CREDIT SUISSE

Research Institute
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Thought leadership from Credit Suisse Research and the world's foremost experts

The world post the credit crisis

Contents

Financial shockwaves are still reverberating, but with the recovery in the global economy and financial markets increasingly apparent, we feel it is important to redraw the map of what the world post the credit crisis might look like and the strategic challenges facing investors.

Though some of the imbalances underlying the credit crisis are ebbing, others persist and new ones are being created by policymakers' attempts to stimulate economies and markets. In particular, the crisis has reversed much of the last decade's growth in US consumer spending (page 8), leaving the expected rise of the emerging market consumer, and specifically the Chinese (page 14), as a necessary condition for a stronger world economy.

In turn, changes in consumption and trade patterns will have profound implications for the dollar, globalization and the willingness of countries and regions to explore new alliances and policy models (page 16).

At this stage, while we are most aware of the financial and economic effects of the crisis, the full social and political effects have yet to manifest themselves. Reform, perhaps drastic reform, is likely for many institutions, and at the broader level of society some socioeconomic models or "ways of doing things" will need to be overhauled (page 26). The encroachment of the State into new areas means that governments will have to become more involved in global investment flows.

Further, the emergence of both winners and losers at the country level are likely to produce tensions that could fuel protectionism (page 20) and possibly even challenge the globalization process. From a long-term investor's point of view, the credit crisis will fundamentally alter the shape of not just the finance industry, but also the broad industrial landscape. Some companies will probably emerge weakened, but a small number of important companies will arguably become structurally stronger by taking advantage of opportunities around them to consolidate their market positions (page 35).

Together with Credit Suisse's research analysts, this "World post the credit crisis" report has drawn greatly on the depth and quality of experience of our Senior Advisors in the Credit Suisse Research Institute. Two of these (Sir John Major and Dr. Ernesto Zedillo) have first-hand experience of government during economic crises and have a polished understanding of the interaction between the State and markets, while Dr. Pachauri and Dr. Rohrer bring a depth of knowledge to our analysis of the implications of the credit crisis for the environmental debate and for innovations in technology. We also have an interview with Bob Parker, Vice Chairman of Asset Management at Credit Suisse, about key changes to the asset management industry.

This "big picture" research piece can cover only some of the many implications of the credit crisis, but we feel it does lay the basis for a deeper understanding of the changes we are already experiencing. We look forward to updating and broadening this fascinating theme in future reports.

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Ripple effects of the credit crisis

THE WORLD

Crisis

Finance

New world, old rules?

The credit crisis has broken many assumptions of how the world operates – we analyze what might replace these old certainties.

Lars Kalbreier, Head of Global Equity and Alternatives Research at Credit Suisse Private Banking
Richard Kersley, Head of Equity Research Europe Product at Credit Suisse Investment Banking
Michael O'Sullivan, Head of UK Research, Global Asset Allocation at Credit Suisse Private Banking

As financial markets rally and the global economy moves into a recovery phase, it is becoming commonplace for commentators to herald the end of the credit crisis and to signal the ways in which it has irreversibly changed the economic and financial landscape.

In our view, the world economy has entered a new, less brutal and arguably more interesting chapter, which has also caused and crystallized tectonic level changes that we are only beginning to appreciate.

Less than ten years ago, some writers were talking of the "end of history" in that the western (largely Anglo-Saxon) way of ordering economies, markets, societies and politics seemed to have triumphed over all other approaches. This certainty has now been smashed and the assumptions of at least the past ten years have been turned on their head. The question is what will replace them?

Emerging economies, which had their own crises in the 1990s are now seen as economically prudent and intelligent, and the developed world is now largely dependent on them for economic leadership. In the developed world, a great clash between the State and markets is taking place, and in many cases staid civil servants have replaced the "auctioneer" of the free market.

As these changes take place, the flow of capital around the globe will create and be driven by a new financial architecture comprising a more multi-polar foreign exchange universe, better-adjusted hedge funds, new financial institutions and state-led investment funds.

Non-financial companies have felt plenty of the pain from the crisis but, in contrast to their financial counterparts, have sought to re-invent themselves rather than wait for policy makers to do it for them. A cyclical recovery will now help, but the access to scarce capital and a control of costs, which have been the key facets of comparative advantage through the crisis will remain. Those that have proved to be the "survivors of the fittest" will have the opportunity to re-shape and consolidate their market position.

In the context of the wealth destruction wrought by the credit crisis, something on a scale not seen since the 1930s or the later part of the 19th century, the rules of the finance game (from monetary policy frameworks to market regulation to government finances) really ought to change, but this debate is still in its early stages. At the same time, it is perhaps concerning that there are signs of new bubbles building in Asian markets and that some consumers and investors have not yet appreciated the lessons of this and many other asset bubbles. Hopefully any such bubbles will deflate before they burst.

Photo: NASA/GSFC/METI/ERSDAC/JAROS, and U.S./Japan ASTER Science Team

Toward a more balanced global economy

Consumption-led imbalances contributed to the credit crisis – these are now being unwound, though further painful adjustment is required. Emerging economies are now bigger and more stable, and should help bolster global growth.

Giles Keating, Head of Research for Private Banking and Asset Management, Credit Suisse

For much of the period since the Second World War, the dominant force in global final demand has been consumption by people in the developed nations, with US consumers being the largest single block. This trend became if anything even stronger in the boom years from 1996–2000, and again from 2003–2007, based on a credit and housing fuelled expansion in the USA. The mirror of this was in Asian countries, which held back their consumption and expanded their exports, as they aimed to build FX reserves to provide a buffer against a future repetition of the 1997–1998 IMF loans and their stringent terms. Like all booms, this felt great while it lasted, but was built on unsustainable imbalances: the US current account deficit, excessive consumer loans, lop-sided Asian growth, and so on.

The 2008–2009 crisis had a dramatic effect in reducing these imbalances rapidly. The US trade deficit shrank from around –5% percent of GDP in early 2008, to just –2.4% in early 2009. The US household savings ratio (savings minus borrowing, as a percent of disposable income) fell close to zero during the boom as a result of easy credit, but rose steeply as the crisis intensified, reaching almost 4.5% in the early months of 2009, taking it halfway back to the level of around 9% that prevailed for three decades before Mr. Greenspan's expansionary Fed policies. Asian countries, faced with export declines of between a quarter and almost one-half, have taken major measures to expand domestic demand, most notably in China, whose stimulus package is by far the largest in the world.

Imbalances being unwound

This swift progress in reducing imbalances is not a coincidence, but rather a direct effect of the crisis. When the supply of credit tightens, borrowers have no choice other than to re-arrange their affairs to manage with less credit, however painful the adjustment. On the other side of the equation, when a saver has been accumulating balances in the fat years in preparation for the lean ones, it is natural to run those funds down when the tough times finally come.

The risk is that the spending reductions by debt-laden consumers are much faster than the increases in expenditure by those with lots of savings. This could lead to a destructive downward spiral in asset prices, bank balance sheets, and consumer spending, ultimately causing depression. At the time of writing, this outcome seems to have been averted, helped by major policy stimuli worldwide. There are even some initial signs of recovery.

Can this tentative upturn turn into a durable, strong new period of global economic expansion? The most sustainable outcome would see growth leadership coming from structural rises in spending in previously high-savings developing countries like China, balanced by subdued but not collapsing spending in the indebted countries like the USA. This should allow further reductions in global imbalances and it would also help to improve the relative living standards of the world's poorer peoples.

Two decades ago, the developing countries would not have been large enough to play this global leadership role; now they are larger and have just about the required size. Within the G20 group, countries that are not dominated by oil exports now account for almost 17% of world GDP in nominal exchange-rate terms. This is only about one-quarter the size of the main developed countries, but because they can grow many times faster, their contribution to global growth may well be much larger. Similar reasoning, though on a smaller scale, applies to the major oil-exporting countries (Russia, Saudi Arabia and others). At 8% of world GDP, these are now significant at the global level. They have the ability to grow much faster than the developed countries (though not as rapidly as the non-oil exporting emerging nations). The reason is that they now use much of their revenues to build and diversify their own economies, rather than simply recycling them back to the USA or Europe as they did in the oil booms of the 1970s.

Emerging economies to lead global growth

These data suggest that, arithmetically, the world can have reasonable growth over the next five to ten years with the US consumer taking a back seat. Continued rapid expansion in emerging markets, alongside positive but subdued growth in the developed world, would deliver global growth of perhaps around 3%. This is only a modest reduction compared to the boom years of the credit bubble.

While this may now be possible arithmetically, due to the increased size of the emerging countries, it can only happen if two key conditions are fulfilled. First, developed world growth can be subdued but must not collapse, which implies that banking systems remain stable and consumers reduce debt relative to income gradually, not catastrophically. All the policy interventions of recent months have set us on the right path for this, but it is still far from assured. The second condition is that developing countries regain a rapid growth path without relying on booming consumer markets in the USA and some other rich countries.

This poses major challenges, which vary across countries. For China and many of the other Asian nations, it requires a

sharp re-orientation of growth away from exports and toward domestic demand. China has already started down this road, initially boosting infrastructure spending while also strengthening the foundations for future consumer-led growth. China is the single most important developing country, both mechanically because of its size and indirectly because of its impact on trade in the Asian region and the world, and an accompanying article by Dong Tao (see page 14) discusses this in detail.

Other major emerging countries such as India, Turkey and South Africa, all saw fast export growth during the US consumer boom years, but did not rely on this to the same extent as China. Although less vulnerable to the slump in global trade, they entered the crisis with far lower foreign exchange reserve positions, limiting the scope for expansionary policies. So they face a significant but smaller demand reorganization and to some extent should benefit from expanding trade among emerging markets. On the negative side, they have to cope with a reduced flow of inward investment and, in some cases, the internal fallout from the credit squeeze. Overall, there is a reasonable chance that both China and the other major non-oil exporting emerging economies can return to a growth rate not very far below that seen during the recent boom.

Some emerging markets to remain weak

The transmission mechanism to Latin American economies through the collapse in global trade and falling commodity prices was somewhat offset by more prudent macroeconomic management in some of the region's economies such as Brazil, Chile and Peru. Mexico is a special case, as its heavy reliance on the US as an export market (more than 80% of the country's exports in 2007 in dollar terms), exposed the weaknesses of having an undiversified economy.

Not all countries have the same degree of policy flexibility, as the existing fiscal and trade deficits impede further expansionary fiscal response. Some of the emerging markets in Eastern Europe such as Hungary and the Baltic countries, which relied heavily on foreign lending, were most affected as international capital dried up. They have now largely been stabilized by international funds made available through the IMF and bilateral agreements.

Major oil exporters (including Russia), some of which saw a degree of financial turmoil during the crisis, have been able to stabilize, helped by foreign exchange reserves built up during the boom. The commodity cycle will largely determine the timing of recovery for these economies. Even so, a significantly slower growth rate seems likely in coming years, although it should still be well above that of the developed nations.

A key lesson from this crisis is that economies cannot grow beyond their means in perpetuity. There is a reasonable probability opening up for a successful reorientation of global growth, away from demand leadership of the US consumer and toward emerging market demand playing a dominant role. If this happens, it would have clear implications for medium-term investment opportunities over coming years. At this stage, however, this is a provisional assessment in what is still a highly uncertain situation. ■

Figure 1

US savings rate

Since August 2008, the US savings rate has increased sharply as the excesses of the consumption boom unwind.

Source: Datastream, Credit Suisse

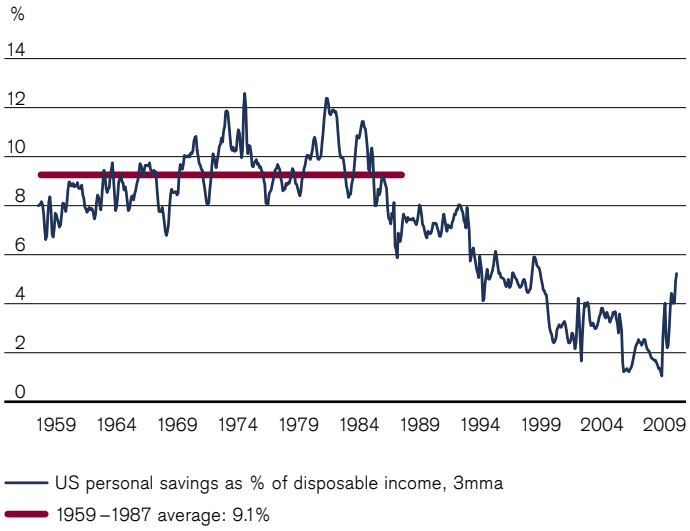


Figure 2

Advanced G20 government debt as a % of GDP

The fiscal policy measures announced to tackle the credit crisis will put a heavy strain on government balances.

Source: IMF, Fiscal Implications of the Global Economic and Financial Crisis

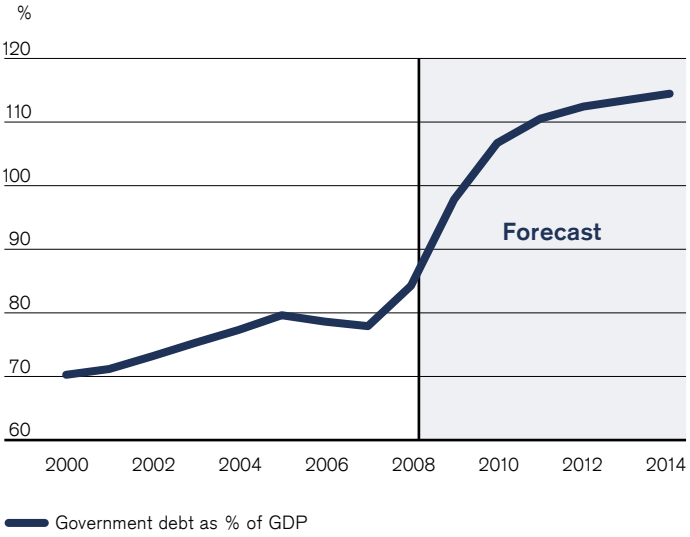


Photo: NASA/GSFC/METI/ERSDAC/JAROS, and U.S./Japan ASTER Science Team

Will central banks now target bubbles?

Before the credit crisis, central banking orthodoxy was that asset bubbles were hard to identify, harder still to prevent and nearly impossible to deflate in an orderly way. This should change if we are to avoid further damaging asset price bubbles.

Giles Keating, Head of Research for Private Banking and Asset Management, Credit Suisse

Ten years ago, Ben Bernanke, then Professor at Princeton University, circulated the first draft of a seminal paper that was to reflect the tone of central banking worldwide during the subsequent decade. Professor Bernanke's paper addressed the issue of whether asset prices should be targeted in the setting of monetary policy, in a similar way to (expected) consumer prices. He noted that some people believed this was unnecessary, because asset prices simply discount the value of future expected cash flows, which was already taken into account in the forecasts of consumer prices. Professor Bernanke rejected this view, arguing that asset prices contain other important information. As an example, the prices of equities, houses or corporate bonds can be higher than implied by simple discounting of cash-flows if investor risk appetite is unusually high or if credit conditions are exceptionally easy. This would seem to support the case for central banks to target asset prices, alongside expected consumer prices.

Had Professor Bernanke ended his paper with that conclusion, the monetary and banking history of the last ten years might have been very different. Instead, he added a further observation. He noted that it is difficult to split the price of an asset into the part that reflects future cash streams, and the part caused by factors like risk appetite. This difficulty led him to conclude that asset prices should not be targeted. Instead he suggested that their only role in monetary decision-making should be as one of many inputs into the process of forecasting consumer price inflation. This kind of analysis seems to underlie the decision by the Fed under Mr. Greenspan, and corresponding decisions by other central banks, to give little weight to the boom in stock prices that led to the 1999–2001 dotcom bubble. It seems to have been applied again during the 2003–2007 credit bubble, when the boom in home, bond and equity prices culminated in this last crash. By contrast, it does not seem to have been applied when asset prices moved the other way, since central banks eased monetary policy dramatically during the dotcom crash and again as most asset prices collapsed last year.

