institute found that the non-financial business sector in most countries entered the recent crisis with lower leverage (measured as the ratio of debt over book equity) than they had at the start of the decade.

Instead debt was more concentrated, particularly on those companies that had been acquired by private-equity firms in leveraged buy-outs (LBOs). In some ways private equity is a creature of the "great moderation" from the mid-1980s to the mid-2000s. Private equity needs willing investors, access to credit, steady economic growth (so that the debt can be repaid) and rising asset markets (so that acquired companies can be sold again).

But conditions are now less favourable. Economic growth may be sluggish as economies work off their debt, and floating companies on the stockmarket may be harder. Among the biggest debt investors were the managers of structured products called collateralised loan obligations (CLOs), but since the credit crunch the market has dried up. And the debts accumulated in the 2006-07 boom have to be refinanced. Moody's reckons that some €250 billion of LBO debt will need to be rolled over in the next five years.

Private-equity loans were just one of many assets (for example, mortgage, car and credit-card debts) that were bundled together and repackaged into instruments bought by investors who themselves were using borrowed money (banks, hedge funds and specialist vehicles like conduits). Such investors were taking advantage of the

"carry trade", borrowing at low rates to invest in higher-yielding but riskier assets. In theory this trade should not be sustainable in the longer term; the higher yields should merely compensate investors for the default risk. In practice, however, a long period of economic growth and falling interest rates meant that for a while the trade paid off—until the debacle of 2007-08.

Carry on regardless

While those good times lasted, hedge funds thrived. They found it easier than conventional fund managers to play the arbitrage game because as well as going long on cheap securities they could go short (bet on a falling price) on expensive ones. Sometimes these arbitrage opportunities were small, so borrowed money was needed to enhance returns. And hedge funds could impose higher annual charges than conventional managers, with performance fees on top.

But many of these strategies were variants of the carry trade, which changed the face of the finance sector. Banks have always borrowed short and lent long. But the fact that bank deposits were guaranteed by the government, allied to the implicit guarantees offered when central banks cut rates at times of financial crisis, lowered the banks' cost of capital and made leverage more attractive.

Investment and commercial banks became integrated as the old division imposed by the Glass-Steagall act was abolished. Investment banking was no longer just about broking (conducting transactions in return for commissions) or giving advice; it was about using the banks' balance-sheets to help clients or manage risks. This generated some fat fees but increased the size of the banks' balance-sheets.

In America, the non-financial corporate sector increased its debt-to-GDP ratio from 58% in 1985 to 76% in 2009, whereas the financial sector went from 26% to 108% over the same period. It was that leverage that made the banks so vulnerable when the subprime market collapsed in 2008; the assets they ended up owning were illiquid, difficult to value and even harder to sell. Banks such as Bear Stearns and Lehman made the fatal mistake of assuming that the markets (often their fellow banks) would always be willing to roll over their debts, but they suffered a bank run. The only difference was that the charge was led by institutions instead of small depositors.

In turn, the collapse of the finance sector had a huge impact on the rest of the economy and created a dilemma for governments. They want to increase banks' capital ratios to avoid future financial crises. But that will cause bank lending to grow more slowly or even contract, an outcome they are equally wary of.

After the crisis struck the banks needed the governments to rescue them, but now the governments need the banks to buy their bonds. One reason why EU governments eventually rescued Greece was that a default would have threatened the member countries' banking systems. As debtors and creditors, banks and governments are locked in a tight embrace.

A better bust?

Bankruptcy is becoming less calamitous

Jun 24th 2010

GOING bankrupt used to be the worst thing that could happen to a company. The term stems from the Italian habit of conducting banking on wooden benches in marketplaces—*banca rupta* means broken bench. Traditionally, it spelled ruin.

Slowly but surely, however, bankruptcy law has changed in favour of the corporate debtor. The main driver has been American law, which has always tended to favour debtors (farmers in the mid-West and South) against creditors (eastern money men). In the 19th century the financial problems of some of the railroad companies made lenders more determined to keep the businesses going; the value of an operational railroad was clearly higher than that of the steel rails and wooden ties that made up its physical capital.

