



The power of business models[☆]

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Abstract Over the past few years, “business models” have surged into the management vocabulary. But, while it has become quite fashionable to discuss business models, there is still much confusion about what business models are and how they can be used. In fact, business models can serve a positive and powerful role in corporate management. While other authors have recently offered definitions of “business model,” none appear to be generally accepted. This lack of consensus may in part be attributed to interest in the concept from a wide range of disciplines, all of which have found a connection to the term. To help managers better understand business models, this paper reviews the extant literature and identifies and classifies the components of business models cited therein. Components were classified into four primary categories: strategic choices, the value network, creating value, and capturing value. To address the absence of a generally accepted definition of a business model, a new definition that integrates and synthesizes the earlier work is offered. Based on the proposed definition, business models are then contrasted with strategy. Four problems associated with business models are also discussed.

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1. Business Models

For many years, Sun Microsystems enjoyed considerable success by bucking the industry trend toward standardized chips and software (Tam, 2003). Sun made the strategic choice to offer more powerful and more expensive computer solutions

based on proprietary hardware and software, which worked well as long as Sun was able to maintain a performance advantage. However, standardized chips eventually matched the performance of Sun’s proprietary chips, and standardized software offered functionality similar to Sun’s. As a result, Sun has seen its quarterly sales drop by more than 40% since their peak in 2001, and its stock price decline to under \$4 per share from a high of over \$60 per share.

In late 2002, after a probing meeting with the head of Sun’s low-end server business, Sun’s CEO agreed that the firm would add a line of cheaper servers based on Intel chips. This strategic choice

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marked a clear departure from Sun's existing business model, but there is no evidence that this change has helped the company's business. In fact, revenues for the quarter ending June 30, 2003 were down 13% from a year earlier. Indeed, one might reasonably conclude that Sun's "business model" was and remains broken. Certainly, the levels of misdirection and confusion in Sun's engineering and sales organizations, reported recently in the *Wall Street Journal*, suggest that, at a minimum, Sun is experiencing some problems communicating its new model internally.

Furthermore, there is little evidence that Sun executives considered issues of internal consistency as they reviewed alternative strategic choices. In particular, the choice to offer less expensive servers needs to be evaluated in terms of the added pressure this will place on Sun's more expensive hardware. In addition, a fundamental element of Sun's traditional strategy has been plowing a significant portion of revenue back into R&D in an effort to maintain its performance advantage. Making the strategic choice to offer less expensive solutions will likely have a significant impact on Sun's ability to maintain its current R&D funding levels, which in turn will have implications regarding its ability to compete on the basis of higher performing solutions.

It is hard to argue that there is a single "right" strategic answer for Sun. However, it is similarly difficult to believe that all of the cause-and-effect relationships within the new business model have been carefully considered. Based on media reports and customer complaints, it is fairly obvious that Sun's executives have not been successful in explaining their new model. While business models can be powerful tools for analyzing, implementing, and communicating strategic choices, there is no evidence that Sun has successfully harnessed that power.

Over the past few years, "business models" have surged into the management vocabulary. In the mid-1990s, "dot-com" firms pitched business models to attract funding. Now, companies of all sorts in virtually every industry rely on the concept as well; in fact, approximately 27% of Fortune 500 firms used the term in their 2001 annual reports. The media have certainly gotten on board also. Within major magazines and journals, only one article in 1990 used the term "business model" three times or more; by 2000, well over 500 articles fell into that category.

While it has become quite fashionable to discuss business models, many executives remain confused about how to use the concept. For

example, in a recent Accenture study, in which one of the authors took part, 70 executives from 40 companies were interviewed regarding their company's core logic for creating and capturing value: the basis of a business model. Surprisingly, 62% had a difficult time describing succinctly how their own company made money (Linder & Cantrell, 2000), and it appears that Sun's executives may be similarly confused. Strategist Michael Porter (2000) has referred to the phrase "business model" as part of the "Internet's destructive lexicon"; we disagree. We believe that business models can in fact play a positive and powerful role in corporate management. Before exploring that role in more detail, it is first necessary to understand exactly what constitutes a business model.

2. Desperately seeking definition: Identity crisis of the business model

To be sure, many authors have offered definitions of the term "business model." Our own review of relevant literature uncovered 12 definitions in established publications during the years 1998–2002. None of these definitions, however, appears to have been accepted fully by the business community, and this may be due to emanation from so many different perspectives (i.e., e-business, strategy, technology, and information systems), with the viewpoint of each author driving term definition; by peering through different lenses, authors are seeing different things.

