SPRING 2009 VOL. 50 NO. 3



### **Rita Gunther McGrath and Ian C. MacMillan**

## How to Rethink Your Business During Uncertainty

Please note that gray areas reflect artwork that has been intentionally removed. The substantive content of the article appears as originally published.

# How to Rethink Your Business During Uncertainty

Recessions are a good time to disengage from businesses and practices that are weak and under pressure — but the volatile environment demands that managers let go of old approaches. BY RITA GUNTHER MCGRATH AND IAN C. MACMILLAN

THE DEPRESSING HEADLINES are only the latest manifestation of a trend that has been long in the making: the encroachment of Schumpeter's famous "gales of creative destruction" over what were once relatively stable, even mature, businesses.<sup>1</sup> Unfortunately, leaders of many of today's more mature organizations don't have the right mindset or practices to help their organizations survive. They grew up with management practices suited to a different age — one with higher barriers to entry, greater transaction costs, fewer capable competitors, growing and increasingly affluent markets and far less information. The environments they are facing now, however, are less predictable, more complicated and more volatile. (See "About the Research," p. 26.)



#### FINDINGS

- Launching reinvention requires candid assessment of the core's prospects and goals to orient the organization toward a compelling future.
- The economics of temporary advantages differ greatly from the standard economics of long-term, sustainable businesses.
- An opportunity portfolio can help manage across levels of uncertainty.



The result is that many of the core businesses involved with what may be boring old, mainstream, mature products and services that everyone has taken for granted — are themselves becoming more uncertain. As uncertainty increases, companies are finding themselves facing what we call a high ratio of "uncertainty to knowledge." This is a problem because making decisions based on old assumptions often leads to unfortunate outcomes.

Human beings have a tendency to embrace information reinforcing their pre-existing beliefs, while challenging or rejecting information that calls these beliefs into question.<sup>2</sup> At the same time, many established management tools, such as net present value,

#### **ABOUT THE RESEARCH**

We have been studying high-uncertainty situations, such as those encountered in the innovation process, for a combined 45+ years. Our previous research has involved longitudinal field studies and/or research and consulting partnerships with companies including DuPont, Citibank, Nokia, IBM and Swiss Reinsurance. For this article, we sought to understand whether the methods that were appropriate to innovation could also be applied to more conventional businesses that were struggling with increases in uncertainty. We thus examined the challenges increasingly dynamic markets pose to companies' core businesses. We found distinct differences between companies that were able to admit the core business was changing and take effective action and those that were not.

Through observation, interviews and archival research, we were able to learn how techniques for operating under high assumption-to-knowledge situations are relevant, whether the challenge is starting a new business or rejuvenating an older one. We are indebted to Mike McCallister, CEO of Humana Inc., who set us the challenge of figuring out what actions to take when the core business does, in fact, have a considerable amount of uncertainty to it.

> are built on a foundation of assumed certainty — that it's realistic to forecast likely cash flows into the future and discount them to today. In volatile business environments, such thinking is no longer practical.

> The good news is that other, more suitable approaches can be adapted from the practices used by successful fast-growth companies, entrepreneurs and corporate new-business-development groups that have always had to navigate unpredictable, resource-constrained and surprising environments. In an unpredictable world, trying to be right can lead managers terribly astray. Therefore, we favor a "discovery-driven" approach that emphasizes searching for the right answers and reducing the assumption-to-knowledge ratio.

> In this article, we will explore how to tackle the challenge of keeping the core business relevant by focusing on three practices: (1) initiating the renewal

process, (2) evaluating change options using financial models, and (3) mapping the future growth portfolio.

#### Practice 1: Initiating the Renewal Process

One of the great ironies of long-run success in business is that good performance tends to dampen the desire to invest in new opportunities and new businesses at the very time when a company can most easily afford to do so. Especially when a business is healthy and generating profits, it is all too easy to overlook the weak signals of performance decline; when a company realizes it needs to invest, the resources are often in short supply. However, the time to invest in a reinvigorated core is before you are forced to.

Define an attractive future. The reason managers are often in denial about the health of the core business is that no one has an incentive to take a big step back and ask, "What if our fundamental assumption that the business is healthy is incorrect?" Addressing the denial syndrome begins by realistically framing where you think the business might be, say, three years into the future. We borrowed this idea from successful entrepreneurs. They don't ask, "How big is the market?" Instead, they invariably want to know: "Is the market big enough for my aspirations?" In other words, you need an idea of the concrete results that would constitute success before you can begin to assess whether the core business is likely to help you get there.