In modern America that approach has morphed into Chapter 11, a structure that allows companies to continue operating and prevents creditors from foreclosing on the business. Chapter 11 has allowed some companies to

come back from the dead, although in some industries (notably airlines) at the expense of more profitable rivals. The system has the great benefit of clarity, with the court ensuring that the creditors are paid in order of seniority, with secured lenders getting first cut. Even so, the system struggled to cope with the sheer complexity of Lehman Brothers' failure. The investment bank became the largest ever Chapter 11 deal, involving loans of \$640 billion.

In Europe bankruptcy law is undergoing steady reform. "It used to be completely impossible to deal with cross-border failures," says Alan Bloom, head of restructuring at Ernst & Young, an accountancy group. That was before Europe-wide insolvency arrangements for dealing with multinationals were introduced in 2005. But it still leaves the issue of which country's courts control the process. That depends on which nation is the "centre of main interest" for the company. There is scope for some legal arbitrage: Wind Hellas, a Greek telecoms company with headquarters in Luxembourg, managed to shift its centre of interest to Britain so it could restructure in the British courts. Generally speaking, Britain is deemed to have the most creditor-friendly approach.

At the opposite end of the scale is France with its *sauvegarde* scheme, where the priority is to save the business and the employees, with the creditors taking third place. Only the debtor can apply for *sauvegarde*. The company has to present a repayment plan to the court, but the court can reject it and impose a plan of its own. The plan also requires a majority vote, with large creditors able to vote down small ones and unsecured creditors able to outvote the secured. Debt repayment can be slow; even under a court order, it can take up to ten years. "It looks brutal to creditors but this is often the subject of pre-negotiation," says Alan Mason of the Paris office of Freshfields Bruckhaus Deringer, a corporate-law firm. There are signs that firms, under pressure from creditors, are reorganising themselves to avoid *sauvegarde*.

With lenders in most countries seeing their rights under bankruptcy law curtailed, they might have been expected to insist on more safeguards upfront. Far from it. At the peak of the lending boom in 2006 and 2007, the fashion was for "covenant lite" deals which gave creditors fewer safeguards; traditionally, covenants were used to force debt repayment when the debtor missed certain financial targets. But investors were so keen to chase higher yields that they were willing to dispense with these protections. A lot of this had to do with the "shadow finance" industry of non-bank institutions and lenders, and the structured products (such as CDOs and CLOs) it created. The industry had such an appetite for debt to feed these beasts that creditors were inclined to lend first and ask questions afterwards.

Now that the reckoning has come, sorting out the finances of troubled companies has become far more complex. "It used to be that a relatively small number of banks owned a company's debt," says Matthew Prest of Moelis, a company that specialises in debt restructuring. "When things went wrong, the company knew whom to call." The banks, for their part, specialised in analysing credit and had workout teams to deal with trouble. These days companies may have several different types of debt, or leveraged loans that have been repackaged and sold round the world.

The interests of the owners of different slices of debt are often at odds with each other, a state of affairs known as tranche warfare. Those who own the most senior securities in CDOs and CLOs, ranked AAA or AA, might want to sell the company's assets immediately to ensure they get their money back. But the owners of the more risky types of debt would be wiped out by that, so they usually want to hang on in the hope that the company's prospects improve. The owners of the riskiest tranches often have the most voting power.

One potential conflict, says Andrew Speirs of Hawkpoint, a firm that advises on corporate finance, is between distressed-debt managers and the original debt holders. The first group has bought the bonds or loans at a discount and is looking for a quick return; the second, having paid the full price, would prefer to hold on in hope of a higher payout.

Delay and pray

In the CLO market, which largely consists of loans made to private-equity groups, there are special reasons to be patient with struggling borrowers. The private-equity managers have little interest in restructuring the debt, since

that would dilute their stakes. The banks are not keen either, since restructuring would require them to write down the value of the debt on their balance-sheet just as they are struggling to improve their capital ratios. Many loans are therefore limping towards maturity in a process known as "extend and pretend" or "delay and pray".

Signs of economic recovery and the support schemes organised by central banks have eased this process along. The prices of distressed debt have increased substantially since the dark days of 2008. But there is still a pile of debt that needs to be refinanced over the next decade. With the old CDO/CLO machine damaged and with banks more cautious about risking their capital, trouble could still lie ahead.

