2008: Trends and Prospects

Booz Allen Hamilton Letters to Clients

A strategy+business Reader

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Edited by Melissa Master Cavanaugh
Introduction by Art Kleiner

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A strategy+business Reader
Published by strategy+business Books

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Design: Opto Design
Project Director: Jodie Collins
Cover photograph: Gandee Vasan

strategy+business Books
Publisher: Jonathan Gage
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Introduction: Signals for the Coming Year

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DECISION MAKERS ARE inundated these days with possibilities. There are myriad opportunities to seize, hundreds of competitive threats to avoid, and the constant awareness that any relevant trend — the price of oil, the popularity of a new interactive medium, the viability of an overseas market — may shift dramatically at any time. That's why the first step of an effective strategy is separating signal from noise: recognizing the most telling indicators of the trends that will have real impact in the coming year. Fortunately, some signals have extra clarity and resonance right now, even amid the cacophony.

At *strategy+business,* which is published by the management consultancy Booz Allen Hamilton, we continually seek insight from industry experts at our firm: people with years of experience working with automotive, financial-services, consumer products, energy, industrials, media, oil and gas, health-care, and high-tech companies. We have learned that the most significant trends in any one industry tend to cross over to others as well. Right now, for instance, the credit collapse affecting the financial-services industry has ramifications for many sectors around the globe. Similarly, if the trend we see of IT regaining relevance is borne out, it might not just influence individual industries, but could have a benign, and largely unanticipated, macroeconomic effect.

We think eight trends will be most important in the coming

year, and they apply to every sector. In this volume, you will see other trends elaborated in essays aimed at particular markets and sectors — but these eight cross over. They're not sending the most obvious signals; indeed, they're important precisely because many leaders are overlooking them. But we think they deserve attention.

1. Faster, more frequent bubbles. Although the effects of the U.S. housing bubble deflation will continue to play out during 2008, there remains a surplus of capital around the world that requires places to invest. But many of the favored places seem suddenly uncertain. Another bubble may be about to burst around credit cards; unsecured consumer debt is higher than the underlying fundamentals of employment and wages can support, particularly as overtime dries up in many industries. The emerging economies within the BRIC (Brazil, Russia, India, China) nations and elsewhere continue to grow, but the amount of growth is uncertain. Competition from companies based in those emerging nations is heating up and will grow far more dramatically in the next year — symbolized, perhaps, by Tata Motors' introduction of its US$2,500 automobile in early January 2008. Private equity capital will be increasingly vulnerable if the cost of debt rises — at least that part of it that expects to get returns through speculation on corporate assets. And it's not clear how far the value of the dollar will drop.

These uncertainties will all exacerbate one another, and they will be reinforced by the increased velocity of capital. There were periods of similar financial turbulence, for example, in the 1970s and '80s, but money was still constrained at that time by the fact that an investor had to call a broker to place an order. Today, as soon as an opportunity is perceived to have potential, billions could flow there instantly.

The result, as our firm's financial-services experts put it, will be "more frequent bubbles" appearing at an ever-faster pace. The definition of a bubble is simple: a state in which asset prices are inflat-

ed beyond the support of underlying cash flow. As some bubbles pop, other sectors will attract sudden speculative investment (for example, export-focused services and high tech this year) and then they may also become vulnerable.

Unfortunately, when bubbles burst, the capital markets tend to overreact. That's why an economy of faster, more frequent bubbles could be difficult to live in. And this situation could last a while, perhaps as long as five years. If the downturn of 2001 was like the economy catching a cold, this downturn will seem more like having the flu: debilitating, longer-lasting, and making it hard to keep up day-to-day activity. Yet people cope with the flu, and many corporations will find they can operate effectively, perhaps even masterfully, in a time of high uncertainty.

Hunkering down and waiting for the turbulence to end will not be a successful strategy. Instead, there will be a renewed interest in having a balanced corporate portfolio, deliberately hedging against local or sector-specific downturns. Some companies, like HSBC, are already learning to develop truly global managers, cultivating employees who can move during the course of their careers through a dozen regions (and who are willing to make personal sacrifices to do so; for example, putting their children in boarding school). Corporations have paid lip service to global activity; now they will be forced to make it a core focus, even if that's difficult at first.

2. The cost of energy complexity. Energy has been in a state of turbulence for a year now, with dramatic price increases, a more serious emphasis on climate change, and a growing consensus that the energy mix must shift…eventually. In power generation, coal is out for now (too many greenhouse gases) except in China (for the moment), nuclear is coming back (but not yet having an impact), renewables are rhetorically satisfying but not yet viable (too small, too uncertain, too unscalable), and demand is poised to rise. This makes natural gas the default fuel in the near future. In transporta-

tion fuels, the conflict between biofuels and food production will be with us for some time, and so will the challenge of building out the kind of infrastructure needed to run motor vehicles on electricity or hydrogen (hydrogen could take decades).

From a strategic perspective, the most important underlying trend is not the move toward any particular fuel or option, not even hybrids, but the ambiguity of choice. This will affect business practices, subtly but pervasively, throughout the world this year. For as energy sources proliferate, complexity increases. Complexity adds cost. And most companies have not yet figured out ways in which they can focus their energy bets on a limited number of technologies. They can expect their costs to escalate.

Unfortunately, there is no way to avoid complexity and uncertainty in making choices about energy. There will be no obvious single solution; like decisions about expanding into new markets, the best options will vary by industry and location. And although flexibility will be paramount, few companies can be infinitely flexible.

Ambiguity has one beneficial consequence: It tends to spur innovation. The energy industry will increasingly resemble the early years of the Internet, marked with both fruitful and failed experimentation, yielding many unexpected successes — and quite a few visible failures. Who will be the energy-oriented equivalents of Amazon, eBay, Yahoo, and Google? We may get some leading indicators during the coming year.

3. Participative risk. Financial institutions, central banks, governments, and insurance companies, all learning to survive in a more volatile economy, are thinking differently about risk than they used to. They are enlisting their customers to assume partial responsibility for reducing the risks they face, not just insuring against them.

This trend will be amplified by the generational shift that has just begun, bringing about a tidal wave of financial and medical need in the U.S., Europe, and Japan as the baby boom generation

starts to enter its 60s. Some of these people are well-prepared for their retirement years, and wealth-related industries are emerging to meet them. But many others are not ready. A large number of people are also ill-prepared for the increasing frequency of storms, fires, and other natural catastrophes. And food, product, and energy safety scares will continue, as will the threat of financial disasters.

Insurance companies in health care and other fields have already begun to rethink the relationships among the costs of care, the costs of insurance, and the level of awareness of their customers. (This is the basic premise of the influential consumer-driven health-care model.) Some government leaders are also becoming interested. Who will educate the public on sound financial practice, on preventive health care, and on wise consumer choices in general? That question has not yet been fully answered, but there may be a wave of activity in the private sector this year, as health-care and financial-services firms continue their innovation in consumer-oriented services.

4. Strategic sourcing. This will be the year in which procurement of supplies, machines, components, materials, and services takes on a strategic importance it has never had before. One driver of this trend is scarcity. In their forthcoming book, *Make or Break: How Manufacturers Can Leap from Decline to Revitalization* (McGraw-Hill, 2008), Booz Allen Hamilton Vice Presidents Kaj Grichnik and Conrad Winkler note that, “For the first time since World War II, companies face growing shortages in key raw materials — everything from once commonplace supplies, such as steel and aluminum, to high-value elements, such as gold, silver, copper, and platinum. Even recycled materials are increasingly scarce. In general, these shortages are primarily due to the inability of mining and processing facilities to keep up with ballooning economic growth in emerging countries like China, India, and Brazil.”

The most farsighted companies have already begun to respond by rethinking the operating model underlying their procurement.

They are abandoning the traditional adversarial efforts to divide and conquer suppliers through price-based competition; instead, they are seeking more collaborative, capable, information-rich partnerships with their suppliers. This means changes in practices and in procedures (often abetted by new ways of using information technology), and changes in corporate culture. They are also developing complex, multitiered, global supply networks. All of this signifies a broader and more incisive role for the chief purchasing officer in many companies. Increasing preference for green products (particularly those with low carbon footprints) and recent problems with product safety (exemplified by the lead paint in inexpensive toys and concerns about food impurities) will make the quality of sourcing ever more important.

5. Excellence as a differentiator. Three trends from previous years are continuing to affect corporations, and they are also interacting with one another in unexpected ways. The first is cost pressure. Global competition continues to accelerate; expanding markets and technological uncertainties demand increasing investment; and mergers, acquisitions, and private equity deals add pressure, as well.

Second, the task of reducing cost is growing more difficult every year. Much of the "low-hanging fruit" has already been taken out of marketing expenses, SG&A (sales, general, and administrative expense), and HR. Outsourcing, once seen as a relatively quick and easy way to arbitrage labor costs, is maturing into a source of capability — higher value, but more expensive.

The third trend is labor scarcity and a rise in labor demand. In the last few years, shortages of skilled workers have begun to constrain new operations in energy, transportation, and manufacturing. Now, even in countries with immense populations like China and India, companies need talent (and governments do, too). There aren't enough highly skilled people to go around. Meanwhile, as the millennial generation (those born since 1980) enters the workforce

en masse, qualities that once seemed novel — in-depth familiarity with the Internet and technology; casual acceptance of diversity in race, gender, and sexual orientation; and appreciation for informality — will become the norm. Millennials also appear to be more interested in social causes than their predecessors, but are nevertheless extremely pragmatic: They don't want to invest their time without seeing results.

Together, these trends seem to be sparking a small but potent cultural shift, both inside corporations and in society at large. We see it in the ever-growing demand for science education, and in a renewed interest in various forms of participative management, operational excellence, and more results-oriented organizational practices and structures.

The craft of management will be seen as a differentiator, even in high-growth environments like China and India, between companies that succeed and companies that fail. Employers will increasingly attract people through learning and development, corporate culture, and operational excellence. After years of being downplayed, practices like lean production, metrics-based marketing, focused priorities (instead of dozens of strategic initiatives that lead nowhere), and in-depth executive succession practices will be taken more seriously.

There are many reasons to look forward to this shift, despite the demands it will place on executive and HR strategists. According to recent research on strategic leadership, companies that are "great places to work" already outperform the S&P 500 by a factor of more than two-to-one; this may be the year that other companies start to recognize their own need to improve.

6. Green technology as the "new Y2K." Back in the late 1990s, when it was not clear precisely what it would require to reconstruct enterprise computers in advance of the date change at the turn of the millennium, the financial-services and corporate worlds bit the bullet

and redesigned their technologies.

The global Y2K effort may or may not have prevented global computer collapse; we'll never know. But its effect was immense either way. It spurred innovation, it promoted housekeeping, and it may well have lessened the impact of disasters such as the September 11, 2001, attacks — if only by making the financial-services community more aware of its capacity for safeguarding against breakdown and recovering from it.

With the threat of climate change, the governments and corporations of the world face a new Y2K-style challenge. Whatever the actual threat of human-created greenhouse gases may be, the perceived threat — and the urgency among groups like the Intergovernmental Panel on Climate Change — is going to drive both governmental and corporate activity for the forthcoming years. This will lead to a wave of housekeeping and innovation that, like the Y2K efforts, will have unexpected effects. We will probably see some of those effects emerging this year. This does not necessarily mean that conventional wisdom (for example, about the immediate returns from energy-efficient technologies) is right. But capital investment priorities will change, many companies will develop innovation or alliance skills that they otherwise would not, and waiting for government mandates will probably not be the most effective strategy.

7. IT's relevance renaissance. Remember when information technology was considered a center of power for organizations? Remember when personal computers were fun — and fun was a source of productivity? Those times may be coming back. At the same time that companies are recognizing the viability of much lower IT spending — that information technologies can consume less of a company's overall budget than they have in the past — we are seeing a rekindling of interest and even excitement over the potential of information technology to revitalize a business. IT is

returning as a subject of strategic interest in the executive suite, rather than merely as infrastructure that is taken for granted.

This renewed interest is driven partly by the cost pressures and new workforce already discussed, and partly by a new wave of IT productivity. Moore's Law continues to hold, so computer power per dollar continues to increase. And the new wave of technological and social advances loosely known as Web 2.0, in which people use Web-based applications for a finer-grained, more participative interchange, continues to play a role. As enterprise technology evolves, each of the industry sectors will adapt in its own way, including consumer products, where point-of-sale data is now available to marketers and retailers in real time; oil, where the "digital oil field" is helping to resolve some labor shortages in exploration and production; power generation, which may require "smart grid" innovations to make the most of advances in nuclear power and renewable technologies; and health care, which may finally embrace the information technology revolution in full force during the next year or two.

8. The digital marketing imperative. Our firm's research during the past year — with the Association of National Advertisers (ANA), the Interactive Advertising Bureau (IAB), and the American Association of Advertising Agencies (AAAA) — has confirmed what many marketers have grasped intuitively: The game has shifted. New media have not just increased opportunities for advertising and drawn consumers away from broadcast TV and mainstream print; they have changed the culture, the required skill set, and the strategic value of the marketing function. As Booz Allen Vice President Christopher Vollmer notes in his forthcoming book *Always On: Advertising, Marketing, and Media in an Era of Consumer Control* (McGraw-Hill, 2008), "We are now at the beginning of a consumer-centric digital age, in which the traditional ways of marketing products and services are no longer viable. The corporate demand for marketing accountability and return on investment has reached a

crescendo. And the previous exclusive relationships between marketers, ad agencies, and media companies are being configured in new ways."

We have seen this in many sectors, most prominently in consumer products. Companies such as Procter & Gamble, Nike, and Unilever are reinventing themselves as they did at the start of the mass media era, into generators of marketing innovation and creators of business models.

For marketers, the greatest challenge and opportunity is the new imperative of metrics. In part because of the rich availability of data about online consumer activity (and in part because of new insights about the impact of television and other legacy media on consumer behavior), marketers are learning new ways to judge the effectiveness of their work, and building new real-time efforts to create responsive, generative advertising. Although new media have been around for a dozen years, it's only since 2006 that the trend of customer-centric, insight-rich marketing has broken through into the mainstream. Most consumer-oriented companies will never be the same.

All of these trends favor companies that can be more internally capable and resilient. Our experience and our observations suggest that this is happening — at least in the best companies we work with. And as the examples of the leaders become more visible, we think others may follow.

In the meantime, the rest of the essays in this book go into more detail, sector by sector. Composed by the industry-facing teams at our firm, they suggest a set of challenges that appear daunting at first, especially given the uncertainties of the larger economy. But in every industry, there is at least one company that has shown its ability to master these challenges. We hope this is a good year for you, and that you will be able to master your own challenges in good time to enjoy a prosperous 2008. +

Automotive

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AS WE REFLECT on the major dynamics in the automotive industry and offer our perspective on where organizations need to focus to meet the challenges of this changing landscape, we realize the industry may be too focused on looking inward.

Certainly, the U.S. auto industry had enough going on close to home in 2007 to keep its attention: Among other events, significant union contracts were renegotiated, and private equity rose to prominence. These events will send ripple effects through the industry for years to come, with some affecting original equipment manufacturers (OEMs) more than suppliers and others affecting suppliers more.

However, significant global issues are also brewing that have far greater potential to profoundly shape the industry's future. With the continued rise of India and China, we are seeing a rapid shift in the global economy's equilibrium and the advent of a multipolar world in which the U.S. and Europe will share economic power with these rising Asian economies. It is forecast that by mid-century, China will be the largest economy in the world, and India and the United States will be tied for second place.

These shifts have significant implications for the auto industry. OEMs and suppliers source from low-cost countries, including China, and offshore essential functions like engineering and shared

services to India. On the demand side, vehicle sales in China are expected to exceed those in the United States by 2015, while annual car sales in India will likely triple. Increasing income disparity in the West and the infusion of demand from the East are also fundamentally altering the global demand curve. The spending power of affluent consumers, primarily in the West, is driving the rapid growth of the luxury and near-luxury segments. Meanwhile, the strength of the "mass" segment is increasingly being dictated by the scale and economic conditions of the East. The rise in the small-car segment globally and the buzz about the US$2,500 Tata Nano are indicative of this trend. Any breakthrough even close to this target is a noteworthy accomplishment and will permanently alter global vehicle economics.

The creation of globally interdependent networks goes hand in hand with these shifts. A more networked world offers more points of interaction within and across value chains, lowering barriers of entry to the network and consequently intensifying competition. In the auto industry, there is as much momentum from Western firms going East for demand reasons as there is from Eastern firms going West to increase market penetration and distribution, and to neutralize unfavorable exchange rates. Today, the price of components is often subject to global pressure; U.S. auto suppliers constantly compete with Chinese and other global suppliers.

How, then, should an organization gear up to compete effectively in a multipolar, networked world where the rules of competition are continually changing?

Embrace and Build a Truly Global Organization

Firms that want to compete in a multipolar world must operate seamlessly across geographic boundaries to take advantage of inherent demand- and supply-side benefits. The era of the U.S. firm, the German firm, or the Chinese firm is quickly coming to an end:

Being global in every sense of the word, rather than behaving as a national firm with regional outposts, is rapidly becoming an economic necessity.

The development of a global organization requires the deliberate creation of a culture that recognizes this new economic order. This means that a company must, among other actions, optimize all resources, including talent, without regard for current borders. Companies capable of figuring out how to align capital, strategies, talent, and operating cost structures globally will be the sustainable leaders in the automotive market.

A number of companies are actively moving in this direction. One example is GM's transfer of its small-car platform to Asia. But more firms need to step up their efforts, and do so systematically and for the long term. Management teams should be analyzing the steps ahead of them and embracing new operating models capable of spreading decision-making power across regions. This requires leaders who unrelentingly question whether their strategic plan reflects the demands of a truly global operation as they move forward.

Win the Global War for Human Capital

As a multipolar global economy emerges, there will be appealing employment opportunities in a wider variety of locations, industries, and disciplines than ever before, leaving forward-looking organizations in a global fight for the best talent.

Simply stated, U.S. companies cannot afford to have all the people they need based in North America. Western firms now compete with Chinese and Indian firms that are able to draw extraordinarily high levels of capabilities and competencies, yet at much lower wage levels than U.S. firms must pay. Fortunately, salary alone is often not the deciding factor or clearing mechanism in this market. Intangibles including quality of life, professional growth and devel-

opment, location, and environment are all important factors. As borders blur, connecting and leveraging globally dispersed talent will become an increasingly important focal point within automotive companies.

