## McKinsey on Finance



## Perspectives on Corporate Finance and Strategy

Number 30,
Winter 2009

The CFO's role in navigating the downturn 2
Companies—and their CEOs—may have to adapt more radically to the downturn than they now expect.

## Leading through uncertainty 8

The range of possible futures confronting business is great. Companies that nurture flexibility, awareness, and resiliency are more likely to survive the crisis, and even to prosper.

Financial crises, past and present 15
Past financial crises had very different effects on the real economy. Though the lessons of the past don't give much cause for optimism, they do provide hints on how companies should prepare this time around.

Mapping decline and recovery across sectors 21
Different sectors enter and emerge from downturns at different times. A look at past recessions suggests how some industries may fare.
Why the crisis hasn't shaken the cost of capital 26
The cost of capital hasn't increased so far in the downturn-and didn't
in past recessions.
What's different about M\&A in this downturn 31
M\&A may be more resilient in this downturn than in previous ones, but it will be a different kind of M\&A.

McKinsey on Finance is a quarterly publication written by experts and practitioners in McKinsey \& Company's Corporate Finance practice. This publication offers readers insights into value-creating strategies and the translation of those strategies into company performance. This and archived issues of McKinsey on Finance are available online at corporatefinance.mckinsey.com, where selected articles are also available in audio format. A McKinsey on Finance podcast is also available on iTunes.

Editorial Contact: McKinsey_on_Finance@McKinsey.com
To request permission to republish an article, send an e-mail to
Quarterly_Reprints@McKinsey.com.
Editorial Board: David Cogman, Richard Dobbs, Massimo Giordano,
Marc Goedhart, Bill Javetski, Timothy Koller, Werner Rehm, Dennis Swinford
Editor: Dennis Swinford
Design Director: Donald Bergh
Design and Layout: Veronica Belsuzarri
Managing Editor: Drew Holzfeind
Editorial Production: Sue Catapano, Lillian Cunningham, Roger Draper, Mary Reddy
Circulation: Subita Gurbani
Cover illustration by Christian Montenegro
Copyright © 2009 McKinsey \& Company. All rights reserved.
This publication is not intended to be used as the basis for trading in the shares of any company or for undertaking any other complex or significant financial transaction without consulting appropriate professional advisers. No part of this publication may be copied or redistributed in any form without the prior written consent of McKinsey \& Company.

## Editors' note

${ }^{\text {I }}$ See "McKinsey Global Survey Results: Economic conditions snapshot, November 2008," mckinseyquarterly.com.

If one thing has now become clear amid the extreme uncertainty spawned by the global crisis in credit markets, it is this: the bubbles-in consumer spending, real-estate prices, leverage, and corporate profitability-that have developed over the past generation have burst, but their effects will be felt for a long time. Across the world, stunning amounts of wealth have disappeared in the housing and equity markets, and the effects are now rippling through the real economy. As a result, CFOs and other executives are already facing a strategic landscape that has been dramatically redrawn, with few, if any, precedents.

Risks abound on that landscape. In a recent McKinsey survey, global executives agreed that their businesses would enter 2009 in a global recession marked by continuing high volatility in equity and credit markets, which they believe will remain more stagnant than liquid. ${ }^{\text {r }}$ As in every downturn, there will be opportunities as well. As many executives expect their companies' profits to rise as to fall in the next fiscal year, and some are finding opportunity in the turmoil—entering markets where competitors have weakened, hiring talent that would otherwise not have been available, and seeking M\&A opportunities.

The wisest course for CFOs during a period of distress-as well as in a period of growthis to resist faddish impulses and instead focus on fundamentals: understanding valuations, weighing investment opportunities, managing the balance sheet, and making strategic choices that create value. As such, we devote this issue of McKinsey on Finance to an exploration of some perspectives that can assist executives as they confront new economic and business realities. We examine the important role the CFO must play in a company's financial and planning processes—and the challenges of leading during a period of uncertainty. We position current and past crises in a historical perspective and gauge the decline in profitability that executives can expect as earnings, swelled by the leverage bubble, revert to the mean. Other research demonstrates that, despite the market turmoil, the cost of equity actually hasn't changed significantly. Finally, we review the year's M\&A activity, comparing it to the first years of past downturns and pondering what 2008 portends for the future.

Richard Dobbs and Timothy M. Koller

# The CFO's role in <br> navigating the downturn 


#### Abstract

Companies-and their CEOs-may have to adapt more radically to the downturn than they now expect.


## Richard Dobbs, Massimo Giordano, and Felix Wenger

${ }^{1}$ See Exhibit 4 in Richard Dobbs, Bin Jiang, and Timothy M. Koller, "Why the crisis hasn't shaken the cost of capital," in this issue. ${ }^{2}$ See Richard F. Dobbs, Tomas Karakolev, and Francis Malige, "Learning to love recessions," mckinseyquarterly.com, June 2002. McKinsey research finds that these more active companies on average conducted 63 percent fewer deals than their peers during times of growth and the beginnings of recessions but were very active toward the ends of recessions. This behavior has been rewarded by the financial markets. By the end of the 1990-9I recession, for example, successful challengers that made countercyclical investments had market-to-book ratios 25 percent higher than those of unsuccessful challengers.

A global downturn might appear to give companies with sufficient resources an unprecedented opportunity to buy assets or acquire market share on attractive terms. Indeed, many nonfinancial companies seem well positioned to do so, having entered the present crisis with stronger balance sheets than they had in past recessions, ${ }^{\text {I }}$ when businesses that followed countercyclical patterns of cash utilization and spending fared much better than those with purely defensive strategies. ${ }^{2}$

Yet this crisis shows signs of being the most dire and unpredictable one since the Great Depression. At the end of 2008 , most national economies were experiencing the sharpest fall in consumer and business confidence in 20 years. After an unprecedented five- to ten-year boom, commodities have experienced their steepest decline since 1945. Experts expect several quarters of negative growth and substantially higher unemployment rates. Indeed, for many companies, survival is not a certainty. What's more, the broader forces at work in the global economy mean that the underlying economics of strategies could continue to shift with unprecedented speed and scale. Such extreme uncertainty
demands constant attention, frequent changes in priorities, and strategies that anticipate and respond to a changing landscape.

Against this backdrop, the role of the chief financial officer takes on critical importance. CFOs must use their deep understanding of financials and liquidity to understand how volatile prices and demand will affect the performance of their companies, both to manage potentially lethal threats and to ensure the availability of the financial resources required for countercyclical investments. Most CFOs will need to replace traditional approaches to budgeting and planning with a more aggressive one
underpinned by a reexamination of earlier assumptions about earnings and growth and about how deep the downturn will be.

## Challenge assumptions

A surprisingly high proportion of companies are still implicitly building their budgets and investment plans on the assumption that they will return rapidly to top-of-the-cycle performance. Many CFOs will need to challenge such optimistic assumptions by asking a few uncomfortable questions.

Most CFOs will need to replace traditional approaches to budgeting and planning with a more aggressive one
${ }^{3}$ See Richard Dobbs, Bin Jiang, and Timothy Koller, "Preparing for a slump in earnings," mckinseyquarterly.com, March 2008.
${ }^{4}$ See Richard F. Dobbs, Tomas Karakolev, and Francis Malige, "Learning to love recessions," mckinseyquarterly.com, June 2002.

## What's "normal" performance?

Many executives still have unrealistic expectations about future growth and margins. In general, nonfinancial corporations performed very strongly heading into 2008, having enjoyed much higher profits and return on capital in 2006 and 2007 than at any time in the past 40 years. ${ }^{3}$ Return on equity, for example, reached 18 percent in 2007, compared with its 40-year average of 13 percent. US earnings reached 6 percent of GDP in 2007, compared with a 40-year average of 3 percent. While some reversion to the mean is underway, in 2008 performance is still likely to beat the 40-year trend.

Projecting what will be normal performance after the end of the present downturn requires careful consideration of an industry's cyclicality and microeconomics. CFOs will need to supplement recent averages with an analysis of the structural changes likely to persist beyond the recession. Growth in demand for many
natural resources, for instance, could well be structural, and supply capacity is short in the medium term. All this implies that investments in natural resources might be sound. Other industries, such as finance, may be undergoing long-run structural shifts, possibly returning to the levels of profitability and industry scale that prevailed io years ago.

## How bad could things get?

Although most companies are already acting on the cost and investment side or have contingency plans to do so, few of them deal adequately with the type of sharp, long downturn that is now possible. Recent months have underscored the impact of changes in confidence and the role of government intervention not only in banking but, increasingly, in other industries as well. The confidence of consumers, corporations, and providers of capital, as well as the actions of governments, will of course be pivotal in determining how quickly the economy recovers. Since all these variables are difficult to forecast, companies must prepare for the worst by considering what might happen in an extreme downturn.

## Where is the real opportunity?

Previous recessions have shown that downturns create organic and inorganic growth opportunities that are different from those arising in boom times. 4 In the US mortgage industry, one of the earliest victims of the crisis, for example, small lenders are thriving and have increased their market share massively as large banks attend to restoring their balance sheets. The valuations of banks, car manufacturers, and natural-resource companies are down more than 50 percent, so they could represent real and unique opportunities for well-positioned companies to consolidate sectors or venture into adjacent markets.

As in other recessions, some companies are already successfully buying on the cheap. But CFOs need to assess the reality of the opportunity by understanding the long-run industry economics, for a number of companies have already bloodied their hands trying to "catch a falling knife" in this downturn.

