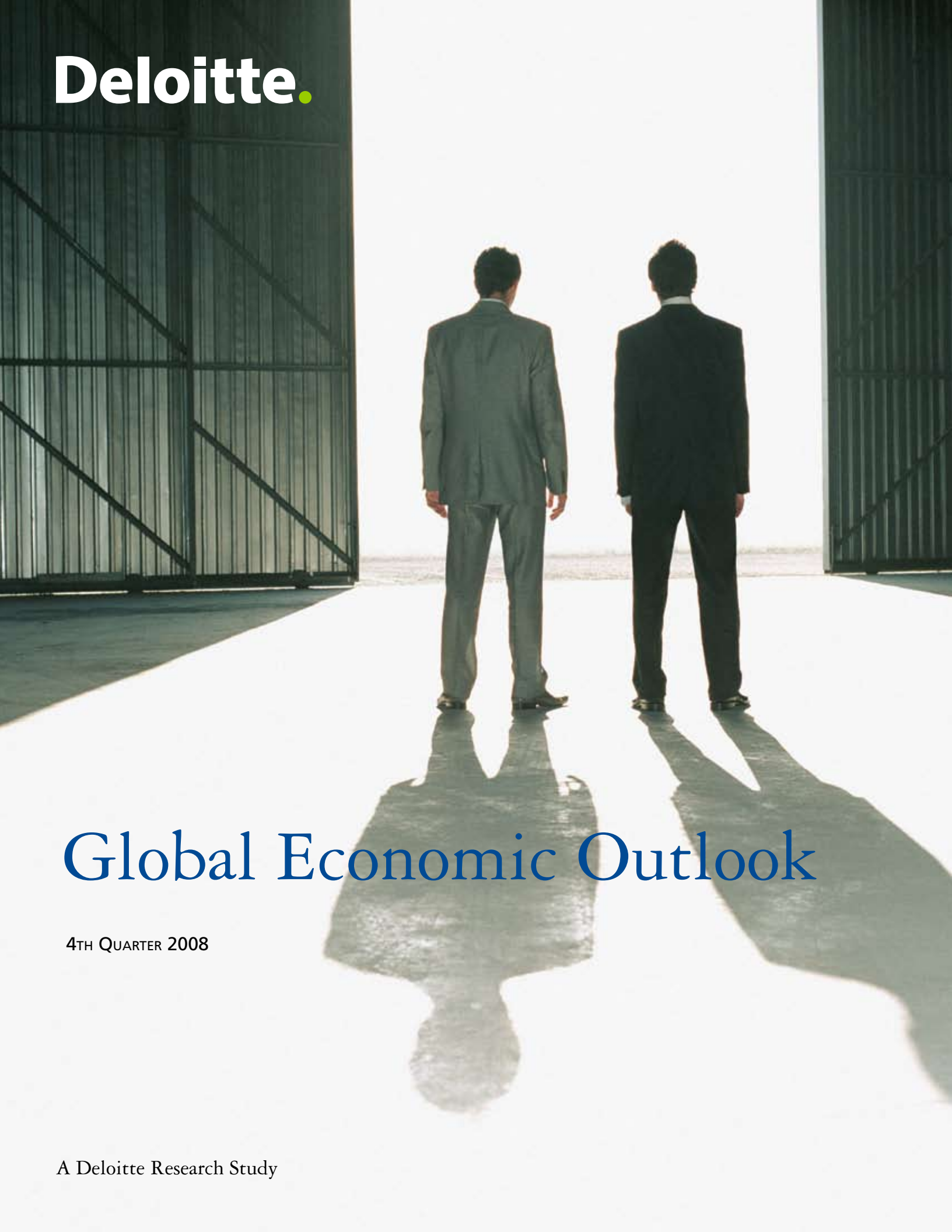


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Global Economic Outlook

4TH QUARTER 2008

A Deloitte Research Study

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As we put this publication to sleep at the start of October 2008, financial events are moving so rapidly that we wonder if our point of view will be out of date within weeks. But alas, schedules must be kept and this report will be published on time. While we cannot be sure of how events will unfold, we can hope to provide some perspective regarding the current crisis. Hence, this report offers a bit of history. In addition, we hesitantly offer our views on where things go from here.

We begin with Carl Steidtmann's outlook for the U.S. economy. Carl highlights the three waves of events and the policy responses that have produced the financial crisis of the past year. Boldly but sensibly, Carl also offers five reasons for optimism in the near term future.

Next, Ian Stewart provides our historical perspective. He examines what has transpired in the recent past when, as with the U.S. housing market, asset price bubbles exploded. Specifically, he looks at the experiences of Finland, Norway, Sweden, Japan, and even the U.S. during the Savings and Loan crisis. The opportunities and challenges of different policy responses provide a useful comparison with which to judge current events.

Elisabeth Denison shifts gears and focuses on a critical issue that has been shadowed by the financial crisis: the price of oil. After examining the causes of the high price of oil and the general myopia of markets in predicting prices, Elisabeth offers some scenarios as to what might happen next. In addition, she considers the economic and business consequences of persistently high petroleum prices.

One of the ramifications of high oil prices and rapid money supply growth in response to the financial crisis is the potential for inflation. In an article on inflation, I offer an analysis on how the credibility of Central Banks influences the degree to which inflation can become a problem. This is an issue that will become of greater importance when economies recover from the current doldrums.

Sunil Rongala discusses exchange rate policy in emerging countries in an article entitled "The Perils of Pegging." Sunil discusses the recent experiences of several important emerging countries, the risks of maintaining fixed exchange rates, and what this means for business.

Finally, our global economists provide outlooks for the economies of the United Kingdom, Eurozone, Russia, India, China, Japan, and Brazil.

We hope that our readers in the business community find these articles useful. Your feedback is most welcome.



Dr. Ira Kalish is Director of Global Economics at Deloitte Research

A Year of Living Dangerously

Dr. Carl Steidtmann



Dr. Carl Steidtmann is
Chief Economist of
Deloitte Research

“Can capitalism survive? No, I do not think it can.”

— Joseph Schumpeter 1942

Schumpeter’s apparent pessimism about capitalism stemmed from his view that populist politicians bemoaning the loss of jobs to creative destruction would work to halt this process, producing more security but much less growth, innovation, and freedom. It remains to be seen if the events of this September will finally vindicate Schumpeter’s pessimism or prove to be an effective means of dealing with large-scale systemic financial failure.

The month of September alone saw a year’s worth of economic and financial events. During this time the U.S. government did more to try to resolve the financial crisis than the Government of Japan did in the entire decade of the 1990s. In September, AIG was effectively nationalized; money market funds were insured; another financial relief program, Treasury Asset Relief Program (TARP), was created; short selling in financial service stocks was outlawed; the traditional investment banking business ceased to exist; several major bank mergers were concluded; and stock market volatility soared. Ben Bernanke, Chairman of the Federal Reserve System, and Henry Paulson, Secretary of the Treasury, appeared before hostile Senate and House hearings to outline their plans for the nationalization of private debt.

In the rest of the economy, mortgage foreclosures are currently soaring; the financial system is still writing off billions in bad debt; job losses are continuing to pile up; consumer spending is contracting; economic growth overseas is sharply declining; and wages are remaining stagnant. Pessimism is the order of the day.

THE TED SPREAD: BANKS FACE A LIQUIDITY TRAP

The TED spread, a measure of banks’ willingness to loan money short term to each other, soared in late September. It rose well above the 200 to 250 basis point spreads achieved in the early waves of the credit crisis. The spread blew above 300 basis points when T-Bill rates fell to zero due to institutional money market funds’ panicked rush to safety.



Figure 1: The TED Spread
3 month Eurodollar rates less 3
month T-Bills in basis points.

Source: Federal Reserve Board

A liquidity trap is a rare credit event that makes it impossible for central banks to stimulate the economy through traditional monetary policy. One of the defining characteristics of a liquidity trap is very high risk spreads and low to zero interest rates on risk-free instruments. This occurs in situations where investors are more worried about the return *of* capital as opposed to the return *on* capital, forcing them to keep all investments in short-term cash instruments like Treasury bills rather than making long-term investments. This is deflationary and makes any recession more severe, which is what has happened in the commercial paper market in late September.

COMMERCIAL PAPER MARKET AND THE BANKING LIQUIDITY TRAP

The commercial paper market freezing up has been at the heart of the credit crunch from the beginning. The sharp decline in commercial paper began in Q3 2007. It was driven by a collapse in the asset backed commercial paper market, as off-balance sheet structured investment vehicles, which were loaded up with mortgage backed securities, imploded. The more recent contraction in commercial paper is something completely different.

First, the financial commercial paper market has frozen due to money market funds shifting their purchases from commercial paper to short term Treasury bills out of fear of principal loss. The breaking of the buck by a money market fund following the collapse of Lehman sent institutional investors fleeing from the money market funds. Government insurance of these funds has not brought the institutional investors back to the market.

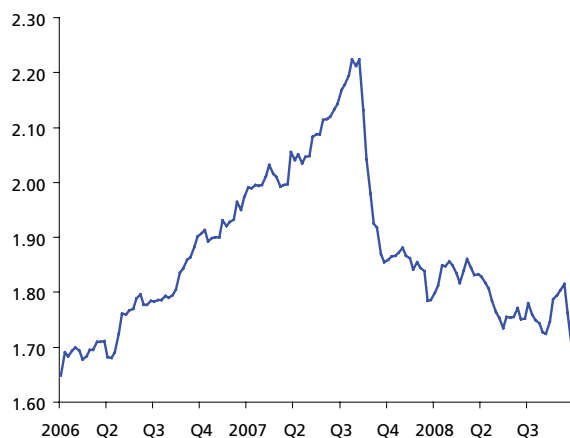


Figure 2: Commercial paper outstanding in trillions \$

Source: Federal Reserve Board

Secondly, the drop in commercial paper in the past two weeks represents unwillingness on the part of banks to buy commercial paper from their non-financial customers. If this component of the commercial paper market remains frozen, it will very quickly translate into liquidity problems for businesses.

THE TREASURY SETS UP TARP

To break the liquidity trap that is forming in the credit markets, Treasury Secretary Paulson proposed the Treasury Asset Recovery Program (TARP). This is a government entity that will buy impaired assets from financial service companies. Total funding for TARP is expected to be in the neighborhood of \$700 billion. The details of this second generation Resolution Trust Corporation are yet to be worked out but will include limits on executive compensation and a possible requirement for equity participation by the taxpayer in any financial institution that

sells assets to TARP. By taking up to \$700 billion in frozen assets off the balance sheets of banks and other financial institutions, this move has the potential of recapitalizing the banks and giving the economy a very strong stimulative jolt.

The problem the banks face is not merely falling asset prices or illiquidity. This is a solvency problem. Banks are not willing to trade commercial paper with each other because they fear the insolvency of their counter party. The banks need to be recapitalized like AIG or given the protection of a larger, stronger balance, as was done with Washington Mutual. The biggest initial shortcoming of the government's plans was that it did little to recapitalize the banks. Following the lead of the British government, the U.S. Treasury has announced that they will make direct investments in a select group of banks, taking preferred stock and warrants in return for the injection of new capital. The German, Australian and Hong Kong authorities have all announced similar plans to recapitalize their banks as well. In addition, the Federal Reserve has set up a special credit facility that will buy commercial paper directly from its issuers.

LOOKING FORWARD

“Liquidate labor, liquidate stocks, liquidate the farmers, liquidate real estate. It will purge the rottenness out of the system. High costs of living and high living will come down. People will work harder, live a more moral life. Values will be adjusted, and enterprising people will pick up the wrecks from less competent people.”

— Andrew Mellon

As Secretary of the Treasury to Presidents Harding, Coolidge, and Hoover, Mellon was a combination of Bernanke and Paulson. Before his public service stint, he was the Warren Buffet of his day. He also owned one of the largest private art collections in the world, which went on to form the core collection for the National Gallery in Washington. His advice for addressing the financial crisis that led to the Great Depression was ignored and today seems quaint in its moralism.

And yet, his prescription for recovery remains as sound now as it did when it was first given. Values are adjusting, painfully in many cases, and the assets in question will quickly move into other hands. Falling home prices will eventually stimulate buyer interest. Bank of America has acquired Merrill Lynch. Barclays picked up the wealth management pieces of Lehman, and AIG will be sold off in pieces, hopefully to the eventual benefit of the U.S. taxpayer. The economy is far from being out of the woods but by the standard laid down by Andrew Mellon, we are making progress at a breathtaking pace. The question that remains is whether the Treasury plan will be sufficient.

For many businesses, the past year has been a difficult one. The economy has been racked by soaring energy prices and systemic threats to the financial system. Employment is down, the real economy is turning negative, and profitability has suffered. Expectations for the near term outlook are modest at best, grim at worst.▲

Asset Booms, Asset Busts

Ian Stewart

- Booms in asset prices are a recurring feature of developed and developing economies
- Asset prices take time, generally measured in years, to reach their lows after the bursting of a bubble
- The bursting of bubbles in real estate and the financial sector have an especially depressant effect on growth
- The IMF estimates that slowdowns and recessions preceded by financial stress are roughly twice as severe as those where financial stress is absent
- Large scale public funding is needed to end systemic banking crises, but the cost to the public can often be recouped as asset prices recover



Ian Stewart is a Director of Research in London

In the last two years the economies of the industrialised world have been hit by falling asset prices and a crisis in the financial system. This article looks back to previous asset bubbles for clues on how this crisis may pan out, as problems of the financial system have precedents in the dozens of financial crises that have occurred over time.



