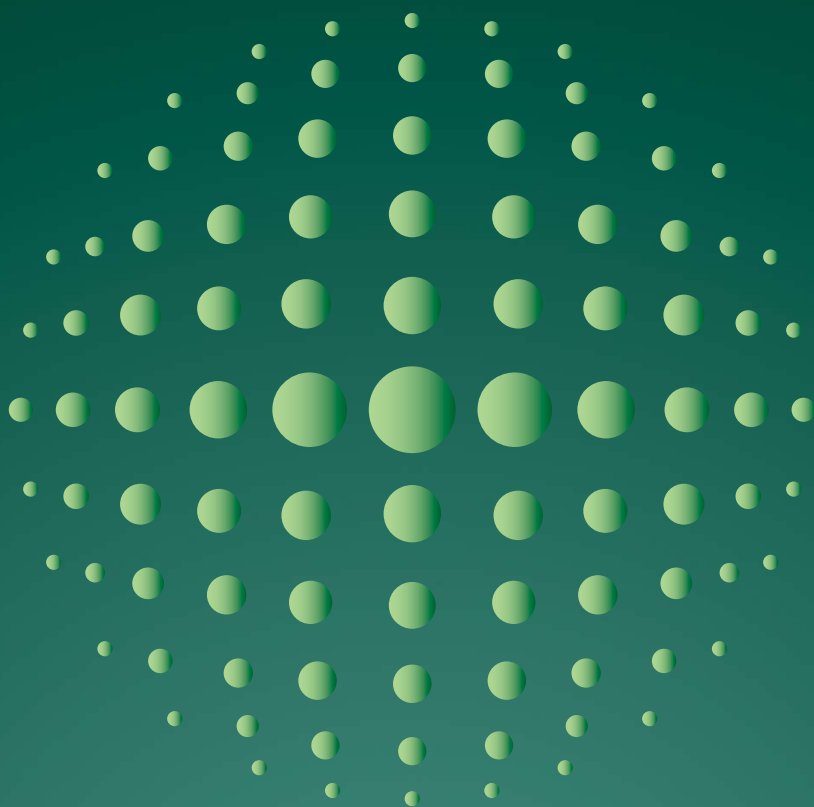




THE BOSTON CONSULTING GROUP

Shaping the Future in an Age of Accelerating Change

A Collection of Groundbreaking Perspectives
on Business and Society



THE GAME-CHANGING SERIES

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Printed in the United States of America

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Foreword

We are living in an age of accelerating change. It is a convulsive time. Everywhere you look, things are shifting, transforming.

This creates uncertainty—but with uncertainty comes opportunity.

It is all too easy to take a dark view of the decade ahead—with countries and companies struggling to shrug off the aftereffects of the Great Recession. But it is our view that the fundamental drivers of growth are stronger than they have been at any point in human history. We believe that, given this platform, leaders should move forward—with what we call *strategic optimism*—to create sustainable growth, value, and opportunity for their countries and companies.

Ever since 1963, when The Boston Consulting Group was founded, we have been advising leaders and their organizations to be proactive, to take decisive action, to seize the day. This is what we mean by “shaping the future”: the future does not just happen—we make it happen.

In his seminal 1968 article, “Why Change Is So Difficult,” Bruce Henderson, BCG’s founder, noted that “all organizations, like all organisms, must adapt to changes in their environment, or die.... [But] to change by evolution rather than revolution, the change must not only be tolerated but actively guided and directed in very explicit terms by the leadership of the firm.”

Today, this advice still applies. But the pressure on leaders to make significant change is greater than ever.

In the years before the Great Recession, companies were able to tinker with reform, knowing that the rising tide of the global economy would help them in their effort to thrive. But today, these companies can no longer simply modify their business model or their cost base.

Future growth depends on our willingness to transform the way we do things. This will not be easy. It will call for vision, courage, determination, and a firm belief that we—each of us—can shape our destiny.

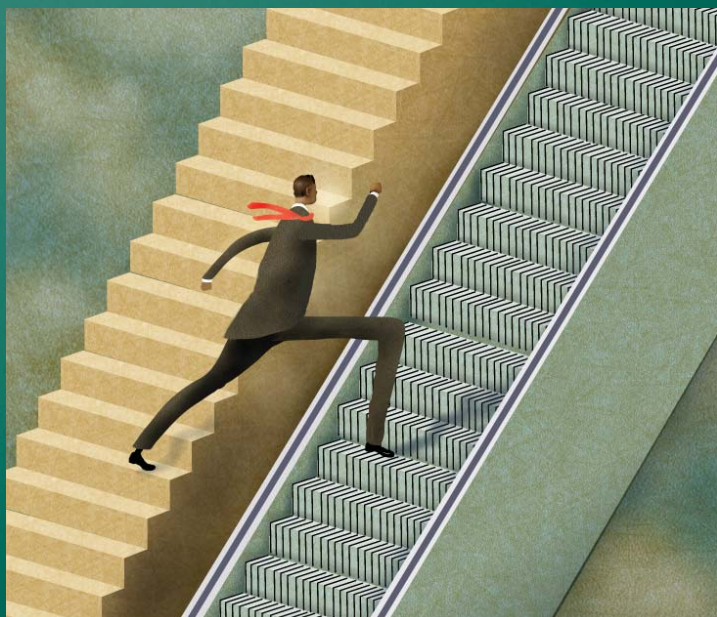
In short, it will call for our readiness and resolve to change the game.

Throughout 2013, as we celebrate BCG’s fiftieth anniversary, we will be giving much attention to the “game changing” theme: it lies at the heart of every effort to shape the future with strategic optimism.

To mark the start of our celebration, and to help CEOs and other leaders navigate their way through some troubled waters, we have assembled some recent BCG publications that highlight how leaders can transform their businesses, stay one step ahead of their competitors, and change the game. The articles include links to related reports, videos, podcasts, and interactive graphics—all of which can be found on bcgperspectives.com.

We hope you enjoy the collection.

Hans-Paul Bürkner
Rich Lesser





Leadership in a Two-Speed Economy

How CEOs Straddle Different Worlds

Currently, most global companies are operating in a two-speed world, yet this scenario was not on the drawing board when today's leaders were rising through the ranks.

The length of the economic malaise in mature markets and the sustained growth of emerging markets have jumbled the deck for them. Emerging markets are no longer satellites circling far away from the center. Leaders now must figure out how to fold their emerging-market businesses into the core of their companies and generate predictable returns from their still sizable mature-market businesses.

Ultimately, today's chief executives will be judged on how well they manage this balancing act of leading in a two-speed world. Half of the global GDP growth in this decade is expected to come from Asia. Brazil will deliver greater growth than Germany, France, or the U.K. And it is not just the speed of emerging markets that is different. Culture, talent, business models, and the role of the state all play out differently in these economies. The emerging markets are also producing global challengers, companies that rival traditional multinationals for industry leadership.

To understand how companies are navigating these two worlds—and the new competitive order—we have spoken with several chief executives, who shared their perspectives in interviews. Although the corporate executives we have interviewed—Howard Schultz of Starbucks, Nils S. Andersen of A.P. Moller–Maersk Group, Siegfried Russwurm of Siemens Industry Sector, and Jean-Pascal Tricoire of Schneider Electric—lead companies that are *headquartered* in the West, their gaze and orientation are shifting increasingly overseas, especially toward emerging markets. Across all the interviews, the leaders highlighted the same four critical capabilities, specifically the need to excel at:

- Leading from the global field
- Feeding two beasts
- Managing the new rules of culture and engagement
- Creating a global talent pool

Leading from the Global Field

Maersk, Schneider Electric, and Siemens each do business in more than 100 countries. Starbucks has stores in 60 countries. So even if these companies' chief executives were able to *manage* businesses from headquarters, they could not *lead* their people in the outer reaches of their empires from afar.

Leadership is a contact sport. People want to know their leaders. “We are a company that benefits from physical meetings and being in close touch with our people,” Schultz said.

The flip side, of course, is that leaders need to know their people and the businesses that they run. “When

you meet the frontline, you get the truth,” Andersen said. “If you just stay at your desk, you lose relevance.”

Leaders of large businesses have always been on the road; this is not a new development. But now the stakes are higher. With so many key overseas markets demanding attention, it is more difficult to check the pulse of the people, to gauge the effectiveness of local leaders, and to know when to intervene.

Based in Hong Kong, Tricoire is on the road about 80 percent of the time. As he puts it, “Reality does not happen in corporate. Reality happens in the field, with customers and with employees.”

Tricoire frequently travels alone. “When I arrive at Schneider in another country, I am with the people of the country. There is no barrier or no interpreter in between the teams and myself. After a few days together without any protection, I hope that people dare to tell me the good, the bad, and the ugly,” Tricoire said. “My job is to deal with the bad and the ugly, and to support them to do the good.”

Russwurm uses customer visits as an opportunity to become familiar with local staff. “I see how they interact with the customer, how well they understand the customer’s needs, and how well they argue the Siemens value proposition to specific customers,” he said. “That is a wonderful source of insight.”

The Siemens managing board frequently meets in emerging markets, but it does not simply sit in a conference room. Following a presentation by the local leadership team, the ten board members fan out into the field and visit with customers and government officials.

“After two days, we reconvene and try to consolidate typically 200 touch points to see if they mesh with the descriptions that our local team has given us and to reach conclusions. What are the investments that Siemens should make in these regions?” said Russwurm.

This approach neither replaces nor undercuts the delegation that executives are taught is necessary to run large, complex, multimarket enterprises. But it does remind us that while management requires delegating, leadership demands getting dirty.

Feeding Two Beasts

For all the promise and potential of emerging markets, the center of gravity for Western-based companies is still located in mature markets. The developed world generates most of the revenues, employs most of the people, and houses most of the assets. Also, a company's culture is generally formed in its home country. Against the backdrop of these realities, nurturing small but fast-growth markets can be tricky; they risk being smothered by institutional inertia and a history of operating in mature economies.

Emerging markets frequently require specific products and services tailored to their income levels, infrastructure, traditions, and habits. Maersk, for example, would not be able to enter the shallow ports in many emerging markets if it hadn't added special ships. And yet, if every market is free to do its own thing, the advantages of scale, brand, and consistency fall away.

One way in which Starbucks has managed that tradeoff is by reorganizing around three regions—the Americas; Asia-Pacific; and Europe, the Middle East, and Africa—rather than functions. The Americas region is disproportionately larger than the other two, but what the new

structure lacks in symmetry it gains in agility by pushing decision making closer to the customer. The regional presidents effectively operate as the “CEOs of their own businesses,” Schultz said.

“If the stewards of any consumer brand believe that they can create local relevance sitting in a white tower somewhere in the U.S.—and dictating the ways in which consumers will react all over the world—they are on a collision course with time,” said Schultz. “The challenge that we have to understand and overcome is creating the balance between the Starbucks experience that customers all over the world expect and desire and a healthy dose of local relevancy that demonstrates respect to the local customer.”

Siemens and Maersk are both organized around vertical business units, rather than regions. To ensure that attention is paid to emerging markets, Siemens has implemented mechanisms and formal structures that foster its vertical businesses.

Maersk divided responsibility for 15 fast-growing, high-priority markets among its six-member executive team. “We are responsible for determining whether there are new activities or synergies that we can take advantage of in terms of cross-selling in these countries,” Andersen said.

Forty percent of Schneider Electric’s revenues are generated in what Tricoire calls “new economies,” so the company is accustomed to meeting the specific needs of these markets. “Our culture is a culture of local empowerment and decentralization,” Tricoire said. “One of the assets that we have benefited from in new economies has been our capability to trust our local employees and local teams and give them the capability to adapt our approaches and business model.”

Managing the New Rules of Culture and Engagement

Culture is the glue that unifies disparate businesses into an organization greater than the sum of its parts. But global organizations will not capture the true value of emerging markets if the glue does not allow for local wiggle room.

The energy and vitality of emerging markets are part of what makes them special. “An important thing we can learn from developing markets is their enthusiasm. The willingness to go after growth and seize opportunities is refreshing,” said Andersen.

At the same time, however, letting a thousand flowers bloom could lead to mild forms of corporate anarchy. There needs to be a common culture, built around broad principles and values, that both celebrates local nuance and corrals it. “We are responsible, excellent, and innovative. That is true wherever Siemens operates,” Russwurm said.

At Schneider Electric, new employees frequently tell Tricoire that his company has a strong culture. “But that does not mean that the people of Schneider China operate the same way as the people of Schneider U.S. do. They operate with different soft skills, but they share the same values,” Tricoire said. “Our values are what keep us together. Straightforward dialogue is one of the important values that we carry together.”

In China, Starbucks recently held two meetings, one in Beijing and one in Shanghai, for the parents of employees. The meeting served as a way to express the company’s understanding of the importance of family in China. “It was as locally relevant as anything we have

ever done,” Schultz said. “And yet it was part of the culture and fabric of our 40-year history.” While Schultz recognized this “annual meeting of parents” may not work globally, he said he believes that it shows the new ways that today’s leaders and their teams engage with employees.

Creating a Global Talent Pool

The four leaders spotlighted here all run businesses that boast strong employer brands. But even as employers of choice, both in their home markets and abroad, these companies face stiff competition and challenges in developing a global pool of talent—employees who can move seamlessly across emerging and developing markets.

Starbucks, for example, has tended to rely on expatriates to run businesses in emerging markets, in order to ensure that the Starbucks culture is properly incubated. Starbucks, in the words of Schultz, has always sought to be “a different type of company that would balance profitability and benevolence.” It is therefore difficult, he explained, to build “an organization with people who are not imprinted with the history of Starbucks.” Relying on expatriates is an expensive approach, so Starbucks is working to develop local leaders who can rise through the ranks.

Maersk has a rich and long history of global talent mobility. More than 70 nationalities are represented in its headquarters, and midlevel executives frequently rotate between mature and emerging markets. Yet mobility slows as executives move up through the ranks. It is far easier to move from an emerging to a mature market as a sales manager than as a country manager. “We are increasing our recruiting activities for top talent in the developing world and trying to diversify

the skills and cultural background in the group. But it is a work in progress,” Andersen said.

Schneider Electric has actively sought to encourage that type of movement through programs such as Marco Polo, which allows recent graduates to work outside their country of origin for their first two years of employment. “If you are like me, a gypsy—and ready to go to one place and to the other one, to bring your know-how, and to mingle with other communities—this is a very exciting place to be,” Tricoire said. “We believe that mobility and diversity are big sources of innovation and creativity.”

Mobility is a good thing so long as all the moving occurs within and not *beyond* the organization. Because these companies are desirable employers and have reputations for offering strong training programs, their employees are recruited frequently and aggressively, especially in emerging markets. “To keep the best and the brightest is an interesting challenge that we increasingly have around the globe,” Russwurm said. “We make quite the effort to ensure that those people stay with us.”

Andrew Dyer
Grant Freeland
David C. Michael

This article is part of BCG’s Leading in a Two-Speed World interview series.

MORE ON LEADERSHIP

Shattering the Glass Ceiling: An Analytical Approach to Advancing Women into Leadership Roles,
BCG Focus, August 2012

Winning Practices of Adaptive Leadership Teams,
BCG Focus, April 2012

Leading Transformation: Conversations with Leaders on Driving Change, BCG report,
October 2011





The Internet Economy in the G-20

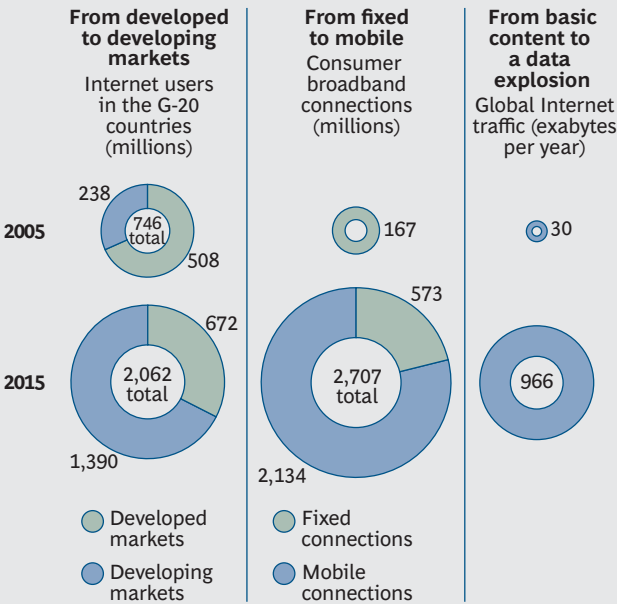
The \$4.2 Trillion Growth Opportunity

Since the first domain was registered in 1985, the Internet has grown at a breakneck pace, disrupted entire industries, and enabled the overthrow of governments. The Internet has become so embedded in everyday life that it is hard to imagine a time when it did not exist.