E. I. du Pont de Nemours and Co. provides a useful example. For decades, the diversified chemical company had delivered steady, reliable earnings growth with relatively few surprises. But its healthy earnings masked a more sinister pattern. In 1999, then-CEO Charles Holliday and his team realized that while the company had been making significant productivity gains (through the deployment of Six Sigma quality practices, for example), revenue increases were lagging. Indeed, throughout the 1990s, DuPont's revenue growth averaged only 0.6%.

Without growth in commoditizing and highly competitive markets, the company's long-term sustainability was in doubt. In management's view, the core business was not capable of realizing the company's growth ambitions. Recognizing this, DuPont executives set a revenue growth target of at least 6% annually; the technical parts of the organization were charged with generating 33% of sales from products that were less than five years old.<sup>3</sup>

Determine which programs and projects are most likely to get you there. Once management acknowledges that the core business is in trouble, the next challenge is to determine which projects, initiatives and other activities can drive the company's growth ambitions. This often leads to decisions to invest less in enhancing the core business and more in new, rapid-growth segments. The more specific a company can be about which kinds of initiatives will support its future strategy, the more momentum it can create.

At DuPont, they addressed this challenge by creating five "growth platforms," each charged with delivering specific growth targets. Supporting the organizational effort was an intense transformation program known as the "Knowledge Intensive University." The idea was to steer DuPont away from commoditized product-based businesses and into growing, largely knowledge-intensive new businesses. As this effort got underway, DuPont spun off its stillprofitable textile business and entered more uncertain businesses with better growth prospects, such as biobased materials and organic light-emitting diodes. The company also began a major expansion into emerging markets, where, according to CEO Ellen Kullman, it is now enjoying a compounded growth rate of 16%.<sup>4</sup>

#### Document and test your fundamental assump-

tions. As the overall business environment changes and the stability of core businesses becomes less certain, managers need to be willing to take a few steps back and reassess. It could be that things they thought they "knew" about their business are actually assumptions that may or may not still correspond with reality.

At Avon Products, Inc., for example, CEO Andrea Jung has had to reinvent the core business not once but twice! Jung was hired in 2000 to turn around the oldfashioned, door-to-door seller of beauty and personal care products. Her first years were triumphant as she expanded internationally, broadened the product line and invested in other innovations to power annual growth in excess of 10%. But reversals in international markets slowed growth dramatically in 2005 — so

WWW.SLOANREVIEW.MIT.EDU

much so that Jung decided she needed to revisit her basic assumptions about the business. As she put it, she had to "fire myself on Friday and rehire myself on Monday." One assumption was that local tastes demanded local decisions. In an effort to reduce costs, Jung centralized such activities as marketing and manufacturing — and eliminated seven full layers of management. Wall Street applauded these moves widely, suggesting that the company was "back on track."<sup>5</sup>

Create enabling structures. Most complex organizations are designed to protect and preserve the status quo. As a consequence, serious efforts to renew the core business almost always require changes in the organization. At DuPont, the move toward new growth businesses was driven by a reorganization of the traditional businesses into new growth platforms that superseded the old productcentered units. Leaders at International Business Machines Corp. similarly found that the established business units were detrimental to efforts to create growth businesses. In response, IBM launched what became known as the "emerging business organization" program, in which new businesses are pulled out of established operations and given their own focus, with a direct line to the senior executive team. Nokia Corp. has historically incubated new businesses in separate units that are tasked with growth. The goal is to eliminate the power of resisters and naysayers.

#### Practice 2: Evaluating Change Options Using Financial Models

Having identified ways to move the organization past a reliance on the existing core business, managers need to construct a financial model that shows what the new strategy might deliver. The idea here is to recognize that in dynamic environments many strategies are themselves dynamic and will not last forever. It is important to build this perspective into the financial projections.

Managers have traditionally been taught to think of strategy in terms of building "sustainable" competitive advantages. But in the current environment, this perspective is in serious jeopardy. And when many advantages are only temporary, how you should spend resources, the time frame over which you calculate paybacks, even the expectations you want to establish with shareholders and employees all need to remain flexible.

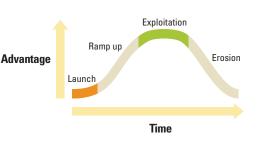
Attach financial assumptions to each phase of your business's lifespan. In addition to the financial projections, there are four time-related inflection points in any new initiative that will have significant implications on profitability. (See "Modeling Transient Competitive Advantage.") First, you need to estimate how much time it will take to launch a particular initiative. Slow launches are costly because you are putting resources into them and delaying the period during which you could begin to extract revenues. Once the initiative has been launched, the next issue is the time needed to ramp it up to achieve commercial scale. Again, the longer this is, the longer

#### **MODELING TRANSIENT COMPETITIVE ADVANTAGE**

By modeling the four phases of business lifespan, managers can predict/project the "wave" of competitive advantage for a product or service, and determine how long they can expect to enjoy better margins on it than competing organizations. Each advantage

has a launch stage, a rampup period, exploitation if you are fortunate and a period of inevitable erosion.