Most asset bubbles share a number of features. They tend to have a self-justifying rationale; generally, that some transformative change justifies permanently higher valuations. For instance, in the late 1990s during the dot-com bubble, there was much talk of the infinite potential of technology; Japan's housing boom of the 1980s was widely held to be a function of land shortages and the remarkable vibrancy and strength of the wider economy.

Asset booms are often reinforced by low interest rates and financial innovation which multiply the returns from leveraged investment. In recent years, for instance, the United Kingdom and the United States have seen exceptionally low real interest rates coupled with an increase in the range of mortgage products available to an ever wider group of consumers. Securitization has liberated lenders from reliance on depositors, enabling them to raise money from wholesale markets and boost their own leverage and that of their customers. At the same time the "originate and distribute" model means that the risks of mortgage default have been passed on from the lender, weakening incentives to maintain credit quality. The result has been a surge in mortgage availability.

Asset booms lead to a mis-pricing of risk and a perception of permanently high returns. As this happens more and more borrowers are able to access credit markets and the boom spreads from "prime" assets to more marginal ones.

The self-reinforcing relationship between rising asset prices and rising credit can reverse very quickly. Holders of overinflated assets – consumers, corporates, or banks – experience damage to their balance sheet as asset prices fall. Reduced collateral reduces the ability of the private sector to borrow. Confidence sags as asset prices fall. Consumers and corporates are forced to deleverage, in turn leading to a fire sale of distressed assets and further downward pressure on prices.

One of the most durable findings from previous bubbles is that even in deep liquid equity markets, it takes a long time for asset values to hit a trough and, in the process, asset values decline significantly:

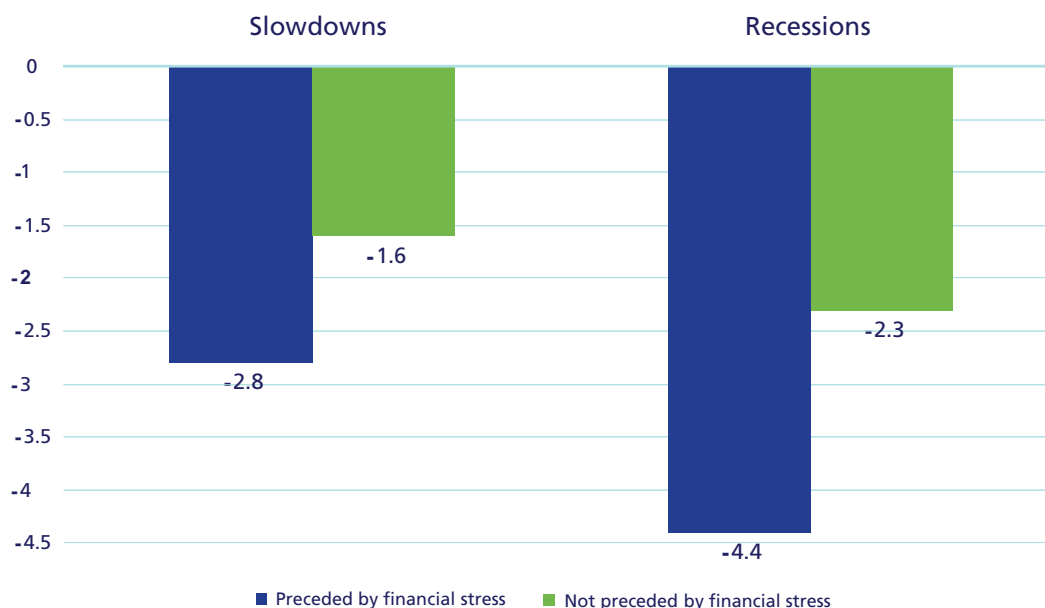
Figure 1: Credit crunches cause major asset damage

	Finland 1991-94	Japan 1991-02	Norway 1987-93	Sweden 1991	U.S. Savings & Loan 1986-91	U.S. (current episode so far)
Real estate price change (inflation adjusted)						
Housing	-49%	-65%	-42%	-26%	+20%	-19%
Commercial		-81%		-59%	-44%	
Equity price change						
Broad market	-70%	-66%	-45%	-46%	-18%	-23%
Financials	-92%	-71%	-83%	-80%	-44%	-44%
Total bank losses or fiscal/recapitalisation costs (% of GDP)	11%	24%	8%	4%	3%	4.3% \$560bn so far

Source: BCA Research, March 2008

The more widely held the asset, the more severe are the economic implications of a fall in asset prices. The bursting of a sectoral equity bubble – as in biotechnology in the United Kingdom in the 1980s or tech shares in 2001 – inflicts less economic damage than a fall in house prices. The greatest risk to the economy comes from a “bust” in the financial system and the ensuing financial stress. Such disruption impairs the ability of financial institutions to extend credit to the private sector. The IMF estimates that slowdowns and recessions preceded by financial stress are roughly twice as severe as those where financial stress is absent:

Figure 2: Cumulative output loss during slowdowns and recessions (medians, % of GDP)



Source: IMF, September 2008

Financial crises have different levels of severity. A systemic crisis, one which threatens the entire financial system, falls at the extreme end of the scale. There is no exact definition of what constitutes a systemic crisis. The magnitude of the crisis is, to a certain extent, in the eye of the beholder. Some commentators, for instance, have taken issue with the U.S. authority’s decision to support AIG and underwrite the Bear Stearns takeover on the grounds that the private sector could solve these problems without government intervention. The key issue is whether the likely damage to the wider economy from failing to act justifies the cost to the public purse and the potential moral hazard of intervening.

Systemic banking crises pose a significant threat to the real economy and their resolution requires major Government intervention. As one Swedish central banker observed of that country’s plan to end its banking crisis in the early 1990s, “Rescuing the banking sector was necessary to avoid a collapse of the real economy.”

In a banking crisis the aim of government intervention should be to facilitate the necessary adjustment in the banking system – through sales of distressed assets, restructuring and capacity reduction. The workout is designed to get the banking sector back on its feet and functioning normally. But as the following three examples demonstrate, this process is always difficult, expensive, and time-consuming — and sometimes struggles to succeed.

JAPAN: ADJUSTMENT POSTPONED

Japan's long, post bubble "bust" between 1990 and 2003 was caused by the interaction of tight fiscal and monetary policy with a dysfunctional banking system. Banks shares dropped 78 percent between 1990 and 2002 and banks became incapacitated by high levels of non performing loans, leading to a dramatic reduction in credit supply.

The Government made two unsuccessful attempts to force bank restructuring. Initially a specially created government agency bought bad real estate loans from the banks. From 1998, the policy switched to injecting capital into the banks through loans and purchases of debts and preferred stock. The effectiveness of these measures was blunted by lax accounting standards and a tolerant approach by the authorities which meant that banks failed to recognise losses.

Government support was not conditional on better risk management and the behaviours that led to excessive risk-taking persisted. Banks sat on bad debts hoping for a reversal of fortunes allowing highly indebted, uncommercial "zombie companies" to soldier on. By the late 1990s, non performing loans were equivalent to 18 percent of Japan's GDP.

More than 10 years into the crisis, the authorities started to make assistance dependent on full disclosure and changes in business practices, leading to a wave of write-offs and restructuring. Within five years, by 2006, the banking system had staged a strong recovery and so did the economy.

SWEDEN: SUCCESSFUL RESOLUTION

Sweden provides a more encouraging precedent for the successful resolution of a banking crisis. The Swedish banking system got into serious difficulties in 1991 with the ending of a credit, real estate, and equity boom. The Swedish stock market fell by 57 percent between August 1989 and October 1992, with financial stocks dropping by 89 percent in the same period.

The Swedish Government's initial intervention took the form of a state takeover of one bank and buying shares in another. An agency was then established to support the banking system through loan guarantees, capital injections, and taking on distressed assets. The agency forced restructuring and mergers on the banks and pushed debtors into bankruptcy. The policy was successful and by 1997 all the assets acquired by the state had been sold at a profit. Nonetheless, the disruption to the real economy during this transition was considerable. The Swedish economy contracted for four consecutive years before recovering in 1994.

U.S.: THE S&L CRISIS

The savings and loan crisis of the 1980s and 1990s had its roots in the deregulation of American savings and loan associations (S&Ls) and their push to capitalise on the 1980s real estate boom. The S&Ls lent aggressively and with lax credit standards. As problems emerged in the sector the authorities responded with a policy of forbearance, changing accounting rules to make them easier on the S&Ls and widening their powers and their ability to take on more risk. These policies accentuated the underlying problem and prospective losses reached some \$200 billion in 1988. In 1989 the Government changed tack and established the Resolution Trust Corporation (RTC) to buy up risky assets and force restructuring. The effect was dramatic and effective: "What ensued was one of the fastest processes of en masse real estate liquidation that has ever occurred" (World Bank Research Working Paper 3379, August 2004).

CONCLUSION

Asset bubbles and financial crises are a recurring feature in developed and developing economies. Once the bubble bursts, it takes time, generally counted in years, for asset values to hit their trough. Deflation in real estate and stress in the financial sector tend to have a particularly negative effect on the wider economy. The damage to the wider economy in the post bubble period tends to be severe. As Japan's experience in the 1990s shows, if the banks fail to restructure and write off bad debts, the period of weakness in the economy is likely to be protracted.

Government intervention and support is needed to end a systemic banking crisis. Successful rescues have certain characteristics: strong political backing for the scheme, high levels of disclosure and transparency, good bankruptcy laws, and skilled and independent staff to run the Asset Management Agency. Above all, government support must be used to drive bank restructuring, as happened in Sweden and the later stages of the U.S. S&L crisis, rather than to avoid it, as happened in Japan in the 1990s and in the early stages of the U.S. S&L crisis.

Direct government intervention to support the banking system always involves the deployment of huge sums of public money. In the case of Japan, the recapitalisation of the banking system cost an amount equivalent to 22 percent of Japanese GDP. Sweden's government spent four percent of GDP to support its banking system. The U.S. S&L crisis consumed capital equivalent to 3.2 percent of U.S. GDP. But as the Cleveland Federal Reserve has observed, although, "the fiscal costs of restructuring may seem extremely large...they often pale in comparison to the long term effects of systemic banking crises" (Policy Discussion Paper, February 2005). Moreover, while the initial costs are large, the eventual cost to the taxpayer is much less because, when the system and asset prices recover, the Government can profit from the sale of assets bought during the crisis. Indeed, most reports suggest that the Swedish, the U.S., and the Japanese bank support operations all eventually made profits.

Government support should be seen as facilitating a painful but necessary process of restructuring and capacity reduction. Perhaps the strongest message, though, is that even well executed bank rescue programmes are accompanied by a withdrawal of credit from the economy as banks focus on bolstering their balance sheets. The result, inevitably, is weaker economic activity. The U.S. S&L crisis reinforced the downturn of the early 1990s. Sweden's bank rescue was accompanied by a deep three-year recession.

Successful resolution of a financial crisis is complex, uncertain, and in the short term, very costly. Such rescues shorten and probably moderate the economic consequences of financial stress; sadly, they do not eliminate them. ▲

Crude Realities

Dr. Elisabeth Denison



Dr. Elisabeth Denison is Senior Economist at Deloitte Research contributing Eurozone perspectives from Germany

From below \$15 per barrel in 1998, the price of oil has risen steadily over the past ten years, reaching \$50 in 2005 and \$70 in 2007. By mid-2008, the price of Brent was scratching the \$150 mark. Against the background of slowing world growth, prices receded in recent months but nevertheless it seems that “the era of cheap energy is over.”¹

Do companies need to prepare for oil at \$200 per barrel anytime soon or can they expect further stabilization in commodity markets? Should they bet on green technologies? And what does it mean for their bottom line? These long-term strategic considerations are likely joining other top-of-mind issues in many boardrooms around the globe.

SETTING THE SCENE

Strong demand for oil over the past decade, fuelled by the rise of emerging markets, has pushed world oil markets close to capacity. In 1985, OPEC had 10 million barrels of spare capacity per day; today it has just two million. Market corrections work with an unusually long lag where oil is concerned, because both demand and supply are pretty unresponsive in the short term. This inelasticity adds to market volatility and translates into strong price movements — in the case of the past few years, mainly to the upside.

For the next two decades, think-tanks envision a number of different scenarios, from a decline in the price of oil to a continuation of increases with production reaching a plateau as predicted by “peak oil” advocates. At the same time, the upward-shift in energy prices is channeling investment toward the development of new, energy-conserving technologies and alternative fuels, which in the long term might help a transition to a new equilibrium of energy demand and supply. Until then, however, the scramble for oil will continue.