By 2016, there will be 3 billion Internet users globally—almost half the world’s population—and the Internet economy will reach \$4.2 trillion in the G-20 economies. If it were a national economy, the Internet economy would rank in the world’s top five, behind only the U.S., China, Japan, and India. Across the G-20, it already amounted to 4.1 percent of GDP, or \$2.3 trillion, in 2010, reaching up to 8 percent of GDP in some leading economies.

The nature of the Internet—who uses it, how, and for what—is changing rapidly too. Developing G-20 countries already have 800 million Internet users, more than all the developed G-20 countries combined. Social networks reach about 80 percent of users in developed and developing economies alike. Mobile devices—smartphones and tablets—will account for four out of five broadband connections by 2016. (See Exhibit 1.)

EXHIBIT 1 | Evolution of the Internet



Sources: Economist Intelligence Unit; Cisco; Ovum; BCG analysis.
Note: While the European Union is a member of the G-20, the figures include only the independent European members: France, Germany, Italy, and the U.K. The developing nations are Argentina, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, and Turkey. The developed nations are Australia, Canada, France, Germany, Italy, Japan, South Korea, the U.K., and the U.S.

The speed of these developments is often overlooked. Exponential growth in processing speed, bandwidth, and data storage, among other things, has been driving technological advancements since the dawn of the computer era.

We have now entered the “second half of the chess-board,” where the scale and speed of change are indelibly altering industry structures and the way that companies do business. The second half of the chess-board is a metaphor that explains the impact of exponential growth on an organization’s overall business

strategy. It refers to an ancient fable in which one grain of rice is placed on the first square of a chessboard, two grains on the second, and so on, doubling the grains of rice on each subsequent square. In this scenario, the sixty-fourth square would have 2 billion times more rice than the first half of the chessboard.

This paper assesses the far-reaching economic impact of the Internet by quantifying the gains—economic growth, consumer value, and jobs—in the context of the economies of the G-20. It demonstrates that no one—individual, business, or government—can afford to ignore the ability of the Internet to deliver more value and wealth to more consumers and citizens more broadly than any economic development since the Industrial Revolution.

The Internet's Economic Impact

The economic impact of the Internet is already large. In the U.K., for example, the Internet's contribution to 2010 GDP is more than that of construction and education. In the U.S., it exceeds the federal government's percentage of GDP.

While policymakers in developed countries enviously cite the GDP growth rates of China and India, particularly in today's troubled economic environment, they can often look past similar, or even higher, rates close to home. The Internet economy in the developed markets of the G-20 will grow at an annual rate of 8 percent over the next five years, far outpacing just about every traditional economic sector, producing both wealth and jobs.

The contribution to GDP will rise to 5.7 percent in the EU and 5.3 percent for the G-20. Growth rates will be more than twice as fast—an average annual rate of 18

percent—in developing markets. Overall, the Internet economy of the G-20 will nearly double between 2010 and 2016.

National levels of Internet economic activity generally track the BCG e-Intensity Index, which measures each country's level of enablement (the amount of Internet infrastructure in place), expenditure (the amount of money spent on online retail and online advertising), and engagement (the degree to which businesses, governments, and consumers are involved with the Internet). Five clusters of nations emerge when their performance on the index is plotted against per capita GDP. (See Exhibit 2.)

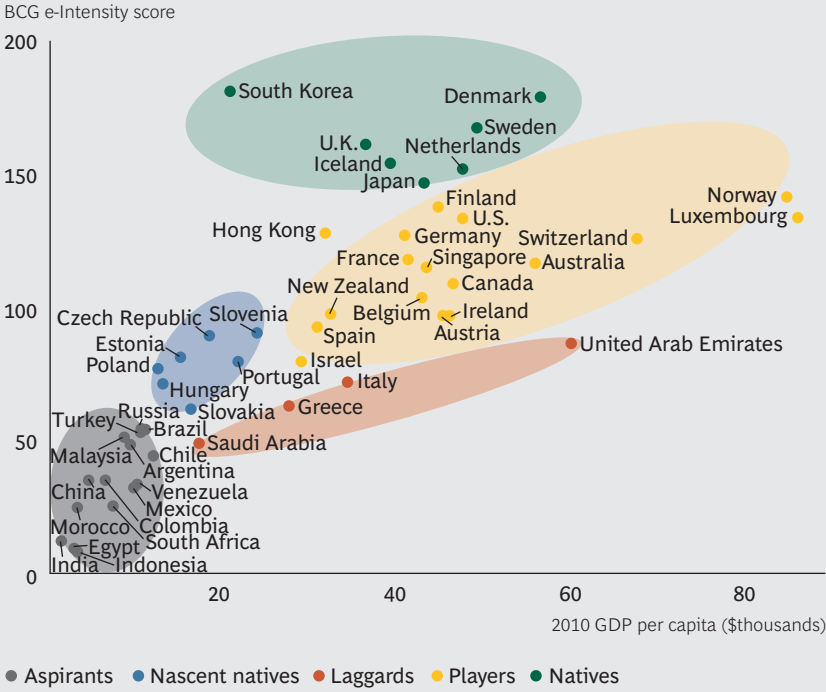
Consumption is the principal driver of Internet GDP in most countries, typically representing more than 50 percent of the total in 2010. It will remain the largest single driver through 2016. Investment, mainly in infrastructure, accounts for a higher portion of the total in “aspirant” nations because they are in the earlier stages of development.

Several “natives” on BCG’s e-Intensity Index—the U.K., South Korea, and Japan—are among those nations with the largest Internet contributions to GDP. Among G-20 “players,” the United States benefits from a vibrant Internet economy, while Germany and France tend to lag.

Retail represents almost one-third of total GDP in the G-20, and online retail contributes a significant and increasing share in many countries. Nowhere is the impact more apparent than in the U.K. Thanks in part to high Internet penetration, efficient delivery infrastructure, a competitive retail market, and high credit-card usage, the U.K. has become a nation of digital shopkeepers, to paraphrase Adam Smith.

Several European economies—Denmark, the Netherlands, Sweden, and the U.K. (to name but four)—perform strongly on BCG’s e-Intensity Index. But various barriers hold back the EU as a whole, the world’s biggest single market, when it comes to cross-border e-commerce. In January 2012, the European Commission announced plans to catch up, removing these impediments and creating a “digital single market.” The commission believes that e-commerce can double its share of overall retail sales by 2015.

EXHIBIT 2 | Developed Markets Score Significantly Higher in BCG’s e-Intensity Index



Sources: Economist Intelligence Unit; International Monetary Fund, ITU; Speedtest.net; Gartner; Ovum; World Bank; Pyramid Research; United Nations; World Economic Forum; comScore; Magnaglobal; Euromonitor; BCG analysis.

Note: The scores of several countries are estimates based on incomplete data.

The Internet's Further Economic Impact

GDP figures are only part of the story. G-20 consumers researched online and then purchased offline (ROPO) more than \$1.3 trillion in goods in 2010—the equivalent of about 7.8 percent of consumer spending, or more than \$900 per connected consumer.

ROPO is a bigger factor in developed economies, as one would expect, but consumers everywhere research a wide variety of products online before purchasing them elsewhere. In China, groceries are a popular ROPO purchase; in the United States, cars; India, technology products; Brazil, electronics, appliances, and travel packages. Multiple factors affect e-commerce and ROPO: regulatory barriers; the state of infrastructure for online and brick-and-mortar retail; Internet penetration; credit-card use; and consumer confidence in online payment systems, delivery, and fulfillment.

ROPO spending is higher than online retail in virtually all the nations we studied, but the margin varies widely. Japan has a busy online retail market, which totaled \$89 billion in 2010. ROPO added \$139 billion because Japanese consumers still prefer the experience of shopping in stores. In Turkey, ROPO dwarfs online retail—\$37 billion compared with \$2 billion—a reflection of weak delivery and fulfillment systems. Across the G-20, ROPO would add an additional 2.7 percent if it were counted as part of Internet GDP.

Mobile shopping—using a smartphone to identify deals, compare products and prices, and “seal the deal” while on the go—is growing in popularity worldwide and further blurring the lines between online and offline buying. Mobile apps such as RedLaser, Google Shopper, and Amazon Remembers allow customers to research

goods offline in a store but purchase them online—a reversal of ROPO.

With the rapid growth of e-commerce and its potential to disrupt both the top and bottom lines, retail is ripe for a transformation similar to the one seen in media. Most businesses will need a multichannel offering that captures sales wherever they occur.

Consumers (Everywhere) Know a Good Deal When They See It

Connected consumers place a considerable value on the Internet. In the G-20 economies, this “consumer surplus”—the value that consumers themselves believe they receive, over and above what they pay for devices, applications, services, and access—amounts to \$1,430 per person. Consumer surplus varies vastly across countries. For example, it’s \$323 per person in Turkey, \$1,215 in South Africa, \$1,287 in Brazil, and \$4,453 in France. The aggregate consumer surplus across 13 of the G-20 countries is \$1.9 trillion, or about 4.4 percent of GDP.

Although the consumer surplus figures are lower for many developing markets, they are actually quite high relative to local incomes. Lower-income people get relatively more benefit from the Internet than wealthier people do. Closing the digital divide can have a meaningful impact for the less well-off.

From High-Web to No-Web: Opportunities for Small and Medium Enterprises

Many small and medium enterprises (SMEs)—long the engine of economic growth in many economies—grasp the power of the Internet to build their businesses. But a surprising number have ventured online only to a

limited extent or not at all. These companies are leaving an enormous opportunity untapped.

During 2011 and 2012, BCG surveyed workers at more than 15,000 companies that employ fewer than 250 people (in the U.S., the cutoff was 500). We grouped the companies into four categories: high-Web, medium-Web, low-Web, and no-Web. (High-Web companies use a wide range of Internet tools to market and sell their offerings and to support customers, interact with suppliers, and empower employees; medium-Web businesses market or sell goods or services online; low-Web businesses have a website or a social networking site; no-Web businesses do not have a website.)

The results are compelling. Across 11 of the G-20 countries, high-Web SMEs experienced revenue growth up to 22 percent higher than that achieved by SMEs with low or no use of the Web over the last three years. In the U.K., sales at high-Web companies increased six times as fast as revenues at companies with no Internet presence.

Many U.S. SMEs have integrated the Internet into their businesses. They are much more aggressive online than low-Web companies, particularly in activities such as search engine optimization, social networking, and purchasing. They are even managing their business finances and recruiting staff online.

High- and medium-Web SMEs generate more jobs. In Germany, 93 percent of high-Web and 82 percent of medium-Web companies increased employment over the past three years, compared with only 50 percent of the no-Web companies. Japan experienced similar results. In South Korea, employment increased at 94 percent of high-Web SMEs and at 60 percent of no-Web companies.

Nearly two-thirds of high-Web SMEs are taking advantage of social networks and social media. The impact can be seen in such developing markets as Brazil and China. Despite the lack of infrastructure and low computer penetration, their SMEs are starting to exploit the Web's facility for driving sales through more intensive customer interaction.

Don't Blink: The Future Is Rushing Straight at Us

On the second half of the chessboard, the rapidly evolving Internet has the potential to both enrich and overwhelm. Businesses in particular need to make a choice. They can rise to the challenge of a new Internet-driven marketplace. Or they can follow in the footsteps of such industries as music and publishing, which held on to outdated business models for too long.

For those willing to think big, embrace change, move quickly, and organize differently, there are countless opportunities to reap the rewards of the Internet's creative destruction in industries ranging from health care to retail and consumer goods. Companies that have not yet developed an online strategy need to build their digital assets while reducing digital liabilities (which are often organizational) that might prevent them from tapping opportunities.

Governments also face challenges and opportunities. In the best of all worlds, with the Internet being a global phenomenon, governments would act in a coordinated manner, working toward beneficial international standards and cross-country agreements that support and enforce a predictable, minimalist, consistent, and simple legal environment for commerce.

On a national level, policies that promote investment—especially in the infrastructure in the developing world—and emphasize education, training, and skill building everywhere are essential. The Internet economy requires a well-educated and skilled workforce. Countries that fail to school their people will sacrifice Internet-driven economic growth to those that do.

Different countries will take different approaches, but the overarching challenge facing those empowered to do the people's business is the same—ensure ready and affordable access, a level playing field, and an open competitive environment that enables everyone to tap the economic benefits of the Internet.

David Dean
Sebastian DiGrande
Dominic Field
Andreas Lundmark
James O'Day
John Pineda
Paul Zwillenberg

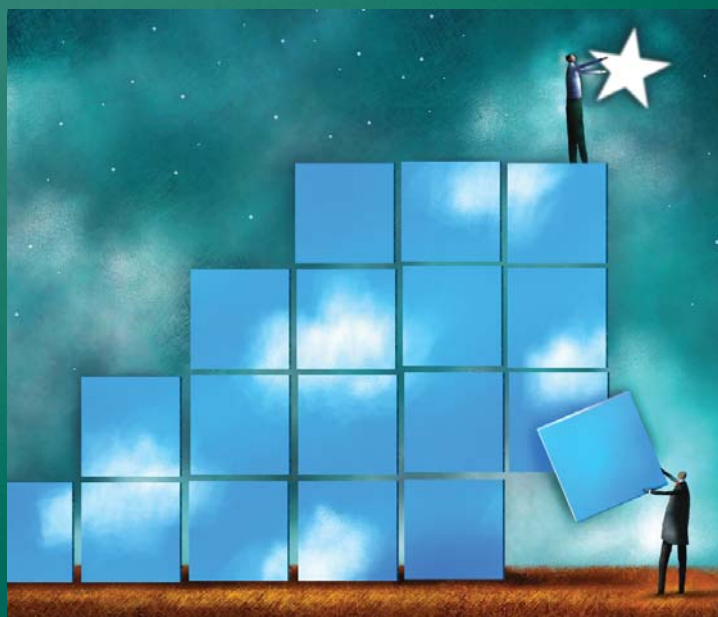
This article was excerpted from the BCG report [The Internet Economy in the G-20: The \\$4.2 Trillion Growth Opportunity](#).

MORE ON THE DIGITAL ECONOMY

Adapt and Adopt: Governments' Role in Internet Policy, BCG Focus, October 2012

"Winning in the Digital Economy: A New Focus for the CIO," BCG article, September 2012

Marketing Capabilities for the Digital Age, BCG report, January 2012





Thinking in New Boxes

How to Bring Fundamental Change to Your Business

The ability to survive in a world of accelerating change and challenge calls for ever greater creativity in our thinking. But to become more creative, we need to understand *how our minds work*. Once we do, we will recognize that we must do more than simply “think outside the box,” as the traditional business manuals suggest. We need to “think in *new* boxes.” In this way, business leaders can marshal their companies’ creativity and give them a real competitive advantage.

We Cannot Think Without Models

We constantly simplify things in order to make sense of the world around us. Take three examples:

- How many colors are there in a rainbow? You will probably say seven. But why seven, when there are actually thousands? The fact is that *thousands* is not a manageable figure—so we are forced to simplify, and seven is what we have been taught.
- How many columns are at the front of the Parthenon? You are probably hesitating and might say anywhere from five to ten. Actually, there are eight. But to have an image of the Parthenon in your mind’s eye requires only that you have a general grasp of the details.

- How many grains of sand does it take to make a pile? More than a few, obviously. But there is no exact answer because a *pile* is, by definition, an approximation: we do not need to know the precise number.

In the business world, we also simplify. Take three more examples: *market segments* are conceptual categories and do not add up to the same thing as the market itself; *balance sheets* are models based on rules relating to currency and accounting, and they do not represent financial reality; and Maslow's hierarchy of needs, devised by the behavioral scientist Abraham Maslow, is an abstract rendering of human nature rather than a precise profile of your customer.

These six examples demonstrate that the human mind needs to invent models and concepts and frameworks as stepping stones on the road to interpreting reality. They are not precise representations of reality—they are working hypotheses. They allow us to think and then work. They help us to “freeze” part of reality in order to make things manageable.

The Art of Thinking in New Boxes (Because Thinking Outside the Box Is Not Enough)

Models and concepts and frameworks are—to use another phrase—mental boxes within which we comprehend the real world. And ever since the 1960s, we have been taught to be creative by “thinking outside the box.”¹

The trouble is this: once you have mentally stepped outside the box, what happens next? The space outside the box is very expansive—infinately so—and there can be no guarantee that you will find a solution to your

problem. So the answer is that you need to find a new box. And you must consciously build or choose that box yourself; if you do not, an unconscious process will do it for you.

The way we think means that we cannot be creative in a constructive way without inventing models or boxes. Ideally, you need to develop a *number* of new boxes—new models, new scenarios, new ways of approaching a problem—to structure your thinking. The challenge—and the real art of creativity—is to know how to build those new boxes and, in the process, provide the framework for fresh imaginative effort.

Half a century ago, Bic, a French stationery company, brought to market the idea of making low-cost pens. Some creative brainstorming produced a series of variations on the theme: two colors, three colors, gold trim, advertising logos, erasers, and so forth. But who would have thought of making a razor? Or a lighter? Bic could come up with those ideas only by adopting a radical change of perspective. Instead of viewing itself simply as a pen company, Bic started to think of itself as a disposable-objects company—that is, as a mass producer of inexpensive plastic implements. In making this transition, Bic had, in effect, created a new box.