Policy asymmetry on bubbles

There is a possible justification for this apparent contrast within Professor Bernanke's 1999 framework. In principle, it could be argued that the booming asset prices held little risk of

future consumer price inflation, while the collapses posed a real threat of deflation. In practice, what has actually happened is that central banks have ended up with a policy framework that has a massively asymmetric approach to asset prices. They are largely ignored when they rise, yet are given substantial weight when they fall.

This asymmetry surely provides a major part of the explanation for the 2003–2007 credit bubble (as well as the dotcom boom), since asset prices lay at its heart. Rising house prices and high prices for mortgage securities (i.e. a low cost of housing finance) fuelled a credit-driven consumer boom in the USA, UK and elsewhere, stimulating Asian exports and underpinning a global resources bubble. Surges in other asset prices, notably for emerging market debt, also played a role. It seems hard to believe that a bubble on this scale could have developed if the Fed and other central banks had given due weight to the strength of asset prices and raised interest rates faster and sooner. As it was, investors in the 2003–2007 period had recently experienced the asymmetry of policy and pushed asset prices up all the more.

Of course, other factors probably exacerbated the cycle, such as lax bank capital adequacy rules, insufficient regulation of mortgage providers, investment banks' remuneration policies, and rating agency conflicts of interest. At the global macro level, managed exchange rate regimes in Asia caused a surge of liquidity into US and European government bond markets, depressing long-term interest rates by 100 basis points or more on some estimates.

Powerful as such effects were, surely they provide no justification for central banks largely ignoring the warning signs from booming asset prices? Rather, the asset boom should have been taken as a signal of how strong these effects were. Micro-economic issues, as well as global macro forces, are always present as a backdrop to the setting of monetary policy. Central bankers make their best estimates about wage-setting behavior, productivity growth and so on. If a destabilizing boom occurs because wages prove stickier than anticipated, then that would be generally recognized as an error in monetary policy. Why should a different judgment be made if credit regulations turn out to be laxer, or foreign inflows stronger, than implicitly assumed by central banks when they set interest rates?

Certainly we can try to learn lessons for the future about better bank and credit regulation, or about encouraging greater flexibility for countries with managed exchange rates. Whether or not such things can be achieved, they do not take away the ultimate responsibility of central banks to manage monetary policy effectively. And that means ending the current asymmetric monetary regime, applied in so many countries, that virtually ignores the information in asset price booms. Recall that Professor Bernanke's argument for not targeting asset prices rested on the view that it was too tricky to disentangle the different factors driving them. Central banks now seem confident to do this when those prices fall sufficiently. Hopefully, they will now commit themselves to doing the same when asset prices rise sufficiently, too. If they do not, there is an increased risk that the solutions to the current problems may lead, over the next half decade or so, to a yet bigger bubble followed by an even larger crash. ■

Figure 1

US monetary policy

US monetary policy is often blamed as a major contributing factor in underpinning the housing bubble.

Source: Bloomberg, OECD, Datastream, Credit Suisse; Note: Taylor rule is estimated using an inflation target of 2%, and breakeven inflation from 10-year TIPS.

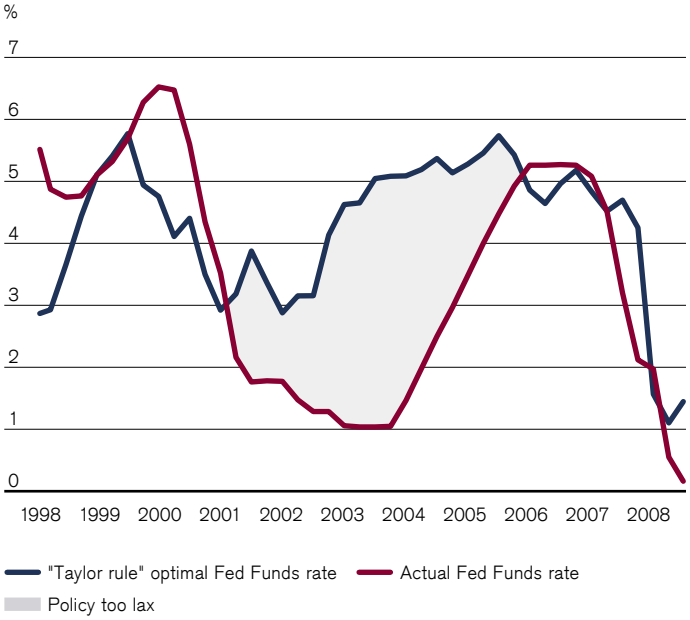


Figure 2

China's holdings of US debt

China has been a major buyer of US government debt and now holds a significant share of outstanding securities.

Source: Bloomberg, Credit Suisse

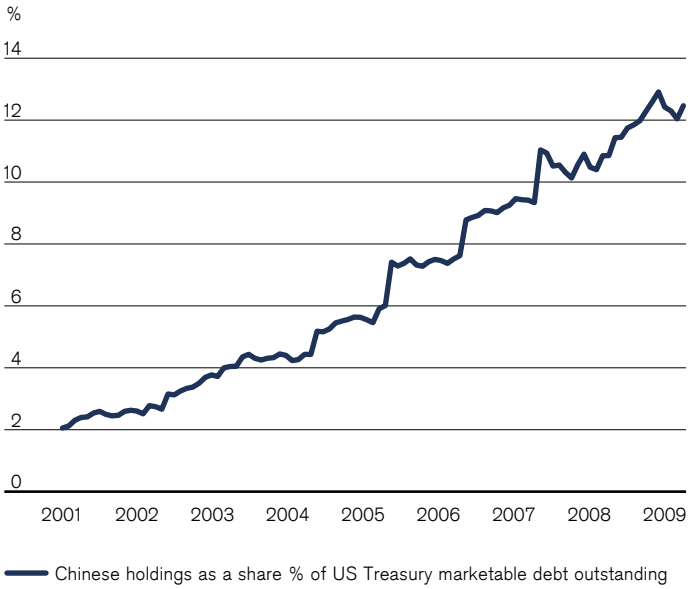


Photo: NASA /GSFC/METI/ERSDAC/JAROS, and U.S./Japan ASTER Science Team

Has capitalism failed?

Sir John Major examines how the credit crisis may have changed the way we regard markets, and also how the role of the State will change in the post-credit crisis world.

Research Institute: Has capitalism failed, or just the capitalists?

Sir John Major: Capitalism has undoubtedly suffered a setback. But the failure is due to the excesses of capitalism – it is not a failure of the free market system. There is no better system to replace that, although it does need proper regulation. It cannot – and should not – be a complete free-for-all.

The danger now is that too much ill-thought-out regulation will be imposed, and if this occurs it will inhibit risk and investment. The authorities have a fine balance to keep, but providing they manage to strike it, the free market system should soon recover.

What historical examples would you refer to when thinking of "the re-emergence" of the State?

Sir John Major: The historical examples are of the "emergence" of the State rather than its re-emergence. Growth of state activities goes back a very long way from the Factory Acts in the early 19th century. From time to time, state activity has grown rapidly: the 1945–1951 UK government, for example, greatly extended both state ownership and influence. That has happened again in the recent crisis, but is likely to be only a temporary phenomenon.

"... the greatest influence over recovery will be when the US returns to growth."

Photo: Corbis / Rune Helestad

Is there a risk that governments now over-react to the crisis and limit entrepreneurship and innovation?

Sir John Major: Yes, there is a danger, although – hopefully – wise decision-making will avoid too many errors.

A severe over-reaction to the recent crisis would be very damaging and destroy competition in a global market. Governments need to be aware of this risk – and avoid it.

Is this the end of globalization?

Sir John Major: No, it is only on pause, and will resume shortly. We cannot – and should not – regress. The trend to globalization is set and will not be reversed.

What countries and regions do you think likely to lead us out of this recession?

Sir John Major: China is the country that will most obviously lead us out of recession, perhaps followed by other parts of South East Asia as well. Moreover, despite the obvious difficulties faced by Dubai, the Gulf States as a whole will continue to be significant investors.

However, the greatest influence over recovery will be when the US returns to growth.

What policies are needed for the Anglo-Saxon countries specifically (i.e. the USA, UK, Australia) to work their way out of this recession?

Sir John Major: The problems that created the crisis were largely government action or, in some cases, inaction. More recently, the policies of the central banks have been far better coordinated than has been the case for some time, which has – consequently – averted a far worse crisis. Ending the recession requires the availability of credit through the banks and a clear indication that governments have plans to repay their debt.

How real is the danger of protectionism?

Sir John Major: It is a clear and present danger. The greatest risk of protection would be if the United States were to take protectionist measures. Were they to do so, many other countries that are less committed to free trade would be likely to follow. Fortunately the United States seems alert to this risk, and we must all hope it will be averted. ■

THE RT. HON. SIR JOHN MAJOR, KG, CH, was Prime Minister of the United Kingdom and Leader of the Conservative Party from 1990 to 1997. During his premiership, the British economy recovered from the 1990–92 recession to usher in one of the longest periods of economic growth in British history.

The rise of Chinese consumption

With the American consumer weakened financially by the credit crisis, consumption in China will still be on a secular rise, providing a lift to the rest of the world and partially offsetting the decline from the USA over the next decade.

Dong Tao, Chief Economist, Non-Japan Asia, Credit Suisse

Over the past 15 years, China's export sector has seen rapid expansion, growing twice as fast as the world's trade. China has essentially become the "world's factory." The Chinese economy, from job creation to current account surplus, has benefited from the export sector boom. However, the golden era of this export boom is perhaps behind us. Domestically, production costs in China have risen sharply, wages have doubled, and the yuan renminbi has appreciated by nearly 20% against the US dollar.

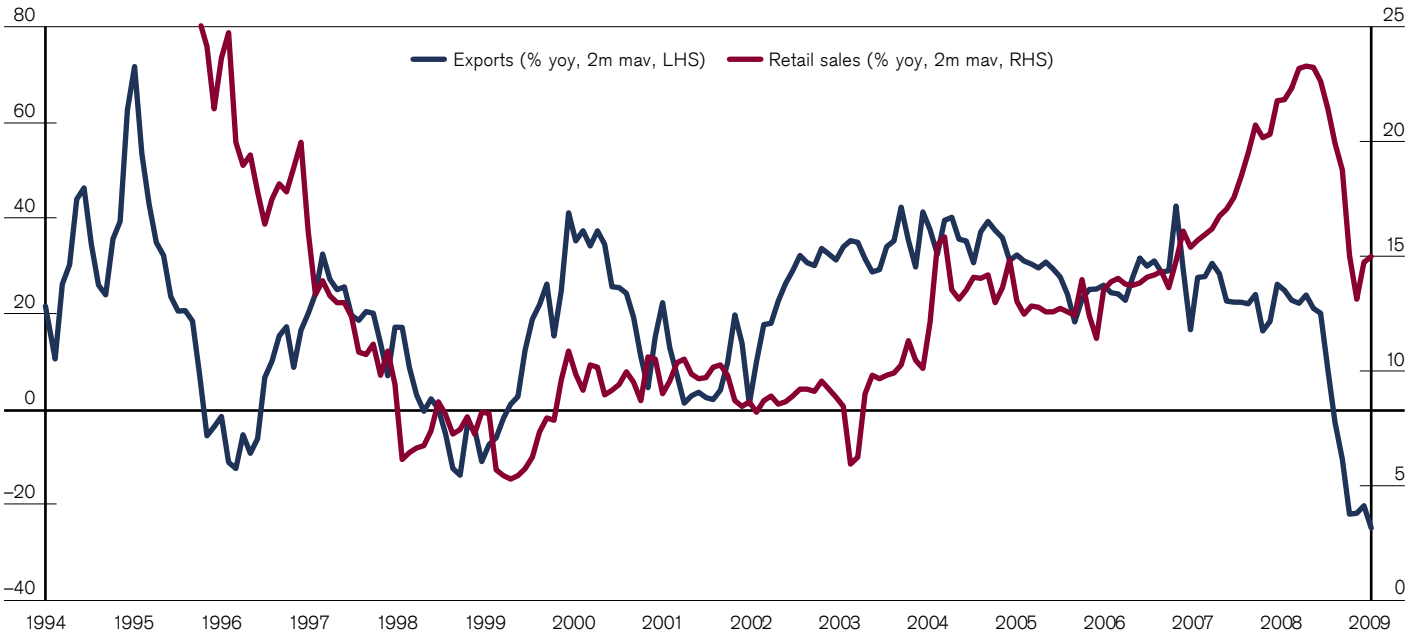
Private consumption in China is expected to soften in the short run, as the domestic labor market is not immune to the global crisis. Nominal retail sales slowed to 14.7% year-on-year in March, though the fall was not as significant as for industrial production and exports. It is important to bear in mind that Chinese consumers' balance sheets are clean, unlike their US counterparts. Over the long run, China's consumption is well positioned for a secular rise over the next decade or so. Besides the obvious driving factors, such as income growth and currency appreciation, our long-term optimistic view is based on two other structural factors: demographics and rural consumption.

The emergence of the "only-child generation" as China's mainstream consumers will have a lasting impact on China's

Figure 1

Retail sales versus export growth

Source: CEIC, Credit Suisse



economic structure and global consumption landscape, in our view. China initiated its "one-child" policy in 1980. The first group of this generation is now aged 20–29. As our consumer survey showed, this age bracket has the fastest income growth of all age groups. They are better educated, more flexible with types of work, and many have joined industries with rising prospects. Equally important, they have been raised in an overly protective family environment and have never experienced the harsh life of their parents' generation. As a result, they have a different view on income prospects and spending habits.

The "only-child" generation has a much higher tendency to spend, compared to their parents' generation. These 20-to-29-year-olds, known as the "post-1980s" (born after 1980), are nicknamed "Yue Guang Zu" (people that run out of money by the end of each month). They are keen on brand names, both international and domestic, and are willing to pay a premium for them. This generation is much more affluent, web 2.0 savvy, and spends much more time in the Internet than the average person in China.

The "post-1980s" age group not only run a low savings rate themselves but, anecdotally, they also lower their parents' savings rate. As more and more "post-1980s" are getting married, their parents demonstrate a willingness to shoulder part of their children's cost of buying a flat or a car. China's demographic trend will become a serious challenge to the country's currently economic growth model and costs for social benefits, as labor growth is projected to peak between 2015 and 2020, and the population is estimated to peak between 2030 and 2040. However, over the next decade or so, we believe that the "post-1980s," joined by the "post-1990s" generation, will become mainstream China's consumer "army." This means that consumption behavior will transform in China.

Urbanization a key factor

Another major structural factor that could transform China's consumption landscape comes from the rural areas. The urban income level has exploded over the past decade, fuelling a surge in private consumption growth. However, income growth in the rural sector has lagged behind. The government has attempted to address this since the beginning of this decade, but without much breakthrough until recently. In our opinion, the land reform that was launched last October and the recent fiscal initiatives could be an important catalyst to jump-start consumption demand in the rural sector.

Beijing made the rural sector a major focus of its fiscal stimulus. There are two areas from which the rural sector could benefit from the fiscal package. First, a large sum, estimated at about CNY 200 billion of direct government investment and hundreds of billions in private investment, will be used to build roads and communication access to the countryside. The infrastructure build-up is critical for the rural sector's development, especially outside of the coastal provinces, in our view. Second, as part of the fiscal stimulus measure, Beijing has provided subsidies to sell electronic products and automobiles to the rural sector. This would help rural consumption on the one hand, and lower inventory on the other.