Winning this war requires a well-thought-out people strategy driven from the highest level in the organization. There is a dire need to accelerate people development and recruitment efforts while paying concerted attention to the intricacies of the new economy. Businesses need to positively distinguish themselves from the pack. Leaders need to clearly define their strategies, programs, and resources so they can properly formulate and deploy plans capable of ensuring that long-term talent resources are available and engaged.

Proper Positioning for Energy Diversity

Another significant shift that is taking place is in the cost of energy — and we are not talking just about the recent spike in oil prices. Presently, energy prices do not reflect their true cost. Oil-rich countries control the supply; large consumers, like the United States, subsidize demand through weaker taxation; and in general, the market price does not reflect the costs of pollution and other environmental impacts. However, political and social consciousness of the use of fossil fuels has been on the rise and is finding expression in both the public debate and new regulation. It is taking different forms across the world: London has banned internal combustion engines on its buses, Brazil is emphasizing ethanol, some cities in China have banned the use of motorcycles, and North America is trying to accelerate CAFE (corporate average fuel economy) standards. Ultimately, these initiatives raise the relative cost of oil as an energy source, either by directly increasing the price of oil to the consumer or by subsidizing the development of viable alternative energy sources.

This has major implications for the auto industry. First, huge investments have to be made to develop the powertrain technology for alternative energy sources. Second, and perhaps more important, it is unclear at this stage which alternative will win out in what markets. Will it be biofuels? Diesel? Hybrids? Plug-ins? Hydrogen? Will any one win out? This question cannot be answered on a purely economic basis, since the decision is highly dependent on political and social factors. No discernible universal pattern has emerged across the globe, nor does one look likely to emerge soon.

During this time of limbo, some manufacturers — Honda, for example — are embracing efforts in various avenues simultaneously so they will be prepared once consumer preferences become clearer. Other companies, by contrast, are betting solely on one alternative or another. As with all hedged bets, the automotive sector's gambles will result in a host of winners and losers.

Ultimately, as the energy diversification issue continues to unfold, it demonstrates the need for flexibility, and sheds light on leaders' need to focus on potential ways to migrate their production efforts to some still-unknown alternative energy source. Since lean businesses cannot afford to design everything, leaders need to make sound judgments and alliances to effectively map out a plan that places operations in position to prosper when the future becomes clear. Suppliers need an understanding of how their product lines can change effectively.

Companies operating in a networked world have greater exposure to risks. Apart from business risks, external risks such as political or financial market risks become more important in networks, because a failure in one part of the network will be rapidly transmitted throughout the entire network. Although it is difficult to manage or hedge against these kinds of contingent risks, businesses can devise creative ways of reducing their exposure. One approach is through a

greater reliance on partnerships, alliances, and project ventures, especially in emerging markets, where political and financial market risks are inherently higher.

In our experience, too many automotive companies have not made the challenges of this new global order a high enough priority. They react too slowly to changing circumstances, misread the differences between markets, fail to leverage their size advantage when needed, and tend to be behind the curve on global trends. This issue is compounded by human resources that are too scarce to adequately address major new initiatives. Growth, to a large extent, is being held back by constraints on resources and talent. We work more and more on issues around people, global workload balance, and leadership.

Finally, the world is far riskier today, with shifts that can dramatically topple market leaders, devastate financial performance, and cause organizations to run from crisis to crisis. As competition continues to heat up, the industry's players cannot afford to ignore the potential impact of these trends. +

Consumer

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IN OUR ANALYSIS looking at 2007, we focused on optimizing companies' internal organizations, specifically by managing at the intersections of a multi-axis model. For 2008, we look outward to the marketing challenges and opportunities confronting the consumer goods industry, as digital media redefine the way marketers interact with emboldened consumers.

Booz Allen Hamilton has just completed the first phase of a sweeping multiyear research program in conjunction with the Association of National Advertisers (ANA), the Interactive Advertising Bureau (IAB), and the American Association of Advertising Agencies (AAAA). This cross-industry partnership — dubbed *Marketing & Media Ecosystem 2010* — is the first of its kind and has already yielded valuable insights into where the gaps and gold mines are in today's media landscape and how leading consumer goods companies are addressing them. More than 250 marketing professionals participated in our initial survey, and we conducted in-depth interviews with more than 75 senior executives, including CMOs, CEOs, and VPs, representing leading marketers, agencies, and media companies. Their observations went well beyond the obvious to illuminate the initiatives, capabilities, and partnerships that will transform the marketer–agency–media value chain in the immediate future.

What follows are the five key trends that emerged from the *Marketing & Media Ecosystem 2010* study and our recommendations on how consumer goods companies should adapt to prosper.

1. Marketing as Conversation

Not only do consumers today talk back to advertisers and interact with marketing messages; they also reshape and distribute those messages through global communities. Accordingly, the mix of media channels has shifted from a one-way broadcast model to a set of dynamic, two-way media forums, including blogs, social networks, YouTube videos, and text messaging. This shift puts the consumer in control of the message and renders traditional strategies, channels, relationships, and metrics less useful, and, in some cases, irrelevant. But it also presents enormous opportunities for companies to interact with consumers and capture new insights. Furthermore, when consumers use digital media to search, shop, blog, socialize, or seek entertainment, marketers can gain insights *immediately.* Now consumer products companies can have direct, real-time conversations with consumers.

Expand consumer insight capabilities. It's not surprising that 80 percent of the marketers in our study say that consumer insights are more important now than they were five years ago, and that they will continue to grow in importance. Further, the definition of *consumer insight* is expanding; it encompasses not only how consumers use a product but how they use media, particularly new digital channels. Sixty percent of marketers surveyed are tracking new media usage behavior, and a rising number believe that ethnography is an important part of the marketing tool kit. Beyond media usage and ethnography, it's critical to understand via real-time consumer discussions how consumers will reshape and repeat the brand message. Standing behind the two-way mirror is no longer enough.

Convert consumer advocates. More than half of survey participants agree that advocacy is a more important marketing objective than awareness. Marketers should draft key influencers and ensure that they act as advocates for a brand's products and services, suggest refinements to the media mix, and, most important, stimulate conversations *with* and *between* consumers. Thanks to the explosion of user-generated content, brand evangelists equipped with the right tools and motivations are the new 30-second spot.

2. Insight into Foresight

The very technologies that enhance consumer insights enable marketer foresight. Consumer goods companies are able to leverage digital channels to capture intelligence about their audiences — one-to-one interactions, blog behavior, search requests, and real-time behavioral data. The way consumers behave and interact online enhances marketers' perspective and accuracy as they try to anticipate consumer behavior, which enables them to create more effective advertising strategies, campaigns, and distribution.

Bring digital out of the back room. Digital and interactive are no longer niche capabilities; they are part of the requisite skill set for all marketers. Consumer products companies need to prioritize internal training in digital marketing, hire technologically savvy talent, cultivate a progressive culture that embraces — and uses — new technology and media, institutionalize flexibility in responding to customer needs, and formalize processes for integrating consumer insight into products.

Rigorously target the audience. Consumer insights, combined with targeting technology, offer an unprecedented opportunity to reach a potential consumer at the right time with the right medium. Testing, understanding, and deploying technologies will not only help companies reach the right consumers and reduce waste, but also help marketers better understand consumer behaviors.

3. Media Planning: The New "Creative"

Marketing message distribution — timing, context, and relevance — is becoming as important as creative execution. Marshall McLuhan's declaration that "the medium is the message" is truer than ever in the digital age. Consumer goods companies are adapting by raising the profile of media strategy within their organizations; they are establishing senior media positions, building communications-planning functions, and shifting their organizational strategies. In fact, leading companies in our study are planning to add related departments and create centers of excellence in the next two years.

While media is becoming a larger and more influential portion of the mix, channels are fragmenting and growing. Companies that aggressively experiment and innovate will realize the potential of these new channels, more effectively reach consumers, and spend more efficiently.

Elevate the position of media. Marketers are investing in capabilities that bridge the gaps between media, creative, and brand strategy. The savviest companies, in our opinion, will develop an internal "integrator" position (which could reside in communications planning) and will appoint senior media leadership. It is important to incorporate media early in the strategic planning process, and to fully integrate media with marketing.

Institutionalize experimentation and media innovation. Close to a quarter of the companies surveyed currently have a centralized experimental media fund. Although the percentage of budget committed and the boundaries of "media innovation" vary by business sector and by company, leading manufacturers are using controlled tests to accelerate their understanding of what works and what does not.

4. Marketing + Math

An influx of data — available, usable, cheap data — has transformed the marketer's job over the past decade. Advertising strate-

gies, campaigns, and distribution are increasingly based on predictive algorithms and spreadsheets. With new data-mining techniques, every page view, search term, and point-of-purchase sale becomes a piece of consumer intelligence that consumer products companies can use to target their media placements and messaging.

Four-fifths of survey respondents agree that it is important to have one centralized database that overlays customer relationship management, media behavior, and creative effectiveness with granular sales information. Only a quarter have such database integration capabilities in place today, but 35 percent are building them for 2010.

Apply rigorous marketing models. In this more efficient and transparent digital environment, marketers should refine their optimal marketing mix on the basis of Web and customer data. Leading marketers are building partnerships with digital agencies, media agencies, and media companies to track ad placement, versioning, and effectiveness. With this data, companies can develop achievable brand objectives on solid business cases.

Develop a consistent scorecard. The industry is struggling to define comparable effectiveness metrics across channels. Standardization will come with time; meanwhile, consumer products companies have to develop their own scorecards. Leading companies watch technology patterns, social trends, and consumer adoption rates in leading geographies. They build their own internal dashboards, measure against new media spend, and share data with key partners.

5. The Network Effect

The marketer–agency–media chain used to be simple and straightforward. Now that linear model has morphed into a spiderweb of overlapping connections. Marketers are partnering directly with media companies, specialty agencies are multiplying, and media companies are building in-house marketing services capabilities. In

the land grab that has ensued, consumer goods companies have had to become master collaborators and integrators, coordinating ideas and execution across all marketing channels.

Marketers agree that today's agency model needs to change; however, they disagree about the model of the future. The majority believe that media and creative agencies should be rebundled, but our research found little consensus on which agency type should lead. In the midst of this confusion, longstanding creative partnerships are taking a backseat to new media solutions. Fifty-two percent of study participants indicate that media company partnerships will be critical in the future.

Manage complexity via partnerships. Consumer goods companies need to develop an understanding of which capabilities are best kept in-house (e.g., those that are scalable and competitively advantaged) and which should be outsourced to external marketing, media, and technology partners. Companies should cultivate these partnerships to reduce complexity and focus on core strategic objectives.

Clearly define the "integrator." Identify the agency or internal resource that will act as the integrator across multiple marketing partnerships. This will ensure consistent messaging and coordinated execution. Although the integrator may vary from brand to brand or campaign to campaign, clarity of role is critical to the success of making the numerous partnerships work seamlessly.

Seizing the Opportunity

Marketing fundamentals have not changed; however, the strategies, investments, and capabilities required to succeed in marketing have shifted significantly. Still, while every marketing executive recognizes the pervasive pull of the Internet, most allocate only 5 to 10 percent of their ad budgets to digital media. Unfortunately, many marketers — by their own admission — have not adapted to the new reality. Fewer than one in four of the *Marketing & Media*

Ecosystem 2010 participants consider their organization to be "digitally savvy." The principal impediments are a lack of senior organizational support, a lack of experience in new media, and the dearth of digital talent.

Winning consumer goods companies recognize this opportunity and have shifted their creative and media strategies to more fully capitalize on the online opportunity in the near term. Industry-wide, companies are increasingly making digital media a priority. Mass advertising will continue to perform a role (albeit a declining one) in driving reach, but marketers will prioritize channels that attract and maintain deeper consumer relationships. +

Energy: Oil & Gas

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TODAY'S MAJOR OIL companies are in a situation similar to IBM's in the 1980s. At that time, the mainframe computer business was profitable and clearly wasn't going away, but it was facing increasing outside pressures. More than 25 years later, mainframes are, indeed, still around. So what went wrong for IBM back then? The company's intensive focus on mainframes caused it to miss some of the most interesting things happening around it, such as the rise of Microsoft and Intel. Similarly, oil companies today are focused largely on transportation fuels, which we believe will be among the last energy applications to change. However, decarbonization of stationary, energy-intensive applications; the advent of transportation batteries; and the potential overlap of the two will create an interesting future that will require vision beyond the current core focus. The key question is whether today's major oil companies will win in this scenario, or whether they will be defeated by this generation's version of Bill Gates.

The oil marketplace is now being defined by two sets of factors, each set of which is sufficiently powerful to dramatically reshape the market. The first set — scarcity and volatility — was the focus of our commentary about 2007, in which we explored shortages in a number of key areas, including oil supply, refining capacity, human capital and capabilities, and service and supply company capacities.

For 2008, we see the scarcity trend lines continuing across the board, in some cases with a surprisingly stubborn persistence.

The future will be defined by the second set of factors — the potential of carbon policy and energy security policy to alter the energy marketplace *permanently.* Despite ever-higher prices, demand for oil has proved inelastic in Organisation for Economic Co-operation and Development (OECD) countries, whereas in emerging economies, especially China and India, demand growth continues unabated, with a growth rate roughly six times that of developed economies.

To cope with this exploding growth, the global effort to mitigate carbon's environmental impact is intensifying. In the U.S., which imports more than 12 million barrels a day — consuming roughly one-quarter of global supply — the goal of reducing carbon output is joined to the goal of reducing dependence on foreign oil sources. Both goals are gaining prominence in public consciousness and in state and federal legislative arenas. Indeed, corporate average fuel economy (CAFE) standards, ethanol use mandates, and carbon trading regimes are likely topics for the 2008 U.S. presidential and congressional elections, with a high potential for legislative action in a new Congress.

The diverse and potent challenges represented by these dynamics require actions with three distinct time lines.

Phase 1: Improve Capacity and Maximize Efficiencies in the Current Core Business

Productivity from traditional oil fields in the United States, the North Sea, Mexico, and elsewhere is declining. Major finds of traditional oil have not kept pace with declines, and the cost of extracting oil — even from relatively accessible fields — is rising. Consequently, extending mature field reserves and lives, strengthening maintenance effectiveness, and increasing production uptime

are ever-higher priorities. Digitization of traditional oil fields is proving to be key in boosting production and increasing reserve recovery. A majority of U.S. supermajors are in various stages of real-time operations and digital oil-field programs.

In addition to enhancing uptime and recovery, digitization also improves the productivity of engineers, leveraging better information and data-mining technologies to shift the work mix to higher-value activities. This is an increasingly important goal, given continuing talent shortages combined with the increasing demands of field maturity and project complexity. Other innovations in human capital productivity are available to the oil industry: Techniques such as lean manufacturing, proven in the automotive and other industries, are now finding their way to the oil business, offering opportunities to stabilize, optimize, and innovate core process productivity, as well as to eliminate waste and rework. Further, innovations in organizational levers such as talent development and structure have been deployed more aggressively to offset the current human capital crisis.

Indeed, capital project management and strategic sourcing have arisen as critical elements in the face of rampant inflation in engineering, procurement, and construction (EPC) and materials costs, compounding the trend toward project complexity. Leading companies are adopting portfolio approaches to projects, using standardization and modularization to improve efficiencies and optimize engineering and construction capacity. Stage-gate review processes have been tuned to better address front-end loading opportunities and advantages, and to ensure that companies optimize their functional and technical excellence.

Phase 2: Continue Advances in Unconventional Resources and Address Infrastructure

Access and maturity challenges are encouraging exploration and extraction in more complex and remote locations. Deeper drilling,

deep-water drilling, and unconventional sources of oil (e.g., sands and other extra-heavy oil) are all part of oil resource development that is far removed from U.S. refineries and pipelines, and that has other special requirements. Moreover, the use of biofuels, especially ethanol, as a replacement for oxygenates as well as a gasoline substitute adds to the strain on the oil infrastructure — refineries, distribution hubs, and pipelines — in the United States. Because the infrastructure was largely a product of postwar expansion, its age suggests the need for heightened emphasis on integrity and additional capital infusion to support new resource and biofuel demands — and perhaps, ultimately, CO_2 sequestration.

As oil prices rise, incentives for unconventional projects grow. The challenge of balancing expanding energy needs with growing opposition to carbon emissions promises to become more complex, and the industry will need to develop practices, including technologies and supply chain initiatives, that reduce dependence on carbon-based fuels and mitigate their effects. However, this process is not without uncertainties. At what price point does coal become an attractive alternative to gas? Or to liquids? At what environmental threshold does nuclear power become an attractive alternative to coal?

In the near term, the most viable nontraditional energy options include oil sands, other extra-heavy oil, and biofuels. Biofuels, supported by government mandates and subsidies, have expanded rapidly. For example, the number of ethanol plants increased from 81 in January 2005 to 130 at the end of 2007. However, biofuels face infrastructure challenges. Most U.S. biofuel production facilities are located in the Midwest to cut down on the cost of transporting corn and soybeans to the refineries, whereas the major consumption centers are on the East and West coasts — and ethanol cannot be transported through existing pipelines. Furthermore, additional expansion of U.S. corn-based biofuels has significant drawbacks,

including pressure on food prices, land limitations, and high resource intensity. Lower-cost biomass, derived from materials such as switchgrass or wood chips, provides lower resource intensity and a less-pronounced carbon footprint. But despite intense interest and R&D funding from the federal government, such cellulosic ethanol has yet to be produced commercially. Companies should carefully consider their participation in biofuels development in light of both current economic considerations and the longer-term potential shift in the role of liquid transportation fuels (discussed below).

The landscape is changing irrevocably. Among many reflections of the new reality is the creation of senior alternative energy positions in several leading companies, and greater discussion of the transition from being oil companies to being energy companies.