Business offers a number of other examples.

- Apple, originally a manufacturer of popular personal computers, leveraged its expertise to expand into the multimedia business. Initially, there was no logical reason for it to contemplate taking on Sony and its ubiquitous Walkman. But once Apple had created a new box and viewed itself through a different lens—specifically, as a multimedia company that knows circuits and bytes—the notion of developing a digital “walkman” became obvious.

- Google’s original aspiration was to build the best search engine ever. Arguably, the company eventually achieved that. But for Google to enter a new era of growth, it needed to perceive itself differently. The creation of a new “we want to know everything” box sparked projects such as Google Earth, Google Book Search, and Google Labs, as well as further improvements to the company’s search engine.
- Philips, a high-tech company, had concentrated its efforts on product-oriented ventures ranging from semiconductors to domestic appliances. Then it started to shift its strategic emphasis and endeavored to identify and exploit global trends in health care and consumer markets. In doing so, it has become a world leader in several new categories, including home health-care systems. By thinking in a new box, Philips has used its core skills in different ways—and has fundamentally changed its business as a result.
- Michelin and IBM illustrate how some companies have successfully moved from a product or technology orientation to a solutions or results orientation—without necessarily abandoning their core products or technologies. Michelin, the tire manufacturer, is now a road safety specialist, while IBM, the computer giant, has entered the consulting business.

How to Create New Boxes

If the theory makes sense, how does it work in practice? Here is one example. Like many companies, Champagne De Castellane, a French champagne manufacturer, was committed to growing its sales. To develop ways of achieving this goal, it held workshops on three days over a two-week period. Senior executives were

asked to build a new box that would foster some innovative business ideas.

To start with, the executives were asked to think about their business without mentioning the words they most often used to describe it—for instance, *liquor, drink, champagne, alcohol, bottle*, and so on. As a result of this exercise, the team came to the conclusion that the company’s business was fundamentally about *contributing to the success of parties and celebrations*.

Once that insight had emerged—and a new box had been formed—the executives had a framework within which they could think about the company and its future. Many ideas flowed—a number of which enabled Champagne De Castellane to become more appealing to consumers and to grow sales. For instance:

- In the summer, champagne is often not cold enough, especially if it is brought to a party as a gift. The company found that it could solve the problem by making a plastic bag that was sturdy enough to carry not only the bottle but also a few pounds of ice.
- At many parties and celebrations, someone is called on to give a speech. The company determined that it could put together a self-help booklet titled “How to Write a Speech” and attach it to the bottle.
- Parties thrive on games and entertainment. The company resolved to modify the wooden crates that contain its champagne bottles so that they could be recycled as game boards for chess, checkers, and backgammon.

It is worth noting that during the three-day brainstorming process, about 80 percent of the executives’ energy was devoted to the identification of a new box (the

party). Once that was done, the ideas came relatively easily. Indeed, coming up with the right new box is *always* the tough part, regardless of whether the underlying challenge is scenario planning, business development, or the design of a new strategic vision. So it is critical that companies understand this—and adopt a process that allows them to create the new box.



The brain is like a two-stroke engine. We are well aware of the value of the second stroke, when the brain selects, compares, sorts, plans, and decides. But the first stroke—when the brain imagines, dreams, suggests, and opens horizons—is the one that really matters. This process, however, needs organization—hence the need for a new box. And in times of crisis, when companies everywhere are concerned about their future, the importance of being able to think in new boxes is greater than ever.

NOTE

1. Although the precise provenance is obscure, the phrase “thinking outside the box” was associated with a popular nine-dot puzzle whose challenge is to connect nine dots on a square grid by drawing four straight lines through them without lifting the pen from the paper. The solution is to extend one of the lines beyond the boundaries of the grid—and so, “outside the box.”

Luc de Brabandere
Alan Iny

MORE ON STRATEGIC DECISION-MAKING

The Art of Planning, BCG Focus, April 2011

“Taking a Creative Approach to Innovation: An Interview with BCG Fellow Luc de Brabandere,”
BCG podcast, January 2011

“Rethinking Scenarios: What a Difference a Day Makes,” BCG Perspectives, October 2010





Resource Management as a Competitive Edge

Florida Ice & Farm is a Costa Rica-based beverage company. From 2002 through 2008, under new CEO Ramón de Mendiola Sánchez, the company's revenues more than quadrupled. In 2008, Mendiola went further, announcing that 40 percent of the variable portion of executive pay would now be tied to the company's performance on environmental and social measures. He put in place a regime of strict measurements and strong managerial focus on environmental metrics, particularly solid waste, water use, and carbon dioxide emissions. The company developed ambitious targets to achieve zero net solid waste by 2011, and to become water neutral by 2012 and carbon neutral by 2017. One of its bottling plants became the most efficient in the world in terms of water usage. At the same time, the company's revenues and market share continued to grow through a tough economy.

This is just one of many companies focusing on their "total return on resources." They are part of a growing trend that has implications for all businesses. Continued population growth and development are straining natural resources and ecosystems that are vital to the world economy. As old ways of production and distribution become more costly, companies will increasingly compete on the basis of a new paradigm: the efficient use of resources.

Putting Resource Management at the Core

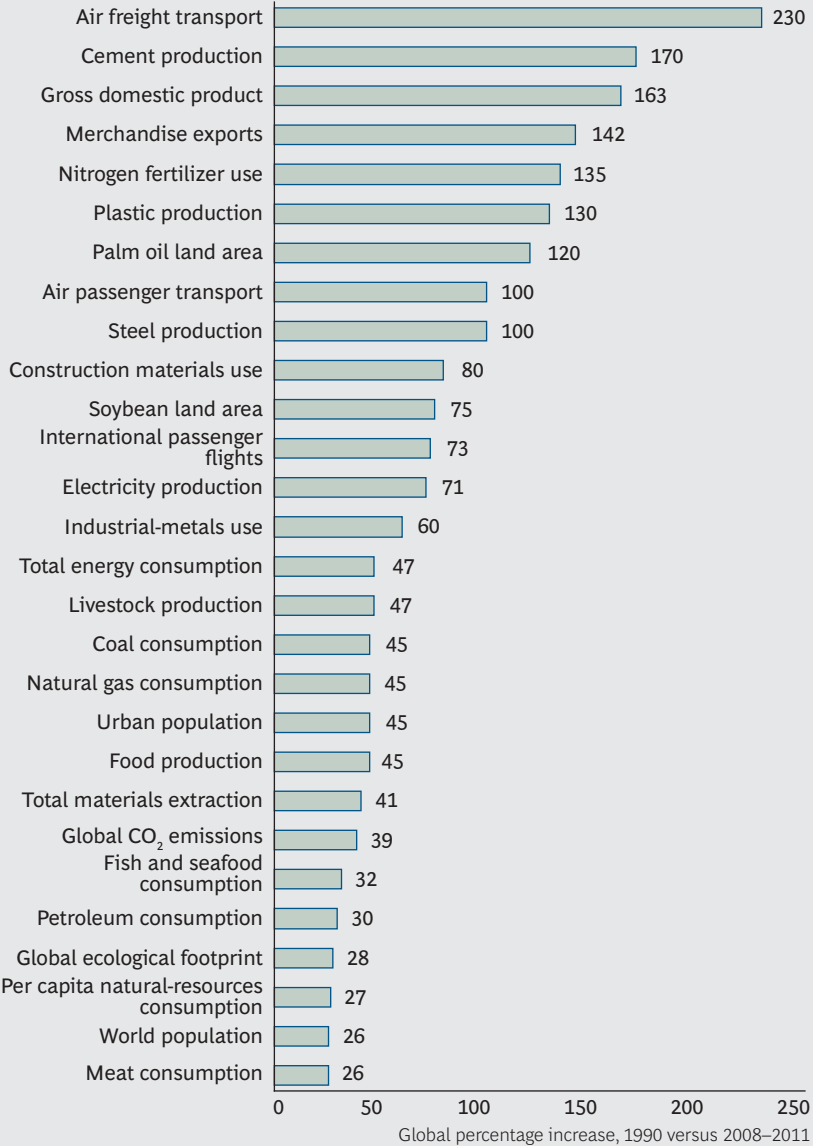
Companies are facing a new world of resource constraints. Humanity's industrial footprint has greatly increased over the past two decades. (See Exhibit 1.) With rapid economic development in much of the world, global GDP is expected to rise from \$69 trillion in 2008 (by purchasing power parity) to \$135 trillion by 2030. The population will continue to grow, from 6.7 billion to 8.2 billion, in that same period. As a result, it will become increasingly challenging to meet demand for several vital minerals and metals, as well as for oil and water.

The decline of readily available supplies will increase competition and price volatility for four key factors: raw materials, energy, water, and food. At the same time, companies will need to become more aware of their generation of emissions and waste—especially if they pose health or pollution risks.

To succeed in this new world, companies must put resource management at the core of their business. To understand what that means, we can turn to companies that already face resource constraints. In BCG's [annual survey of executives](#) across the globe, cosponsored with the *MIT Sloan Management Review*, we saw that resource-intensive industries treat sustainability as a core issue. They view resource management as a necessary part of their competitiveness, and many of these companies have a business case to support and drive their actions. (See Exhibit 2.) Each year, they put more emphasis on sustainability issues as resource challenges become more pressing.

Constrained resources will increasingly force companies to take two governing metrics into consideration. They will have to monitor the *payback* from natural resources

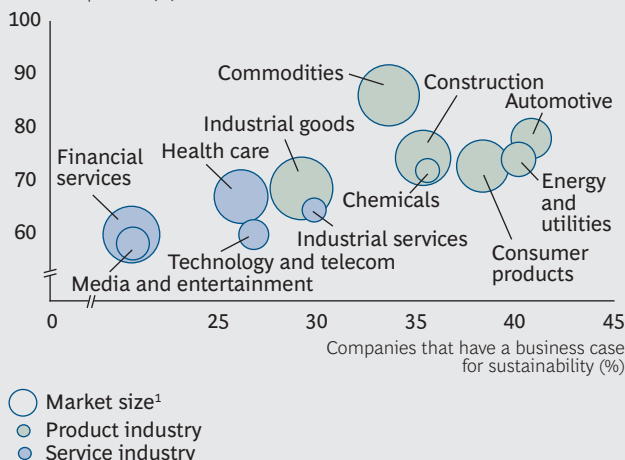
EXHIBIT 1 | The Human Industrial Footprint Has Grown Rapidly



Sources: United Nations Environment Programme; World Bank; Worldwatch Institute's *Vital Signs Online*; World Wildlife Fund; Sustainable Europe Research Institute; United Nations Development Programme; Food and Agriculture Organization of the United Nations; IEA.

EXHIBIT 2 | Sustainability Is an Important Topic for Resource-Intensive Industries

Companies that say sustainability is necessary to be competitive (%)



Sources: MIT Sloan Management Review–BCG, Sustainability & Innovation Global Executive Study, 2011; Prognos; BCG analysis.

Note: Based on commercial-specific survey data only, exclusive of academic, governmental, or nonprofit categories; 2,874 responses.

¹Relative market sizes are estimated from OECD reported production for 23 countries in 2008.

in order to minimize the consumption of scarce supplies. Electric utilities, for example, invest heavily in improving the efficiency of their generating plants to reduce how much fossil fuel they need in order to produce each megawatt. Companies will also have to watch their *putback* of natural resources in order to minimize their damage to the larger ecosystem. Electric utilities are investing in scrubbers and other processes to reduce the harmful emissions they release into the atmosphere.

This attention to the “total return on resources” changes how companies grow and compete with each other. But this is not a new story: companies have always optimized their inputs and outputs to maximize profits. The

inputs that are the most constrained get the most attention. The Industrial Revolution made natural resources a competitive factor in the nineteenth century, as companies located operations near hydropower and other low-cost energy sources. Energy became relatively abundant by the twentieth century, so executives turned their attention back to labor costs by, for instance, implementing automation. Or they focused on new sources of advantage—such as quality, speed, and other attributes.

As competition for resources increases, resource management will rise to the top of the company agenda once again. Companies that excel within this new paradigm of competitive advantage will turn this constraint into an opportunity and gain market share. Those that fail to respond to this trend will suffer from price increases and volatility, regulation, and social pressures.

Welcome to the new world of sustainability. As resource supplies struggle to keep up with burgeoning demand, companies will start treating sustainability as a central part of management rather than relegate it to a vaguely defined office of social responsibility. The world as a whole is on the verge of a new wave of innovation in resource management. And as with all innovation, this will create opportunities for companies that can help their customers address these issues.

Resource management will also help to solve the problem of responsibility. In the past, each producer internally optimized the use of resources and let the wider society worry about the consequences. Now companies will be motivated to make improvements themselves as externalities are priced in or as responsibilities are clearly assigned. Resource scarcity is already frequently a factor in the developing world. Despite the common presumption that a focus on

sustainability is a luxury for the developed world only, many companies in emerging economies are, in fact, already finding smart ways to anticipate the changes and create competitive advantage. These leaders can teach other companies, in the developed as well as the developing world, how to thrive in a resource-constrained world.

Understanding What Leading Companies Do

For the past two years, the World Economic Forum and The Boston Consulting Group have worked together to find sustainability leaders in the developing world. After researching thousands of companies, we focused on 16 that have managed resources wisely while achieving profitable growth.

These “new sustainability champions” have identified opportunities and innovations that companies based in affluent nations often seem to overlook. They provide inspiring examples for companies everywhere that are looking to tackle today’s challenges of performance, innovation, growth, and sustainability. The success of the new sustainability champions stems from three primary practices.

First, they turn constraints into opportunities through innovation. They have a pragmatic approach, adapting and tailoring existing technologies to their local business environment. They look for alternative ways to bring products to market or to develop markets that have not yet taken off.

Second, the champions embed sustainability in their company culture. They know that only with the commitment of the entire organization can they combine sustainability with profitable growth. All employees are

involved in defining and delivering on common goals and ambitions that maintain a sustainability focus.

Finally, they actively shape their business environment. The new sustainability champions acknowledge that everyone along their value chain—from suppliers to customers—does not necessarily embrace or understand their views and goals. They educate suppliers, customers, and others to shape the environment in their favor. When they see government policy regarding their industry functioning poorly or against their interests, they may reach out to influence policy-makers.

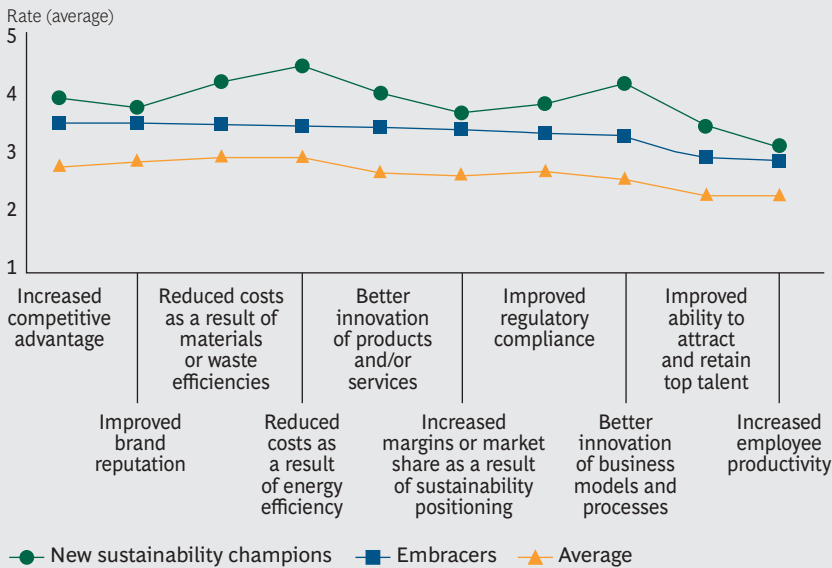
Indeed, they are outliers when compared with the “embracers” of sustainability, as identified by the BCG–MIT Sloan Management Review collaboration of 2011. Embracers are companies that say sustainability is necessary for profitability, have it permanently on their management agenda, and have made a business case for sustainability. Compared with them, the champions have a more holistic outlook, including a wide variety of environmental and social elements in their thinking. They push multiple boundaries at the same time but with one clear focus and business logic. They are better at measuring the benefits of their efforts—not just in terms of quantifiable targets, such as energy efficiency, but also in terms of intangibles such as corporate reputation and attractiveness to talent. (See Exhibit 3.) They also seem to incorporate the risks of resource shortages more deliberately into their business decisions than the embracers do.

Through a series of interviews and deep-dive analyses, we have distilled seven core principles that guide the new sustainability champions’ focus on total return on resources. These principles may seem to be familiar management dictates for any major initiative, yet they

EXHIBIT 3 | The New Sustainability Champions Have a Strong Focus on Many Aspects of Sustainability

To what extent do you quantify those potential sustainability-related benefits when evaluating the business cases that frame decisions?

