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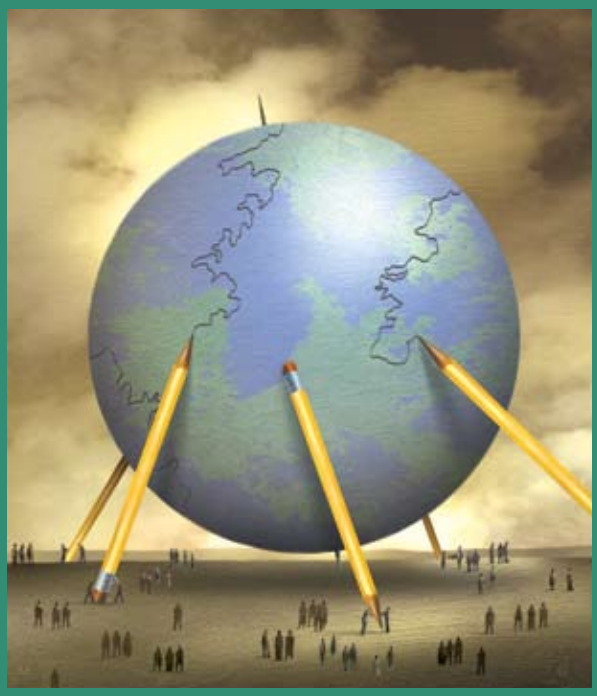
REPORT

The 2008 BCG 100 New Global Challengers

How Top Companies from Rapidly Developing Economies Are Changing the World



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How Top Companies from Rapidly Developing Economies Are Changing the World

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December 2007

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Note to the Reader

In 2006 The Boston Consulting Group (BCG) published the first *New Global Challengers* report. In the context of rapid globalization—and particularly the emergence of fast-globalizing companies from rapidly developing economies (RDEs)—we were responding to a question that was being raised in the boardrooms of many of the world's leading companies: Which are the emerging RDE-based competitors that we should know about?

Our 2006 report contained a list of 100 RDE-based global challengers that could boast of large businesses, significant global activity, and a clear commitment to further globalization. We knew that the report and the issues it touched on were important. Nonetheless, the immense interest the report garnered around the world, especially among business leaders, surprised us. *Fortune* magazine quoted Jeff Immelt, CEO of General Electric, as saying that GE had used the report to better understand which of the BCG 100 challengers were customers, suppliers, or competitors—and what GE could do to move more companies into the first two groups while reducing those in the last.

In this report, we update the original list, introducing readers to a number of new challengers while tracking the progress of the companies we discussed in the 2006 report. Our analysis of the 2008 BCG 100 global challengers reveals globalization dynamics that are already affecting every market and industry, reshaping the world's economic landscape. We hope that you find this report both interesting and useful. We welcome your feedback and the opportunity to discuss the implications for your business.

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Acknowledgments

This report was sponsored by BCG's Global Advantage Initiative. For inquiries about the activities of the Global Advantage Initiative, please contact any of its three leaders:

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The research and analysis that went into this report were led by a global team of senior BCG consultants based principally in RDEs around the world. The team also had the support of senior BCG advisors in Europe and the United States. We would like to acknowledge the particularly valuable contributions made by our colleagues Aditya Agrawal, Mukund Bhaskar, Dan Faccio, Fernando Machado, Andrew Schmid, Bo Wu, and Jinhua Yin. We would also like to acknowledge the editorial and production assistance of Barry Adler, Gary Callahan, Elyse Friedman, Kim Friedman, Gina Goldstein, Kathleen Lancaster, Justin Palmer, and Sara Strassenreiter.

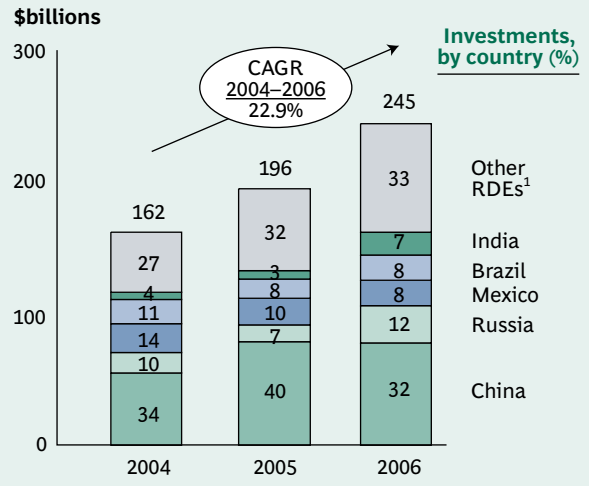
The Accelerating Tide of RDE-Based Globalization

This report focuses on areas of the world that are experiencing rapid economic growth and on the fast-growing companies operating within them. These rapidly developing economies (RDEs) are currently home to many excellent companies. The companies featured in this report merit particular attention from established industry leaders because they are the challengers that the incumbents will soon face in global markets—if they aren't already confronting them. Incumbents will encounter these challengers as competitors, as customers, as candidates for partnering in mergers or acquisitions, and as potential acquirers. They are the new global challengers.

The 2008 BCG 100 global challengers ("the BCG 100") hail from some widely disparate but fast-growing economies. In general, RDEs have been gaining importance in the global economy at an accelerating pace. The 14 countries that are home to the BCG 100—Argentina, Brazil, Chile, China, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Poland, Russia, Thailand, and Turkey—accounted for 17.3 percent of real GDP worldwide in 2006, up from 15.7 percent in 2005 and 13.4 percent in 2000. Moreover, they command an increasing share of global trade. In 2006 China overtook the United States as the world's second-largest exporter, behind only Germany; in 2008, if Chinese exports continue to grow at the astonishing rate of 27 percent per annum that they achieved in 2006, China will become the world's largest exporter.

Many RDEs are also developing closer economic ties with one another. For example, trade between China and India grew 38 percent in 2006. The mix of goods traded also shifted to include an increasing share of high-valued-added offerings, such as telecommunications products and IT services. Another indication of the increasing prominence of RDEs in the global economy is the level of foreign direct investment they receive. Across the 14 RDEs that are home to the BCG 100, this investment surged at a compound annual growth rate (CAGR) of almost 23 percent from 2004 through 2006, to reach $245 billion. In 2006 alone, the rate of growth was even higher, at 25 percent. (See Exhibit 1.)

Exhibit 1. Foreign Direct Investment in RDEs Has Been Increasing



Sources: The Economist Intelligence Unit; BCG analysis.
Note: CAGR = compound annual growth rate.
[1]Argentina, Chile, Egypt, Hungary, Indonesia, Malaysia, Poland, Thailand, and Turkey.

The 2008 BCG 100 New Global Challengers

Like our 2006 report, this year's edition features 100 dynamic companies based in RDEs around the globe. Although these companies operate in different countries and different industries, they all share the desire to globalize—and are moving in that direction with impressive speed. (See Exhibit 2, page 8.)

In part, this report is a review of how far those of our 2006 challengers that also appear on this year's list have come since we wrote about them more than a year ago. As we did in the 2006 report, we discuss who the BCG 100 are, how they are performing, and what global strategies they are adopting. We then consider the key challenges the BCG 100 face and whether they have the capabilities to overcome those challenges. This report also looks for the first time at the role of the state, particularly China's State-Owned Assets Supervision and Administration Commission (SASAC).

Who They Are

In compiling this year's list, we went through the same systematic selection process we undertook for the first edition. (For details, see the sidebar "Methodology for Selecting the 2008 BCG 100," page 9.) It is not surprising that a great many of the companies that made it onto our 2006 list—83 of them—appear again on this year's list, but 17 challengers are new this year, replacing the same number from the 2006 list. However, the disappearance from this year's list of 17 companies that we listed in 2006 does not mean that those companies are no longer significant global challengers. On the contrary, most of them remain powerful contenders in their respective industries. Nonetheless, as we evaluated the relative performance of thousands of globalizing companies from RDEs, we found compelling reasons to introduce 17 new companies to our list this year.

Although our criteria for inclusion were primarily quantitative, we have exercised a certain prerogative by developing a final list that is highly diverse. Of the 17 new challengers, 5 come from Latin America and 8 from China. (China also accounted for 11 of the 17 companies from the 2006 list that were dropped this year.) Like the other 83 challengers on the 2008 list, the 17 new entrants are major local—and increasingly global—players that have recorded high revenues and are threatening established players in markets around the world. This group of challengers comprises the following companies:

- Changhong Electric (China), a home appliances company with $2.4 billion in 2006 revenues and subsidiaries in Australia, Europe, Southeast Asia, and the United States
- Chery Automobile (China), the leading Chinese exporter of cars, with $2.6 billion in 2006 revenues, currently building plants in Eastern Europe, the Middle East, and South America
- COFCO (China), a company with $17.9 billion in 2006 revenues and the country's largest manufacturer, importer, and exporter of oils and food
- CSAV (Chile), a global top-ten shipping carrier with 2006 revenues of $3.8 billion and subsidiaries in Brazil, Hong Kong, and Uruguay