Phase 3: Pursue Decarbonization and Electrification

It appears inevitable that there will be a tipping point at which global oil demand outstrips supply. Because of the growth of both industrial output and consumer appetite in developing nations, demand is likely to continue accelerating. China has already surpassed the U.S. in consumption of grain, coal, and steel. At current growth rates, Chinese consumers could put 1 billion cars on the road before mid-century. If even a sizable fraction of that market is realized — in China *alone* — the impact on oil supply and carbon production will be staggering.

More efficient use of oil and gas is not a comprehensive strategy for the long term. To meet long-term energy demand, the focus on coal (with carbon capture and sequestration), possibly shale (subject to emissions and other technological advances), renewable technologies, and nuclear power will intensify, with a commensurate increase in R&D funding from both private and public sources. The future of the internal combustion engine, the workhorse of the 20th century, is in doubt.

Hybrid vehicles will grow more commonplace as batteries improve and higher gasoline prices prevail. Over time, hybrids are likely to give way to plug-in hybrids as battery technology continues to improve, liquid fuel costs remain high, and power costs (especially overnight when plug-ins would be "refueled") become relatively low. These forces will drive a transition from a liquid-based transportation system to a power-based system, and potentially drive the evolution of today's oil companies into tomorrow's energy companies.

Finally, it is difficult to imagine a post-carbon scenario that does not include renewed emphasis on nuclear power. Newer alternative technologies will be challenged to meet the relentless growth in energy demand. Nuclear power's ability to scale, compared to other options, makes it a strong candidate to play a vital role in the future energy mix.

Visionary companies are already engaged in scenario planning in order to prepare for a post-carbon future. In fact, Booz Allen has conducted "wargames" with several companies to determine the potential impact of federal regulation of carbon emissions and help companies formulate their strategies for this eventuality.

The combination of oil scarcity and increased greenhouse gas emissions effectively demands an alternative energy future. That future will undoubtedly arrive in fits and starts. Yet its basic outlines are already evident, and companies with vision will begin laying a new foundation now by placing bets on an array of non-oil and non-gas energy sources and technologies.

There is much to do in the near term to achieve heightened performance in conventional oil and gas production, to expand the role of unconventional resources, and to address the changing needs of our aged energy infrastructure. For those companies able to take the long view, further opportunities are available to create step-change

improvements in competitive position and industry leadership, if they make strategic choices grounded in a thorough understanding of future industry paths. ✚

Energy: Utilities

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MANY OF THE issues that have agitated the utility industry in recent years — the contours of deregulation, the health of balance sheets, the optimal business model to pursue — have receded. They remain important, but they are being managed.

Today the strategic center stage is occupied by a different and more intractable issue: how to reconcile our society's continually increasing need for energy with our urgent concern over the effects of carbon emissions. This is an issue of the broadest social and economic significance. It cannot be satisfactorily addressed by this industry alone, but this industry is nonetheless cast in the role of first responder. Legislatures can debate and delay. Other industries can engage in R&D, watching and waiting in the meantime. The utility industry, by contrast, needs to set direction and make commitments, because reserve margins are shrinking.

As we suggested at this time last year, there is unfortunately no clear direction in which the industry should move as it seeks an effective response to the carbon issue. At first it may appear, depending on whom you talk to, that the obvious answer is renewable energy sources, or nuclear power, or demand management. On closer inspection, though, none of these answers is fully adequate alone, and all are interlinked in ways that render any single-focus strategy risky.

The Natural Gas Solution

Gas-fired generation offers a proven, practical, and flexible stopgap for supply shortages and carbon mitigation. So long as gas prices remain in the range of US$6 to $7 per million cubic feet (mmcf), gas will likely be the default option for new generation. But that assumption of stable gas price seems increasingly dubious.

The long-term equilibrium price of U.S. gas depends primarily on whether liquid natural gas (LNG) imports set or take the market price. To the extent that LNG is abundant with respect to demand, it will set the price at a level reflecting its relatively low production and transportation costs. To the extent that it is scarce with respect to demand, it will take whatever price is set by more expensive alternatives.

In regard to LNG, of course, the relevant demand and the relevant alternatives are global. Economic growth in Asia and elsewhere, and the risks associated with Russian gas being supplied to Europe, point to a likely future of continually rising global demand for LNG. Within the U.S., a corresponding rise in demand could well occur as power generators meet reserve requirements via the "default" option of new gas generation. The seemingly reasonable response to current gas prices on the part of generators would thus escalate those very prices, and could well prove self-defeating. Without hazarding any prediction as to long-term gas prices, we simply note that these market dynamics — global as well as domestic — are troublesome, and that they suggest caution in long-term expectations for gas generation plans.

The Coal Solution

No generation fuel faces greater uncertainty than coal. It sits at the center of the storm — relatively cheap (still), abundant, and accessible, yet environmentally problematic. Its future is clouded by the high likelihood of regulatory intervention. The purpose of such regulation will be to reconstruct the economics of coal generation so as

to "price in" its environmental costs. Successful regulation either will make it worthwhile to capture and sequester carbon emissions, or will make it worthwhile to employ an alternative source of baseload generation. Economic interventions that fall short of either of these results will simply add costs to production without creating any offsetting environmental gains.

Consequently, until the cost — let alone the feasibility — of carbon capture and sequestration is better established than it is today, and until the future cost of alternative generation sources comes into clearer focus, the burden that will be imposed by future carbon regulation is virtually impossible to predict. Scenarios are imaginable in which the cost increment on coal imposed by carbon regulation encourages increased gas generation, causing gas prices to rise to a level that requires further regulatory increments on coal costs. An uneven spiral of rising costs across the board could ensue — hurling the industry into a maelstrom of soaring rates and regulatory recriminations. Workable carbon capture and sequestration could provide an exit from this spiral, but at a price and a time that are unknown.

Apart from these looming imponderables, a current and tangible challenge is presented in the U.S. by Phase II of the Clean Air Act. Regulations scheduled to come into effect in 2010 will require nearly 200 existing coal plants to be retrofitted in order to reduce sulfur dioxide and nitrogen oxide levels. In addition, coal is responding to the same global price pressures that currently affect virtually all raw materials. In view of these multiple factors, any coal-based strategy will bear a substantial risk burden.

The Nuclear Solution

Nuclear power would appear to offer a way out of the dilemma posed by an excess of carbon dioxide and a dearth of electric power. Yet despite encouragement on many fronts, including legislated subsidies, it is unlikely that growth in nuclear capacity will appreciably

alter the energy landscape over the next 10 years. Indeed, nuclear plants will struggle to maintain their current relative contribution to the country's generation supply portfolio.

One of the challenges is relicensing. Most existing nuclear plants are facing the need for 30-year license extensions. Eighty plants (about three-quarters of the nation's nuclear generation fleet) have already applied for such extensions or plan to do so. Most of those applications face some measure of public opposition, especially those pertaining to urban sites. Any attrition in that existing stock will offset some of the planned fleet expansion. Twenty-five percent attrition would offset all of the planned expansion.

Another challenge is construction. Years of dormancy have severely compromised the United States' capacity to build reactors. The steady evolution in design that occurs in most industrial contexts has been aborted in the nuclear power industry. Promising new designs are untested; when introduced, they are likely to encounter unpredictable construction delays. The supply chain necessary to support a significant fleet expansion has attenuated in both material and human resources. Only one facility exists in the world (in Japan) that is currently able to forge reactor vessels. It will take years to train and rebuild a labor force with the specialized skills that nuclear power demands. Constraints in design and construction capacity are likely to lead not only to higher costs for owners, but also to higher risk burdens as engineering, procurement, and construction (EPC) companies use their bargaining power to offload responsibility for contingencies. Given the continued fragmentation of the power industry, few companies have the size, the balance sheet, the investor confidence, and the capital resilience to shoulder these multiple risks.

The Renewables Solution

The other beguiling escape from the dilemma posed by too much carbon and too little power is, of course, renewable energy genera-

tion. But this path, too, is paved with risk. Notwithstanding strong technology gains in both wind and solar power, renewable technologies are likely to remain at the periphery of the national supply mix for the near and medium terms. Solar power remains primarily a regulatory play, dependent on subsidies. Significant advances in efficiency, cost, and convenience are still needed before solar power can achieve peak price parity even in high-cost markets with good solar fundamentals, such as California. Wind power faces not only obvious location and intermittency constraints but also supply chain constraints similar to those affecting other major infrastructure projects, including turbine manufacturing bottlenecks and the rising cost of steel for towers.

Although renewables are likely to be only a peripheral source of overall supply, they are nevertheless squarely at the center of current development activities. In part, that position is due to the paralysis besetting alternative generation options. In even greater part, it is due to the widespread adoption of renewable portfolio standards (RPS) — in some U.S. states, as much as 30 percent of the portfolio. Most such RPS targets envision renewables development at a scale well beyond the point of economic efficiency. That is not surprising: Why else would portfolio targets be necessary? However, at some point that noneconomic forced choice may return to haunt utilities, in an echo of the U.S. Public Utilities Regulatory Policies Act of 1978.

Renewables certainly have a valuable place in the nation's long-term supply portfolio, and RPS adoption will doubtless have the salutary effect of short-circuiting the otherwise lengthy period in which promising technologies often languish for lack of scale. Public policy that encourages renewables development may well be sound. But utilities working within that public policy framework will need to recognize the risks they face, the limitations of the technology they are encouraged to adopt, and the intricacies of the supply chain dynamics they must manage.

The Smart Grid Solution

The "smart grid" is gaining momentum in the industry. Focus is shifting from advanced metering to integrated solutions that will support economic demand response, asset management, and system reliability. This is a useful shift of perspective, for it forces the utility to ask a useful question: Why are we doing this? What, in fact, do we plan to do with meter reads flooding in at 15-minute (or shorter) intervals? Do we actually have some plan in mind for sorting this data into workable categories and responding to it in a way that creates value? Or are we just gathering data because some new technology allows us to do so?

If the smart grid fulfills its promise, it will be one tool in an overall approach to serving the customer that integrates the supply portfolio with local demand patterns to provide an optimal balance of cost, service, and environmental impact. It will achieve the unfinished business of deregulation, which is to connect the preferences of the customer to the costs of serving those preferences, allowing market forces to effect an economic reconciliation of those desires and costs. But such reconciliation is possible only in close collaboration with regulators. From the abundant information generated by the smart grid, and from the host of pricing responses it will presumably allow, which responses will the regulator even allow the utility to explore? And what will be the value of that confined space to maneuver? And how will the utility adjust its dispatching protocols, its customer relations, its grid control systems, and its pricing schedules in order to capture that value?

If a utility's smart grid vision begins and ends at demand management, then the utility would probably do better to just more aggressively employ the efficiency programs that began in the early 1990s — creating incentives for more efficient equipment, lighting, and appliances. The appeal of such efforts will only be heightened by the rate increases that are likely to follow the imposition of

carbon regulation. If the utility's vision is broader, then its change agenda must extend far beyond the acquisition of technology to the redefinition of a utility's role. Smart grid technology will enable the utility to evolve from being a conveyer of power to being an information-based broker of supply and demand. That is conceptually a far-reaching transformation. It requires a well-defined view of how data will be used effectively, and how emerging technology can be deployed against that data plan. Otherwise, a great deal of money may be spent for limited results.

We have described our skepticism regarding each of these potential solutions *pursued on its own.* Taken together, however, they offer an array of promising options for a tailored, flexible, and balanced strategy. As we look ahead to 2008, we believe the appropriate executive mind-set will combine caution, technological awareness, appreciation of interactive market dynamics, a push to expand options, and sustained outreach to regulators. The issue posed at the beginning of this chapter, that of reconciling our society's increasing energy needs with our concern over the effects of carbon emissions, will not be solved in 2008. But steps taken in 2008 will determine how successfully each company can solve the problem in 2009 and beyond. +

Financial Services: Capital Markets

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IN THE END, 2007 was an inflection year in capital markets. The frothy returns of recent years were abruptly replaced by the cold reality of credit and liquidity risk. Nowhere was this truer than in the mortgage market, but the reverberations will be felt more widely. In particular, the substantial losses absorbed by sell-side financial institutions have raised legitimate questions about the universal banking format in the United States. Equally valid are questions about asset management pricing, given the industry's uneven investment performance.

A weak housing market, higher adjustable mortgage resets, and tighter lending created a perfect storm in the U.S. mortgage market. The consequent spike in homeowner defaults — particularly by subprime borrowers — created material losses and risk aversion among players across the mortgage value chain and in the broader credit markets. A global credit crisis followed, prompting emergency liquidity infusions by leading central banks.

Capital markets, not commercial bank lending, drove this dynamic. A global savings glut made aggressive investors stretch for yield, and capital markets obliged by packaging risky mortgages for them. When the same investors lost confidence, capital markets froze funding even on high-quality loans. As the music stopped, institutions with large balance sheet exposures to risky mortgages

were left scrambling to stay in the game.

Interestingly, with their capital surplus and exuberance for risk, these institutions ignored clear warning signs of looming trouble. For example, in our 2006 year-end analysis, we noted: "With so much alternative capital chasing limited investment opportunities, the performance across these institutions is likely to be quite varied.… Sell-side firms are putting more capital at risk.… Nevertheless, smart ideas attract more capital than is needed.… Ideas [should be] more important than capital in the 2007 market."

A Rebuilding Year in 2008

The hangover in the wake of the bubble has been rather painful, and it's likely not over yet. Still, it should be noted that the global savings glut remains an enduring, albeit a bit chastened, reality. Market history suggests that these savings will seek returns again, in the process likely initiating new asset-class bubbles. Indeed, this surplus of capital, its hunger for yield, and the ease of capital movement indicate that asset prices are probably now prone to faster, more frequent bubbles with higher peak-to-trough volatility.

Market participants must, therefore, ask themselves how best to organize against this volatility and uncertainty. Generally, what we expect to see in 2008 is a return to core competencies. Institutions hurt by the credit crunch will refocus and rationalize their business portfolios; those firms that managed through the crisis better will have a material opportunity to pick up assets from weakened competitors — and perhaps pick up the competitors themselves — for relative bargains. It will be critical for institutions to ensure appropriate merger and acquisition capacity to engage in these strategic discussions.

Given this, we would expect M&A teams to have a pretty good year — with both domestic and foreign clients. Given attractive company valuations and a declining dollar, U.S. assets in 2008 will

look very attractive to foreign buyers, both strategic and financial.

The events of 2007 also raised questions about the American universal bank business model. Holding an array of financial businesses under one umbrella did not increase strength and mitigate risk through diversification of business lines; in fact, just the opposite was true. The model bred risk by making the enterprise more complicated, opaque, and difficult to manage. Given the unimpressive valuations investors have bestowed on universal banks, a strong case can be made that the whole is worth far less than the sum of the parts. It's also interesting to note the poor ongoing leadership transitions at some of the largest U.S. institutions. Given the strategic importance of the financial sector, these events erode confidence; going forward, we expect that regulators and shareholders will insist on formally outlined succession plans at such key institutions.

The universal bank won't be the only business model tested in 2008. Asset managers will feel pricing pressure for two reasons. First, the normal effects of competition are bound to lower fees, and second (and what strikes at the heart of the business model), investors will question high fees for funds focused mainly on beta returns — the strategy most funds pursue.

This attitude could take a particular toll on hedge funds. We estimate that a large proportion of hedge funds are beta shops, and these may see pricing pressures in 2008. The 2 and 20 percent fee structure will likely hold only at premier hedge funds achieving alpha returns. As investors depart underperforming, expensive beta shops for alpha shops, there will be a wave of closures and consolidation. Assets under management for the industry may increase in 2008, but we expect the number of hedge funds to shrink.

One final thought on the asset management business model: We think it worth noting that on October 15, the first baby boomer applied for U.S. Social Security, for which she will become eligible in 2008. Kathleen Casey-Kirschling, a retired teacher from New

Jersey, was born one second after midnight on January 1, 1946 — officially the first in a generation of nearly 80 million born between 1946 and 1964. It is truly a watershed event, and asset managers must rethink the time-honored 60/30/10 (stocks/bonds/other) asset allocation model. That allocation was fine for wealth accumulation, but it's likely too risky for what most retirees need: wealth preservation. Instead of managing accounts that are steadily increasing in size, asset managers must now figure out how to manage — and profit from — accounts that will need to support annual living expenses. Cash-flow management products will find a place in the market.

Searching for Solutions

Given the volatility in the market, and the stress it's putting on certain business models, how should firms be looking to run their operations in the near term? We see a big cost-cutting push across the capital markets as many institutions react to their losses in 2007 and slowing growth prospects for 2008. Process automation will continue to drive cost reduction. In the equity, bond, and derivative markets, automation will bring greater price transparency and confidence, while lowering transaction costs and boosting scale. With prices per transaction being squeezed, success hinges on scaling the business and handling greater transaction volumes. Automation makes this possible.

As firms examine their cost structure, they will inevitably turn their attention to labor costs. Truly understanding who your most valuable employees are and coaxing more productivity out of them will be the key. Managing human capital will be of paramount importance in 2008, and it will be a real challenge.

One area where we see room for improvement is in the realm of outsourcing. Outsourcing is a trend that's clearly maturing: After an initial rush to move back-office and call-center operations overseas,

the most obvious positions have been shifted. At many firms, the next round of outsourcing might involve more valuable customer-facing positions, making the decision to outsource more perilous. What's more, labor costs in many overseas locales are starting to rise, a trend exacerbated by the dollar's rapid descent. But although costs are rising, we do not believe outsourcing is a trend that's played out; it's still a potential source of huge cost savings, and we expect in 2008 to see innovative firms lead the way.

Finally, as the subprime crisis has amply demonstrated, firms must invest more in risk management and analytical capabilities. The need to venture into complex products and lines of business is a blunt reality in today's market. This is where the profits are richest but the hazards are real and significant. Ideally, robust risk management allows a firm to operate in these markets and pursue these profits while shielding itself from catastrophic losses. Many firms that suffered in 2007 thought they had such controls in place but clearly did not; 2008 will be a year to sort out where and why risk management jumped the tracks and to redesign controls. +

Financial Services: Retail Banking

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THE RETAIL BANKING industry saw a volatile year in 2007 — to put it mildly. Early on, the subprime lending market melted down; suspicions then grew that complex derivatives based on these subprime loans weren't worth nearly what their owners had assumed. Then, over the summer, the credit markets suddenly seized up. Central bankers in the U.S. and Europe had to step in and prod banks to lend to each other again.