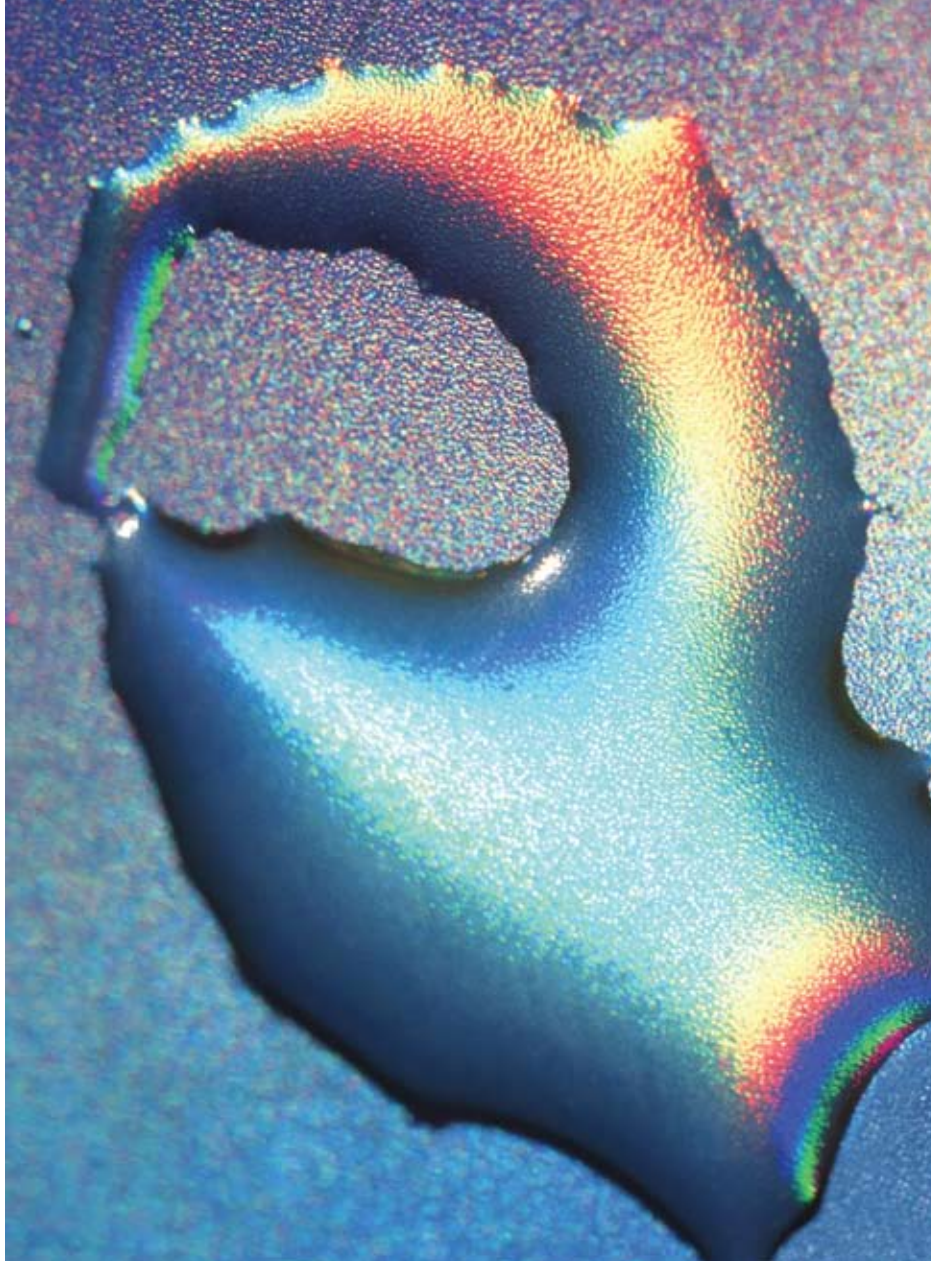
There are various channels through which these developments affect businesses. First-round effects of higher oil prices include a direct impact on consumer spending and company profits; while second-round effects bite consumers as central banks try to establish their inflation-fighting credibility via higher interest rates. In the long term, high energy prices reduce the growth potential of oil-importing nations and lead to a fundamental shift in the world’s wealth distribution. The \$3 trillion of assets under management of sovereign wealth funds currently are the tip of the iceberg. There are worries that oil-rich nations could use their windfall for more than pure financial gains.

Companies need to be politically savvy to navigate a world of rising resource nationalism and brave the risks related to energy insecurity and climate change. However, there is also an opportunity for those who get a head start in the transition to a greener economy.

THE REASONS BEHIND HIGHER OIL PRICES

Demand forces

A fundamental shift has taken place in the world over the past decade. Globalization — and the rise of India and China — has led to a massive increase of productive capacity, with falling prices for manufactured goods (and some tradable services) and a rise in the price of commodities. As economies mature, they use more oil — from industrial production, transport, heating, and cooling,



to rising consumer preferences for energy-intensive goods. A recent study of a cross-section of nearly 180 countries by the Dallas Fed shows that a doubling in per capita income more than doubles the per capita oil consumption. A few big nations growing rapidly can have a profound impact on world oil markets.

The world's population is expected to increase from around 6.5 billion in 2006 to 8.5 billion by 2030, mainly due to the fast growth of developing countries. At the same time, urbanization continues. By 2030, 59 percent of the world's population is expected to live in cities, compared with 48 percent in 2006. As OPEC's most recent World Oil Outlook points out, the number of city dwellers in developing countries will swell by more than 1.5 billion over the period to 2030, equivalent to each year having four additional cities the size of Jakarta. Fast-growing and rapidly industrializing nations will continue to drive energy demand over the next two decades.

Fuel subsidies — which are especially popular in developing nations — stoke demand further. Indonesia is a prime example, spending an estimated \$20 billion on fuel subsidies this year in order to support the economy and pacify protests. But it is hardly alone. In China, subsidies are estimated to total almost \$40 billion in 2008. According to the International Monetary Fund (IMF), 46 countries had price subsidies in place in 2008, with the projected level of these subsidies ranging up to 14.6 percent of GDP. BP estimates that countries with subsidies accounted

for 96 percent of the world's increase in oil use in 2007. Fuel subsidies are counterproductive in more than one way: not only do they put enormous pressure on public finances, they also disrupt free market mechanisms and discourage sensible fuel-efficiency measures.

While emerging markets display the fastest growth rates in oil consumption, however, industrialized nations still remain the largest consumers of oil overall. A moderation in demand there can be expected as economic activity slows in the aftermath of the financial crisis. In addition, the push toward alternative energy is slowly making an impact. Germany registered the world's largest decline in energy consumption of -9.0 percent in 2007, despite healthy GDP growth of +2.6 percent.

Overall, however, demand adjustments tend to be lengthy since decisions on heating and transport equipment have been made by both companies and individuals and habits of consumption are ingrained. New technologies are slow to mature and companies need time to adjust to new realities (although currently car companies are hard pressed to make that transition rather faster).

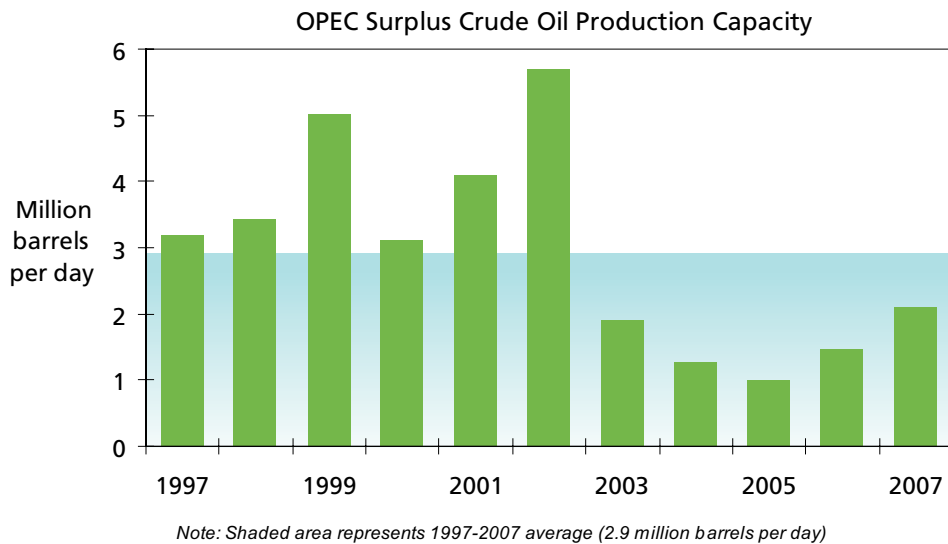
While Western nations are on the path to becoming more fuel and energy efficient, emerging nations still have a long development curve ahead of them. The world is experiencing another era of industrialization. Only this time, instead of millions of people, it involves billions of people. In 2006, Chinese car sales overtook Japan's; in 2015, they are projected to overtake the United States'. In India, 420 million people have yet to gain access to electricity. According to market experts, continuing increases in energy demand from rapidly developing regions are likely to remain a dominant force in oil markets for at least the next two decades.

Supply factors

How will this growing demand be met? Depending on whom you want to believe, global oil production has either already peaked, is about to peak, or still has upside potential due to the development of new technologies and the possibility of extracting oil from depositories previously deemed uneconomic (as suggested by companies with commercial interest in the field). The U.S. Energy Information Administration puts the peak in oil production "within this century." The German government-sponsored think tank "Energy Watch Group" is less optimistic, maintaining that oil production has already peaked and that the world is now entering a transition period that will force us to fundamentally rethink our long-term approach to fossil fuels.

In the short term, supply is hampered by the fact that for the past 25 years, oil prices and thus the level of investment were low. Spare capacity in OPEC has bottomed out (see figure 1). Even if oil-exporting nations were able and willing to boost output right now, new supply will be slow to materialize, since it takes about a decade before an oil discovery is ready for production.

The problem is not helped by the fact that over three-quarters of the world's oil reserves are in the hands of state-owned oil firms in nations that are reluctant to let international capital into the country. In this new era of resource nationalism, these countries are increasingly using control of natural resources to advance political goals. These developments have added to supply uncertainty and price volatility. In addition, there is now a shortage of equipment and experienced scientists and engineers, so costs are escalating.

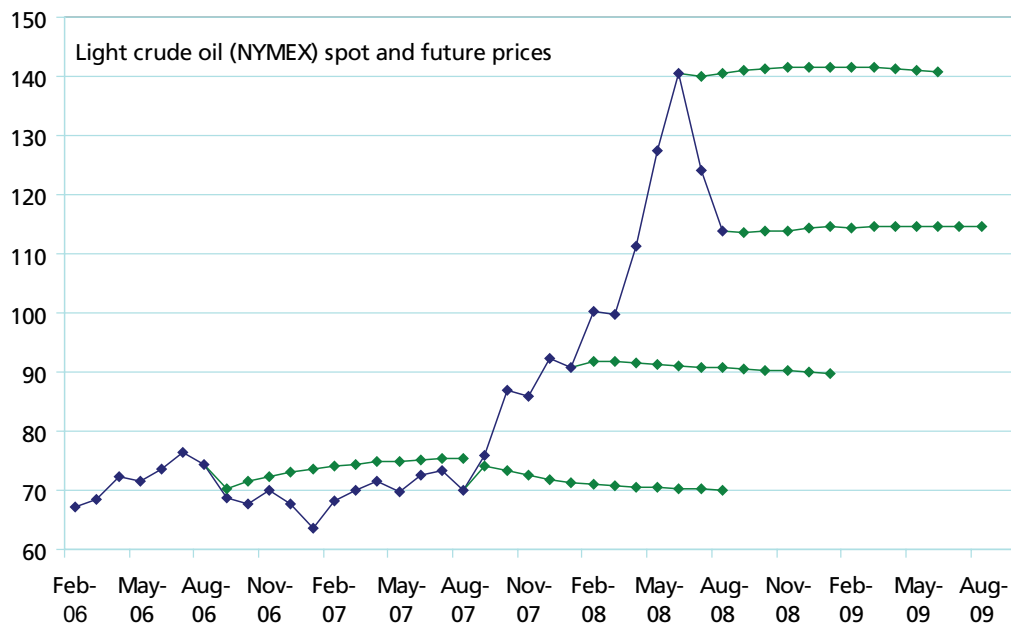
Figure 1. OPEC spare capacity

Source: EIA, Short-term Energy Outlook, August 2008

LOOKING AHEAD: OIL PRICE SCENARIOS

When the oil price rose from about \$25 per barrel at the end of 2002 to \$45 at the end of 2004, many market participants expected prices to decline over time to “more reasonable levels.” At over \$100 per barrel, similar sentiments were heard. Myopia seems to be a general problem of the futures market. Oil price predictions embedded in forward contracts tend to follow spot prices, always assuming stabilization around given levels (see figure 2).

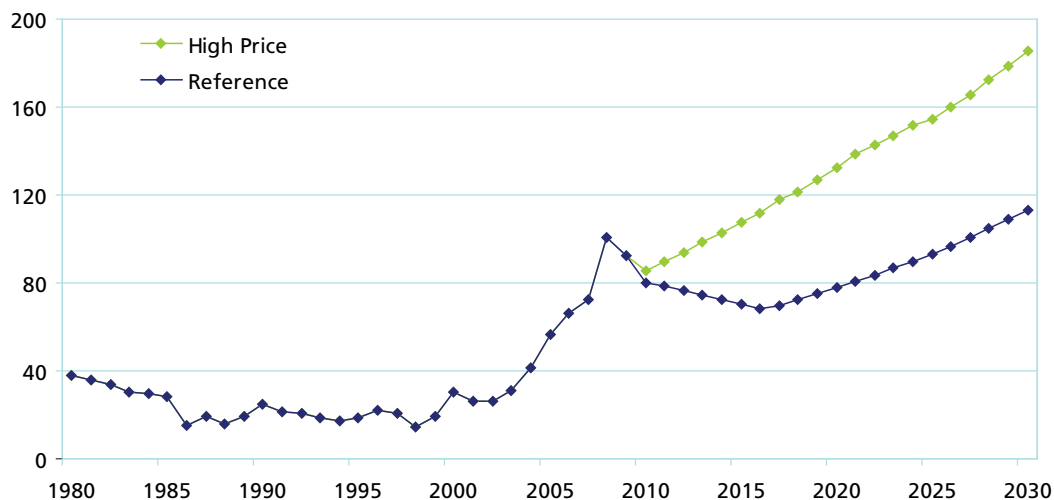
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Figure 2. Myopia in oil markets

Source: Bloomberg

The U.S. Energy Information Administration predicts some moderation in the price of oil over the next decade, but sees further acceleration towards \$110 per barrel in 2030 in the reference case and \$190 per barrel in a risk scenario (see figure 3). Based on long-term demand and supply projections, the consensus seems to be clear: even if some correction in the oil price is on the cards short term, the time of cheap oil of the 80s and 90s is over for good.