A more fundamental attempt to industrialize the rural sector has been initiated through an innovative approach of granting farmers the right to use farmland. In essence, farmers are now entitled the right to use the land they are working on. Farmers can mortgage their land for bank credit (to start a small business, for instance) or pool their land together to achieve better economies of scale. This is the most ambitious reform in the rural sector since Deng Xiaoping started economic reforms 30 years ago. It is too early to tell whether the efforts will pay off, but if each farmer makes an extra CNY 100 (USD 16) per month, that would become an enormous driver of consumption among the rural population of 750 million.

Despite a short-term and cyclical slowdown in China's private consumption, we argue that the emergence of the "only-child" generation as consumers and changes in the rural sector will create a major structural rise in private consumption. We project that this should lead to a 6–8 percentage point decline in China's savings rate for consumers, which currently stands at about 28%. This should also lead to a 6–8 percentage point increase in the contribution of consumption to GDP. China's consumption officially counts for 36% of GDP, although we think this is substantially understated due to tax reasons.

In 2007, the USA accounted for about 30% of world consumption while China accounted for 5.3%. We project that China will overtake the USA as the largest consumer market by 2020. By then, China should account for 21% of global consumption, and the USA for 20%. This development will result from a combination of China's income growth, currency appreciation, demographics, in addition to the deleveraging effect among US consumers. It is our belief that the structural rise of the Chinese consumer will create a shift in China's growth model as well as the global consumption landscape. It is also our belief that China's own consumer brands, à la Coca-Cola, McDonalds and Google, will emerge over the next decade or so. ■

Table 1

We expect China's private consumption to account for 21% of global consumption by 2020

Source: CEIC, Datastream
Credit Suisse estimates.

(% share of global consumption)	2007	2008E	2009F	2010F	2015F	2020F
US	30.2	29.3	28.3	27.4	23.5	20.8
Japan	8.2	7.9	7.7	7.4	6.5	5.8
Germany	5.6	5.5	5.3	5.1	4.3	3.8
China	5.3	6.4	8.0	9.3	16.4	21.1
UK	5.0	4.9	4.8	4.6	4.0	3.7
France	4.2	4.1	3.9	3.8	3.2	2.9
Italy	3.6	3.4	3.3	3.2	2.7	2.3
Spain	2.4	2.3	2.2	2.2	1.9	1.8
Canada	2.3	2.3	2.2	2.1	1.9	1.7
India	2.0	2.2	2.4	2.6	3.9	5.3
NIE4*	2.9	3.0	3.0	3.0	3.1	3.1
ASEAN4**	1.8	2.0	2.1	2.1	2.5	2.7
Non-Japan Asia	12.1	13.6	15.5	17.1	25.8	32.3

* includes Hong Kong, Korea, Taiwan and Singapore.
** includes Indonesia, Malaysia, Philippines and Thailand.

Re-assessing the anchor role of the US dollar

The US dollar's global role is set to face deep scrutiny in coming years. Implications for the greenback are negative, while prospects for liquid alternatives to the dollar, such as the euro and gold, are positive.

Joe Prendergast, Chief Currency Strategist at Credit Suisse Private Banking

That the US dollar still retains a disproportionately large representation in international trade transactions, official reserves and exchange rate regimes is largely due to the many institutional arrangements and incumbencies which remain from the Bretton Woods era of 1944 to 1971, when the gold-linked dollar provided the formal anchor of the world monetary system. This privileged, inherited status of the paper dollar is under threat not just from the falling relative economic size of the USA and its cyclical influence, but also from the scale of the excesses that this very privilege has allowed.

Appropriately straddling the years around the turn of the twenty-first century, the "borrowed" consumer decade of 1997–2007 may come to be regarded as the fin de siècle, marking a critical juncture in the drift away from the US dollar hegemony that has dominated the international financial system since the end of the formal Bretton Woods regime in 1971. Instead, we are on the road to a new, multi-lateral currency order.

As far back as the 1970s, in the earliest years of the floating rate regime, when the US dollar declined rapidly in value after the formal break of its link with gold, its hegemony was under threat. But back then the USA was still a net creditor nation, the country uniquely offered the world's most liquid and transparent financial markets, and there was no obvious liquid alternative. Today, after near 25 years of deficits (see Figure 1), the USA is the world's largest debtor, with little chance of shrinking that debt without significant further real depreciation of its currency. Moreover, while the US financial system is in crisis, with increasing levels of public intervention in the system, liquidity and transparency in both industrialized and emerging currency and financial markets, while still imperfect, has greatly increased. Finally, there is a credible, liquid alternative currency to at least share the role of global numeraire – the euro.

This backdrop of cyclical and structural pressures presents a challenging environment for even the most established and rigid dollar-peggers, such as Hong Kong and the Gulf States. Their pegs have resulted in unprecedented foreign currency reserve accumulation, as warranted exchange rate adjustments are prevented via intervention and capital control. Prior to the crisis, higher inflation was also a natural consequence of having to keep monetary policy linked to that of the US Federal Reserve. That policy was way too loose for domestic economic conditions in many pegged countries.

Focus returns to dollar fundamentals

The credit crisis has distracted attention from the disequilibrium of many dollar-pegged currencies around the world, not least as the dollar has recovered significantly in value over the past year. But as the world emerges from the crisis, US monetary policy may stay expansive for a prolonged period and the dollar may return to significant weakness. This will potentially drive a new wedge between the appropriate monetary policy of the dollar-pegged states and the policy of the USA. All the more so, as expansive monetary policy may eventually drive up global commodity prices, upon which the economic performance of many dollar-pegged states depends. Pressure for revaluation of dollar pegs can thus be expected to return, potentially acutely. Appropriate monetary policy for the USA is most unlikely to be appropriate monetary policy for the rest of the world.

Domestic price adjustments in imports, housing, wages and ultimately all goods and services, will be part of the equilibrating costs of a currency peg during such phases, as long as the peg is maintained. If the currency cannot adjust, then prices must do so. Are these costs of ever-increasing phases of inflation, or in other circumstances potentially deflation, worth sustaining unilateral pegs? In a world of more diversified trade, fading US dominance and ever-larger capital flows, the answer is, increasingly, no. Boom-bust cycles, redistributions and inequalities of income and purchasing power, damage to non-US export markets, and disincentives for investment are all likely to be prevalent. Economic considerations would thus argue that adjustment of these regimes is justified not just cyclically but also structurally.

But what's the alternative? Given the typically high trade dependence and relatively low liquidity of the currencies in

question, and the ever greater scale of international capital flows, it is unlikely that the volatility of a perfectly free float, or "benign neglect" of the exchange rate will be desirable.

A multilateral currency?

Political considerations may dictate that simple revaluation of the dollar peg rate is the only viable option to regain control of inflation in the short-to-medium term. But this may invite yet-larger scale speculation, as any change in these long-established regimes would likely weaken their credibility. The Hong Kong dollar peg has been fixed around the current central rate of 7.80 per US dollar since 1983. The Saudi riyal has been effectively pegged at 3.75 per US dollar since 1986.

A switch to a peg with the only liquid alternative to the dollar – the euro – may be just as, if not more, inappropriate, unless the country in question happens to have highly concentrated trade with Europe alone. The appealing alternative in a more diversified world economy is a multi-lateral currency regime, consisting of a blend of major currencies such as the euro and dollar, or a much broader trade-weighted basket. This approach is already favored by several countries that have moved away from unilateral pegs in recent years, such as Russia and Kuwait, and with great success by Singapore since 1981. While China has maintained tight control of the yuan renminbi's exchange rate versus the dollar since the unilateral peg was abandoned in 2005, it is ostensibly managed with reference to an unpublished, broader exchange rate basket.

Such a multilateral currency world should be a natural consequence of economic growth over time. But the pace at which the shift takes place will depend critically upon the stability of the USA and its economic policies. Change could thus occur suddenly. For the first time in modern history, many of the largest foreign currency reserve holders of today are not part of the Group of Seven (G7) industrialized countries. This is important, as the G7 has traditionally acted as a co-operative stabilizing influence, dampening major currency swings with intervention at times of greatest stress and illiquidity, and effectively maintaining confidence in the dollar. Today's largest currency reserve holders may act as stabilizers to preserve their own self interest, but not more than that.

With close to 100 countries around the world still using currency pegs, in varying forms, mainly versus the US dollar, the procession to a more multi-lateral exchange rate regime is expected to continue in coming years. As it does so, the desired share of the US dollar in global reserves should begin to decline. With increasing diversity of central bank reserve assets, and an increasingly diverse range of reserve holders themselves, a tripolar world, with shared primary reserve status between the principal currencies of the Americas, Asia and Europe, is likely to take shape. The euro is increasingly posing that challenge from Europe, and can be expected to see yet further increases in its share of global currency reserves, from around 30% now (see Figure 2). And in the much longer run, China's yuan renminbi may well be both liquid and flexible enough to represent Asia's primary role in the multilateral system. ■

Figure 1

US external deficit

The USA accumulated a vast external debt during the floating exchange rate period. There is limited prospect of reversing this course without significant currency depreciation.

Source: Datastream

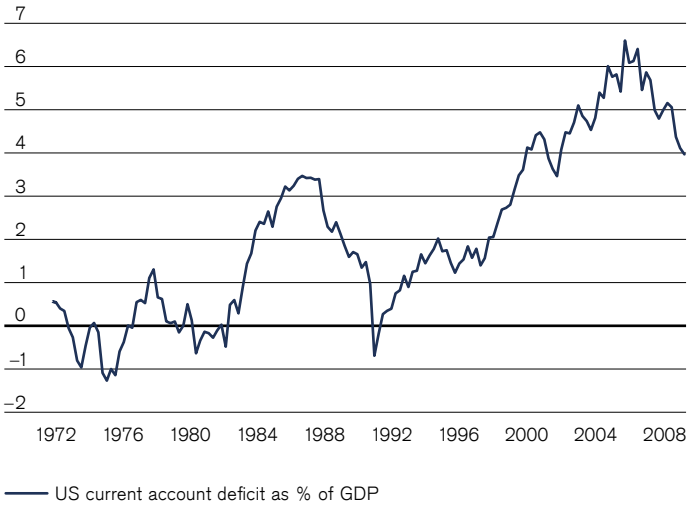


Figure 2

Global currency reserve diversification

The US dollar retains the largest share of global currency reserves. Slow decline since the arrival of the euro may accelerate in coming years.

Source: IMF COFER

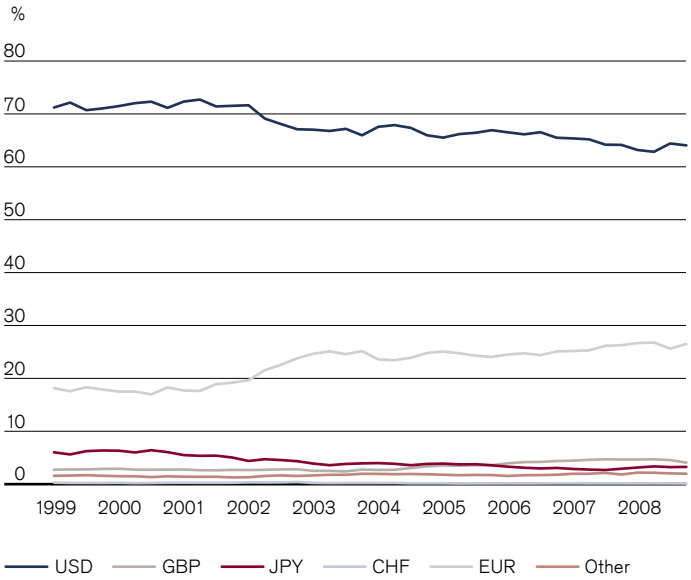


Photo: NASA /GSFC/METI/ERSDAC/JAROS, and U.S./Japan ASTER Science Team

The scientist's view

The implications of the credit crisis cut across many fields – here **Dr. Heinrich Rohrer** explores some of the financial, moral, scientific and technological issues that emerge.

Research Institute: What in your view has led to the credit crisis?

Dr. Heinrich Rohrer: I would stress a number of points here.

First, society, economy, and banks lived increasingly on consuming debts, not on durable investments, achievements and production. Overall, the fast pace of global economic growth became unstable and a crash was inevitable.

Second, banks lost control over their products and their values. What was intended for distributing risk got completely entangled and made a full risk assessment impossible. The banks seem to have understood their role only as profit producers instead of as profit enablers for the economy. Here, I am reminded of Goethe's "The Sorcerer's Apprentice" – the bankers, with the derivatives they created, thought they were masters, but in fact were merely apprentices.

"... economic growth must be built on 'real' values like sustainable investments."

Third, few of the economists – not even those ordained in Stockholm – ever raised a warning finger or a serious word on a possible disaster.

Which lessons should be drawn from the crisis?

Dr. Heinrich Rohrer: It is important that the banks keep their financial products under constant control and thus accessible to meaningful risk assessment. Also, economic growth must be built on "real" values like sustainable investments.

Photo: Keystone / Regina Kuehne

Do other sciences have anything to teach economists/finance?

Dr. Heinrich Rohrer: I am surprised that neither mathematics (e.g. insurance mathematics) nor mathematical economics realized much earlier the pitfalls of what they called risk assessment. I am not sure that they really understand that control by a feedback loop – that is the usual way of control – only functions with an appropriate time constant. If the latter is incorrectly chosen, everything goes wrong.

If I could underline some lessons from the scientific world: extraordinary achievements beyond what already exists are the motivation, driving force and challenge for top performance, not useless competition and megalomania. The measures are worldwide standards in all matters, those of an exemplary corporate citizen.

DR. HEINRICH ROHRER is a renowned Swiss physicist who shared the 1986 Nobel Prize in Physics with Gerd Binnig for the invention of the scanning tunneling microscope.
His research interests included Kondo systems, phase transitions, multicritical phenomena, scanning tunneling microscopy, nanomechanics and nanotechnology.

What socio-political lessons do we take from the credit crisis?

Dr. Heinrich Rohrer: Do not decouple the financial (especially banking) from socio-political and socio-ethical issues. We must not form a financial banking elite – elite in disproportionate compensations, not in achievement and creation of sustainable values.

In what ways has the financial crisis affected innovation?

Dr. Heinrich Rohrer: Innovation in the technical area has hardly been affected. Innovative thinking rather gained, though the realization became more difficult.

What are the likely "new paradigm" technologies of the future?

Dr. Heinrich Rohrer: My favorites are: 1) science and technology on the nanometer scale in nearly all technical disciplines, from engineering to clinical nanomedicine, 2) brain science and whatever is related to it, 3) from hardware (components) to software (the way to solve the problem), in short: "brain cells instead of peta flops." 4) Medtech.

What social problems can new technologies solve?

Dr. Heinrich Rohrer: Here I have my problem: New technologies get ever more sophisticated and demanding for the brain, knowledge, and skills. The population of technical "have-nots" increases faster than that of the "haves," and the gap between the ones who can follow and the ones who cannot gets bigger. That is the real time bomb, not our Western quarrels about half-full stomachs and half-empty purses. ■

Should we fear protectionism?

Throughout history, economic crises have often triggered protectionism as a way of defending domestic companies and jobs. Things might be different this time: while traditional trade protectionism is unlikely, financial protectionism is a real risk.

Eric Güller, Head of Emerging Markets ex-APAC Equity Research at Credit Suisse Private Banking
Hervé Prettre, Head Thematic Research at Credit Suisse Private Banking
Christine Schmid, Research Analyst at Credit Suisse Private Banking

The most striking cases of protectionism are found in times of severe depressions: the Meline tariffs restricting foreign imports were enacted in France following the depression that began in 1875, the Smoot-Hawley Tariff Act that raised US tariffs on over 20,000 imported goods to record levels was enacted in 1930, and Ronald Reagan imposed the Tariff and Trade Act on commercial partners of the USA in 1981. In view of the depth of the current recession, will we witness a similar return to protectionism?