## Extreme crisis planning

The new assumptions should underpin a new approach to the annual budgeting and planning process. Most companies ought to throw out the traditional one and adopt a crisis-planning mode focused strictly on cash flows, not accounting profits. For this reason, CFOs must emphasize financing decisions, capital expenditures, and working-capital changes and adopt a scenario approach that is more common in longer-term strategic planning. Ideally, the CFO should prepare two or three scenarios built upon different macroeconomic assumptions-base case to worst case. These scenarios should also reflect company-specific risks, such as the sudden unavailability of short-term funding, bankruptcies of major customers or suppliers, or a loss of access to working capital in the local currency. And the CFO must develop contingency plans in the event that these scenarios should actually come to pass.

In the best-run crisis-planning efforts we've seen, the CFO manages the work in a centralized "war room," assembling a crossfunctional task force that includes team members from the finance function, as well as representatives from the sales, supply chain, production, and business-management functions. The task force examines cash flow-related mechanisms, such as how many days it takes to convert raw-material expenses into customer payments for finished goods-often half a year-the
extent of the sales force's accountability for credit losses, and whether operating units have incentives to maximize cash at the expense of earnings. The task force then moves on to a more operational phase of its work, using the war room to monitor and manage payment flows, operating profitability, investments, and funding activities.

## Ensuring survival

In building these plans, CFOs will need to evaluate and quantify all cash-generating measures in each scenario. Most of them will be familiar, reflecting what we know from experience are the priorities of many companies. Even so, our experience also shows that there's value in maintaining a checklist to avoid overlooking things in the heat of battle.

## Liquidity management

Many corporations still keep their cash in several legal entities and plan their liquidity on a monthly basis, with a generous cushion. In a crisis, they should adopt more aggressive practices. Leading banks, for example, have daily liquidity updates, sophisticated estimates of cash needs up to 360 days in advance, and structural analyses of the current and projected balance sheet. As bank analysts develop their forecasts, they take into account external risks, such as currency shifts or a failure of counterparties to pay. Some banks also pool cash on a daily, even real-time, basis.

## Secure short-term funding

In normal times, best practice may be for companies to engage with a number of banks that compete to provide them with credit and short-term funding. Under extreme circumstances, however, stronger partnerships with fewer, stronger banks could make more sense. Companies will find that such banks understand their needs and risks in greater detail and are willing

to commit more credit, orchestrate financing, and propose innovative solutions to finance receivables. In some cases, companies are better off drawing down credit lines even if they are not yet needed.

## Working capital

CFOs looking to generate cash over the next 12 months often find that the single biggest opportunity is to reduce working capital by tightening up management. A global chemical company, for example, has implemented a plan to shave 25 percent off its net working capital by billing earlier, enforcing payment terms, reducing safety stocks, and improving production planning. These moves will generate additional one-off cash flows higher than the current annual operational cash flows. CFOs should also consider steps (including changing credit terms for riskier customers) to deal with a potentially dramatic increase in nonpayment. Some companies are even considering the creation of special collection units-similar to the credit workout groups banks use-to recover receivables from clients.

## Streamline capital expenditures

The need for additional output drives most capital expenditures, either directly, through higher capacity, or indirectly, though higher productivity. In a recession, many companies need to reduce output, so optimizing capital expenditures may not suffice. CFOs must be prepared to cut them almost completely should the need arise, except if exiting would destroy valueparticularly strategic, long-term investments that must be preserved at all costs-
and maintenance investments. Companies that do need more capacity, such as a pharmaceutical business with a pipeline of new drugs, should evaluate whether to cancel projects for new factories and rely on contract manufacturing instead or to buy a distressed competitor with idle capacity.

## Cost reduction contingency plans

CFOs often find that cost-cutting measures do not have the expected cash impact or take additional time to generate net savings. Headcount reductions, for example, are often cash negative in the first year because of severance payments and notice periods. Plant closures generate shutdown and opportunity costs.

Typically, the most flexible costs are procurement, compensation (such as bonus pools), and overhead (management and staff functions with flexible contracts). One global trading company, for instance, suspended activities in certain Asian countries where business in a downturn was negligible. The company relocated all its personnel but kept an address in these countries and had senior managers who could travel to them and maintain a minimal presence-and it quickly expanded its position once the market recovered. A European bank is considering a new stock option plan and postponing variable compensation until better times.

## Protect funding and capital base

The current financial crisis, it is widely accepted, means that companies will need to operate with less debt. Because shortterm funding is uncertain, CFOs tend to
prefer longer-term capital. Together, these trends have significant consequences for balance sheet planning: CFOs, for example, will have to evaluate the trade-offs between issuing or suspending dividends. The latter course would give companies access to long-term funding now but frustrate equity holders. The former would satisfy equity holders but require the company to wait until conditions improved before accessing longer-term funding.

> Recessions are also a good to time acquire talent, if new employees remain loyal after the downturn ends

${ }^{5}$ See André Annema, William C. Fallon, and Marc H. Goedhart, "When carve-outs make sense," mckinseyquarterly.com, May 2002.

## Planning to seize the opportunity

If funding and continuity are secure, a company can try to overtake its peers even at the bottom of a cycle. Such moves require a recession-specific planning approach to assess a range of strategic possibilities.

## Proactive M\&A

In the coming months, companies with the necessary resources will have a chance to pick and choose from a range of attractive small to midsize companies that are fundamentally strong but face difficulty gaining access to capital markets. Non-core divisions of larger troubled groups might also provide opportunities. Particularly at risk are companies with weak cash flows, high funding needs, poor ratings, high cyclical risks, or unstable investor bases. In mining, for example, smaller players and aggressively funded new entrants now trade for a fraction of their invested capital. So do biotech companies and specializedequipment manufacturers whose orders have vanished. The planning process should
identify and evaluate such acquisition targets so that a company is ready to pounceif necessary lining up a financial partner such as a sovereign-wealth fund or a privateequity firm.

## Reevaluate the portfolio

In downturns, companies generally desire greater focus yet hesitate to divest at depressed prices, even as lagging businesses fall further and further behind. At a European chemical company, for instance, managers resisted selling a unit in decline, arguing that only a year previously it would have fetched double the current market value. Two years later, the business had actually lost more money than the price it would have fetched earlier. Eventually, it was given away.

It bears remembering that the recession price for a sale isn't comparable to the positive-cycle economics of keeping the business. CFOs must insist on a suitably realistic business plan or help to develop alternative exit ideas. The options include a sale to peers, payment in stock instead of cash, or a spinoff in which shareholders receive split shares as compensation. Empirical evidence suggests that such transactions do create value for the seller. ${ }^{5}$

Capital expenditures, R\&D, recruiting, and advertising
In previous downturns, winners took a countercyclical approach to capital expenditures, $\mathrm{R} \& D$, and advertising: just when all these were least expensive, companies that had enough money outspent the competition, building strong positions for the day when the economy recovered. Recessions are also a good to time acquire talent, if new employees remain loyal after the downturn ends.

## Extract value from suppliers

Companies often have a strong sense of their suppliers' credit risk because they understand the products being offered. Some suppliers may be fundamentally healthy but still face a cash squeeze, so customers that have sufficient funding can extract better price terms from them by paying more quickly. ${ }^{6}$ Recessions are also an opportune moment to push for a restructuring of the supply chain and perhaps to acquire suppliers.

The unusual breadth and depth of the present crisis may force companies to adapt more radically than many now expect, by breaking with established rules for planning, budgeting, and investing. Cash once again is king, and all systems and decisions must be geared to preserve it while companies make conscious trade-offs to achieve their longer-term strategic objectives. MoF
${ }^{6}$ See Richard Dobbs, Tomas Karakolev, and Rishi Raj, "Preparing for the next downturn," mckinseyquarterly.com, April 2007.

Richard Dobbs (Richard_Dobbs@McKinsey.com) is a partner in McKinsey's Seoul office,
Massimo Giordano (Massimo_Giordano@McKinsey.com) is a partner in the Milan office, and Felix Wenger (Felix_Wenger@McKinsey.com) is a partner in the Zurich office. Copyright © 2009 McKinsey \& Company.
All rights reserved.

# Leading through uncertainty 

The range of possible futures confronting business is great. Companies that nurture flexibility, awareness, and resiliency are more likely to survive the crisis, and even to prosper.

Lowell Bryan and Diana Farrell

As consumers batten down the hatches and the global economy slows, senior executives confront a more profoundly uncertain business environment than most of them ever have. Uncertainty surrounds not only the downturn's depth and duration-though these are decidedly big unknowns—but also the very future of a global economic order until recently characterized by free-flowing capital and trade and by ever-deepening economic ties among nations. A few months ago, the only challenges to this global system seemed to be external ones such as climate change, terrorism, and war. Now, every day brings news that makes all of us wonder if the system itself will survive.

The task of business leaders must be to overcome the paralysis that dooms any organization and to begin shaping the future. One starting point is to take stock of what they do know about their industries and the surrounding economic environment; such an understanding will probably suggest needed changes in strategy. Even then, enormous uncertainty will remain, particularly about how governments will behave and how the global real economy and financial system will interact. All these factors, taken together, will determine whether we face just a few declining quarters, a severe global recession, or something in between.

Uncertainty of this magnitude will leave some leaders lost in the fog. To avoid impulsive, uncoordinated, and ultimately ineffective responses, companies must evaluate an unusually broad set of macroeconomic outcomes and strategic responses and then act to make themselves more flexible, aware, and resilient.