In fact, across these 12 definitions, one can find 42 different business model components: unique building blocks or elements. As Table 1 illustrates, some of these components appear in only one definition, but others are seen time and time again. To gain additional insight, we developed an affinity diagram (Pyzdek, 2003) to categorize the business model components that were cited twice or more (affinity diagrams are a popular "Six Sigma" tool for organizing ideas into categories based on their underlying similarity; affinity diagrams help to identify patterns and establish related groups that exist in qualitative datasets). The resulting affinity diagram (see Fig. 1) identified four major categories: strategic choices, creating value, capturing value, and the value network. To develop the affinity diagram shown in Fig. 1, two of the authors, along with a graduate student, worked independently to (a) cluster into categories the 20 business model components cited two or more times and (b) develop a descriptive name for each

Table 1 Components of a business model

	Timmers (1998)	Hamel (2000)	Afuah and Tucci (2001)	Amit and Zott (2001)	Weill and Vitale (2001)	Dubosson-Torbay et al. (2002)	Magretta (2002)	Rayport and Jaworski (2002)	Van Der Vorst et al., 2002	Hoque (2002)	Chesbrough (2003)	Hedman and Kalling (2003)
Context	E-Business	Strategy	E-Business	E-Business	E-Business	E-business	Strategy	E-Business	E-business/SCM ^a	Technology	Strategy	IS ^b and strategy
<i>Components</i>												
Value network (suppliers)	X	X			X	X			X	X	X	X
Customer (target market, scope)		X	X			X	X	X		X	X	
Resources/assets		X		X		X		X		X		X
Value proposition			X			X	X	X	X		X	
Capabilities/competencies		X	X	X		X						X
Processes/activities		X	X			X			X			X
Revenue/pricing	X	X	X			X					X	
Competitors								X		X		X
Cost						X	X				X	
Information flows	X			X	X							
Output (offering)				X				X				X
Product/service flows	X			X	X							
Strategy		X								X	X	
Branding						X				X		
Customer information		X				X						
Customer relationship		X				X						
Differentiation		X								X		
Financial aspects						X		X				
Mission		X								X		
Profit						X	X					
Business opportunities				X								
Cash flows					X							
Create value				X								
Culture										X		
Customer benefits								X				
Customer interface		X										
Economic logic							X					
Environment										X		
Firm identity										X		
Firm reputation										X		
Fulfillment and support		X										
Functionalities									X			
Implementation			X									
Infrastructure—applications									X			
Infrastructure—management						X						
Management												X
Product innovation						X						
Specific characteristics									X			
Sustainability			X									
Transaction content				X								
Transaction governance				X								
Transaction structure				X								

^a Supply chain management.

^b Information systems.

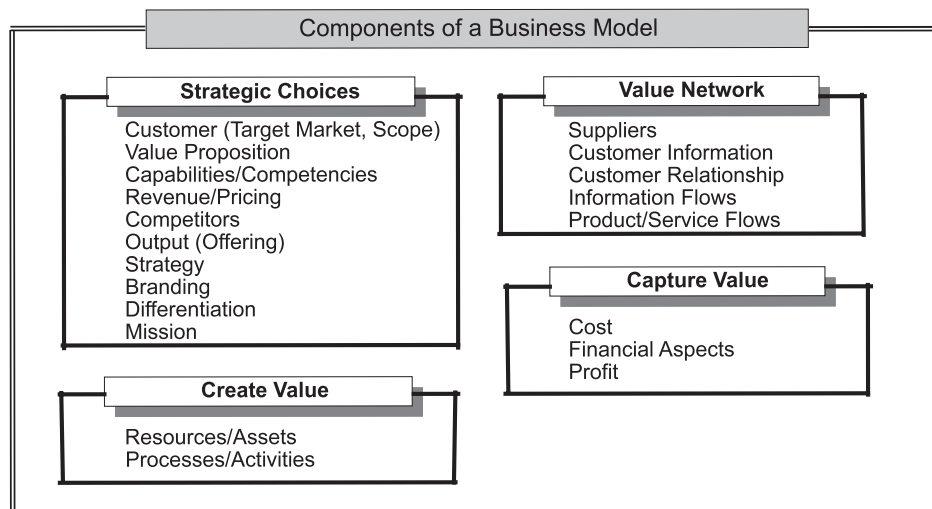


Figure 1 Components of business model affinity diagram.

category. At that point, the preliminary clusters were shared, and two of the authors discussed the individually developed clusters to reach a final consensus.