Exhibit 2. The 2008 BCG 100 Global Challengers List Includes 17 New Entrants

Companies by country	Industries
Argentina (1)	
Tenaris★	Steel
Brazil (13)	
Braskem	Petrochemicals
Companhia Vale do Rio Doce (CVRD)	Mining
Coteminas	Textiles
Embraer	Aerospace
Gerdau Steel	Steel
JBS-Friboi★	Food and beverages
Marcopolo★	Automotive equipment
Natura	Cosmetics
Perdigão	Food and beverages
Petrobrás	Fossil fuels
Sadia	Food and beverages
Votorantim Group	Process industries
WEG	Engineered products
Chile (1)	
CSAV★	Shipping
China (41)	
Aluminum Corporation of China (Chalco)	Nonferrous metals
BYD Company	Consumer electronics
Changhong Electric★	Home appliances
Chery Automobile★	Automotive equipment
China Aviation I	Aerospace
China FAW Group Corporation	Automotive equipment
China International Marine Containers Group Company (CIMC)	Shipping
China Minmetals Corporation	Nonferrous metals
China Mobile Communications Corporation	Telecommunications networks
China National Heavy Duty Truck Corporation (CNHTC)	Automotive equipment
China Petroleum & Chemical Corporation (Sinopec)	Fossil fuels
China Shipping Group	Shipping
CNOOC	Fossil fuels
COFCO★	Food and beverages
COSCO Group	Shipping
CSIC (China Shipbuilding Industry Corporation)★	Shipbuilding
Dongfeng Motor Company	Automotive equipment
Founder Group	Computers/IT components
Galanz Group Company	Home appliances
Gree Electric Appliances	Home appliances
Haier Company	Home appliances
Hisense	Consumer electronics
Huawei Technologies Company	Telecommunications equipment
Johnson Electric	Engineered products
Lenovo Group	Computers/IT components
Li & Fung Group	Textiles
Midea Holding Company	Home appliances
Nine Dragons Paper Holdings★	Paper packaging
PetroChina Company	Fossil fuels
Shanghai Automotive Industry Corporation Group (SAIC)	Automotive equipment
Shanghai Baosteel Group Corporation	Steel
Shanghai Zhenhua Port★ Machinery Co. (ZPMC)	Engineered products
Shougang Group	Steel
Sinochem Corporation	Chemicals
Sinomach★	Engineered products
TCL Corporation	Consumer electronics
Techtronic Industries Company	Engineered products
Tsingtao Brewery	Food and beverages
VTech Holdings★	Consumer electronics
Wanxiang Group Corporation	Automotive equipment
ZTE Corporation	Telecommunications equipment
Egypt (1)	
Orascom Telecom Holding	Telecommunications networks
Hungary (1)	
MOL Group★	Fossil fuels
India (20)	
Bajaj Auto	Automotive equipment
Bharat Forge	Automotive equipment
Cipla	Pharmaceuticals
Crompton Greaves	Engineered products
Dr. Reddy's Laboratories	Pharmaceuticals
Hindalco Industries	Nonferrous metals
Infosys Technologies	IT services/business process outsourcing
Larsen & Toubro	Engineering services
Mahindra & Mahindra	Automotive equipment
Ranbaxy Pharmaceuticals	Pharmaceuticals
Reliance Group	Petrochemicals
Satyam Computer Services	IT services/business process outsourcing
Suzlon Energy★	Wind energy
Tata Consultancy Services (TCS)	IT services/business process outsourcing
Tata Motors	Automotive equipment
Tata Steel	Steel
Tata Tea	Food and beverages
Videocon Industries	Consumer electronics
Videsh Sanchar Nigam (VSNL)	Telecommunications networks
Wipro	IT services/business process outsourcing
Indonesia (1)	
Indofood Sukses Makmur	Food and beverages
Malaysia (2)	
Malaysia International Shipping Company (MISC)	Shipping
Petronas	Fossil fuels
Mexico (7)	
América Móvil	Telecommunications networks
Cemex	Building materials
Femsa	Food and beverages
Gruma	Food and beverages
Grupo Bimbo★	Food and beverages
Grupo Modelo	Food and beverages
Nemak	Automotive equipment
Poland (1)	
PKN Orlen★	Fossil fuels
Russia (6)	
Gazprom	Fossil fuels
Inter RAO UES★	Energy
Lukoil	Fossil fuels
MMC Norilsk Nickel Group	Nonferrous metals
Rusal	Nonferrous metals
Severstal	Steel
Thailand (2)	
Charoen Pokphand Foods	Food and beverages
Thai Union Frozen Products	Food and beverages
Turkey (3)	
Koç Holding	Home appliances
Sabanci Holding	Chemicals
Vestel Group	Consumer electronics

★ Companies new to the BCG 100.

Sources: BCG 100 database; BCG analysis.

Methodology for Selecting the 2008 BCG 100

We generated the 2008 list by using a detailed screening process based on the same rigorous selection principles we followed in 2006. For the 2006 report, we looked at 2004 financial data; this time we had the benefit of additional data from fiscal years 2005 and 2006. First, we selected a set of RDE countries in which to find our challenger companies. We started with 30 countries ranked according to size of GDP, value of exports, and amount of outbound foreign direct investment. From these rankings, we chose a set of 14 RDE countries: Argentina, Brazil, Chile, China, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Poland, Russia, Thailand, and Turkey.

We then compiled an initial master list of more than 3,000 candidate companies that are based in these countries. This list drew on a variety of local company rankings, such as the top 500 companies in India selected by *Businessworld* (India's leading business magazine) and the top 500 companies in Brazil selected by *Exame* (Brazil's leading business magazine). Having amassed this large candidate pool, an international BCG research team from Brazil, China, Eastern Europe, India, Mexico, and Russia, together with a panel of senior BCG experts in Asia, Europe, Latin America, Russia, and the United States, conducted a rigorous three-step triage process.

In step one, we ensured that our selection included only companies that are truly RDE based, omitting foreign joint ventures and the RDE-based subsidiaries of multinational corporations. In step two, we homed in on those players with 2006 revenues of at least $1 billion, a threshold we believe is generally necessary to drive a serious globalization campaign. We allowed ourselves some flexibility on this criterion; four companies on our final list fell short of the $1 billion threshold. We included them because their revenues are fast approaching this level and because we felt that they merit inclusion on the basis of other criteria.

In step three, we scored the major globalization credentials of the remaining companies using five criteria: the international presence of the company as indicated by its owned and operated subsidiaries, sales networks, manufacturing facilities, and R&D centers; the major international investments pursued in the past five years, including mergers and acquisitions; the company's access to capital for financing international expansion, whether through free cash flows, stock markets, or other sources; the breadth and depth of its technologies and its intellectual-property portfolio; and the international appeal of its existing offerings and value propositions.

- CSIC (China Shipbuilding Industry Corporation), the country's largest manufacturer of ships and marine equipment, with $8 billion in 2006 revenues
- Grupo Bimbo (Mexico), a food and beverage company with $5.9 billion in 2006 revenues that produces and sells market-leading brands in Brazil, Mexico, and the United States
- Inter RAO UES (Russia), the country's number-one importer and exporter of electricity, with 64 percent ($649 million) of 2006 sales coming from overseas operations
- JBS-Friboi (Brazil), Latin America's largest beef-and-pork processor, with $1.8 billion in 2006 revenues—which should rise to $13 billion in 2008 in the wake of the company's recent acquisition of United States-based Swift & Company
- Marcopolo (Brazil), the world's third-largest manufacturer of bodywork and components for buses and vans, with $820 million in 2006 revenues, 46 percent of which came from abroad
- MOL Group (Hungary), the country's leader in oil refining, fuel retailing, and gas transport, with $13.7 billion in 2006 revenues, subsidiaries in 12 countries, and 5,000 employees abroad
- Nine Dragons Paper Holdings (China), the largest paperboard-packaging manufacturer in China and one of the largest in the world, with 2006 sales growth of 64 percent and $1 billion in revenues
- PKN Orlen (Poland), an oil and gas company and the largest Central European company by sales—$17 billion for 2006, 46 percent of which were generated offshore

- Shanghai Zhenhua Port Machinery Co. (ZPMC) (China), a leading international manufacturer of container cranes, with $2.1 billion in 2006 revenues, 84 percent of which were generated in international markets

- Sinomach (China), one of the world's leading machinery contractors, with half of its $5.1 billion in 2006 revenues coming from offshore markets

- Suzlon Energy (India), the fifth-largest company in the world for installed wind-energy capacity, with 2006 revenues of $1.8 billion and manufacturing in China, Europe, India, and the United States

- Tenaris (Argentina), a leading international manufacturer of tubes and pipes for the oil industry, with global operations and $7.7 billion in 2006 revenues, 80 percent of which came from offshore

- VTech Holdings (China), the market leader in Europe and the United States for educational video games and an innovator in cordless phones, with $1.2 billion in 2006 revenues, 78 percent from offshore

Where They Come From

The 2008 BCG 100 are based in 14 countries: Argentina, Brazil, Chile, China, Egypt, Hungary, India, Indonesia, Ma-

A Snapshot of Five Countries' BCG 100 Challengers

China. China is home to the largest number of challengers (41). On average, these companies earned 2006 revenues of $14.5 billion and achieved a compound annual growth rate (CAGR) of 26 percent for 2004 to 2006. In 2006 their operating-profit margin averaged 14 percent, down from 15 percent in 2004, and international sales accounted for 17 percent of their total revenues, up slightly from 16 percent in 2005. Of the 41, 34 are publicly traded, including most of the 29 companies that are mostly or entirely state owned. The total shareholder return (TSR) of the publicly traded companies for the period January 2002 to June 2007 grew at a CAGR of 27.7 percent.

India. Next is India, with 20 challengers. Their revenues for 2006 averaged only $3.9 billion, but they boasted an impressive CAGR of 31 percent for revenues from 2004 to 2006. The operating-profit margin of these companies averaged 16 percent in 2006, down from 17 percent in 2004. International sales in 2006 represented 47 percent of total sales, up from 40 percent in 2005. All the Indian companies on our list are publicly traded, and none of them are state owned. Their TSR for the period January 2002 to June 2007 grew at a CAGR of 38.2 percent.

Brazil. Brazil contributes 13 challengers to our 2008 list. Their 2006 revenues averaged $9.8 billion (skewed by Petrobrás, whose 2006 revenues were a whopping $72 billion) and have been growing very fast; the average CAGR for revenues from 2004 to 2006 was 35 percent. The operating-profit margin of these challengers averaged 25 percent in 2006, down from 26 percent in 2004. Their 2006 international sales accounted for 30 percent of total revenues, up from 28 percent in 2005. Of these 13 companies, 8 are publicly traded and only Petrobrás is state owned. The publicly traded companies' TSR for the period January 2002 to June 2007 grew at a CAGR of 44.5 percent.

Mexico. Mexico weighs in with seven challengers, which had average 2006 revenues of $9.5 billion. These challengers grew their revenues, on average, at a CAGR of 29 percent from 2004 to 2006. Their operating-profit margins remained steady over the same period, at an average of 18 percent. International revenues accounted for 56 percent of total 2006 revenues, up from 51 percent in 2005. Six challengers are traded directly on the Mexican stock exchange and the seventh, Nemak, is traded indirectly, as it is a subsidiary of Alfa, which is traded directly. The TSR of the six publicly traded companies for the period January 2002 to June 2007 grew at a CAGR of 37.4 percent.

Russia. The six companies contributed by Russia to this year's list enjoyed strong 2006 revenues that averaged $29.7 billion, fast revenue growth (a CAGR of 41 percent for 2004 to 2006), and high average profitability of 24 percent. These impressive results reflect the dominance of natural-resource companies and the rise in oil prices over the period. International revenues accounted for 70 percent of total 2006 revenues for the six companies, slightly below the 71 percent they represented in 2005. Three companies are publicly traded and three are state owned. The TSR of the publicly traded companies grew at a CAGR of 44.3 percent from January 2002 to June 2007.

laysia, Mexico, Poland, Russia, Thailand, and Turkey. (See the sidebar "A Snapshot of Five Countries' BCG 100 Challengers.")

Asia is home to the large majority (66), followed by Latin America (22). Russia, Turkey, and Egypt collectively are home to another 10. The 2008 list includes two Latin American countries (Argentina and Chile) and two Central European countries (Hungary and Poland) that were not represented on the 2006 list; we selected one global challenger from each of those countries. China remains by far the dominant home-base country, with 41 of the 2008 BCG 100. India and Brazil follow with 20 and 13 challengers, respectively.