Strengthening these organizational muscles will allow companies not only to survive but also to seize the extraordinary opportunities that arise during periods of vast uncertainty. It was during the recessionary I 870 s that that John Rockefeller and Andrew Carnegie began grabbing dominant
positions in the emerging oil and steel industries by taking advantage of new refining and steel production technologies and of the weakness of competitors. A century later, also in a difficult economy, Warren Buffett converted a struggling textile company called Berkshire Hathaway into a source of funds for far-flung investments.

The task of business leaders must be to overcome the paralysis that dooms any organization and to begin shaping the future
of cross-border investment and trade flows. A dollar of capital must finance every dollar of trade, so the global capital market has stimulated the international exchange of goods and services. It has facilitated crossborder investments-in intellectual property, talent, brands, and networks-that help economies and companies grow and profit, and it has enabled the companies that make such investments to repatriate their profits. In short, global integration and growth will revive only if the global capital market does. Yet it has sustained a body blow that will have repercussions for years, even if international leaders make the necessary long-term adjustments.

## What we know

The financial crisis of 2008 has severely damaged the global capital market. Through greed, neglect, or ignorance, the participants abused it until they broke some of its basic mechanisms-and the implications are far reaching.

Most obviously, congestion in the global capital market is exacerbating the US domestic credit crisis. That crisis has spread globally, hitting Europe especially hard. Banks have been scrambling for deposits to replace sources of funding such as directissue commercial paper, medium-term notes, and asset-backed paper. The search for deposits is required to finance existing loans, and borrowers will need significantly more of them because all but the strongest have, like the banks, lost access to the securities markets. The US government, in particular, has aggressively tried to address this problem through huge liquidity programs, such as the purchase of mortgageand other asset-backed securities. But it remains to be seen how effective those efforts will be in mitigating the credit crunch.

The global capital market crisis worsens this credit crunch by reversing the dynamic

## The changing role of government

Since September 2008, governments have assumed a dramatically expanded role in financial markets. Policy makers have gone to great lengths to stabilize them, to support individual companies whose failure might pose systemic risks, and to prevent a deep economic downturn. We can expect higher tax rates to pay for these moves, as well as the reregulation of finance and many other sectors. In short, governments will have their hands in industry to an extent few imagined possible only recently.

That's not all. Protectionism and nationalism will probably feature more prominently in policy debates. We may see not only oldstyle populist anger against business, high executive compensation, and layoffs but also the emergence of authoritarian populist movements. Already-dilatory trade discussions will encounter renewed resistance. Although greater global coordination is sorely needed, national political pressures will make it hard to achieve. All this will constrain some business activities, but it also opens the door to new ventures that depend upon collaboration between the public and private sectors.

## Exhibit

Hard, harder, hardest times


## Deleveraging

The cheap credit of the past few years probably won't return for some time. For many households, this will mean reducing consumption and postponing retirement; for financial institutions-increasingly, bank holding companies-much higher capital requirements, less freedom to operate and innovate, and probably lower profitability; for governments, even more limited resources for health care, education, pensions, infrastructure, the environment, and security; and for corporations, a different role for capital. More broadly, for many companies the high returns and rapid
growth of recent years rested on cheap credit, so deleveraging means that expectations of baseline profitability and economic growth, as well as shareholder returns, must all be seriously recalibrated.

## New business models and industry restructuring

Companies engaging with the capital markets will encounter funders that are less tolerant of risk, a reduced ability to hedge it, and greater volatility. Hardest hit will be business models premised on high leverage, consumer credit, large customer-financing operations, or high levels of working capital.


Businesses with long or inflexible production cycles or very long-term investment requirements will find it especially difficult to manage their funding. Some won't make it, so industries will restructure. Corporate leaders already recognize this: in a McKinsey Quarterly executive survey launched the day after the US presidential election, 54 percent of the respondents expected their industries to consolidate.

These are all truths we know. They require a significant shift in thinking about government as a stakeholder, the value talent creates when it becomes harder to leverage, how to conserve capital, and strategies for sound risk taking-among other things.

## What we don't know

Yet there is much that we don't know, and won't for some time: how well will governments work together to develop effective regulatory, trade, fiscal, and monetary policies; what will these responses mean for the long-term health of the global capital market; how will its health or weakness influence the pace and extent of change in areas such as the economic role of government, financial leverage, and business models; and what will all this imply for globalization and economic growth?

Although these questions won't be answered in the short or even the medium term, decisions made in the immediate future are critical, for they will influence how well organizations manage themselves now and compete over the longer haul. The winners will be companies that make thoughtful choices-despite the complexity, confusion,
and uncertainty-by assessing alternative scenarios honestly, considering their implications, and preparing accordingly.

In particular, organizations must think expansively about the possibilities. Even in more normal times, the range of outcomes most companies consider is too narrow. The assumptions used for budgeting and business planning are often modest variations on baseline projections whose major assumptions often are not presented explicitly. Many such budgets and plans are soon overtaken by events. In good times, that matters little because companies continually adapt to the environment, and budgets usually build in conservative assumptions so managers can beat their numbers.

But these are not normal times: the range of potential outcomes-the uncertainty surrounding the global credit crisis and the global recession-is so large that many companies may not survive. We can capture the wide range of outcomes in four scenarios (exhibit). In the most optimistic of them, government action revives the global credit system in the short to medium term, depending on the efficacy of the massive stimulus packages and aggressive monetary policies already adopted. Globalization may slow, but trade and capital flows ultimately resume, and the developed and emerging economies continue to integrate as confidence returns.

Under the least optimistic scenario, the global recession lasts more than five years (as Japan's did in the I990s) because of ineffective regulatory, fiscal, and monetary policy. Economies everywhere stagnate; overregulation and fear keep the global credit and capital markets closed. Trade and capital flows continue to decline for years as globalization goes into reverse,
and the psychology of nations becomes much more defensive and nationalistic.

We have intentionally stylized our descriptions of these scenarios to enliven them; many permutations are possible, depending, for example, on the individual circumstances of any given company or industry. What we hope to illustrate is the importance for strategists of considering previously unthinkable outcomes, such as the rollback of globalization. Unappealing as some scenarios may be, any company that sets its strategy without taking even the worst of them into account is flying blind.

## Leading through uncertainty

Most companies acted immediately in the autumn of 2008 when credit markets locked up: they cut discretionary spending, slowed investment, managed cash flows aggressively, laid off employees, shored up financing sources, and built capital by cutting dividends, raising equity, and so forth. While prudent, these actions probably won't produce the short-term earnings that analysts expect, at least for most companies. In fact, it's time they abandoned the idea that they can reliably deliver predictable earnings. Quarterly performance is no longer the objective, which must now be to ensure the long-term survival and health of the enterprise by making it more flexible, aware, and resilient.

## More flexible

A crisis tends to surface options-such as how to slash structural costs while minimizing damage to long-term competi-tiveness-that organizations ordinarily wouldn't consider. Unless executives evaluate their options early on, they could later find themselves moving with too little information or preparation and therefore make faulty decisions, delay action, or forgo options altogether. Companies therefore
must now take a more flexible approach to planning by developing several coherent, multipronged strategic-action plans, not just one. Every plan should embrace all of the functions, business units, and geographies of a company and show how it can make the most of a specific economic environment.

These plans can't be academic exercises; executives must be ready to pursue any of them-quickly-as the future unfolds. In fact, the broad range of plausible outcomes in today's business environment calls for a "just in time" approach to strategy setting, risk taking, and resource allocation by senior executives. A company's Io to 20 top managers, for example, might have weekly or even daily "all hands on deck" meetings to exchange information and make fast operational decisions.

Greater flexibility also means developing as many options as possible that can be exercised either when trigger events occur or the future becomes more certain. Often, options will be offensive moves. Which acquisitions could be attractive on what terms, for instance, and how much capital and management capacity would be required? What new products best fit different scenarios? If one or more major competitors should falter, how will the company react? In which markets can it gain share?

As companies prepare for such opportunities, they should also create options to maintain good health under difficult circumstances. If capital market breakdowns make global sourcing too risky, for example, companies that restructure their supply chains quickly will be in much better shape. If changes in the global economy could make a certain kind of business unit obsolete, it's critical to identify it and finish all the preparatory work needed to sell off its assets before
other companies with similar units reach the same conclusion.

## A crisis is a chance to break ingrained structures and behavior that sap the productivity and effectiveness of many organizations

${ }^{\text {I }}$ See Matthew Guthridge, John R. McPherson, and William J. Wolf, "Upgrading talent," mckinseyquarterly.com, December 2008.

## More aware

Better business intelligence promotes faster, more effective decision making. Companies can often gain insights into the potential moves of competitors by weighing news reports about their activities, stock analysts' reports, and private information gathered by talking to customers and suppliers. Such intelligence is always important; in a crisis it can make the difference between missing opportunities to buy distressed assets and leaping in to snare them.

To get this kind of business intelligence, companies need a network, typically led by someone with strong support from the top. This executive's mandate should include creating "eyes and ears" across businesses and geographies in particular areas of focus (such as the competition's response to the crisis), as well as gathering and exchanging information. A network is critical because information is most useful if it moves not just vertically, up and down the organization, but also horizontally. Employees can help one another: salespeople in a network, for example, should exchange knowledge about what's working in economically distressed regions.

Assembling bits of information, facts, and anecdotes helps companies make sense of what's happening in an industry. Say, for example, that a supplier says it has no difficulties with funding, though firsthand knowledge from other sources indicates that the company is struggling to meet its
payroll. Such warnings can allow executives to get a full picture much more quickly than they could by sitting in their offices and interacting only with direct subordinates.