(Please rate on a scale of 1 to 5, where 1 = “not quantified at all” and 5 = “quantified in detail”)



Sources: Sustainability & Innovation Global Executive Study, BCG-MIT, 2010; Economist Intelligence Unit; BCG analysis.

Note: Based on commercial-specific survey data only, exclusive of academic, governmental, or nonprofit categories; 2,136 responses.

take on special significance in the context of resource management.

- *Monetize resource management.* India’s Shree Cement is constantly scrutinizing its operations to identify process or material innovations that could reduce costs. For example, in 2011, Shree estimated that it generated savings amounting to 8 percent of its aftertax profits for that year through measures such as installing rotary screens on fly ash silos and

increasing direct deliveries to customers in order to reduce the use of secondary freight.

- *Embed resource management.* Exhorting employees to monetize sustainability is not enough. Companies also need to embed the key concepts of resource management within the organization. They must go beyond strategy and into corporate structure, governance, and the organization's mission. Resource management can't have a project-of-the-month strategy; it has to be accepted as a standard part of how the company works.
- *Measure, measure, measure.* It is better to go with a few, easily understood "magic metrics" than with an exhaustive list of all the indicators around a process. Florida Ice adopted a limited number of indicators as part of its effort to produce no solid waste and to be water neutral and eventually carbon neutral. It installed permanent monitoring of these resources, and it now reports progress regularly to the broader organization.
- *Look widely at resource management.* By working broadly with stakeholders, companies can promote better management of the resources that they depend on. When companies are able to identify their operational risks and better mitigate and prevent them, they create competitive advantages. Shree used just such an approach when it adapted its kiln to act as an incinerator. It disposed of solid waste from local communities while reducing its fuel bill.
- *Be innovative with the business model.* Innovation will be central to succeeding in this new world, both in terms of business models and in the adaptation of technologies. China's Broad Group wasn't content

with improving the energy conservation of its air conditioners. The need to improve building insulation was everywhere. So it retrofitted nearly a dozen of its buildings by incorporating thick thermal insulation and four-paned windows.

- *Shape the business ecosystem.* By partnering with or lobbying regulators, leading companies can persuade governments to raise regulatory standards. Even when governments aren't involved, market leaders can convince suppliers and customers of the need to support those practices as industry norms—norms that match the company's strengths.
- *Constantly explore and improve.* As more companies recognize the growing resource constraints, pioneers in resource management will have to improve relentlessly in order to maintain an edge. They will want to readjust their targets on an ongoing basis—using those metrics that they have already invested in and finding new relevant ones to stay ahead of the curve.



Changes in resource availability will drive new competitive dynamics, and the capabilities that lead to success will correspondingly change. This is not a niche issue that touches only a few companies but rather a universal phenomenon that applies to all. Like the new sustainability champions, which already understand how to operate in this altered world of scarce resources, future market leaders will focus on resource management as a pathway to growth. By putting resource management at the very core of business strategy and operations, these companies will be able to leverage the opportunities that lie behind what appear to be constraints.

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*This article was excerpted from the BCG report **Handle with Care: Resource Management as a Competitive Edge**, which was produced in collaboration with INSEAD and the *World Economic Forum*.*

MORE ON SUSTAINABILITY

“Sustainability: The Adaptive Art of Sticking Around,” BCG article, August 2012

“Creating Practical Consumer Value from Sustainability,” BCG article, June 2012

“Potential Impacts of the New Sustainability Champions: How Management Can Change the World,” BCG article, April 2012





U.S. Manufacturing Nears the Tipping Point

Which Industries, Why, and How Much?

Editor's Note: Since this article was first published, BCG has increased its estimates of the number of jobs that will be created in the U.S. as a result of the return of manufacturing from China and higher U.S. exports to 2.5 million–5 million. We have also raised our estimate of added U.S. production in the seven tipping-point industries to \$100 billion–\$190 billion annually. These changes have led to adjusted estimates of the potential impact on the U.S. unemployment rate and trade deficit.

The U.S. has been losing factory jobs for so long that many observers have all but written off manufacturing as a meaningful part of America's economic future. The mass exodus of production following China's 2001 entry into the World Trade Organization (WTO) deepened this pessimism.

But the tide is starting to turn. Rising wages and other forces are steadily eroding China's once-overwhelming cost advantage as an export platform for North America. By around 2015, when higher U.S. worker productivity, supply chain and logistical advantages, and other factors are taken fully into account, it may start to be more economical to manufacture many goods in the U.S. An American manufacturing renaissance could result.

But which industries will be most affected? By how much? And what will be the economic impact? To answer these questions, BCG analyzed the primary industry groups to identify those most likely to be influenced in the years ahead by changing global cost structures. We identified seven industry groups in which rising costs in China could prompt manufacturing of goods consumed in the U.S. to return to the U.S.

The economic impact would be significant. Production of 10 to 30 percent of the goods that the U.S. now imports from China in those seven groups could shift back to the U.S. before the end of the decade. The relocation of manufacturing from China, combined with increased exports due to improved U.S. competitiveness compared with Western Europe and other major developed markets, could directly and indirectly create 2 million to 3 million jobs in the U.S., reduce unemployment by 1.5 to 2 percentage points, and lower the nonoil-related merchandise deficit by 25 to 35 percent. In fact, given the many changes sweeping the global economy, we believe our estimates are conservative.

The Rush to China in Retrospect

U.S. companies had been moving production offshore well before China became a realistic option. But the rush accelerated after China joined the WTO in 2001. With hundreds of millions of workers, low factory wages, a rapidly developing domestic market, and generous government incentives to attract foreign investment, China offered an unbeatable cost proposition. Between 2000 and 2009, Chinese exports to the U.S. nearly tripled.

Nonetheless, the U.S. still manufactures \$3.4 trillion worth of goods annually, nearly three-quarters of what it consumes. What's more, the U.S. exports \$1.3 trillion

worth of goods per year, mainly to Europe, Canada, and Mexico—further evidence of a robust manufacturing sector.

The rush to China should be seen in context. Yes, a lot of U.S. factories closed and a lot of jobs were lost. But many were casualties of automation or more efficient production methods—trends that are reducing direct-manufacturing employment everywhere in the world. A meaningful share of work went to China because labor accounted for a major share of costs. Had such production not gone to China, it would probably have gone to another low-wage country.

But a surprising amount of work stayed home in other industries—even some that experienced extensive outsourcing to China. For example, the U.S. manufactures 52 percent of appliances sold domestically, 61 percent of machinery, 70 percent of transportation goods, and 71 percent of furniture. Industries such as these are neither destined for low-cost nations nor anchored by necessity to the U.S. Factory wages generally account for only a modest portion of total production costs. Logistical issues, such as shipping costs, time to market, and the proximity of production lines to engineering and design teams, are relatively important. Being located in a major industrial cluster can be an advantage but is not necessarily crucial for many companies.

As a result of these major shifts in global cost structures, a number of industries are approaching a tipping point, where bringing production back to the U.S. makes economic sense.

Recalculating the China Price

In 2000, factory wages in China averaged just 52 cents an hour, or a mere 3 percent of what average U.S.

factory workers earned. Since then, Chinese wages and benefits have been rising by double digits each year, averaging increases of 19 percent from 2005 to 2010. The fully loaded costs of U.S. production workers, in contrast, rose by less than 4 percent annually between 2005 and 2010, and labor unions have become more flexible in negotiating future pay and benefits.

As the Chinese labor market continues to tighten owing to economic growth and the nation's aging workforce, further wage increases of 18 percent per year are projected through 2015. By that time, the average fully loaded hourly wage in China would reach \$4.51. (See Exhibit 1.) In the Yangtze River Delta, the region of China's highest manufacturing output and the heart of such high-skill industries as automobiles and electronics, average wages are expected to reach \$6.31 per hour in 2015. That would make Chinese compensation packages equal to around 25 percent of what skilled workers earn in low-cost manufacturing states in the U.S. Take much higher U.S. worker productivity into account, and wages in the Yangtze River Delta will likely exceed 60 percent of labor costs in U.S. states with low manufacturing costs. Even though our model includes aggressive forecasts of productivity growth in China of around 8.4 percent per year through 2015, these increases will not compensate for wages likely to rise twice as fast.

By around 2015, the total labor-cost savings of manufacturing many goods in China will be only about 10 to 15 percent when actual labor content is factored in. When shipping and the many risks and hidden costs of operating extended global supply chains are considered, many companies will find that making products in China that are destined for the U.S. will bring only marginal cost savings—and that manufacturing these products in the U.S. may be more economical.

EXHIBIT 1 | Labor Rates Are Growing Much Faster in China Than in the U.S.



The Tipping-Point Industries








The impact of the changing math of manufacturing will be felt the most in seven industry sectors that our analysis predicted would reach a tipping point in around five years, when the rising costs of producing in China will make it more economical to shift the manufacture of goods consumed in the U.S. to the U.S. These groups of industries are computers and electronics, appliances and electrical equipment, machinery, furniture, fabricated metals, plastics and rubber, and transportation goods.

Together, these industries account for nearly \$2 trillion in annual U.S. consumption. In 2010, the U.S. imported nearly \$200 billion worth of products in these categories from China—almost two-thirds of total Chinese exports to the U.S. (See Exhibit 2.) We project that manufacturing growth in the seven tipping-point industries, combined with increased U.S. exports to Western Europe and other developed markets, will add \$80 billion to \$120 billion in annual output to the U.S. economy.

The estimate that 10 to 30 percent of goods in tipping-point industries could be reshored to the U.S. from China is based on an evaluation of factors such as logistics costs and evolving supply and demand in the domestic Chinese market and in the U.S. We also considered the “movability” of production. Will some production remain where it is, for instance, because it needs to be located in an established industrial cluster or because it would be too expensive to build new capacity elsewhere?

We expect that around three-quarters of the manufacturing that is reshored from China will likely shift to the U.S. in the coming decade. This increased produc-

EXHIBIT 2 | Tipping-Point Industries Account for Almost \$2 Trillion of U.S. Consumption and Nearly \$200 Billion in Imports from China

	Industry category	Value of goods consumed	Imports from China
	Transportation goods	~\$582 billion	~\$6 billion
	Computers and electronics	~\$467 billion	~\$122 billion
	Fabricated metals	~\$262 billion	~\$10 billion
	Machinery	~\$251 billion	~\$16 billion
	Plastics and rubber	~\$170 billion	~\$9 billion
	Appliances and electrical equipment	~\$134 billion	~\$25 billion
	Furniture	~\$75 billion	~\$13 billion

Sources: U.S. National Census Bureau; U.S. Bureau of Economic Analysis; BCG analysis.

tion will add between \$20 billion and \$55 billion annually to the U.S. economy. Again, the impact will vary from industry to industry. We expect that the vast majority of computer and electronics manufacturing that moves from China will go to the U.S., for example, while Mexico could get a significant share of reshored transportation goods owing to its strong manufacturing and supplier clusters.

The Impact on Exports and Jobs

We estimate that in around five years, U.S. exports could increase by at least \$65 billion annually. The reason is that the U.S. is gaining a significant production-cost advantage in many industries over much of Europe, largely because wages across Western Europe have been rising more sharply than in the U.S. when adjusted for productivity. Between 2000 and 2005, manufacturing output per worker rose by 3.3 percent per year in Western Europe—approximately twice as fast as in the U.S. But in the latter half of the decade, annual productivity growth accelerated to 2 percent in the U.S. while it slowed to just 0.04 percent in Western Europe. Coupled with a U.S. dollar that has depreciated by an average of 3.6 percent per year against the euro since 2000, this meant that the average U.S. worker was around 35 percent cheaper per hour on a productivity-adjusted basis than the average Western European worker in 2010. That same worker was 26 percent cheaper in 2005 and only 12 percent cheaper in 2000.

We expect that the wage differential with Western Europe will continue to grow. The projected shift in cost competitiveness is dramatic when examined over a 15-year period. By 2015, U.S. productivity-adjusted wages are expected to be equal to only 67 percent of German wages. French labor costs will have risen by more than 40 percent against U.S. wages over that period, and Italian labor costs will be nearly 80 percent higher. Therefore, some companies might even consider the U.S. as a low-cost export platform for Western Europe, especially in industries in which logistics issues are not paramount.

An American manufacturing renaissance would have a considerable impact on employment. By our estimates, the combination of manufacturing returning to the U.S.

from China and higher exports will directly create between 600,000 and 1 million manufacturing jobs.

Each manufacturing job, in turn, will create jobs in sectors such as construction, retail, transportation, food services, and housing. A number of organizations, including the U.S. Bureau of Economic Analysis, the Economic Policy Institute, the New America Foundation, and the Public Policy Institute of New York State, have attempted to quantify this indirect impact and arrived at similar estimates, with multipliers ranging from around 2.5 to 3.5. Averaging these multipliers, we calculate that new factory jobs will create 1.8 million to 2.8 million additional jobs in the rest of the economy. The addition of this many jobs would be enough to lower the U.S. unemployment rate by 1.5 to 2 percentage points.

The Implications for Manufacturers

The impact of rapid shifts in the cost structure between China and the U.S. is likely to be profound—both for the U.S. manufacturing sector and for companies that source their products globally. Companies that have not done so already must start reassessing their global manufacturing footprint. This is especially true, and urgent, if they are in an industry nearing the tipping point, where the clear cost advantage of using China as an export base for the U.S. no longer applies. Companies that continue to see China as the default option for manufacturing could find themselves at a competitive disadvantage.

Companies must approach this potential paradigm shift carefully and intelligently, however. Not long ago, too many companies rushed into China, spellbound by its cheap labor and fixed currency. Now they must avoid a wholesale withdrawal of production just because wages

are rising and the yuan is appreciating against the dollar. What is required instead is a holistic, global, and long-term understanding of the total costs of making particular products for particular markets and the economic trends that will influence future costs.

That assessment should include worker productivity in different countries, labor as a share of total costs, the relative importance of logistics, and the myriad hidden costs and risks of operating extended global supply chains. Companies should also determine whether their Chinese production lines can be redeployed to supply China's growing domestic market and other Asian nations.

The winners are building flexibility into their supply chains now. For those companies planning to add new production capacity to meet demand in the U.S. market, it probably is time to take a hard, fresh look at the U.S.

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Michael Zinser
Douglas Hohner
Justin Rose

*This article was excerpted from the BCG report **U.S. Manufacturing Nears the Tipping Point: Which Industries, Why, and How Much?***

MORE ON MANUFACTURING

“Why America’s Export Surge Is Just Beginning,”
BCG article, September 2012

The Human Factor: What Sets Quality Leaders in Manufacturing Apart, BCG Focus, August 2012

Made in America, Again: Why Manufacturing Will Return to the U.S., BCG Focus, August 2011





Improving Health Care Value

After decades of struggle to control rising health-care costs, it is clear that the conventional methods have had only limited effectiveness. There is, however, a promising alternative: improving patient outcomes and focusing on health care value. We have studied provider organizations, regions, and countries that provide high-quality care at relatively low cost. They are all living examples of what can be accomplished when a strong system of disease registries provides clear goals for caregivers.

Most discussions of disease registries portray them primarily as repositories of data useful for outcomes research. We take a broader view. We see disease registries not only as systems for the collection and analysis of data on health outcomes but also as important institutional catalysts for efforts to improve those outcomes over time.

By identifying variations in outcomes within the same population, registries make it possible to benchmark and assess comparative performance at the clinic, regional, national, and even international level. In-depth analysis of the causes behind variations in performance can lead to the identification of best practices. Active dissemination of those best practices and support to enable their adoption can improve outcomes and reduce variations in clinical practice.

Systematic quality improvement of this type often has the virtuous side effect of lowering total health-care costs for a given condition. What's more, by putting the responsibility for improved quality squarely in the hands of physicians and other health-care practitioners, registries organize and engage the medical community around the common goal of better health-care value.

Disease Registries and Value-Based Health Care

The Boston Consulting Group has been studying disease registries as a potential model for *value-based health care*, an approach to controlling health care costs that emphasizes maximizing value, defined as patient outcomes relative to the cost of care for the same patient.¹ This research began in 2009, when a group of senior health-care leaders in Sweden asked BCG to analyze that country's disease registries and evaluate the opportunities and costs involved in expanding the registry model to include other conditions.

Sweden has been an international pacesetter in the establishment of disease registries, with some dating back to the 1970s. Today, Sweden boasts more than 100 registries that cover more than 30 percent of total national health expenditures. A recent study found Sweden to have the best health-care outcomes in Europe, even though its health-care costs, as a percentage of GDP, hover around the European average of roughly 9 percent.² By contrast, the U.S., which has the highest per capita costs, spends 17.6 percent of GDP on health care.