Figure 3. World oil price scenarios
(U.S. Energy Information Administration)



Source: Annual Energy Outlook 2008 (Washington, DC, June 2008)

ECONOMIC CONSEQUENCES

Loss of purchasing power

The most immediate and direct impact of higher oil prices is its effect on consumer spending. At an average \$110 per barrel in 2008 (average of the first two quarters), the price tag for oil imports in the United States would jump more than 50 per cent from \$70 per barrel in 2007. This could boost the import bill from \$320 billion in 2007 to \$500 billion in 2008 — an increase amounting to about two percent of disposable income. Assuming not all costs are being passed on to the consumer, and some expenses can be met by dipping into savings, this would probably cut spending by 1 to 1.5 percent. This ties in with estimates of economic forecasting firm Global Insight, which believes every \$10 per barrel increase in oil prices in the United States cuts growth of consumer spending by a third of a percentage point.

In Europe, the rise in the price of oil has been more muted, thanks to a strong currency. At \$70 per barrel (average in the first two quarters of 2008), oil is up just 35 percent from 52 in 2007. Petroleum imports amounted to \$290 billion in the Eurozone in 2007, a bill that could rise to \$400 billion in 2008. The increase amounts to about 1.5 percent of disposable income of Euro area economies. Assuming a pass through of 50 to 75 percent, this could slow consumption spending by 0.75 to 1 percentage point. Not a pretty scenario, given that private consumption rose just 1.4 percent in the Eurozone in 2007, half the 2.8 percent pace of consumer spending growth in the United States.

Tighter monetary conditions and falling profits

Meanwhile, monetary policy makers are gearing up to face the threat to price

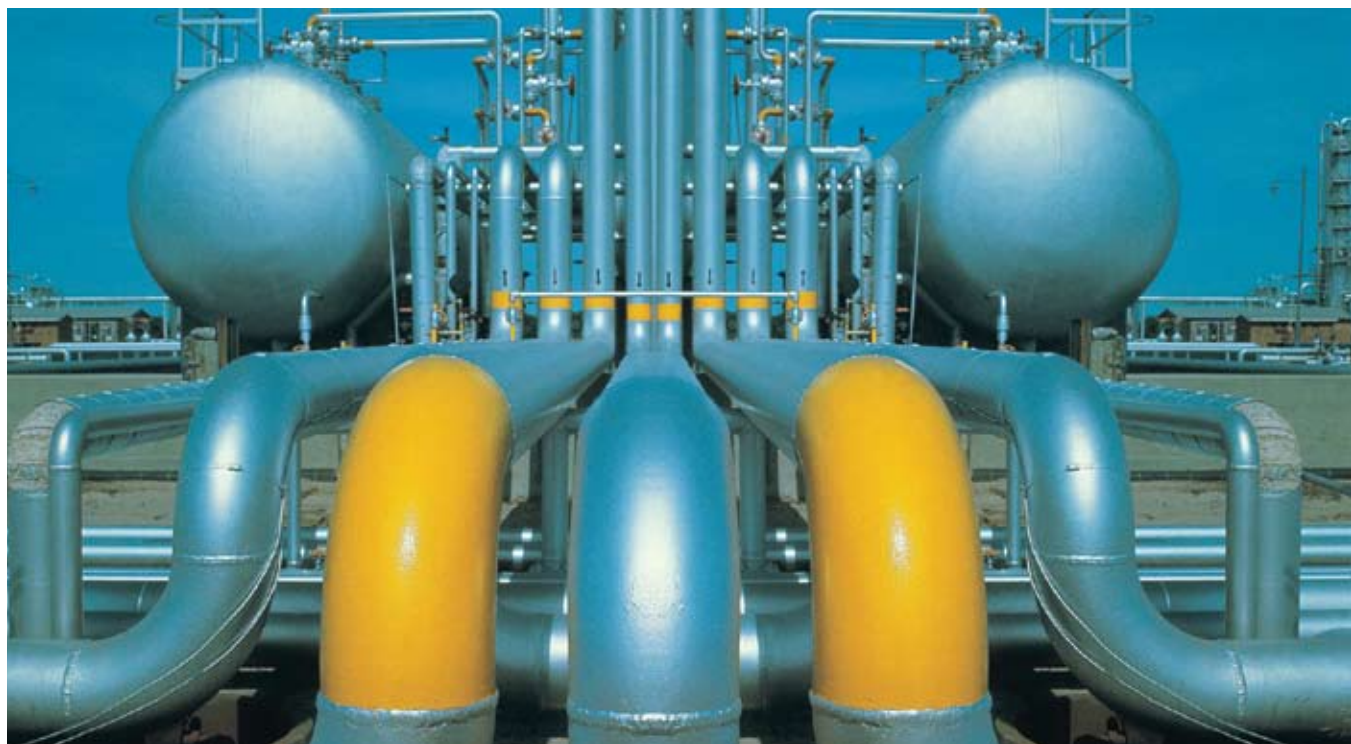
stability. Asian central banks have started to raise interest rates to reign in high inflation in their booming economies, while western central bankers are torn between the threat of inflation and worries about growth. They are facing a difficult task, given that the credit crisis has already led to a marked tightening of credit conditions. But with inflation risks stemming from higher energy prices, the scope for monetary policy to be supportive of financial stability has become constrained. The European Central Bank showed its teeth this summer in an effort to forestall second-round effects of inflation as wage demands started to accelerate.

The combination of higher oil prices, rising labour costs, and tighter credit conditions will leave their mark on businesses. Although the world seems to be getting used to profit warnings, more bad news from the corporate sector might be in the pipeline. In a risk scenario of oil reaching \$160 per barrel at the end of 2008 (a 20 percent probability compared to a base scenario of price around \$100 per barrel), Allianz research estimates the negative impact on non-financial corporate profits in the United States and Germany would be reflected in a drop of both the S&P500 and the DAX stock market indices by a further 10 to 15 percent.

Long-term drag on potential growth

In the long term, higher energy prices lead to a negative impact on potential growth. Because energy is an important input to the production process, a sustained hike in real energy prices entails lower equilibrium output.

The OECD estimates that at a level of \$120 per barrel, the impact on potential growth in the United States amounts to -0.21 to -0.51 percentage points, while Eurozone growth suffers a loss of -0.06 to -0.2 percentage points. The reason for the smaller impact in Europe is a stronger currency on one hand, but also the fact that the Eurozone is less dependent on energy (its share of oil and natural gas in total production is about 50 percent smaller than in the United States).



BUSINESS IMPLICATIONS

New realities in the automotive industry

Consumer habits will change drastically against the background of higher oil prices. In the United States, this is already happening. As gasoline prices have risen steadily since 2004, car sales have trailed off. After averaging close to 17 million units per year over the first half of the decade, sales are now running at an annual rate of about 13 million and are expected to decline further. CIBC predicts gasoline prices in the United States will reach \$7 per gallon within the next two years and expects a mass exodus of vehicles off America's highways as a result. In Europe, where consumers are already paying the equivalent of \$7 or more per gallon today, driving behavior is markedly different from that in the United States (see table).

Daily Travel Characteristics		United States	United Kingdom
Used car to get to work	(%)	90.4	61.8
Total distance traveled	(miles)	20.9	7.0
Number of trips		4.0	2.0
No of cars in household	(%)	8.0	30.6
2 cars or more in household	(%)	61.9	24.7

Source: Giuliano & Dargay (2005) "Car ownership, travel and land use: A Comparison of the U.S. and Great Britain" in CIBC StrategEcon "Heading for the exit lane," June 2008

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Not only will Americans drive less but they will likely start to drive very different vehicles from the ones they are currently driving. U.S. car companies are responding. At GM, the Chevrolet Volt is due in showrooms in 2010 and Chrysler is developing a hybrid technology called ENVI for extended-range hybrid vehicles. Ford is trying to score with its EcoBoost technology, which attempts to make big motors as efficient as small ones.

Changing consumer preferences and clean energy investments

High oil prices are not the only reason why consumers are changing their buying habits. A general rise in awareness about climate change and sustainability is noticeable across the globe — not just since the release of Gore's *An Inconvenient Truth*. Combine peak oil fears and the rising cost of oil exploration with growing environmental consciousness, and it's no surprise that green energy is touted as the next big thing. According to New Energy Finance — an independent provider of global research to investors in renewable energy — total new investment in clean energy reached a record \$148 billion in 2007, up 60 percent from 2006. As Andris Piebalgs, the EU energy commissioner, said in March 2008: "You cannot separate the two goals: energy and climate change."

The oil endgame

Globalization has changed the structure of the world economy over the past decade. The rise of emerging markets increased productive capacity and contributed to a long period of stable inflation and low interest rates ("the great moderation"). For years, industrialized nations reaped the benefits and withstood even the steady rise of commodity prices accompanying this development. However, after the burst of the liquidity-fueled boom, companies are now faced not only with slowing economic growth, but also with higher oil prices and the threat of further tightening credit conditions. The confluence of these factors does not make for a particularly rosy near-term outlook.



Chevrolet Volt is due in showrooms in 2010

It is important, however, to keep the big picture in mind. Emerging nations have a long development curve ahead of them and growth opportunities there remain impressive. In the current environment, it is important for companies to examine the risks and impacts of different energy scenarios for both themselves and their customers, weighing their options to hedge against these risks or take advantage of opportunities. Diverging strategies might have to be developed for industrialized and developing nations for the next decade. But against the background of climate change and scarcity of fossil fuels, this might also be the time for companies to develop long-term visions of a world “beyond petroleum.” From energy providers, technology incubators, industrial manufacturers, and consumer companies — as environmental awareness spreads, a license to operate is likely to go to those companies who develop the next generation of clean energy and green technology. ▲

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Anchoring Inflation Expectations

Dr. Ira Kalish



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Inflation is often the result of people expecting inflation. If people expect inflation in the future, it will influence their behavior. Workers will seek higher wages in order to offset expected increases in prices. Businesses will seek to raise prices in order to offset expected increases in costs. This sets off a wage-price spiral. If, on the other hand, people expect low inflation and believe that a rise in the price of a commodity is a one-off event, this too will influence behavior. Workers will reluctantly agree to modest pay increases and businesses will seek to avoid large price increases lest they become less competitive. Thus, the degree to which central banks can anchor expectations of inflation will, in fact, influence actual inflation.

What does it take to anchor inflation expectations? Credibility. How hard a central bank must work to ensure credibility depends on many things. These include the central bank's historic performance, its degree of independence, the degree to which wage behavior is influenced by unions, and the degree to which external events influence inflationary expectations. For example, when increased globalization in the 1990s resulted in lower manufacturing costs, this reduced expectations of inflation. When commodity prices increased recently, this increased expectations. Being a Central Banker was much easier in the 1990s.

How does a central bank gain credibility? Every now and then, it must do something that makes everyone angry. For example, when an economy is growing rapidly and wage pressures are starting to appear, a smart central bank will raise interest rates in order to quell inflationary pressures. The effect will be to retard economic growth while averting inflation. Such action may engender anger, but it will also engender respect and, hence, credibility.

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Given all this, where do we stand today? The central banks of the major developed nations have a high degree of credibility. The European Central Bank (ECB) has maintained a relatively tight monetary policy and has certainly made many politicians angry. Credibility is probably not an issue here. Hence, there is reason to expect inflation in the Eurozone to remain under control. This was also the case in Japan where the central bank seemingly panicked when prices rose a ghastly one percent. There is plenty of credibility here, too. Finally, there is the U.S. Federal Reserve. It has dramatically loosened monetary policy during the credit crunch and injected vast quantities of money into the system to maintain liquidity. Yet most observers expect the Fed to tighten monetary policy quickly once the credit situation is resolved (whenever that may be). Consequently, inflation is not expected to get out of control in the United States. Indeed current modest wage behavior underlies this forecast.

The story is a bit different in the emerging world. In many such markets, we are now at the tail end of a prolonged period of low inflation. This was the result of many factors. In China, for example, vast internal migration led to a rapid increase in the supply of labor, thereby putting a downward pressure on wages. In some countries, rapid money supply growth was absorbed by asset markets rather than product markets. The result was asset price inflation rather than goods price inflation. This is now changing. In several large emerging markets, rapid money supply growth, increased commodity prices, and slowing labor force growth are conspiring to create inflation. As inflationary conditions take hold, an inflationary psychology is developing whereby workers seek to recover lost purchasing power with higher wages. This will result in a wage-price spiral that only a credible central bank can avert. Yet in China and Russia, for example, central banks have not yet shown anti-inflationary resolve. Russia's Prime Minister, Vladimir Putin, has said that it is "incorrect to restrain inflation at the expense of economic growth." The longer these countries continue without demonstrating the resolve to take on inflation, the more difficult and costly it will be in the future to suppress inflation.

Fighting inflation generally means causing a slowdown in economic growth. When central banks lack independence from political authorities, they often face pressure to avoid unpopular measures. Time will tell whether inflation in emerging markets becomes a long-term problem. Why does this matter? It matters because high inflation can be economically and socially destabilizing. It leads to inefficiency, economic distortions, and often foreign debt crises. In addition, dealing with high inflation generally entails long or deep economic recessions. Consequently, dealing with the problem early is the best policy. ▲

Pegging Perils: The Dangers of Fixing Exchange Rates

Dr. Sunil Rongala



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Once seen as the panacea for all ills, fixed exchange rate regimes are increasingly becoming a burden on countries opting for them.