Since no generally accepted definition of a business model has emerged to date, we offer a new definition guided by the following two principles. First, the definition should integrate and synthesize the earlier work in this area. Second, the definition should be simple enough so that it can be easily understood, communicated, and remembered.

As a starting point, we began by parsing the term “business model.” More specifically, business is fundamentally concerned with creating value and capturing returns from that value, and a model is simply a representation of reality. Combining these concepts with the results summarized in the affinity diagram shown in Fig. 1, we define a business model as a representation of a firm’s underlying core logic and strategic choices for creating and capturing value within a value network.

This definition includes four key terms. The first key term, core logic, suggests that a properly crafted business model helps articulate and make explicit key assumptions about cause-and-effect relationships and the internal consistency of strategic choices: the second key term. In effect, the business model reflects the strategic choices that have been made; a point to which we return in the next section.

The term creating and capturing value reflects two fundamental functions that all organizations must perform to remain viable over an extended period of time. Successful firms create substantial value by doing things in ways that differ-

entiate them from the competition. Firms might develop core competencies, capabilities, and positional advantages that are different from those of competitors. They might use those core competencies and capabilities, for example, to perform work activities in a unique way or might combine their work activities into business processes in a way that differentiates them from competitors. They might even have a unique approach in securing the capital that is needed to fund the creation of the core competencies, capabilities, and positional advantages. In the end though, for-profit companies must make money to survive; thus, their viability is tied both to the value they create and to the way they capture value and resultantly generate profit.

Neither value creation nor value capture occurs in a vacuum, however. As Hamel (2000) argues, both occur within a value network, which can include suppliers, partners, distribution channels, and coalitions that extend the company’s own resources. The firm may be able to create unique relationships with any of these parties or even with its end customers. The role a firm chooses to play within its value network is an important element of its business model.

Note that this definition is in no way restricted to the online world. Of course, it is true that the use of the term “business model” gained momentum during the dot-com era: those bygone days in which sock puppets sold dog food on web sites. But, as we noted at the outset, the concept is relevant for firms of all sorts. While some refer to “e-business models” (e.g., Chen, 2003; Weill & Vitale, 2001), our definition in no way demands the “e-” prefix.

3. A “business model” is not a strategy

With a definition now in hand, we can consider something that a business model is not: a strategy. While a business model does facilitate analysis, testing, and validation of a firm’s strategic choices, it is not in itself a strategy.

What exactly is the relationship between a firm’s strategy and a business model? To answer this question requires that one first define “strategy,” but unfortunately that is not a trivial task. As Henry Mintzberg (1994) notes in his book *The Rise and Fall of Strategic Planning*, “strategy” can be viewed in at least four different ways: as a pattern, plan, position, or perspective. Specifically, in a backward-looking context, strategy is sometimes viewed as a pattern of choices made over time. More frequently, however, strategy is considered in a forward-looking sense. Within that forward-looking domain, some see strategy as a plan; a view that relates to choices about paths or courses of action, much like a directional roadmap. Some, such as leading strategist Michael Porter, see strategy as a position; a view that relates to choices about which products or services are offered in which markets based on differentiating features. Still, others, such as management guru Peter Drucker, view, in a grand vision, strategy as perspective; choices about how the business is conceptualized.

Although these views differ in many respects, they all have in common the element regarding making choices. Business models reflect these choices and their operating implications. They facilitate the analysis, testing, and validation of the cause-and-effect relationships that flow from the strategic choices that have been made. In some cases, executives can best effect this by directly translating one set of strategic choices into a single business model, which they then analyze, test, and validate. In other cases, executives may wish to consider a range of business models simultaneously, each representing a different set of strategic choices before drawing a conclusion about the best business model for their organization.

As an illustration of the difference between a strategy and a business model, consider the construction of a custom home. Initially, the architect consults with the future homeowners to understand how they envision the finished home and their life within it. They then consider options in a number of areas (e.g., main level or second-story master bedroom) and create a design to fulfill the vision; this corresponds to the strategy. Next, the architect prepares a detailed floor plan and elevation based on the choices made during the design

process; this corresponds to a business model. Just as a business model can be used to help analyze and communicate strategic choices, the floor plan can be used to help understand, analyze, and communicate the design choices that were made. In fact, it could even prod the future homeowners to rethink some of their original strategic choices; for example, as the process moves forward, they might realize their choice of a main level master bedroom would conflict with the only possible placement of the kitchen, leading them to revisit their original choices and perhaps modification.