We have already seen some signs of this. For example, India has raised tariffs on steel and iron imports and stated that it would impose safeguards or anti-dumping duties on products from any country being sold below cost. Indonesia is contemplating the introduction of special licenses or tariffs on textiles, footwear, toys, food and beverages. Russia hiked duties on pork imports, cut poultry quotas and introduced temporary customs on imports of agricultural equipment. Brazil and Argentina have imposed tariffs on automobile and meat imports.

Unlikely trade protectionism

Overall, however, we feel that a major return of trade protectionism is unlikely, for two main reasons. The first is that governments and policymakers are more attuned to past mistakes when protectionism simply worsened economic downturns, as in the 1930s. Evidence from Professor Douglas Irwin, for example, shows that the imposition of discretionary trade barriers was almost equally responsible for the sharp downturn in world trade from 1929 to 1932 as the decline in national income. No major country benefited from this. Second, we feel that globalization is sufficiently entrenched that it will make full trade protectionism very unattractive. Most corporations are internationalized and globalization has triggered an unprecedented world division of labor: a single product often has many global production sites, international diversification of corporations and joint ventures has become the most profitable way to cope with competition, and "foreign" products, such as Japanese autos, are often partly produced in the end-market. As a result, very few companies would actually benefit from blocking products at the border. Further, the logistics and technology backbone of globalization challenge the traditional definition of frontiers and domestic regulation. As a result, only in countries where corporations have a low level of internationalization – such as India, Indonesia, and selected frontier markets – do trade measures still matter.

How about beggar-thy-neighbor policies?

While full-blown protectionism remains unlikely on a large scale, there are other related risks, such as economic nationalism, financial protectionism and "beggar-thy-neighbor" economic policies. Beggar-thy-neighbor policies are actions taken by one country to improve its economic situation that may have adverse effects on other economies. For example, a country may lower prices on certain goods or drive down the value of its currency to increase exports in the hope that more jobs will be created. This was widely used in Europe in the 1980s, when countries such as France and Italy became champions of devaluation.

As mentioned on page 16, effective currency devaluations had become "fashionable" as the credit crisis took its toll on export-led economies. Looking ahead, such behavior is more likely to be seen in emerging markets, though it should be noted that the UK economy has been helped by a weaker sterling.

In the longer term, we believe that most emerging markets will be less focused on increasing the price competitiveness of exports than on creating a local consumer base. Many emerg-

ing markets aim to become more independent from Western purchases and are currently boosting domestic consumption as a way to find a new and more stable outlet for their industrial production.

Economic nationalism and financial protectionism are real concerns, in our view. Economic nationalism tends to center around fiscal spending and infrastructure plans that are aimed at benefiting national corporations and jobs. The political climate in many countries makes it attractive for politicians to adopt a more nationalistic stance when crafting economic policy. A key pillar in this regard is the creation and support of national champion companies. One complication here that could give rise to tension between countries is that many national champions outsource production to foreign countries. President Nicolas Sarkozy of France recently provided an apt summary of the stance currently being adopted by governments when he stated: "It is justifiable if a Renault factory is built in India so that Renault cars may be sold to the Indians. But it is not justifiable if a factory ... is built in the Czech Republic and its cars are sold in France." President Sarkozy surely knows that over 50% of Peugeot and Renault automobiles are produced outside France.

Financial protectionism is a real concern

Given that the epicenter of this crisis is in financial markets, financial protectionism is a very real risk. One early sign was the imposition of various types of bank asset and deposit guarantees in countries like the UK and the USA. These steps had unintended adverse consequences. Many other countries, from Eastern Europe to Latin America for instance, could not offer similar guarantees. As a result, capital shifted from the periphery to the center. In the peripheral countries, currencies fell, interest rates rose and banking institutions were squeezed. Additionally, the home countries of banks at the center encouraged them to lend domestically in return for government support of capital, in many cases to the detriment of smaller, emerging countries.

A related trend is the aggressive campaign against "offshore banking," which has seen the acceptance of the OECD standards on banking secrecy by a range of smaller countries. Though somewhat tangential to the core problems underlying the credit crisis, these moves underscore governments' desire to track down capital flows and tax revenues.

One key difference between the 1930s and now is the presence of a range of multilateral institutions such as the International Monetary Fund (IMF). Bodies like the IMF and OECD may help to limit protectionism and economic nationalism. There are several ways in which this can be done. First, the expanding budget of the IMF may well help alleviate economic stresses in countries that are tempted to adopt more protectionist policies. Second, policy advice from such institutions should help to calm protectionist instincts and lay out policy frameworks that do not necessarily entail "beggar-thy-neighbor" tendencies.

Overall, we feel that traditional protectionist measures which significantly halt international trade are unlikely on a widespread basis. However, soft protectionism in the form of economic nationalism might be one key trend to emerge from the current crisis, with financial protectionism at the fore. ■

Figure 1

World market share in private banking, in %

Countries with strong private banking franchises came under heavy pressure at the start of 2009 to ensure more cooperation and more transparency, a move we view as a part of financial protectionism.

Source: L'Agefi, Credit Suisse

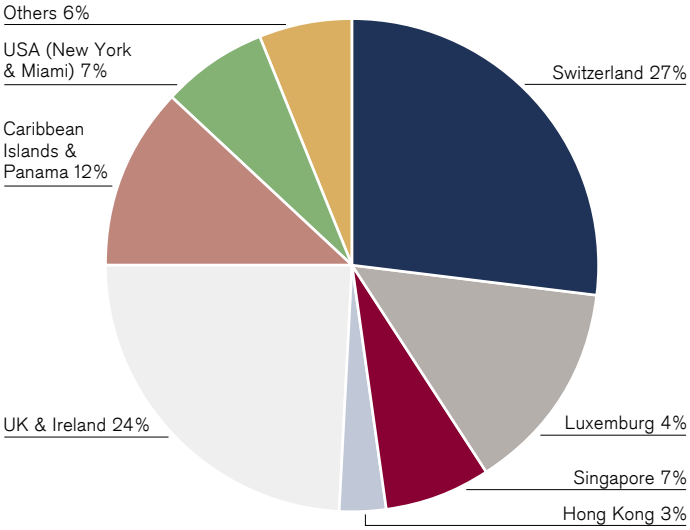
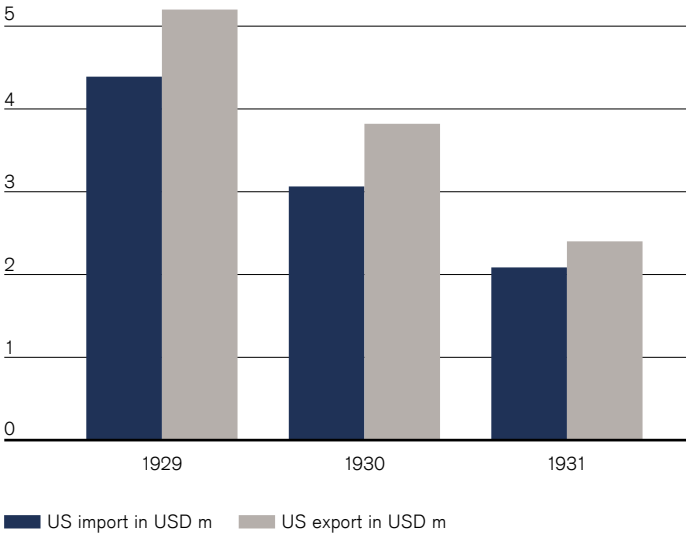


Figure 2

Impact of trade protectionism in the 1930s

The Hawley-Smoot Tariff Act of 1930 that raised US tariffs on over 20,000 imported goods to record levels was supposed to trigger a substantial decline in US imports but also dealt a major blow to exports and domestic industrial production.

Source: US Department of Commerce, Credit Suisse



Emerging bank business models

Strict regulation of the banking sector might result in separation of banking divisions, while certain sub-industries such as structured finance might be aggressively curbed. Overall, new business models are expected to emerge in both developed countries and in emerging economies.

Daniel Davies, European Investment Bank Analyst, Credit Suisse Investment Banking
Christine Schmid, Research Analyst at Credit Suisse Private Banking

Looking back, the faultlines of the credit crisis now appear more obvious: the overly cheap availability of capital and leverage, significant off-balance-sheet items, intense risk transfer driven by new credit derivatives and, last but not least, unregulated but sizeable market participants. There are strong echoes here of the Swedish banking crisis of the early 1990s when the collapse of the Infina group had a similar market-wide effect as that of Lehman. However, this credit crisis is not limited to individual countries – it is global, and the interconnectedness of financial markets and banking systems, as well as the sheer size of debt and derivatives markets, makes it all the more complex.

At this stage, banking sectors in many developed countries are heavily government-influenced with the USA, Ireland, UK, Spain and Germany among the most affected. This new development raises a range of issues – the ability of governments to influence lending for good and bad (political) reasons, the operational efficiency of government-run banks, as well as competition concerns.

We estimate that a number of banking sectors may remain "government-influenced" for at least three years, depending on the severity of the economic downturn and the costs of the credit cycle. As these stresses ebb, governments may seek to restructure certain banks or even entire banking sectors. In the UK as well as the USA, the discussion of banking separation is heating up. The Bank of England, for example, is examining whether those of Britain's biggest banks that are under government control should be split into different business units – with a particular focus on separating investment banking from retail banking operations.

Higher capital buffers for universal banks

For the remaining standalone and integrated universal banks, stricter regulation could result in a more punitive capital requirement with the aim of protecting deposits and reducing systemic risk in financial markets. Given the potentially higher cost of capital, this could create a competitive disadvantage in some business lines and could ultimately lead to changes in the business form or legal structure.

Accounting and other regulatory changes could also be costly. The focus of accounting rules might revert to countercyclicality from the current critical pro-cyclicality: generic provisions, new goodwill accounting instead of impairment tests, a complete overhaul of Basle II capital rules including liquidity risk, and a non-risk-based supplementary for systemic risk control such as leverage.

Similarly, regulation of balance sheets may shift back to more simple metrics. Of these, the balance sheet leverage ratio reflects the "lowest common denominator" of bank regulation as this metric is calculated simply from the face of the balance sheet without any allowance for the fact that some assets are more risky than others. The decision on the part of some regulators to move back to this ratio, effectively undoing all the regulatory changes since 1987, likely reflects a fundamental lack of confidence in the ability of the financial system to distinguish between risky and safe assets. This is understandable in light of the way in which the recent crisis has developed: in particular, many of the largest losses over the last 18 months have been related to assets with AAA credit ratings and very low Basle II risk charges.

One potential effect of this would be to penalize business lines that have low economic capital requirements compared to their balance sheet use – in other words, low-risk business lines. Although risk aversion in the industry is high at present, if the current regulatory direction is maintained in the long term the incentives facing the sector all point in the direction of reducing or abandoning low-risk/low-return lines of business with substantial balance sheet usage. In turn, capital might be redirected into either business lines with less balance sheet commitment or with high enough returns (usually reflecting higher risks) to justify the capital charge.

Further prescriptive regulation expected

The introduction of "stress tests" as a key concept in assessing solvency is a welcome development. Further prescriptive regulation cannot be ruled out. Several regulatory authorities have shown interest in regulating the compensation mechanisms used by banks.

Having outlined some of the possible regulatory trends that we may see, we would now like to consider the potential consequences. First, the financial sector of the future will be smaller in relation to the economy as a whole, in terms of both aggregated profits and human capital employed. In retrospect, the experience of the last ten years, when financial sector profits reached as much as 35% of the whole economy, was clearly unsustainable. As the sector shrinks, we expect that business models will change in response to economic and regulatory pressures.

Second, a more onerous economic outlook could change the private client offering in developed countries with more of a focus on lower risk-taking, tax efficiency and pension ben-

efits as the drivers. Further, demographic trends are clearly in favor of emerging markets and their younger and growing populations. As a result, we expect emerging markets to remain attractive for banking. Some sizable emerging market banks that have been less impacted by the financial crisis are currently profiting from a less competitive environment in their respective home market following the withdrawal of some (mainly US-based) competitors.

Business model splits possible

The separation of investment banking and commercial banking along Glass-Steagall lines may be forced on parts of the industry, either by prescriptive regulation or by punitive capital regulations making balance-sheet-intensive business lines uneconomic. However, this is likely to occur unevenly across jurisdictions, meaning that some universal banks may persist, while the bundling of different business lines that do not involve the taking of principal risk (such as securities brokerage and asset management) are likely to continue to cluster together because of the synergies between them.

The "structured finance" industry, which has been responsible for a significant part of the growth in investment banking industry profits, may have suffered a material and long-lasting impairment. This high value-added, "intellectual capital intensive" end of the structured finance business (CDOs, SIVs and similar business lines) may not recover at all, rather in the same way that exotic rates and forex derivatives did not recover from the 1998 crises.

In summary, varying regulatory responses to the crisis among different national authorities are likely. This may end up creating significant arbitrage opportunities as different types of business have different capital charges depending on the location of the regulator for the group that carries them out. Initiatives being implemented (such as the current G20 initiative) to standardize global financial regulation may mitigate this, but all previous experience has tended to show that completely homogeneous global financial regulation is neither achievable nor necessarily desirable. In our view, this offers room for regulatory arbitrage and a rebuild of the financial system of the 21st century. The organizational and financial flexibility to withstand the unexpected, a lack of government influence, a clear client focus and a product mix that reflects future challenges should position the winners of this crisis. ■

Figure 1

Leverage ratios do not reflect risk

The original purpose of risk-weighted asset regulation was to prevent high-risk businesses being subsidized by low-risk income lines. A leverage ratio regime risks reinstating this cross-subsidy.

Source: Credit Suisse

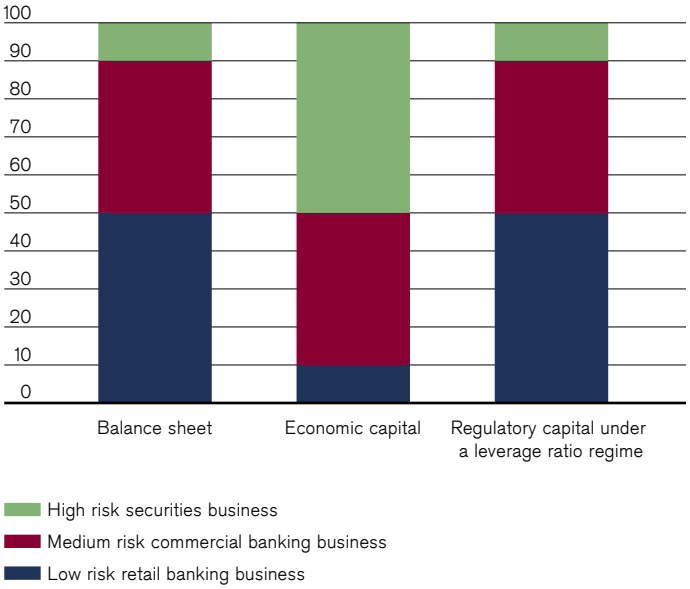
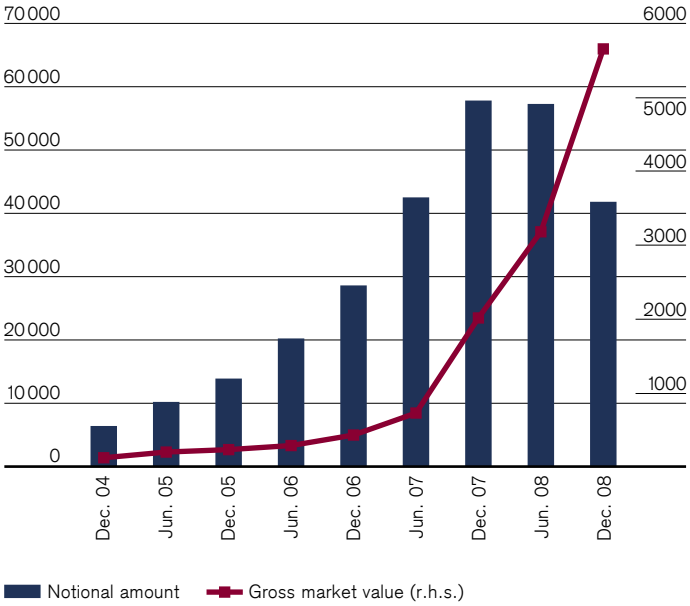


Figure 2

Credit derivatives outstanding

The explosive growth of the credit default swaps market illustrates how important structured finance became to industry profitability. These business lines may have been permanently impaired.