Our 2009 study concluded that by investing \$70 million annually in disease registries, data analysis resources, and IT infrastructure, Sweden could reduce its annual growth in health care spending from an estimated 4.7

percent to 4.1 percent. The estimated cumulative return totaled more than \$7 billion in reduced direct health-care costs over ten years.³ Partly as a result of our study, in September 2011 the Swedish government declared the expansion of Sweden's network of registries a national priority and increased their funding nearly fivefold.

Encouraged by the initial results of the Swedish study, BCG expanded its research in 2010 to analyze the impact of disease registries in other countries. Our study had four primary goals: to document outcomes improvement in patient populations covered by disease registries; to identify what role, if any, the registries played in achieving these results; to quantify (where data were available) the cost savings made possible by those improvements in the form of avoided health-care costs; and to estimate the potential impact of similar improvements in the U.S.

We studied 13 registries in five countries and across six major disease areas. Although many of the registries we studied were in Sweden, the majority were located in other countries, including Australia, Denmark, the U.K., and the U.S. We also interviewed approximately 40 health-care professionals to gain insight into how the registries function and to identify the mechanisms by which they are able to influence clinical practice.

Evidence of Improved Health Outcomes

Our study identified many instances where the existence of registries was associated with significant improvements in health outcomes. Although such associations do not prove causality, when we looked closely at how the disease registries operate, we found many indications that they played an active role—and in some cases, a leading role—in encouraging changes

in clinical practice that led to improved health outcomes.

This has been the case, for example, in the area of acute myocardial infarction (heart attack). Sweden's Register of Information and Knowledge about Swedish Heart Intensive-care Admissions was established in 1991. Between 1998 and 2009, Sweden's hospitals greatly improved their adherence to nine interventions recommended by the European Society of Cardiology, decreasing the average 30-day mortality rate for patients who experience an acute heart attack by 65 percent and the one-year mortality rate by 49 percent. (See the exhibit.)

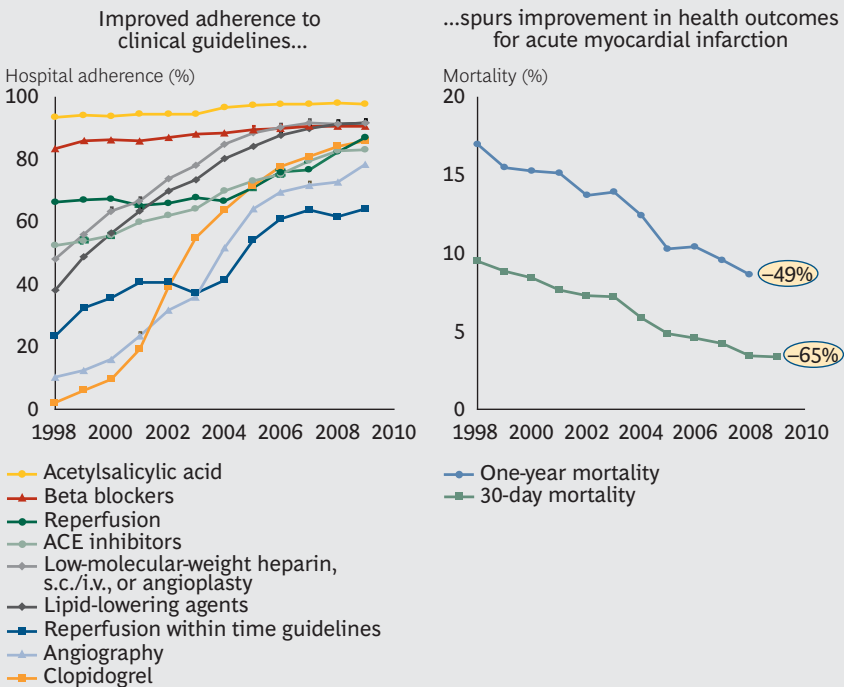
What role did the Swedish heart-attack registry play in this improvement? The registry collects comprehensive data from all 74 of the nation's major medical centers and covers 80 percent of patients who suffer a heart attack. But the registry does not simply collect these data. It also makes them transparent—initially to health care practitioners and later, after the data collection process and outcome metrics are fully vetted, to the public at large. This data transparency has had a demonstrated impact on the rate of clinical improvement.

In 2005, the registry created a quality index that tracks how well the nation's cardiac hospitals are complying with clinical guidelines. At first, the registry published only aggregate data at the regional level, but in late 2006 it decided to make public both the index scores and actual patient-survival rates for each of the country's 74 hospitals.

A review of the results shows a sharp inflection point after public disclosure. From 2005 through 2007, the average quality-index score improved by 13 percent per year. Meanwhile, the bottom half of performers improved by only 7 percent, indicating a widening quality

gap between above-average and below-average clinics. From 2007 through 2009, the period after the data were made fully public, the overall rate of improvement almost doubled to 22 percent per year. But bottom-half performers improved their quality scores by 40 percent, decisively narrowing the quality gap. By 2011, none of the 74 hospitals deviated significantly from EU guidelines—not because payers had demanded or monitored compliance but because of a powerful combination of transparent outcomes, professional pride and competitiveness, and the drive to improve and deliver better results for patients.

By Promoting Adherence to Clinical Guidelines, Sweden's Coronary-Care Registry Has Helped Improve Outcomes



Sources: R. Carlhed et al., “Improved Adherence to Swedish National Guidelines for Acute Myocardial Infarction: The Quality Improvement in Coronary Care (QUICC) Study,” *American Heart Journal*, 2006, 152(6); RIKS-HIA interviews, data, and annual reports; BCG analysis.

Combining Improved Outcomes with Lower Costs

The evidence-based continuous improvement enabled by disease registries has strong parallels to the total-quality-management movement that has swept through the manufacturing world in recent decades. One of the core tenets is that boosting quality often has the beneficial side effect of lowering costs. Despite severe data limitations, we found several instances that suggest that this phenomenon also applies to disease registries.

Total-hip arthroplasty, the replacement of a hip joint with an artificial prosthesis, is a common operation. Although generally effective, the procedure fails for some patients. In such cases, a second procedure, known as a “revision,” is required to repair or replace the implant.

Since the founding of the Swedish Hip Arthroplasty Register in 1979, Sweden has reduced its revision burden (the number of surgeries that have to be performed again as a share of total-hip arthroplasties in a given year) to 10 percent, one of the lowest national rates in the world. On the basis of registry data, we estimate that Sweden avoided some 7,500 revisions in the decade from 2000 through 2009 that would have taken place had Sweden’s revision burden been as high as that in the U.S. at the same time.⁴ That represents approximately \$140 million, or \$14 million per year, in avoided costs—about 8 percent of the total cost of total-hip arthroplasty in Sweden during this period.⁵

The U.S. health-care system spent \$6 billion on total-hip arthroplasty in 2005, and according to one estimate, these costs are expected to rise to \$24 billion by 2015. On the basis of these assumptions, we estimate that if

the U.S. health-care system improved its revision rate by 2015 to Sweden's current level of 10 percent, it would avoid \$2 billion of the expected \$24 billion in total costs.⁶

Extending the Reach of Disease Registries

Our research demonstrates that disease registries can function as powerful platforms for improving health outcomes, lowering health care costs, and thus improving health care value. But the formation of registries in the U.S. with the scope and comprehensiveness of those found in Sweden and other nations faces major challenges.

The U.S. health-payer system is extremely complex and fragmented, with few common reporting standards or clinical-outcome metrics across the system, even within the same specialty. There is no national mechanism to compel providers to report outcomes to disease registries. Nor is there a unique patient identifier in place that would enable researchers to combine data across different disease states to examine the effects of complex comorbidities.

Despite these obstacles, the U.S. boasts some outstanding registries. For more widespread and systematic usage of registries to take hold, however, key stakeholders will need to champion them. Medical professional societies have a central leadership role to play, both in creating uniform standards for data collection and in securing the broad support and participation of practicing clinicians.

The federal government can support registries by creating a legislative and regulatory framework that facilitates their establishment and by providing seed funding to get them up and running. And private-sector

players should support disease registries because the high-quality data the registries produce will help the health care system focus on genuine innovations to improve clinical outcomes and bend the health care cost curve.

NOTES

1. Michael Porter and Elizabeth Teisberg, *Redefining Health Care: Creating Value-Based Competition on Results* (Harvard Business Press, 2006).
2. *Euro Health Consumer Index 2009*, Health Consumer Powerhouse, 2009; available at <http://www.healthpowerhouse.com/files/Report-EHCI-2009-090925-final-with-cover.pdf>.
3. *From Concept to Reality: Putting Value-Based Health Care into Practice in Sweden*, BCG Focus, November 2010; available at https://www.bcgperspectives.com/content/articles/biopharma_health_care_payers_providers_health_care_from_concept_to_reality/.
4. Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project (HCUP), HCUP Nationwide Inpatient Sample (NIS), 2007–2009; available at <http://www.hcup-us.ahrq.gov/nisoverview.jsp>.
5. See J. Kärrholm et al., “Improved Analyses in the Swedish Hip Arthroplasty Register,” presented at the Annual Meeting of the American Academy of Orthopaedic Surgeons, February 14–18, 2007, San Diego, California; and M. Skutek et al., “International Epidemiology of Revision THR,” *Current Orthopaedics*, 2006, 20(3).
6. S. Kurtz et al., “Projections of Primary and Revision Hip and Knee Arthroplasty in the United States from 2005 to 2030,” *Journal of Bone and Joint Surgery* (American ed.), 2007, 89(4), and S. Kurtz et al., “Future Clinical and Economic Impact of Revision Total Hip and Knee Arthroplasty,” *Journal of Bone and Joint Surgery* (American ed.), 2007, 89 (supplement 3).

Stefan Larsson
Peter Lawyer

*This article was excerpted from the BCG report **Improving Health Care Value**. Portions of this material appeared previously in **Health Affairs**.*

Editor's Note: Focusing on improving health outcomes through the development and use of comprehensive health-outcomes data from disease registries can pay significant dividends—for payers, providers, and patients. That is why in October 2012, BCG partnered with Michael Porter's [Institute for Strategy and Competitiveness](#) at Harvard Business School and with Sweden's [Karolinska Institute](#) to create the International Consortium of Health Outcomes Measurement (ICHOM).

The mission of ICHOM is to serve as a catalyst for the global value-based transformation of health care. It provides a necessary first step toward reorienting health care reform around more systematic reporting and tracking of outcomes for defined medical conditions and procedures. With this essential information in hand, core stakeholders will be better able to engage in a rational discussion about the appropriate level of spending to achieve a desired health-care outcome. We believe that this will lead to broader adoption of value-based health care around the world—and, ultimately, to better health care for all.

MORE ON VALUE-BASED APPROACHES

“Health Reforms Should Focus on Outcomes, Not Costs,” BCG article, October 2012

Achieving More for Less in U.S. Education with a Value-Based Approach, BCG Focus, July 2012

Progress Toward Value-Based Health Care: Lessons from 12 Countries, BCG Focus, June 2012





The Most Adaptive Companies 2012

Winning in Turbulent Times

The phenomenon of turbulence is not new, but today it strikes more frequently than it did in the past. Since the mid-1980s, a perfect storm—digitization, connectivity, trade liberalization, global competition, and business model innovation—has been creating a “new normal” of chronic turbulence that can undermine incumbent positions and business models with unprecedented speed.

According to our calculations, **turbulence** has increased in intensity: volatility in revenue growth, in revenue ranking, and in operating margins has more than doubled since the 1960s. Also, it persists much longer than in preceding periods: the average duration of periods of high turbulence has quadrupled over the past three decades.

Another feature of turbulence is that it destroys a significant proportion of the value companies create during stable periods: over the past 30 years, the companies we have studied saw their overall market capitalization grow eight times larger during stable quarters, but *one-third* of that value was destroyed during turbulent quarters—and that effect has been amplified in recent years.

Faced with such a challenging business environment, executives must now master the art of what we call “adaptive advantage.”

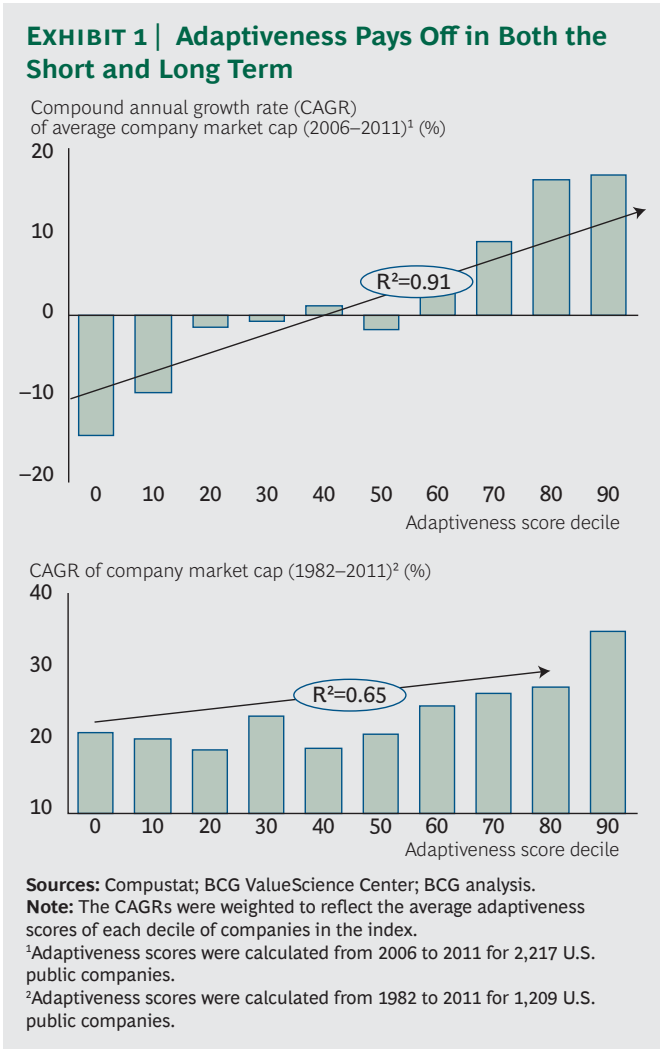
The Value of Adaptive Advantage

As we noted in a recent *Harvard Business Review* article, adaptive companies adjust and learn better, faster, and more economically than their rivals.¹ By learning how adaptive they are compared with others and what practices make some players more adaptive, companies can enhance their own adaptive capabilities. It is for this reason that we have created the BCG Adaptive Advantage Index, which takes a cross-industry perspective, using publicly available data.

We have been able to identify a set of companies that outperformed their peers under the most difficult circumstances by measuring a company’s outperformance relative to its industry during the seven most turbulent quarters of the past six years. Of the 2,500 U.S. public companies we examined for the period from October 2005 to September 2011, we ranked **417 companies** as “adaptive” or “highly adaptive”—in other words, they achieved a score above 100. If, for instance, a company was awarded a score of 105, it means that, on average, it outperformed its industry by 5 percentage points during a *single turbulent quarter*—a major achievement in tough times, and a performance effect that can compound significantly over time.

In doing this analysis, we identified several key characteristics of adaptiveness. First, it creates short-term *and* long-term value. Increases in index scores showed a strong relationship to growth in a company’s market capitalization over the entire six-year period. The same pattern held for a company’s total shareholder return over the entire period. From 2006 to 2011, companies

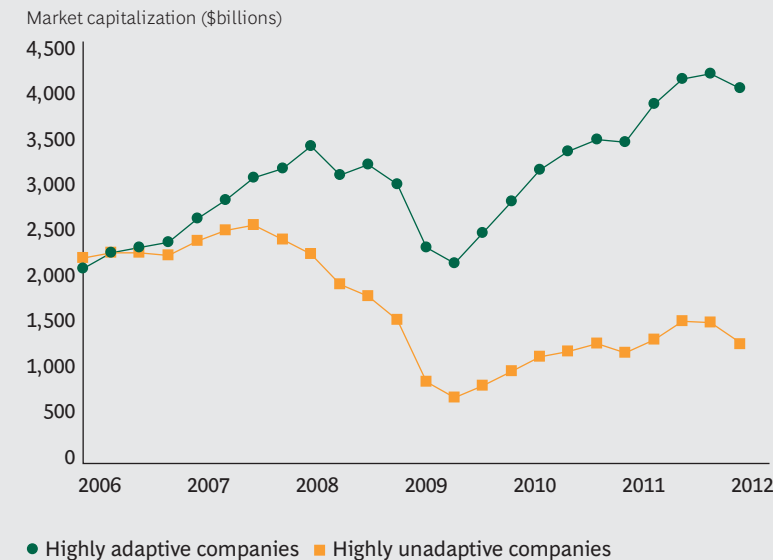
ranked in the top decile in the BCG Adaptive Advantage Index grew their market capitalization by 31 percentage points more per year, on average, than the bottom-decile companies. From 1982 to 2011, the top-decile companies in the index grew their market capitalization by 18 percentage points more per year, on average, than the bottom-decile ones. (See Exhibit 1.)