Applied in a business context, consider GM’s OnStar division (Barabba et al., 2002). In the late 1990s, GM created a project team to develop a business model and strategically analyze opportunities related to the telematics industry (telematics involves the use of wireless communication technologies and global positioning systems to deliver a variety of safety, security, entertainment, and productivity services to individuals while they are traveling in their cars). The team was unsure how to position the telematics business opportunity. One alternative was to simply treat it as though it was another car feature. From GM’s perspective, this was a safer and more conservative approach since it had extensive previous experience in pricing and marketing vehicle options. The other alternative was to position telematics as a new service business. From this perspective, the telematics opportunity entailed greater risk, given the large investment in infrastructure that would be required and GM’s lack of experience dealing directly with end consumers (a subset of other strategic decisions and options for each decision are listed in Table 2).

After identifying the relevant strategic decision areas and the options in each, choices are made. A business model embodies a set of choices. Through it, the set can be tested and analyzed to ensure

Table 2 Illustrative strategic decision areas and options at OnStar

Strategic decision	Options
Position	New service business New car feature
Installation	Factory Field
Internal product scope	Select GM vehicles All GM vehicles
External product scope	Only GM vehicles Sell to other auto manufactures
Call center	Insource Outsource
Application development	Insource Outsource

that implicit cause and effect relationships are logical and that the choices are mutually supportive and internally consistent.

But how would OnStar team test the business models that represented different sets of strategic choices? The team had to ensure that implicit and explicit cause-and-effect relationships were logical and reasonable and also had to ensure the choices were internally consistent and mutually supportive. This was not an easy task because no historical data existed for this brand new industry. Instead, the project team relied on a variety of sophisticated management science methodologies, including systems dynamics, conjoint analysis, dynamic optimization, models of diffusion, real options valuation, simulation, and game theory. Using simulation techniques, for example, the team was able to analyze how factors, including customer acquisition, customer choice, alliances, customer service, finances, and dealer behavior would impact business performance on multiple dimensions, including market share and cash flow.

As part of this analysis, the team demonstrated that attempting to run the call centers as cost centers would result in business failure. In addition, the team was able to analyze the options of installing OnStar in vehicles both at the factory and in the field and found that factory installation would provide a superior outcome in all parameters.

As a result of these types of analyses, the team ultimately recommended that senior management embrace a more aggressive set of strategic choices and create a new service business. The suggested model included a number of rather aggressive positions, including that OnStar be installed in all new GM cars, that GM recruit and make available OnStar to other auto manufacturers, that one year of service be provided free, and that GM aggressively pursue partnerships with content providers. GM senior management accepted the project team's recommendations and formally acknowledged that the iterative process employed by the team, one in which strategic choices were tested through business models, greatly influenced their decision.

Although the jury is still out regarding OnStar's ability to consistently make money, the results of GM's OnStar initiative have so far been rather impressive. By the fall of 2001, GM had two million OnStar subscribers, representing 80% of the telematics market. Alliances with other major auto manufacturers, including Toyota, Honda, VW, Audi, Isuzu, and Subaru provide OnStar with access to approximately 50% of total new vehicle sales. GM has also developed partnerships with impor-

tant content providers, including Dow Jones and Fidelity Investments. Internal forecasts indicate that the service will break even in 2003 and generate significant positive cash flow thereafter. Based on these results, [Merrill Lynch \(2002\)](#) has valued the OnStar business at between \$4 to \$12 billion.

We earlier defined a business model as the representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network. The core logic should be as comprehensive as possible, not simply one or two components, and the business model should reflect the firm's strategic choices. While executives can use business models to analyze and communicate strategic choices, it is equally important to recognize that misusing the business model concept can lead to problems; a topic to which we now turn.

4. Four problems of business models

A properly crafted business model has great power and can serve as an essential strategic tool for the firm, but concerns about business models can be traced to four common problems associated with their creation and use. These problems, which follow directly from the key terms in our definition, are the following:

- (1) Flawed assumptions underlying the core logic.
- (2) Limitations in the strategic choices considered.
- (3) Misunderstandings about value creation and value capture.
- (4) Flawed assumptions about the value network.