The unkindest cuts

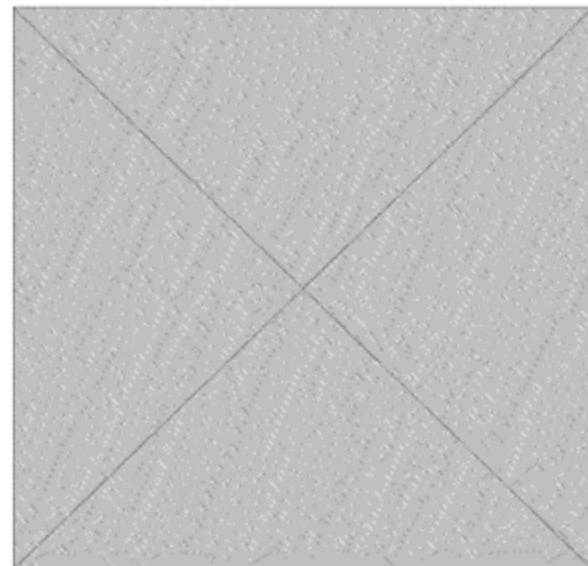
Many countries face the difficult choice of upsetting the markets or upsetting their voters

Jun 24th 2010

CALL it the rich-uncle theory. When the private sector struggles, governments often step in to pick up the bill. And when individual countries have trouble meeting their commitments, they turn to their neighbours, or to the International Monetary Fund, for help.

The recent recession, and the financial crisis that precipitated it, have led to a sharp increase in government debt in the developed world, on a scale virtually unprecedented outside world wars. For some states this burden has arisen at a time when their finances were already stretched. And for most countries in the rich world this has happened when they are having to face up to a range of problems associated with ageing populations.

Countries have long had a complicated relationship with their national debt. It was the need to repair its national finances that forced the *ancient regime* of Louis XVI in France to summon the Estates-General in 1789, an event that triggered the French revolution. In his book, "A Free Nation Deep in Debt", James Macdonald argues that the national debt was a source of strength for countries such as Britain and the Netherlands, whose governments were financed by merchants and bankers. In wartime such countries could easily outspend those run by aristocrats, which had a history of default. For Britain and the Netherlands there was no incentive to default on the debt owed to the classes that controlled them.



During the first and second world wars governments on both sides of the conflict exploited the patriotism of their citizens, persuading them to buy "victory" bonds and the like. Those same governments then penalised the patriots by inflating away their debt after the war. From 1945 onward government debt became a tool of economic management as Keynesian deficit spending was used to cushion economies during recessions. The booms of the 1980s and 1990s led to a surge in tax revenues and kept the debt problem under control. But the recent financial crisis caused some of the biggest deficits recorded in peacetime. The debt-to-GDP ratio of the G7 group of nations is at its highest level for 60 years (see chart 5).

That has started to raise questions about whether countries can actually meet the bill. Allowing governments to

assume debt has some obvious advantages. If companies, and in particular banks, go bust, they cause a lot of knock-on social costs, including lost jobs and consumer uncertainty.

Governments are much less vulnerable to credit runs because they can raise taxes and print money to buy time for the debt shock to be absorbed. Governments also find it easier to fund deficits during recessions, when nervous investors are only too happy to shelter behind the safety of government bonds. But in the long run deficit financing is the equivalent of a private individual getting a new credit card and making the minimum repayment every month. For a while it seems like free money. The tricky point comes when the credit limit is reached.

For governments, that credit limit can vary enormously. One reason why the crisis has hit the euro zone before other regions is that its countries have renounced the money-printing and devaluation options by adopting a common currency. In some ways the problems facing euro-zone members are akin to those facing countries on the gold standard in the 1930s. They had to choose between imposing austerity to maintain the standard or repaying creditors in devalued currency. The countries that went off gold soonest tended to recover fastest. But abolishing the link to gold was far easier than it would be to replace, say, the euro with a new drachma.

With luck, today's government deficits will be temporary, gradually disappearing as the private sector comes to the fore again. Countries recovered from even bigger government debt burdens after the second world war. But at that time the personal, industrial and financial sectors of the economy were much less indebted.

Economists are still arguing about how quickly to cut government deficits. Earlier this year the different schools sent rival letters to the *Times*, discussing the suitability of early efforts to cut Britain's budget deficit (the new coalition government announced cuts of £6 billion in May). The fear is that higher taxes and spending cuts will cause job losses and hit demand at a point when the economy is still fragile.