For a few weeks it seemed the crisis had been averted, and then came third-quarter earnings season, which exposed how toxic the fallout from the subprime lending bubble was. Profits plunged by billions of dollars at some firms due to enormous trading losses and write-downs. And the damage is not over. It's still unclear how much these derivatives are worth, which means trading will be thin to nil, chaining the derivatives to bank balance sheets. To make matters worse, tens of thousands of mortgages will reset in 2008, further stressing the value of these bonds. Bankers across the country now realize the models they had hoped could predict the damage were woefully inadequate.

Not surprisingly, we expect to see poor results for many banks in 2007 and 2008 — really the first years of poor earnings in some time. It's still hard to predict how long and steep the slide will be, but circumstances are not helped by calls for more regulations.

In October came the first "overhaul" proposals from Washington, and we didn't like what we saw. Representative Barney Frank (D-Massachusetts), the chairman of the Financial Services Committee in the U.S. House of Representatives, is pushing to change the way mortgages are offered, securitized, and supervised. Among the bill's provisions: Prohibit prepayment penalties on subprime loans and limit prepayment penalties on prime loans, create a national standard for originating mortgages, and, most controversially, extend liability to parts of the secondary market, an issue known as assignee liability. The idea is to ensure that investment banks and other securitizers monitor the quality and underwriting standards of loans.

We are actually optimistic that sweeping rules changes are unlikely once the initial bluster from Washington dies down. But the issue can't be ignored; although the industry is weakened and politically vulnerable, executives must be ready to vigorously fend off rules that could crimp a near-term recovery and harm the long-term health of the industry.

A Glimmer of Hope for 2008

Even though earnings are spiraling downward, risks difficult to quantify, and the legislative environment a bit unfriendly, we see some great opportunities for banks in 2008, particularly consolidation opportunities. Unlike the recent past, 2008 will see a great variance in the performance of banks. Some banks have been hit very hard by the subprime mortgage meltdown; others, such as JPMorgan Chase, Wells Fargo, and PNC, have weathered the storm better. These banks and those like them may be perfectly positioned to pick up assets from weakened competitors for relative bargains. For example, leaders at both JPMorgan Chase and Wells Fargo have expressed a desire to grab mortgage market share during the crisis.

Consolidation will mostly involve smaller acquisitions, but we think it quite possible that a very large bank could fail in 2008. This

would present regulators with an interesting dilemma. The most orderly solution would be a quick sale. The trouble is, federal law bars bank deals that would leave one institution holding more than 10 percent of insured deposits nationwide. Bank of America, Wells Fargo, and Wachovia — three of the country's strongest banks and most likely acquirers — are close enough to the 10 percent deposit cap that they might be ineligible to step in and make the purchase.

The 10 percent deposit cap was created in 1994, when no banks were near the cap. Bank of America has made several attempts to persuade Congress to raise the cap or remove it altogether, arguing that it puts the bank at a competitive disadvantage with foreign banks that don't have similar restrictions. Nothing has come of those attempts so far, but given today's circumstances — the precariousness of the mortgage market, the desire to avoid crisis, the law's obsolescence in today's global environment, and congressional leadership's openness to a change — we believe that in the event of a large bank failure, Congress will act rapidly to eliminate the cap. That will be to the long-term good of the industry and will open a new avenue of growth for the largest U.S. banks.

Ironically, another driver behind consolidation may be the deconsolidation of some universal banks. We wonder whether 2007 sounded the death knell for the universal bank model, given how poorly it has performed. Holding an array of financial businesses under one umbrella has not increased strength and mitigated risk through diversification of business lines; in fact, just the opposite. It has bred risk by making these enterprises more complicated, opaque, and difficult to manage. Does having mortgage origination and securitization groups together really create efficiencies, or just inevitable conflicts of interest? Does it make better business sense to keep wholesale and retail banking separate? Given the unimpressive valuations investors bestow on the universal banks, a strong case can be made that the whole is worth far less than the sum of the parts.

Opportunities in Operations

Consolidation opportunities aside, how will banks run their operations in the near term given the tough operating environment? Generally, we see a big cost-cutting push as banks react to losses in 2007 and dismal organic growth prospects for 2008. At retail banks, these cost-reduction initiatives will touch two areas in particular: human resources and technology.

As firms examine their cost structure, they will inevitably turn their attention to labor costs. But be warned: Quick savings generally won't be easy; there's not much fat to trim after so many years of thinning the ranks. And across-the-board cuts, or mass shifts overseas, may be politically unwise in 2008. Sentiment on Main Street and in Washington is tilting against globalization, given that it's an election year, and business leaders may not want to feed that antipathy with major layoffs.

Managing human capital will be of paramount importance in 2008, and it will be a real challenge. Banks will need to do a better job of analyzing their workforces, identifying the most valuable employees, and coaxing more productivity out of them. More of the same won't be enough. Most people-management systems are targeted at developing average performers and don't focus enough on growing top-tier producers. Recruiting processes will need to be refined to identify and attract new top performers, and banks will need to find ways to retain the ones they have. The good news is that with the turmoil that is likely to remain over the next 12 months, there will be plenty of opportunities to poach high performers from competitors.

Further, the offshoring challenge is growing more complex: After an initial rush to move back-office and call-center operations overseas, the most obvious positions have been shifted. At many firms, the next round of outsourcing might involve more valuable customer-facing positions, making the decision to outsource or off-

shore more perilous. What's more, labor costs in many overseas locales are starting to rise, a trend exacerbated by the dollar's rapid descent. But although costs and complexities are rising, we do not believe outsourcing is a trend that's played out; it's still a potential source of huge cost savings, and we expect in 2008 to see innovative firms lead the way.

Finally, after many years of spending freely on technology, banks will look to cut costs there as well. IT will have a dual role to play in supporting cost reduction: by tightening its own belt, and by enabling the capabilities necessary to boost efficiency in business processes, such as workflow automation and straight-through processing. Although investment dollars will be tight, we do not anticipate any reduction in demand for IT resources. Specifically, IT investments will be directed at improving the customer experience, standardizing operating platforms and reducing complexity across the value chain, and selectively implementing cross-product capabilities. In this supply-constrained environment, IT executives will have to rely on rigorous demand management and comprehensive architecture planning, as well as greater use of offshore development resources, to have a fighting chance in meeting the demand. +

Financial Services: Wealth Management

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AT THE BEGINNING of 2008, despite recent market volatility, underlying growth drivers for wealth management remain sound. Investable household assets crossed the US$20 trillion mark, and have been steadily growing at an annual rate of 10 percent. This growth will continue to be driven by two key trends among the existing and potential clients of wealth management firms — the impending retirement of the baby boomers and the higher-than-average growth of the wealthiest households.

The Baby Boomer Effect

This was the year the baby boomer transition became official; on October 15, 2007, the first baby boomer applied for U.S. Social Security, for which she will become eligible in 2008. Kathleen Casey-Kirschling, a retired teacher from New Jersey, was born one second after midnight on January 1, 1946 — officially the first in a generation of nearly 80 million born between 1946 and 1964. As this demographic trend gathers momentum, more than US$10 trillion in assets currently invested through retirement accounts will come into play, setting a tidal wave of money in motion during the next 10 years.

We are also witnessing increasing asset accumulation among the wealthiest households (defined as households with investable assets

in excess of $1 million), which now account for more than one-third of total household assets and which are growing at 11 percent.

We are living through a defining period in the evolution of client wealth management needs. The shift to retirement has been the topic of the day for some time, but wealth management firms are still struggling to create distinctive products and services uniquely targeted to retirees. Instead, the financial advisor mind-set remains anchored in capital accumulation. Booz Allen Hamilton research reveals that financial advisors are more than twice as likely to say their clients are prepared for retirement as the clients themselves.

The Rich Get Richer

The rapid growth of wealthy households is also putting pressure on the prevailing financial advisor model. The wealthy are demanding enhanced investment performance in this era of increasing volatility and product complexity. To meet this demand, an understanding of broader and more complex markets is required, as is an array of financial-services offerings. After all, issues such as collateralized debt obligation pricing and Chinese stock market volatility were not concerns five years ago.

The combination of greater investment complexity and the need to provide high-quality service make the traditional approaches of using a single advisor or a two-person team increasingly unworkable. Firms and financial advisors have begun to understand this new reality. This past year saw efforts by many of the larger firms to design ultra-high-net-worth offerings. And the journey has only just begun; a significant enhancement of the service offering and relationship model is still required.

This past year also witnessed a continued race among firms to increase client assets. Acquisitions continued briskly as firms sought to expand by buying other firms. They sought additional expansion

through financial advisor transfer deals, which reached record levels; even independent firms began offering up-front bonuses for advisors willing to jump ship. But the sector is still fragmented, with the largest firms having only 6 to 7 percent of investable assets and less than 3 percent of the combined household asset and long-term liability "wallet" (a combination of investable assets, retirement assets, and home mortgages).

The Past Year

The year 2007 was a positive one for wealth management firms of all three major types — retail brokerages, banks, and insurance companies — as well as independent and registered investment advisors.

Retail brokerages continued to grow their overall asset base at 10 percent annually, and for the first time in five years, the combined operating margins of the five largest firms nudged 20 percent. This success does, however, mask some key challenges. Full-service retail brokerage firms, which constitute the dominant wealth management format, struggle to attract new assets. Net new client assets are hovering around the $15 billion mark at most of the largest firms, as compared with the substantially larger $72 billion in net new client assets reported by Charles Schwab in 2006.

In our opinion, retail banks and insurance companies had an average year. These institutions have yet to fully realize the promise of a shift in client needs from capital accumulation to cash flow and risk management, especially among the mass affluent clients. The client penetration remains low, and even the leading institutions have less than 20 percent of their clients' investable assets.

Independent and registered investment advisors recorded the strongest growth performance. In our estimate, these firms have grown around 20 percent annually, and now manage almost a third of total household investable assets. The wealth management space will continue to expand at both ends — with large, full-service play-

ers at one end of the spectrum and small players leveraging the scale of platform providers such as Pershing, Fidelity, and Schwab at the other end. Stand-alone firms in the middle will continue to feel the pressure that has led to the acquisitions of A.G. Edwards by Wachovia in 2007, Piper Jaffray by UBS in 2006, and Advest by Merrill Lynch in 2005.

Looking Ahead

In the near future, winning firms will continue transforming the traditional advisor model at a fast pace, effectively doing three things well: unlocking talent, managing the client experience, and increasing the efficiency of the operating model. In the past, these activities were considered by some to violate the laissez-faire "social contract" with the financial advisors, but to stay competitive, firms no longer can afford to be hesitant in pursuing this transformation.

Unlocking talent. Unlocking and leveraging talent will be one of the principal upcoming challenges. Wealth managers must start to aggressively support teaming among advisors. This will require recrafting the current training and development approaches, as well as an evolution in compensation away from the traditional grid-based individual models toward team-based models. Metrics to increase the transparency of team performance will also be required.

Another aspect of the focus on talent will be the leveraging of managerial capabilities. Gaining the most from talent will require that a coaching culture be created in the channel, in lieu of the current sales and supervisory mind-set. Effectively leveraging the coaching talent could also require a change in channel structure. During the past year, among those first transitioning firms, we saw further consolidation of prior structural change advantages, while a few of the largest retail brokerages embarked on a channel redesign.

A third aspect of driving talent will be the systematic effort to increase productivity. The easy steps of increasing basic efficiency

have been successfully executed over the past year. The toughest challenge is now ahead — to increase advisor effectiveness while making more time with the advisor available (at a cost); doing this without upgrading capabilities will, in our experience, be ineffective. In the words of one Booz Allen client, who leads one of the largest advisor forces in the country, "We need to improve client relationships, not golf handicaps."

Managing the client experience. Winning firms are fast realizing the value of actively managing the client experience. We have already seen the beginning of a separation across the delivery model when firms are targeting different client segments. Ultra-high-net-worth and high-net-worth clients have needs that are no longer well met by the earlier service model, in which the client experience was left largely to the agility and capability of individual advisors. We expect a growing trend to define, control, and deliver a consistent client experience relevant to the specific needs of each client segment. While that may be easy to advocate on paper, we do not underestimate the transformational challenge it will require. However, we do believe that this transformation is critical.

Increasing efficiency. The leading firms will continue to examine their cost structures. As easy-to-achieve gains are realized, greater efficiencies will require a reexamination of the operating model with the goal of increasingly leveraging scale in the channel. In most instances, branch staffing as well as operations and supervisory capabilities have been directly correlated with branch size, thus making it difficult to fully realize scale benefits. Redesigning the process for initiation of operations in the branches, the workflows to the home office, fulfillment by operations, and the overall supervisory construct can collectively save between 15 and 25 percent off the current operating baseline.

Another area we see as ripe for improvement is outsourcing — a clearly maturing trend that has been underleveraged at wealth

management firms. Sophisticated users will show increased momentum to outsource elements of the more valuable customer-facing positions, thus making the decision to outsource particularly significant — and even rather perilous. Additionally, labor costs in many overseas locales are starting to rise, a trend exacerbated by the dollar's rapid descent. Although the costs of complexities are rising, we do not believe outsourcing is a trend that has yet played itself out; it is still a potential source of huge cost savings, and we expect it to advance in 2008 as innovative firms lead the way. +

Health: Pharmaceutical

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As 2007 came to a close, a strong international economy helped the United States cope with credit problems, housing-sector issues, a weak dollar, expensive oil, and the ongoing costs of war. Although the political balance in Washington changed in 2006, with ramifications that spilled over into 2007, we are still in the early stages of reframing the national debate on a broad range of issues, including — in fact, especially — health care.

As we enter 2008, we'd like to briefly share our thoughts on the state of the health-care industry, the implications of developments in health care on the pharmaceutical sector, and the trends we see for the year ahead.

2007: The Year of Living Safely

Although the health-care industry saw some significant political and economic events in 2007, it was primarily a year for hunkering down, sticking to one's knitting, and trying to divine the future. The consensus for change continued to broaden and everybody seemed to roll out a plan, but serious change will have to wait for the 2008 presidential and congressional elections — and perhaps will have to wait for a good while after that. Our prediction in last year's letter, that 2007 would be a year of "politics — and pragmatism — as usual," was largely borne out.

Viewed from a high level, most sectors of the health-care industry had another good or very good year. Profits at most major health plans continued to be strong, owing to effective trade-offs between pricing discipline, medical and network management, and reduction of administrative costs. Premium increases from health plans and rate increases from providers were both somewhat lower than in recent years — but they remain major issues, even if 2007 didn't feature those issues quite as frequently in the daily press. Although pharma had a less-robust year than other sectors, it did avoid a showdown on direct government price negotiations for Medicare Part D, the government program that provides drug coverage for the elderly. However, both this win and the sector's continued profitability need to be viewed cautiously, since they mask the issues of failed compounds, a less-robust product pipeline, and ongoing price and utilization constraints. Hospitals continued to enjoy strong sector-wide performance, but 2007 was still a story of the rich getting richer. Little or no progress occurred in spreading the riches to small hospitals and nonacademic urban facilities. *Pricing and quality transparency* remained a slogan, with little substance behind it.

If things were fairly quiet in the news and few developments occurred on the innovation front, 2007 was still notable for at least one thing: Consumerism, broadly conceived, achieved mainstream status and secured a strong place in any pluralistic reform of the health-care system. Since Booz Allen Hamilton's first articles on the concept appeared in 1998, the shift to a retail market has gone from being a curiosity to being an idea with real traction in the marketplace and increasing acceptance from consumers. Not only is the health-care infrastructure for consumer-driven plans in place, but players at the health/wealth nexus are now gaining size and traction. In addition to efforts by several of the national plans, the Blues have established the Blue Bank to administer transactions and maintain balances for their consumer-directed health plan (CDHP) enrollees

with high deductibles and health savings accounts. Reports of more large employers planning to switch to such plans in 2008 mean that double-digit, "S-curve" growth will likely continue. Moreover, employers' ongoing concern about the affordability of health benefits is leading to higher cost sharing and increased consumer participation in decision making in conventional products as well. CDHPs and other high-cost health plans account for about 20 percent of the private market today and will certainly gain more share.

There were also signs of delivery system innovation in 2007, but they received little public attention. While pay-for-performance and various grand-scale IT programs (like electronic medical records) continued to languish for lack of consensus and funding, fast-service clinics and concierge medicine offerings enjoyed increasing popularity. In fact, at least one new player may be "stitching" fast-service clinics together with rented PPO (preferred provider organization) networks and sophisticated Internet tools to deliver plans that provide more convenience, better clinical care, and lower costs. Another promising development is the emergence of branded offerings for high-cost specialty care. Several national brands (MD Anderson Cancer Center, Texas Heart Institute, and Geisinger Health System, for example) are beginning to offer packaged pricing and evidence-based care programs for cancer and heart patients. These "clinical packages" — early signs of the emergence of true "products" in health-care delivery — offer the hope not just of market differentiation for players, but of better outcomes, fewer hassles, and lower costs for consumers. Such "product plays" are likely to increase in importance and attractiveness.

Blockbuster asset plays were largely missing in 2007. The CVS–Caremark deal was the largest and most significant — furthering the shift in the marketplace toward consolidation between pharmacy benefit managers and drug retailers. Pharma saw several deals,

including AstraZeneca's acquisition of MedImmune and Schering-Plough's acquisition of Organon, that were mostly driven by the need to improve product pipelines. The provider sector was fairly quiet except for the usual game of musical chairs played by the hospital chains. Interestingly, the breakup of several health systems in the not-for-profit sector grabbed as much press as any new activity. More subtle plays didn't make headlines, as multiple players (large health plans, mostly) created lash-ups with new entities — particularly in the rapidly emerging retail clinic space. This activity replaced the larger and more visible plays of recent years in which major health-care plans added CDHP capabilities.