## More resilient

A crisis is a chance to break ingrained structures and behavior that sap the productivity and effectiveness of many organizations. Such moves aren't a short-term crisis response-they often take a year or more to pay dividends-but are valuable in any scenario and could help a company survive if hard times persist. Although employees may dislike this approach, most will understand why management aims to make the organization more effective.

This may, for example, be the time to destroy the vertical organizational structures, retrofitted with ad hoc and matrix overlays, that encumber companies large and small. Such structures can burden professionals with several competing bosses. Internecine battles and unclear decisions are common. Turf wars between product, sales, and geographic managers kill promising projects. Searches for information aren't productive, and countless hours are wasted on pointless e-mails, telephone calls, and meetings.

Experience shows that streamlining an organization to define roles and the way those who hold them collaborate can greatly improve its effectiveness and decision making. When jobs must be eliminated, the cuts mostly reduce unproductive complexity rather than valuable work. Cisco took that approach in shedding 8,500 jobs in 200I. ${ }^{1}$ When the company redesigned its roles and responsibilities to improve cooperation among functions and reduce duplication of effort, talented employees felt more satisfied in a more collaborative workplace. In fact, many functional areas offer big
${ }^{2}$ For more on managing technology, operations, and marketing in this environment, see David Court, "The downturn's new rules for marketers," mckinseyquarterly.com, December 2008; James M. Kaplan and Johnson Sikes,
"Managing IT spending," mckinseyquarterly .com, December 2008; and Alexander Niemeyer and Bruce Simpson, "Freeing up cash
from operations," mckinseyquarterly.com, December 2008.
opportunities: greater effectiveness, lower fixed costs, freed-up capital, and reduced risk. This could be the time to redefine and reprioritize the use of IT to increase its impact and cut its cost. Other companies could seize the moment to control inventory; to reexamine their cash flow management, including payments and receivables; or to change the mix of marketing vehicles and sales models in response to the rising cost of traditional media and the growing effectiveness of new ones. ${ }^{2}$

As customer preferences change, competitors falter, opportunities to gain distressed assets emerge, and governments shift from crisis control to economic stimulus, the next year or two will probably produce new laggards, leaders, and industry dynamics. The future will belong to companies whose senior executives remain calm, carefully assess their options, and nurture the flexibility, awareness, and resiliency needed to deal with whatever the world throws at them. MoF

The full version of this article is available on mckinseyquarterly.com.

Lowell Bryan (Lowell_Bryan@McKinsey.com) is a partner in McKinsey's New York office, and
Diana Farrell (Diana_Farrell@McKinsey.com) is director of the McKinsey Global Institute.
Copyright © 2009 McKinsey \& Company. All rights reserved.

## Financial crises,

## past and present

> Past financial crises had very different effects on the real economy. Though the lessons of the past don't give much cause for optimism, they do provide hints on how companies should prepare this time around.

## David Cogman and Richard Dobbs

[^0]Financial crises occur with surprising frequency-in every decade in the past century there has been at least one big shock to a major economy's financial system. Judging from that history, the current upheaval will probably rank among the largest, and we face the prospect of a severe, painful recession. Yet comparing the current financial crisis with those of the 2oth century may provide some comfort: the impact of past crises on the real economy was by no means uniform, and it depended, critically, on the way governments acted to recapitalize the banking system and to restore stability and confidence.

The boom that preceded the present crisis uniquely combined several leverage-driven bubbles: a residential-mortgage bubble, an associated one in the real-estate market, and a bubble in corporate earnings. At the time of writing, US financial institutions had taken total credit crisis-related write-offs of almost $\$ \mathrm{I}$ trillion. ${ }^{\mathrm{I}}$ McKinsey estimates that the total eventual credit losses in the United States are likely to be between $\$$ I. 4 trillion to $\$ 2.2$ trillion in a base case. ${ }^{2}$ The losses will be greater if another major asset area (such as credit default swaps) collapses or if a misguided policy response exacerbates the problems, as it did in Japan during the 1990s. This
base case range of possible losses represents Io to 15 percent of US GDP.

By historical standards, that is substantial. In the past century, it was exceeded only three times: during the banking crisis that inaugurated Japan's "lost decade" in the early 1990s, the Asian financial crisis of the late ' $90 s$, and the Great Depression. In the first two, the afflicted banking systems recorded total losses of 15 and 35 percent of GDP, respectively. Losses in the Great Depression were around 20 percent of GDP in 1929, ${ }^{3}$ but this occurred in a very different industry environment from today. Due to a combination of runs on deposits,
high levels of bank leverage, progressive deleveraging of the economy, and limited ability of the Fed to intervene, ${ }^{4}$ this quickly became a protracted economic downturn in which more than 9,000 financial institutions either went into bankruptcy or sought governmental assistance, and the economy experienced massive deflation.

> How long it takes an economy to emerge from a downturn depends heavily on what kind of cleanup and stimulus package governments employ
${ }^{4}$ The regulatory environment for the banking industry in 1929 was very different from today's, particularly around deposit insurance, which was instituted after the Great Depression; the Federal Reserve's ability to act as lender of last resort; and the degree of visibility that the Fed had into banks' balance sheets.
${ }^{5}$ Lowell Bryan and Diana Farrell, "Leading through uncertainty," mckinseyquarterly.com, December 2008. An excerpted version of the article appears in this issue.
6 "Employment situation summary," US Department of Labor, Bureau of Labor Statistics, December 5, 2008.
7 Carmen M. Reinhart and Kenneth S. Rogoff,
"Is the 2007 sub-prime financial crisis so different? An international historical comparison," National Bureau of Economic Research working paper, Number I376I, January 2008.
8 "Financial Stress and Economic Downturns," World Economic Outlook, October 2008:
Financial Stress, Downturns, and Recoveries, International Monetary Fund, 2008.

From a company standpoint, the critical issue is the impact such shocks and subsequent downturns can have on the availability of credit-and the impact of a credit shortage on the real economy and on consumer and corporate confidence. The downturn after the S\&L crisis of the 1980 and '90s, when bank write-offs equaled some 4 percent of GDP, lasted about two years. GDP ended up about 4 to 5 percent lower than it would have been given the pre-crisis trend line. This is in line with McKinsey's current estimate that the present credit crisis will cut real GDP by around 3 to 7 percent from trend growth. ${ }^{5}$

If the US economy were to follow the same path as in the more severe crises, the total lost GDP could be two to three times greater than that estimate. After the bursting of Japan's asset bubble, the country's economy grew by less than half a percent a year in real terms for a decade, and GDP ended up around I 8 percent lower than it would have given its pre-crisis trend line. In the countries hardest hit by the 1990s' Asian financial crisis-Indonesia, Malaysia, the Philippines, South Korea, and Thailand-GDP shrank by an average
of 8 percent in 1998 in local-currency terms. Since their currencies halved in value, on average, in US dollar terms the damage was catastrophic-bankrupting many companies and causing widespread social unrest. And during the Great Depression, from 1929 to 1933, 28 percent of real GDP was lost.

As of December 5, 2008, US unemployment stood at 6.7 percent. ${ }^{6}$ That is slightly above its level during the 2001-02 recession but still some way below the level associated with the oil shocks of the 1970s (8.5 percent) and the S\&L crisis (nearly io percent). It is far short of unemployment during the Great Depression, which conservative estimates put at around 25 percent.

How long it takes an economy to emerge from a downturn depends heavily on what kind of cleanup and stimulus package governments employ-especially in repairing the banking system's ability to provide credit efficiently and restoring confidence among companies and consumers. On average, countries have needed two years to emerge from past recessions after major banking crises ${ }^{7}$ and up to twice as long to return to trend growth. ${ }^{8}$ Only in two cases did a downturn last substantially longer: in Japan during the lost decade, as a result of counterproductive government policies, and in the Great Depression, when the government was far less able to mount a coordinated response than it is today.

Equity markets are the most visible and dramatic indicators as crises unfold. At the end of October 2008, the S\&P 500 index had fallen by 46 percent from its peak a year before (October 9, 2007, to October 27, 2008). By late November 2008, the US equity market had given up almost all of its gains since the 2001-02 dot-com bust.

## Exhibit

## Coming back in sync

- Including financial sector


Year-to-year net income growth, \%


[^1]Although nobody knows if the market has reached bottom, the fall so far isn't unusual by historical standards. Japan's Nikkei 225 fell by 48 percent from peak to trough (December 29, 1989, to October 1, 1990) during the banking crisis, though the market has subsequently fallen still further; at the end of October 2008, it retained less than 20 percent of the peak value reached in 1999. During the Asian financial crisis, the equity markets of Indonesia, South Korea, and Thailand fell by 65,72 , and 85 percent, respectively, in local-currency terms. In the United States, the S\&P 500 index fell by 49 percent from March 24, 2000, to October 9, 2002, after the tech bubble burst.

There is, however, one important difference in the current crisis. In previous ones, market valuations, as measured by price-to-earnings ( $\mathrm{P} / \mathrm{E}$ ), hit excessive levels before the crash. 9 This time, corporate earnings, which were around 50 percent above their long-run trend line as a proportion of GDP, experienced a bubble as well. Before the onset of the credit crisis, US corporate earnings were substantially above their trend growth (exhibit). ${ }^{10}$ Both the numerator and the denominator of P/E ratios were inflated.

By historical standards, the real-estate market bubble is more worrisome, because of the medium-term impact on household wealth. From the mid-i97os to the end of the last century, US housing values enjoyed average nominal growth of around 5.4 percent a year, according to the House Price Index of the Office of Federal Housing Oversight. There were two major cycles during this period: in the late I970s and the late 1980 s. In both, national average home prices climbed, at most, 5 to 6 percent above the trend line. From 2000 to 2007 , however, home prices climbed to 40 percent above the previous trend.