4.1. Flawed assumptions underlying the core logic

A firm moves into a danger zone if its business model's core logic is based on flawed or untested assumptions about the future. Recently, an entrepreneur told us of an exciting opportunity his firm was planning to pursue, providing integrated services over wireless networks in many regions of the US. His business model seemed to be well formed and internally consistent in that he had a good sense of his core logic for both creating and capturing value. However, when asked about incompatibilities in standards among wireless networks, he told us that he was assuming seamless and interchangeable national service in the near future. While we certainly agree there ought to be such a seamless and standard network across wireless providers, the reality is that such a

network does not now exist and likely will not for a number of years; hence, our prediction is that he will face significant challenges in implementing his model.

It is vital that, once a set of strategic choices has been made, the resulting business model be checked to ensure that implicit and explicit cause-and-effect relationships are well-grounded as well as logical. Furthermore, the resulting business model should be scrutinized to ensure that the set of choices is internally consistent and mutually supportive of one another. To illustrate this, consider two of the strategic choices faced by OnStar: its position and its external product scope. One incompatible combination of choices would have been to position OnStar as simply a new car feature and to make OnStar available to other auto manufacturers. If such a combination of choices were embraced, any potential benefits to GM would be quickly negated since the competition would be able to offer the identical feature. Alternatively, choosing to position OnStar as a stand-alone service business and making the service available to other auto manufacturers are choices that are quite compatible. In such a case, the decision to offer the service to other auto manufacturers facilitates penetration of a new market.

4.2. Limitations in the strategic choices considered

A business model should address all of the firm's core logic for creating and capturing value, not just a portion of that logic. Indeed, one of the major mistakes of the "dot-com" era was the assumption that, having defined one portion, one had a business model. When one addresses only a small subset of the rows in Table 1 or only a subset of the categories in Fig. 1, one is mistaken in referring to this as a "business model." Definition of a customer set (e.g., families with young children) or a value proposition (e.g., providing much more value at a greater cost), for example, does not constitute a business model. Of course, such an error in nomenclature is problematic in and of itself because it frustrates communication. However, the biggest flaw with such an approach is that it may well delude the executive into overestimating his or her model's probability of success in the marketplace.

eToys serves as a high-profile example of a firm that made this mistake in the dot-com world. In an effort to build its customer base and gain brand awareness in 1999, eToys (and its online competitors, such as KBT Toys) focused primarily on cus-

tom acquisition. Not surprisingly, this led to cut-throat price wars, deep discounts, and offers of free shipping among the toy e-tailers, each of whom was hoping to establish a beachhead in the \$23 billion per year toy retailing industry (Bannon, 2000). In fact, eToys' goal of customer acquisition was largely achieved. Four years after opening its virtual doors for business and by spending at times as much as 60% of its revenues on marketing, eToys established a base of almost two million customers. However, eToys had not developed (or, it appears, even seriously considered) another important component in its business model: the process of fulfilling customer orders. During the 1999 holiday season, eToys received a tremendous amount of bad publicity resulting from its very poor and unreliable delivery performance. In an effort to not repeat this fiasco the following year, the company invested heavily to in-source order fulfillment. But, in the end, eToys was not able to generate the volume of business needed to support its investment in infrastructure and went bankrupt in 2001 (Cox, 2001; eToys, 2001). Its realization that it had never really created a workable business model in that it had been relying on only the single component of customer acquisition came far too late for recovery.

The problem of too limited a set of strategic choices can often be traced to a tendency on the part of senior management to consider strategic decisions in a piecemeal fashion, which is especially likely in a volatile business environment. Sun would certainly fall into this trap if it considered offering low-end servers independent of other strategic decisions. The problem is also exemplified by eToys' initial attention being focused almost exclusively on customer acquisition, with a subsequent shift to order fulfillment.

A business model provides a powerful tool for avoiding this pitfall for two reasons. First, because the business model is a reflection of the strategic choices made, it highlights the need to consider holistically a range of strategic decisions. Second, the business model requires senior management to consider the logic and internal consistency of the strategic decisions collectively.

4.3. Misunderstandings about value creation and value capture

Many executives have a tendency to focus so much on the value creation part of the model that the value capture portion is ignored or at least downplayed. In these situations, organizations are unable to capture corresponding economic returns in relation to the value they create.