Slow launches and long ramp-up periods are expensive because they involve committing resources before realizing revenues or profits.



it will take to generate profits (or, the more lost opportunities for revenue will be incurred). Third, you need to think about how long you can expect to enjoy a competitive advantage before competitors respond and the market changes. Many people assume a business that has been launched successfully will continue to thrive in perpetuity. Finally, you need to estimate what you expect your total investment will be. Moreover, for each initiative you will need to set a discount rate; the riskier the venture, the higher the discount rate needs to be (which means the opportunity needs to be commensurately large).<sup>6</sup>

We use a technique based on the logic of net present value (NPV). That is, it analyzes the value of cash flows that an investment or project adds to the company, but it is specifically adapted for fast-paced, high-uncertainty situations; modeling the "pattern of transient advantage" provides a good estimate of the financial performance of the new initiatives you are trying to drive. It provides a good snapshot of the flows of returns and expenses over the life of a project without getting into all of the detail that a more complete NPV analysis would entail.<sup>7</sup> Because the calculations are deliberately simple, we refer to this analysis as a "bare-bones" version of an NPV statement.

#### Compare competing alternatives and speeding

**decisions.** The bare-bones NPV analysis can give managers a sense of whether the suite of initiatives they have planned to undertake as part of Practice 1 can drive the financial results the company needs. It allows managers to assess core business variables as well as the possibilities from new initiatives, and it permits them to examine the impact erosion or cannibalization of the core business might have.

For instance, software giant SAP Aktiengesellschaft is currently wrestling with the challenges its core business will face from the "Software-as-a-Service" model (SaaS). The traditional SAP business model involved receiving a substantial licensing fee up front for the software and then an annual fee of 17%-18% of the original license for upgrades and maintenance. By contrast, SaaS has no up-front fee; instead, customers pay a monthly fee for each user on the system. Although in both cases costs are incurred up front, the SaaS revenues take longer to accumulate and the payback period is far longer. Although SAP announced its entry into SaaS with great fanfare in 2007 (estimating it would generate revenue of \$1 billion by 2010), it has since scaled back its ambitions amidst speculation that it had dramatically underestimated the total operating costs of running the SaaS business as well as the threat the model might pose to its highly profitable core.8

An interesting aspect of weighing the advantages of one strategy versus another is that it highlights the impact of delays anywhere in the process on the total project value. We recently saw a striking example of this in the course of modeling a proposed new product launch for PPG Industries Inc., the Pittsburgh-based manufacturer of paints and industrial coatings. The company was preparing to launch the new product, although senior executives were not completely convinced that it made sense. We calculated that a six-month delay would decrease the project's net present value by over \$2 million (assuming the other parameters remained the same). With this insight, the project team went back to the leadership with a renewed sense of urgency and decided to accelerate the launch.

#### Practice 3: Mapping the Future Growth Portfolio

If the role of the core business in the context of the overall set of activities is changing, there can be profound implications for how managers allocate resources across different levels of uncertainty. As the strategy changes, the change should be reflected in the projects the company pursues and in the things it

stops doing. Unfortunately, many companies are remarkably ineffective in aligning their strategies with the activities they are actually investing in. A useful tool to help companies visualize what they are actually doing is something we call an "Opportunity Portfolio." It involves evaluating the full range of projects against both market uncertainty and capabilities uncertainty. (See "Mapping an Opportunity Portfolio.")<sup>9</sup>