Going into the present crisis, the US economy was more exposed to real estate than ever before. In the run-up to the S\&L crisis, the total stock of US residential property was worth around IO4 percent of GDP, and mortgage debt financed a third of that property. In 2001, it was worth around I2I percent of GDP ${ }^{\text {II }}$ and more than 40 percent of it was financed by mortgages. At the end of 2007, Harvard's Joint Center for Housing Studies estimates, the total stock of US residential property was worth \$19 trillion, around I40 percent of US GDP, and more than half was financed by mortgages. If commercial mortgages are included, total mortgage debt was \$I4.4 trillion, more than ioo percent of GDP.

Since the peak, housing prices have fallen by more than 20 percent, as measured by the Case-Shiller housing index, whose futures imply a further fall of more than io percent from current levels. Losses in housing, when realized, could be of the same order as in the stock market as of early December 2008.

## What does the future hold?

Despite the shared features of the past century's financial crises-usually, excess leverage somewhere in the financial system and then a breakdown in confidencethe recessions following them were quite different. What determined the length and severity of those recessions was how governments responded: in particular, whether they managed to restore confidence among consumers, companies, investors, and lenders.

An economic crisis becomes a catastrophic recession only if it blocks the provision of capital to businesses long enough to generate widespread corporate failures. This blockage is what made the Asian financial crisis so devastating. Net capital inflows to the
${ }^{9}$ Marc Goedhart, Bin Jiang, and Timothy Koller, "Market fundamentals: 2000 versus 2007," mckinseyquarterly.com, September 2007.
${ }^{10}$ Richard Dobbs, Bin Jiang, and Timothy Koller, "Preparing for a slump in earnings," mckinseyquarterly.com, March 2008.
${ }^{\text {II }}$ Flow of Funds Accounts of the United States, Federal Reserve Statistical Release, December 7, 200I.
region, $\$ 93$ billion in 1996, turned into net outflows of \$12 billion in 1997. Local banking systems just couldn't provide the capital to plug this gap, foreign banks weren't prepared to extend credit, and the International Monetary Fund (IMF) moved too slowly. As a result, businesses couldn't finance working capital, let alone investment, and failed to obtain the

> Under less extreme conditions, with the right kind of government intervention, economies can weather even sizable credit crises

[^2]export financing these countries needed given the high share of exports in their GDPs. Once the flow of credit had been restored, the economies affected by the crisis recovered quickly. Similar dynamics were at work during the Great Depression, when a combination of bank runs and limited federal controls undermined the financial economy. From 1929 to 1933, almost half of the banks operating in the United States before 1929 either failed or needed government assistance, as a result of falling prices, the doubling of the country's debt-service ratio, and the default of more than half of US farm debt. ${ }^{12}$ Many of the companies with the strongest credit couldn't obtain long-term debt capital in the years after the crisis. Moreover, capital had minimal cross-border mobility in the 1930 s. With businesses starved of funding, corporate investment fell by more than 75 percent from 1929 to 1933, according to Bureau of Economic Analysis data.

Under less extreme conditions, with the right kind of government intervention, economies can weather even sizable credit crises. From 198i to 1983, for example, Federal Deposit Insurance Corporation (FDIC) data
show that 258 US banks failed or required assistance. Nonetheless, nonresidential US investment fell by less than a percent in all. During the entire 1980s, almost 750 banks failed and more than 1,500 required assistance, as opposed to 35 during the preceding decade. Yet corporate investment increased by an average of 4.5 percent a year in the '8os.

Today, the real economy goes into the recession surprisingly well prepared: US industrial companies had lower leverage and higher interest coverage than they did going into the dot-com bust, the S\&L crisis, or even the oil shocks of the 1970s. How the real economy fares will depend greatly on the way the current policy debate plays out over the next few quarters.

## What should companies do?

We do not yet know how the current crisis will evolve. The confidence of consumers, corporations, and investors-a key factorcannot be forecast. Nor can government policy. Yet research shows that in past recessions, companies pursuing a purely defensive strategy fared less well than their more active counterparts. ${ }^{13}$ As the economy enters what will probably be a difficult downturn, companies should prepare to seize their opportunities.

## Examine the patterns

Although recessions differ, it's worth understanding how different industries performed during past downturns and what factors determined the speed of recovery. In coming months, as the focus of government policy shifts from fire fighting to economic stimulus, this kind of research will help companies understand the implications for themselves and assess how the evolving macroenvironment will affect them in the next few years.

## Overprepare

Most companies already have contingency plans, but few plan as aggressively as they should. It's worth preparing for the worst-for example, major customers filing for bankruptcy, capital expenditures neeing to be cut in half quickly, or a country sales operation losing access to local-currency working capital. What seems improbable now could become a reality sooner than you expect.

Scan for opportunities
Managing downside risk shouldn't blind executives to potential upsides. Despite the current turbulence, in most industries it isn't hard to identify either the companies that will find themselves under pressure or which consolidation and reshaping scenarios might emerge. Instead of reacting to situations on short notice as they arise, invest time now to understand how such forces might affect your industry and what role you want your company to play. MoF

The authors gratefully acknowledge the contributions of David Atkins, Kevin Buehler, Jared Chung, Jeff Gu, Bin Jiang, Susan Lund, Christopher Mazingo, and Hamid Samandari to this article.

David Cogman (David_Cogman@McKinsey.com) is an associate principal in McKinsey's Shanghai office, and
Richard Dobbs (Richard_Dobbs@McKinsey.com) is a partner in the Seoul office. Copyright © 2009 McKinsey \& Company. All rights reserved.

## Mapping decline and

## recovery across sectors

## Different sectors enter and emerge from downturns at different times. A look at past recessions suggests how some industries may fare.

## Bin Jiang,

Timothy M. Koller, and Zane D. Williams

${ }^{\text {I }}$ The recessions we studied were those of November 1973-March 1975, January 1980November 1982, July 1990-March 1991, and March 200I-November 200I. Technically, the $1980-82$ downturn was two recessions: January 1980-July 1980 and July 1981November 1982. For this analysis, we have combined the two
${ }^{2}$ We grouped the companies in our sample into ten Global Industry Classification Standards (GICS) sectors.

In an ideal world, every company would enter a recession led by a team of grizzled executives who could draw on their experiences of past downturns to guide it through the current one. Many companies don't, however, and even for those that do, it can be difficult to rise above the crisis to ponder the lessons of history. Yet in a recession, developing accurate strategic plans is usually a high-stakes effort. False assumptions about the pace, scale, and timing of growth may slow progress in good times but could be fatal now.

Executives in an industry that lags behind the economy, for example, may imagine that they can avoid a downturn because at first the industry doesn't slow down when the economy does. Other executives, failing to realize that their industries tend to revive before the overall economy, may plan too conservatively for the upturn. Decisions about acquisitions, divestitures, and even recruiting or retaining talent often hang in the balance.

To help executives sharpen their perspective, we looked at the financial performance of US companies during the four most recent recessions. ${ }^{\text {I }}$ Then we analyzed sector-level ${ }^{2}$
total returns to shareholders (TRS), revenue growth, and growth in earnings before interest, taxes, and amortization (EBITA) around the times of these downturns. Although such analyses can't provide definitive parallels from one recession to the next (for obvious reasons, such as size, geographical reach, or origins), the general trends can prove invaluable in helping executives examine their assumptions about the future performance of an industry. We found that, so far at least, the current recession-despite claims of its being "unprecedented"-seems to be following many of the patterns that previous ones did.

## Exhibit 1

True to type
All four of the most recent recessions began with falling sales and EBITA in the consumer-discretionary sector.

${ }^{\text {r }}$ Recovery is defined as ist quarter of sustainable, positive real earnings before interest, taxes, and amortization (EBITA) growth following quarter in which it bottoms out; in line means occurring within I quarter before or after beginning or end of the recession; no effect is defined as $<10 \%$ decline in real EBITA. Question marks indicate sectors where, as of Q3 2008, there was no significant change in EBITA.
${ }^{2}$ Based on annual data.
${ }^{3}$ Categorized by decline in real net interest income.
${ }^{4}$ Utilities not meaningful in 2001, because of impact of idiosyncratic events (eg, Enron collapse) unrelated to recession.

- Similar beginnings. The timing of contractions in sector-level sales and EBITA indicates that the four most recent recessions began with a core underlying shock that then spread through the economy in a fairly predictable way. All four began with falling sales and EBITA in the consumer discretionary sector, and three began with similar declines in the IT sector as well (Exhibit I). By contrast, in three of the four, the energy sector was
among the last to be hit. Some sectors have been fairly resistant to recessions: consumer staples wasn't affected significantly in the last three, and the last two didn't significantly affect health care.
- Variable magnitude. The size of the contraction in EBITA varies across sectors (Exhibit 2). Generally, consumer discretionary, materials, energy, and industrials post the sharpest drops. The information

Exhibit 2

## Varied effects

The extent of the contraction of EBITA during recessions varies across sectors.
${ }^{3}$ Of the 27 instances when we documented a decline in earnings before interest, taxes, and amortization (EBITA) due to a recession, 24 showed a drop in EBITA that was faster than the recovery.

| Degree of sector declines in EBITA1 during recessions |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Sector | Peak-to-trough change, \% |  |  |  |
|  | 1973-75 ${ }^{2}$ | 1980-82 | 1990 | 2001 |
| Consumer discretionary | -71 | -62 | -47 | -36 |
| Consumer staples | -38 | -5 | 6 | -5 |
| Energy | -23 | -38 | -51 | -55 |
| Financial ${ }^{3}$ | -8 | 22 | -15 | -9 |
| Health care | -17 | -31 | 2 | 21 |
| Industrial | -13 | -48 | -46 | -26 |
| Information technology | -13 | -11 | -35 | -99 |
| Materials | -33 | -72 | -62 | -44 |
| Telecommunication services | -6 | -57 | -8 | -45 |
| Utilities | -5 | -5 | -8 | -20 |

[^3]technology sector has been more variable, with large drops during the past two recessions but smaller ones in 1973-75 and 1980-82. The most resilient sectors have been health care and consumer staples, whose revenues and EBITA fell relatively little in the majority of the previous recessions.