Fixed exchange rates, also known as pegs, are fixed at a certain level by monetary authorities against another currency or basket of currencies. Currently, the U.S. dollar is the top currency of choice for an anchor currency. The typical reasons for pegging are:

- To increase stability, thereby reducing inflation. For example, the Zimbabwe dollar may soon be pegged to the South African rand to reduce their 11 million percent inflation
- To make currencies more competitive to benefit trade — China, Malaysia
- To reduce volatility in export receipts when the country has just one major export — Saudi Arabia, United Arab Emirates, and Kuwait
- To align a currency before joining a monetary union — Countries in the first round of conversion to the euro were pegged to the German mark

THE PERILS OF PEGGING

On the face of it, pegging a currency to another anchor currency seems to have a significant amount of upside with very little downside. The upside is obviously measured in terms of the pegging objectives of that particular country. However, as the adage goes: “There is no such thing as a free lunch,” pegging comes with its own perils. Drawing from the “unholy trinity” or the “impossible trinity” theory in international economics, countries can only have two of the following three characteristics: a fixed exchange rate, free capital movement, and an independent monetary policy. In the present environment, it’s rare for any country to have full capital control because of the nature of modern financial systems. For example, China, which imposes controls on inflows of money, finds it cannot fully control the inflow of speculative money. Thus China, along with other countries having a fixed exchange rate and free capital movement will, going by the trinity theory, not have an independent monetary policy. If these countries have high inflation, they are not likely to raise their interest rates because of an upward pressure on the currency.

Pegging is also an expensive proposition. A country that pegs has to keep relatively high amounts of foreign reserves to show its credibility in the market and to signal to anyone planning a speculative attack that it will protect the peg at all costs. Pegging is also expensive because of sterilized intervention¹. Central banks have to pay money on bonds they issue in order to ensure that foreign inflows don’t enter the monetary base causing inflation.

¹ Investopedia.com defines sterilized intervention as “a method used by monetary authorities to equalize the effects of foreign exchange transactions on the domestic monetary base by offsetting the purchase or sale of domestic assets within the domestic markets. The process limits the amount of domestic currency available for foreign exchange. Sterilized intervention is a way for a country to alter its debt composition without affecting its monetary base. It is used to counter undesirable exchange-rate movements.”



China

Perhaps the most famous peg was the Chinese yuan to the U.S. dollar. When currencies having a tendency to appreciate are pegged, they become undervalued. This caused problems in China. Though China participated in sterilized intervention, there wasn't a lot it could do about the significant amount of "hot" money that came in. After the rigid peg was removed in 2005, speculative inflows occurred because of the expectation of the yuan to appreciate further. During this time, a good chunk of money went into the real estate and stock market, which created bubbles in both markets — these bubbles eventually burst. The asset bubbles also created a significant wealth effect causing consumption to increase, which in turn caused prices — especially of food — to go up dramatically. The yuan is technically no longer a peg but it remains a very tightly managed currency, which has resulted in a massive current account surplus causing inflationary pressure. During periods of relatively high inflation in mid-2008, the central bank was unable to raise rates to combat inflation because it feared this would only cause more inflows and stoke more inflation.

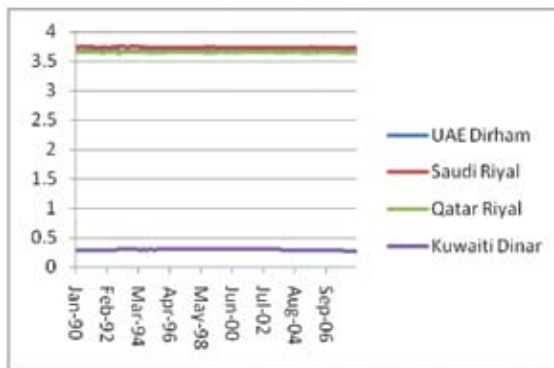
Argentina

Argentina had 3000 percent inflation in the 1980s, which resulted in the peso being pegged to the U.S. dollar in 1991. This helped the economy gain stability, but the central bank couldn't raise rates for fear of breaking the peg. The U.S. dollar also appreciated during the late 1990s causing the peso to be valued more than its fundamentals. The problem worsened after Brazil, its largest trading partner, de-pegged itself from the U.S. dollar causing the two countries' trade balance to fall dramatically. In December 2001, facing the risk of a massive

speculative attack, the government abandoned the peg and devalued the currency by 29 percent. The resultant economic situation was bleak for a number of years. Though Argentina has managed to pull itself out of the slump, it still faces an inflation problem.

The Middle East

Middle East countries were pegged to the U.S. dollar not to make their currencies competitive but to reduce volatility in their export receipts; their single biggest export, oil, is priced in U.S. dollars. This worked till 2006 as oil was priced relatively low and the returns that these countries received were not as outsized as they are today. Then the price of oil went up. There were large inflows and though central banks intervened, not all inflows could be sterilized creating the classic inflationary situation of “too much money chasing too few goods.” Increased income also resulted in asset bubbles especially in the real estate market. Saudi Arabia, U.A.E., Qatar, and Kuwait all have asset bubbles as well as high levels of inflation (over 10 percent). However, central banks in the region have refused to raise rates. Then there’s the social issue. Though these countries are rich, their populations tend to be dominated by immigrant labor who have suffered because of high inflation. Immigrants also remit a good part of their income to their families, but because of the fall in the value of the dollar they can now only send less money back home.



Middle East currencies and the U.S. dollar (January 1990 – August 2008)

Source: Bloomberg

WILL THESE COUNTRIES MOVE AWAY FROM THE PEG?

Unlikely. When China had record inflation rates earlier this year, the central bank was contemplating letting the yuan appreciate against the U.S. dollar. Since then two things have happened: the economy started slowing down, and inflation rates reduced. China’s economy slowed down to 10.1 percent in the second quarter of 2008 from 10.6 percent in the previous quarter. Though pretty much every country would kill for this kind of a “slowed down” growth rate, China had 11 plus growth rates in 2007 including a 12.6 in the second -quarter of 2007. The Chinese Politburo, in a meeting held late July of 2008 after the second-quarter GDP number came out, said China’s focus would be on “ensuring steady and fast economic growth and controlling excessively rapid price increases as the key tasks of its macroeconomic policies.” The central bank’s second-quarter monetary policy report released a couple of days after the politburo meeting has, not entirely surprisingly, indicated that its monetary policy will be focused on creating steady and rapid economic growth. A notable omission in this report, highlighted in previous reports, was on letting the market play a greater role in setting the value of the yuan. The way to read this is that China still considers the yuan-U.S. dollar connection a linchpin to its growth and is unlikely to break ties anytime in the near future.

The oil-producing countries are also unlikely to move away from their pegs. Kuwait has transitioned from its dollar peg to a currency basket but there are reports that it is a dollar-heavy basket. In an interview with *The New York Times*², Muhammad Al-Jasser, Vice Governor of the Saudi Arabian Monetary Agency, said, "The peg is here to stay, no ifs or buts." Other central banks in the region have also voiced similar opinions. A probable reason for staying put with the dollar peg is geo-political. Since these countries have not had their own monetary policy for some two decades now, they likely don't know how to react to the current situation. However, things could change when the Gulf Cooperation Council (GCC) forms its monetary union in 2010, though nothing official has been announced to this effect as yet.

WILL THE DOLLAR BE KNOCKED OFF AS THE TOP ANCHOR CURRENCY?

Given the current turmoil in the U.S. financial services industry, a number of people have written off the U.S. dollar as the top anchor currency. The recent weakness in the dollar hasn't helped matters. The other obvious choice for an anchor currency is the euro. The question now is whether countries that currently peg to the dollar will move fully to the euro or to a basket where the euro has a substantial weight. The former is highly unlikely because news of the demise of the U.S. dollar is a bit premature, and countries would have to revalue their currencies causing their competitiveness to be hit. The move to a basket could happen but it is very likely that if this does come to pass, the euro would have a fairly small weight. This was the case with the Kuwaiti dinar. Other Middle East countries will probably remain pegged solely to the U.S. dollar because they have the money to essentially buy themselves out of the situation. Given China's renewed focus on its currency, it too will probably never move away from the U.S. dollar. Other countries that manage their currencies by linking to the U.S. dollar are also unlikely to move away because a weak U.S. dollar makes their currencies more competitive.

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CONCLUSION

Fixed exchange rates have been responsible for the Mexican, Asian, Argentinian crises, as well as the speculative attack on the British pound in 1992. The essential problem with fixed exchange rates is that they are much like a drug countries find it very hard to wean off the addiction. This is why almost every country that has had a fixed exchange rate policy has turned a blind eye to inflation. Even countries that peg to overcome inflation turn a blind eye to inflation when times are good. The tragedy is that inflation usually plays only a small role when moving away from strongly managed currencies, but tends to hurt the poor something both China and the Middle East have in abundance the most .

In conclusion, fixed rates are not bad all the time; they can help. However, policy makers have to be extra cautious and follow good policies. They should be flexible enough to either move to a currency basket or abandon the peg should they see inflation rates rising. ▲

² Landon Thomas, "Gulf Countries Remain Tied to the Dollar," *The New York Times*, August 25, 2008.

Eurozone: Economic Outlook

Dr. Elisabeth Denison

What a difference three months make. As effects of the financial crisis continue to reverberate around the world, the outlook for euro-area growth has deteriorated markedly since early summer. Headlines of “defying gravity” have given way to predictions of recessions for several European nations. The world is “re-coupling.”

Already in early summer, leading indicators in the Eurozone started to send the first warning signals. Credit conditions were tightening and confidence deteriorating (see *Glob-*

celeration of economic activity.

Slower growth in emerging markets and the effects of a stronger currency are affecting European exports. Even Germany, the best-positioned large economy of the Eurozone, is losing steam.

Growth revisions

In its September reassessment of economic activity, the OECD downgraded average growth for the Eurozone in 2008 to 1.3 percent from 1.7 percent (figure 2). At the same time, U.S. growth was revised higher, thanks to the expected effects of the fiscal rescue package. However, the OECD did warn that the continuing uncertainty surrounding the financial market crisis “make(s)



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al Economic Outlook Summer 2008). By now, the number of red flags is hard to ignore. Economic Sentiment in the Eurozone has declined sharply in recent months, with the European Commission’s ESI index reaching a five-year low of 88.8 in August. As a leading indicator for GDP growth, this does not bode well for the economy (see figure 1).

Housing market woes, with sharply lower prices and declining construction activity, seem to be spreading beyond Ireland, Spain, and the United Kingdom. Lower transaction volumes are seen as a precursor of downturns elsewhere. In France, declining housing starts point to further declines in construction activity in the coming quarters.

Meanwhile, the global slowdown is reaching emerging markets. While China still posted growth of over 10 percent in the first half of the year (mainly thanks to strong investment and consumption), export growth weakened. In most emerging Asian economies, recent data point to a de-

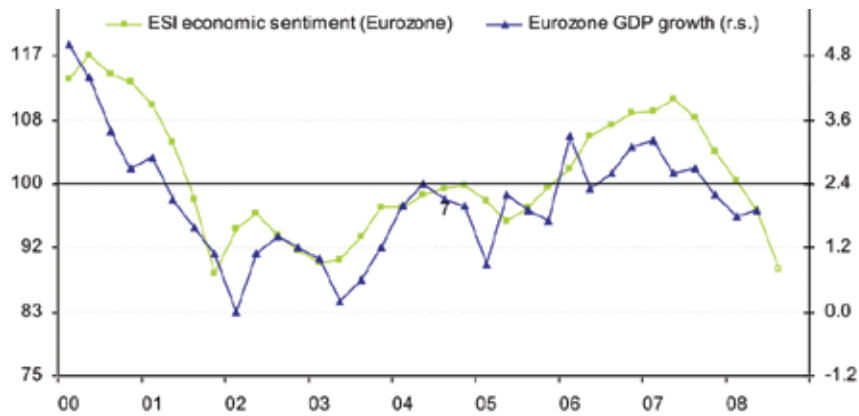
the evolution of the U.S. economy difficult to evaluate at this juncture.”

The Eurozone forecast includes sharp downward revision to growth in several nations. Italy is more or less stagnating (0.1 percent) and expectations for other nations have been markedly reduced. The growth outlook for Germany was revised to 1.5 percent from 1.9 percent. After a negative quarter of GDP growth in Q2, the stated confidence intervals open the possibility of a second quarter of contraction for Germany as well as for several other European nations.

Recession indicators: A comparison

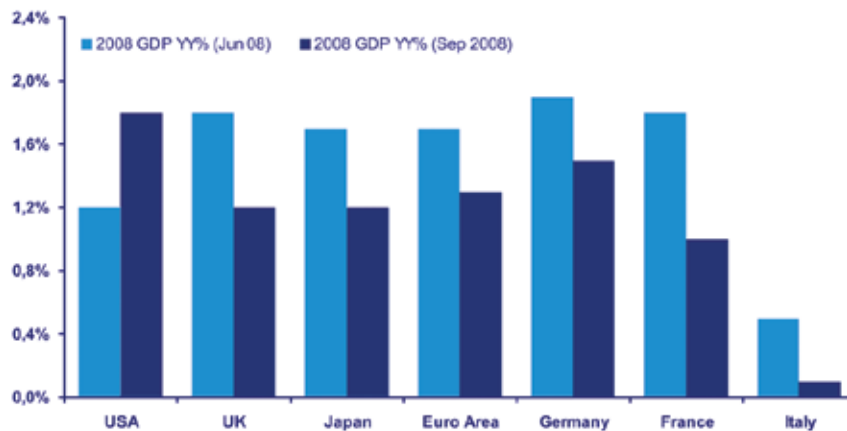
So is Europe in the grip of recession? That depends not only on how the current slowdown evolves, but also on how it is classified. While many commentators like to equal two consecutive quarters of negative growth to a recession, this traditional yardstick might need reassessment. How a tem-

Figure 1: European Economic Sentiment has taken a turn for the worse



Source: European Commission, Eurostat

Figure 2: OECD revised outlook for economic growth, September 2008



Source: OECD, economic outlook, interim Assessment, 2 September 2008



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porary decline in real output is perceived by a country's residents crucially depends on how it affects employment and spending power.