The efforts of Verizon Communications Inc. to completely remake itself illustrate the kind of portfolio thinking that such an analysis can provoke. Back in the 1980s, it would have been hard to conceive of a more stable, long-term business than operating "plain old telephone service" in geographically protected areas with minimal competition. The so-called "Baby Bells" that emerged after the breakup of the old AT&T Corp. monopoly were regarded as safe, if boring, havens. But by the late 1990s, there were signs of trouble. The number of access lines operated by the Bells began to contract as Americans began to take advantage of wireless alternatives and broadband started to become a practical reality for many households. In 2002, the number of access lines fell by 2.7%.<sup>10</sup> By 2004, the Baby Bells reluctantly began offering Voice over Internet Protocol services to compete

with a raft of low-cost upstarts.<sup>11</sup>

WWW.SLOANREVIEW.MIT.EDU

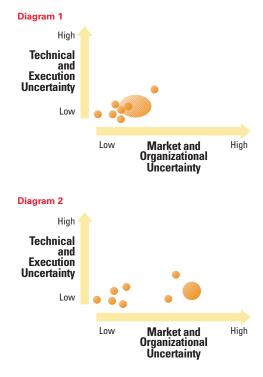
Ivan Seidenberg, Verizon's long-time CEO, decided to pursue an aggressive strategy of moving out of their traditional, slow-growth core businesses such as landlines and into more competitive and risky, but faster-growth, areas including wireless and data services. In 2001, he was expecting annual revenues over \$100 billion, with 35% coming from wireless and 20% from data. He also anticipated that traditional voice revenues would represent only about 35% of the total book of business, down from 60%.<sup>12</sup> Since then, Verizon has shed slow-growth units (even those with solid cash

#### **MAPPING AN OPPORTUNITY PORTFOLIO**

To construct an Opportunity Portfolio, you need to map all of your organization's major initiatives against two types of uncertainty. Across the horizontal axis is uncertainty about markets — internal and external constituencies for your company's offerings. On the vertical axis is uncertainty about capabilities — typically, technical or execution uncertainties. Projects in less uncertain spaces have lower levels of uncertainty (and therefore lower assumption-to-knowledge ratios); those in more uncertain spaces have higher levels of uncertainty (and higher assumption-to-knowledge ratios).

tion-to-knowledge ratios). We differentiate between projects designed to enhance the core (and that are therefore intended to drive more of today's business) from new platforms, which might represent tomorrow's businesses, and what we call "options for the future" ---investments made today in uncertain ventures that may or may not succeed.<sup>i</sup> Like financial options, options for the future buy you the right, but not the obligation, to make additional investments going forward.

Opportunity Portfolios will look different depending on the makeup of the organization's projects (see diagrams 1 and 2). When the portfolio is tilted toward the core (as in diagram 1), most of the projects will be located in the low-uncertainty part of the map. The size of each bub-



ble represents the estimated NPV of that initiative today. If we saw a map like this one, we'd be concerned that the company is not making enough investments in future opportunities.

Now let's consider a more future-oriented map (diagram 2), where the core business is suddenly much less certain than it was. Not only has the core business (represented by the big bubble on the right) become smaller, it has also moved into a part of the map where there is much more uncertainty, meaning that the certainty of achieving these payoffs is probably much lower. At this point, management may need to reallocate resources, shifting the mix of projects away from declining or increasingly uncertain businesses toward businesses with brighter prospects. flows) such as phone directories, and in their place and using the cash these businesses have spun off the company has made massive investments in such new areas as fiber optic service technology (which it markets as FIOS) to enable it to compete with cable companies in offering television and Internet services. Seidenberg has done what many companies fail to do: make aggressive investments in the company's future while the core business was still generating substantial cash.

One of the stiffest challenges involved in exiting the core business and repositioning the company in growth spaces is convincing the investment community that this is the right thing to do. Verizon's stock was "battered" for years as it poured money into broadband offerings. Beginning in 2007, however, articles with titles such as "Verizon's Gutsy Bet" started to appear.<sup>13</sup> And in early 2009, an article in *Barron's* about Verizon began like this:

In times that are anything but normal, it pays to invest in a company that delivers reliable, business-as-usual results, keeps its focus on avenues of growth and holds the promise of market-beating returns. Verizon Communications, the New York-based telecommunications giant, fits the bill nicely.<sup>14</sup>

The vindication must have been gratifying for Verizon, given the skepticism that greeted the company's bold moves away from its former core business.

AFTER EVERY RECESSION, the world that emerges is different from the old one. We believe a discoverydriven approach can help managers redirect their companies and begin to shape the world that will emerge when the current crisis passes. This is the time to disengage from businesses, initiatives, people and other resources that are weak or under pressure and likely to erode in terms of future effectiveness. It is the time to reconfigure the core, redeploying resources away from the old core into new opportunities for growth.

**Rita Gunther McGrath** is an associate professor at Columbia Business School. **Ian C. MacMillan** is the Dhirubhai Ambani Professor of Innovation and Entrepreneurship and the Director of the Sol C. Snider Entrepreneurial Research Center at the University of Pennsylvania's Wharton School. Their new book is titled Discovery-Driven Growth: A Breakthrough Process to Reduce Risk and Seize Opportunity (Harvard Business Press, 2009). Comment on this article or contact the authors at smrfeedback@mit.edu.