Although the structural "big plays" of recent years were missing, a series of unorchestrated but stunning shifts in risks and costs occurred in 2007. All of the shifts moved risk away from traditional players (i.e., payors). The biggest headline, of course, was the United Auto Workers' (UAW's) new deal with the auto industry, in which employers' liability for more than US$50 billion in health-care costs was shifted to the union. This cleaned up some balance sheets and potentially eased some price pressures, but the long-term goal (solvency for both parties) is uncertain. More subtle changes also occurred: CDHPs nearly doubled their enrollment, thus shifting additional costs (but not catastrophic risk) to consumers; private plans announced their intention to increase 2008 Medicare Part D premiums by 17 percent (for those staying with the same plan); and the shell game of Medicaid funding and eligibility rules continued to marginalize more and more citizens in the health-care system. For all these payors, seeking shelter from the storm was the goal.

The political front, unsurprisingly, was more active this past year, but the big fight on Medicare Part D never materialized. Instead, the focus of this round of political proxy wars in health care was the State Children's Health Insurance Program (SCHIP). Although billed publicly as a budget fight, it was equally significant

as a battle between public and private solutions for the health-care system's problems. In other words, the SCHIP expansion was less a matter of money and more a matter of which programs, public or private, would expand to fill the need. Most congressional Republicans took the politically unpopular position of limiting the expansion of government involvement — risking voter retribution. We can expect more of these symbolic skirmishes in the run-up to the elections.

The states were more active in moving forward with various experiments and new programs. While Maine's Dirigo plan for the poor and uninsured continued to limp along, owing to affordability concerns on the part of small employers and challenges funding the program, the new Massachusetts subsidized "pay-or-play" program was quickly oversubscribed and now needs a new appropriation (i.e., it will cost much more than expected). California's plan (essentially pay-or-play) remains stalled at the starting gate. These and other state programs can be viewed as laboratories testing various features of potential national programs — the better points perhaps being stitched into a full-blown national approach. But like the many plans offered by various presidential candidates, none can currently be viewed as the definitive solution.

The industry has long expected to see the effects of changing demographics (primarily aging), an epidemic of chronic diseases, and an inflationary spiral. These trends, combined with what must be viewed as mainstream acceptance of consumerism in the payor sector, have begun to catalyze early movement along long-dormant fronts: strategic experimentation in the provider sector, much of it from outside sources; philosophical shifts in employer-sponsored benefits; and government interventions involving coverage scope and levels. If 2007 was not a banner year for new developments in health care, it was certainly a year of populating the playing field with ideas and programs that are likely options for inclusion in an

eventual national program of health-care reform. Those looking for swift closure on the topic of reform will need patience.

2008: The Calm before the Storm

The 2008 elections will determine the next occupant of the White House, but will not provide a strategic road map for industry players on how to navigate what will be a drawn-out series of health system changes and reforms. Even the slim possibility of a filibuster-proof (or veto-proof) Senate would be unlikely to speed along change of the magnitude and complexity likely to be proposed. The good news is that all of the mainstream candidates seem to have a healthy respect for the difficulties involved in such change and the unintended consequences that may arise from it. A monolithic new federal approach to the entire health system is not going to arrive on Congress's doorstep early in 2009, since the agenda will already be full with taxation, war funding, and entitlement issues. This is not to say that significant change won't occur; it just will not happen in 2008 or even 2009.

The complexities and challenges are clear. Among the most important:

- Primary care is already in short supply and the aging population (of caregivers as well as patients) will make the problem worse — even before adding in demand from newly empowered citizens. Without major funds to train more doctors, nurses, and other midlevel practitioners, expanded access may remain elusive.
- Any new program to financially empower the uninsured (and others) will cost more — a lot more — regardless of what steps are taken in the near term.
- Tax policy may be the first skirmish for the new administration and Congress — first, to sort out the problem of the alternative minimum tax and its increasing burden on the middle class, but

later to deal with deductibility of health plan costs for employers and individuals, continued tax exemption for health savings accounts, and the sources of funding for any increased costs of new programs. The ongoing war and the huge downstream costs of caring for the wounded will also need resolution before Congress can consider new entitlements or mandates.

- Meaningful management of any new program will require advanced IT capabilities (interoperable health information technology and electronic medical records) at the clinical and transaction levels. Public sector–private sector groups such as the American Health Information Community (AHIC) have been set up to deal with standards and other challenges, but progress has been slow and no real advanced capability exists. Substantial progress in this area will take years and cost billions to implement.
- In proposing any sort of reform, stakeholders will need to be aware of unintended consequences that may bring major penalties or windfalls to particular sectors. For example, if a new system were to significantly reduce free care and bad debts for hospitals, how would such gains be minimized or repatriated? If similar factors improve doctors' income, how many of them might reduce their workloads and exacerbate current labor shortages?

Any proposals for new health-care plans must, at a minimum, address these challenges, and they will likely take many months to work out. Given the range of issues involved and the number of sacred cows that may be gored, the coming health-care debate probably means full employment for every health-care lobbyist in the nation for years to come. Furthermore, all of these issues and problems are essentially independent of the direction chosen.

At this point, the shape of the reform — whether proposed by

Republicans, Democrats, or a bilateral coalition — is virtually impossible to predict. That said, we can posit a number of characteristics of the outcome and the process:

- The reforms will be incremental and pluralistic. No proposal currently on the table will become the single answer, as evidence from various state experiments and matters of affordability will forestall radical, wholesale change. Given the size and continuing growth of conventional products such as HMOs, PPOs, and CDHPs (and other consumer-active plans) already in the marketplace, new approaches will almost certainly include these options going forward.
- Tax policy and the related matter of means testing for new benefits (and probably Medicare as well) will share center stage as critical factors to be worked out under any new plan. Interestingly, if tax policy makes medical costs and premiums fully deductible for individuals (as they are today for employers), those individuals will need to find coverage that effectively forms a large group to aggregate risk. Further defections from employer-sponsored plans would be likely. Means testing is apt to become one of the most divisive issues to be tackled under any reform scheme.
- Medicare Part D will very likely be pulled under a federal bidding process and perhaps stricter rules on generic drugs. This may simply push prices even higher for on-patent compounds, but the short-term gain for Medicare will be nearly irresistible.
- Significant change is unlikely prior to 2010 and is apt to be gradual thereafter. Although *urgency* is still the operative word, the players have a healthy respect for the complexity of the problem and the runaway costs that will result if they get it wrong. Even if some changes emerge in the first year of the new administration, implementation would take at least a year. Bigger changes would probably follow, being phased in starting in 2011.

The big issues won't be settled for a few years and the specifics are difficult to predict, but that does not mean that participants in the industry cannot do anything in the short term. A robust market exists for consumer-oriented products with more cost sharing. There are also problems that can be tackled immediately — with solutions that can form better businesses today and position players for a range of eventualities. Patient care is still fragmented, coordination of care and services is marginal at best, connectivity and interoperability are largely absent, and, as always, costs are growing too fast. These problems continue to merit the serious attention of industry leaders.

Themes and Directions for Industry Players

In periods of uncertainty, the industry needs to develop new approaches that will deliver lasting value — independent of tweaks or tremors in the funding and organizing of the health-care system. None of the broad strokes currently on the table for health-care reform will improve today's bedside care or coordinate care and service throughout a patient's health-care episode. Quite simply, the clinical variability and often nightmarish bureaucracy of today's system are problems waiting to be addressed, and those who develop the solutions can expect huge returns. Knowing this, and having an awareness of the opportunities that health-care reform may create, we offer four high-level suggestions for the coming year.

1. Create more substantive, collaborative business models. The time is ripe for pharmaceutical companies and health plans to build a better model. Our work with both parties suggests they are more willing than in the past to collaborate in ventures that improve outcomes and value for both. Health plans are under pressure to address the major diseases that generate the bulk of their costs: They can do so in part by leveraging pharmaceutical companies' ability to influence physician and patient behavior. The pharma company can then

reap some of the benefits of being part of the solution.

The idea of joint programs between health plans and pharma companies is certainly not new, but most initiatives to date have been tactical arrangements based on risk sharing, such as performance guarantees. These risk-sharing arrangements are inherently defensive in nature and continue the old paradigm of zero-sum competition (in which every winner must be counterbalanced by a loser), since they focus on distributing the existing pie differently, not on making it bigger.

Collaborative ventures, by contrast, aim to increase the size of the pie. For example, health plans have worked with employers to change benefit designs, allowing consumers to forgo a co-pay. They have also worked with pharmaceutical companies to provide access to plan-specific health data on an ongoing basis. In addition, pharma companies have redeployed sales forces and other elements of patient and stakeholder marketing — including direct-to-consumer advertising, patient support and education services, samples, and coupons — to help physicians change patient behavior. In combination, these ventures improve overall health-care outcomes and/or reduce total health-care costs, while also increasing pharmaceutical sales. Such ventures will not work for all plans or all therapeutic areas, but with an agreed-upon, objective view of disease economics and the impact of joint interventions, real opportunity exists.

The chance for pharmaceutical companies to capture more of the downstream value created by preventive and therapeutic interventions may also offset continued pressure on price and utilization for drugs themselves. Collaborative relationships can help to capture value and thus may help make the case for pricing and utilization approaches that enable the industry to continue to fund innovation. This is particularly true in areas where value is indeed demonstrable to payors as well as patients and physicians.

2. Develop scaled-up versions of more effective and efficient commercial

models. A number of external market drivers have complicated the relationships that pharma companies have with physicians, payors, and other major stakeholders and made the traditional pharmaceutical sales and marketing models less viable. On the physician front, challenges include increased group practice dynamics in many markets, which may limit physicians' choice in drug prescriptions or increase barriers to pharmaceutical companies' access to physicians; tightened regulations on marketing to physicians; increased payor intervention; proliferation and similarity of products; and greater influence on physicians' decisions coming from managed care organizations. These influences are combined with a sales-force "arms race" among pharma companies that has resulted in a profusion of sales reps exceeding physicians' saturation point. Together, these issues have led to deterioration of the interactions between reps and physicians, decline of the influence that reps have on general practitioners and specialty physicians, and decline in sales-force productivity.

Despite significant effort and experimentation to address sales productivity troubles, no pharmaceutical company has yet discovered an approach that has resulted in a new "productivity curve." Several factors come into play, such as the sheer difficulty of the challenges posed by the trends listed above, as well as the complexity of managing to scale when a sales force has multiple tailored approaches.

Given the magnitude of the challenge, we believe that a new approach is required: one that entails systematic, value-focused, smart customization of regional sales and marketing, rather than the isolated, piecemeal, incremental efforts that have had limited impact in the past. To shift the productivity curve by giving customers the services that will add the most value, while still avoiding the cost of complexity that can result from tailored approaches, companies will need to:

- Avoid the tendency to develop a tailored approach for a multitude of different stakeholder segments, and instead focus tailored approaches on "outlier" segments, where there is a demonstrable and significant benefit in a given region. For instance, it may make sense to target a managed care organization or group practice that can influence a number of physicians, rather than targeting numerous physicians separately.
- Build the capability to support both outlier and traditional segments with a modular approach that configures and sizes the capability to the needs and value of each segment, rather than bolting on successive customer and product support capabilities.
- Move rapidly beyond experimentation with tools, planning, and pilots to scale up fundamentally enhanced approaches in a systematic way.

3. Develop and use new approaches to benefit–risk management. Benefits and risks are shifting dramatically on both the revenue and cost sides of the ledger for pharmaceutical companies. The risks of unanticipated product safety problems and related revenue losses are increasing, as in the well-publicized cases of Vioxx, Avandia, and EPO. At the same time, risks related to price levels and utilization constraints are affecting revenue projections. In addition, there have been dramatic shifts in R&D success rates.

Pharmaceutical companies need to respond to these developments at multiple levels. For example, product safety issues have been an important factor in calls for improved monitoring and have highlighted the potential of a consistent, broadly available, and authoritative source of safety information. One specific development that may facilitate the creation of large, widely available databases for safety information is the Reagan–Udall Foundation. The foundation was established in the FDA Revitalization Act of 2007 for the purpose of facilitating collaboration among government, industry, and academia, in order to bolster R&D productivity, pro-

vide new safety tools, and make product development and safety more predictable. The Reagan–Udall Foundation could enable signifgicant changes in the nature and extent of collaborative public–private initiatives, whether by developing authoritative sources of information on product benefits and risks, or providing information to support the development of "personalized medicine" and other approaches that have the potential to improve R&D productivity.

In addition to finding better ways to monitor risks and benefits for in-line products, addressing the risk–benefit equation is critical for making R&D portfolio decisions. The variables are changing in both technology and the market, and snapshots of pharmaceutical company R&D portfolios suggest that portfolio prioritization decisions may not be based on empirical evidence.

For example, in terms of technology, evidence suggests that success rates for biologics and small molecules have converged; biologics historically held a significant success rate advantage. Similar improvements have occurred by therapeutic area, target novelty, and mechanism of action. It's not clear, however, that the knowledge of these changes is being fully leveraged in decision making about portfolio rationalization.

On the market side, areas of opportunity are also shifting, as is the impact of price and utilization constraints. Biologics, typically associated with specialty drugs for serious illnesses, are coming under increasing price scrutiny from payors. Although the seriousness of a disease is an important factor in the severity of price and utilization constraints, other critical matters to consider include the ability of payors to assess differential benefit by patient segment and the number of treatment alternatives available. Pharma companies must consider who is making the decisions about their products in an increasingly consumer-driven health market; the economics of reimbursement become more or less complex depending on the priorities of the decision maker.

4. Attack under-addressed opportunities for cost improvement. Numerous such opportunities exist. For instance, we have written in previous years about ways to improve the return on rebate spending. Rebates, at approximately 10 to 15 percent of revenue, can escape the attention they deserve because they do not appear as an explicit line item on the P&L, having been deducted to yield net revenue. Most pharmaceutical companies have significant opportunities to better utilize third-party data and advanced analytical techniques to greatly improve rebate effectiveness.

Another under-addressed area of opportunity is marketing spending. In many pharmaceutical companies, marketing has avoided significant and disciplined cost improvement initiatives. The primary consideration has been whether a marketing initiative has the potential to add revenue; if so, brand executives have had a rather free hand in choosing marketing materials and services, which can represent more than 50 percent of a company's total purchases. In many cases, companies can achieve overall savings of roughly 10 to 25 percent. New approaches can help realize these savings. Specifically, companies can involve line marketing managers in the design and execution of streamlined sourcing approaches by designing incentives and decision-support tools for them to better understand and exploit vendor economics, and by making them responsible, with the support of procurement, for reaching and maintaining a new cost base.

Whatever the specific developments in the year ahead, we believe 2008 will be most memorable for the political signals sent by the elections, the continued development of CDHPs and their variants, the growth of comprehensive "product" offerings for specific conditions, and the kickoff of a multiyear process to determine the direction of the future health system. +

Health: Services

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AS WE ENTER 2008, we'd like to briefly share our thoughts on the state of the health-care industry and the trends we see for the year ahead.

2007: The Year of Living Safely

Although the health-care industry saw some significant political and economic events in 2007, it was primarily a year for hunkering down, sticking to one's knitting, and trying to divine the future. The consensus for change continued to broaden and everybody seemed to roll out a plan, but serious change will have to wait for the 2008 presidential and congressional elections — and perhaps will have to wait for a good while after that. Our prediction in last year's letter, that 2007 would be a year of "politics — and pragmatism — as usual," was largely borne out.

Viewed from a high level, most sectors of the health-care industry had another good or very good year. Profits at most major health plans continued to be strong, owing to effective trade-offs between pricing discipline, medical and network management, and reduction of administrative costs. Premium increases from health plans and rate increases from providers were both somewhat lower than in recent years — but they remain major issues, even if 2007 didn't feature those issues quite as frequently in the daily press. Although pharma had a less-robust year than other sectors, it did avoid a

showdown on direct government price negotiations for Medicare Part D, the government program that provides drug coverage for the elderly. However, both this win and the sector's continued profitability need to be viewed cautiously, since they mask the issues of failed compounds, a less-robust product pipeline, and ongoing price and utilization constraints. Hospitals continued to enjoy strong sector-wide performance, but 2007 was still a story of the rich getting richer. Little or no progress occurred in spreading the riches to small hospitals and nonacademic urban facilities. *Pricing and quality transparency* remained a slogan, with little substance behind it.

If things were fairly quiet in the news and few developments occurred on the innovation front, 2007 was still notable for at least one thing: Consumerism, broadly conceived, achieved mainstream status and secured a strong place in any pluralistic reform of the health-care system. Since Booz Allen Hamilton's first articles on the concept appeared in 1998, the shift to a retail market has gone from being a curiosity to being an idea with real traction in the marketplace and increasing acceptance from consumers. Not only is the health-care infrastructure for consumer-driven plans in place, but players at the health/wealth nexus are now gaining size and traction. In addition to efforts by several of the national plans, the Blues have established the Blue Bank to administer transactions and maintain balances for their consumer-directed health plan (CDHP) enrollees with high deductibles and health savings accounts. Reports of more large employers planning to switch to such plans in 2008 mean that double-digit, "S-curve" growth will likely continue. Moreover, employers' ongoing concern about the affordability of health benefits is leading to higher cost sharing and increased consumer participation in decision making in conventional products as well. CDHPs and other high-cost plans account for about 20 percent of the private market today and will certainly gain more share.

There were also signs of delivery system innovation in 2007, but

they received little public attention. While pay-for-performance and various grand-scale IT programs (like electronic medical records) continued to languish for lack of consensus and funding, fast-service clinics and concierge medicine offerings enjoyed increasing popularity. In fact, at least one new player may be "stitching" fast-service clinics together with rented PPO (preferred provider organization) networks and sophisticated Internet tools to deliver plans that provide more convenience, better clinical care, and lower costs. Another promising development is the emergence of branded offerings for high-cost specialty care. Several national brands (MD Anderson Cancer Center, Texas Heart Institute, and Geisinger Health System, for example) are beginning to offer packaged pricing and evidence-based care programs for cancer and heart patients. These "clinical packages" — early signs of the emergence of true "products" in health-care delivery — offer the hope not just of market differentiation for players, but of better outcomes, fewer hassles, and lower costs for consumers. Such "product plays" are likely to increase in importance and attractiveness.