Second, adaptiveness creates a performance gap between the top performers and the rest of the pack. In stable quarters, both adaptive and unadaptive companies grew, but unadaptive companies tended to grow slightly faster. During turbulent quarters, however, the most highly adaptive companies grew while the least adaptive companies generally declined significantly. For example, from 2006 to 2011, this performance gap resulted in highly adaptive companies doubling their value, while highly unadaptive companies (those with the lowest index scores in their industries) lost 40 percent of their value. (See Exhibit 2.)

Third, adaptiveness predicts future performance. Companies with high scores on the BCG Adaptive Advantage Index were more likely to experience higher

EXHIBIT 2 | Adaptiveness Can Help a Company Scale the Heights of Performance



Sources: Compustat; BCG ValueScience Center; BCG analysis.

future growth in value, on average, than companies ranked low on the index.

Fourth, the value of adaptiveness is increasing. The relationship between a higher score on the BCG Adaptive Advantage Index and a company's higher overall growth has become twice as strong over the past 30 years.

What Sets Adaptive Companies Apart?

Adaptive advantage is rooted in five adaptive capabilities: *signal advantage* is the ability to read and act on change signals; *experimentation advantage* is the ability to experiment rapidly and economically to learn new and better ways of coping with change; *organizational advantage* is the ability to organize in ways that promote adaptation, including enhancing knowledge flow, diversity, risk taking, collaboration, and flexibility; *systems advantage* is the ability to harness the diversity and adaptive potential of multicompany ecosystems; and *ecosocial advantage* is the ability to continuously adapt the business model to changes in the ecological, social, and economic spheres over both the short and long term.

Let's now look at three of these in detail: signal, experimentation, and ecosocial.

SIGNAL ADVANTAGE

Beset by competition in the fast-changing retail landscape, Target realized that it faced a marketplace that has "changed more in the last five years than the previous 50," according to Andrew Pole, group manager of guest analytics at Target. To combat periods of high turbulence during the downturn, Gregg Steinhafel, CEO of Target, outlined a set of growth drivers in 2008: strengthen guest loyalty, boost shopping frequency, and increase transaction size.

Target used signal advantage as one of the weapons to achieve these goals. Signal advantage helped the company produce an impressive score of 105 on the BCG Adaptive Advantage Index, which classifies it as a highly adaptive company.

Target follows three steps to separate valuable signals from background noise and then to turn them into actionable information. First, it acquires relevant internal and external data about its customers and uses those to construct a “guest portrait.” Second, it recognizes hidden patterns in the data, such as major inflection points in customers’ purchasing habits, including marriage, pregnancy, moving to a new home, and graduation. While most shoppers don’t purchase all household and grocery products from one store, the likelihood that they will do so increases at such inflection points. Identifying these customers helps Target drive up the value of its average transaction per customer.

Third, Target leverages these insights by determining the right message to send its guests—such as baby-product promotions to new moms, grocery offers to lure new shoppers into the store, or back-to-school sales for students—through the online and offline channels each customer is most likely to use.

Following these steps, Target has been successful at predicting when a woman is likely to be further along in her pregnancy. It has used that insight, for example, to identify 30 percent more guests to be contacted with a mailer featuring baby diapers—a marketing move that has resulted in significantly increased coupon redemption and increased purchasing of diapers and products in the baby category overall. Signal-reading tactics like these have helped Target boost its revenues by 17 percent and its EBIT by 6 percent from 2006 through 2011. Over the same period, in the multiline

retail industry overall, revenues grew by just 4 percent, and EBIT *declined* by 7 percent.

EXPERIMENTATION ADVANTAGE

Thanks to its knack for creating hundreds of new products each year—Post-it Notes the most famous among them—3M has achieved a score of 108 on the BCG Adaptive Advantage Index, classifying it as a highly adaptive company.

Over the past six years, in particular, 3M has outperformed other industrial conglomerates during periods of turbulence—boosting its market capitalization by 5 percent even as its industry market cap declined 45 percent. One of the secrets behind 3M’s outperformance is its superior economics of experimentation relative to other players in the industry.

To manage the economics of experimentation, 3M does several things well. It promotes *idea generation* by allowing employees to devote 15 percent of their schedules to “slack time” and by hosting technology forums to brainstorm and share ideas. It increases the *volume of ideas converted to experiments* by providing multiple channels of seed capital, such as the “Genesis” grant to fund experiments. And it *accelerates the scale-up of successful experiments* through its Pacing Plus program (which focuses on leapfrog technologies) and its Acceleration Initiative (which addresses large opportunities and markets). The programs help allocate more corporate resources to experiments and speed up their commercialization.

Supporting all these efforts is a culture that rewards experimentation with equivalent technical and managerial career paths, provides prizes for top innovators, and tolerates failure. As George Buckley, the company’s former CEO, explained, “At 3M, because of our wide

diversity of technologies and end markets, the term ‘failure’ is rarely applied to R&D, and invention here is almost always repurposed and reused.”

Experimentation has become the company’s standard operating procedure. One measure of the success of its efforts is the company’s New Product Vitality Index (NPVI), which calculates the percentage of sales generated by products introduced within the past five years. Even during the turbulent periods of 2009, 3M maintained its NPVI at 29 percent, which added 1 to 2 percent to its overall growth rate and helped the company outperform its industry.

ECOSOCIAL ADVANTAGE

A normally staid business once known exclusively for carting garbage to landfills might not immediately come to mind as an example of ecosocial advantage. What then explains Waste Management’s score of 101 on the BCG Adaptive Advantage Index and classification as an adaptive company?

The landfill specialist now earns substantial profits not just from garbage handling but also from such sustainable activities as recycling, renewable energy, and waste reduction consulting to other businesses. It pioneered the operation of a recycling program in a major city by launching Seattle’s program in 1988. Now it is North America’s largest recycler, with 131 facilities serving municipalities, businesses, and households. Revenues from its recycling business grew by 74 percent from 2006 to 2011, totaling \$1.6 billion in 2011.

Furthermore, Waste Management has accelerated expansion of businesses that turn garbage into electricity. Wheelabrator, its waste-to-energy incineration subsidiary, has generated up to 12 percent of the company’s net income since 2009, despite accounting

HIGHLY ADAPTIVE LARGE COMPANIES, 2012

The following 27 companies had a market cap greater than \$20 billion and ranked among the top 50 percent of their industry peers, achieving scores of 100 or higher on the BCG Adaptive Advantage Index.

3M	Google
Allergan	MasterCard
Amazon	McDonald's
Apple	Nike
Baxter	Occidental Petroleum
The Coca-Cola Company	Precision Castparts
Cognizant	Priceline.com
Covidien	Southern Company
Danaher Corporation	Target
Deere & Company	Time Warner Cable
DirectTV	TJX Companies
Disney	VMware
Express Scripts	Yum! Brands
Ford Motor Company	

for only about 7 percent of its revenues. The company also manages 110 landfill-gas-to-energy projects. Together, these businesses generate enough electricity to power 1.1 million homes—more than the entire solar-energy industry generates in the U.S.

Finally, as companies deal with increasing amounts of waste as well as rising energy and commodity prices, Waste Management now offers “sustainability services,” advising companies how to use—and throw away—less.

The company has identified the shifting ecological values of its customers, treating these values as unmet needs and building profitable new businesses and business models in response. In the process, it has

attained the holy grail of sustainability: getting rewarded for doing the right things. Increased growth and profitability from recycling and renewable-energy businesses have helped the company deliver measurable outperformance during times of turbulence.

The Road to Adaptive Advantage

Companies can take three concrete steps to progress down the road to adaptive advantage.

Step 1: Identify the most adaptive players in your industry. Ask the important questions: How turbulent is your industry? Who are the most adaptive companies in your industry? Are you more or less adaptive than your key competitors? Are your competitors gaining advantage by becoming more adaptive over time? What can you learn from more adaptive competitors?

Step 2: Assess your adaptive capabilities, pinpointing strengths and identifying the gaps. Evaluate your strengths and weaknesses in relation to the five capabilities that drive adaptive advantage: signal, experimentation, organizational, systems, and ecosocial advantage.

Step 3: Design and take measures to address any capability gaps. For example:

- Sense and respond to trends and uncertainties.
- Measure and manage your economics of experimentation.
- Foster diversity and adaptation by embracing the idea of “compulsory dissenting opinions” for key decisions.
- Try changing the unit of analysis from “the firm” to “the ecosystem” when you next assess your strategy.

- Turn negative externalities into business opportunities.



Being adaptive can translate into significant financial rewards. We estimate that the average large unadaptive company lost 13 percent of its initial value from 2006 to 2011. So, by first gaining an understanding of its adaptive advantage and then building and expanding that advantage, a company can proactively position itself to benefit during times of turbulence.

NOTES

1. Martin Reeves and Mike Deimler, “Adaptability: The New Competitive Advantage,” *Harvard Business Review*, July–August 2011.

Martin Reeves
Claire Love
Nishant Mathur

This article was excerpted from the BCG report [The Most Adaptive Companies 2012: Winning in an Age of Turbulence](#).

MORE ON STRATEGY

“Your Strategy Needs a Strategy,” BCG article, October 2012

“The Interactive Rankings of Adaptive Companies,” BCG interactive, August 2012

“Adaptability: The New Competitive Advantage,” BCG article, August 2011





The Accelerator Mindset

Ever since Frederick Taylor’s early writing on industrial efficiency—followed by the work of Peter Drucker, Alfred Chandler, and others—the modern Western corporation has been managed according to a tightly defined set of rules and norms. A clear corporate strategy calls for earning at least the cost of capital, growing at a higher rate than the overall market, and managing the portfolio to a “logic”—periodically pruning poorly performing businesses. And with Wall Street analysts ready to applaud CEOs for making their numbers or pulverize them for a one-cent-per-share miss, there is often little opportunity to change course.

But speak to entrepreneurs in China and India, and you’ll soon hear that they think about strategy in a strikingly different way. For instance, these leaders have recognized that traditional return-on-investment calculations are not very relevant. This is because all the value sits in the terminal value of the company—given the massive growth. They believe that when growth is this dynamic you need to be faster, more creative, and more willing to learn as you go. For them, value creation derives from confidence and comfort with ambiguity, backed up by investment, talent, and fast cycles—and not from preprogrammed business plans and projections to two decimal places.

Ambitious, audacious, adaptive, aggressive when necessary—these business leaders have what we call the *accelerator mindset*.

You can get a sense of the accelerator mindset by watching a two-minute video on YouTube that shows a 15-story hotel in China being constructed in a few days using prefabricated parts. It is an astonishing spectacle. But there are many business leaders who are carrying out such feats: creating multifaceted companies with broad operations and astounding growth targets. With their fast-forward approach to business, they are turning what can seem like colossal dreams into reality, and in so doing, transforming the world economy.

Already, many of these leaders are taking their companies global—and they are taking their mindset with them, too. We think that it could be their most enduring export.

The Accelerator Mindset and the \$10 Trillion Prize

We calculate that the consumer markets of China and India will roughly *triple* by 2020 to reach \$10 trillion annually. In the years ahead, consumers in these two countries will purchase ever-increasing quantities of food, clothing, household items, cars and trucks, health care services, computers, electronics—indeed, just about everything associated with modern comfort and convenience. The purchase of these finished goods will fuel the demand for steel, cement, coal, wood, cotton, chemicals, and all the other building blocks of life today.

But to capture a slice of this prize, business leaders will have to adopt an accelerator mindset of the kind exhibited by the entrepreneurs described here—pio-

neers in these markets who have capitalized on an unprecedented level of growth and opportunity.

ANAND MAHINDRA: CHAIRMAN AND MANAGING DIRECTOR, MAHINDRA & MAHINDRA

If you had looked at us ten years ago, and if I had said that we would grow from \$1 billion to \$14 billion, no one would have believed it. Yet that is what we have accomplished. In ten years' time, we want to be one of the 50 most admired brands in the world on the basis of metrics that are both quantitative and qualitative.

—Anand Mahindra

Educated abroad, graduating magna cum laude from Harvard in 1977, and then earning an MBA from Harvard Business School in 1981, Anand Mahindra is a brilliant steward of the accelerator mindset.

When Mahindra came home after attending Harvard, he joined his uncle's business, rising through the ranks to become managing director. He combined Western management styles with Eastern ambition and innovation to turn Mahindra & Mahindra (M&M), India's top producer of off-road vehicles and agricultural tractors, into a global powerhouse in just three decades.

Under his leadership, the company has acquired a Korean automotive company, an electric car manufacturer, multiple European auto-components manufacturers, assorted IT companies, and aerospace interests. M&M's constellation of businesses also includes real estate, metallurgy, and private-equity investment. One of the company's successes is the first Indian multimarket SUV—the Scorpio—and the company's tractors today command more than 40 percent of the market in India.

In the United States, M&M, competing with companies such as Deere & Company, has achieved a share of the

small-tractor market as high as 20 percent in some states. It has also become one of the top tractor companies in China, although Mahindra's target is number one. "Life's too short to be number two," he says.

But even with M&M's global position, Mahindra sees plenty of opportunities for investment at home. "If I had an incremental billion dollars, I would, of course, continue to invest in India," he points out. "We have scale and size. In fact, I believe that when you invest in an Indian company that is going global, you are investing in the world."

LIU JIREN: CHAIRMAN AND CEO, NEUSOFT CORPORATION, AND FOUNDER OF NEUSOFT UNIVERSITY

We are not China's IBM or Microsoft. We have our own business model.

—Liu Jiren

Liu Jiren grew up in poverty in postwar Liaoning, a province in the country's northeast. As a teenager, he did dangerous work in a steel mill that left many of his coworkers with burned faces and other wounds. He was able to get out of the fire crew because he had other self-taught skills, including watch repair and photography. Clawing his way up in a state-run enterprise, he was accepted as one of only two applicants from the factory to attend Northeastern University of China in Shenyang, where he ultimately completed his PhD. It was while working as a research fellow at the U.S. National Bureau of Standards that Liu first dreamed of building a software park in China. When he returned to China, he set up a research lab at Northeastern University, whose Web address is neu.edu.cn—hence his company's name.

Neusoft went public in 1996 with sales of \$7.5 million and profits of less than \$2 million. Sales have increased

nearly a hundredfold since then, with profits running at about 10 percent of sales. With a market capitalization of \$1.6 billion today, the company provides IT solutions for multiple industries, including telecom, energy, finance, social security, health care, manufacturing, transportation, and education. It is the largest IT solutions and services company in China, and Neusoft's embedded software is in a large number of digital home products, mobile terminals, automobiles, and IT products around the world.

But Liu is proudest of his decision to set up three IT university campuses in China, with more than 14,000 students at the largest campus, in Dalian. Neusoft University resembles an American college, with 34 majors, including computer science, software engineering, IT management, digital arts, English, and Japanese. "It is my dream to give back to my country," Liu says. "It is my dream to have a legacy of students with the ability to innovate, create new businesses, and compete on a world scale." Liu is defying limitations to create growth at an exponential rate. Like other entrepreneurs with the accelerator mindset, the more opportunities he creates, the greater are his ambitions.

ADI GODREJ: CHAIRMAN OF THE GODREJ GROUP

Today, we have just announced what we call a ten-by-ten vision—ten times bigger in ten years.

—Adi Godrej

Adi Godrej is slight and speaks with a soft Indian accent, but he exudes hope, ambition, and a history of success. "We have had much success," he says. "But there is much to do—many, many more opportunities to conquer."

Since inheriting a small household-products company nearly 40 years ago, Godrej has grown the family

company from \$25 million in sales to the \$3 billion company that it is today. The company founded by his grandfather in 1897 was a lock manufacturer. Now it is a conglomerate with a presence in fast-moving consumer goods and durables, chemicals, and real estate. Educated at the Massachusetts Institute of Technology, Godrej, aged 69, remains ambitious for his company and his country, dreaming of an even bigger, more diverse set of businesses.

Godrej firmly believes in his projection that his company will grow tenfold in just ten years. He says that this ten-by-ten leap is fully possible because India is at a “tipping point,” providing unprecedented opportunities for massive wealth creation—and fertile ground for entrepreneurs.

“I don’t look at it as an unachievable goal,” he says of growing from \$3 billion to \$30 billion in ten years. “But it’s going to be tough, and it’s going to need not only strong strategic thinking but also excellent execution.”

Adopting Your Own Accelerator Mindset

Much like the innovators and risk takers who made the Industrial Revolution possible in nineteenth-century America, Anand Mahindra, Liu Jiren, and Adi Godrej are adventurers—and pioneers. They display an extraordinary creativity and industriousness, a confidence to invest and take actions to spur growth in markets that are already booming around them, and an exceptional determination: they really do not take “no” for an answer.