- The speed of decline and recovery. In almost every recession we studied, sectors contracted much more quickly than they recovered. ${ }^{3}$ Typically, it takes six to eight quarters for a sector's EBITA to bottom out-fewer in 1973-75 and more in 1980-82. The time needed to get back to peak EBITA levels generally is not only much longer but also highly variable. It took the better part of a decade for many sectors to recover from the
recession of the early i980s. After the recession of 2001, however, it took just over two years for most sectors to recover their peak EBITA levels once they reached bottom. Some industries, such as telecommunications in 200I, never hit their peak levels again.
- Similarities in share price performance.

Share prices tend to decline either before or just as a recession starts; rarely does a sector's TRS begin to decline much later. As a result, the share price performance of different sectors during a recession tends to be more similar than their financial performance (Exhibit 3). Share prices also tend to rise in step near the end of a recession, in marked contrast to revenues and EBITA, which often lag behind significantly.

Exhibit 3
Less variability in share prices

During a recession, the share price performance of different sectors tends to be more similar than the financial performance.

[^4]Total returns to shareholders (TRS) decline by sector

${ }^{\text {r }}$ Based on annual data.

Overall, the impact of recessions on share prices has varied. During the 1973-75 downturn (and to a lesser extent, the 2001 one), share prices fell steeply, with many sectors suffering large losses; in 1973-75, for instance, all sectors but materials (which was down by 26 percent) lost more than a third of their value. In the 2001 recession, seven out of ten sectors lost more than 20 percent of their value. Sectors affected by "shocks" can fare even worse: IT and telecommunications each lost more than 75 percent of their value in the recession of 200 I .

The 1980-82 and 1990-91 recessions affected valuations less severely. Only one sector lost more than a third of its value in either downturn (energy in 1980-82 and financials in 1990-91), and most sectors suffered losses of 5 to 15 percent.

The current recession seems to be following many patterns we observed in its predecessors. The consumer discretionary sector, which is sensitive to economic decline, has led in all of the past four recessions. It is also leading the current downturn, having posted the sector's largest post-200I drop in EBITA—almost 5 percent-during the second quarter of 2007 , five months before the recession's official start. ${ }^{4}$

In 2008 , TRS fell significantly in nearly every sector, with all but consumer staples losing more than 20 percent of their value and seven losing more than a third of it. ${ }^{5}$ Given the historical patterns (and current headlines), revenues and EBITA can be expected to fall in most other sectors as the recession continues. These similarities give executives some idea of what to expect as they plan their next steps.

History also suggests some possible indicators of the beginning of a recovery. In three of the four most recent recessions, higher consumer discretionary and IT spending led the way. When real EBITA growth resumes in these sectors, it may be
a useful indication that the economy is turning around. Also, TRS generally stops declining near the end of a recession, so resumed growth in broad stock market indices might also herald the end of the current one. MoF

Tim Koller (Tim_Koller@McKinsey.com) is a partner in McKinsey's New York office, where

# Why the crisis hasn't shaken the cost of capital 

The cost of capital hasn't increased so far in the downturnand didn't in past recessions.

## Richard Dobbs,

Bin Jiang, and
Timothy M. Koller
${ }^{\mathrm{I}}$ See Marc H. Goedhart, Timothy M. Koller, and Zane D. Williams, "The real cost of equity," mckinseyquarterly.com, October 2002.

The cost of capital for companies reflects the attitudes of investors toward riskspecifically, the reward they expect for taking risks. If they become more averse to risk, companies have difficulty raising capital and may need to cancel or defer some investments or to forgo some mergers and acquisitions. So it's understandable that the current financial crisis has many executives concerned about what the price of riskthe cost of capital-will mean for their strategic decisions in the near term.

Yet our analysis finds no evidence that the long-term price of risk has increased over its historical levels-even though short-term capital is difficult to obtain. Anyone with a longer-term view won't find this surprising. At the peak of the tech bubble of 2000 , when the media were awash with suggestions that the cost of capital had permanently declined, a deeper analysis suggested that it was remarkably stable-and has been for the past 40 years. ${ }^{\text {I }}$

Obviously, for companies that are concerned about survival and having difficulty raising capital, its cost is clearly irrelevant. We realize some companies just don't have access to new capital, period. Yet for companies that have more of it than
they need to survive-either from internally generated funds or the long-term-debt markets-assumptions about its cost can make the difference between snapping up promising opportunities or being overtaken by competitors.

To understand changes in the weighted average cost of capital (WACC), we need to examine, in nominal terms, its component parts: the cost of equity and the cost of debt.

## Cost of equity

We infer changes in the cost of equity by examining changes in equity values and in expected future profits and cash flows. Neither of these can be measured straightforwardly.
${ }^{2}$ See Marc Goedhart, Bin Jiang, and
Timothy Koller, "Market fundamentals: 2000 versus 2007," mckinseyquarterly.com,
September 2007.
${ }^{3}$ See Richard Dobbs, Bin Jiang, and Timothy Koller, "Preparing for a slump in earnings," mckinseyquarterly.com, March 2008.

The S\&P 500's climax- 1,500 , in 2007reflected extraordinarily high profits in the financial, petroleum, and mining sectors and above-trend profits in many others. ${ }^{2}$ To normalize the level of equity prices, we compared the long-term relationship between GDP growth and corporate profits. We estimated that, in mid-2008, the long-term sustainable level of corporate earnings would suggest a price level for the S\&P 500 of about $\mathrm{I}, 100$ to $\mathrm{I}, 200 .{ }^{3} \mathrm{At}$ the time of writing, the index was fluctuating in the 900-to-950 range, a decline of I 5 to 25 percent from this sustainable level.

We can also calibrate this decline with the decline in share prices of those companies that did not experience the same earnings bubble, such as consumer goods companies and retailers. We find that these companies, which have had more stable earnings, are a stronger benchmark for assessing the economy-wide cost of capital. Their share prices at the time of this writing were down by about 15 to 20 percent from peak levels. Admittedly,
this calculation isn't exact, and prices change daily.

The second factor in assessing the cost of equity capital is the ongoing level of corporate profits, which typically falls in recessions as GDP trend growth declines. History suggests that a recession involving a 5 to 10 percent decline in the cumulative long-term GDP trend would permanently reduce the corporate-profits trend line also by 5 to 10 percent.

Now let's pull these variables together into a discounted-cash flow model.
A mid-point estimate of the share price decline— 20 percent—and a 7.5 percent decline in the profit trend line translate into a hike in the cost of equity capital of about half of a percentage point. That is within the usual allowances for measurement error and within the range of annual market fluctuations.

Note that this analysis does not make allowance for the expected sharper

Exhibit 1

## Minimal impact

Changes in the implicit cost of equity can
be inferred by examining changes in equity values and in expected cash earnings.

Change in cost of equity, percentage point
short-term drop in corporate profits or for the market's tendency to overreact to recessions. Taking all these factors into account, we think there has been no significant change in the long-term cost of equity capital.

But this is based on our assumptions: Exhibit I allows you to construct your own estimate of the change in the cost of equity capital. For it to increase by a full percentage point, share prices would have to decline by 25 percent from their normal levels while profits remained relatively stable. Mathematically, a bigger drop in profits, which some expect, would mean an even smaller increase in the cost of capital.

Some might object that very few public offerings of equity have been floated
recently. Our answer is that prices of liquid shares on stock exchanges are the best indicator of what investors will pay for shares. Others might counter that the economy faces extraordinarily high uncertainty right now. That is true, but uncertainty affects industries differently and therefore ought to be built into cash flow projections rather than the cost of equity. A single uncertainty risk premium should not apply to the entire economy.

## Cost of long-term debt

The cost of debt is the second component of the cost of capital. It's easy to assume the cost of debt has increased, considering the increase in absolute rates on corporate bonds and the spread between Treasury and corporate bonds in recent months (Exhibit 2). As a benchmark, the yield to

Exhibit 2

A growing spread

The spread between corporate bonds and treasuries has widened in recent months.

10-year constant maturity bond yields for nonfinancial companies, \%


## Exhibit 3

## Cheaper debt?

The current cost of debt is still below the
historical average.

Moody's average annual bond index yields for nonfinancial companies, \%


Source: Moody's; Bloomberg
maturity on A-rated bonds rose a little more than one percentage point, to about 7 percent, from September to November 2008.

When you take a longer-term perspective, though, 7 percent isn't unusually high. Only during 6 of the past 20 years has the cost of debt for A-rated companies been lower than that (Exhibit 3).

In all likelihood, the spread is increasing as a result of high demand for Treasury bonds-a demand that depresses their yields—not because investment-grade corporate bonds are becoming more risky. The rates and spreads of the past several years were probably unsustainably low and current levels are simply a reversion to normality.