The Industries They Represent

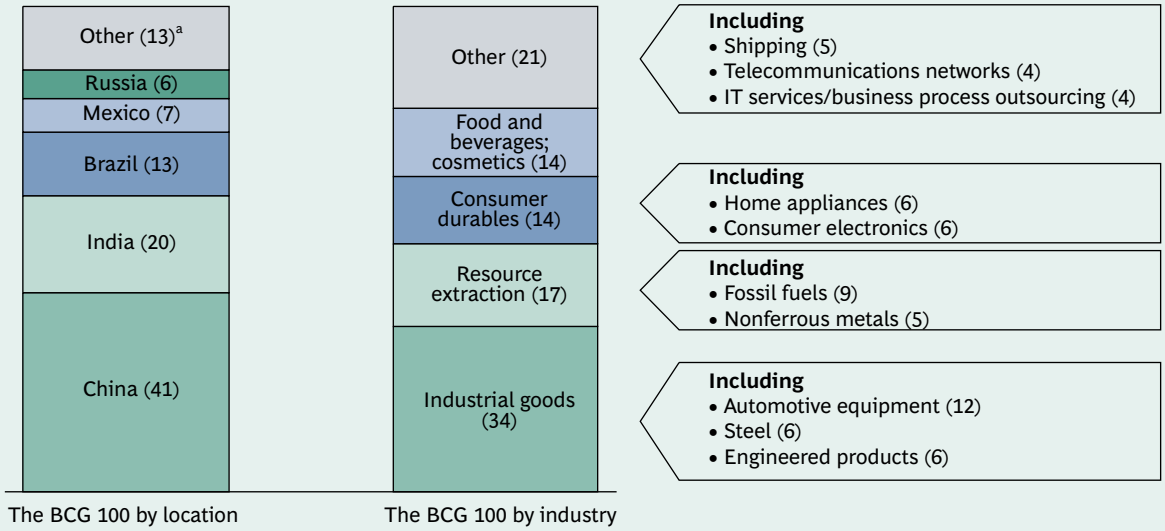
The BCG 100 span a very broad spectrum of industries. For example, they include 34 companies operating in the industrial-goods sector and 17 resource-extraction companies, 9 of which are fossil fuel companies. There are also 14 consumer-durables challengers and 14 companies from the food-and-beverage and cosmetics industries. The remaining 21 challengers represent a range of industries, including shipping, telecommunications networks, and IT services and business process outsourcing. (See Exhibit 3.)

Note that although we label companies according to industry for easy categorization, in reality some companies are large conglomerates with diversified holdings that extend well beyond the industries with which they are primarily identified. Koç Holding (Turkey) is an example. In addition to home appliances, it has businesses in a wide variety of other sectors, including automotive, energy, finance, and retail. Other large conglomerates include Sabanci Holding (also in Turkey), Videocon Industries (India), and Votorantim Group (Brazil).

Why Are They Globalizing?

The desire for growth ultimately drives globalization. For the great majority (90) of the BCG 100, access to new growth and profit pools is the overriding rationale for going global. These companies have realized that being big in their home markets is not enough to ensure their long-term viability. They must move abroad in order to continue growing and to attain a scale that will enable them

Exhibit 3. The BCG 100 Global Challengers Represent 14 Countries and Many Industries



Sources: BCG 100 database; BCG analysis.
[a]Argentina (1), Chile (1), Egypt (1), Hungary (1), Indonesia (1), Malaysia (2), Poland (1), Thailand (2), and Turkey (3).

to compete with other global players. Many of the BCG 100 have other motives for globalization in addition to growth. These include, for example, developing complementary skills, such as R&D expertise; acquiring intangible assets, such as brands; and experimenting with new business models.

For the ten challengers whose globalization efforts are not motivated primarily by a quest for growth, the impetus comes from an increasingly urgent need to secure long-term access to natural resources. These challengers are therefore global less in terms of their revenues than in terms of their purchasing and investment patterns: they acquire rights to resources in key locations across the world.

How Are They Globalizing?

In our 2006 report, we identified six globalization models that RDE challengers adopt when seeking to expand. Those models continue to be the most widely used. We list them below, with examples drawn from this year's BCG 100. Clearly, companies often pursue these strategies not to the exclusion of one another but in combination. Furthermore, all six approaches build on an underlying foundation of low costs.

Model 1: Taking RDE Brands Global. Twenty-nine of our challengers, including 11 from China and 7 from India, have focused on this approach. Many pursue growth organically. An example is India's Bajaj Auto, the country's largest exporter of two- and three-wheeled vehicles. The company recorded 2006 revenues of $2.2 billion, up 131 percent since 2000. Its expansion has been entirely organic. It holds a dominant position in nine countries outside India, mainly in developing markets.

Another example of a company taking its brand global is Natura, a Brazilian cosmetics company. With a strong brand in its home market, the company first expanded into other Latin American countries and is now entering the European market.

Model 2: Turning RDE Engineering into Global Innovation. Twenty challengers are pursuing this approach. Examples are aviation companies Embraer (Brazil) and China Aviation I. Embraer posted 2006 revenues of $3.8 billion (of which 96 percent were international); it is the world's third-largest commercial aircraft manufacturer, behind Boeing and Airbus, and it operates a joint venture in China with Aviation Industry Corporation (AVIC) II. Embraer competes using a combination of low-cost labor and strong R&D. China Aviation I, with 2006 revenues of $10.5 billion (up 420 percent since 2000), is China's largest manufacturer of defense and commercial aircraft, missiles, and other aeronautical products.

Model 3: Assuming Global Category Leadership. Fourteen challengers, eight of which are based in China, focus primarily on this approach. For instance, BYD Company, China's largest maker of rechargeable batteries, is a top performer among our publicly traded challengers, providing investors with a total shareholder return (TSR) of 148 percent in 2006. BYD competes head-on with Japanese players in the battery market, using a labor-intensive approach in contrast to its competitors' capital-intensive model. In 2003 BYD entered the automotive industry through its acquisition of Tsinchuan Automobile Company.

Model 4: Monetizing RDE Natural Resources. Seventeen challengers representing a variety of industries concentrate on this model. More than half of them use mergers and acquisitions (M&A) to expand globally. An example is Hindalco Industries, an India-based metals company that is Asia's largest integrated primary producer of finished aluminum. The company recorded 2006 revenues of $4.1 billion, of which about one-third came from abroad. Although Hindalco has traditionally grown organically, it recently made a number of acquisitions, including the purchase in 2001 of Alcan's INDAL facilities in India, the purchase in 2003 of two copper mines in Australia, and the purchase in early 2007 of Canada's Novelis for $6 billion. The Novelis acquisition is expected to boost the company's revenues to $10 billion.

Model 5: Rolling Out New Business Models to Multiple Markets. Ten challengers focus on this approach, and nine of them are pursuing M&A growth strategies. An example is Mexican challenger América Móvil. With 2006 revenues of $21.3 billion, this mobile-network operator has a commanding presence in the Americas, including a 28 percent share of the prepaid wireless market in the United States. The company has effectively expanded its

business into new markets while localizing operations in each. For instance, it uses different brands and marketing strategies in different regions but maintains as a common element a strong emphasis on cost containment. It is interesting that a major shareholder in the company (with a 30 percent stake), Carlos Slim Helú, is now among the richest men in the world.

Model 6: Acquiring Natural Resources. China is home to half of the ten companies on our list that pursue this strategy. This focus reflects the high priority the Chinese government puts on securing access to resources, especially energy. A representative company is China Minmetals Corporation, a base-metals producer and trader. The company is China's largest metals manufacturer and overseas trader and its largest importer of steel and nonferrous metals. Although China Minmetals receives strong government support, it has also accumulated in-depth market knowledge through its global trading network. Its 2006 revenues totaled $18.9 billion. Another Chinese company pursuing this model—and generating a superior profit margin of 40 percent—is CNOOC, China's largest producer of offshore crude oil and natural gas.

The BCG 100's Performance

The BCG 100 challengers are not simply 100 interesting, fast-growing companies based in far-off countries. As a group, these companies are an awesome economic force. In recent years they have rewarded investors with superior returns while earning substantial revenues and profits. And with those earnings they are also buying more and more goods and services, spending increasing amounts on research, and making acquisitions around the world.

Superior Value Creation

The shareholder value-creation performance of the BCG 100 is truly remarkable. For 64 of the 75 publicly traded companies on our list, TSR over the five-and-a-half-year period from January 2002 to June 2007 averaged 418 percent.[1] This compares quite favorably with a 221 percent total return for the MSCI Emerging Markets index and a 47 percent total return for the S&P 500 index for the same period. As of June 2007, the total market capitalization of the 64 companies was $954 billion—nearing the trillion-dollar mark. (See Exhibit 4.)

Revved-Up Revenues

Revenue growth among the global challengers is accelerating. From 2004 to 2006, total revenues for the 2008 BCG 100 grew at a CAGR of 29 percent—close to three times the rate achieved by companies in the S&P 500 and *Fortune* 500. (See Exhibit 5.) As a result of this extraordinary growth, total 2006 revenues for the BCG 100 amounted to $1.2 trillion. Still more impressive—and perhaps more worrisome for managers defending their home markets—the group's international revenues grew even faster, achieving a CAGR of 37 percent from 2005 to 2006. As a result, the BCG 100 generated 34 percent of their revenues offshore in 2006, compared with 32 percent in 2004.

Potent Profits

In 2006 the BCG 100 generated operating margins of 17 percent, significantly above the average of 14 percent achieved by the S&P 500 companies—and even farther above the 8 percent margin achieved by companies on Japan's Nikkei index and the 7 percent achieved by companies on Germany's DAX index. (See Exhibit 6.)

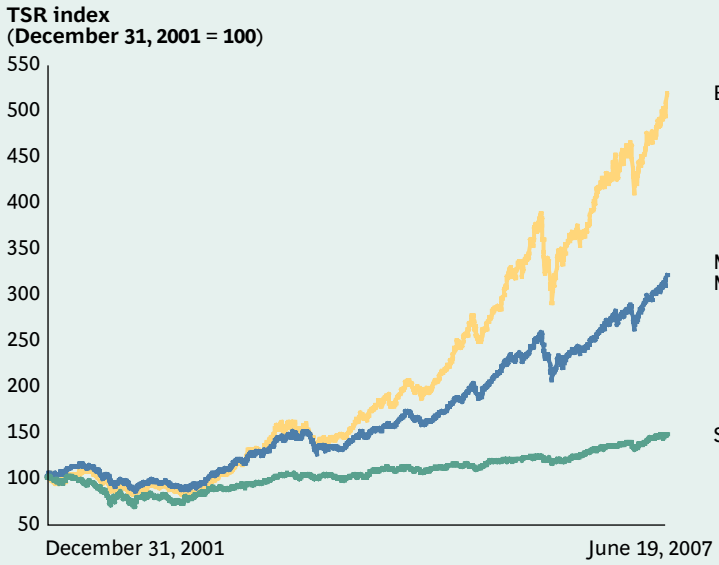
High though their revenues are, the overall profitability of the BCG 100 has decreased by a little over one percentage point since 2004 (down from almost 19 percent in that year). However, the companies composing the S&P 500, the Nikkei, and the DAX experienced a drop of two percentage points over the same period.