But they are not alone. At all levels of Chinese and Indian society, there are dynamic people who approach life in a fast and furious way. The poor, hungry, and

driven—the “PhDs,” whose only qualification is a bountiful supply of energy and enterprise—also dream about success, achievement, hope, material wealth, and a better life. They are shaping their own version of the “American dream,” and they are prepared to work hard for it: the 50 hours of weekly practice for an eight-year-old aspiring concert pianist; the 90-hour study weeks for students competing for a coveted slot at a prestigious university; the 16-hour days, seven days a week, put in by the engineers who are developing electronics products that will have twice the functionality of those of their Western competitors and will sell at half the price.

As you consider this wave of optimism, growth, and new possibilities, you should ask yourself, *Do I have an accelerator mindset? Can I take part in China’s and India’s impending \$10 trillion prize?*

As you prepare to mobilize, consider the following critical set of questions:

- Can I paint a detailed picture of the hopes, dreams, and evolving needs of China’s and India’s newly affluent consumers? Do I know enough about these consumers to spur a generation of innovation and secure their lasting loyalty and recommendations? Have I set a sustainable business model that permits profits now—at low prices—yet provides funds for continued innovation?
- Do I have our best and brightest deployed in the long-term growth markets of China and India, where the world’s new middle class is being born? Have I done enough throughout my company to portray these market growth opportunities and inspire our most curious and ambitious employees to go there to pursue them?

- Am I taking the lessons home—and to other markets around the world? Am I creating sufficient dialogue around what we are learning in China and India so that our other international subsidiaries can see and grasp the lessons?
- When it comes to China and India, have I set a bold enough overall aspiration for myself and my organization? Is our level of investment sufficient—in size, scale, and timing—so that in 2020, we will have no regrets, no hesitations, no “should have, could have” conversations around the boardroom? Am I certain that we will earn our fair share of the \$10 trillion prize?

To seize this opportunity, you must act now. There is no time to lose.

Michael J. Silverstein
Abheek Singhi
Carol Liao
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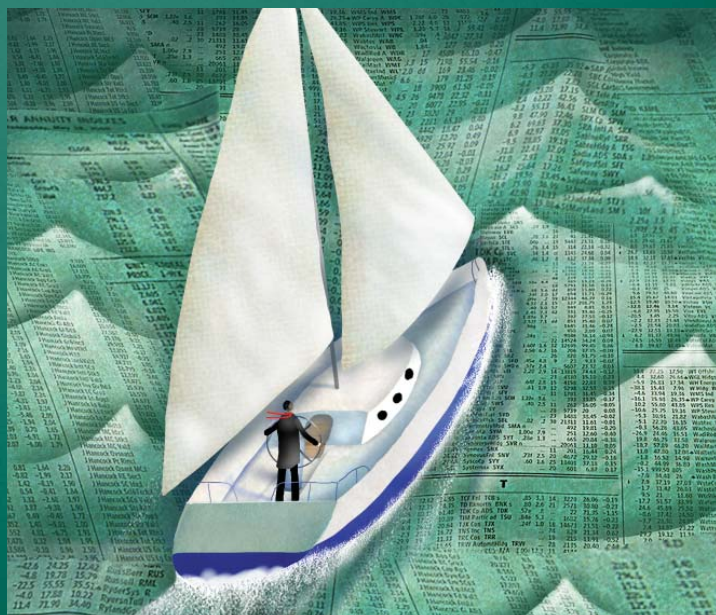
*This article is based on material from the authors' book, **The \$10 Trillion Prize: Captivating the Newly Affluent in China and India**, published by Harvard Business Review Press in October 2012.*

MORE ON EMERGING MARKETS

The \$10 Trillion Prize: Captivating the Newly Affluent in China and India, BCG book, October 2012

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The CEO as Investor

All roads of managerial evaluation lead to capital allocation.

—Michael J. Mauboussin

Of the many roles played by the modern CEO, one of the most important is among the most neglected—the role of the CEO as investor.

A company's investment choices form a critical and underestimated part of the CEO agenda. These choices have extremely high stakes: typically, a company allocates investment cash flows equal to half or more of its market capitalization over a three- to five-year period. These choices are extensive in scope, encompassing not only decisions about reinvestment to drive the business (capital expenditures, acquisitions, and brand and technology investments) but also decisions about the company's deployment of its cash flow other than for operations (for example, for dividends, share buybacks, capital structure, and management of non-debt liabilities). At first glance, some of these may not seem to involve much choice—just being in a business requires some reinvestment. But taking a passive attitude toward portfolio exposures and managing reinvestment “democratically” is, in itself, a choice—in many cases, a poor one.

Many CEOs and senior teams struggle in the investor role. Strikingly few companies have a coherent process

for managing their investment choices and linking these choices to the company's value over time. Investment failures are surprisingly common. More than one-third of the \$8 trillion of invested capital in the S&P 1500 does not earn the cost of capital. Over a five-year period, half the companies experience a significant write-off, divest a major business, or see a decline of 50 percent or more in company value.

Many CEOs assume that “financial discipline”—especially in the form of a tough CFO who approves or rejects spending requests using tools such as discounted cash flow and earnings per share (EPS)—will protect them from investment failure. Unfortunately, the lesson of experience is that such financial tools are like a racecar's speedometer: they sometimes provide useful guidance, but they neither prevent accidents nor deliver the power to drive the car forward.

There is a better way. By developing an explicit corporate *investment thesis*, much as professional investors do, a CEO and his or her team can more effectively assess the tradeoffs among competing priorities and evaluate the performance of their company's myriad investment decisions over time.

What an Investment Thesis Is—and Is Not

An investment thesis is not an “equity story” that describes how a company's leaders wish outsiders would see the company's opportunities. Rather, it's a clear and focused summary—grounded in the granular realities of the company's competitive situation, opportunities, and risks—of how the company will create value over time.

In contrast to the typical strategic plan's lengthy list of actions and ambitions, a good investment thesis

highlights three to six critical actions that are required to achieve attractive performance over a specific time horizon (usually three to five years). A company's opportunity set for driving value at any point in time is likely constrained by just a few factors, and a good thesis focuses managerial energy.

Finally, a good thesis explicitly considers enterprise risks and embraces contrarian viewpoints. After all, from an owner's standpoint, one shouldn't invest in a company unless he or she can first describe why the consensus view driving today's valuation is too conservative and he or she can also see where the short seller's logic is misguided.

A Tale of Two CEOs

To understand the difference a clear investment thesis can make, consider the experience of two CEOs of a large, highly diversified consumer-products company. The first CEO was a disciplined operator whose agenda was that each of the company's businesses should "be the best growth company" in its respective sector. He challenged each business unit to become the biggest competitor in its served market, raise operating margins, and beat its budget each quarter. And he measured business unit performance using a comprehensive list of more than a dozen measures—from revenue growth and inventory turns to operating-profit margins.

Operationally, these priorities generated good results. Working-capital efficiency improved; selling, general, and administrative expenses (SG&A) were reduced; and a number of acquisitions drove top-line growth. What's more, the company was able to leverage attractive borrowing rates to fund share buybacks with debt, which contributed to raising the company's EPS nearly 50 percent over a four-year period.

And yet, the company's competitive position was steadily eroding. Whatever progress the company had made in growing its profits was more than offset by a series of poor investment choices. Under pressure to deliver quarterly earnings in excess of plan, some unit managers cut back on long-horizon technology investments. The aggressive search for growth resulted in sizable acquisitions in segments with fundamentally weak returns, diluting earnings quality. In the context of declining gross margins, investors interpreted the cuts in SG&A as bad news—a sign that the company was on a commoditizing trajectory (however much EPS was growing at the moment). As investors fled the stock, the company's valuation multiple shrank more than its earnings increased, putting the company's total shareholder return into the bottom quartile of its peer group. This poor value-creation performance cost the CEO his job.

His replacement developed a more integrated strategic and investment agenda. The new CEO continued the push for operational excellence, but he also engaged openly with the company's long-term owners, seeking to understand their views. The new CEO developed an explicit thesis that was backed by a financial model linking operational performance to the company's market value over time. That thesis came to be known as “ $8 + 6 = 14$ ”: driving through-cycle operating-profit growth of 8 percent while throwing off 6 percent cash-flow yields would create performance that should drive annual shareholder returns in the neighborhood of 14 percent.

Deceptively simple, this way of articulating the company's financial goals focused attention on the key trade-offs. The company's operational agenda remained important: without continuous improvement in operating discipline, the model wouldn't work. But the new model clarified the critical role of investment discipline.

To create value, the executive team had to focus not only on revenue growth and margins but also on the capital strategy. The executives had to manage the tradeoff between *reinvested cash* to drive profitable growth and *distributed cash* (including dividends, share count reductions, and debt paydowns), which provides cash flow yield.

The new investment thesis also pushed the senior team to focus on three key changes that unlocked significant value. First, instead of aiming to grow all the company's many business units opportunistically, the team developed an explicit portfolio strategy that was grounded in a view of competitive advantage and its drivers. The team clearly differentiated priorities for the various businesses in the portfolio, detailing how each should contribute in its own way to creating value. A few platforms merited disciplined investment in growth, other businesses required a turnaround, and still others were structurally worth more to different companies and were candidates for divestment.

Second, they developed a more rigorous and disciplined approach to acquisitions in order to ensure that each dollar of cash flow reinvested to drive growth would deliver well above a dollar of value to owners. Meaningful acquisition investment would continue to be a key part of the agenda, but—from target screening and deal board approvals to integration management and postmortem reviews—the company developed new tools and resources to manage the M&A process more effectively.

Finally, the senior team adjusted the control system so that the new investment thesis was reinforced meaningfully and tangibly at the operating units. Metrics, performance assessment, and unit level incentives were simplified and aligned with sustained value creation

over a three-year horizon. The team also worked intensively to communicate the logic of the corporate-level thesis, empowering the units to bring forward bolder investment ideas that expressed a more differentiated range of growth-to-yield tradeoffs in the various businesses.

These moves transformed the company's performance. Business unit heads no longer perceived capital as free and growth as the only way to create value. Rather, each dollar of cash flow was allocated toward the best alternative for driving sustainable returns. Investors regained confidence when they saw strategically disciplined, high-return acquisitions and expanding gross margins that were the result of focused increases in innovation spending. The valuation multiple expanded, and the company's value-creation three- and five-year track records were the best of its peer group.

Identifying the Right Value Pattern

One of the greatest challenges for a management team that is developing an investment thesis is to identify the right shortlist of focus areas that fit well with the company's starting position. Every company wants to grow profits and value over time, but the path and relevant priorities of a Google, a Gazprom, a Gilead, or a General Dynamics will be radically different. Sometimes the best long-term path requires short-term pain—shrinking a troubled business or eliminating risk from the balance sheet for greater liquidity. Other times, shifts in the competitive landscape require a bold rethink of the business model or of where and how to compete. Many companies find themselves with limited growth exposure in the core but unclear linkages to the many potential adjacent businesses. How does the senior team develop an investment thesis that truly fits the company's starting position and its opportunity set?

Although starting positions are multidimensional and vary widely across companies and industries, recent analysis by The Boston Consulting Group suggests that there is a limited set of common archetypes, each with a distinct set of preferred pathways for creating value. Each of the archetypes—*healthy high-growth*, *high-value brand*, *utility-like*, and *distressed*, to name a few—has its distinct profile and priorities. BCG refers to these starting positions as *value patterns*. Knowing the value pattern of a company can help define the boundaries of its investment thesis and identify the most promising value-creating initiatives to focus on.

BCG has been conducting extensive empirical research into these value patterns and exploring how to use them to inform a company's investment thesis.

Gerry Hansell
Dieter Heuskel

MORE ON VALUE CREATION

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How Companies Can Rise Above Faustian Economics

The prospects for the world economy have improved since the dark days of the financial crisis, but the West's escape from another Great Depression has come at a price.

It was the expansion of government spending and deficits that allowed the world to avoid a deep depression. And only sustained public-sector intervention can prevent a return to recession if the private sector needs to repair its balance sheet by reducing debt. The problem is that Western governments are running out of ammunition. Since 2007, public debt in Europe and the U.S. has grown by about \$2.5 trillion and \$5 trillion (22 percent and 47 percent of GDP) respectively. This puts it past the 90 percent threshold beyond which economists see debt as a drag on growth.

Five years into the crisis, Western leaders know that this time is indeed different. This is not simply a normal—albeit larger—recession. It is the end of a 30-year debt supercycle during which governments and the private sector used debt to soften downturns and boost growth. Across many developed economies, governments, private households, and corporations now have to reduce debt. The result is less demand and lower economic growth—amplifying the need for debtors to get their houses in order. It is

not simply a liquidity issue in the West; it is also a solvency issue.

This seemingly perpetual economic uncertainty makes it hard for managers to run their businesses. As tempting as it may be to sit and wait, history teaches us that the future belongs to those companies that come off the fence, grasp the initiative, and take advantage of less confident, frozen competitors.

A Drug with Significant Side Effects

Someone needs to take over the excess debt if creditors are to maximize payback (and minimize losses) and debtors are to offload as much debt as possible. This is what the central banks are doing—the Bank of England, the Federal Reserve, increasingly the Bank of Japan, and, following the policy shift by its president, Mario Draghi, the European Central Bank (ECB).

The ECB's balance sheet has expanded from €1.2 trillion to more than €3.0 trillion in an attempt to address deteriorating bank and government funding—sucking up assets of doubtful quality in the process. The Fed's balance sheet has grown even more dramatically. It was \$900 billion at the beginning of the financial crisis, and it reached almost \$3.0 trillion by mid-2012. When interest rates could not be reduced any further, the Fed launched quantitative easing (QE) and acquired mortgage-backed securities and U.S. Treasuries. While QE1 and QE2 were limited to \$600 billion each, the recently announced QE3—also nicknamed “QE Infinity” or “QEternity”—has no maximum limit in magnitude or duration.

Having bailed out the creditors, the central banks now have to find ways of helping the debtors without incurring losses themselves. The obvious approach is

to lower the cost of money—which is why the central banks have reduced interest rates and pursued quantitative easing. Just as in Japan after the bubble burst in the early 1990s, central banks today are lowering the financing costs for debtors in order to avoid crystallizing any losses. In Japan, this strategy created “zombie banks”—one of the reasons that Japan became trapped in a prolonged period of economic stagnation. The Bank for International Settlements says that the Western world is repeating the mistakes of the Japanese government,¹ only this time the central banks run the risk of becoming zombies themselves.

With a significant debt overhang and a number of Western economies facing insolvency, any additional central-bank intervention merely offers creditors an opportunity to dump assets. In theory, they could lower the interest rate for all these loans to zero while extending them to perpetuity. No one would ever go bankrupt. Indeed, there was a proposal that went beyond the “evergreening” of outstanding debt, arguing that the central banks should simply “retire the debt” (that is, write off the asset and forgive the debtor—which, in the case of quantitative easing, means the government).²

Could this work? Many see the risk of inflation as negligible since printing the money to buy the assets in the first place has not yet led to inflation. Moreover, if done over time rather than in a single step, the central bank could still reduce the monetary base by selling assets, thereby preventing any inflation. For the multinational ECB, such an approach implies a redistribution of wealth among countries, notably from the north to the south, posing an additional hurdle not faced by the Fed or the Bank of England.

So is this the secret formula for implementing a debt restructuring without hurting anybody? Is this “[Back to Mesopotamia](#)” in the twenty-first century? Goethe’s *Faust* turns out to be eerily prophetic.³

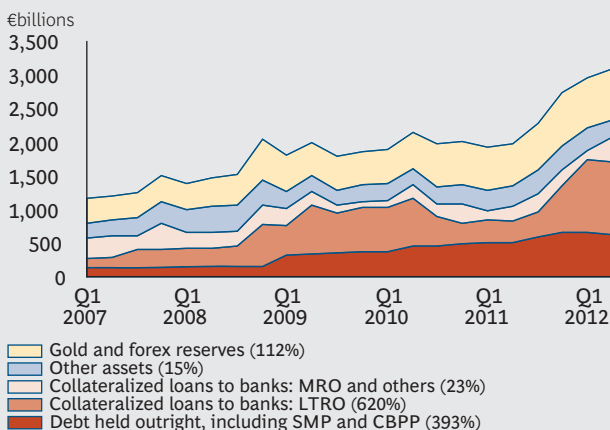
Exhibit 1 illustrates the magnitude of the problem with the structure of central bank balance sheets, in terms of both quantum and quality. Additionally, not only is government debt too high, but so are debt levels in most sectors of the economy. Addressing the sovereign debt issue resolves only part of the problem—unless the governments shoulder substantial private-sector debt as well, which requires selling it to their central banks.

Are the central banks’ balance sheets prepared for such massive debt forgiveness? Exhibit 2 shows the ECB and Fed balance sheets. The ECB carries capital that is able to absorb debt retirements of about €500 billion. If larger losses were to occur, either the ECB would have to carry forward negative capital or the national central banks (and ultimately the highly indebted governments) would have to inject fresh capital. On paper, the Fed has a rather limited loss-absorption capacity. But a change of accounting standards in 2011 created an almost infinite loss-absorption capacity by introducing the new liability position: interest on Federal Reserve notes due to the U.S. Treasury. Losses (such as those from selling bonds below their original purchasing price) will not show up on the Fed’s balance sheet as a reduction in capital but as capital participation from the U.S. Treasury.