The doves contend that the first priority should be to stimulate growth, since that will automatically raise tax revenues and cut expenditure on items such as unemployment benefits. The hawks counter that there comes a point when further deficits are self-defeating. Carmen Reinhart and Kenneth Rogoff suggest that the crunch arrives when the debt-to-GDP ratio reaches around 60% in emerging markets and 90% in developed economies. In rich countries median growth rates tend to fall by around one percentage point a year once that limit is reached.

When debt gets too high, a number of problems arise. First, a spiral is set off in which lower credit ratings for a country lead to higher borrowing costs, in turn increasing the deficit. Markets already seem unwilling to fund some countries at sustainable rates: by the time Greece turned to the IMF and its EU partners for help, its short-term bond yields were nearly 20%. Ramin Toloui of PIMCO, a fund-management group, explains the process this way: "When government debt reaches extreme levels, concerns about government creditworthiness become so severe that additional government spending produces increases in long-term interest rates that exacerbate, rather than ameliorate, the economic contraction."

Second, once a country is stuck in this debt trap, it has to bring in austerity programmes to reduce the deficit; but such austerity holds back economic growth because higher taxes and lower spending reduce demand. Like the Red Queen in Lewis Carroll's "Through the Looking-Glass", the country has to run as fast as it can just to stand still. Ireland has been the good boy of the sovereign-debt markets, taking quick action to reduce its deficit through measures such as cutting public-sector pay. But other countries may not be in a rush to emulate it: its nominal GDP has fallen by over 16%.

Third, larger government deficits imply greater government interference in the economy and thus a less efficient use of resources. One study found that each percentage-point increase in the share of GDP devoted to government spending reduced growth by 0.12-0.13% a year.

Last, according to the doctrine of Ricardian equivalence, consumers and businesses see larger deficits as the precursor to higher taxes in future, so they save more of their income, meaning that pump-priming by the government ceases to work.

Even those governments that are tempted to keep stimulating the economy may find that the markets punish them for it. Once a crisis of confidence has occurred, governments find it difficult to raise the money they need at an acceptable interest rate. A report by an economic adviser to the Bank for International Settlements in March noted that "our projections of public debt ratios lead us to conclude that the path pursued by fiscal authorities in a number of industrial countries is unsustainable. Drastic measures are necessary to check the rapid growth of current and future liabilities of governments and reduce their adverse consequences for long-term growth and monetary stability."

Countries that decide to embark on deficit reduction may face another problem. According to Andrew Smithers of Smithers & Co, a consultancy, a debt-cutting policy will make it harder for the government to bail out the private sector in times of need, as well as reducing companies' cashflow by imposing higher taxes.

An even bigger problem may be the unfunded liabilities that government face from ageing populations. This is a double burden: benefits for growing numbers of pensioners will have to be paid for by a shrinking band of workers. These liabilities are difficult to calculate. Pierre Cailleteau of Moody's, a rating agency, says that "the state of public-finance accounting is extremely rudimentary relative to private-sector accounting."

A 2009 report by Jagadeesh Gokhale, of the right-wing Cato Institute in Washington, DC, estimated that the average EU country would need a fund worth 434% of its GDP, earning interest at the government's borrowing rate, to meet such liabilities; alternatively, it would need to save 8.3% of its GDP each year. Neither seems realistic. The only answer is to cut future benefits. But the elderly form a powerful voting block, with a higher turnout than their children, who will pay the bill.

European extremes

Neither Greece nor Iceland has had any choice about tackling its deficits. They may be a long way apart, both geographically and culturally, but both are casualties of the debt crisis. Iceland was the little country that could. A land with just 300,000 people, best known for its volcanoes and its fish, it privatised its banks and suddenly became an international financial powerhouse. "In the Icelandic system, all the banks were aggressive broker-dealers like Bear Stearns and Lehman," says Asgeir Jonsson, an economist and author of a book, "Why Iceland?".

A high exchange rate encouraged its corporate sector to go on an overseas acquisition spree. Its housing market boomed as fishermen took out cheap loans in euros and yen. The country became an egregious example of the excesses of financial liberalisation. Its politicians failed to halt its debt spiral because its citizens (and particularly its elite) seemed to be doing well out of the boom. Houses doubled in price, the strong krona allowed its people to go shopping in London and its billionaires to buy British retailers and football clubs.

Greece, for its part, was not noted for an aggressive banking sector or a housing boom. It was traditionally dismissed by investors as a country of high inflation and repeated devaluations. When it joined the euro zone in 2001 it reaped an immediate dividend in lower interest rates, but it failed to tackle its underlying problems.