The future of the asset management industry

Robert Parker highlights the key changes to the asset management industry that will stem from the credit crisis, focusing in particular industry consolidation, risk management, hedge funds and the growth of the industry in emerging markets.

Research Institute: What do you see as being the key changes to asset management resulting from the credit crisis?

Robert Parker: First, the way clients regard investment management will change – more specifically, they are likely to adopt a barbell approach. They will move to lower risk, indexed products, while at the other end shifting to higher risk products that offer greater scope for alpha (including alternatives). In general, there will be a move away from traditional asset management as we know it, driven in large part by poor performance.

Second, we are likely to see the "retailization" of the asset management industry, with two growth drivers. One is the shift of savers to life assurance products and the other is the growing mutual fund industry as it relates to pensions. In general, the retail nature of the business will increase.

Third and very importantly is the role of the emerging markets, both as an investment area and in terms of the development of the asset management industry in developing countries.

In general I think we are likely to see far greater amounts and proportions of capital allocated to emerging market equities and debt as asset classes.

There are of course several "growing pains" that should be flagged here. Savings pools in many emerging countries are substantial, partly because they function to offset the relative lack of welfare systems, and the large size of these savings pools relative to the size of local capital markets is a problem. I should also mention that while the development of local regulatory frameworks in many emerging markets has proceeded well so far, there remains room for further development. Other related issues like technology (which is impressive in the Indian financial services market) and liquidity have also developed reasonably well in emerging markets.

Will the credit crisis have a structural (lower) impact on risk appetite?

Robert Parker: I don't think it is right to say that there is a trend toward lower risk appetite. Risk-taking will be more balanced and perhaps selective. For instance, in order to attract capital the hedge fund industry post the Madoff scandal will have to show much better process. Investors will be more demanding in terms of liquidity and pricing, especially in "stressed" scenarios, and in part this should drive improvements in investment process, transparency and risk management across the industry.

> **"In general, there will be a move away from traditional asset management as we know it ..."**

How will investment managers generate alpha and beta in the future?

Robert Parker: First, I think that leverage as a source of performance will be curtailed. In terms of its availability and cost, leverage will be harder to come by for managers. In the hedge fund world specifically, 2008 was a very tough year and up to 50% of funds have closed, mostly owing to performance failure. We are witnessing a "survival of the fittest" and this trend makes me less negative on the hedge fund industry, because most of the survivors are proven/talented managers and I think that the environment for "alpha" generation is more encouraging. I would identify three hedge fund investment styles as being interesting.

We are likely to see a pick-up in merger and acquisition activity in the near future and this should be good for event-driven funds. The cheapness of the convertible market is opportune for convert/arb funds, and I also see the growth of emerging markets (both debt and equity) as a plus for EM funds.

Will we see the asset management industry consolidate or fragment in the next five years?

Robert Parker: I think consolidation is the more likely outcome here – driven by the need for economies of scale, downward pressure on revenues and the increasing cost of regulation. What may be interesting is that consolidation will more take the form of partnerships than outright mergers. I'm referring to things like managers sharing back offices. In turn, this should help them focus on generating alpha for clients.

Will investment managers take a more activist stance on corporate governance as a result of the credit crisis?

Robert Parker: I think the evidence shows that corporate governance has been inadequate in recent years, and I feel that we should see a trend toward greater activism in the future – both in defensive and aggressive ways. Institutional investors will act "defensively" to ensure that corporate executives do not fall into the same traps as the financial sector (i.e. overinvestment, high risk-taking). In an aggressive sense, institutional investors may act to improve corporate strategies.

Also, on compensation, this doesn't have to be low, but needs to be in line with corporate performance.

What does the future hold for investment research?

Robert Parker: I see an intense demand for research-driven asset allocation advice. The disparity in returns between asset classes that we have seen in recent years will make the top-down view more important. I think this will be reinforced by client dissatisfac-

tion with the investment advisor industry, where individual advisors (i.e. IFA's in the UK) have tried to provide asset allocation advice but have demonstrably lacked rigour.

Because of this, and large swings in asset class performance over the past ten years at least, I see a long-term trend toward quality top-down asset allocation research work.

Thematic investment research should also grow in importance. It is important to differentiate between "fads" and themes, of course.

Will Sovereign Wealth Funds (SWFs) be as powerful as some thought two years ago?

Robert Parker: Most sovereign wealth funds have now signed up to the Santiago principles, under which they basically agree not to act in a political way and to generally improve the transparency of their actions. This should help to defuse the debate on the motivation of their investment strategies. In fact I think that debate is now over.

At the same time, given the corrections in global imbalances and lower commodity prices, it is likely that the flows of capital into SWFs will slow compared to recent years. Still, I do think that SWFs will be an important "player" in markets in the long term, and in the near term we may well see them become more diversified. Some Funds, like that of Kuwait, have adopted a very sophisticated and well-diversified approach for decades now, and others, such as the China Investment Corporation, are becoming more diversified through investments in private equity for example.

Will we see more, less or over-regulation of the asset management industry as a result of the credit crisis?

Robert Parker: I think the proposed EU regulatory changes could be an issue, in that hedge funds and private equity funds operating in London are already regulated by the FSA and may find the EU proposals a further, unnecessary burden. It is important that FSA and EU rules are consistent.

I don't think anyone in the industry has any objection to transparency, or robust risk management systems or indeed intelligent regulation. But I do think people will push back on undue control of compensation, regulatory overlap and attempts to control levels of risk-taking. On risk, it is important that the industry demonstrate good risk management, and that this is not confused with "low risk-taking."

Will family offices play a bigger role in the future?

Robert Parker: Family offices are becoming better established, partly owing to the trend rise in individual wealth. Interestingly, their investment processes are somewhat different from institutional managers. Family offices focus on absolute returns and in a sense they are unlike pension funds in that they are asset rich/have low liabilities. In future, the challenge with regard to family offices will be to design asset allocation processes that capture upside in asset classes but are very cautious in limiting downside/absolute losses.

Finally, what should the investment/asset management industry do to restore transparency and trust post the credit crisis?

Robert Parker: I think a number of things are needed –

- Demonstrate good risk management, especially in extreme/stressed circumstances.
- Demonstrate very strong industry ethics and active, robust corporate governance.
- Transparency in investment processes and systems – no black boxes.
- Display a high quality of reporting.
- High-quality research. ■

ROBERT PARKER is Vice Chairman of Asset Management at Credit Suisse. He is a Member of Credit Suisse's Investment Committee and also has responsibility globally for the management and development of new business and client relationships for Credit Suisse's Asset Management business.

The big picture – future economic models

The Anglo-Saxon socio-economic model has dominated since the early 1980s. The credit crisis could break this. Capitalism may not disappear, but could slow to a more "managed" form.

Michael O'Sullivan, Head of UK Research, Global Asset Allocation at Credit Suisse Private Banking

Deng Xiaoping said: "To be rich is glorious."[1] Economic crises often beget profound changes in thinking about socio-economic models as the pendulum of received thinking swings from old ideas toward new ones (for example, France in the 1720s, Meiji Japan in the 1860s or China in the 1980s). This was also the case in the 1970s, when economic crises throughout that decade and growing geopolitical strains led to the political emergence of Margaret Thatcher and Ronald Reagan in the UK and USA respectively. Together, their very similar policies came to be known as the Anglo-Saxon socio-economic model.

This "model" has dominated the practice and debate of economics since the 1980s but has been severely undercut by the credit crisis. In brief, the Anglo-Saxon model rests on a belief in free trade, the primacy of markets over more controlled or regulated exchanges of goods and services, a small role for the state in the economy (e.g. tax revenues as a % of GDP in 2006 were 44% in France, 49% in Denmark, but only 28% in the USA) and in general a deregulated and low tax business climate.

The Anglo-Saxon approach has been particularly remarkable for the way in which it has become diffused through international policymaking through the "Washington Consensus" policy package, through the corporate world in terms of the advance of US multinational corporations ("the B-52s of globalization"[2]) and the rise of the finance industry, as well as the spread of Anglo-Saxon language, laws and education standards (e.g. the MBA).

There are two competing models to the Anglo-Saxon approach – the European and the Asian. Broadly speaking, the European model is one where government finance and policy play a central role in economic development, and in the case of Germany and France from the 1950s to the late 1980s this approach had a good track record[3] in generating growth (real GDP in Germany over this period was 1.5% greater than that of the UK). The most admired European socio-economic model is the Nordic one (Nordic countries plus Netherlands and perhaps Switzerland), which is seen as combining innovation and strategic economic strengths with social cohesion.

Another alternative model is that of the now highly globalised Asian Tiger economies and China. What these countries have in common in the way in which they have developed is heavy government control, high levels of investment and savings and a passing interest in the idea of an open society.

The Great Transformation

One of the crucial implications of the credit crisis is how it challenges the assumptions behind the Anglo-Saxon model, questioning in particular its competence and balance (i.e. in that it leads to high inequalities). Even though the relative wisdom of the Asian and European models is somewhat clearer now, policymakers in small and developing countries, amongst others, may well be asking "what model should we follow now?" Interestingly, in the early part of the 20th century, there was a similar shift in "models" with government spending as a percentage of GDP in developed countries going from 12% (in the USA in 1912) to closer to 31% by the 1930s.

While changes in these socio-economic models take place slowly, some forces for change are becoming clearer. As countries at the epicenter of the credit crisis go though the necessary phases of rescue, recovery and reform, we may well see the role of governments in economies grow, the regulatory pendulum swing towards over-regulation from low regulation, and as in many previous bubbles, the use of leverage will be reined in, at least in the short to medium term.

As capitalist economies need to lean more on governments and as government-run economies seek to return to capitalist levels of economic growth, the overall near-term trend is likely to be one of "managed capitalism." Capitalism itself as under-

[1] Mahbubani, K., "The New Asian Hemisphere," New York: Public Affairs, 2008, p. 76.

[2] Bhagwati, J., "In defence of globalization," Oxford: Oxford University Press, 2004, p. ix.

[3] Landier, A. & Thesmar, D., "Le Grand Merchant Marche," Paris: Flammarion, 2007.

stood by the relationship between producers and consumers of goods and services is unlikely to change, though the speed at which it takes place could change as leverage is restricted and regulation heightened. The ability to take financial risks will most likely be curtailed, and the scope to bear them will be broadened (i.e. unlimited private versus limited liability).

One trend that may support a move toward managed capitalism is that households in Anglo-Saxon countries are discovering the costs of low levels of investment in public goods (France and Switzerland spend about 11% of GDP on healthcare as opposed to 8% for the UK) and high inequalities (the Gini inequality coefficient for Denmark is 0.23 but 0.37 for the UK, see Figure 1), while households in Europe and Asia have their aversion to unfettered capitalism reinforced by the experience of the credit crisis.

In the political arena, managed capitalism in its various cultural forms could evolve toward a common model where individual nation-states resolve the best way to protect themselves against the side-effects of globalization while fostering the prosperity to adopt a traditional republican model based on strong institutions, skilled technocrats and which combines the best elements of each regional model – equality (Nordic), fraternity (Asian) and liberty (Anglo-Saxon).

The idea here is that nation-states, especially those that are smaller and more open, think more strategically about the effects of "outside" forces such as international trade, financial markets and global organized crime/terrorism, and then act to construct buffers to limit the effects of these on their economies and societies. This could intensify the pattern whereby more open, successful developed economies have a relatively high degree of government involvement in economic management. In turn, this kind of "buffer" or republic mode could be a guide for the GCC nations or developing countries in Eastern Europe and beyond.

The friction caused by tectonic moves in these socio-economic models also has the potential to open up new political spaces, both within nation-states and beyond them, as countries vie for influence within multi-national bodies and try to build "soft power."

Boston, Berlin, Beijing

At a level above nation-states, the desire to curb but not stop the influence of markets, open trade and the power of corporations could lead nation-states to place greater emphasis on the role of multinational institutions and also fuel the growth of regionalization. Individual models could adapt toward each other and we may well see a tri-polar world form along the lines of three chief regions incorporating the EU, the Anglo-Saxon world and Asia (led by China), or as George Orwell conjectured in "1984" – Oceania, Eurasia and Eastasia.

Growing regionalization could lead to a new form of balance-of-power politics, just as the emergence of a larger Germany at the end of the nineteenth century led to coalitions between other European powers (back then America, like China today, was the emerging power). The extent to which this happens is a matter of speculation, but the key lesson from the first wave of globalization is that a mixture of nationalism, balance-of-power rivalries, financial market imbalances and creeping protectionism led to its demise. ■

Figure 1

Gini coefficient of inequality

"Anglo-Saxon" countries tend to be more unequal.

Source: OECD

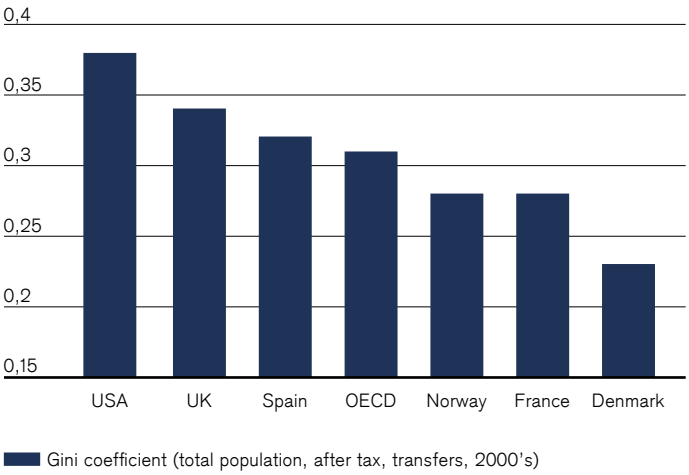
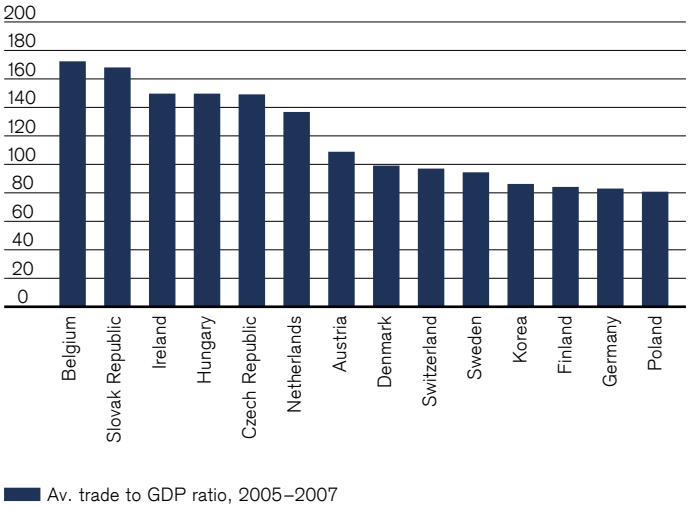


Figure 2

Trade to GDP ratios

Small, developing "Tiger" economies tend to become highly globalized.

Source: OECD



The visible hand of the State

Modern financial theory suggests that the private sector is best suited to allocate capital. Is this theory still valid after the disastrous misallocation of capital by the private sector, or can governments allocate capital more efficiently?