The following two charts present a comparison of two recession indicators (industrial production and employment) in the United States and Germany. The large drop in German industrial production over the summer certainly does not look promising, especially considering the relatively much more muted development of the equivalent industrial production index in the United States (see figure 3).

At the same time, however, labor market conditions look comparatively much healthier in Germany, where the number of employed has continued to trend upward, while payrolls

have been declining in the United States since the beginning of the year (see figure 4).

This has partly to do with the flexibility of labor markets. In the United States, slower growth is transmitted quickly into layoffs with a more immediate effect on consumers. In Europe it is generally more difficult to fire workers, so the lag with which unemployment rises following a downturn is longer. German firms were also slower in hiring workers during the expansion years from 2004 to 2007, which means there is a smaller overhang in the labor market.

Potential growth and per capita GDP

Another part of the explanation lies in the growth potential of nations. America has faster trend growth than Europe — not

Figure 3: Industrial production in the USA and Germany



Source: Destatis, FRB



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Figure 4: Employment in the USA and Germany



Source: Destatis, FRB

least because its population (and workforce) is growing more rapidly. A bigger output gap means a faster rise in unemployment.

A measure which illustrates this fact is GDP per capita. GDP in the United States is estimated to have risen around 1.0 percent over the past year (Q3 2007 to Q3 2008), while growth in the Euro area was only about 0.8 percent. Per capita GDP, however, has grown faster in Europe, at more than 0.4 percent compared to slightly under 0.3 percent in the United States.

Stability in labor markets is currently providing some support for European economies even as external demand slows. However, as unemployment rises with a lag, it will hold back the pace of recovery. Accord-

ing to current forecasts, Europe could face a couple of years of subtrend growth before momentum picks up again.

Monetary policy

The still relatively restrictive stance of monetary policy does not help the outlook. Certainly, the European Central Bank (ECB) is in a dilemma. On one hand, Europe is facing a real danger of a wage-price spiral, which would be a sure way to strangle any nascent recovery. Labor cost increases have accelerated over the past year, which can be partly attributed to tighter labor markets and continued high-capacity utilizations in parts of the euro area.

Importantly, however, nominal-wage

indexation schemes — which are linking wages to past price developments — as well as increasing union demands are setting in motion second-round effects detrimental to employment and competitiveness. Commentators joke that there is nothing more pro-cyclical than the German labor market, where the large metal-workers union IG Metall is currently demanding an 8 percent wage increase even as output has started to decline. The ECB's 25-basis-points rate hike in July was clearly an attempt to lean against these pressures and anchor inflation expectations.

The medium-term outlook

For companies in the Eurozone, leaner times lie ahead. As the global downturn intensifies, Europe will not be able to avoid the consequences. A number of our European countries — particularly those impacted by their own housing market collapse — might already be in recession and others could be close. The outlook for growth over the next year is muted, with both consumer spending and investment spending taking a breather.

However, there are also some reasons to remain optimistic about the medium-term outlook. Having less exposure to the U.S. market, this side of the Atlantic will have a more muted reaction to the financial crisis. Consolidation of the European banking system — which has been in the cards for some time — could prove to be a long-term benefit. Even companies in other sectors might find that changes in the competitive environment are opening up opportunities that did not exist before.

Structural reforms of past years have left core European economies like Germany in good shape, with little debt and strong labor markets. In addition, Eurozone exports are likely to be supported by demand from Eastern European neighbors, which are still growing at a relatively healthy clip. Developing nations in general will be in continued need of high-technology exports from the West as their economies mature — even if growth is slowing somewhat. For anyone who trusts long-term predictions, professional forecasters in an ECB survey see Eurozone growth reaching 2.1 percent again by 2013, with the unemployment rate falling to 6.9 percent. ▲



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The United Kingdom: Bye-bye NICE

Ian Stewart

For the United Kingdom, the 10 years after the Labor Party took office in 1997 was a decade of strong growth and low inflation. Profits boomed, reaching an all time high at the end of 2007, and unemployment fell to levels last seen in the early 1970s. The past 18 months have witnessed a dramatic set of challenges. As the Governor of the Bank of England, Mervyn King, ruefully observed earlier this year: the decade of Non-Inflationary Constant Expansion (NICE) is well and truly over.

percent over the year to August, even faster than the 10 percent decline seen in the United States. Housing activity has fallen even more precipitately. In August, mortgage approvals, the most important leading indicator of housing activity, stood at just two percent of its level a year ago — an unprecedented decline.

This major slowdown has been driven by weaker income growth and a sharp reduction in mortgage supply. Real incomes have been falling for the last year and at the fastest rate since the late 1970s. Unemployment, at 5.5 percent of the workforce, is relatively low, but it is trending up. Moreover, the average consumer's balance sheet is stretched, meaning there is little scope for

UK



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The United Kingdom shares many of the structural problems — and vulnerabilities — of the U.S. economy. Debt accumulation and real estate prices have run ahead fuelled by low interest rates and financial innovation. The savings is low and consumption is heavily dependent on capital gains and credit. The financial and real estate sectors have made a disproportionate contribution to growth. The imbalance of consumption over production is reflected in the United Kingdom's substantial trade deficit, which as a share of GDP is not significantly different from that of the United States. Against this background of structural imbalances, the United Kingdom, like the United States, has been hit by three major shocks: falling asset prices, stress in the financial system, and sharply higher inflation.

The UK housing market has followed the U.S. slowdown with a lag of about six months. House prices have fallen by 12.7

consumers to support consumption by running down savings. Indeed, the UK savings ratio is lower than the U.S. savings ratio.

UK consumers are highly dependent on external sources of credit. Yet as banks focus on rebuilding their balance sheets and reducing risk, the supply of credit has contracted. Many borrowers, especially the young, the less well off, and the highly geared face much higher credit costs and a reduced availability of credit.

The rapid pace of restructuring in the UK banking sector testifies to the degree of stress in the financial system. As of early October 2008, two major mortgage lenders, Northern Rock and Bradford, have been nationalized; meanwhile the Spanish bank Santander acquired Alliance and Leicester, and Lloyds TSB was due to takeover HBOS. The share price of UK banks has been as badly affected by the credit crunch as their U.S. counterparts through the crisis. UK in-



stitutions have significant exposure to leveraged assets and have become increasingly dependent on wholesale markets and on securitization. As these markets have frozen over, the supply of credit to the economy has reduced. Like in the United States and the Eurozone, the provision of liquidity to the UK banking system by the authorities has failed to reduce the severity of the problems in the sector.

In an environment of reduced credit availability, falling house prices, and slower growth, consumers will have to rely on their own incomes to fund spending. And to strengthen their financial situation, UK consumers will have to spend less than they earn, probably for some time. The general expectation for 2009 is that consumption, which accounts for about 70 percent of the economy, will scarcely grow at all.

In general, a classic process of deleveraging is underway for financials, corporates and households. Tight credit conditions and illiquidity are likely to lead to further sales of real estate, corporate- and debt-related assets by distressed borrowers. This, in turn, will tend to put downward pressure on asset prices.

GDP growth may get some support from exports as the sterling weakens, although this effect is likely to be tempered by a slowdown in the United Kingdom's major markets of Western Europe and North America. Government expenditure will also offer limited support to growth. Public spending has been on a rising path for several years. Tax rises have probably reached their limit, at least for now, but public borrowing seems likely to take much of the strain.

The UK economy faces a demanding combination of factors. As a result, GDP

growth over the next two years is likely to be the weakest since the recession of the early 1990s. The Bank of England's base rate, which currently stands at five percent, may well fall further in 2009 as inflation pressures moderate. However, concerns about solvency in the financial system mean that market interest rates have traded well above official rates in recent months, considerably weakening the power of monetary policy. The United Kingdom's fundamental problem is the need to reduce debt levels in the financial and household sector. This is unlikely to happen swiftly and, until it does, economic activity is likely to remain sluggish. Any material recovery in UK GDP growth is unlikely to materialise before 2010. ▲



Russia: Economic Outlook

Ira Kalish

Prior to Russia's military action in Georgia, investor sentiment was highly positive toward this fast growing economy. Then, following the invasion, investors became concerned about political risk. The result was a serious drop in asset prices, capital flight, and credit market contraction. Where this will lead is difficult to say at this writing (late September 2008). Yet even aside from the fallout due to the Georgia issue, Russia's economy faces a number of risks that could dampen growth in the very near future. On the other hand, there are many salutary aspects of Russia's current

market economy has developed with strong and relatively transparent credit markets. Entrepreneurs have succeeded in creating new businesses. In addition, businesses have been able to take advantage of a relatively skilled labor force.

Finally, the high price of oil and gas has played a significant role in the growth of the Russian economy and its ability to rectify its international accounts. The vast inflow of funds has enabled the government to accumulate the world's third highest cache of foreign currency reserves. This means that Russia is not as vulnerable to financial crisis as it was 10 years ago.

RUSSIA



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economic situation. Here's a review of both its strengths and weaknesses.

On the positive side

First, consider what has gone right about Russia. Much commentary on Russia focuses on the high price of oil, and indeed this is warranted. Yet even before the massive increase in the price of oil that took place in the past few years, Russia was well positioned. Following the near economic collapse of 1998, Russia undertook substantial reforms. Most importantly it put its fiscal and monetary house in order. The result was that, by 2007, the government posted a surplus equal to 5.4 percent of GDP and inflation was in single digits. In addition, external debts were paid down and by 2007 the current account surplus was 6.1 percent of GDP.

Although the government has intervened in resource-related industries, it has left other economic sectors alone. A true

Reasons to be concerned

Since the price of oil rose dramatically, the pace of economic reform in Russia has slowed. Evidently the oil windfall removes the urgency that once characterized policy-making just a few years ago. Instead, this windfall has given Russia a level of confidence in its economic strength that may not be fully warranted. In addition, Russia has not taken advantage of high prices to boost production. Instead, the government has taken control of much of the resource sector and used the cash windfall to boost currency reserves. The result has been underinvestment in new productive capacity and an actual decline in oil output. Going forward, Russia is at risk if the price of oil continues to decline.

On the other hand, Russia is at risk even if the price of oil remains high. The massive increase in foreign currency reserves reflects a big increase in the money supply. This is a result of government efforts (until recently)

to hold down the value of the ruble. The end result has been a rise in inflation. The global rise in commodity prices has only exacerbated this problem. Moreover, the longer that inflation is allowed to fester, the more difficult the task of reducing inflation in the future. Now that there is downward pressure on the ruble owing to Russia's perceived political risk, inflation might even worsen.

Another potential problem is that, despite the massive influx of oil-related cash, the government has not substantially boosted spending on infrastructure. This creates difficulties for modern businesses and retards non-oil related economic growth.

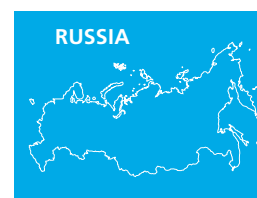
Finally, there is the issue of political risk. Whatever the merits of Russia's incursion in Georgia (it has been roundly condemned in the West but remains highly popular in Russia), the reality is that this action has increased the perception of risk for foreign investors. Consequently, capital has left Russia, equity prices have fallen, and Russian companies that borrowed money using their equity as capital are now facing liquidity problems. Credit conditions in Russia have thus seriously worsened.

As of this writing, it is difficult to say whether the current situation represents a temporary blip or a serious turning point for Russia. What can be said is that Russia faces a constraint. It cannot act in ways that frighten the global investment community and still have stable financial markets. On the other hand, given its massive currency holdings and given the Russian government's determination to maintain control of the resource sector, the concerns of global investors might not be of high importance to the government.

Outlook

Despite the uncertainties, a general view of Russia's outlook is emerging. With declining oil prices, rising inflation, and weak investment, it is reasonably safe to say that Russia's economy will slow down in the near future. In addition, monetary policy-makers are caught between a rock and a hard place. On the one hand, rising inflation suggests a need to tighten monetary policy, especially as there is now downward pressure on the ruble. On the other hand, the recent shift in credit conditions suggests the need to loosen monetary policy in order to maintain liquidity in the economy.

In Russia's favor is the fact that the governing regime remains highly popular. Popularity is an asset that can sometimes be utilized by governments to do unpopular things. Popularity gives the government leeway to enact difficult reforms that could pay dividends in the future. Whether this will eventually happen is hard to say at the moment. ▲



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China: Interesting Times Ahead

Dr. Sunil Rongala

The past few months in China have been most interesting indeed. First the bad news: there was a slowdown in GDP, producer prices rose, and so too did the purchasing index of raw materials. Then the good news: China hosted a successful Olympics winning the largest haul of gold medals ever, Chinese astronauts completed the nation's first spacewalk, and inflation moderated considerably from its record levels. This fall in inflation in August (the month's CPI number was 4.9 percent

“to solve prominent problems in current economic operation, carry out the principle of differentiated treatment and structural optimization, and maintain stable, sustained and relatively fast growth of the national economy.”