Blockbuster asset plays were largely missing in 2007. The CVS–Caremark deal was the largest and most significant — furthering the shift in the marketplace toward consolidation between pharmacy benefit managers and drug retailers. Pharma saw several deals, including AstraZeneca's acquisition of MedImmune and Schering-Plough's acquisition of Organon, that were mostly driven by the need to improve product pipelines. The provider sector was fairly quiet except for the usual game of musical chairs played by the hospital chains. Interestingly, the breakup of several health systems in the not-for-profit sector grabbed as much press as any new activity. More subtle plays didn't make headlines, as multiple players (large health plans, mostly) created lash-ups with new entities — particularly in the rapidly emerging retail clinic space. This activity replaced the larger and more visible plays of recent years in which major

health-care plans added CDHP capabilities.

Although the structural "big plays" of recent years were missing, a series of unorchestrated but stunning shifts in risks and costs occurred in 2007. All of the shifts moved risk away from traditional players (i.e., payors). The biggest headline, of course, was the United Auto Workers' (UAW's) new deal with the auto industry, in which employers' liability for more than US$50 billion in health-care costs was shifted to the union. This cleaned up some balance sheets and potentially eased some price pressures, but the long-term goal (solvency for both parties) is uncertain. Other notable changes also occurred: CDHPs nearly doubled their enrollment, thus shifting additional costs (but not catastrophic risk) to consumers; private plans announced their intention to increase 2008 Medicare Part D premiums by 17 percent (for those staying with the same plan); and the shell game of Medicaid funding and eligibility rules continued to marginalize more and more citizens in the health-care system. For all these payors, seeking shelter from the storm was the goal.

The political front, unsurprisingly, was more active this past year, but the big fight on Medicare Part D never materialized. Instead, the focus of this round of political proxy wars in health care was the State Children's Health Insurance Program (SCHIP). Although billed publicly as a budget fight, it was equally significant as a battle between public and private solutions for the health-care system's problems. In other words, the SCHIP expansion was less a matter of money and more a matter of which programs, public or private, would expand to fill the need. Most congressional Republicans took the politically unpopular position of limiting the expansion of government involvement — risking voter retribution. We can expect more of these symbolic skirmishes in the run-up to the elections.

The states were more active in moving forward with various experiments and new programs. While Maine's Dirigo plan for the

poor and uninsured continued to limp along, owing to affordability concerns on the part of small employers and challenges funding the program, the new Massachusetts subsidized "pay-or-play" program was quickly oversubscribed and now needs a new appropriation (i.e., it will cost much more than expected). California's plan (essentially pay-or-play) remains stalled at the starting gate. These and other state programs can be viewed as laboratories testing various features of potential national programs — the better points perhaps being stitched into a full-blown national approach. But like the many plans offered by various presidential candidates, none can currently be viewed as the definitive solution.

The industry has long expected to see the effects of changing demographics (primarily aging), an epidemic of chronic diseases, and an inflationary spiral. These trends, combined with what must be viewed as mainstream acceptance of consumerism in the payor sector, have begun to catalyze early movement along long-dormant fronts: strategic experimentation in the provider sector, much of it from outside sources; philosophical shifts in employer-sponsored benefits; and government interventions involving coverage scope and levels. If 2007 was not a banner year for new developments in health care, it was certainly a year of populating the playing field with ideas and programs that are likely options for inclusion in an eventual national program of health-care reform. Those looking for swift closure on the topic of reform will need patience.

2008: The Calm before the Storm

The 2008 elections will determine the next occupant of the White House, but will not provide a strategic road map for industry players on how to navigate what will be a drawn-out series of health system changes and reforms. Even the slim possibility of a filibuster-proof (or veto-proof) Senate would be unlikely to speed along change of the magnitude and complexity likely to be proposed. The

good news is that all of the mainstream candidates seem to have a healthy respect for the difficulties involved in such change and the unintended consequences that may arise from it. A monolithic new federal approach to the entire health system is not going to arrive on Congress's doorstep early in 2009, since the agenda will already be full with taxation, war funding, and entitlement issues. This is not to say that significant change won't occur; it just will not happen in 2008 or even 2009.

The complexities and challenges are clear. Among the most important:

- Primary care is already in short supply and the aging population (of caregivers as well as patients) will make the problem worse — even before adding in demand from newly empowered citizens. Without major funds to train more doctors, nurses, and other midlevel practitioners, expanded access may remain elusive.
- Any new program to financially empower the uninsured (and others) will cost more — a lot more — regardless of what steps are taken in the near term.
- Tax policy may be the first skirmish for the new administration and Congress — first, to sort out the problem of the alternative minimum tax and its increasing burden on the middle class, but later to deal with deductibility of health plan costs for employers and individuals, continued tax exemption for health savings accounts, and the sources of funding for any increased costs of new programs. The ongoing war and the huge downstream costs of caring for the wounded will also need resolution before Congress can consider new entitlements or mandates.
- Meaningful management of any new program will require advanced IT capabilities (interoperable health information technology and electronic medical records) at the clinical and transaction levels. Public sector–private sector groups such as the

American Health Information Community (AHIC) have been set up to deal with standards and other challenges, but progress has been slow and no real advanced capability exists. Substantial progress in this area will take years and cost billions to implement.
- In proposing any sort of reform, stakeholders will need to be aware of unintended consequences that may bring major penalties or windfalls to particular sectors. For example, if a new system were to significantly reduce free care and bad debts for hospitals, how would such gains be minimized or repatriated? If similar factors improve doctors' income, how many of them might reduce their workloads and exacerbate current labor shortages?

Any proposals for reforming the current health-care system must, at a minimum, address these challenges, and they will likely take many months to work out. Given the range of issues involved and the number of sacred cows that may be gored, the coming health-care debate probably means full employment for every health-care lobbyist in the nation for years to come. Furthermore, all of these issues and problems are essentially independent of the direction chosen.

At this point, the shape of the reform — whether proposed by Republicans, Democrats, or a bilateral coalition — is virtually impossible to predict. That said, we can posit a number of characteristics of the outcome and the process:

- The reforms will be incremental and pluralistic. No proposal currently on the table will become the single answer, as evidence from various state experiments and matters of affordability will forestall radical, wholesale change. Given the size and continuing growth of conventional products such as HMOs, PPOs, and CDHPs (and other consumer-active plans) already in the mar-

ketplace, new approaches will almost certainly include these options going forward.

- Tax policy and the related issue of means testing for new benefits (and probably Medicare as well) will share center stage as critical factors to be worked out under any new plan. Interestingly, if tax policy makes medical costs and premiums fully deductible for individuals (as they are today for employers), those individuals will need to find coverage that effectively forms a large group to aggregate risk. Further defections from employer-sponsored plans would be likely. Means testing is apt to become one of the most divisive issues to be tackled under any reform scheme.
- Medicare Part D will very likely be pulled under a federal bidding process and perhaps stricter rules on generic drugs. This may simply push prices even higher for on-patent compounds, but the short-term gain for Medicare will be nearly irresistible.
- Significant change is unlikely prior to 2010 and is apt to be gradual thereafter. Although *urgency* is still the operative word, the players involved have a healthy respect for the complexity of the problem and the runaway costs that will result if they get it wrong. Even if some changes emerge in the first year of the new administration, implementation would take at least a year. Bigger changes would probably follow, being phased in starting in 2011.

The big issues won't be settled for a few years and the specifics are difficult to predict, but that does not mean that participants in the industry cannot do anything in the short term. A robust market exists for consumer-oriented products with more cost sharing. There are also problems that can be tackled immediately — with solutions that can form better businesses today and position players for a

range of eventualities. Patient care is still fragmented, coordination of care and services is marginal at best, connectivity and interoperability are largely absent, and, as always, costs are growing too fast. These problems continue to merit the serious attention of industry leaders.

Themes and Directions for Industry Players

In periods of uncertainty, the industry needs to develop new approaches that will deliver lasting value — independent of tweaks or tremors in the funding and organizing of the health-care system. None of the broad strokes currently on the table for health-care reform will improve today's bedside care or coordinate care and service throughout a patient's health-care episode. Quite simply, the clinical variability and often nightmarish bureaucracy of today's system are problems waiting to be addressed, and those who develop the solutions can expect huge returns. Knowing this, and having an awareness of the opportunities that health-care reform may create, we offer four high-level suggestions for the coming year.

1. Fix the big stuff — with a partner. Cardiac conditions, joint replacement, cancer, asthma, and diabetes account for a staggering percentage of total health-care costs. These conditions and associated procedures also create huge challenges for patients and caregivers in coordinating care and navigating the system. Throw into the mix the slow uptake of evidence-based medicine and lack of standardization, and the industry has a big problem, regardless of how reform plays out. All the key players — doctors, hospitals, health plans, and pharmaceutical companies — have a stake in finding a better answer for patients and their families. In fact, no single player in the health-care system can fix these problems, so joint efforts among payors, providers, and pharma companies are the most likely to bear fruit. State-of-the-art, branded ventures between leading providers and a select number of plans are starting to gain traction and will expand

into many more markets — perhaps with pharma playing a role. In short, investments in better care and better service will be rewarded.

2. Continue to explore "market maker" and other advisory roles. Under any pluralistic health-care reform measure, CDHPs and other plans encouraging consumer price sensitivity will continue to exist. The need for market makers that can provide reliable, unbiased cost and quality data is obvious but remains undeveloped. Regional market makers that can manage and use such data will be sorely needed, and many large plans are in a position to create such businesses. Although there is some risk that the market maker role may eventually devolve into that of an undifferentiated "utility," that scenario lies well in the future.

3. Consider whether a utility play makes sense. Infrastructure and experience with large federal programs are likely to be necessary ingredients in the market under any reform scenario. Today's Medicare and Tricare intermediaries are well positioned to benefit from reforms that move consumers into Medicare and FEHBP, the federal employees health benefits program. Companies that can offer online adjudication and payments, as well as those with the infrastructure to support electronic medical records, are also candidates for growth in any reformed health-care system.

4. Reimagine risk aggregation. Many of the current proposals for reform include means for severing the link between employment and health insurance (though employers may still make major payments). Although some approaches would roll up individual insurance risk into Medicare or the FEHBP, others could create new opportunities for aggregation of risk. This opens up the possibility for a new entity, whether private or public, to aggregate catastrophic risk and create new, "virtual" groups of individual policyholders. Such an approach would require changes to insurance laws and regulations, but imagining a solution now could help shape the changes needed.

Whatever the specific developments in the year ahead, we believe 2008 will be most memorable for the political signals sent by the elections, the continued development of CDHPs (and variants), the growth of comprehensive "product" offerings for specific conditions, and the beginning of a multiyear process to determine the direction of the future health system. ✚

Industrials

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ON BALANCE, 2007 was a solid year for industrial manufacturers, despite a slowing U.S. economy in the second half and fear of a 2008 recession. As of late November, the Dow Jones Industrial Average and the Standard & Poor's 500 Index had both gone up 4 percent. Unfilled orders for U.S. manufactured goods reached their highest levels in 15 years last fall, with export sales rising almost 14 percent for the year, according to the U.S. Bureau of Economic Analysis. However, industrial production fell by 0.5 percent in October, with U.S. capacity utilization declining to 81.7 percent from September's 82.2 percent.

Even more ominously, global prices for essential raw materials such as copper, steel, and plastic resin resumed their upward climb following a pause in 2006, while oil prices rose nearly 50 percent between January and November. Oil prices in excess of US$90 per barrel hit U.S. manufacturers especially hard, because the price is denominated in U.S. dollars, which have lost more than 25 percent of their value against the euro since 2000. Given the enormous U.S. current account deficit, the real surprise may be that the dollar's decline did not begin sooner. Meanwhile, credit market jitters and declining U.S. home values shook the confidence of consumers and businesses alike. Considering that more than 70 percent of the U.S. economy is consumer driven, it is only a matter of time before con-

sumers' diminished net worth and their mounting concerns about the future begin to dampen the overall economy, affecting industrial production.

These twin prospects — slow or negative economic growth and the likelihood of further declines in the dollar — form the backdrop for our views about important industrial manufacturing trends in 2008.

We believe the U.S. companies that will emerge as winners in the coming year will be those that best prepare for both:

- a harsh economic environment that will challenge every North American business to achieve greater end-to-end efficiencies
- expanding export opportunities via the cheaper dollar that will alter manufacturing strategies and global trade patterns for years to come.

The Good News about Bad News

The silver lining in an increasingly cloudy economic season is the incentive it provides to prepare for the next surge in growth. Well-managed companies respond to an economic slowdown by fixing inefficiencies, lowering costs, and becoming more competitive. The coming slowdown should be no different, because industrial manufacturers have ample opportunities to make themselves leaner and more globally competitive. Managing industrial companies through a period of slowing sales and rising commodity prices will be challenging because they are capital-intensive enterprises with high fixed costs. Even so, most could do a far better job of managing their operations.

Finding more creative ways to manage SG&A (sales, general, and administrative) and IT costs will likely prove to be an important lever. Many companies in this sector are conglomerates that have grown through serial acquisitions. Often the holding company attempts to preserve the autonomy of each business, rather than

overhauling and rationalizing key support activities. The evolution of shared-services techniques provides more sophisticated ways to consolidate common functions and streamline SG&A — without damaging the individual business unit's autonomy, flexibility, and customer focus. SG&A spending can be pared substantially through outsourcing or by creating shared services for such functions as IT, human resources, finance, and legal.

Another big lever for industrial companies will be the streamlining of working capital. Many publicly traded industrial manufacturers pay scant attention to the details of balance sheet management. By contrast, private equity investors have shown many enterprises how the simple act of bringing accounts payable and receivable into balance — say, by imposing 60-day settlement terms for both — can rapidly turn a company from cash negative to cash positive, yielding substantial savings in borrowing costs and creating greater financial flexibility. Enhanced rigor and greater transparency of current assets and liabilities will be of critical importance in a deteriorating business climate.

Better rationalizing of product and service offerings is another area of opportunity. Our past letters have discussed what we call Smart Customization — which means responding *selectively* to customer demands for increased customization of products and services. Put simply, companies need to ask themselves, Is each customer really paying for all the complexity we create in our operation in order to serve that customer's unique needs? The same principle applies when manufacturing companies provide customers with tailor-made *solutions* as opposed to products. By providing solutions without requiring that a customer pay for the additional expertise and service involved, manufacturers sacrifice efficiency and erode their margins, often without realizing the magnitude of the impact on customer profitability.

For example, one midsized industrial company sells only bare-

bones products to a giant discount retailer, knowing that the retailer pays only rock-bottom prices. Such a policy makes sense for the largest customers that have the scale and the resources to perform machinery installation, maintenance, and other after-sales support services for themselves. By contrast, when dealing with smaller retailers, the same industrial manufacturer provides highly tailored solutions that include extended warranties and financing, for which smaller companies are willing to pay a premium.

Finally, in a slowing economy with increasing competition for basic resources, winning companies will be those that become more adept at hedging strategies on the back end and at managing customer expectations on the front. They will also focus on developing more recession-resistant products made with fewer of the most costly resources. Many such products will feature reduced complexity, making them less expensive to produce and operate.

Expanding Global Opportunity

The declining U.S. dollar has positive implications for U.S. manufacturing. U.S. exports have already strengthened as a result of the weakened currency, and the nation's trade deficit has begun to improve as well. In 2007, Europe's exports to China actually fell, while U.S. exports were up 15 percent. In recent years, the U.S. consumer has been the most important driver of the global economy, despite short-term fluctuations in currency values. Given the phenomenal economic growth of India, China, and other emerging economies, the U.S. is unlikely to maintain such a central role in the future. The U.S. consumer's diminished purchasing power, coupled with the declining dollar, points to a permanent shift in the global marketplace. For industrial manufacturers and many other sectors, globalization must now become the top priority. Currently, 45 percent of the earnings of the S&P 500 are from non-U.S. sources, and this proportion will likely grow in coming years as exports expand.

The dollar value of non-U.S. earnings will grow as well, if the greenback continues its slide, as is expected.

For years, most American manufacturers have talked about globalization as a strategic focal point, but relatively few have actually reoriented themselves to become export-driven. For many, it is now imperative to do so. As part of that reorientation, U.S. manufacturers must begin developing localized capacity to service overseas markets. A major finding of Booz Allen's third annual analysis of the world's 1,000 largest corporate R&D spenders has important implications for all manufacturers: The most significant differences in returns on R&D investments are based on the extent to which companies directly engage customers to develop new products. Companies that focus on obtaining direct customer insight throughout the innovation process reported more than three times the operating income growth, 75 percent higher total shareholder returns, and more than two times the return on assets as compared to companies less focused on direct customer input.

Although this finding applies to companies' engagement with virtually all targeted customer groups, it is particularly relevant to customers and potential customers in developing economies. Just as Japanese auto manufacturers had to understand and master U.S. consumer tastes and behaviors as a prerequisite for growing their U.S. market share, U.S. industrial manufacturers must become truly embedded into foreign markets, and they must bring indigenous expertise into R&D efforts to ensure that they are actually designing for non-U.S. needs and tastes.

The 2007 Global Innovation 1000 study also reinforced an important finding from the previous year: The relative handful of companies that we call High-Leverage Innovators — those that consistently outperform peers while simultaneously spending less on R&D as a percentage of sales — have three things in common, regardless of which industry they're in. They share a well-integrated,

end-to-end approach to innovation at each step in the process; a strong understanding of the needs and desires of customers and end-users; and transparency throughout the innovation process, so that investment decisions and assumptions can be understood, debated, and anticipated across the enterprise.

The rapid expansion of global opportunities has further implications for top leadership. American manufacturers tend to house most of their top leaders within a single U.S. headquarters location, a practice that unfortunately hinders the adoption of a truly global mind-set. To be successful in the future, companies must abandon highly centralized management models and create senior management teams that are genuinely global in both structure and outlook. Companies can no longer afford to view international assignments as valuable developmental experiences for promising up-and-comers. Instead, as exports and global value chains become increasingly important, companies must assign their best and most experienced executives to operations in fast-growing markets — both because these markets are more volatile and because they represent the company's greatest future growth potential.

Even among industrial companies that have taken tentative steps toward truly globalizing, the primary footprint usually remains regional, not global. To be sure, expanding into Brazil or Mexico entails numerous challenges — not only in redeploying the company's own operations but also in terms of persuading critical suppliers to move as well. Sourcing materials and the logistics of ocean and rail freight pose significant challenges, as does navigating the complexities of tariff and tax rules. For example, even under NAFTA, a U.S. company that shifts operations to Mexico may fail to qualify for tariff exemptions if the savings in labor costs cause the total value added to fall short of certain regional value-added requirements.