Lars Kalbreier, Head of Global Equity and Alternatives Research at Credit Suisse Private Banking

Since the late 1970s, the prevailing theory of capital allocation has been a quasi-absolute trust in capital markets and a concern over government involvement. Adam Smith's theory of the invisible hand of the market was seen as the most efficient way to allocate capital. Capital markets were regarded as being responsible for the rapid development of new industries such as biotechnology, semiconductors and mobile telephony. This belief was supported by strong economic data during the period from 1990 to 2007: as economic policies became increasingly liberal, marked by deregulation and privatization, the global economy witnessed an unprecedented period of economic growth, particularly in countries with limited state involvement in the economy. However, this theory has now been challenged by the excesses of recent years, particularly the substantial misallocation of capital to subprime mortgages, which have brought the financial system close to the brink and played their part in triggering the worst economic crisis since World War 2.

The dire state of banks' balance sheets after years of poor allocation of resources has prompted a massive rescue effort of financial institutions by governments in many countries. Furthermore, many governments are also stepping up spending by releasing stimulus packages in order to counteract falling private sector and consumer demand. These stimuli will only increase the size of government and the scale of its involvement in the economy. Among believers of the invisible hand of the market theory, these developments have raised concerns as to how efficiently the money will be spent.

Fears of "bridges to nowhere"

History provides us with some alarming examples: In Japan, for instance, the economic stimulus program of the 1990s was largely spent on wasteful projects, the infamous "bridges to nowhere." Hamada, a city 140 times smaller than Hong Kong, received an infrastructure reminiscent of a megacity. Indeed, during the 1990s, this small city located 800 kilometers from Tokyo and 400 kilometers from Osaka received a new highway, a four-lane bypass, a university, a prison, a children's art museum, a ski resort and an aquarium featuring three ring-blowing beluga whales. Shimane – a rural prefecture – was the beneficiary of three commercial airports able to handle jets, including the USD 250 million Hagi-Iwami Airport, which now sits eerily empty with just two flights per day.

Several important factors suggest that governments have learnt from the past and are likely to allocate capital in a more efficient manner. First, democracy has expanded in recent decades and counter-powers to government spending have risen. The press is now freer and much more powerful and, as a result, is more willing to make life uncomfortable for the governments if it deems that taxpayers' money is being wasted. Moreover, anti-government lobby groups can be more easily organized than in the past due to the use of modern information technology such as the internet (e.g. blogs). In addition, the average level of secondary and tertiary education has increased, enabling more and more individuals to understand and judge government action.

Second, as a result of globalization, individuals and companies are more flexible in their ability to relocate to other countries/regions if they think that the tax rates imposed on them are out of proportion with the benefits they receive. It is thus unlikely that companies will keep paying taxes in a given country if the government squanders their tax revenue on projects with little or no payback. Furthermore, governments are facing increased pressure to remain competitive in a globalized world and hence need to steer their policies to accommodate an ever-increasing and rapidly evolving knowledge society.

Third, the level of government debt relative to the size of the economy has substantially increased in recent times. This is especially true in developed markets. For instance, the net debt level of the G7 governments has doubled over the past 30 years and is likely to continue to increase in the foreseeable future. Unfavorable demographics, a problem shared by many European countries, are only likely to add to the existing debt burden. As a consequence, it is becoming increasingly difficult in political terms for governments to take on new debt, resulting in stronger scrutiny by opposition parties of stimulus plans. This was very much illustrated by the difficulty faced by the Obama Administration in passing its stimulus package earlier this year.

Are governments better at allocating capital?

It could be argued that governments might be better capital allocators than the private sector for projects with a long-term payback horizon. Of course, these projects should not just be "bridges to nowhere," but should help create new industries with a competitive edge.

One shortcoming of the private sector might be an excessive but structural focus on a short-to-medium-term payback. The private sector can be very myopic at times. Given that the performance of many pension fund and money managers is measured on a yearly basis, managers have a strong bias toward investing in assets and projects with a short-term horizon. The same goes for company CEOs, who tend to favor investing capital in projects that will provide a return during

their tenure rather than during that of their successors. Since CEOs' average time in office is less than five years, this arguably does not provide strong incentives for projects with a protracted payback timeframe.

This is probably where the government allocation of capital is most crucial, as it can fulfill a need which is too long-term for the private sector, but will likely benefit the private sector in the long run. One of the keys to success is to involve the private sector at a very early stage. Some governments have demonstrated how this can work, providing numerous successful examples: In the 1960s, the Japanese Ministry of Finance launched a plan to strategically develop the automobile and consumer electronics industries, and the success of this initiative was clearly visible a decade later. In the 1970s, European countries focused on the development of aeronautics, giving birth to Airbus, which is today the world's largest producer of commercial airplanes. In the 1980s, Ronald Reagan created SEMATEC, a partnership between the US government and US-based semiconductor manufacturers like Intel, in order to enhance the productivity and pace of innovations of US companies. Finally, the "information highway" launched by the Clinton administration in the early 1990s accelerated use of the internet.

There is no shortage of areas where long-term challenges offer payback only on a very long horizon. While they do not pose an immediate threat, dwindling natural resources and climate change are two such areas of enormous challenge for future generations. The need to develop alternative energies is thus an area where the longer-term horizon of the State can contribute to an efficient allocation of capital. A large proportion of both the Obama Administration's recent stimulus package and the Chinese government's infrastructure plan was allocated to green projects.

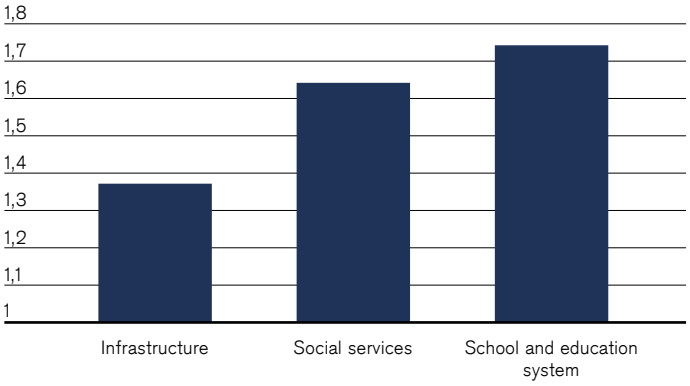
Healthcare and education are two other areas where the payback will not be immediate, but will benefit the private sector in the long term. For instance, better healthcare in China will help to reduce the savings ratio, providing a boost to consumption, thereby helping China to transform its economic model from being purely export-driven to one driven by domestic consumption. Education, including investment in science and research, is probably the area with the longest payback, but as many Asian countries have demonstrated, there is a strong link between higher education spending as a percentage of GDP and stronger long-term economic growth. Unlike "bridges to nowhere," which only produce jobs while they are being built, the emergence of a more skilled workforce will boost productivity, while a growing number of scientists emanating from universities will likely increase the pace of innovation, supporting the emergence of start-up companies and ultimately the creation of new jobs and industries.

In most countries, the credit crisis has substantially increased the role of government in the economy. This stronger role can be beneficial both in the short and the longer term. This is especially true if governments allocate capital to strategically relevant projects with longer payback times, which might be too long-term to attract investment from the private sector. However, recent history has shown that the early involvement of the private sector is critical to the success of such projects; governments and the private sector should thus work hand-in-hand and not in competition with each other. ■

Figure 1

Impact on Japan's GDP of JPY 1 trn spent during the 1990s

The efficiency of funds spent on infrastructure has been much lower than in other areas. Nevertheless, the Japanese stimulus package was mainly an infrastructure package.



The end of globalization?

The credit crisis has slowed the pace of globalization, but it does not herald its end, **Dr. Ernesto Zedillo** said in an interview held in June. Stronger emerging markets, re-engineered world institutions and more balanced can keep globalization going.

Research Institute: What factors do you think are to blame for the credit crisis and what historic parallels would you highlight?

Dr. Ernesto Zedillo: By now it should be clear that the world has endured much more than a credit crisis. We are in the middle of the worst global recession since the 1930s. A shock of the magnitude being endured is not the result of a single cause. Several things must go wrong practically at the same time to cause a disaster like the present one: huge global macroeconomic imbalances – sustained for too long by wrongheaded policies by some of the key players; housing booms extended by the courtesy of excess liquidity that also fed systematic under-pricing of risk throughout the whole financial spectrum. Moreover, financial innovation ended up concentrating risk and not spreading it, and instilled more, not less, imperfect and asymmetric information into the new instruments. Of course, outdated regulation; faulty management and governance in large financial intermediaries; at best incompetent rating agencies; and failure to recognize and mitigate risk factors on the part of the pertinent authorities contributed too.

"Unwinding the new and the old imbalances will pose a considerable challenge for economic policy ..."

FORMER PRESIDENT OF MEXICO, DR. ERNESTO ZEDILLO is the Director of the Yale Center for the Study of Globalization and professor in the field of international economics and politics at Yale University. He is recognized as a leading voice on globalization, especially its impact on relations between developed and developing nations.

Photo: Keystone / Remy Steinegger

Will some imbalances remain once we exit this financial crisis?

Dr. Ernesto Zedillo: Once the market's mood shifted from cheer to gloom and quickly approached panic, governments intervened massively in order to avoid a total collapse of the global financial system – and indeed the global economy. The policy activism displayed since last fall most likely will avoid a repetition of a great depression. It will do so, however, at the expense of leaving some of the major economies with huge fiscal deficits and highly expanded central bank balance sheets. Also, a substantial current account deficit in the USA matched by surpluses elsewhere, a prime cause of the crisis, will probably remain. Unwinding the new and the old imbalances will pose a considerable challenge for economic policy rather sooner than later.

What issues will emerging economies and markets face?

Dr. Ernesto Zedillo: The crisis will accentuate the differences among the emerging economies. Those that failed to acquire anti-cyclical resilience during the good times – think of several emerging European and Latin American

economies – will suffer a dramatic setback during this crisis, particularly those caught by it with weak financial systems. Depending on their respective policy responses, some economies will take a shorter period of time – if they adjust expeditiously – or longer – if they try to avoid the adjustment – to recover from the global shock.

In any case, the crisis will leave China and other emerging Asian countries in a relatively stronger position than before the crisis. Emerging economies, even after the recovery starts, will face sluggish global demand and in all likelihood a process of global financial disintermediation. Emerging countries with high domestic savings rates, if successful in switching their aggregate demand into domestic expenditure, could resume dynamic growth but probably not at the high levels seen before this crisis.

Emerging economies with lower savings rates, unless they undertake vigorous structural reforms to increase productivity, will see their growth severely constrained, more acutely so if their recent expansion has depended on high commodity prices.

Do we need a new set of "world institutions" in the post credit crisis world?

Dr. Ernesto Zedillo: This crisis has highlighted the deficit in global governance that is warranted by the unprecedented degree of economic interdependence and social connectivity that has been achieved in recent decades. Collective action is needed to put in place solutions to global problems. Unfortunately, the multilateral institutions have not been adapted to deal with the economic and geopolitical challenges that the international community faces in these early years of the 21st century. It is yet to be seen whether the ongoing disaster will generate the vision and political leadership to undertake the necessary reforms to provide the global public goods that are needed to manage or dispel risks that could prove catastrophic to globalization.

In your experience how has globalization sped up in the past ten years and is it now threatened?

Dr. Ernesto Zedillo: Globalization has certainly sped up in the last ten years and this has occurred for multiple reasons. Openness to trade has deepened, technological change in communications and transportation have delivered unprecedented complexity and efficiency of supply chains and, very importantly, a significant group of developing countries have integrated at a very fast pace into the global flows of trade and investment. Technological change can hardly be reversed but policies favoring open markets can. I have long sustained that, if accelerated by technological change, globalization is crucially the result of deliberate political decisions to remove national barriers to trade and investment. If those political decisions can be reversed, it follows that globalization can be slowed down, and itself reversed, to some extent, at the discretion of political leaders.

"The coin is still in the air about whether the right lessons will be learned from this crisis."

Do you think a more balanced, multipolar world is now more likely and what might it look like?

Dr. Ernesto Zedillo: The coin is still in the air about whether the right lessons will be learned from this crisis. There is certainly an opportunity if this traumatic episode enhances the quality of domestic policies as well as international cooperation. But there is also a possible scenario where some key countries don't undertake exit strategies from the fiscal and monetary time bombs and that isolationist and protectionist views end up prevailing.

What is the best set of policies for developing countries to "catch-up" in a post-credit crisis world?

Dr. Ernesto Zedillo: Whether the crisis is over in one year or two, and whether the trajectory of the economy follows an "L" or a "V," developing countries should fortify their anti-cyclical stance and deepen structural reforms to enhance the total productivity of their factors of production.

Harold James at Princeton writes about "The End of Globalization" – is this a likely scenario?

Dr. Ernesto Zedillo: Harold James submits that we are looking at the end of the era of financially driven globalization [1]. As said above, contemporary globalization has had not one but several engines. Thus, I don't agree with James that our globalization has been financially driven. I think it is still possible to see a vigorous restoration of growth in the global economy without seeing a deepening of the process of financial globalization. It may even be desirable to have slower financial growth at least for a few years. James is right, however, in emphasizing that our globalization, just like the previous ones, can be stopped and seriously reversed. This has been a sound observation by a number of historians and also some economists like myself [2]. It will all be about the folly or the wisdom of policies. ■

[1] James, Harold, "The Late, Great Globalization," Current History, vol. 2

[2] Zedillo, Ernesto, Introduction, "The Future of Globalization", Routledge 2008

Green shoots

Despite the credit crisis, other important debates continue. One is the revolution in green technologies and the importance of global warming. **Dr. Rajendra Pachauri** pinpoints the lessons for this from the credit crisis.

Research Institute: Are there any aspects of the Anglo-Saxon model that emerging markets should employ?

Dr. Rajendra K. Pachauri: I think it is mainly an issue of sophistication in the way you apply the model, because there are certainly many areas where it makes sense to use markets to create innovation and efficiency. But what we need, particularly in the emerging markets, is an appropriate safety net and we also need to ensure that governments have a role in establishing infrastructure, in providing services, particularly for the poorest of the poor. I'm afraid that this is something the so called Anglo-Saxon model has not really dealt with adequately.

Should the finance industry go right back to basics, and if so, how?

Dr. Rajendra K. Pachauri: The finance industry should go back to the basics, in my view. I think more as a matter of internal self-discipline. Certainly you need some major revamp of the regulatory mechanisms. The financial industry itself should do a little bit of introspection and see where things went wrong and set up internal mechanisms by which you ensure that the kinds of violations and indiscriminate practices that happened will not recur. If they do, then not only would the industry lose credibility but a lot of people would lose large sums of money as indeed we've seen. It devastates lives and we need to be fully conscious of that fact.

How has the outlook for alternative energy been impacted by the credit crisis?

Dr. Rajendra K. Pachauri: What we see right now is only a temporary halt in taking some long-term steps: I would call it a temporary distraction. I think that when the dust has settled, we will probably see a great deal of soul searching and introspection on what is wrong with the basic economic system. Also, I think the energy sector needs a major change and we definitely will require a shift to sources of energy that reduce reliance on fossil fuels, and this certainly means much higher energy efficiency and greater use of renewables. We haven't seen the end of the kind of analysis that people are carrying out at this point, which essentially focuses on fire-fighting. We need to get beyond the fire-fighting, which we will, and then you will clearly see a much greater preference for research and development and fiscal incentives for industry by which alternative energy technologies can be developed and disseminated.

What can be done to make people and policymakers pay more attention to the "green" argument?