Huge Purchasing Power

The purchasing power of the BCG 100 is enormous and growing, highlighting the important potential of these companies as customers. We estimate (on the basis of 2006 data) that their 2007 purchases will total half a trillion dollars: $310 billion to $330 billion for raw materials

1. Of the BCG 100 challengers, 75 are publicly traded. We have included 64 of them in our calculations of TSR and market capitalization. The other 11 include 10 Chinese companies that are listed only on Chinese exchanges that have unusual share-pricing practices, as well as Gazprom (Russia), for which consistent share-price data were unavailable from Russian exchanges.

Exhibit 4. The BCG 100 Challengers Have Generated Superior Shareholder Returns

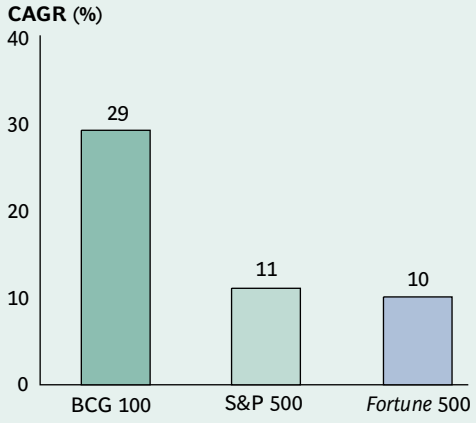


	Total index as of June 19, 2007	CAGR 2002–2007 (%)[a]	Change since December 31, 2001 (%)
BCG 100	517.7	35.1	417.7
MSCI Emerging Markets	320.7	23.8	220.7
S&P 500	147.3	7.4	47.3

Sources: Datastream; BCG analysis.
Note: The TSR index for the BCG 100 is based on 64 companies or their subsidiaries listed in Bombay, Budapest, Cairo, Hong Kong, Mexico, Milan, New York, Russia, Santiago, São Paulo, Toronto, and Warsaw.
[a]CAGR was calculated for a period of 5.46 years, from December 31, 2001, to June 19, 2007.

Exhibit 5. The BCG 100 Have Achieved Superior Revenues

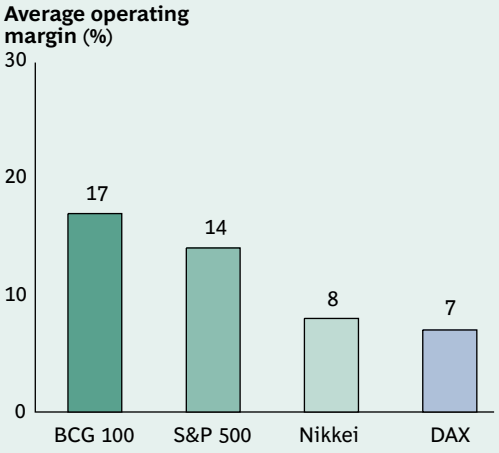
Revenue growth, 2004–2006



Sources: Datastream; literature search; BCG analysis.

Exhibit 6. The BCG 100 Have Achieved Superior Profits

Profitability, 2006



Sources: Datastream; literature search; BCG analysis.

and energy, $80 billion to $100 billion for parts and components, and $65 billion to $80 billion for services. The overall value of purchases made by the BCG 100 grew at a CAGR of 29 percent from 2002 to 2006.

Rising Spending on R&D

Overall, the R&D spending of the BCG 100 is still low. However, numbers alone do not paint the full picture. One million dollars can buy far more research hours in RDEs than in developed markets. Moreover, it is difficult to obtain accurate R&D data for RDE-based challengers. Those on our list that have revealed their research expenditures (48 in total) increased their R&D investments by almost 16 percent during the 2004-to-2006 period.

A number of challengers have also shown strong R&D capabilities. Petrochemicals company Braskem (Brazil) claims to have more than 130 ongoing innovation projects with a potential value of $250 million. Cosmetics company Natura (Brazil) has the most advanced cosmetics R&D center in Latin America; in 2003 the company launched a new product every three days. Truck manufacturer China National Heavy Duty Truck Group Corporation (CNHTC), which has invested heavily in research, holds 463 patents. Telecommunications equipment company Huawei Technologies Company (China) invests nearly 10 percent of its annual revenues in research and holds 1,400 patents. Turkish conglomerate Koç Holding employs 450 researchers and has been responsible for 10 percent of all patent applications in Turkey since 1997.

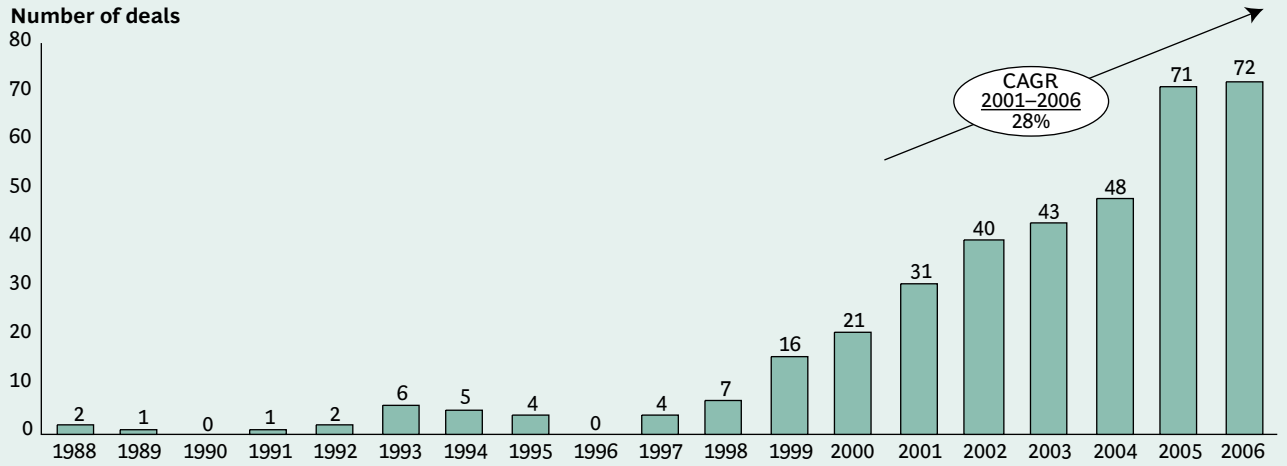
Aggressive M&A Activity

The BCG 100 concluded approximately 72 outbound M&A deals in 2006. This is similar to the number of deals they concluded in 2005 but is significantly up from 2000, when only 21 outbound M&A deals were signed. From 2001 to 2006, the number of acquisitions grew at a CAGR of 28 percent. (See Exhibit 7.)

The average size of the BCG 100's deals also grew—from $156 million in 2001 to $981 million in 2006. This shift reflects, in part, the increasing number of very large deals concluded: seven deals worth more than $1 billion in 2006, versus three in 2005. (See Exhibit 8.)

This tendency to make more and larger acquisitions applies across all regions. For example, the Brazilian mining company Companhia Vale do Rio Doce (CVRD) acquired Inco (Canada) in late 2006 for approximately $17.8 billion—the largest M&A deal yet concluded by a Latin American company. A few months later, in February 2007, Tata Steel (India) acquired the Anglo-Dutch

Exhibit 7. Outbound Deals Concluded by the BCG 100 Have Risen Sharply in the Past Decade

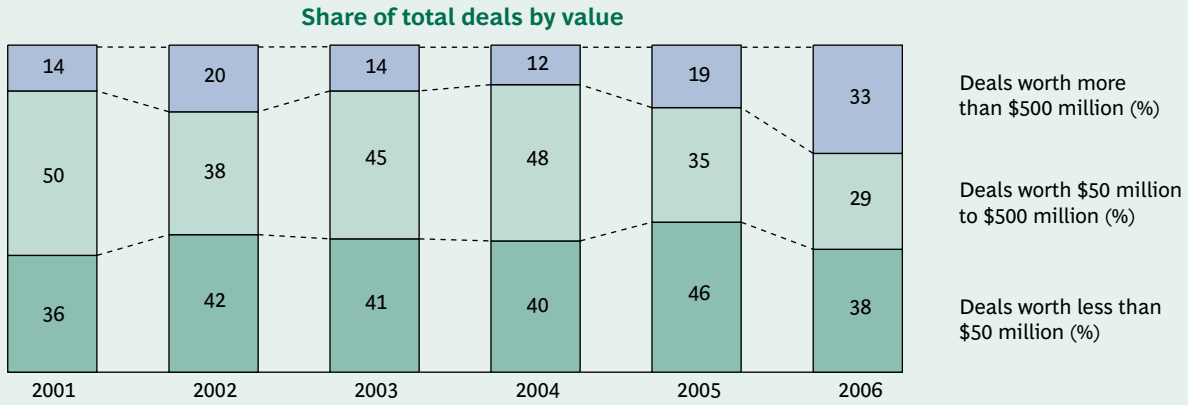


Sources: Thomson Financial Securities Data, Worldwide Mergers & Acquisitions; BCG 100 database.

steelmaker Corus for roughly $12 billion, thus striking the largest outbound M&A deal in India's history. In 2006 Indian companies made overseas acquisitions that totaled $22.4 billion.

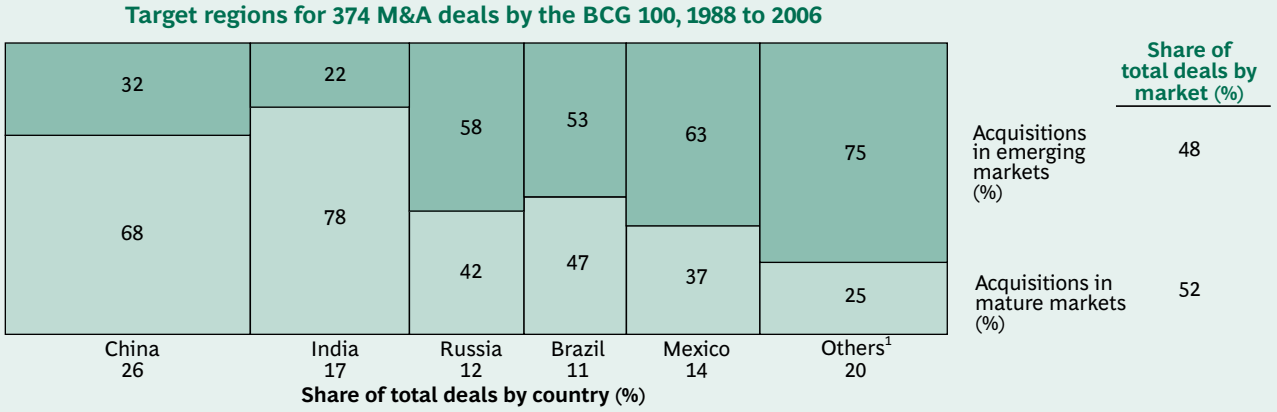
Not all target companies are in developed markets. Indeed, the number of deals conducted in emerging markets versus mature markets has remained evenly split over the last seven years. However, this ratio varies widely among the BCG 100 by country of origin. Companies from China and India have concentrated more of their acquisitions in developed markets, whereas companies from other RDEs have focused on acquisitions in other RDEs. (See Exhibit 9.)