As an example of creating value but not capturing it, consider the online portal Yahoo! For many individuals, Yahoo!'s continuously expanding range of offerings, including searches of the Web, e-mail accounts, stock quotes and other financial information, greeting cards, maps, driving directions, and so on create a tremendous amount of value. The fact that Yahoo! is consistently among the top sites in terms of unique visitors per month is a further indication of its appeal. But, for many years, Yahoo! struggled to turn this value into profit; in fact, its net loss more than doubled from its fiscal year ending in 1997 to the one ending in 2001. However, under the hand of CEO Terry S. Semel, who joined Yahoo! in May 2001, the company has apparently found a way to capture more of this value, with revenues now coming from "digital music and online games to job listings and premium e-mail accounts with loads of extra storage... [Yahoo! now] pulls in one-third of revenue from such offerings and hopes to drive it up to 50 percent by 2004," according to a recent *Business Week* report (Elgin & Grover, 2003).

Alternatively, executives can encounter this pitfall when they confuse potential value with actual value. Just a few years ago, professional investment analysts argued that a company's performance ought to be measured by its number of customers, not its free cash flow. It seems silly now, but many capable business leaders have similarly confused potential value with actual value when they design business models. For example, one large commercial bank spent millions acquiring an investment-banking boutique to get into the *Wall Street* deal flow only to discover that their model did not work. The newly acquired investment bankers refused to share information and resisted the commercial bankers' interference with their clients. They were particularly unenthusiastic about making joint sales calls to help sell commercial banking services with margins that did not support their bonus structure.

4.4. Relying on flawed assumptions about the value network

Sometimes, a model mistakenly assumes that the existing value network will continue unchanged into the future. For example, oil companies have been accustomed to retailing gasoline through their own branded outlets in the UK. When supermarket chains, like Tesco and Safeway U.K., began drawing customers into stores with low-priced gasoline, some oil companies simply added food products to their gas station inventories. This choice main-

tained the current value network. Cagier competitors, like BP, took a different tack. They locked up partnerships with the best grocery chains under the premise that the oil company would manage gas retailing and the grocery company would manage food retailing across all the outlets in their joint network.

In another example, listeners of US commercial radio stations are accustomed to receiving free broadcasts in return for listening to advertisements; in fact, this has been true for several decades. However, building a business model on the long-term assumption that this arrangement will continue may be a mistake. Although only beginning to move from infancy into adolescence, satellite radio (now with two major US providers, XM and Sirius, each offering dozens of commercial-free stations for a fee) may turn the longstanding free-programming-with-commercials structure on its head. Business models that assume a continuation of the current state of affairs, such as one for an intermediary that barter commercial time among local stations in return for services, could well be flawed.

To be sure, some in the broadcast industry have considered the emergence of satellite radio but have downplayed the threat to local stations, arguing that listeners expect to receive local information (e.g., traffic reports, weather, local news), which satellite technology is not well suited to deliver. It should be noted though that the XM and Sirius signals are transmitted, not just over satellites, but also through local signal repeaters that the companies have installed in several US urban areas. Their stated intentions are to use the repeaters to improve reception within crowded city environs as satellite reception can be unreliable in the midst of tall buildings. At present, these repeaters typically deliver the national feeds without any local customization; however, it is certainly conceivable that these repeaters will allow the satellite companies to someday compete with local programming and carry local advertising (Flynn, 2003).

5. Final thoughts

The survival and prosperity of all for-profit organizations is directly linked to their ability to both create and capture value; therefore, business models are applicable to all these. Of course, the strategic decision areas confronting each organization will vary based on numerous factors such as the firm's age, industry, industry concentration, customer type, government regulations, and so on. At

the same time, an organization's business model is never complete as the process of making strategic choices and testing business models should be ongoing and iterative. While there are certainly no guarantees, we contend that the probability of long-term success increases with the rigor and formality with which an organization tests its strategic options through business models.

Business models provide a powerful way for executives to analyze and communicate their strategic choices. Although there is some chance that firms with sloppily formulated business models will succeed in the marketplace, the probability is low since the core logic for value creation and capture will not have been clearly thought through. As the old saying suggests, blind squirrels do occasionally find acorns, but, until they do, there is a lot of wasted effort. Just like firms that burn through their working capital, the squirrels may run out of energy before they achieve their prize.

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