Dodgy accounting disguised the size of its government debt. Its businesses remained uncompetitive, causing a large trade deficit. The economy is riddled with inefficiencies and restrictive practices. For example, cruise ships are not allowed to take on new passengers at Greek ports, and the number of lorry licences is still the same as in 1990 even though GDP has doubled. Such restrictive practices are keeping transport costs too high. According to Yannis Stournaras of IOBE, a think-tank, it is cheaper to transport goods to Athens from Italy than from Thebes, just 32 miles away.

Greece is an exemplar of the flaws in the European welfare model. The state gets remorselessly bigger because political parties of the right and left have bought votes by providing supporters with jobs or subsidies. Antonis Kamari of Levant Partners, an investment group, says the state must "remove benefits that have built up like a ship accumulates barnacles". Public-sector workers were mollycoddled with pay for 13 or 14 months per year and arcane allowances for things like firewood or carrying files between office floors.

Tax evasion is widespread. A report by the London School of Economics estimates that it reduced Greece's

potential tax yield by 26%. It is normal to do deals under the table. On the birth of his baby daughter one parent was asked to hand over €2,500 in cash to the doctor, in exchange for a receipt for €1,500. The Greeks are attempting to tackle this issue. The austerity packages introduced over the past 12 months require higher earners to provide receipts for expenditure before they can qualify for their tax-free allowance.

Market discipline did not work in either country. Greece benefited from the implied credit upgrade provided by joining the euro zone. Iceland, with its high interest rates, got a boost from the "carry trade", with investors borrowing money in low-yielding currencies (eg, the yen) and buying high-yielding ones (eg, the krona). "It was a classic case of monetary boom and bust," says Thordur Palsson, a former chief economist at Kaupthing, a big Icelandic bank. "The money supply increased at 40% a year over a five-year period."

Both economies face fundamental difficulties. For Greece, being a member of the euro zone is now a hindrance rather than a help. Its costs are too high but it cannot devalue its currency, and trying to inflate its way out of its debt would, in effect, be impossible. Iceland, which is not a member of the European Union, has been able to devalue the krona, but that created a problem for individuals and companies which had borrowed in foreign currencies. Its banks had to be nationalised and domestic depositors were favoured over foreign creditors.

Both countries have had to call in outside help. The Icelanders have borrowed from the IMF, with their negotiations made more complex by a dispute with Britain and the Netherlands over compensation for foreign depositors in one of its big banks. Iceland is trying to reduce its fiscal deficit, which in 2008 reached 13.6% of GDP, via increases in value-added tax, income tax, and petrol and alcohol duties. Rising unemployment has prompted many Icelanders to emigrate, causing the population to fall for the first time since the 19th century.

In Greece spiralling debt costs also forced the government to turn to the IMF as well as to its EU partners. But it remains to be seen whether the population will tolerate the austerity needed to bring the debt burden down to a reasonable level. The most recent package of cuts provoked a wave of strikes and riots in which three bank employees died.

America also faces a huge debt problem. The Congressional Budget Office calculates that the federal government will accumulate a deficit of \$10 trillion between 2011 and 2020, and even that depends on some fairly optimistic assumptions about economic growth. Unless policies are changed, total government debt will reach 100% of GDP by 2023. There are unfunded liabilities on top of that. Chris Watling of Longview Economics reckons that the net present value of spending commitments under the Medicare, Medicaid and Social Security programmes is 276% of GDP. The Democrats resist cuts in entitlements and the Republicans resist tax increases, so nothing much gets done. Efforts to establish a bipartisan deficit-cutting commission have failed.

Advantage America

But America has two huge advantages over other countries that have allowed it to face its debt with relative equanimity: possessing both the world's reserve currency and its most liquid asset market, in Treasury bonds. Even in the midst of the credit crunch, when some of the biggest Wall Street banks were collapsing, the dollar rose and Treasury bond yields fell, making it easier and cheaper for America to finance its deficit. There may come a time when America is hit by a funding crisis, but it does not look imminent.

America would be more at risk if the Asian central banks and sovereign-wealth funds had an obvious alternative. But with Europe in the midst of its own debt crisis, the euro does not look like an appealing option. And there is simply not enough gold in the world to absorb a substantial portion of central-bank reserves. For the moment, the dollar is the one-eyed currency in the land of the blind.