Exhibit 8. The Proportion of Very Large M&A Deals Concluded by the BCG 100 Has Increased



Sources: Thomson Financial Securities Data, Worldwide Mergers & Acquisitions; BCG 100 database; BCG analysis.
Note: The number of deals whose size is known is 180.

Exhibit 9. The BCG 100 Have Made M&A Deals in Both Emerging and Mature Markets



Sources: Thomson Financial Securities Data, Worldwide Mergers & Acquisitions; BCG 100 database; BCG analysis.
[1]Argentina, Chile, Egypt, Hungary, Indonesia, Malaysia, Poland, Thailand, and Turkey.

Gauging the BCG 100's Global Competitiveness

The performance of the BCG 100 is astonishing in many respects. But looking forward, one wonders what challenges these companies will encounter and what strategies and tactics they will devise to meet those challenges. They face a number of issues in common. In this chapter, we consider how they will fare along six dimensions:

- Competing on cost
- Going beyond cost-based competition
- Winning the M&A game
- Addressing the talent shortage
- Operating on a truly global scale
- Managing risks

We then look at where the BCG 100 stand in terms of their overall globalization, and we offer a few thoughts on the role of the state in affecting their present competitive positions and their prospects.

Competing on Cost

Many RDE-based companies have built their businesses on the basis of low costs, and that remains a fundamental element of their success. Mastering the low-cost approach allows challengers to achieve ever-larger volumes and therefore benefit from economies of scale, which, in turn, further increase their cost advantage. This is the way many challenger companies have come to dominate commoditized global markets. Examples abound across industries and regions. In industrial goods, China International Marine Containers Group Company (CIMC) has been number one in volume in the global shipping-container market since 1996; Johnson Electric (China) is the world's largest and most profitable manufacturer of micromotors; and Reliance Group (India) is the world's largest producer of polyester fiber and yarn. In resource extraction, CVRD (Brazil) is the world's largest iron-ore exporter. In the consumer durables industry, Galanz Group Company (China) manufactures more than half the microwave ovens sold in the world, and BYD Company (China) is the world's largest manufacturer of nickel cadmium batteries. And in the food industry, Indofood Sukses Makmur (Indonesia) is the world's largest instant-noodles manufacturer and flour miller.

Manufacturing is not the only sector in which companies are pursuing low-cost strategies. A number of our Indian challengers (Infosys Technologies, Satyam Computer Services, Tata Consultancy Services, and Wipro) are using low cost and scale in the IT and business-process-outsourcing sectors to secure *Fortune* 500 company customers and to attack foreign incumbents in developed markets.

Although low cost continues to be a powerful source of competitive advantage, certain factors serve to dampen its effect. First, RDEs' low costs are also available to foreign companies that locate their operations in these countries. For years, large companies from the West and Japan have been relocating manufacturing and sourcing to low-cost countries such as China—indeed, to such an

extent that in 2006 more than 58 percent of China's external trade was driven by non-Chinese companies. To maintain a substantial cost advantage, challengers must create—and sustain—a cost differential based on other factors as well as low labor costs.

In addition, the importance of intellectual property in modern products and services has reduced the relative importance of manufacturing costs alone. Companies without a pool of intellectual property must not only pay royalties to others but also forgo royalty revenues. Chinese television makers, for example, are losing their cost edge in the manufacture of LCD TVs because the licensed technology is still in the hands of Japanese and Korean rivals. Chinese telecommunications-equipment players that lack access to third-generation (3G) mobile-telecommunications technologies have not been competitive despite low manufacturing costs.

Furthermore, the growing sophistication of customer demand increases the importance of new sets of skills. Lower costs alone have ceased to provide a sustainable competitive advantage in industries where product design, performance, and brand name have become key criteria for consumers whose purchasing power is rising and whose tastes and demands are rapidly evolving.

Finally, as RDE-based companies set up more operations in developed markets, they encounter higher costs of doing business, which may affect their previous, cost-focused positioning. For example, some Chinese companies establishing regional sales and customer-service offices in Europe have been surprised at the costs of adding personnel. Similarly, RDE-based competitors that establish manufacturing or logistics activities in developed markets are discovering that these investments incur unanticipated new costs as well as the expected benefits.

Going Beyond Cost-Based Competition

The BCG 100 are beginning to go beyond cost-based competition by investing in R&D and branding, while also seeking to retain their cost advantages. Having gained experience at the lower end of their markets, many challengers now aspire to develop or acquire capabilities that will allow them to enter the middle and higher-end segments. They are moving toward this goal by means of acquisitions and partnerships, and also by devoting more resources to reaching these segments of the market.

Investing in R&D. Sustained investment in R&D is essential for any company wishing to differentiate itself from its competitors. The BCG 100 are in general only beginning the journey toward a sustained commitment to R&D. For example, few of them yet provide detailed information about the level of their R&D spending. Anecdotal evidence suggests that their overall R&D investment remains low, although it has been rising. Evidently, many of these 100 companies find that their traditional cost-based strategies still create opportunities for growth.

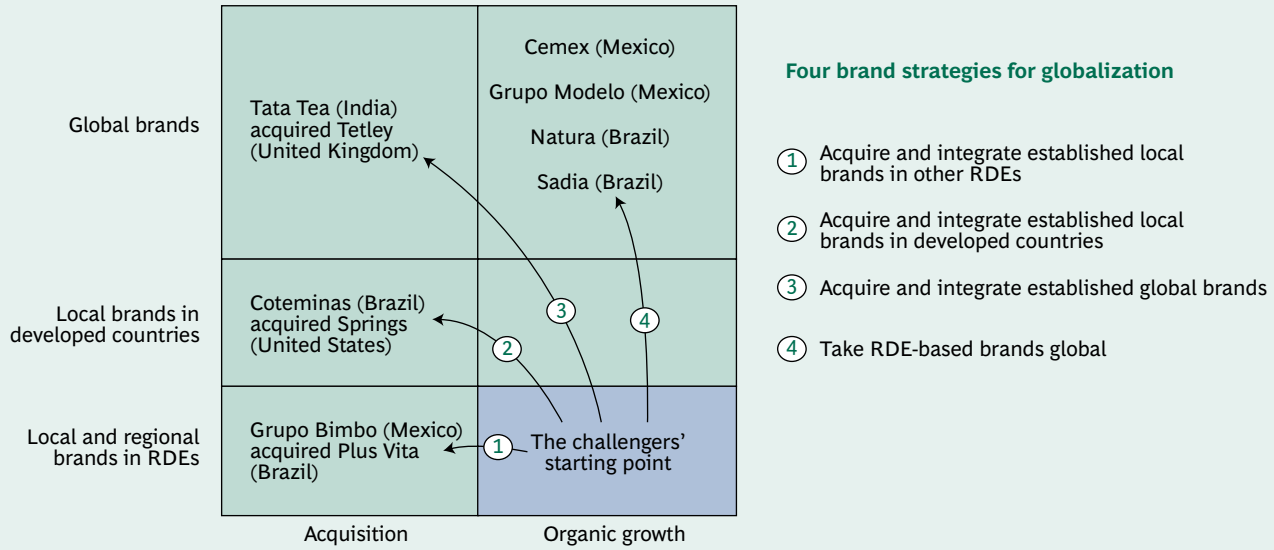
However, some of the BCG 100 clearly appreciate the role that innovation can play in their growth, and they are investing in it. One example is Argentina's Tenaris, a manufacturer of pipes and tubes. It has established a global network of five R&D centers located in Argentina, Italy, Japan, Mexico, and the United States. Each center specializes in one type of technology or product, and collectively, the centers employ more than 200 researchers, half of whom have doctoral or master's degrees. This effort has enabled the company to add more high-end products to its portfolio.

Another example is ZPMC, a harbor crane manufacturer based in China. The industry leader worldwide with a 54 percent market share, this company entered the market on the basis of low costs but now offers customers extra value. ZPMC can design and manufacture a variety of fully erected cranes and then use its 18 ships to deliver them to customers. In addition to ensuring customer satisfaction at a reasonable price, the company is developing new products and adding innovations to existing ones. ZPMC employs 800 engineers in its R&D department and cooperates with universities and scientific research institutes across China.

Developing Brands and Brand-Building Skills. Challengers are now starting to recognize the importance of brands. We observe them pursuing brand building in two basic directions—acquisition and organic growth—through four brand strategies. (See Exhibit 10, page 20.)

Acquiring Established Local Brands in Other RDEs. This is the approach preferred by challengers that want quick

Exhibit 10. The BCG 100 Pursue Four Brand Strategies



Sources: Company Web sites; literature search; BCG analysis.

access to brands already established in foreign markets and that prefer not to build those brands themselves. To globalize fast, they acquire established local brands in other RDEs. For example, Mexico's Grupo Bimbo, a leading food manufacturer, has acquired a range of strong brands both in its domestic market and abroad (including brands such as Brazil's Plus Vita). The company has proved adept at growing these brands through marketing, sales, and product extensions.

Acquiring Established Local Brands in Developed Countries. Other challengers target developed countries as places in which to acquire existing local brands. For example, Coteminas (Brazil), a $1.6 billion textile company, acquired Springs, a U.S. brand, and created Springs Global. Coteminas has been leveraging the high brand recognition of Springs in the United States to market textile products for the home.

Acquiring Established Global Brands. India's Tata Tea, in its 2000 acquisition of the United Kingdom's venerable Tetley brand, gained a brand with global recognition. Tata Tea had been seeking an opportunity to acquire Tetley since 1995, understanding the value that such a well-known brand would bring. It also understood the challenge it would have faced developing the Tata Tea brand to the same level of international recognition, even though Tata is the number one tea in India. The company's current strategy is to promote Tetley in developed markets and Tata Tea in emerging markets.

Taking Local Brands Global. Brand development strategies are pursued by ambitious RDE-based challengers that have set branding at the core of their growth strategies and are looking to develop local RDE brands into world-class global brands. We earlier mentioned Natura, a Brazil-based cosmetics company, as an example of a challenger seeking to develop its brand globally.

Another company using a brand development strategy is Grupo Modelo (Mexico), a beverage company that earned 29 percent of its $5.2 billion in 2006 revenues from sales in overseas markets. Grupo Modelo sells five brands, the most famous of which is Corona, the leading imported beer in North America. Brazilian food-products company Sadia has so successfully established its brand in the Middle East that Sadia has become a household word for a whole category of food products.

The branding ability of the best RDE-based challengers goes beyond consumer goods and services. For example, Cemex (Mexico), one of the world's largest building-materials companies, has established itself as a leading brand in its segments of the construction industry.

Winning the M&A Game

Challenger companies are increasingly engaging in M&A around the globe. They are pursuing a number of objectives.