The impact of the increasing cost of debt on a company's WACC is mitigated by the tax deductibility of debt and by the con-
servatism of the capital structures of most investment-grade companies, which means that the cost of debt is a smaller proportion of the WACC. Indeed, nonfinancial S\&P 500 companies have less debt today than they have had for most of the past 40 years (Exhibit 4).

## Implications

In sum, despite the decline in equity values and the increasing spreads on corporate debt, there is no evidence of a substantial increase in the cost of long-term capital. Of course, we cannot be certain that its cost will not increase over the next several years as the recession develops.

One unknown that demands caution is the outlook for inflation or deflation. The analysis above is on a nominal basis. For real cost of capital not to change, we need to assume that long-term inflation remains stable, at 2 to 3 percent. Some

Exhibit 4

## From a point of strength

Nonfinancial US companies were well capitalized before the crisis.

## Ratio of debt to EBITA ${ }^{1}$ for nonfinancial S\&P $\mathbf{5 0 0}$ companies



Interest coverage ratio for nonfinancial S\&P $\mathbf{5 0 0}$ companies

${ }^{1}$ Earnings before interest, taxes, and amortization.
analysts are concerned about deflation, at least in the short term; others about inflation as governments around the world flood their economies with money. Deflation or high levels of inflation for an extended period could change investors' appetite for risk and the real cost of capital, along with other economic relationships.

Nonetheless, as with all valuations, the uncertainty of cash flows has a much bigger effect on value than changes in the cost of capital. That uncertainty has increased significantly. It is particularly unclear what a normal level of growth and returns on capital will be in the future. The credit bubble has distorted both during the past few years. MoF

Richard Dobbs (Richard_Dobbs@McKinsey.com) is a partner in McKinsey's Seoul office;
Bin Jiang (Bin_Jiang@McKinsey.com) is a consultant in the New York office, where Tim Koller (Tim_Koller@ McKinsey.com) is a partner. Copyright © 2009 McKinsey \& Company. All rights reserved

# What's different about M\&A in this downturn 

M\&A may be more resilient in this downturn than in previous ones, but it will be a different kind of M\&A.

Antonio Capaldo, David Cogman, and Hannu Suonio

Given the chaos in the financial economy, it should come as no surprise that M\&A activity fell sharply in the fourth quarter of 2008 . Since $\mathbf{1 9 8 0}$, US recessions have led to steep declines in the value of global M\&A activity-typically, of around 50 percent during the first year. That falloff results from factors we see in the current downturn as well, including lower deal values in sinking equity markets; difficulties with financing, particularly for very large transactions; and a general fear about the economic outlook, which forces acquirers to put plans on hold. Moreover, in December 2008 stock markets were down 40 to 50 percent from their January levels. Corporate earnings expectations have been substantially lower too, and access to funds is challenging, to say the least.

The current environment is grim, and nobody knows how the M\&A market will develop in the short term. The last quarter saw a sharp drop in activity, and there is still considerable uncertainty about the ability of capital markets-particularly the debt markets-to provide enough financing to support deals. We believe that over the longer term, however, the trends that emerged over the past cycle will remain important. As a result, the pattern of M\&A activity in the current downturn will be quite different from that of previous cycles.

Stock markets peaked in the fourth quarter of 2007, and the world economy has been progressively slowing through 2008. But the 2008 M\&A market should be seen in context: the value of announced M\&A activity for the whole year reached $\$ 3.4$ trillion globally, the third-highest level of all time. If 2007's volumes now look like a departure from the trend, 2008 seems to mark a return to it rather than a complete collapse: volumes fell by 25 percent from 2007, back to levels comparable to those of 2006, the second-highest year of all time.

Moreover, volumes went up significantly quarter by quarter until the slowdown in the fourth one-despite a 40 to 50 percent decline on stock markets, the collapse of expectations for corporate earnings, and limited access to funding. In the fourth quarter, a significant number of large deals, such as BHP Billiton's bid for Rio Tinto, were withdrawn. Yet though the volume of withdrawn deals for that quarter was relatively high, for the whole year it wasn't so-about 15 percent of deals by value, and 4 percent of deals by number for the year, versus an average 13 percent and 5 percent for deal value and deal numbers respectively since 1995. Indeed, though the cycle peaked in 2006 and 2007, just over 60 percent of the deals announced in those years were completed, versus 87 percent for the previous decade.

M\&A activity got a boost in 2008 from restructuring transactions that were generated by the crisis: governmentsponsored deals represented 25 percent of those in the financial-institutions sector, which accounted for 23 percent of total deal volumes in 2008 . The effects of these deals were perhaps more limited than most observers think, however. The top ten transactions for financial institutions represented 4.5 percent of total deal volumes in 2008 , in line with the 5 percent of $2007 .{ }^{\text {r }}$ Even excluding these transactions, underlying volumes remained surprisingly healthy in 2008, and M\&A proved to be resilient for the year as a whole. The question, of course, is what 2008's activity portends for 2009.

## A different kind of cycle?

During the previous M\&A cycle, volumes peaked in 1999 and then fell almost by half during the following year before they hit bottom, in 2002—the cycle ended suddenly and decisively. It's impossible to
say where the M\&A market will go in the short term, and nobody is anticipating a fast recovery. But when you think about the trends in the previous cycle and the market's performance in 2008, the picture that emerges is quite different from the traditional boom-and-bust pattern of previous cycles. Certain characteristics of deal activity in the previous up cycle suggest that M\&A may be more resilient and more relevant to the general economy in this downturn than in previous ones.

- M\&A is increasingly global rather than dominated by a few countries with little linkage among them (Exhibit I). In 2000 and 200I, the United States, Europe, and Asia accounted for approximately 60,30 , and io percent of deal volumes by target, respectively. From 2005 to 2008 , the distribution was much more balanced, at approximately 40 , 40 , and 20 percent. Cross-border M\&A activity grew from 23 percent of the total in 2000 to 29 percent in 2006 and 4I percent 2007, falling back to 35 percent in 2008. Emerging markets, particularly in Asia, played an important role in this transformation; China and India together represented some 12 percent of all cross-border deals in 2008.
- One defining feature of the past few years were megadeals-transactions valued at more than \$io billion-which were driven by the market's confidence and by a trend toward greater industry concentration. In 2008, the focus of such deals changed sharply: most of them were restructurings in the financial sector (for instance, Bank of America's acquisition of Merrill Lynch). The 37 such deals, with a value of almost $\$ 833$ billion globally, represented a significant proportion of total M\&A. When the economic and financial crisis subsides, megadeal activity
${ }^{\text {I }}$ Three kinds of deals are included in this category: the sale of distressed assets of bankrupt (or quasi-bankrupt) companies, for instance, the purchase by Barclays of selected assets and businesses of Lehman Brothers; capital infusions by cash-rich players (such as sovereign-wealth funds) to provide fresh liquidity and capital to companies in financial distress; and "forced" M\&A activity—for example, Bank of America's acquisition of Merrill Lynch-to reinforce the target's capital base or even that of the combined entity.

Exhibit 1

## A global market

Emerging markets play an increasingly important role in the global M\&A market.

Share of global M\&A by geography of target, \%


border flows, \%
from Asia, \$ billion

Source: Dealogic; McKinsey analysis
may shift back toward large-scale transformational deals in other industries, such as energy, materials, and telecom. The 2001-02 downturn did not put many major companies in financial distress. But this coming downturn will, paving the way for a higher number of large, industryshaping deals.

- Hostile activity, peaking in 2007, became increasingly prominent as a result of very strong market confidence and extraordinary financial conditions. Surprisingly, the pace of such deals was still high in 2008: in the first three quarters of 2008, they were still running at around $\$ 50$ billion a quarter, in line with the average 2000 to 2007 level, before declining to $\$ 2$ I billion in the fourth quarter.

They were typically large-for instance, German ball bearings manufacturer Schaeffler's $\$ 35.6$ billion bid to acquire car parts manufacturer Continental.

- Private equity reached unprecedented levels of activity and importance during this cycle, expanding from 4 percent of the global M\&A market in 2000 to a staggering 20 percent in the first half of 2007. In part, this explosion reflected a need to deploy funds under management, which rose by 3 percent a year from 2000 to 2004 and by a whopping 33 percent a year from 2004 to 2007, so that the global buyout industry had upward of $\$ 900$ billion to spend. The assets of North America's top ten private-equity firms rose more than ten times during the past decade.

${ }^{2}$ To monitor trends in value and value creation from M\&A, we compared the share price for each deal two days before and two days after it was announced in order to assess the financial markets' initial reaction. Academic research has found a positive correlation between longrun value creation and these "announcement effects," which are useful to assess trends in M\&A, as they strip out the impact of many other factors that drive share price movements. For a more detailed look at the methodology and long-term analysis of value creation in M\&A, see Richard Dobbs, Marc Goedhart, and Hannu Suonio, "Are companies getting better at M\&A?" mckinseyquarterly.com, December 2006.
${ }^{3}$ The deal value added (DVA) is defined as the change in the market capitalization of both the acquirer and the acquired company, adjusted for market movements, from two days before to two days after the announcement of a deal as a percentage of the transaction's value. Since the DVA index is derived from immediate market reactions, it isn't a definitive view of the actual value a deal creates, but it is useful to monitor aggregate value creation characteristics and trends over time.
${ }^{4}$ The proportion of overpaid (POP) is the proportion of transactions in which the share price reaction, adjusted for market movements, from two days before to two days after the announcement was negative for the acquirer. This definition assumes that the share price of the acquirer declines if the price it pays for the target is higher than the target's stand-alone value plus synergies (hence, overpayment).
${ }^{5}$ See Richard Dobbs, Bin Jiang, and Timothy M. Koller, "Why the crisis hasn't shaken the cost of capital," in this issue.