In addition, American industrial manufacturers must learn to view the domestic market in the same way that global competitors

do. The declining dollar will make it easier and more attractive for foreign competitors in a widening array of product sectors to invest in U.S. operations, putting still more pressure on companies whose primary focus remains domestic. The Detroit Three U.S. auto manufacturers learned years ago that foreign auto companies could manufacture in the U.S. more profitably than they could. That same principle now applies to a growing array of companies making items such as recreational vehicles and large, hard-to-ship appliances.

Finally, globalization is increasing the burden on most companies to ensure product quality and sustainability. The lead paint found in Chinese-manufactured toys in 2007, along with tainted Mexican, Chinese, and Southeast Asian food exports, is making consumers in developed nations more wary of almost any product originating in a distant, low-cost country. There is also mounting concern among developed nations about the full spectrum of green issues — especially energy efficiency and carbon emissions. For example, Australia, California, and the U.S. Congress have all introduced legislation to ban the common incandescent lightbulb in favor of new, energy-efficient, compact fluorescent bulbs, and governments will soon focus on consumer appliances such as computers and televisions. It is only a matter of time before industrial products receive the kind of environmental scrutiny previously reserved for passenger vehicles. +

Media

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WHAT SHOULD SUCCESSFUL companies be doing to prosper in today's increasingly complex and challenging media landscape? At a recent dinner party for senior media executives, the themes presented here generated some passionate discussion; we hope they resonate with you and your organization as well.

It's no secret that the media and entertainment sector has undergone a seismic shift in recent years, with all forms of media experiencing their own breakthroughs and challenges. Every media player is fighting a war for relevance. Many traditional forms of media, even while they are still profitable and generating substantial cash flows, face a major growth challenge as more consumers spend a greater amount of time with digital media, and as marketers contemplate more dramatic shifts in their advertising spending. The implications for media valuations and performance are significant. For example, "new media" company market capitalization has, on average, achieved a compound annual growth rate of 34.7 percent, compared to an average of just 6.5 percent for the top traditional media companies. (This information is as reported by Bloomberg; new media companies include Google, Yahoo, eBay, and Amazon.com. Traditional media companies include Time Warner, Time Warner Cable, News Corporation, Walt Disney Company, Comcast, CBS, Viacom, Clear Channel Communications, The

McGraw-Hill Companies, Liberty Capital, Liberty Interactive, Gannett, and the Washington Post Company.)

Interestingly, the competition resulting from a fragmenting media landscape is affecting both digital and traditional media. Traditional players have been forced to cut costs to address declining revenue across analog businesses, and are pushing even their digital units to become more efficient and deliver greater profitability. The result: more innovative ways to cut costs. For one example, consider the book publishers that have taken outsourcing beyond production and printing to include editorial, research, and indexing services. Newspaper companies such as Gannett are redefining news operations through efforts such as "crowdsourcing" (that is, incorporating more reader-generated content). The broadcast networks have shifted more programming from scripted productions to reality shows. Finally, many video game companies are already offshoring a number of elements in their content development, and most anticipate expanding those initiatives in the future.

Merely cutting costs, however, isn't going to "cut it." We believe that media and entertainment companies need to recognize that the current moment is a tipping point, when business models and operations require real restructuring, not gentle tweaks. And where there is great change, there is also opportunity for market leadership and growth for players that recognize that the game today is being played by different rules — rules that require fresh approaches, capabilities, and strategies.

Media and entertainment companies that do not embrace change quickly enough may become acquisition targets or may be forced to make hasty changes that could have been made more deliberately earlier. When it comes to creating the media company of the future, the question is whether today's giants will act decisively now — or be further forced by the market to make high-profile changes at a later stage under even greater management duress.

A Vision of What's to Come

The media industry's greatest asset in the past was its ability to profit incrementally from virtually every new platform and every technology development, while using essentially the same recipe and business model. That ability is now challenged; media and entertainment companies cannot rely solely on the approaches and business processes that worked in the past. Our perspective is that employing a new set of capabilities will be essential for media companies that want to succeed in the years to come. Specifically, we believe the winning "media company of the future" has to excel along the following five dimensions.

1. Market sensing and consumer insight. Today's media environment puts consumers irrevocably and permanently in control. This situation is the natural consequence of having a myriad of outbound communications channels on the Web and elsewhere; a multitude of technologies that enable either ad skipping or outright ad blocking; an immense number of low-cost and amateur content providers; and a rich variety of on-demand and portable media, available on devices that range from wall-sized flat-screen TVs to pocket-sized iPhones. Consumers are no longer passive and conveniently available; they have instead become selective, skeptical, and demanding. Moreover, they are rejecting the information and entertainment they find irrelevant, and they are opting into those media that give them more of what *they* want: greater personalization, relevance, and interactivity.

Because consumers are the new boss in the media marketplace, insights into their individual behaviors and preferences, instead of merely their demographics, can make both content and advertising relevant and valuable — and those insights, therefore, have become the most important currency for the 21st-century media company. The smart media companies already recognize this reality and are moving their interaction with consumers from monologue to dia-

logue. This new focus acknowledges that *knowing* what will be relevant to consumers, rather than "guesstimating," may be the only antidote to the current loss of control felt by many in media, advertising, and marketing.

Benefiting from more direct dialogue with consumers, however, requires new capabilities, technologies, and assets. Scripps, for example, is notable for its marriage of database marketing and digital media, which it uses to develop deep, granular insights into the interests and behaviors of its consumers. Using various media vehicles, Scripps has forged a powerful feedback loop that provides the company and its brands, such as Food Network and HGTV, multiple opportunities for creating value: ad-supported, branded e-newsletters; online marketplaces that connect consumers directly with relevant merchants, and behavioral insights that the company uses to improve the effectiveness of its online content, advertising, and on-air programming.

Media companies will never dominate their consumers' lives the way they once did. However, they can know their consumers better than anyone else and seek to monetize that insight with their marketing and retail partners. For example, when the executives at NBC Universal describe a viewer of the Bravo cable channel, the fact that she is an affluent woman age 18 to 49 is just the starting point. They know her interests: They know that she is an early adopter of fashion and consumer electronics and that she is an "affluencer" — both affluent and influential among peers and colleagues. They also know how well she remembers the brands that are integrated into the Bravo environment and how favorably she considers brands that appear on Bravo. All of these insights require a focus that goes well beyond traditional audience research and drills down more deeply into behaviors. And as with Scripps, the resulting consumer-centric approach not only strengthens the value of a media brand and the distinctiveness of its advertising inventory, but also informs what

content will resonate and which media platforms will create the most valued touch points for consumers and advertisers.

2. A robust innovation engine. A second dimension integral to media companies' ability to grow profitably will be their ability to link consumer insights more directly to a structured process for product, brand, and business model innovation. Our recent work has found that the consumer insight capability described above is the foundation on which higher growth will be built. In fact, Booz Allen's recent study of the most successful innovators across all innovation strategies found that companies that *directly engaged their customer base* and *closely tied their innovation strategy to overall corporate strategy* had more than twice the return on assets and more than triple the growth in operating income achieved by survey respondents that didn't do those things.

Several other qualities are critical to building a robust innovation engine. The first is having *an ideation process that incorporates multiple sources and functions,* encouraging experimentation and mining the entire organization to fill the innovation pipeline. This approach solicits ideas from all levels instead of only from senior management, which is increasingly critical; junior staff may have a more intuitive understanding of new media products and technologies. Another important quality is *a consistent, structured gating process* for new and existing projects that considers their economic value and strategic fit with the rest of the portfolio. Many successful innovators are also using *an open innovation approach* that creates value by accessing a broader network of relationships with distributors, retailers, and customers. Finally, some players even house *a separate innovation function* inside their organizations to give the strategic development of new products and services more attention and breathing room and free it from the demands of daily firefighting.

We are seeing outstanding examples of all of these elements within the media industry. At ESPN, for instance, innovating

around the fan experience is an ingrained part of the operating culture, championed by the chief marketing officer. This focus has enabled ESPN to extend its brand from traditional and digital media into such events as the X Games, experiences like ESPN golf schools, and even sports-related travel. Apple's development of the iPod over a six-month period involved 10 different industry players sharing technology, staff, and business models. Google has proved that consumers' digital behavior is a great source for innovation; when the company observed that people were using the search engine to do price comparisons, it created Froogle. Finally, MTV Networks has recognized that its target consumers are shifting more of their entertainment time to social networking and video games. With that insight, the company has been moving to establish a leading position in digital virtual worlds — immersive 3-D digital environments that are developed explicitly to create a new high-engagement media platform for young people and the advertisers that want to connect with them through MTV brands. As of December 2007, MTV Networks was operating nine different "worlds" and had a 10th in development.

3. Dynamic information technology. Ever since video killed the radio star, traditional media has been surprised and occasionally defeated by new media technologies and applications that it wasn't prepared for, such as Napster and YouTube. Traditional media has also been held back from reaping the benefits of new production technologies that could generate revenue, cut costs, or do both. To some degree, these issues can be traced back to uncertainty over where responsibility for technological innovation should reside. Does it belong in the business units, since new technologies are integral to growth, or in IT, where expertise has traditionally existed? Certainly, there are advantages to giving technology more of a role in setting the business agenda, rather than relegating it to the back office. But the industry must develop greater technological acumen, and IT organ-

izations must become nimbler, more strategic, and more cost-effective. Media companies' technology resources must be able to deliver both more rapid development and better maintenance of new capabilities — especially concerning the integration of traditional analog with new digital activities — as well as drive down costs for the commodity services all IT organizations provide.

The first step in creating a more dynamic technological function is to structure the IT organization and its relationship to the business in a way that allows it to turn new capabilities on and off in weeks, rather than months or years. This requires development of a flexible but well-thought-out IT strategy: one that recognizes the uncertainty of today's media IT world and demonstrates the adaptability required to handle emerging technologies and small vendors. Such a strategy must determine a desired end state, set the path to get there, and enable adjustments to be made along the way. It also requires the willingness to invest in the IT "rock stars" who understand where the industry is headed and who can quickly translate that knowledge into new products and business support services, as well as the seasoned managers capable of handling large vendors and external service providers. Finally, the structure of the organization must include reporting lines and decision rights that enable flexibility in a fast-paced, consumer-driven, revenue-centered industry.

The same type of balance between strong management and rapid innovation is necessary in determining the IT organization's priorities. On the one hand, it must continue to better manage core technologies: back-office systems such as finance and HR, production and delivery technologies such as editorial production and traffic, and core infrastructure operations such as data centers, networks, and help desks. On the other hand, IT must be poised to support business innovation, with funds earmarked for investments in projects that may be unproven, but that have high potential in efficiency or revenue. As part of its long-term strategic plan, the

organization should leverage partners and vendors for such revolutionary technologies, both to access their innovation pipelines and to spread the risk. This requires a more modular approach, rapid prototyping, and greater flexibility in the construction of technology solutions and their integration into business functions.

A certain level of technophobia in traditional media is hardly surprising. IT has traditionally been a cost to be managed. In the past, IT spending was often curtailed, commodity services were rarely consolidated, and risks were often avoided. The future will require a "software company" mind-set, in which the product itself is software (or is software-enabled), investment occurs in new capabilities, talent is rewarded, and risks are managed.

4. Operational excellence. Today's media companies have diverse portfolios of products and services. They must constantly assess how best to manage their existing offerings and constantly reassess the company's operating model.

Instead, too often, media companies focus on cost cutting that may negatively affect the company's ability to invest in growth areas. The best cost reduction efforts lead to new capabilities, reinvestment, innovation, and growth. Instead of a slash-and-burn approach, we recommend a focus in four areas:

- **Invest in strategic bets.** Growth through mergers or acquisitions has exacerbated media companies' operating complexity. As a result, media companies must continually examine and refine their portfolios at every level to unlock underperforming costs and reinvest in growth areas. The industry abounds with examples of companies that are putting their money where it will grow: The launch of the CW merged the UPN and WB networks, improving scale and decreasing costs to adjust to slowing network and station revenues; CBS sold its low-growth, capital-intensive theme parks and several dozen of its 180 radio stations in order to reinvest and focus on its core businesses; Condé Nast

closed *House and Garden* magazine; NBC Universal reduced its investment in prime-time programming by moving to unscripted shows from 8 to 9 P.M. on most nights; and newspapers and magazines across the industry are rethinking their rate bases. Unfortunately, many more companies are holding on to struggling properties with little potential for improvement. For some traditional media properties that have been breaking even, at best, for the past few years, the future will only get worse. Furthermore, with a growing focus on innovation and new products, media companies must be more strategic about the length of time they allow a new property to underperform before breaking even or hitting margin targets.

- **Focus energy on high-impact, differentiated capabilities and shed the rest.** Across media, many functions have been outsourced to access the best creative capabilities, better meet uneven demand, and tap into scale benefits in such areas as movie trailer production, fulfillment services, photography, and writing. In addition, outsourcing and offshoring have brought new capabilities and 24-hour service to back-office functions such as HR, finance, and IT. More media and entertainment companies should look at all of their core knowledge and creative activities to determine where outsourcing and offshoring offer potential savings; they should also ensure that they have done the same for all back-office activities. There is an emerging base of very capable suppliers able to provide high-quality service for commoditized, routine functions. Many companies are reaping benefits by changing the way they think about delivering content: For example, the *Chicago Sun-Times* outsourced home delivery to the *Chicago Tribune.* Overall, the publishing industry is leading the charge, partnering or building offshore capabilities in editing, indexing, formatting, layout, production, and circulation. Companies such as Houghton Mifflin, McGraw-Hill, Pearson

Education, Reed Elsevier, and Wolters Kluwer have outsourced major parts of their operations to India, the Philippines, and other locations. We expect the trends for video to follow suit. For the most aggressive companies, outsourcing and offshoring create an opportunity to not only reduce costs but provide services to others, creating a new revenue stream (e.g., Hearst's CDS and Reed Elsevier's RBI for the magazine industry).

- **Realign the business model.** Because so many media companies have grown through acquisitions, many find upon closer examination that they have redundant or unnecessarily expensive functions. There are many opportunities to increase scale and cost-effectiveness while still being nimble. Real estate offers one example: Given that the world's typical media footprint is in expensive locations (e.g., New York, London, Los Angeles, and San Francisco), companies are finding themselves with multiple locations within the same high-cost city. Although moving and consolidating real estate is difficult owing to transition complexities and morale concerns, it can unlock significant savings and help bridge silo organizations. Additionally, companies can drive more savings by realigning staff to locations appropriate for their roles. Moving functions has the added benefit of providing a chance to reengineer calcified processes. There are often opportunities to streamline senior and middle management roles, especially in the wake of mergers and acquisitions. Classic span-and-layer analysis is a simple but effective tool to identify underleveraged senior staff and allow more junior staff to have greater opportunity and impact (improving morale and infusing more new ideas into the business). In most media companies, duplicate functions are common, performed without sufficient expertise because the company has not invested in new systems and best practices. In today's environment, unless a function is truly unique for a product, parallel organizations should be con-

solidated and centralized. Sourcing is the best example: Not only can cost-to-serve potentially be reduced; much more important, the cost of purchased goods and services, which for many companies represents several billion dollars, can be dramatically reduced by 10 to 20 percent across all commodities. We have even found that greater centralization is a good strategy for newsgathering, an area heretofore generally left alone. Companies are discovering that if a reporter is covering a story for multiple properties, both properties have better access and an ability to create higher impact through multiple platforms.

- **Modernize the operation.** The media business has long been a relationship-driven, hit-based business in which operational excellence focused on getting high-quality, professionally produced product out the door, sometimes without sufficient consideration for efficiency. Given the new challenges, we believe all media companies should ensure they have implemented leading practices that may not be sexy, but that are proven and highly effective. These include creating greater cost and productivity transparency across the organization to hold management accountable for spending — often at a line-item level, both in the budget and for day-to-day decision making. Trade-offs should be transparent and thoroughly discussed. Employing a zero-based budgeting approach can help to eliminate activities that do not provide sufficient value. Although it's usually an unpopular initiative, compensation should be realigned to recognize that media is now a mature business. Applying benchmarks, moving to 18-month appraisal cycles for high wage earners, and enforcing run-rate increase maximums are proven approaches. At the same time, more aggressive incentives could play a much larger role in both rewarding the "best and brightest" and putting pressure on managers who are not earning their way. All functions remaining in the organization should be reg-

ularly benchmarked and reviewed for use of best practices, from both inside and outside the industry. In areas such as supply chain management and production, for instance, many media companies lag the standards of other industries, in which companies have been counting pennies and searching for service improvements for decades. All efforts should place a premium on integrating digital and analog processes where possible, so data and information can be seamlessly converted. As always, quality is important; best practices and reengineering should provide an opportunity to achieve cost reductions without a decline in quality.

5. Strong Talent Management. There is one more dimension along which the winning media company of the future must excel. For many years, media and entertainment companies have focused their talent management on actors and actresses, artists and writers, and top executives. Far too often, more junior staff were not allowed to fully develop as they were kept in the same functional department or were tied to a more senior manager who took them along to each new place of employment. Traditional media companies are frequently unwilling to take risks with younger talent, alienating the staff who are most eager for change and investment. Even more problematic, today's younger workers often have priorities and values different from those of their baby-boomer bosses. There will always be extremely talented and dedicated people in the media business, but more and more, lifestyle issues, desire for job fulfillment, and the possibility of job switching take center stage. Given the increasing complexity of today's environment and the growing cross-functional nature of today's issues, we believe talent management best practices should be applied across the business and at all levels.

There are a number of qualities critical for successful talent management, and they should be applied across the organization

instead of reserved for the elite. Talent needs should explicitly be established from the top down on the basis of business priorities — not from the bottom up via the budgeting process. The company's leadership criteria should align with its strategy and be consistent with its culture, and should form the basis of a rigorous, disciplined evaluation process that clearly communicates expectations. High-potential employees at all levels should be notified of the company's interest in them, and senior management should hold regular reviews of those employees to outline specific actions for their development — including job rotation, transfers across business units, special projects, additional mentoring, and cross-functional training. Media companies need to break down the silos that exist between functions and between media properties — not just by restructuring the organization but by putting individuals in situations where they can interact with their peers, assess one another's strengths and weaknesses, and learn how the business operates more broadly. High-performing employees should receive visible rewards (financial, such as stock or a bonus, or nonfinancial, such as public recognition) based on their business performance and true value creation.