Dr. Rajendra K. Pachauri: If you go back in time and emphasize the fact that the world has been on a treadmill, it has been on a path of development which is clearly not sustainable. What we see today, for instance, in the nature of climate change which is human induced, is only a symptom of a much larger problem. This larger problem has led to degradation of ecosystems; it has lead to major damage to natural resources and, incidentally, the serious problem of climate change. I think the media, leaders of public opinion, political leaders and certainly the scientific and academic communities have to get far more active in spreading the message.

"What we see right now is only a temporary halt in taking some long-term steps ..."

Photo: Keystone / Salvatore Di Nolfi

What steps must be taken to achieve a more balanced world?

Dr. Rajendra K. Pachauri: I am really concerned that the disparity between rich and poor is growing so rapidly. This is not only a source of tension between haves and have-nots, but it also leads to generally unfulfilled aspirations on a large scale on the part of people who are deprived, wanting exactly what the developed world has. This leads to a convergence in unsustainable lifestyles. We are becoming an extremely wasteful society and we blindly consume goods and services according to a pattern of just reaching higher incomes and wealth without necessarily looking at some of the externalities that this encourages all over the world.

I think it is important to change lifestyles. This again is something the leadership in politics and academia and – I would even say – the religious order has to start focusing on. There is no religion in the world that advocates indiscriminate consumption and degradation of natural resources.

Do you think that global institutions like the World Bank need to change and how? Do we need new global institutions?

Dr. Rajendra K. Pachauri: I really think – and this is perhaps not a popular view – that we need a radical transformation of institutions like the World Bank. They were established at a time when conditions were very different. I think some of the inertia in the system and the kind of expertise that exists over there is – in my view – a little out of date.

Also I believe that if you were to look at the record of success of the Bank you could ask some questions which would be totally valid. I think the time has come to restructure the institution with new expertise and a focus on the real problems that are affecting human society today. This includes certainly degradation of the environment and natural resources and the services the ecosystems provide to the poor and the poorest of the poor. And certainly we need to focus more on poverty eradication. The World Bank's approach of essentially funding governments and not really working with civil society I think needs to be questioned. There are other institutions and other organizations that the bank should be working with because otherwise it just becomes a mutually convenient system whereby bureaucrats and civil servants in the developing countries pay lip service to the Bank and the Bank gives a pat on the back to those countries which are absorbing large sums of money, but what comes out of it, I am afraid, is questionable. So I think the Bank has to change and the sooner, the better. ■

DR. RAJENDRA K. PACHAURI is the Chief Executive of TERI (The Energy and Resources Institute) in India, and Chairman of the Intergovernmental Panel on Climate Change (IPCC). He has a PhD in Industrial Engineering and a PhD in Economics. In 2007, he accepted the Nobel Peace Prize for the IPCC, along with co-recipient Al Gore.

Photo: NASA/GSFC/METI/ERSDAC/JAROS, and U.S./Japan ASTER Science Team

From crisis to consolidation

The credit crisis has been an exercise of the "survival of the fittest" across the corporate sector. There has of course been a stark contrast across the equity market in terms of the performance of industries. The typical recession-proof sectors have performed to type. However, there has equally been marked divergence within industries, particularly governed by those with ability to generate cash flow themselves rather than relying on others to supply finance. Even as the extreme risk aversion now abates in the stock market, a rising tide will not lift all boats. We expect the long-term winners to prove to be those who have turned out to be the "last men standing" among industries that now restructure and consolidate.

Andrew Garthwaite, Head of Global Equity Strategy at Credit Suisse Investment Banking
Richard Kersley, Head of Equity Research Europe Product at Credit Suisse Investment Banking
Luca Paolini, Global Equity Strategist at Credit Suisse Investment Banking

The credit crisis has led to many corporate casualties over the last 12–24 months. Looking ahead, we see the crisis impacting the longer-term structure of industries as much as the immediate problems it has posed. For example, many weaker players will have been squeezed by a lack of access to liquidity for expansion, thus harming their market positioning – that is if they still exist. However, others will be able to take advantage of weakened competitors to consolidate market-leading positions and potentially improve pricing. Their cost structures may also be superior due to their ability to invest or acquire others. These players have the ability to enjoy a step change in profitability as they capture market share and raise barriers to entry. Against this background, we look specifically at the topic of industry consolidation based on a top-down assessment of the structure of industries and also factoring in feedback from Credit Suisse industry analysts. While we provide illustrations of likely trends within industries, and companies that might be influential within these trends, this does not mean that we offer them as specific investment recommendations.

Intellectual framework

Our aim here is to identify the industries and companies whose returns have the potential to be structurally higher into a recovery because:

1. The industry in question has been a value destroyer and governments are unwilling (indeed on a long-term basis, cannot afford) to subsidize an artificially low cost of capital. As governments divest their exposure, formerly state-supported players face a higher cost of capital, to the advantage of their privately owned competitors.
2. The second- or third-tier players (or indeed the whole industry) are excessively financially leveraged. Hence, consolidation and a sharp fall in capital spending will likely lead to abnormally high profits once the economic recovery begins, especially for the incumbents.
3. Barriers to exit are small because the industry is neither a "national champion" nor deemed economically important.

Quantitative and qualitative approach

To take this broad thought process and drill down into some specifics, we have come at the topic in two ways. Firstly, we have adopted a quantitative screening approach, where we look for industries that have been value-destroying, have high financial leverage and are overinvested (i.e. industries that need to change). Then, secondly, we have conducted a more qualitative assessment via our analysts. Here we focus in particular on sectors where consolidation is already underway and also highlight those companies with a notable cost advantage versus their peers.

Quantitative screening

To begin with, in the charts that follow, we have screened for industries where we think changes need to occur using our quantitative tools to isolate value destruction, leverage and over-investment as suggested above.

1. Industries that have been value-destroying

In Figure 1, we screen for the number of years (over the past ten years) that an industry has been a value destroyer (i.e. the cash flow return on investment or CFROI® generated by Credit Suisse's HOLT valuation framework has been below the cost of capital). This highlights airlines, automobiles, bulk chemicals, auto components, building products, paper, railroads and transport infrastructure.

Figure 1

Global industries that have had a CFROI of less than 6% in five or more years over the past 10 years

Source: Credit Suisse HOLT, Credit Suisse Research

Rank	Sector	% of years with CFROI > 6%	Average CFROI
1	Airlines	0%	3.3%
2	Automobiles	0%	3.8%
3	Paper & Forest Products	0%	3.1%
4	Road & Rail	0%	4.0%
5	Transportation Infrastructure	0%	3.5%
6	Auto Components	10%	4.8%
7	Chemicals	10%	4.6%
8	Diversified Telecommunication Services	10%	5.7%
9	Electronic Equipment, Instruments & Components	10%	4.3%
10	Building Products	30%	5.4%
11	Construction & Engineering	30%	4.9%
12	Construction Materials	30%	5.6%
13	Marine	30%	5.1%
14	Trading Companies & Distributors	30%	5.0%
15	Electrical Equipment	40%	5.0%
16	Household Durables	50%	6.0%
17	Machinery	50%	6.3%

2. Industries that have excess financial leverage

In Figure 2, we rank global industries by their level of leverage in debt terms. This screens in industries by their ratio of net debt to earnings before tax, interest, depreciation and amortization (EBITDA).

Figure 2

Leverage of global industries (net debt/EBITDA)

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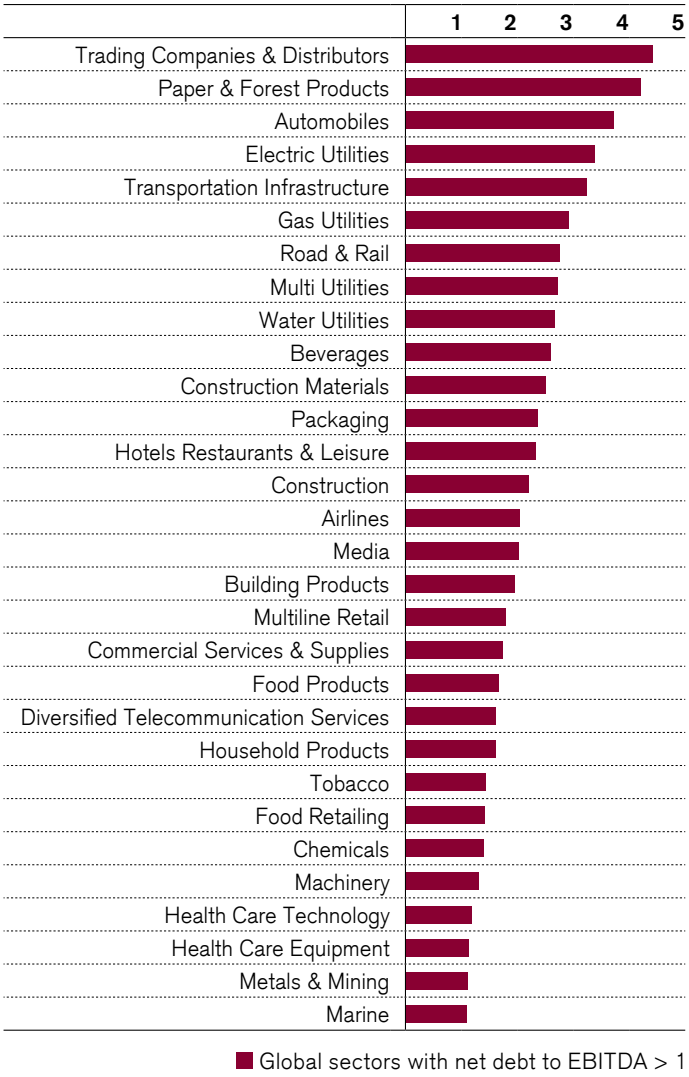

3. Industries that have over-invested

When the cost of capital was abnormally low, industries tended to over-invest. As a result, the global investment share of GDP hit an all-time high in this cycle. In Figure 3, we look for industries that have been over-investing and thus have the greatest potential boost to profits if capital spending were to fall to more normal levels or to maintenance levels. Moreover, if overall capital spending falls, the industry is likely to become more disciplined. We have analyzed this across industries to estimate the possible boost to profitability (return on equity) if capital spending to depreciation returned to its long-term average.

Figure 3

Impact on profitability from capital spending normalised – global sector ranking

Source: Credit Suisse HOLT, Credit Suisse research

Global sector	Capex / depreciation			RoE if capex / depreciation at long-term average		
	2008	Long-term average	RoE 2008	Adjusted RoE	Increase in ROE	Rank
Marine	3.2	1.7	14%	26%	11%	1
Oil, Gas & Consumable Fuels	2.5	1.7	18%	24%	6%	2
Energy Equipment & Services	2.7	1.7	22%	27%	5%	3
Metals & Mining	2.3	1.5	17%	21%	5%	4
Machinery	2.0	1.3	15%	19%	3%	5
Electrical Equipment	1.8	1.2	15%	17%	3%	6
Construction Materials	2.0	1.5	9%	12%	3%	7
Containers & Packaging	1.6	1.2	8%	10%	3%	8
Health Care Technology	1.1	1.3	–122%	–119%	2%	9
Chemicals	1.5	1.2	12%	14%	2%	10
Road & Rail	1.7	1.5	13%	15%	2%	11
Food Products	1.8	1.4	21%	23%	2%	12
Automobiles	1.8	1.7	–8%	–7%	2%	13

Aggregate consolidation scorecard

We combine these three metrics into an aggregate valuation table below. We show the industries that have exhibited the highest propensity to be value-destroying, have the highest leverage and the most potential to boost earnings by bringing capital spending back into line with the historical average, and attach a "consolidation" ranking to them. The industries that show the most potential for consolidation on these metrics would be autos, transport, paper, packaging, construction, bulk chemicals, airlines, telecoms, auto components and some parts of the tech food-chain.

Figure 4

Aggregate sector consolidation scorecard – the top-ranked sectors (sectors where we think consolidation is most likely)

Source: Credit Suisse HOLT, Credit Suisse research

Global industry	Impact on RoE if capex / depreciation returns to long-term average	% times CFROI >6%	Net debt/ EBITDA	Consolidation rank
Automobiles	2%	0%	3.7	1
Road & Rail	2%	0%	2.7	2
Paper & Forest Products	0%	0%	4.1	3
Construction Materials	3%	30%	2.5	4
Transportation Infrastructure	0%	0%	3.2	5
Containers & Packaging	3%	60%	2.3	6
Construction & Engineering	1%	30%	2.2	7
Chemicals	2%	10%	1.4	8
Building Products	1%	30%	1.9	9
Marine	11%	30%	1.1	10
Diversified Telecommunication Services	0%	10%	1.6	11
Airlines	–1%	0%	2.0	12
Healthcare Technology	2%	60%	1.2	13
Electrical Equipment	3%	40%	0.8	14
Trading Companies & Distributors	–1%	30%	4.4	15
Auto Components	0%	10%	1.0	16
Household Durables	0%	50%	0.7	17
Electronic Equipment Instruments & Components	–1%	10%	0.5	18
Computers & Peripherals	–1%	60%	0.1	19
Semiconductors & Semiconductor Equipment	–3%	60%	–0.2	20

Our analysts' views

Companies with the ability to cut costs

In general terms, we envisage the world remaining one where pricing conditions are still challenging for companies. While not forecasting deflation, neither are we forecasting sufficiently above-trend growth as of yet to believe that companies will be able to aggressively raise prices. In fact, as we show in Figure 5, profits do not grow meaningfully unless GDP is above 1.5%–2%. Hence, in this environment, we believe cost-cutting will be one of the main drivers of profits. Indeed, this reality of itself will surely create consolidation momentum. We believe that it is important to be conscious of companies with a low and flexible cost base. One can clearly not generalize about sectors here; this is very much a micro exercise. Hence, in the tables below, we have taken into account feedback from our analysts on this topic. We would stress that this does not constitute buy recommendations for these names but rather an illustration of best practice. Of course, companies who move from a position of poor to best can represent equally attractive investments as those who currently exhibit such qualities.

In Figure 6, we show European and US companies that Credit Suisse analysts identified as (i) low-cost producers, (ii) having the most flexible cost base and (iii) having the least flexible cost base versus their peers. We would stress these represent characteristics of the companies rather than investment recommendations.

Figure 5

US corporate earnings growth and economic growth

Profits do not grow strongly without GDP growth over 2%. Cost cutting and relative pricing power remain key drivers of the profit outlook for many companies.