Judging the judges

The travails of the rating agencies

Jun 24th 2010

THE rating agencies did not have a good debt crisis. They were accused of being, at best, naive about the safety

of complex structured products such as collateralised debt obligations (CDOs) and, at worst, being less than impartial because of the fees they got from issuing CDOs.

Now companies such as Standard & Poor's, Moody's and Fitch are back in the limelight. Every time they change the rating of a sovereign debt they move the markets. For a while the rules of the European Central Bank seemed to give enormous power to just one agency, Moody's. Had it downgraded Greece, the country's government bonds would not have been eligible for use as collateral for loans from the ECB. (The ECB eventually amended the rules to accept Greece's bonds, whatever their rating.)

More recently the agencies have been accused of being too harsh, and even of being part of an Anglo-Saxon conspiracy to hold down the southern European nations. Countries have been outraged by downgrades. There has been talk of setting up a rival European rating agency. The agencies put up a vigorous defence, pointing to the good record of their ratings in predicting sovereign default rates. No country rated AAA, AA or A has gone on to default for 15 years. Nearly 98% of countries ranked AAA were still ranked either that or AA 15 years later.

When Standard & Poor's downgraded Greece to junk status in April, David Beers, its head of sovereign ratings, put the move into perspective: "We provide an independent view that investors may or may not choose to consider. Ratings are one of many inputs that investors look at, and they are only one of many factors that may affect movements in the market."

Mr Beers argues that people may be paying too much attention to maintaining the top AAA rating: "People's perceptions are that a downgrade from AAA means that minutes later you default, but in fact it means only a slight increase in default risk." But Pierre Cailleteau of Moody's says that "because of the crisis we have to define the boundary between AAA and AA ratings very clearly." The agency uses three concepts: economic and institutional strength, government financial strength and susceptibility to event risk.

Mr Cailleteau says the key measure is not the debt-to-GDP ratio but the proportion of government revenues devoted to interest payments. Once that proportion exceeds 10%, keeping the AAA rating becomes more difficult. But the agency will not downgrade the country if the government is committed to decisive action to reduce the deficit.

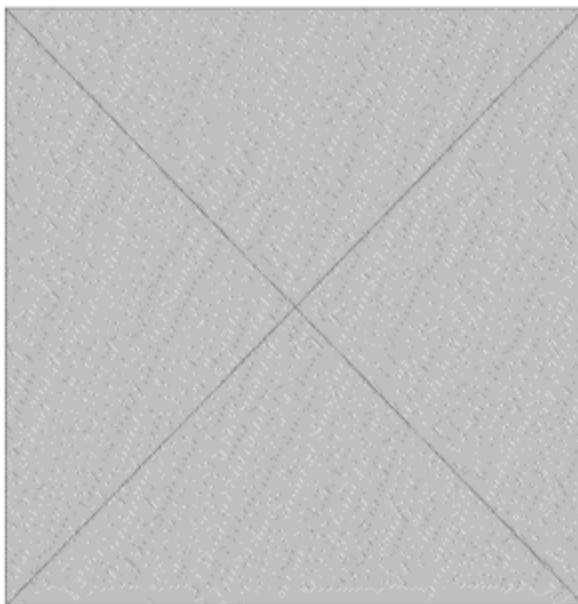
But what constitutes decisive action? In judging that, the rating agencies are bound to be drawn further into tricky political territory. For example, they will have to weigh the new British coalition's plans to deal with its deficit, and assess how far EU countries are likely to go in bailing out their indebted fellow members. One thing is certain: the agencies will be shot at from all sides.

In a hole

Stagnation, default or inflation await. The only way out is growth

Jun 24th 2010

THERE is an old joke about a stranger who asks a local for directions and gets the cheerful reply: "If I wanted to go there, I wouldn't start from here." That advice sums up the dilemma the developed countries face in dealing with their debt. They have accumulated a mountain of it at every level, from the personal to the corporate and the sovereign. As this special report has shown, this was encouraged by a legal system that sheltered debtors, a corporate and financial sector that used debt to boost its returns and a cultural change that made it more respectable.



Central banks and governments implicitly guaranteed this debt, riding to the rescue whenever a repayment crisis loomed. They intervened in a host of small financial fires, using low interest rates to put out the flames. But this merely allowed the tinder to build up that set off the huge conflagration of 2008. Now the governments' own balance-sheets have deteriorated. In America the amount of government debt per person has risen from \$16,000 in 2001 to \$34,000 now, and household debt has gone up from \$27,000 to \$44,000. In Britain government debt per head has almost trebled, from £5,000 in 2001 to nearly £18,000 today, and household debt has jumped from just under £14,000 to £24,000.