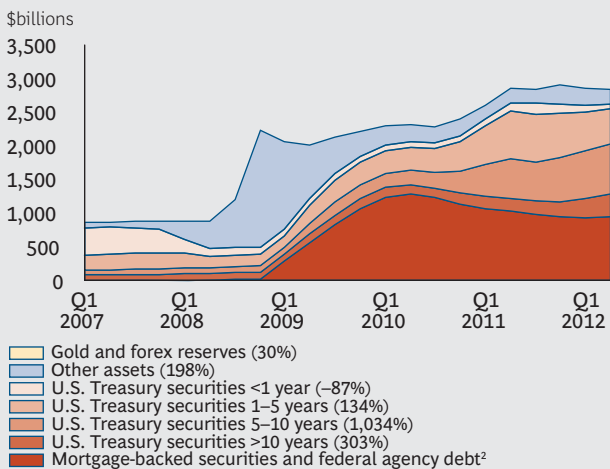
As bond purchasing programs are ongoing, there is no end in sight yet. At the same time, the likelihood of defaults on central banks’ balance sheets becomes greater. Although their loss-absorption capacity seems almost infinite, it does not appear credible that this scenario would lead to a pain-free resolution.

EXHIBIT 1 | The Quality of Central Banks' Assets Is Deteriorating

ECB assets¹



U.S. Federal Reserve assets



Sources: European Central Bank; U.S. Federal Reserve; Thomson Reuters Datastream; BCG analysis.

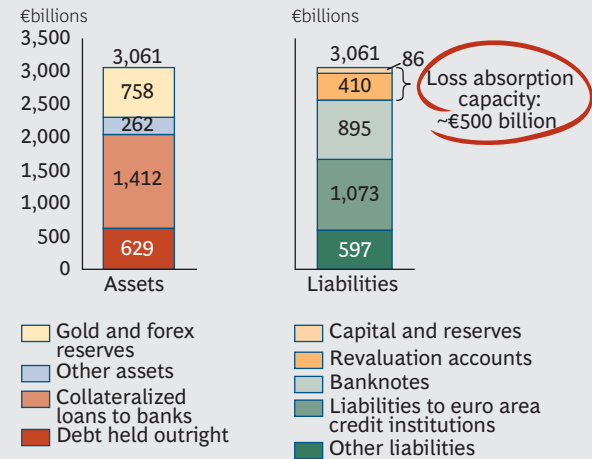
Note: Percentage change between Q1 2007 and Q2 2011 in parentheses; the balance sheets of the ECB and the Fed are not directly comparable owing to very different accounting methodologies. MRO is main refinancing operations; LTRO is longer-term refinancing operations; SMP is Securities Markets Program; and CBPP is Covered Bonds Purchase Program.

¹Data consolidated for the Eurosystem.

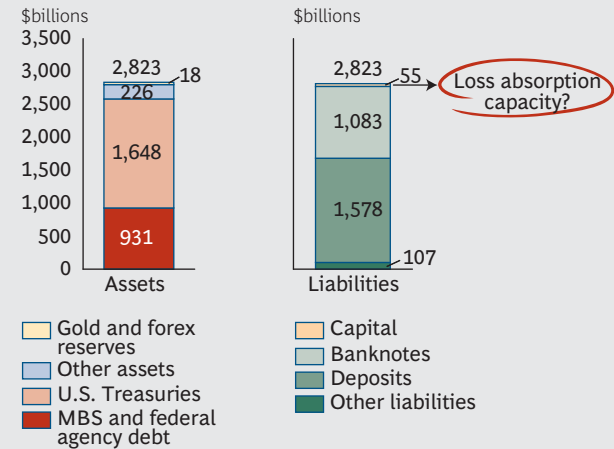
²No percentage change cited because the assets were \$0 in 2007.

EXHIBIT 2 | Measuring the Central Banks' Theoretical Capacity to Absorb Losses

ECB: ~€500 billion in theoretical capacity to absorb losses



U.S. Federal Reserve: On paper, very limited capacity to absorb losses



Sources: European Central Bank; U.S. Federal Reserve; BCG analysis.
Note: As of September 2012, consolidated balance sheets for the Eurosystem and the Fed are not directly comparable owing to very different accounting methodologies. MBS = mortgage-backed securities.

The Side Effects of Cheap Money

The endgame of central bank intervention may be unclear, but the implications of this ultra-loose monetary policy are significant.⁴

- *Less Incentive for Fiscal Discipline.* Central banks have bought time for governments; for now, at least, the huge deficits appear less problematic.
- *Asset Price Inflation.* Western stock markets are currently trading above long-term valuation multiples. Low interest rates in developed economies are likely to cause spillover effects in emerging markets because low borrowing costs in the world's major currencies encourage investors to borrow dollars or euros to invest in countries with higher interest rates, potentially leading to asset bubbles.
- *Creation of “Zombie” Companies and Banks.* Very low interest rates hinder the process of creative destruction. As in 1990s Japan, zero interest rates allow companies with poor profitability to survive, while zombie banks can evergreen potentially nonperforming loans.
- *Promotion of Social Discontent.* Ultra-easy monetary policy hurts savers and promotes social discontent. Prudent savers suffer negative real-cash returns, while leveraged speculators benefit from easy money. In the U.S. and in southern Europe, the working population faces high unemployment and depressed house prices. There is growing dissatisfaction with the distribution of the economic spoils.⁵

Western economies face a period of economic turbulence, with possible bubbles and financial upheaval, anemic or no growth, high unemployment, and in-

creased tensions. Outstanding debt will continue to grow relative to GDP. The best hope is higher inflation, which can be hard to contain once it starts; it could precipitate a flight into real assets and a spike in inflation. Creditors lose under all scenarios.

So what should companies be doing in the face of such uncertainty?

Even in the Worst of Times

History shows that companies can prosper—even in bad times. We have written often about the lessons from the Great Depression of the 1930s, the inflationary recessions of the 1970s, Japan's lost decade, and even the most recent crisis. Not only can companies deal successfully with such challenges but the pecking order of entire industries can get turned upside down during times of upheaval. The winners are those that attempt the following:

- *Take a position.* With the question of deflation or inflation still open, making choices might seem impossible. But it isn't. Most operational decisions would be unaffected by either scenario. Differences in prospective financial structure are best resolved by taking a conservative financial approach.
- *Relentlessly focus on cost.* Obvious as this point is, our experience shows that companies are still not transforming themselves to achieve new breakeven points. Only a few companies have taken a fresh look at how to reshape their operations to adjust to today's world of new technology and shifting labor-cost advantages.
- *Make pricing a core function.* Too often, pricing is derived either from internal costs or as a response to outside factors driven by competition and relative

market position. In a prolonged period of either low inflation (even deflation) or higher inflation, pricing is a core capability—not only to protect the business but to gain share.

- *Aggressively pursue growth options beyond Western markets.* There are significant growth opportunities in emerging markets, even if competitive intensity is increasing. Participating in this growth will provide important opportunities for companies given that achieving growth in the West will require gaining share. Companies need to ask themselves: how ready are they really to globalize?
- *Prepare for the event risks.* We could still see a relapse into a deep recession, which governments would be unable to cushion with further spending. And the final verdict on the long-term implications of monetary policy remains to be seen. High inflation would have a disastrous impact on company margins and merits appropriate preparation.
- *Use your cash.* Many Western corporations are enjoying record-high profit margins. Most companies use these profits to increase payouts or to deleverage. Going forward, politicians seeking to implement austerity programs will look at these impressive margins. These margins could come under pressure as austerity depresses business or governments introduce higher taxation. Moreover, managers expecting higher inflation should consider a more productive deployment of their cash reserves and free cash flow. Higher investment would support economic growth while reducing the risk of further taxation.
- *Bet on innovation.* Innovation is decisive in times like these. In all past major crises, innovative companies

gained significant share. History shows that innovation has to play a pivotal role in getting the Western world back on a self-sustained growth trajectory.

Not all companies will thrive—but for those willing to accept the new realities and act accordingly, the opportunities are huge. These are interesting times. These are not times to sit and wait. Winners are those who act!

NOTES

1. Bank for International Settlements (BIS), 82nd Annual Report, June 2012.
2. “Bank of England Should Retire QE Debt,” *Financial Times*, March 11, 2012.
3. In the tragedy’s second part, Faust seeks redemption by expanding his horizon and seeking to shape society as an entrepreneur and statesman. Goethe incorporated his personal experiences, developed during ten years as chief advisor to the Duke of Saxe-Weimar-Eisenach, where he led the Ministry of Finance. The Duchy was heavily indebted. Goethe’s primary concern resonates today: how to reduce the state deficit while stimulating the economy.
4. William R. White, “Ultra Easy Monetary Policy and the Law of Unintended Consequences,” Federal Reserve Bank of Dallas Working Paper 126, August 2012.
5. See Dylan Grice, “Memo to Central Banks: You’re Debasing More Than Our Currency,” Société Générale Global Strategy Alternative View, October 2, 2012.

David Rhodes
Daniel Stelter

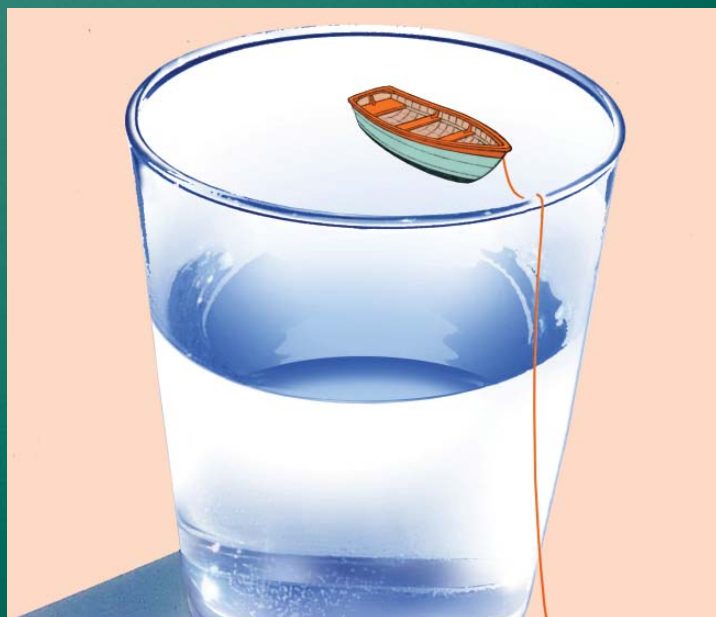
*This article was excerpted from the latest report in the Collateral Damage series, **Reasons to Be Cheerful: How Companies Can Rise Above Faustian Economics.***

MORE ON THE GLOBAL ECONOMY

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What to Expect and How to Prepare,** BCG Focus,
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Strategic Optimism

How to Shape the Future in Times of Crisis

For a while, during the height of the financial crisis, the world stared into the abyss. But in the end, there was no repeat of the Great Depression. Instead, there was what has become known as the Great Recession.

The concerted efforts of governments and central banks played a critical role in staving off a 1930s-style depression. But the actions of individuals and companies will shape the next phase of the recovery.

The Glass Half Full: Optimism in Times of Crisis

It is all too easy to take a dark view of the decade to come. After all, there are several reasons to believe that growth in the global economy will remain sluggish for some time—even the once fast-growing developing markets such as China and India have slowed.

Companies and households are facing years—and governments are probably facing decades—of deleveraging; this bitter medicine will depress consumption and investment. Countries, in their efforts to prevent unemployment from rising ever higher and to champion the cause of local businesses, are engaging in protectionist measures; these moves will slow globaliza-

tion. And regulators are clamping down on banks in ways that will constrain credit and investment.

We should be clear-eyed about these challenges and their implications. But we should also recognize that the world today is primed for change and filled with opportunity.

The fundamental drivers of growth are stronger than they have been at any point in human history. These include the increasing number of highly educated and capable people in the world, the breathtaking speed of technological breakthroughs, the onward march of globalization, the inclusion of “the next billion” into the world economy, and relative political stability.

Given this platform for growth, leaders have both an obligation and an imperative to move forward—with strategic optimism—to seek and to create growth, value, and opportunity for their countries and companies.

If this appears to be a tough assignment, that’s because it is. But there will be support for this approach. Crisis and upheaval have historically unleashed enormous levels of pent-up creative energy, innovation, and fundamental change. When times are tough, we learn to make the difficult decisions that we should have made a long time ago. We cut back on waste and use scarce resources more efficiently. We come up with new solutions—and are willing to accept them. We step outside our comfort zone and go beyond our previous boundaries.

After the two oil shocks and the deindustrialization in major economies in the 1970s and early 1980s, the future looked bleak, too. But technological advances, the fall of the Iron Curtain, and economic liberalization helped initiate nearly 30 years of unprecedented

growth. Along the way, there were downturns and instances of greed, fraud, and irrational exuberance. But despite these detours, the world made progress. Many of the United Nations' much-heralded Millennium Development Goals—such as reducing hunger and child mortality and expanding education—are now closer to being realized than ever before.

Today's crisis could very well spur the next big wave of growth. In the aftermath of the Great Recession, we all have a rare opportunity to reinvent ourselves, to start afresh, to make things better than they were before.

Carpe Diem: Turning Optimism into Action

What does this mean in practice?

For countries with bloated bureaucracies, aging populations, and rising health-care and pension costs, it will require radically restructuring government programs, raising the retirement age, opening labor markets, and, of course, investing heavily in education. Greece, for example, would probably never have implemented its austerity program without the push of the current crisis. The undertaking will be a painful process, of course. But in a best-case scenario, Greece's moves will help return the country's people to a path of progress and prosperity.

For companies, it means making major changes that address the deep structural problems plaguing many industries. Pharmaceutical companies, for example, are facing a devastating double whammy: their labs are not developing the kind of breakthrough drugs they need to replace the blockbusters that are losing patent protection. Automotive manufacturers are still producing too many cars and, in North America, too many of the wrong kind of cars—oversized gas guzzlers. And media

companies are struggling to persuade consumers to pay for news, music, and videos in the age of the Internet.

In the years before the crisis, companies were able to tinker with reform, safe in the knowledge that the rising tide of the global economy would help them in their efforts to survive and succeed. But today, these companies can no longer simply fine-tune their business model or fiddle with their cost base: the structural defects in their industries and in their business models are just too great to ignore.

Some companies have already accepted that they cannot go back. Faced with extinction and aided by government subsidies, General Motors has made painful but overdue decisions to sell money-losing divisions, close underutilized plants, and focus on energy-efficient cars.

But bold moves will not be enough. Companies also need to be quick because time is not on their side. As the recovery takes hold, they will find it harder to make the tough decisions that were postponed during the boom years. With every passing year, they will also face growing global competition as companies from China, India, Brazil, and other emerging economies climb to the top of their industries. Unencumbered by legacy systems and cultures, these “global challenger” companies can move fast and aggressively.

So it is now time to stand up and be counted, take the future into your hands, grasp the opportunity presented by the worst economic crisis since the 1930s, and do things in a new and different way.

Ten Steps to a New Way of Doing Business

Of course, this is easier said than done. But there are steps you can take to ensure that you become the

master rather than the prisoner of circumstance—and that your organization returns to a strong growth trajectory.

- Be frank about your company's current performance, your competitive threats, and why the crisis hit you so hard. Instill into your organization the courage to change, overturn the status quo, remove cumbersome legacy structures, and dispense with sacred cows.
- Take a long-term view of value creation for your various stakeholders. Quick wins are nice to have, but sustainable success is nonnegotiable.
- Move with deliberate speed to make the required transformation. Pace really matters: the ability to recognize and adapt swiftly to change will be a hallmark of the winners.
- Help your organization see opportunity in the market changes. To be among the first to benefit from these changes, make use of shifting customer behaviors and attitudes and unleash the power of marketing.
- Focus on innovation by investing in R&D, accelerating the introduction of new products and services, and redesigning processes.
- Develop new business models: pilot low-cost approaches, experiment with high-value offerings, shift from products to services, or fundamentally restructure your portfolio of activities.
- Embrace globalization and use fast-growing emerging markets not only as a supply base or as additional consumer markets, but as a strong business base in their own right.

- Play an active role in the consolidation of your industry through divestments and through mergers and acquisitions.
- Take an agile and flexible approach. Experiment and transform yourself continuously.
- Build the strongest team you can. You should lead from the front and by example, but you should not expect to do it all on your own.

Future growth depends on our willingness to change the way we do things. This will not be easy. It will call for vision, courage, determination, and a resolute belief that we—each of us—can shape our destiny. As a guiding philosophy, optimism trumps pessimism. By acting with a positive outlook, we can succeed—individually and collectively.

After all, the future does not just happen. We make it happen.

Hans-Paul Bürkner



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