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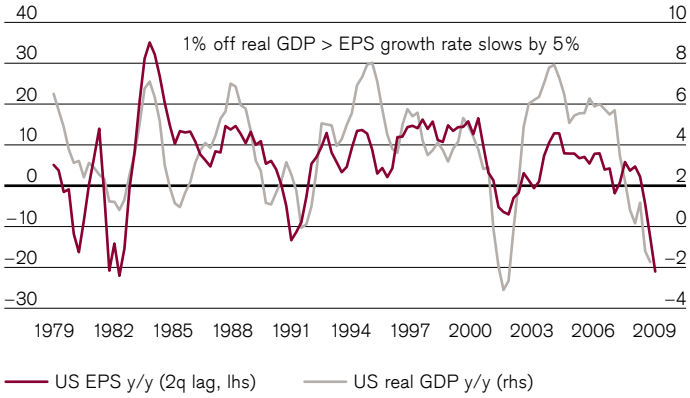


Figure 6

Summary table: European and US stocks that Credit Suisse analysts identify as (1) low-cost producers, (2) having the most flexible cost base and (3) having the least flexible cost base versus their peers

Source: Company data, Credit Suisse estimates

Sector	Low-cost producer	Most flexible cost base	Least flexible cost base
Tobacco	Imperial Tobacco, BAT, Philip Morris	BAT, Philip Morris	
Luxury		Tod's	Bulgari
Consumer Durables & Apparel	Harman Int, Nike, Vf Corp	Adidas, Puma,Polo Ralph Lauren, Nike	Jones Apparel, Carter's Inc, Hanesbrands
Food & Stap Ret	Wal-Mart, Costco Wholesale, Cvs Caremark	Tesco, Cvs Caremark	Supervalu
Beverages		Coca-Cola, Anheuser-Busch, Pepsico	
Retailing	Target, Tjx Companies, Ross Stores	Nordstrom Inc, Ross Stores, Tjx Companies	Foot Locker, Cabelas
Media	Moneysupermarket.com	WPP, Publicis, Havas	JCDecaux
Capital Goods	Schneider, Legrand, Atlas Copco, Sandvik	Schneider, Legrand, Philips, Atlas Copco	ABB, Alstom and Siemens
Building Materials & Construction		CRH, Kaba	
Chemicals	BASF	Linde	Rhodia, Air Products & Chem, Praxair
Metals & Mining	Xstrata, Antofagasta, Nucor	Xstrata, Nucor	
Paper & Forest Products	Smurfit Kappa, UPM-Kymmene, Stora Enso		
Utilities	Verbund, Fortum, Iberdrola and Iberdrola Renovables	E.ON	
Automobiles & Components	Continental, Johnson Controls	Continental	PSA Peugeot, Renault , Ford
Software & Services	SAP, Capgemini	SAP, Capgemini	Atos Origin, Logica
Semiconductor Equipment	Renewable Energy	CSR	STMicroelectronics
Technology Hardware & Equipment	Nokia,Dell, Hewlett-Packard, Lexmark Intl	Nokia,Motorola, Qualcomm, Dell	National Instruments

Sector summaries

On this and the following pages we seek to summarize, sector by sector, the key factors at work in some of the industries where consolidation seems likely to be a common theme. The companies that appear are not intended to represent investment recommendations but the likely players judged by the feedback from Credit Suisse industry analysts.

Automobiles and components

The sector ranks at the top of our sector consolidation scorecard: the industry has not covered its cost of capital in any of the past 10 years and its leverage is very high (its net debt to EBITDA ratio is 3.7). Additionally, our analysts believe that there is around 20% excess capacity in the auto industry and that the restructuring that is currently under way, in particular in the USA, could see up to 10% of capacity being taken out of the market. There is also a realization that to be a mass producer, a company needs 5.5 million units of production. High concentration (top five producers account for 47% of global capacity), government divestment and the UAW agreement in the USA point to a structural improvement in profitability. We see strong consolidation potential in the auto components industry, with clear consolidators gaining market share.

Consolidation stories in the auto sector

Source: Credit Suisse Research

Sector	Consolidators	Rationale
Auto	Toyota, VW	Toyota is market leader with 14% market share and benefits from tighter controls on gas emissions due to its technological lead and its 80% share in the hybrid vehicles market. Strong balance sheet (net cash excluding financial services).
Auto components	Johnson Controls, Denso	JC dominates the passenger car interiors market (33% market share) and the battery market (70% market share in USA, 40% globally). Much stronger balance sheet and profitability much better than peers (Lear, Faurecia). Denso has higher margins and technological edge, and is gaining market share against rivals Delphi, Visteon.
Hybrid car batteries	Panasonic	With acquisition of Sanyo, Panasonic controls 80% of the nickel-hybrid car battery market. High barriers to entry, as volumes, safety standards and customer relationship are key. Max. 5 players left in next few years.

Information technology

Certain segments of the information technology industry, such as computers & peripherals and semiconductors, have significant potential for consolidation due to excess capacity, lower government involvement and the existence of players with a clear technological and financial edge. Information technology in general is well positioned in the credit crisis, given its short asset life and ability to generate profits in a deflationary environment. The memory industry, with half of capacity producing below cash cost, very high capex to sales (around 40% compared to 15%–20% for the semiconductor industry) and the Taiwanese government scaling down support (Taiwan accounts for around a quarter of global capacity) is the best example of this. We believe that only 4/5 of DRAM producers will be left in the industry in two years' time.

Consolidation stories in the Information Technology sector

Source: Credit Suisse Research

Sector	Consolidators	Rationale
DRAMs	SEC, Micron	50% of capacity below production cost and capex/sales of 42% exceptionally high. Only 4/5 players likely to be left in two years' time. DRAMs only account for 1.8% of GDP and barriers to exit are low. Micron and SEC have much higher margins and lower leverage than their peers.
Wireless chips	Qualcomm	Qualcomm market share for 3G chipsets set to rise from 31% to 35%–40% as TI exits over 4 years and there is a 3 way merger with execution problems
Copiers	Ricoh	There are increasing demands for networked development and an increase in the share of direct distribution. Weaker players (Toshiba, Kyocera, Sharp) may have to exit the business in the next five years, leading to an oligopoly of the top four (Ricoh, Xerox, Canon, Konica, with 85% share).
Foundries	TSMC, UMC	4-player market with clear leader. TSMC (63% market share) has much lower break-even, net cash and technological edge. UMC, second biggest player, has strong cash position.
Electronic manufacturing services (EMS)	Hon Hai, Flextronics	Industry to benefit from increasing outsourcing by OEMs. Only 50% of the electronics products market accounted for by EMS/ODM. Capacity reductions could amount to 15% of sales.
TFT-LCD	AUO, SEC, LG	40% of production is below the cash cost. The top three have 60% share and are still profitable.
Telecom equipment	Nokia, Ericsson	The handset industry has a clear leader (Nokia) with 37% market share, lowest and most flexible cost base and margins double industry average. Sony-Ericsson and Motorola are loss-making with 5%–6% market share. The infrastructure industry is a 6-player market likely to become 4- with Nortel in bankruptcy and Motorola exiting. Ericsson (40% market share) is the best executor and its margin are double the market average.

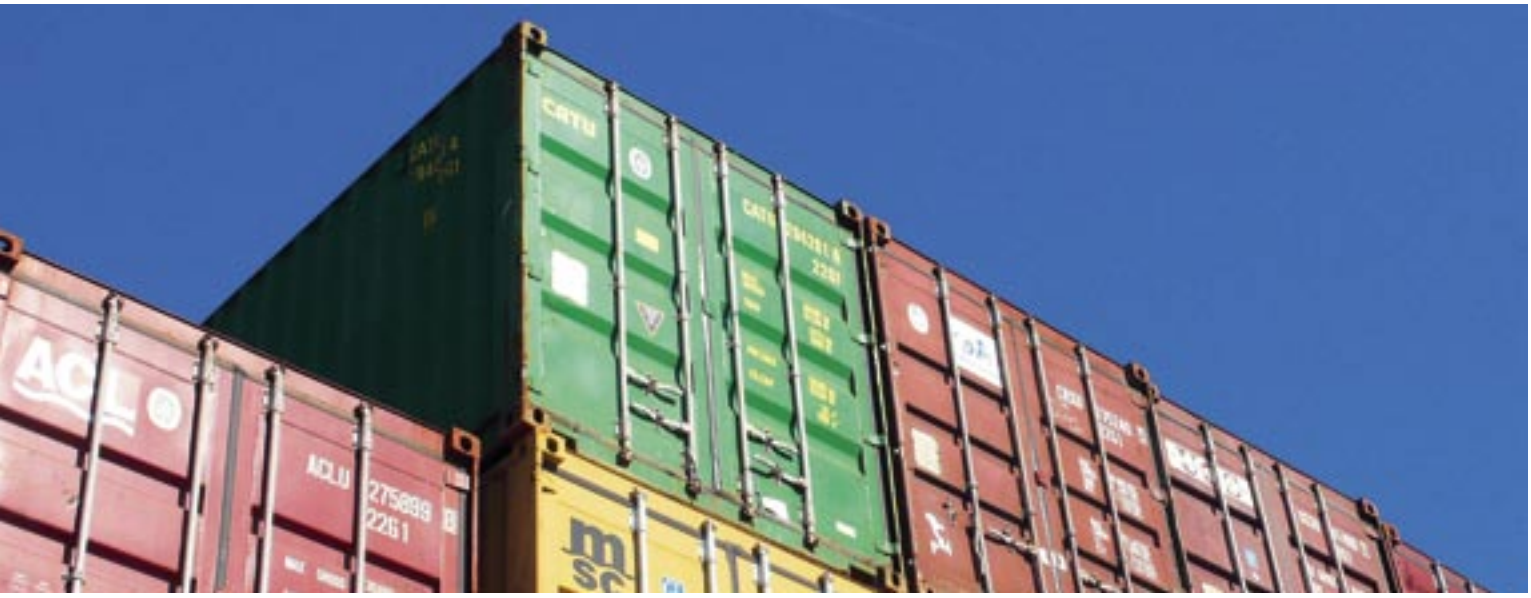
Paper and packaging

The paper industry is set for consolidation – the sector has been value-destroying over the past ten years and is one of the most leveraged sectors with a net debt to EBITDA of over 4x on average in Europe. In the containerboard industry, which is not affected by the spread of electronic media, SCA in Europe and International Paper in the USA should emerge as the top players in an increasingly oligopolistic market (the top four containerboard producers in the USA now account for around three-quarters of capacity, whereas five years ago the top five players accounted for around half). The European coated paper industry is already reducing capacity, but market leaders Sappi and UPM have been able to impose price increases, a sure sign of increasing pricing power. The glass bottle and can industries in the US are already concentrated but further consolidation is likely via aggressive acquisitions by Ball, Crown and Owens Illinois.

Consolidation stories in the paper and packaging sector

Source: Credit Suisse Research

Sector	Consolidators	Rationale
Containerboard	SKG in Europe, IP in the US	Europe is still a fragmented industry but smaller private companies with higher costs are likely to reduce capacity or exit the market. 90% of the increase in capacity since 2003 from highly leveraged private companies, whose assets are now likely targets. In USA, the top 4 control three quarters of capacity post International Paper's acquisition of Weyerhaeuser.
European coated paper	UPM, Sappi	Top 3 players in coated paper control three-quarters of the European market. Small private companies facing financing problems are exiting market or reducing capacity. Sappi (30% market share) emerges as industry leader. In spite of weak demand in Q1, prices have held up relatively well.
US glass bottle/can producers	Owens Illinois, Crown	Industries heavily cartelized – the four beverage can makers hold 96% of the market and one of these, A–B InBev's Metal Container, will likely be sold to reduce debt burden. High concentration and barriers to entry should allow high margins for an extended period. Owens Illinois controls around half of the glass containers market.



Transportation

The transportation industry scores near the top of our sector consolidation scorecard, having been consistently value-destroying over the last ten years. Road & rail, transportation infrastructure, express travel and airlines are the areas where the potential for consolidation is greatest. The less-than-truck-load (LTL) industry is likely to see consolidation under the lead of low-gearing companies, with the market leader now at risk of bankruptcy. Express travel is already relatively consolidated but the required global presence and high economies of scale will lead to further consolidation. Airlines have been a highly value-destroying industry with significant government involvement, which is now being reduced. Budget airlines with low leverage, high margins, stronger brands and larger networks (Easyjet, AirAsia) will gain market share. In the shipping industry, a lack of financing and a very strong delivery pipeline will likely force many small players to exit the market or be acquired. Low-cost operators with a strong balance sheet such as Diana Shipping will lead the consolidation process.

Consolidation stories in the transportation sector

Source: Credit Suisse Research

Sector	Consolidators	Rationale
Less than truckload (LTL)	Con-Way, Old Dominion	Top ten account for 60% of capacity – number one player, YRC Worldwide, is under stress, with a net debt to EBITDA of 18x.
Japan parcel delivery	Yamato HD	Only 4 big players have survived, 3rd and 4th players are loss-making and are now merging their business.
Express travel	UPS	This is a four-player market with Deutsche Post, TNT, UPS and FedEx controlling 42% of the market. There are considerable economies of scale and a global presence is required. UPS has margins well above average and could be the consolidator in the long term.
Airlines	Easyjet, AirAsia	AirAsia is tapping into the trend of passengers downtrading to low cost carriers and gaining market share in Thailand and Indonesia, where rivals are cutting capacity. Air Asia has a stronger brand, larger network and better economies of scale than peers. Easyjet has lower leverage and higher profitability than its peers.
Ocean shipping	Diana Shipping	Industry heavily impacted by a lack of financing and excess capacity (capacity expected to rise by 10% by 2011). Many small players to exit market or be acquired, but industry will remain fragmented given low barriers to entry. Diana Shipping is the lowest cost operator in dry bulk shipping with strong capital position – leverage just one third of its peers.

Retail

In the retail industry, drug retailing in the USA, specialty retail in Japan and DIY in the UK are the areas with the biggest potential for consolidation. The US drug retailing industry appears to be on the cusp of major supply-side changes. CVS Caremark and Walgreen are likely to gain market share from Rite Aid (which is overleveraged and has poor liquidity), as around a third of Rite Aid's locations have a CVS or Walgreen store within one mile. In Japan, the electronics retail industry is still very fragmented but the crisis has widened the gap in earnings and financial health between the top players and the rest. Substantial downsizing is inevitable and only 2–3 players are likely to be left in the market in three years' time. In the UK DIY industry, where the top three players control almost a half of the market, Kingfisher will consolidate its leadership given its structurally superior margins.

Consolidation stories in the retail sector

Source: Credit Suisse Research

Sector	Consolidators	Rationale
US drug retailing	CVS, Walgreen	Very competitive industry, but drugstores are likely to see a structural improvement in profitability. The number 4 operator, Rite Aid with 7% market share, has net debt to ebitda of 6X compared to peers of less than 1X and a poor liquidity position. CVS and Walgreen, which control around a quarter of the market, are the biggest beneficiaries.
Other US retailing	Best Buy, Bed Bath and Beyond, Staples, Abercombie	The credit crisis has accelerated the supply discipline evident in the retail sector by discouraging additional development and making refinancing of marginal properties more difficult. In electronics, Best Buy will benefit from the bankruptcy of Circuit City. In home furnishing, office supplies and department stores we have seen store closures but the impact on the industry has not been significant so far. In general, companies without structural problems and able to fill empty space at low rents will benefit the most.
Japan specialty retail	Yamada Denki, K's Holdings	In electronics, the top 5 players control more than a half of market share, but only Yamada and K's are efficient enough to survive in the medium term (their ROE is around 10% compared to an industry average of 1%). In drug retailing, the scheduled introduction of deregulation in OTC drug sales will force consolidation in the most fragmented and overcrowded retail format in Japan.
UK DIY	Kingfisher	Kingfisher's margins have been on average 65% higher than at Homebase, the number two, over the last 5 years and sales density is much better. DIY capacity likely to shrink by around 15% from peak.

Telecommunications

From a macro perspective, telecoms are one of the few industries that have experience of falling prices with falling asset prices. The incumbents are likely to be relative winners from the credit crisis. According to our telecom equipment analysts, 24 carriers (representing around a third of 2008 global mobile subscribers and a quarter of global wireless capex) have major potential refinancing problems (as defined by negative FCF if they pay back debt). The incumbents will benefit for the following reasons: (a) in some markets (Spain and UK) the second-tier operators have much lower margins and higher leverage; (b) telecom equipment providers set to lose pricing ability; (c) the race to invest in the next generation of technology is being postponed (only NTT DoCoMo and Verizon are moving to the next generation, the former out of choice, the latter because its technology is essentially 2G); (d) into downturns, handset replacement rates tend to fall and thus so do subsidies; (e) regulators may become more benign to make sure that fiber is eventually built.

Consolidation stories in the telecommunications sector

Source: Credit Suisse Research

Sector	Consolidators	Rationale
Telecom operators in some regions (UK, Spain, Philippines, to a lesser extent India and Indonesia)	Vodafone,TEF, PLDT, PT Telekom, Bharti Airtel	Used to deflation, second- tier operators in mentioned regions weakening, telecom equipment providers lose pricing ability (a quarter of capex is discretionary and FCF could be boosted by a similar amount), 4G upgrade postponed (hence reap rewards of 3G for longer), a more benign regulator in some instances.

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