Some of these practices are already in place within parts of the industry, but they need to be more broadly applied. Ad sales organizations, for instance, have always been big proponents of rewarding performance, but these practices should expand to circulation, editorial, marketing, and production organizations, as well as back-office functions such as finance, IT, and HR. Within the media industry, Time Warner and NBC appear to be the most advanced, each having a department dedicated to developing talent or an explicit strategy to develop talent by putting employees in new roles. As the business challenges continue to grow and media properties continue to morph into overlapping businesses, more and more companies should adopt these progressive practices.

Create a Crisis

It is our strong belief that the path forward is becoming clearer. Although many elements will shift — technology and content, consumer engagement models and platforms, revenue streams and business models, players and priorities — media organizations' core imperatives will remain the same. Thus the challenge is how to move ahead quickly. Unfortunately, many companies are unable to make the leap without a looming crisis. For some, a look at the news, a stagnant stock price, or an impatient board is sufficient. For others, extrapolation of cost and revenue trends may show that a highly profitable business today will be breaking even, at best, in 10 years. The challenge is creating the feeling of crisis while maintaining positive morale. For that, strong leadership is mandatory.

Once they have a crisis mind-set, we believe the best companies will actually not engage in long, time-consuming, consultant-rich "opportunity identification" diagnostics. Rather, the need for speed and the fact these are proven opportunities mean that media companies should skip consideration of whether these concepts apply, and proceed to figure out where and how they do apply.

We believe 2008 will be another year of continued innovation, change, and challenge. It is our view, though, that now is the time for media and entertainment companies to reorient themselves toward the new capabilities that will be required for their long-term success. Whether it is bringing deep and unique consumer insight to the market, developing the ability to work with marketers to deliver the leads and sales they seek across all media, upgrading technological capabilities, enhancing talent management, or truly achieving operational excellence, it is now time to act. +

Technology

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ON BALANCE, 2007 was a strong year for technology, despite increasing indications in the second half that the U.S. economy was beginning to slow. As of late November, the NYSE Technology, Media, and Telecommunications Index had risen 12 percent over the previous 12 months and the Nasdaq Computer Index was up 10 percent, compared with a rise of just 4 percent in both the Dow Jones Industrial Average and the Nasdaq. Meanwhile, the Philadelphia Semiconductor Index fell by 17 percent. This drop reflects anemic global semiconductor sales growth of just 3.8 percent in 2007, reaching a total volume of US$257 billion for the year, thanks to Intel and AMD's price war and the continued "commoditization" of high tech's fundamental building block. This once again demonstrates that the relentless pace of Moore's Law can actually prove to be the enemy of revenue, as unit prices fall faster than unit sales growth can make up the difference. In addition, U.S. employment in high technology rose for a third straight year, reaching 5.9 million at midyear, its highest level since 2002. But the year's 2 percent growth in high-tech jobs trailed the 3.3 percent growth rate of overall United States employment, and 98 percent of these new high-tech jobs were in services, rather than in manufacturing.

Technology investments by private equity firms remained

strong in the first half of 2007 but fell off sharply in the second half, reflecting widespread concerns about the credit markets and the growing prospect of recession. Cisco added another $10 billion to its multiyear share-repurchase program, punctuating the need to employ mechanisms other than actual earnings growth to boost earnings per share. In September, 3Com agreed to be acquired by Bain Capital, with China's Huawei Technologies acquiring a significant minority interest. As with IBM's sale of its PC group to Lenovo three years earlier, it was an instance of a Chinese company's acquiring a substantial interest in a legendary U.S. technology brand. In another noteworthy deal, Avaya was acquired by TPG and Silver Lake — a further indication that more and more high-tech companies are mature businesses, with predictable cash flows that attract private capital. Venture capital investment was at its highest level since 2001, with continued strong investment in software and Internet-focused companies. Finally, anticipating a sluggish holiday shopping season, many U.S. technology retailers, such as CompUSA, announced that holiday sales would begin as early as 12:01 A.M. on the Friday after Thanksgiving in the hope of juicing volume.

In last year's analysis, we made five predictions about important trends — four and a half of which we feel were on target. Our predictions for 2007 were:

1. **The effectiveness of company R&D budgets would remain elusive.** Indeed, innovation spending by software and Internet companies, as well as by computing and electronics firms, accelerated above the pace of the previous five years, but it is still a challenge to link that spending to results, as we discuss further below.
2. **The offshoring of engineering activities would accelerate,** complementing the trend toward the offshoring of IT and business process services. Another bull's-eye.
3. **The use of GPS and RFID technologies would continue to broaden** — a

prognostication that proved only half correct. GPS applications have, indeed, proliferated and are becoming ubiquitous. RFID, however, has been slow to catch on; it may have to await significantly less expensive chips and may be superseded by new 2-D bar code technologies in many applications.

4. **Products simpler in features and more thoughtful in design would continue to win consumers' hearts and minds.** The backlash against product complexity continues to gain momentum, as consumers embrace products like the iPhone and other streamlined, easy-to-use devices.
5. **The CIO would return to prominence** as companies' aversion to making major infrastructure investments continued to abate. This prediction, too, hit the mark.

Prospects for 2008

Credit market jitters and falling U.S. home values have shaken the confidence of consumers and businesses alike. In addition, the dollar is likely to continue its decline, having already lost 25 percent of its value against the euro since 2000, and oil prices are unlikely to ease in dollar terms for some time to come. Most economists believe this "economic perfect storm" will significantly dampen the overall U.S. economy. The consensus view is that 2008 will be a year of slowing economic growth and possibly recession, prompting companies to adopt a far more cautious stance toward major technology investments, while consumers, too, will likely think twice before making major new discretionary purchases.

On a more positive note, the Semiconductor Industry Association forecasts that semiconductor sales will increase at a 7.7 percent compound annual growth rate between 2007 and 2010, reflecting the increasing proliferation of semiconductors in an ever-broadening array of applications. Over the next several years, that growth is likely to be driven by the emergence of strong new con-

sumer markets in Asia, Eastern Europe, and Latin America.

Our predictions for the year begin with the adjustments technology companies must make in anticipation of a slowing economy and weaker markets for their products. At the same time, we believe leading companies in the high-tech sector will need to continue to plan for the long term, adopting strategies and making investments that will position them to remain globally competitive. Here are five trends that we expect to gain further traction in 2008:

1. A slower economy and a weak dollar will intensify cost pressures and focus on non-U.S. markets.
2. The adoption of common industry standards will be a powerful spur to innovation.
3. The software sector's consolidation will pick up speed again.
4. Consumers' taste for all-in-one technology devices will grow even stronger.
5. The push will be on for greener technology products.

1. A Slower Economy and a Weak Dollar Will Intensify Cost Pressures and Focus on Non-U.S. Markets

With the weakening economy eating into margins, technology companies will spend much of 2008 rethinking their costs and pricing. They will also need to focus more closely on running cash-positive businesses by better managing their balance sheets and working capital. Bringing accounts payable and receivables into balance, for example, can be a major step toward generating consistently positive cash flows. Inventory management will be especially important for technology companies importing products into the U.S. market, with its weakened currency, while U.S.-based manufacturers can focus on inventory and balance sheet strategies that support increasingly attractive export opportunities. However, they will also need to determine how to handle cost pressures, given the extensive level of components and finished products brought in from Asia. Tech

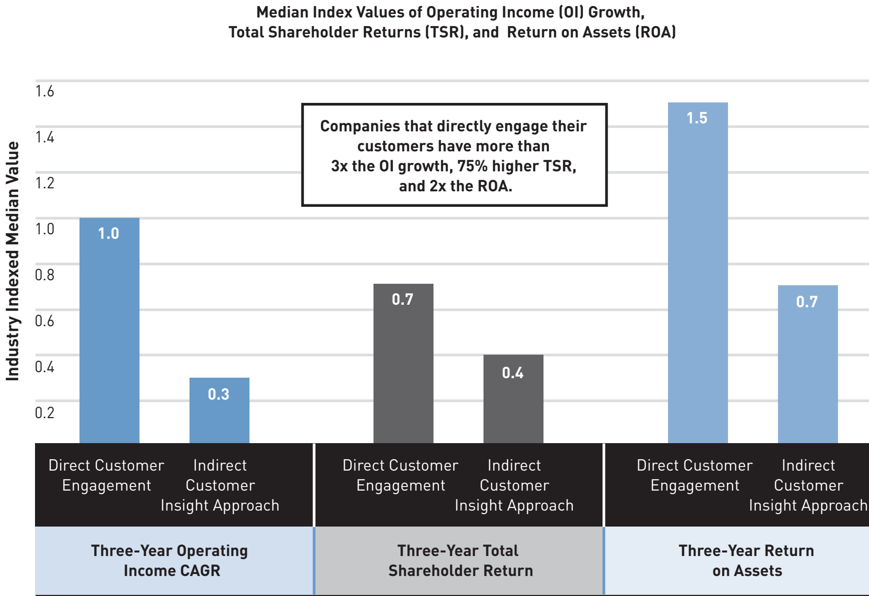
companies that have built a stronger reliance on non-U.S. markets have proven more resilient, as was most recently demonstrated by Hewlett-Packard's exceeding expectations, courtesy of the fact that 65 percent of its sales come from overseas markets, compared with only 40 percent for the average tech company.

In addition, as we noted last year, most technology companies continue to struggle with achieving higher, more consistent returns from their R&D expenditures. In 2007, our third annual Global Innovation 1000 study demonstrated anew that there is no statistically significant relationship between higher R&D spending levels and superior performance in terms of growth, profitability, or shareholder returns.

A major finding of Booz Allen Hamilton's ongoing study of the world's 1,000 largest corporate research and development spenders is that the most significant differences in returns on R&D investments are correlated with the company's degree of direct customer engagement. Companies that focus on close linkage and integration of their R&D process with customer insights and strategies reported more than three times the operating income growth, 75 percent higher total shareholder returns, and more than two times the return on assets as compared to companies less focused on directly capturing insight into customers' needs and behaviors. (See Exhibit 1.)

Although these findings are significant across virtually all industries, they are critical for high-tech companies, as they relentlessly pursue new markets while devoting a percentage of sales to R&D that is two to four times as high as that invested by than the typical manufacturing company. Just as Japanese automakers 30 years ago had to understand and master U.S. consumer tastes as a prerequisite for succeeding in the U.S., technology companies will need to understand and master customer needs here and abroad to ensure their sustained success.

Exhibit 1: **Direct Customer Engagement vs. Indirect Customer Insight Approach**



Source: Booz Allen Hamilton

2. The Adoption of Common Industry Standards Will Be a Powerful Spur to Innovation

A few decades ago, the rivalry between VHS and Betamax technologies had the potential to impede both the development and the consumer acceptance of videocassette recorders. Consumers rapidly adopted the technically inferior VHS, because a broadly available standard provided greater utility and value than the enhanced picture quality of Betamax. The VHS standard enabled the growth of a broad ecosystem of products and services and fostered more rapid innovation and customer adoption. The same issues, but with a different dynamic, are continuing to play out now in the rivalry between the Blu-ray Disc and HD DVD.

Although DVR sales rose 25 percent this year, many consumers are apparently holding off on buying high-definition disc players

until there is a clear winner. Once that happens, if history is any guide, an explosion of innovation will follow, with product manufacturers vying to introduce a broader range of high-definition video products based on a single standardized format. The continuing lack of a standard is impeding the growth of this entire sector.

In recognition of a similar principle, in the fall of 2007 Apple decided to lay open its iPhone technology, allowing outside players — like Salesforce.com — to modify the iPhone for use with their own software, such as in customer management. Apple clearly understands that creating and managing a standard enables a vital ecosystem that benefits the creator as well as its growing network of partners. Microsoft from its inception has demonstrated the power of de facto standards as a spur to outside innovators. By making its code available to software developers, it ensures that a range of software options will appear for each new operating system it releases. Taking a similar approach, Sun Microsystems CEO Jonathan Schwartz has now opened Sun's Solaris operating system to the Linux developer environment.

Collaborative networks are increasingly indispensable to the innovation process, given the complex, overlapping technologies that must be harmonized before companies can bring innovative technology products to market. The companies most likely to succeed are those that start by setting common standards and architectures for their products and then make them accessible to a network of collaborative innovators.

3. The Software Sector's Consolidation Will Pick Up Speed Again

The software industry began to consolidate rapidly a few years ago, with such mergers as Oracle/PeopleSoft and Symantec/Veritas. The trend will reassert itself in 2008. As larger software companies such as IBM, SAP, Oracle, and Microsoft exhibit signs of slowing growth

in their existing markets, they will turn more and more to acquisitions in new market segments with high growth potential. Already this fall, IBM strengthened its software position with the $5 billion purchase of Cognos; SAP snapped up Business Objects; and Oracle came close to acquiring BEA Systems. Among other factors likely to fuel acquisitions:

- Hardware and software companies alike remain under sustained margin pressures from an explosion of eager, low-cost competitors.
- The ongoing commoditization of both electronic components and software makes it increasingly difficult for vendors to charge premium prices based on product characteristics alone.
- Enterprise customers increasingly insist on integrated, end-to-end solutions and are shortening their lists of approved vendors as a means of making vendors more accountable and easier to manage. This makes it all the more likely that software vendors will attempt to increase their scale and scope as a means of gaining greater leverage and appeal with customers.

4. Consumers' Taste for All-in-One Technology Devices Will Grow Even Stronger

For years now, manufacturers of mobile communications devices have pursued the goal of all-in-one technology, but success has generally eluded them, as they have been unable to find the right balance of features. The response to the iPhone this year, with its stunning design, intuitive user interface, and amalgamation of communications and entertainment features, gives the all-in-one concept new momentum. Indeed, the response to the iPhone and its halo effect on sales of Apple computers — which are themselves designed around the all-in-one concept — has been such that Apple's total market capitalization now exceeds those of IBM and Hewlett-Packard, two companies with much greater revenues and profits.

Exhibit 2: **iPhone Analysis: Expert-Perceived Strengths and Weaknesses**

Strengths	Weaknesses
• **Multimedia design:** Building on Apple's core strengths, the features on the device emphasize mulitmedia applications: – iPod and phone functionality – Internet access on the Safari browser and e-mail/personal information manager – Support for desktop applications and Google Maps • **Customer-centric form:** Handset is a complete redesign of the iPod form factor, with a 3.5-inch screen that takes up nearly the entire face of the device: – approximately 11.6mm thick (compare to Motorola RZR, which is approximately 14mm thick) – speakerphone and conference-call capabilities • **Enhanced Web searching**: The iPhone offers a strong mobile Web-surfing experience vs. other 2.5G competitive handsets, owing to its form factor (wide-screen, multi-touch) and use of AT&T's NOC (network operations center), increasing the speed and efficiency of mobile Web browsing and downloading. • **Software:** The iPhone is based on the OS X operating system, which gives the device a larger developer base than most other platforms.	• **Touch-screen keypad:** Unlikely to satisfy heavy e-mail/data users or users of devices with QWERTY keyboards (e.g., Palm Treo). • **Short battery life:** Given iPhone's feature-rich design and large, high-resolution screen, adequate battery life could be a concern; moreover, battery is not removable. • **High price:** Apple introduced the device at $499 for the 4GB version and $599 for the 8GB version; most smartphone competitors cost $99-$199 (e.g., Motorola Q9). • **Limited distribution:** distributed only through AT&T in U.S.; similar exclusivity model to pursue internationally. • **Limited corporate use:** Unlikely to address IT security, manageability, and integration concerns.

Source: Analysts' reports, literature searches, Booz Allen Hamilton

The iPhone is not the first product to combine mobile telephony with music and video features, but it is the first to genuinely excite consumers. (See Exhibit 2.) Its success, we believe, represents a watershed moment in consumers' increasing reluctance to have to own, master, and recharge numerous devices. PC manufacturers are rushing to market with new all-in-one desktop models, such as the Gateway One, the Dell XPS One, and Sony's Vaio LT PC/TV. Hewlett-Packard has updated its TouchSmart PC, designed for kitchens and dens, giving it a touch-activated screen similar to that of the iPhone. Similarly, Sansui, Toshiba, and Westinghouse have introduced flat-panel TVs with built-in DVD players. The all-in-one revolution is all but certain to affect the development of other product sectors such as televisions, handheld computers, and mobile communication devices. Amazon's new Kindle e-book reader demonstrates a far greater sensitivity to creating real customer solu-

tions with an overarching focus on ease of use. Simple, elegant design using a bounded set of value-added features and functions will increasingly trump the "kitchen sink" approach to product design, which has been the bane of technology customers.

5. The Push Will Be On for Greener Technology Products

Local, state, and federal governments are increasingly concerned with the full spectrum of green issues. In 2005, Americans discarded 2.6 million tons of electronic goods containing toxic substances, and companies are beginning to respond before the issue attracts greater public concern. IBM, for example, recently announced a greener method for recycling scrap silicon and other waste from its process for manufacturing microprocessor wafers.

However, no environmental issue looms larger at the moment than energy efficiency. Australia, California, and the U.S. Congress have all introduced legislation to ban the common incandescent lightbulb in favor of new, energy-saving models. It won't be long before power-hungry appliances such as computers and televisions get similar attention, since they drain power from the electricity grid 24/7. Don't be surprised if regulators push for new TVs and computers that really turn off at night rather than lying in dormant "sleep" mode, during which they continue to draw power. Attention may also focus on computers' energy-hungry cooling mechanisms, with the possible revival of more efficient liquid cooling systems to replace air cooling. It is possible, as well, that more companies will try to emulate Google, which intends to generate its own electricity for its new data centers using wind and solar power. +

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BOOZ ALLEN HAMILTON has been at the forefront of management consulting for businesses and governments for more than 90 years. Providing consulting services in strategy, operations, organization and change, and information technology, Booz Allen is the one firm that helps clients solve their toughest problems, working by their side to help them achieve their missions. Booz Allen is committed to delivering results that endure.

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