#### REFERENCES

**1.** J. Schumpeter, "Capitalism, Socialism, and Democracy" (New York: Harper Perennial, 1942).

**2.** D. Kahneman, P. Slovic and A. Tversky," Judgment Under Uncertainty: Heuristics and Biases" (Cambridge: Cambridge University Press, 1982).

3. M.S. Reisch, "DuPont Gets an Overhaul," Chemical & Engineering News 80, no.15 (2002): 22-27.

**4.** "Ellen Kullman to Investors: Growth from Emerging Markets," September 18, 2008, at www2.dupont.com/ Media\_Center/en\_US/index.html.

5. E. Byron and K. Richardson, "Avon Makeover Isn't Cosmetic: Multiyear Turnaround Appears Solid, With a Buyback Coming," Wall Street Journal, Oct. 22, 2007, sec. C, p.1; and E. Byron, "Is Avon's Latest Scent Sweet Smell of Success? Bold Moves, High-Touch-Meets-High-Tech Business Model Help CEO Andrea Jung Boost Sales of Sluggish Company," Wall Street Journal, Oct. 15, 2007, sec. B, p. 1.

**6.** I.C. MacMillan, "Controlling Competitive Dynamics by Taking Strategic Initiative," Academy of Management Executive 2, no. 2 (1987): 111-118.

**7.** A spreadsheet for calculating this abbreviated NPV can be downloaded at www.discoverydrivengrowth.com by clicking on the "tools" tab.

**8.** L. Abboud and A. Lagorce, "SAP Profit Slumps: New-Software Rollout Is Slowed," Wall Street Journal, May 1, 2008, sec. B, p. 6.

**9.** R.G. McGrath and I.C. MacMillan, "Discovery-Driven Growth: A Breakthrough Process to Reduce Risk and Seize Opportunity" (Boston: Harvard Business Press, 2009).

**10.** R. Waters, "Baby Bells Hit by a Series of Wrong Numbers," April 16, 2002, www.FT.com.

**11.** "The Phone Call Is Dead; Long Live the Phone Call," Economist, Dec. 2, 2004, 69.

**12.** S. Mehta, "Don't Call Me Baby," Fortune, April 16, 2001, 162-168.

**13.** S. Rosenbush, "Verizon's Gutsy Bet," Business Week, Aug. 4, 2003, 52-62.

**14.** S. Ward, "You Can Really HearThem Now," Barron's, Feb. 2, 2009, 24.

i. A.K. Dixit and R.S. Pindyck, "Investment Under Uncertainty" (Princeton, New Jersey: Princeton University Press, 1994); A.B. van Putten and I.C. MacMillan, "Making Real Options Really Work," Harvard Business Review 82 (December 2004): 134; and I.C. MacMillan and R.G. McGrath, "Crafting R&D Project Portfolios," Research-Technology Management 45, no. 5 (September 2002): 48-59.

#### Reprint 50308.

**Copyright** © Massachusetts Institute of Technology, 2009. All rights reserved.

30 MIT SLOAN MANAGEMENT REVIEW SPRING 2009



#### PDFs - Reprints - Permission to Copy - Back Issues

Articles published in MIT Sloan Management Review are copyrighted by the Massachusetts Institute of Technology unless otherwise specified at the end of an article.

Electronic copies of MIT Sloan Management Review articles as well as traditional reprints and back issues can be purchased on our Web site: *sloanreview.mit.edu* or you may order through our Business Service Center (9 a.m.-5 p.m. ET) at the phone numbers listed below.

To reproduce or transmit one or more MIT Sloan Management Review articles by electronic or mechanical means (including photocopying or archiving in any information storage or retrieval system) requires written permission. To request permission, use our Web site (*sloanreview.mit.edu*), call or e-mail:

Toll-free in U.S. and Canada: 877-727-7170 International: 617-253-7170 Fax: 617-258-9739 e-mail: smrpermissions@mit.edu

Posting of full-text SMR articles on publicly accessible Internet sites is prohibited. To obtain permission to post articles on secure and/or password-protected intranet sites, e-mail your request to smrpermissions@mit.edu.

**Hyperlinking to SMR content:** SMR posts abstracts of articles and selected free content at www.sloanreview.mit.edu. Hyperlinking to article abstracts or free content does not require written permission.

MIT Sloan Management Review 77 Massachusetts Ave., E60-100 Cambridge, MA 02139-4307 e-mail: smrorders@mit.edu



Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