An added agenda of the central bank reducing interest rates, acting on the CPC Central Committee's edict, was to put a brake on the appreciation pressure on the yuan. The currency had appreciated some 6 percent against the U.S. dollar this year but upward trend on appreciation seems to have become more flat post the release of the second-quarter GDP number.

China's equity markets have been ravaged. This is not entirely surprising given the



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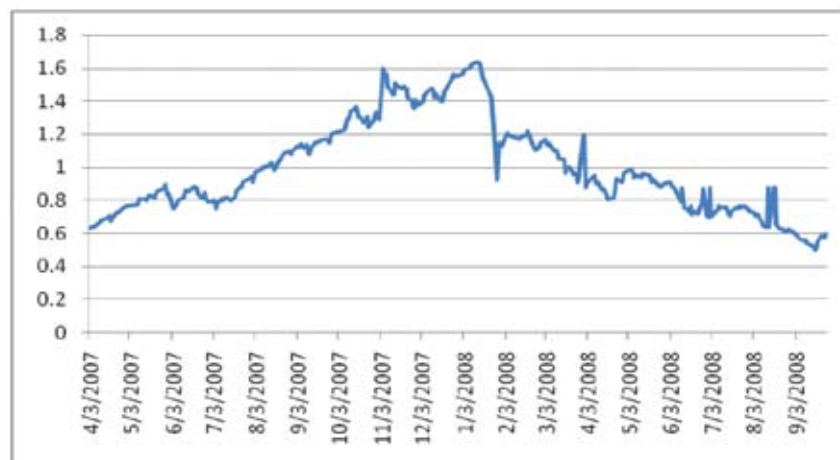
compared to 6.3 percent in July and 7.1 percent in June) prompted the central bank, the People's Bank of China, to make its first rate cut in almost six years. It reduced its benchmark interest rate (one-year lending rate) on 16 September by 27 basis points to 7.2 percent. The central bank also almost simultaneously, on 25 September, cut the reserve ratio requirements of banks by 100 basis points to 16.5 percent.

Both these measures were in response to the CPC (Communist Party of China) Central Committee's mandate that China's focus would be on “ensuring steady and fast economic growth” after the slowdown in GDP growth — second-quarter GDP growth was 10.1 percent as against 10.6 percent in the previous quarter; it was 11 plus in 2007. Further urgency was felt when August's industrial production growth rate dropped to 12.8 percent from 14.7 percent in July and 16 percent in June. According to the central bank's website, these measures were aimed

global turmoil, but the Chinese markets fell more than most because they were widely thought to be in a bubble. Here's an indication of how much wealth has been lost: market capitalization as a share of GDP was 0.594% on 29 September as compared to 1.558% on 2 January. The government did initially puncture the bubble but, of late, it has been instituting some measures to boost the stock market.

In the near-term, it is obvious that the entire state machinery is going to be geared towards “ensuring steady and fast economic growth.” The Chinese government has been worried about the slowdown in GDP and the social consequences that could potentially arise. The slowdown in July's and August's industrial production growth numbers has only added fuel to the fire and portends a further slowdown in the third-quarter GDP. Analysts are predicting that the GDP growth rate in FY08 could be around 10 percent and even lower the next year.

Figure 1: Market capitalization of the Shanghai stock exchange as a percentage of GDP



Source: Bloomberg

To combat this, there's likely to be a three-pronged strategy: fiscal, monetary, and currency. The Chinese government is already planning to introduce fiscal measures to give a boost to the economy. Though the plan has not yet been officially announced, it is widely expected to be a big package given that China has no dearth of cash (it had \$1.8 trillion in foreign exchange reserves as of end June 2008). Along with other central banks, on October 7th, the Chinese central bank cut its benchmark interest rate by 27 basis points to 6.93 points and cut reserve requirements of banks by 50 basis points. Given that inflation has eased at least for the moment and because of global and local growth concerns, the central bank will likely cut rates and/or reduce reserve requirements further.

On the currency front, it is virtually certain that the central bank will curb the appreciation of the yuan, as a weak yuan is widely considered to be the linchpin of Chinese economic growth. The rising yuan of recent times has hurt a number of small exporters. Many manufacturing facilities have either closed or moved to countries like Vietnam, which have comparatively lower cost structures. Since most of these manufacturers work on razor-thin margins, a weaker yuan will certainly improve margins. Currency forwards have already factored in this slowed-down appreciation; it is likely that the yuan will remain close to

current levels in the near-term but that's if the central bank doesn't intervene heavily in the markets.

Inflation will probably remain at relatively low levels for the remainder of the year. That said, it is not completely clear whether the sudden drop in inflation in August is the result of the government imposing price controls on a variety of goods, or whether the supply went up. It is likely a bit of both. Either way, the government may find it prudent to remove most, if not all, of the controls; price controls almost always cause a fall in supply of a good especially if it is produced by the private sector. However, there are other areas from where there are inflationary threats. Producer-price inflation and the purchasing index of raw materials are on the rise and manufacturers could pass on increased costs to the consumer.

Summing up, the near-term outlook for China is very hazy, but it seems likely that rough times are ahead. ▲



Japan: Economic Outlook

Dr. Ira Kalish

When Japan's GDP declined in the second quarter of 2008, it became apparent that, at the least, Japan is experiencing a mild economic downturn. The question now is whether Japan will bounce back quickly or will it experience a deep and prolonged recession. A sensible argument can be made for both sides of this question, as there are positive and negative elements underlying the country's economic scenario. Let's consider them.

Japan's problems

First, consider the bad news. Japan's

Many observers point to Japan's strong exports to other Asian economies as evidence of economic strength. They say that although the U.S. demand is weak, roughly 60 percent of Japan's exports go to Asian countries where economic growth remains strong. Yet this ignores the fact that a large share of exports to Asia is intermediate goods that are re-processed for export to the United States. Ultimately this will mean weak demand in Asia for Japanese inputs. Consequently, Japan's important export sector cannot be considered good insurance against recession.

Areas of strength

While there is no doubt that the current

JAPAN



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consumers are not making a positive contribution to economic growth. Wages have been relatively stagnant for several years. Now, with food and fuel prices rising, the ability to make discretionary purchases has declined. Thus, inflation-adjusted consumer spending is anemic. And although indices of consumer confidence are not necessarily good leading indicators of economic activity, the fact that Japan's index of consumer confidence hit a record low this summer cannot be ignored.

Not only are consumers in bad shape, businesses are challenged as well. While commodity price increases have contributed to wholesale price gains, companies are reluctant to increase retail prices in the current environment. The result is that profit margins are being squeezed. This, in turn, has a negative impact on the willingness to invest.

state of the Japanese economy is struggling, there is reason to believe that the recovery will be strong when it comes. That is because Japan's consumers, businesses, and banks all worked hard to clean up their balance sheets following the economic downturn of the 1990s. Recall that Japan suffered the bursting of a financial bubble at the start of the 1990s that had unfortunate long-term consequences. At that time, debt levels were high, asset prices were deflated, and credit conditions were poor. Sound familiar?

Today, unlike in the United States and the United Kingdom, Japanese consumer debt as a share of income is substantially down from the early part of this decade. That means that consumers are in a good position to accelerate spending once real wages start to improve. In addition, corporate debt in Japan has dropped dramatically

thereby setting the stage for an investment recovery as well. Finally, Japan's once sickly banks have cleaned up their portfolios of bad assets and are now in a much better position to extend credit.

Another positive aspect of the situation is that Japan's banks were not seriously exposed to the U.S. sub-prime mortgage situation. Losses of Japanese banks from this crisis have totaled about \$17 billion, far less than the losses of several individual financial institutions in the United States and Europe. Indeed, several Japanese banks are now injecting equity into troubled U.S. financial institutions. They expect that, when recovery comes, they will reap substantial rewards from these stakes.

What happens next

Going forward, much will depend on Japan's economic policy. Despite political turmoil, policymakers have not been comatose. In the summer, a fiscal stimulus package was enacted that, at the least, will have a modest positive impact on economic activity. More important, of course, is monetary policy. Here, the jury is out. On the one hand, inflation has risen to a (by Japanese standards) shocking one percent. This suggests either the need to tighten monetary policy or leave it unchanged. Yet all of the increase in prices is due to food and fuel. Core inflation remains nil and the yen has risen in value, which tends to be deflationary. At the same time, overall demand is quite weak. This suggests an easing of monetary policy would be warranted. A best guess is that monetary policy will remain unchanged.

As for the economy, our best guess is that the downturn will be mild and short lived and the recovery will be relatively robust. Compared to the United States, overall growth will be slow, but on a per capita basis it will be reasonably strong. ▲



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India: “No Fright! We’re Full of Fight”

Dr. Sunil Rongala

This — “No Fright! We’re Full of Fight” — was the lead headline in a major Indian business newspaper in September, summing up the discussions of a CEO roundtable held in Mumbai to discuss problems in the global economy and challenges India faces. A fairly bold, uplifting statement and not necessarily a bad thing when times are tough. And times are fairly tough now in India. GDP growth for the first-quarter of FY09 (India’s fiscal year is April to March) came in at 7.9 percent, a significant dip

strengthening of the dollar but it is also because foreign equity investors are deserting India in droves. And then, of course, there is the problem of inflation. Inflation has now been over 10 percent since the beginning of June 2008 and has averaged at over 12 percent from the last week of June to the middle of September (the inflation number is released on a weekly basis with a two week lag). The Reserve Bank of India (RBI) increased its benchmark interest rate, the repo rate, at the end of July by 50 basis points to 9 percent, its third hike in the year. The RBI has also simultaneously been increasing the cash reserve ratio (CRR) — the ratio of reserves banks have to keep; the CRR is currently at 9 percent. As if all this weren’t

INDIA



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from the previous quarter when the GDP growth number was 8.8 percent. In fact the last time GDP growth came in below 8 percent was in the third-quarter of FY05 (October to December). Industrial production has also slowed down sharply. Average industrial production in the first quarter of FY09 was 5.23 percent compared to 7 percent in the previous quarter (4QFY08) and 10.26 percent in the first quarter of FY08. The country’s asset markets — equity and real estate — have also taken a beating.

The trade deficit has gone from bad to worse, obviously the result of record crude oil prices. The increased trade deficit, as well as foreign equity withdrawals has resulted in the Indian rupee depreciating to five-year lows, losing the most value in the Asian region. Between 1 August 2008 and 26 September 2008, the rupee lost close to an astounding 10 percent to the U.S. dollar. This loss can partly be attributed to the

bad enough, the government had acquired a fiscal problem. Subsidies on fertilizers and fuel, a massive debt write-off, and a pay-hike for all federal government employees have all contributed to the problem.

Going forward, GDP growth for FY09 is likely to slow down. Last year, GDP growth for FY09 was forecast to be well over 8 percent; it has now been downgraded to around 7.4 percent. A number of forecasts from investment banks, the government, and the Asian Development Bank seem to be coalescing around this number. What could now possibly lower the GDP number even further is the government’s advance estimates that the summer crop is down 4.7 percent. These are, however, still advance estimates (they came in late September), but if the revised number turns out to tally it is very likely that the current GDP growth forecast number will be further downgraded. The obvious side-effect of the fall in

Figure 1: Indian rupee to the U.S. dollar



Source: Bloomberg

the summer crop production numbers will be on inflation, which is currently forecast to reduce to around 9 percent. If the crop number falls, it could drive inflation up.

The fall in crude prices is unlikely to ease domestic inflation because fuel prices are fixed in India. The government has said it will not reduce fuel prices as it wants to let government-owned oil companies recoup some of their losses, thereby lessening the fiscal burden. As a response to this inflation, the market was widely expecting the RBI to increase its benchmark interest rate as well as the CRR by around 25 to 50 basis points this calendar year. To reinforce this, the new governor of the RBI has been talking tough about tackling inflation. However, recent global events could mean that this may not happen. In a surprise move, the RBI cut the CRR by 50 basis points to 8.5 percent on 6 October (effective 11 October) in order to increase liquidity in the market. This should not be interpreted as a forerunner to reduced interest rates. It is very likely that the RBI may keep rates constant as it expects inflation to cool off by the end of the year, but given the current global scenario it wouldn't be entirely surprising if the RBI cuts its benchmark rate by 25 basis points this year. The problem is that the repo rate, in real terms, is well into negative territory and the RBI should try and ensure that it comes back into positive territory because

of the negative repercussions.

The rupee will likely remain weak in the near future on the back of high trade deficits and poor foreign equity inflows. There have been rumors though that the RBI will not let the rupee fall below 47 to the dollar (it fell below 48 in early October) because it doesn't want the trade balance to worsen. The silver lining is it could provide a boost to exports. Current forecasts point to the rupee averaging 45 to the dollar by the end of the year. The RBI has also loosened regulations on External Commercial Borrowings (ECB) for infrastructure projects in the hope that these inflows will provide support to the rupee. Ironically, less than a year ago, the RBI tightened the screws on ECB because it was causing the rupee to appreciate too much.