Seeking Growth Opportunities. As is the case with most companies seeking mergers, challenger companies' motivation for participating in M&A activity is to grow. Often their ambition is not simply to be a larger company but to become a major global player. For example, Cemex used its $5.8 billion acquisition of RMC (United Kingdom) in 2005 and its $14.2 billion acquisition of Rinker (Australia) in 2007 to consolidate its position as a global competitor—and as the number one producer of ready-mix concrete in the world. Similarly, Hindalco's acquisition of aluminum maker Novelis helped it become the world's largest aluminum-rolling company and one of the top five aluminum companies in the world.

Acquiring Missing Pieces. Challenger companies often view acquisition targets differently from the way companies in developed markets view them. Whereas an executive in a Western or a Japanese company might see a high-cost enterprise that is losing market share and operating in a declining home industry, an executive in a challenger company might see assets that his or her firm needs or wants. Such assets could include brands, reputation, control over natural resources, technologies, customers, distribution channels, and market expertise. With its acquisition of Inco, CVRD not only gained control over the world's largest reserves of nickel, it also acquired a company with good products, a pipeline of future products, global expertise in nickel technology, high-quality staff, and a strong brand name.

Extending Operational Expertise. Challenger companies also wish to acquire companies that can benefit from their own expertise. For example, in early 2007, China Mobile Communications Corporation, a network operator, completed its first successful international M&A, acquiring an 89 percent stake in Pakistan operator Paktel for $284 million. China Mobile intends to use its experience in China to enhance Paktel's competitiveness. Egypt's Orascom Telecom Holding has built its business by acquiring operators in emerging markets around the world, including Algeria, Pakistan, and Zimbabwe. In 2005 it acquired Wind, an Italian telecommunications provider, for around $14 billion, subsequently sending in its own management team to help spur growth.

Leveraging Low-Cost Manufacturing on a Larger Scale. Achieving such leverage is a motivating factor in many M&A deals conducted by challenger companies. Examples abound of RDE-based challengers that acquire companies in developed countries only to bring the acquired companies' manufacturing activities back to their own cheaper domestic production base. CIMC is a master of this strategy, having dismantled and shipped entire production lines from developed markets to China. Taking an alternative approach, the acquiring companies sometimes maintain their new assets in their current locations and cut procurement costs by using their own low-cost sources of supply.

The most successful acquisitions achieve several of these objectives simultaneously. For example, with the acquisition of Germany-based REpower Systems, wind energy company Suzlon Energy (India) gained key technologies for offshore turbines that enabled it to compete in higher-value-added segments and gain a strong foothold in the European market. Suzlon is also leveraging its low-cost manufacturing by providing REpower with components that it manufactures at the lowest cost in the world; before the acquisition, such components represented up to 80 percent of the cost of the turbines REpower assembled. With this acquisition, Suzlon intends to further extend its market share, geographic coverage, and product offering, while further lowering its costs, thanks to increased volume.

Facing M&A Obstacles. The difficulties of concluding cross-border M&A deals are numerous. In 2004 China Minmetals, a state-owned enterprise, tried to buy Noranda (Canada), but extensive criticism in the Canadian media contributed to the deal's collapse. In 2005 the U.S. Congress strongly objected to the bid made by Chinese oil company CNOOC for Unocal.

The challenges of postmerger integration (PMI) are also significant, as TCL Corporation, a Chinese consumer-electronics company, has learned. In 2004, in an attempt to gain global scale, it acquired the TV assets of French electronics company Thomson, including the rights to the Thomson and RCA brands. Six months later, TCL formed another joint venture with Alcatel. Both investments have struggled significantly.

However, some RDE-based challengers have mastered PMI. Cemex, which has operations in 50 countries run by 67,000 employees, has become an industry leader through a string of acquisitions. Cemex excels at integrating its acquisitions by means of "the Cemex Way," its global capability platform that covers every aspect of the business. The success of Cemex also lies with its team of international managers seasoned in executing deals and ensuring smooth PMI of the company and its targets.

Addressing the Talent Shortage

RDE-based challengers benefit from a generic advantage: low-cost labor. The gap in wages between developed countries such as Germany and the United States and countries with a surplus of unskilled labor, such as China, is immense. An autoworker in Germany can expect to earn around $50 an hour (including benefits). In China, the comparable wage is roughly $2. What the German autoworker earns in an hour, a college-educated white-collar manager in Shanghai earns in a day.

On the other hand, despite an abundance of unskilled and semiskilled labor in RDEs, there is generally a real shortage of staff possessing both home-country and developed-market knowledge, experience, and language skills. So while RDE-based companies can dictate the terms for entry-level positions, they face a significant talent shortage in more senior positions. There simply are not enough trained technicians and experienced managers to match these companies' growth ambitions.

The BCG 100 are seeking to solve the talent problem by establishing themselves as employers of choice. Success in the marketplace raises their profile among prospective employees, while global expansion offers ambitious graduates international career paths and global learning opportunities. In the past, it was common for local subsidiaries of multinational corporations (MNCs) to be the first choice of graduates in RDEs. Today, however, an increasing number of graduates prefer to join locally owned companies, which are proving to be good places to work. Four of our Indian challengers are on Hewitt Associates' list of the 25 "Best Employers in India 2007." Most notably, the number one position is held by Aditya Birla, the parent of metals company Hindalco, and Satyam Computer Services is listed second.

From the viewpoint of local talent, a clear attraction of joining a domestic company is the potential to rise all the way to the top. Local employees have no concern about being shut out of top management positions, as do employees working in the local subsidiaries of MNCs, where top spots may be reserved for expatriates or where the possibility of being transferred to an overseas headquarters may not be appealing. RDE-based challengers also play to the patriotism of prospective recruits. And many of these companies have developed sophisticated internal systems to foster training and continuing education. Argentina's Tenaris, for example, has created its own corporate university. The company says that the average white-collar employee spends more than 65 working hours each year in class or taking online courses.

Operating on a Truly Global Scale

What is a global company? This question can generate spirited debate. In our view, a reasonable way to measure an organization's degree of globalization is by assessing the geographic footprint of its sales, the geographic range of its manufacturing and supplier base, and the degree of internationalization of its top management. Along these three dimensions, some of the BCG 100 are considerably more "global" than the companies in developed markets with which they compete—despite the fact that the latter are more frequently referred to as "multinational" enterprises.

Geographic Footprint of Sales. Asia, Europe, and North America each accounts for around one-third of the global demand for auto parts. Bharat Forge—an Indian manufacturer of auto parts, with 45 percent of sales in its home region of Asia and the remaining 55 percent split between North America and Europe—has a more global sales footprint than do its leading Western competitors.

Geographic Range of Manufacturing and Supply. Some of the BCG 100 have already developed truly global operations. Although the steel mills belonging to Argentina's Tenaris are concentrated in Latin American countries, the company's manufacturing facilities span the globe; it has operations in four Latin American countries as well as in Canada, Italy, Japan, and Romania. It has also acquired several welded-products plants in the United States. This global reach is not restricted to manufacturing; Tenaris has research centers at home as well as in Italy, Japan, Mexico, and the United States.

Degree of Internationalization of Top Management. In many MNCs, top management consists almost entirely of people drawn from the company's home country or region. RDE-based challengers, as they expand and acquire companies around the world, are developing a more international complexion. Suzlon Energy, which is the world's fifth-largest maker of wind turbines, has Indian ownership. Following successive acquisitions, however, its board of directors now includes executives from Australia, Denmark, Germany, the Netherlands, and North America.

Managing Risks

Global exposure entails a range of significant risks, which the BCG 100 will need to navigate as they continue to expand into new markets abroad. These include currency fluctuations, rising prices for energy and raw materials, trade tariffs and quotas, and increasing complexity.

Currency Fluctuations. These can prove disruptive to challengers looking to grow their businesses through exports. The appreciation of Brazil's real against the U.S. dollar in 2005 and 2006 buffeted many Brazilian challengers, including Braskem, Coteminas, Embraer, Perdigão, and Sadia. Nonetheless, they continued to achieve superior performance.

Rising Prices for Energy and Raw Materials. Price hikes for oil, iron, coal, and other raw materials can prove particularly damaging to RDE-based companies, as many have strategies that depend to some extent on the costs of such commodities. Moreover, these companies have not always been able to pass cost increases on to their customers, so their profit margins get squeezed. For example, overall Asian export prices have underperformed commodity prices since 2002.

Trade Tariffs and Quotas. These can undercut any cost advantage RDE-based challengers enjoy or—worse—can shut companies out of certain markets entirely. For example, export quotas imposed by the European Union and the United States in 2006 have hurt Chinese textile and clothing exporters, as well as Brazilian food exporters. Challengers can find themselves caught in trade wars and, indeed, may face continuous pressures of this kind over the next several years.

Increasing Complexity. Complexity is inherent in running an operation that is both growing and going global. As companies expand, whether organically or by acquisition, there are more variables to control and more opportunities for things to go wrong. The recent health and quality scares surrounding Chinese exports highlight the difficulties that can arise quickly.

Are We There Yet? The BCG 100's Globalization Journey

All of the BCG 100 want to operate successfully on the global arena. To indicate the different stages of globalization of the BCG 100, we have divided these companies into three groups: the recent globalizers, the fast globalizers, and the arrivers.

The Recent Globalizers. These companies (33 in total) are fairly new to their globalization journeys. This is not to say that they are smaller than the companies that began to globalize earlier; average revenues of this group ($15.2 billion) are not much lower than those of the most global of challengers ($18.2 billion). Recent globalizers include companies from a variety of sectors and countries, such as Cipla, an Indian pharmaceutical company whose products are sold in more than 150 countries; Mexico's Femsa, Latin America's largest beverage company; Sabanci Holding, a Turkish industrial and financial conglomerate; and Severstal, a leading international steel producer based in Russia.

The Fast Globalizers. The majority of the BCG 100 (59 companies) are in this category; all are rapidly expanding their global operations. For example, consumer electron-

ics company Vestel Group (Turkey) saw its international revenues shoot up from 32 percent of total revenues in 2004 to 75 percent in 2006. Indian challengers Hindalco, Suzlon Energy, and Tata Steel epitomize the speed at which many challengers are growing. All three emerged rather suddenly onto the world stage as strong players in their respective industries. High price-to-earnings multiples have given them easy access to capital, which they have used to make acquisitions, further increasing their size and value.

The Arrivers. Eight of the BCG 100 are already truly global, and five of them have been using M&A to grow their businesses. Based in various countries, most earn substantial portions of their revenues from overseas markets. They include five companies we have already mentioned—Cemex, CIMC, Coteminas, Koç, and TCL—as well as three others: Gerdau Steel (Brazil), a minimill steel producer with 2006 revenues of $11.4 billion, 63 percent of which came from offshore sales; Russian oil giant Lukoil, with 2006 revenues of $67.6 billion—84 percent from offshore; and Thai Union Frozen Products, the world's second-largest tuna canner and exporter, with 2006 revenues of $1.7 billion—90 percent from offshore.