Combined with easily available and cheap credit, these developments sparked a spending spree unprecedented in private equity's history.

This trend came to an abrupt end in 2008 as credit markets sputtered. Overall volumes of private-equity deals fell by about 72 percent from the levels of 2007 , representing about 6 percent of total M\&A deal volumes. What's more, the nature of the private-equity deals that closed changed dramatically. Since it is hard in the current climate to build consortia for club deals, private-equity involvement in megadeals screeched to an almost complete halt. In 2008, a single transaction above \$ 10 billion was announced, only to be later withdrawn; no such megadeals were completed in 2008, compared with 9 completed in 2007 and I4 in 2006. In the absence of cheap credit, private-equity firms have found themselves restricted to deals with a much higher equity content. Often, they take minority stakes in circumstances in which they would previously have assumed control or looked at alternative asset classes, such as distressed debt. Given the large decline in private-equity activity that has already taken place, it cannot collapse much more. Most likely, it will rise once the financial crisis starts to subside.

- Strategic buyers, showing discipline, didn't lose sight of value. In M\&A booms, acquirers are often tempted to overpay, but not in this boom cycle: the value created by M\&A increased consistently. Some worrisome signs did emerge in 2008,
however. The total level of value created has started to decline, and the target is capturing a majority of it, ${ }^{2}$ despite premiums paid remaining low. In 2008, the average deal value added (DVA)—our proxy measure of the total value created for buyer and seller-had decreased from the 2007 level ( 6.4 percent), to 2.8 percent, which is below the long-term average of 4.0 percent (Exhibit 2). ${ }^{3}$ This decline resulted entirely from a sharp fall in the creation of value for acquirers; for targets, it even slightly increased in 2008 compared to previous years. To understand what has happened, you must look at the reaction of the market to deals-in particular, the proportion of them in which it thinks the acquirer overpaid. ${ }^{4}$ From 2004 to 2007 , this figure hovered around 55 to 57 percent, below the long-term average of 6 I percent. In 2008 , however, it rose to 63 percent (Exhibit 3).

Most of these themes are likely to persist in 2009. The events of the past year undoubtedly dealt a major blow to the confidence of many companies. Nonetheless, M\&A volumes remained healthy. Companies went into this downturn with relatively strong balance sheets, ${ }^{5}$ and valuations have become much more affordable. As the slowdown progresses, good companies in many sectors will certainly come close to financial distress. The megadeals of 2006 and 2007 were ambitious acquisitions of healthy companies facilitated by cheap financing; those of 2008 were resuscitations of failing banks. Although financing conditions are now considerably more challenging, this does not spell the end of megadeals: in 2009 and 2010, there will probably be a number of well-planned takeovers of struggling industrial giants. A few have already appeared on radar screens.

## Exhibit 2

## Trends in DVA

The total level of value creation has started to decline, and the majority of it is being captured by the target rather than the acquirer.

${ }^{1}$ For M\&A involving publicly traded companies; defined as combined (acquirer and target) change in market capitalization, adjusted for market movements, from 2 days before to 2 days after announcement, as $\%$ of transaction value.
Source: Datastream; Dealogic; McKinsey analysis

Proportion of overpaid (POP), ${ }^{1}$ \%


[^5]${ }^{6}$ Or about 70 days in the first half of 2008 and about 30 days in the second half, according to Dealogic.
${ }^{7}$ See Richard Dobbs, Massimo Giordano,
and Felix Wenger, "The CFO's role
in navigating the downturn," in this issue.

The next few years will present considerable opportunities for ambitious and disciplined acquirers-and these are not in short supply, as we have seen over the past few years. Asian acquirers, less affected by the credit crisis than their counterparts in Europe and the United States, will have a stronger incentive to look for overseas acquisitions.

## What will be different?

Although we see little change in the themes driving the M\&A market, the way companies think about the execution of deals has already changed visibly. M\&A in a rising market with easy access to capital is very different from acquisitions in a downturn, when opportunities arise and decisions must be made very quickly. The key differences fall in three specific areas.

## Speed

The interval between the announcement and the closing of deals valued above \$ 1 billion has fallen dramatically, from about I30 days (1995-2007) to about 60 in $2008 .{ }^{6}$ Companies have already started to realize that if they want to close successfully in turbulent markets, they must undertake fast, targeted due diligence on the main issues and then use reps and warranties more extensively to address minor ones.

## Managing stakeholders

In today's market, a company can't start to negotiate deals without knowing
for sure whether it will have the necessary support at the end: there is no longer much time to build an internal consensus among the board, nor can executives assume that shareholders will extend the benefit of any doubts. In particular, a company must actively establish realistic expectations for growth and profitability. Coming out of the past few years, many board members and shareholders will have unrealistic onesthe downturn is not yet reflected in future earnings estimates, and this problem will have to be managed to frame external growth moves correctly. ${ }^{7}$ It is likely that we will see a greater proportion of deals financed by equity, due to the economic uncertainties: this will make solid investor and board support even more important.

## Opportunity scanning

The best opportunities in a downturn are often good pieces of a distressed portfolio forced into a fire sale. Success in this environment will depend on choosing the right targets to stalk: these will be very different from the sorts of deals businessdevelopment teams have considered during the past few years. Now is the right time to put aside conventional thinking about M\&A and take a fresh look at your industry: do not assume that any company will simply be "not for sale" over the next few years. Which companies will experience difficulty? Which parts of which businesses would tempt you? How can you put together creative deals that will snare them? Mof

Antonio Capaldo (Antonio_Capaldo@McKinsey.com) is a partner in McKinsey's Rome office,
David Cogman (David_Cogman@McKinsey.com) is an associate principal in the Shanghai office, and
Hannu Suonio (Hannu_Suonio@McKinsey.com) is an associate principal in the Helsinki office.
Copyright © 2009 McKinsey \& Company. All rights reserved.

## Podcasts

Download and listen to these and other selected McKinsey on Finance articles using iTunes. Check back frequently for new content.

## Why the crisis hasn't shaken the cost of capital

The cost of capital hasn't increased so far in the downturn—and didn't in past recessions.
Richard Dobbs, Bin Jiang, and Timothy M. Koller

## How climate change could affect corporate valuation

Efforts to reduce climate change can profoundly affect the valuations of many companies, but executives so far seem largely unaware.
Marcel W. Brinkman, Nick Hoffman, and Jeremy M. Oppenheim

## Managing capital projects: Lessons from Asia

Some Asian companies are better at executing capital projects than are rivals elsewhere.
What lessons can others learn from them?
Navtez Singh Bal, Subbu Narayanswamy, and Anil Sikka

## A better way to understand TRS

Traditional methods of analyzing total returns to shareholders are flawed. There's a better way. Bas Deelder, Marc H. Goedhart, and Ankur Agrawal

The new role of oil wealth in the world economy
Regulators may worry when Arab investors acquire stakes in Western companies,
yet vast reserves of petrodollars have kept down interest rates and buoyed financial assets.
What's the broader effect of the surge in petrodollars?
Diana Farrell and Susan Lund

## How to improve strategic planning

It can be a frustrating exercise, but there are ways to increase its value.
Renée Dye and Olivier Sibony

## Organizing for value

The division structure can mask big differences in the performance of smaller units.
A finer-grained approach can better show where value comes from.
Massimo Giordano and Felix Wenger

## How to choose between growth and ROIC

Investors reward high-performing companies that shift their strategic focus prudently, even if that means lower returns or slower growth.
Bin Jiang and Timothy Koller


[^0]:    ${ }^{\text {I }}$ Source: Bloomberg. Numbers cited refer to total credit losses, irrespective of ownership of the debts.
    ${ }^{2}$ See Lowell Bryan and Diana Farrell, "Leading through uncertainty," mckinseyquarterly.com, December 2008. An excerpted version of the article appears in this issue.
    ${ }^{3}$ Source: National Bureau of Economic Research. By 1933, total deposits in the more than 9,000 suspended banks were $\$ 7$ billion; nominal GDP was $\$ 58$ billion in 1933.

[^1]:    ${ }^{\text {I }}$ Before extraordinary items, adjusted for goodwill impairment.
    ${ }^{2}$ Estimated using actual GDP as of Q3 2008 .
    ${ }^{3}$ Estimated using sum of net income of last quarter of 2007 and net income of first three quarters of 2008 .
    Source: US Bureau of Economic Analysis; McKinsey analysis

[^2]:    ${ }^{12}$ See Ben S. Bernanke, "Nonmonetary effects of the financial crisis in the propagation of the Great Depression," American Economic Review, 1983, Volume 73, Number 3, pp. 257-76.
    ${ }^{13}$ Richard F. Dobbs, Tomas Karakolev, and Francis Malige, "Learning to love recessions," mckinseyquarterly.com, June 2002.

[^3]:    ${ }^{1}$ Earnings before interest, taxes, and amortization.
    ${ }^{2}$ Based on annual data.
    ${ }^{3}$ Categorized by decline in real net interest income.

[^4]:    ${ }^{4}$ The National Bureau of Economic Research has dated the start of the current US recession as December 2007.
    ${ }^{5}$ The 2008 total returns to shareholders (TRS) measured as of November 30, 2008.

[^5]:    ${ }^{1}$ For M\&A involving publicly traded companies; POP defined as proportion of transactions in which share price reaction, adjusted for market movements, was negative for acquirer from 2 days before to 2 days after announcements.
    Source: Datastream; Dealogic; McKinsey analysis