Cutting the debt back to more acceptable levels is both hard and unappealing, since it may involve years of austerity and slow economic growth. It also requires some tough political decisions. If being able to borrow makes people feel richer (however illusory the sensation), having to repay the debt makes them feel poorer. They resent the sacrifices involved, especially if they are imposed by outsiders. This is particularly true in democracies. In a referendum Icelanders voted overwhelmingly against a debt repayment deal with Britain and the Netherlands.

Dani Rodrik, an economist at Harvard, has talked of a "trilemma" in which countries aiming for the three goals of deep economic integration with the rest of the world, national sovereignty and democratic politics can achieve two of them but not all three. Left to themselves, voters will resist the sacrifices needed to remain competitive in a system of deep economic integration, and nation states are constantly erecting barriers to international trade. One way of eliminating those barriers would be to set up some sort of global federal government. Another would be to install a "free-market Stalin"—a figure in the mould of Chile's Augusto Pinochet—who would force his country's citizens to accept the constraints of the global market, including debt repayment. Neither option is appealing.

The citizens of Europe may now be realising that debt transfers power from the borrower to the creditor. The first world war destroyed Britain's credit position and ushered in the era of American financial dominance. Now the debt burden reflects the shift in the balance of economic power from rich countries to developing ones. It is striking that on average developed countries now have a higher debt burden than emerging nations. Investors have certainly noticed, and have poured money into emerging-market bonds funds over the past year. Developing countries also have more chance of outgrowing their debt burdens. According to Tony Crescenzi of PIMCO, investors are asking themselves, "Would I rather lend money to nations whose debt burden is worsening, or to nations where it is improving?"

This pattern of debt is the opposite of what you might expect. At the level of individual consumers, people tend to borrow when they are young because they are hoping for higher incomes in the future. As they reach middle age they start to pay off their debts and save for retirement. By extension, rich countries with their greying populations should be saving whereas younger, fast-growing developing countries should be borrowing heavily. But in fact it is the other way round.

This is not unalloyed joy for the creditor nations. Once the exposure of a creditor to a borrower gets sufficiently large, the two sink or swim together. The relationship between China and America has been described as vendor financing, in which the Chinese lend the Americans the money to buy their cheap manufactured goods; a collapse in American demand would cause substantial unemployment (and social unrest) in China.

The longstanding system of vendor financing may have encouraged the rich world to concentrate on consumption rather than investment and to enjoy the resulting "artificial" growth, like a child on a sugar high. Richard Koo, who wrote a book about the Japanese recession, "The Holy Grail of Macroeconomics", refers to a debt-financed boom as "cherry-blossom" economics. He recounts the tale of the two brothers who bought a barrel of sake to sell to revellers at Japan's cherry-blossom festival. But instead of taking money from the thirsty crowd, each brother charged the other for a cup of sake, then used the proceeds to buy a cup for himself, and so on. The brothers ended the day drunk and empty-handed.

Jeremy Grantham of GMO, a fund-management group, is a detached and cynical observer of the financial and economic scene. The way he sees it, "all debt seems to do is bring growth forward a little. If you get people to spend 1% more than their income every year, after 20 years they are going backwards because interest expense is eating up more of their salary."

Robert Bergqvist, chief economist at SEB Group in Sweden, is equally pessimistic. "The leverage-led growth model is dead," he says. "Households and corporates can increase borrowing and enhance today's consumption and investments but that requires that we can assume higher future incomes and expected returns and/or rising asset values. And this is not certain."

Running out of ammunition

The debt burden may also have had a distorting effect on economic policy. In the 1960s and 1970s governments grappled with a wage-price spiral in which demands for higher wages forced companies to increase their prices, which in turn triggered demands for higher wages. The past two decades have seen a debt-interest rate spiral. It starts off with the private sector borrowing a lot of money. This is followed by a crisis in which the central bank cuts interest rates to help borrowers. That encourages the private sector to borrow more, which makes it all the more imperative for central banks to come to the rescue when the next crisis comes along. With short-term interest rates now at 1% or less in America, Britain, Japan and the euro zone, this process cannot go any further.