The Roles Played by States

No discussion of RDE-based companies is complete without a reference to their home-country governments. To varying degrees, these governments play important roles in the development and globalization of locally based companies. Common roles include that of active investor, environment shaper and infrastructure provider, exports promoter, low-cost financier, and R&D and technology provider.

Active Investor. State ownership exists to varying degrees across RDEs. Nowhere is it more prevalent than in China, where one Chinese-government entity, the State-Owned Assets Supervision and Administration Commission (SASAC), controls 16 of the 41 Chinese companies on our list. (See Exhibit 11 and the sidebar "SASAC: China's

Exhibit 11. The BCG 100 Include 16 SASAC-Controlled Companies

Company	Industry	Revenues, 2006 ($billions)
Aluminum Corporation of China (Chalco)	Nonferrous metals	7.9
China Aviation I	Aerospace	10.5
China FAW Group Corporation	Automotive equipment	19.2
China Minmetals Corporation	Nonferrous metals	18.9
China Mobile Communications Corporation	Telecommunications networks	37.9
China Petroleum & Chemical Corporation (Sinopec)	Fossil fuels	138.9
China Shipping Group	Shipping	9.5
CNOOC	Fossil fuels	15.7
COFCO	Food and beverages	17.9
COSCO Group	Shipping	15.4
CSIC (China Shipbuilding Industry Corporation)	Shipbuilding	8.0
Dongfeng Motor Company	Automotive equipment	17.9
PetroChina Company	Fossil fuels	88.4
Shanghai Baosteel Group Corporation	Steel	25.6
Sinochem Corporation	Chemicals	23.6
Sinomach	Engineered products	5.1

Sources: Company Web sites; literature search.

SASAC: China's Megashareholder

China's State-Owned Assets Supervision and Administration Commission (SASAC) is the world's largest controlling shareholder. It controls 155 Chinese companies, which have combined 2006 revenues of $1.06 trillion and combined 2006 assets of $1.56 trillion. SASAC's portfolio spans a broad range of industries—from energy to automotive—but does not include China's banks or financial-services companies, which are controlled by other government entities. Its holdings include many of China's largest companies, such as Air China, China Mobile Communications Corporation, China Petroleum & Chemical Corporation (Sinopec), PetroChina Company, and Shanghai Baosteel Group Corporation. Eight of the companies in its portfolio are among the *Fortune* 500. SASAC also indirectly controls the publicly traded subsidiaries of companies in its portfolio through its ownership of their parent holding companies. For example, Sinopec has 13 publicly traded subsidiaries on the Shenzhen and Hong Kong stock markets.

Established in 2003 to take over state-owned enterprises that had previously belonged to various ministries, SASAC reports directly to the State Council of the People's Republic of China, the highest authority of the state. The chairman of SASAC, Li Rongrong, and his team of managers therefore have vast influence over a trillion-dollar state-corporate empire, despite having relatively little visibility in the global business media.

SASAC's declared primary objective is to protect and increase the value of state assets. Toward that end, it drives reforms in the companies it controls. More generally, it also undertakes restructuring and consolidation in the industries in which it is active.

This focus on industry consolidation has an important historical context. Many of China's state-dominated industries have been quite fragmented. Multiple govern-

Megashareholder.") SASAC's active involvement in the management of these companies reflects the Chinese government's keen interest in their success and impact. Indeed, the rank of CEO at many of these large state-owned companies is equivalent to that of vice minister in China's political hierarchy. SASAC actively nurtures a few champion companies in industries that it considers to be of national strategic significance (such as petroleum) or otherwise important (such as automotive). The commission also actively encourages certain of its companies to globalize and facilitates their access to capital, management talent, diplomatic support, and other resources.

Environment Shaper and Infrastructure Provider. States can have a significant impact on RDE-based challengers by shaping the environments in which they evolve and function, affecting both cost factors and overall competitiveness. States also provide the physical infrastructure that connects challenger companies to their markets, as well as the educational and training programs that produce the educated people that companies need as employees. Through tight control, allocation decisions, and price setting, states can subsidize energy and raw materials and directly affect the cost of doing business. They can also secure necessary raw materials, as the Chinese government is doing.

Exports Promoter. States can promote exports in various ways: internally, through tax rebates, and externally, through economic and political policy. For example, China's "economic diplomacy" in Africa has resulted in the quadrupling, since 2001, of trade with Africa—to $55 billion in 2006. This rapid growth rests heavily on China's use of conditional loans.

In other cases, export promotion can look like matchmaking. In May 2007 the Associated Chambers of Commerce and Industry of India (Assocham) and the China Council for the Promotion of International Trade (CCPIT) oversaw various memorandums of understanding involving $5 billion worth of investment between Indian and Chinese companies. As a result, ZTE Telecom India (a wholly owned subsidiary of China's ZTE Corporation, a BCG 100 challenger) inked a deal with Spice Communications to set up telecommunications-equipment-manufacturing units in the Chinese boomtown of Shenzhen. Another BCG 100 challenger, India's Videocon Industries, also agreed to invest in Shenzhen, injecting $1.5 billion into an LCD-manufacturing facility.

Low-Cost Financier. The state can finance the companies or projects it deems important, using funds from official banks or development agencies. For example, the Brazil-

SASAC: China's Megashareholder (continued)

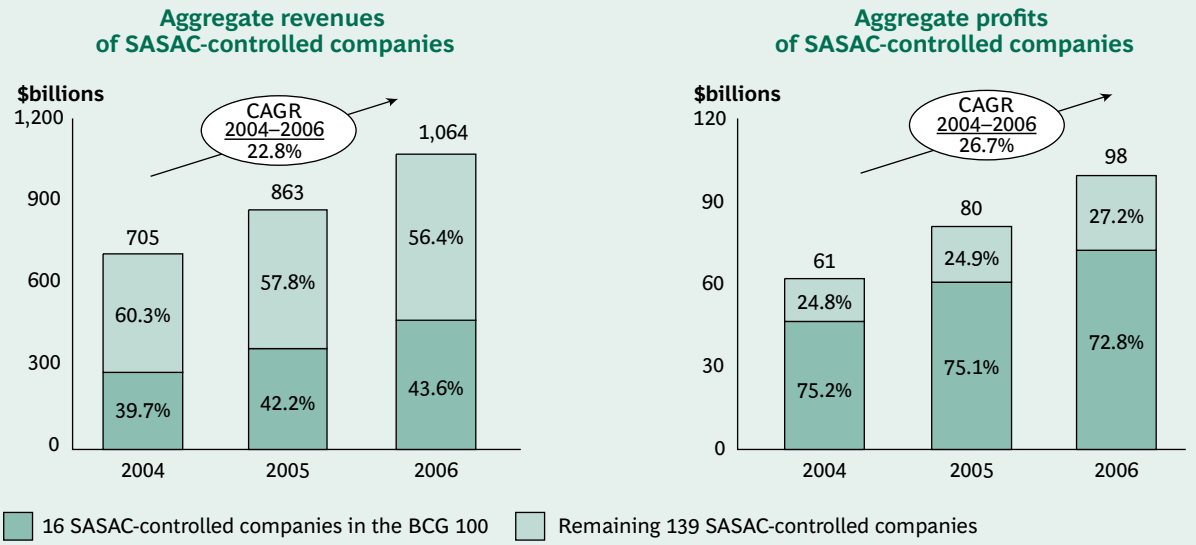
ment-affiliated companies based in more than 30 provinces and regulated by dozens of ministries have been operating at subscale levels and making investments that would not have withstood rigorous business-justification procedures. To address this situation, SASAC has assumed control of many corporate assets that formerly belonged to various ministries and provinces. It takes the view that most industries fare better when they consist of fewer, larger companies, and it has used restructurings to shrink the number of enterprises in its portfolio from 196 in 2003 to 155 in mid-2007. Its plan is to cut the number to fewer than 100 by 2010.

In its operations, SASAC exerts control in several ways. It plays a major role in matters related to human resources, including top executive appointments and training. Its management academy educates more than 6,000 executives of SASAC-controlled companies every year. SASAC officials also supervise and approve the budgets of its companies, keeping tight control of the purse strings.

In addition, SASAC seeks to influence the overall structure of the industries in which its companies compete. In general, it works to achieve a reasonable level of consolidation in domestic industries, which typically are excessively fragmented. SASAC drafts laws and policies and vies with other government entities that have different views regarding industry structure.

Although its role is still evolving, SASAC is an enormously powerful entity that is at the center of China's ongoing efforts to modernize and globalize its portfolio of state-controlled companies. Thanks at least in part to SASAC's efforts, SASAC-controlled companies have achieved substantial performance improvements in terms of both revenues and profits. (See the exhibit below.) The future moves of many of China's largest companies will depend on SASAC's policy decisions. Smart non-Chinese companies realize this and are making significant efforts to understand and advise SASAC on these issues. More information about SASAC can be found at www.sasac.gov.cn.

SASAC-Controlled Companies Have Grown Revenues and Profits Substantially



Sources: Literature search; SASAC Web site; BCG analysis.
Note: CAGR = compound annual growth rate.

ian Development Bank (BNDES) supports a whole range of programs—from education and health projects to large infrastructure projects and export financing. To promote Brazil's development, BNDES collaborates with financial institutions to facilitate loans to companies both small and large. Most of the Brazilian challengers among the BCG 100 have received support from BNDES, either for local investment or for global expansion. With low interest rates, such funding facilitates taking risks in pursuit of growth.

R&D and Technology Provider. By establishing or supporting research institutes, the government develops new technologies that help private firms compete globally. Brazil again provides examples here. Its education-focused institutions Embrapa and ITA provide industry with both technology and talent. Embrapa is an agricultural research institute that develops products, such as genetically modified soybeans, that it licenses to private companies. It employs more than 2,000 researchers, and since its formation in 1973, it has developed more than 9,000 technologies. ITA is a government university focused on aeronautical engineering. With support from Brazil's Aeronautical Command, it is one of the top engineering schools in the country and provides companies such as Embraer with high-quality graduates.

However, some government policies can have unintended negative consequences. Although China's government seeks to develop a strong local technology industry, this has proved difficult in practice. Some commentators argue, for example, that China's pursuit of its own 3G mobile-telecommunications-technology standard (known as TD-SCDMA) has in fact delayed the overall development of the telecommunications sector in China. As a result, Chinese mobile-phone manufacturers, such as ZTE, have not had the benefit of a domestic 3G market in which to experiment and develop the next generation of handsets. The absence of that market opportunity may have had an impact on the ability of these companies to compete globally. Some commentators have also questioned the role of SASAC. Critics argue that the large, state-owned oligopolies under its control impede the development of a healthy economy and the growth of private firms.

Looking Ahead

The global challengers highlighted in this report are a small subset of the thousands of RDE-based companies that are thriving both locally and internationally. Many that are not on our list are already global challengers in their own right, and many others soon will be. Their rapid growth has urgent implications both for the challenger companies themselves (including the BCG 100) and for incumbent companies in developed markets.