That said, this is a near-term outlook. The long-term outlook will completely depend on the government's ability to invest in infrastructure. Thus far, actual investment remains well below estimates. ▲



Brazil: Economic Outlook

Dr. Ira Kalish

Brazil has lately experienced relatively strong economic growth combined with single-digit inflation – a rare combination considering Brazil’s difficult history. The country benefited from sensible monetary and fiscal policies, a competitively-valued currency, rising prices for commodity exports, and strong interest in Brazil, Russia, India, and China (BRIC) countries by global investors. The last factor resulted in record direct foreign investment in the last few years. On the other hand, strong growth of commodity exports pushed up the value of the Brazilian currency, the real, and thereby

fortunate combination of slowing growth and rising inflation. Brazil’s central bank recently responded by tightening monetary policy, opting to fight inflation early even at the cost of slower economic growth. This was a wise move given the country’s inflationary history. If inflationary psychology can be averted now, then Brazil can eventually resume normal growth without too much turmoil.

Remaining challenges

Still, Brazil faces a number of other challenges that threaten to limit the country’s capacity for growth. First, dependence on commodity exports means volatile export earnings and a volatile exchange rate. The



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hurt the competitiveness of manufactured exports.

The cost of growth

Brazil’s rapid growth comes with a price. Lately, wages have been rising and strong economic activity has resulted in supply bottlenecks. Both have contributed to an increase in inflation. At the same time, global commodity prices have started to decline in recent months resulting in reduced export earnings. In addition, this decline in commodity prices has pushed the currency down. While this might be beneficial to exporters of manufactured goods, a weak currency also has the negative effect of increasing import prices and adding to inflation.

Thus Brazil’s policymakers, like many the world over, are now faced with an un-

latter limits the ability to develop a stable exported manufacturing industry.

Second, the public sector remains far too large for a country at Brazil’s level of economic development. It diverts resources from the private sector. Moreover, the fear that the country’s budget deficit might be monetized creates inflation, keeping interest rates abnormally high. This means a high cost of capital and it limits the amount of business investment that takes place. That, in turn, slows economic growth.

Third, despite moves in the right direction, government intervention in markets remains high. There is substantial regulation, especially of labor markets, and there remains a high degree of protection from imports for domestic industries. The latter reduces the incentive for domestic producers to improve efficiency and cut costs.



Finally, the Brazilian government has decided to nationalize the vast newly-found deposits of oil off the Atlantic coast. This will probably result in inadequate investment. In addition, huge increases in oil export revenue in the future could create problems. Many other countries have suffered from the curse of oil. That is, increased oil earnings put upward pressure on the currency thereby damaging the competitiveness of all other exports. This can leave a country dangerously vulnerable to the vicissitudes of the global oil market. This would not be an optimal situation for Brazil given the potential of its manufacturers.

A notable plus

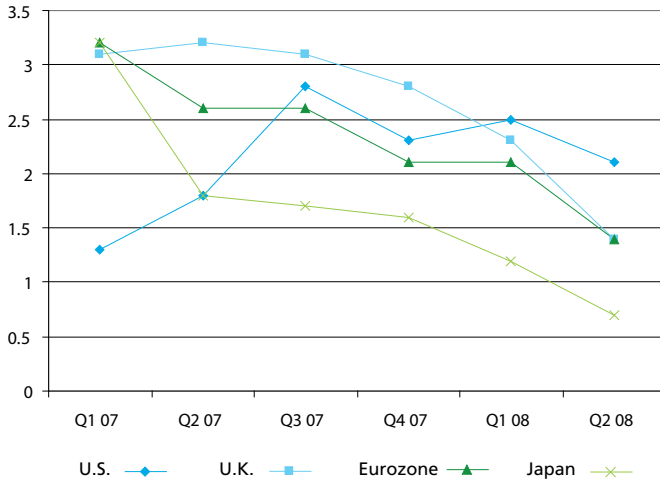
Despite its challenges, Brazil has accomplished something unique in its history and in comparison to other major emerging markets: its income distribution has improved in the past decade. Thus, as the economy has grown, the poor in Brazil have reaped disproportionate benefits. This accounts, in part, for the popularity of the current government. Moreover, it enhances public support for a market-driven economy and could help in passing reform-oriented legislation.

Outlook

For the near term, it appears that Brazil's economic growth will slow. A combination of declining overseas demand, declining commodity prices, and tightening monetary policy will see to that. Once the global economy eventually recovers, Brazil will probably resume moderate growth. Yet faster growth in the future will only come with a series of economic reforms that, at this point, seem unlikely. ↘

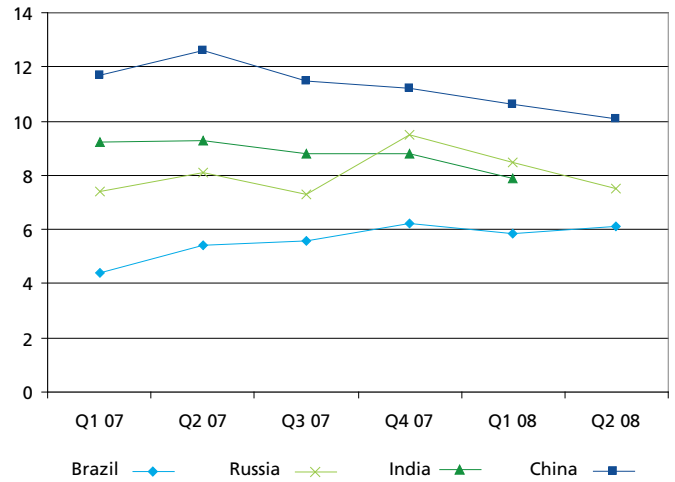


Big Four GDP Growth Rates (YoY %)



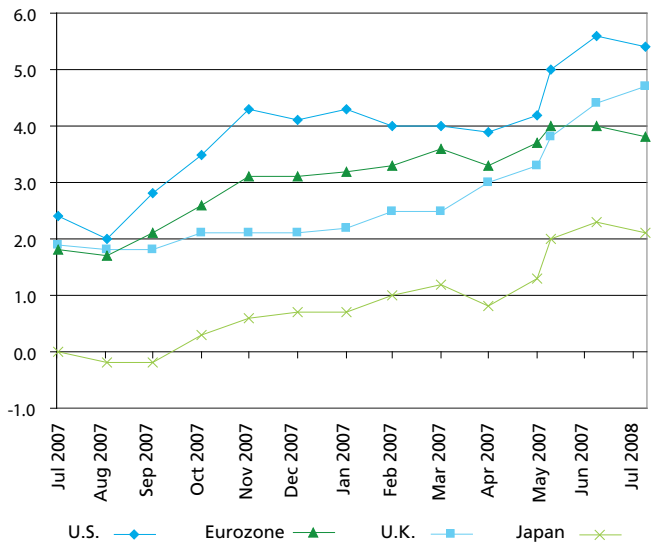
Source: Bloomberg

BRIC GDP Growth Rates (YoY %)



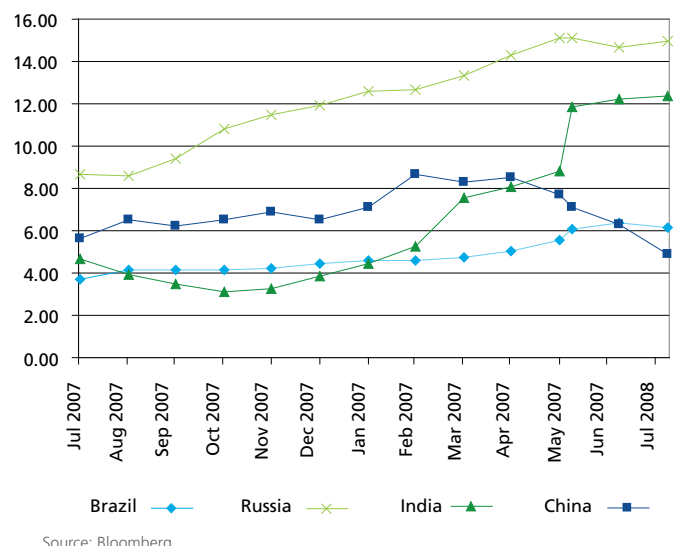
Source: Bloomberg

Big Four Inflation Rates (YoY %)



Source: Bloomberg

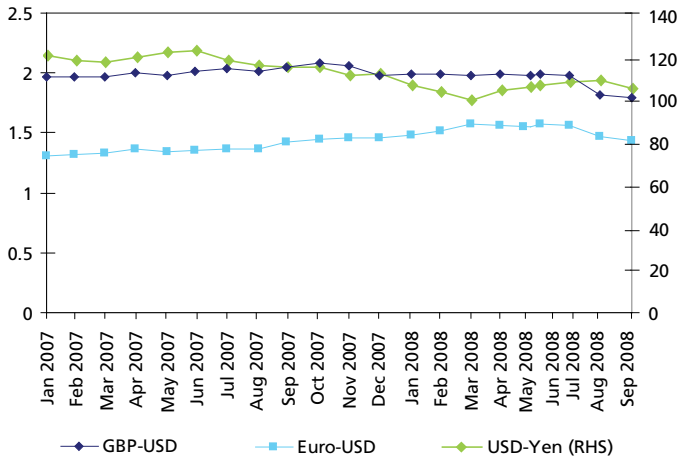
BRIC Inflation Rates (YoY %)



Source: Bloomberg

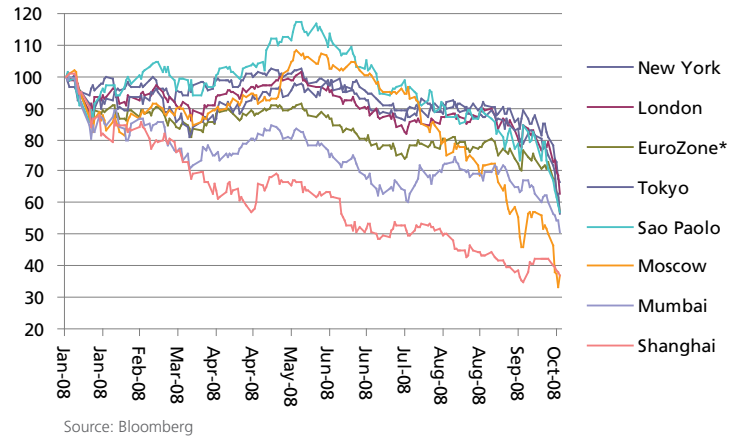
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Major Currencies vs. U.S. Dollar



Source: Bloomberg

Indexed Benchmark Stock Indices



Source: Bloomberg

Big Four Yield Curves

	U.S. Treasury Bonds & Notes	U.K. Gifts	Eurozone Sovereign Benchmark	Japan Sovereign
3 months	0.94	3.77	3.83	0.58
1 Year	1.76	3.91	3.78	0.62
5 Years	2.95	4.25	3.86	1.10
10 Years	3.79	4.52	4.20	1.48

Source: Bloomberg: As of September 29, 2008

BRIC Yield Curves

	Brazil Govt Benchmark	China Sovereign	India Govt Actives	Russia Sovereign
3 months	14.30	3.14	8.43	6.52
1 Year	14.58	3.29	8.68	6.70
5 Years	14.51	3.54	8.63	7.57
10 Years	14.39 (8 years)	3.75	8.72	7.62

Source: Bloomberg: As of September 29, 2008

Composite GDP Forecasts

	U.S.	U.K.	Eurozone	Japan	Brazil	China	India	Russia
2008	1.7	1.2	1.35	1	4.8	10	7.5	7.5
2009	1.5	0.7	1	1.1	3.5	9.35	7.4	6.95

Source: Bloomberg: As of September 30, 2008; Citigroup

Composite Currency Forecasts

	Q4 08	Q1 09	Q2 09	Q3 09	2009	2010	2011	2012
GBP-USD	1.79	1.76	1.74	1.69	1.73	1.8	1.8	1.8
Euro-USD	1.43	1.4	1.38	1.34	1.35	1.35	1.34	1.33
USD-Yen	108	109	110	110	111	114	111	109
USD-Brazilian Real	1.69	1.69	1.75	1.75	1.8	1.95	2.01	NA
USD-Chinese Yuan	6.7	6.65	6.56	6.5	6.37	6.37	5.86	5.74
USD-Indian Rupee	44.75	44.48	44.25	43.75	43.13	43.75	38.75	38
USD-Russian Ruble	24.4	24.4	24.43	24.08	24.95	NA	NA	NA

Source: Bloomberg: As of September 30, 2008

OECD Composite Leading Indicators

	United States	United Kingdom	Euro area	Japan	Brazil	China	India	Russian Federation
Jul-07	102.90	101.79	99.99	98.77	105.24	104.04	103.38	99.46
Aug-07	102.21	101.30	99.41	97.03	105.36	104.52	102.55	99.52
Sep-07	101.57	101.07	99.03	96.09	106.42	104.69	103.05	99.77
Oct-07	101.24	100.97	98.97	96.39	107.05	104.20	103.78	100.39
Nov-07	100.47	100.55	98.79	96.90	107.04	103.28	104.43	101.01
Dec-07	99.87	100.24	98.47	96.93	106.49	102.37	104.04	101.65
Jan-08	99.33	99.82	98.12	96.77	105.80	102.26	103.49	101.06
Feb-08	99.02	99.71	97.66	96.48	104.98	102.38	102.44	101.11
Mar-08	98.38	98.96	97.09	95.91	103.60	102.72	101.95	100.60
Apr-08	98.25	98.55	96.58	95.76	103.71	103.73	101.34	101.71
May-08	98.21	98.04	95.91	96.02	104.15	104.69	100.25	102.51
Jun-08	98.10	97.19	95.13	95.84	106.23	103.93	98.74	104.30
Jul-08	97.85	96.28	93.97	95.37	107.58	102.67		

Note: A rising CLI reading points to an economic expansion if the index is above 100 and a recovery if it is below 100. A CLI which is declining points to an economic downturn if it is above 100 and a slowdown if it is below 100.

Source: OECD

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