If the 1960s and 1970s produced consumer inflation, the debt-interest rate spiral created asset inflation. In 2000 this pushed share prices to unprecedented peaks; indeed many stockmarkets have yet to regain the levels they reached a decade ago. Now the support of asset prices has entered a new stage, with central banks buying assets (in particular, government and mortgage-backed bonds) directly to boost the financial sector.

Indeed, that sector was the biggest beneficiary of this spiral. Before the credit crunch it generated some 35% of all domestic profits in America. A highly sophisticated society would be expected to spend quite a lot on finance, but that figure still looked too high. "We have been transferring aggregate income and wealth to the financial-services industry. All this financial activity is just a deadweight on the system," says Mr Grantham.

During the debt boom the optimists argued that the huge growth in derivatives did not add to risk in the system because every buyer was matched by a seller. Nobody drew attention to the fact that with each new instrument the finance sector took a cut in the form of a fee, or the spread between buying and selling prices. As derivative was piled on derivative, debt on debt, the cut got ever larger.

Financial profits may have artificially boosted the government's revenues across a range of items, from corporate profits to capital gains and taxes on bonuses. Some of that revenue may now be lost for good. Mr Koo points out in his book that whereas in 1990 Japanese tax receipts were ¥60 trillion (\$416 billion), in 2005 they had come down to only ¥49 trillion, even though Japan's nominal GDP was 13% higher. When revenues were booming, governments thought they would keep coming and increased their spending accordingly. Now it is hard to see how the gap can be closed.

The vast amount of debt at every level also raises the question whether the pool of savings is large enough to absorb it all. In the early 2000s there was no problem. Central banks and sovereign-wealth funds in the emerging economies seemed only too happy to recycle their current-account surpluses into the government bonds of rich countries. This forced down bond yields and tempted rich-world investors to look for better returns by buying mortgage-backed and high-yield corporate bonds.

All that changed with the credit crunch. Suddenly the business sector found it very difficult to borrow. By contrast, governments found it easy because their debt was seen as safe. But once economies start expanding again, business and governments may start competing for the same pool of savings and the public sector may "crowd out" the private one. As the Greek crisis has shown, countries which want to dip into that pool would do well to keep their finances in order.

If attracting international investors is too hard, governments will be tempted to lean on their domestic savers. Theo Zemek, who heads the fixed-income division at AXA, a giant insurance company, reckons that a combination of regulatory and accounting changes will encourage banks and insurance companies to buy more bonds, and ageing populations in the rich world will also want to hold more assets that produce fixed incomes.

Historical factors such as legal, tax and monetary policy have provided incentives for consumers, companies and (crucially) the finance sector to pile on debt. The level of debt has become untenable, but the options for reducing it are not enticing.

Here's how not to do it

One example not to follow is Japan, which has suffered a long period of stagnation accompanied by ever-rising government-debt-to-GDP ratios. This has proved sustainable only because of the country's strong external position; it owes its debt to its own institutions.

For nations that owe money to foreigners, a long period of stagnation is likely to lead to at least partial default. This may be the eventual outcome in Greece, despite the recent rescue package put together by the IMF and the EU. Ms Reinhart and Mr Rogoff argue that the world is due for a wave of sovereign defaults, which are common after serious financial crises.

Another undesirable model is to inflate the debt away, as has often happened in the past. At the extreme, as in Germany in the 1920s, central banks "monetise" the debt, simply printing the money to allow the government to pay its bills. Some regard quantitative easing—in which central banks create money to buy financial assets, mainly government bonds—as monetisation by another name. But many countries may find this difficult, especially if they have a lot of short-term debt. Dhaval Joshi of RAB Capital, a hedge fund, explains that 53% of government debt will have to be rolled over by 2012, for example. If investors think inflation is set to rise, they will demand higher yields, increasing the cost of servicing the debt.

Stagnate, default, inflate—they all seem equally grim. The best solution for rich countries is to work off their debts through economic growth. That may be harder for some than for others, given that many countries' workforces are set to level out or shrink as their populations age. It will be all the more important for such countries to pursue structural reforms that will increase productivity.

But outgrowing debt is not easy: the McKinsey study found that, out of 32 cases of deleveraging following a financial crisis that it examined, only one was driven by growth. America, which has a younger workforce than Europe or Japan, might still manage it. But for many other countries the hole they have dug for themselves may already be too deep.

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