Implications for Challengers

Despite their impressive financial performance, the BCG 100 still have a lot of work to do. Although most of these companies are growing extremely fast and clearly have many advantages, few of them have yet to demonstrate a long-term track record of competitiveness at the global level. Their new agendas should include the following key action items.

Accelerate differentiation. Currently, the BCG 100's investments in R&D and innovation vary widely. In general, we believe that these companies must push harder to move well beyond cost-based competition. Too many are still reliant on cost and are therefore vulnerable to attack when Western competitors cut *their* costs—and redouble their investments in innovation. In the worst cases, RDE-based challengers that fail to innovate run the risk of being wiped out by aggressive Western players, which is what has happened to a number of Chinese mobile-handset makers in the past few years. Sustained innovation in pursuit of lasting competitive advantage is now job number one for the BCG 100.

Choose carefully where and how to compete. The shift away from cost-based strategies quickly raises fundamental questions about where and how to compete. Frankly, many challengers do not yet have robust answers to these questions, particularly looking out to a five-year horizon. To succeed, companies should know who their target customers are (and why they are targets) as well as which business models to deploy to profitably gain market share with those customers. These companies should also know in which regions, market segments, and disciplines they intend to build advantage. It would be a serious mistake for any of them to follow an opportunistic and reactive strategy, such as engaging in a series of M&A deals of the moment, rather than pursuing a well-crafted set of strategies for growth.

Get intimate with the target global markets. The move beyond low-cost strategies also necessitates much deeper insights into the foreign customers targeted by challengers and the economics of winning in the markets where they operate. These insights should drive important decisions about global strategy. Companies that rely instead on guesswork, home-market biases, and the advice of middlemen such as distributors and agents will leave themselves vulnerable to major missteps.

Manage image and brands in the global spotlight. As they grow in size and stature, challengers will come under greater scrutiny from a variety of stakeholders, including their own and other governments, citizens groups, and the media. In an era of concern about product safety, challengers' products and brands will also face careful examination. Moreover, government approvals of potential acquisitions hinge in part on the acquirer's image.

Challenger executives will need to prepare their companies to manage under this spotlight. Successful companies will build trusted brands and reputations; others may find themselves losing control of their image abroad as they are buffeted by geopolitics and global competitive dynamics.

Become winners in the global quest for talent. Challengers need to skillfully manage their rapidly growing talent pools. When they conduct M&A in developed markets, they need to find ways to retain good people who may be wary of foreign management. In their home markets, they must compete for talent with foreign companies that offer more prominent corporate identities and brands.

The best companies have done this well. China's Lenovo Group has hired a CEO from the United States and has begun to globalize its management team. But we have seen other challengers stumble in this area. One company faced a management exodus from a newly purchased U.S. subsidiary. Another incurred costly delays in its European expansion by refusing to recognize the reality of prevailing executive salaries in European markets.

Manage the risks of globalization. Global operations require much more sophisticated approaches in many management disciplines than do local or even regional operations. For example, managing financial risk on a global scale is quite complex. Best-practice companies develop finance and corporate-development capabilities that enable them to manage currency risks, optimize global tax exposure, and successfully complete major global transactions and partnerships. At the other extreme, we have seen RDE-based companies get burned when they fail to anticipate and hedge the financial volatility brought on by globalization.

Become masters of global advantage. Ultimately, the most successful companies will be those that integrate the many benefits of their RDE-based heritage to develop truly advantaged organizations. For example, such an organization might combine the best of China-based manufacturing and sourcing with cutting-edge Indian design capabilities, and then establish sales and marketing networks in several high-growth markets worldwide, access capital and know-how from the world's great business centers, and stitch all these elements together under a global management team, moving faster and managing risks better than its competitors.

Is this vision realistic? All the elements are in place, and the conditions are attractive. The race is now on—among the BCG 100 and other aspiring companies—to capture the global advantage that is now possible.

Implications for Incumbents

Executives of incumbent companies should worry and should mobilize for action. Their worst possible response would be to hope that the threat posed by RDE-based challengers will not affect their markets. In fact, the reverse is likely: the threat will intensify. Extrapolating from the BCG 100's actual CAGR of 29 percent from 2004 to 2006, we can project that their combined revenues will reach $3.3 trillion by 2010 and a massive $11.8 trillion by 2015. Meanwhile, hundreds more RDE-based companies will attain the size and capabilities of today's BCG 100.

Of course, trends are not definitive. What is certain is that the new global challengers will only strengthen and multiply. So incumbents need to develop appropriate strategies. Many will, no doubt, be tempted to adopt a wait-and-see attitude. This, however, is precisely what the challengers will not do. These companies do not wait; they act. The appropriate response from incumbents is to take action, and to do it now.

To combat the penetration by challengers into incumbents' markets, it can be helpful to think more like a challenger and less like an incumbent. We suggest that incumbents take heed of a modern Chinese proverb (adapted from Sun Tzu's *Art of War*): "If you know yourself and your enemy, you will come out of one hundred battles with one hundred victories." In addition to thoroughly understanding their opponents, incumbents should take action on four fronts.

Challenger-proof your business models. This is a major, integrated task. It likely requires picking up the pace of innovation, lowering costs, and fundamentally changing the way in which the company adds value. It may mean exiting certain whole parts of the value chain while dramatically deepening activities in other parts. For example, as mobile-handset vendors such as Motorola, Nokia,

and Sony-Ericsson took on the rise of China-based challengers, they increased their rates of new product development, outsourced some manufacturing to players such as global services provider Foxconn, redoubled efforts at branding, and took on the new competitors aggressively in their own markets. Many major global automakers are taking analogous steps as India- and China-based automakers become increasingly capable.

Attack challengers on their home turf. As we suggest above, incumbents should not wait for challengers to come to them. While waiting to enter developed markets, challengers are strengthening their positions at home. They will use their strong home bases as launching pads into global markets. Incumbents need to take the fight to the challengers, slowing them down in the process. For instance, RDE-based players may try to move "up market" in their home markets before moving up overseas. Thwarting such a step can prove crucial. Some Western home-appliance and industrial-products companies, for example, see the importance of taking on their Chinese competitors in their home markets. Of course, for many incumbents, an aggressive push into an RDE is not economically viable.

Acquire fast-growing RDE-based players. This approach can enable a company to gain challenger-like capabilities faster than it could build such capabilities on its own. To date, few companies have pursued this approach aggressively; notable exceptions include the acquisition by IBM and EDS of Indian outsourcing firms. The paucity of such acquisitions can be attributed in part to the fact that leading RDE-based challengers have such high valuations.

Another issue is that few incumbents have the capability to identify, screen, and evaluate acquisition candidates in RDE countries. In our experience, relatively few large incumbents have meaningful M&A capabilities based in RDEs; their M&A teams are far more likely to be based back at headquarters than in Delhi or Shanghai. We recommend that incumbents develop their "shopping lists" of RDE-based targets and build up their ability to conduct such M&A effectively. We know of one leading incumbent, for example, that has significantly built up its Asia-based M&A team and has given its regional management the responsibility of identifying and proposing RDE-based acquisitions as part of a global growth strategy.

Make challengers partners and customers. Collaboration and partnerships can take many forms and are a viable way to counter or co-opt challengers. Royal Philips Electronics formed a joint venture with China Neusoft Group, a major Chinese IT player, to gain accelerated market access as well as technical and manufacturing abilities. Other leading incumbents, including GE, have systematic programs to cultivate RDE-based companies as customers and partners. The best incumbents will start early and think long-term in cultivating relationships with challengers. Indeed, the hunger of challenger companies for new technologies and their impatience for growth means that they can become very attractive customers.

Closing Questions

Of course, the competitive battle that is now under way—and that will soon intensify—is not just between RDE-based global challengers and developed-market incumbents. The reality is more complex. Western and Japanese companies will continue to battle each other as well, while companies in RDEs will have to contend with other rising RDE-based stars.

In our view, CEOs of incumbent companies in developed markets would do well to ask themselves the following sets of questions:

- Which RDE-based challengers are we facing today, and which will we face in the future? What are their strengths and weaknesses? How might they reshape our industry? Is there a threat of a major discontinuity in our competitive landscape, such as that posed by a traditional competitor's merging with a new RDE-based challenger?

- Are we adapting our business models and strategies fast enough to contend with the rise of RDE-based challengers? Have we built challenger-like capabilities? Are we sufficiently engaging the challengers as partners and customers? Do we know what a challenger-proof business model looks like?

- Are we as global as we think we are, especially compared with the best RDE-based challengers? Are we leveraging fully the potential advantages that come from more aggressive participation in RDEs? Are we

building the capability to operate successfully in RDEs, or are we falling behind? Do we understand just how important RDEs will become in our industry or industries—for example, as a source of total global market potential, as a source of global talent, or as a home base for new competitors?

For RDE-based challengers, the central questions are the following:

- Do we really have a clear view of our weaknesses as well as our strengths?
- Are we evolving our business models and capabilities fast enough to sustain a lasting advantage?
- Can we break away from the thousands of other RDE-based challengers and ensure that we can compete against incumbent companies—which increasingly will understand how to respond?

Finally, whether your company is based in developed markets or in RDEs, the essential question is, are you actively studying your new RDE-based competitors? If your company is global—or going global fast—you can be sure that these new competitors are studying you.

For Further Reading

The Boston Consulting Group publishes other reports and articles that may be of interest to senior executives engaged in globalizing their operations. Recent examples include:

Avoiding the Cash Trap: The Challenge of Value Creation When Profits Are High
A report by The Boston Consulting Group, September 2007

Sourcing from China: Lessons from the Leaders
A Focus by The Boston Consulting Group, July 2007

Organizing for Global Advantage in China, India, and Other Rapidly Developing Economies
A report by The Boston Consulting Group, March 2006

"Spurring Innovation Productivity"
Opportunities for Action in Industrial Goods, November 2005

"The New Economics of Global Advantage: Not Just Lower Costs but Higher Returns on Capital"
Opportunities for Action in Operations, July 2005

"Globalizing R&D: Building a Pathway to Profits"
Opportunities for Action in Operations, May 2005

"Globalizing R&D: Knocking Down the Barriers"
Opportunities for Action in Operations, May 2005

"Avoiding Supply Chain Shipwrecks: Navigating Outsourcing's Rocky Shoals"
Opportunities for Action in Operations, March 2005

The Central and Eastern European Opportunity: Creating Global Advantage in Serving Western Europe
A Focus by The Boston Consulting Group, January 2005

Navigating the Five Currents of Globalization: How Leading Companies Are Capturing Global Advantage
A Focus by The Boston Consulting Group, January 2005

Capturing Global Advantage: How Leading Industrial Companies Are Transforming Their Industries by Sourcing and Selling in China, India, and Other Low-Cost Countries
A report by The Boston Consulting Group, April 2004

"What Is Globalization Doing to Your Business?"
Opportunities for Action in Industrial Goods, February 2004

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12/07 rev 2/08

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