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Divestitures: How to invest for success

When it comes to creating value, divestitures are critical—but a positive outcome is not automatic. Some up-front investment can improve the odds of success.

Sean O'Connell, Michael Park, and Jannick Thomsen

Senior executives often have a hard time letting go. When it comes time to decide whether to sell certain assets, particularly those that have become less relevant to the core business, many bosses hold on for too long, only to watch as value withers and the assets become costly distractions. Others are simply more focused on acquiring¹ or turning things around and, as a result, fail to prune noncore assets or divest even those businesses that destroy value. The effect on shareholder returns is more than you might imagine: our analysis of the largest 1,000 global companies finds that those that are actively involved in both acquiring and divesting create as much as 1.5 to 4.7 percentage points higher shareholder returns than those focused primarily on acquisitions.

Yet creating value through divestitures isn't automatic, and how much a company can gain depends heavily on planning the right approach. For some deals, such as auctions or those that involve businesses in decline with minimal customer overlap, managers may want to sell at the best price with the fewest strings attachedand then just walk away. But for others, such as spin-offs and situations where businesses' performance could be improved by better owners or with shared customer bases, there are nuances to preparing and structuring deals that affect both the price and the potential for creating longterm value. The range of value created or destroyed between top- and bottom-quartile performers after a spinoff, for example, is

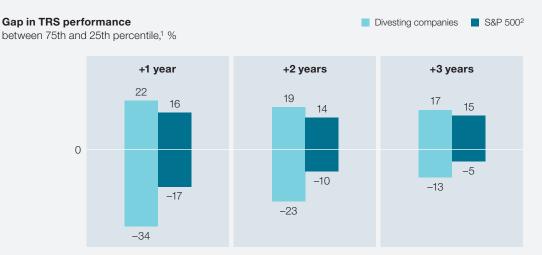
striking compared with market averages (Exhibit 1). This is especially true in the first year after a divestiture, when parent-company performance ranges from 37 percent higher shareholder returns to 100 percent lower, relative to their benchmarks, even after adjusting for company-specific factors. The substantial difference illustrates the risk in what are typically material business disruptions for the parent company and the spun-off company alike.

The most successful companies for these types of deals are those that take a more thoughtful approach to divestitures. Our colleagues have highlighted a number of themes important to such planning,² including shaping deals around a buyer's needs and managing stranded costs. Our latest research and work suggest others—requiring a modest investment in time, thinking, and resources—that are often overlooked but can make the difference between a good deal and a poor one. For example, are you preparing for suitors *before* you need a buyer? Have you really considered your potential buyers' point of view on the deal details that would create value? And finally, are you investing to boost the chances of the success of a divestiture for both your company and your buyer?

Prepare for suitors before you need a buyer

Companies often don't sufficiently evaluate their businesses as candidates for divesting. That leaves them unprepared to generate the most interest for those assets among potential buyers—and to act expediently—when the pressure to divest becomes unavoidable.³ The most successful portfolio managers we've seen address these circumstances by embedding divestitures into their regular portfolio-review process, evaluating businesses at least once a year for their strategic importance and operational value. One challenge is the inclination of division leaders to aggressively avoid divestiture discussions, protecting assets by

Exhibit 1 Top divestors outperform the market, but those at the bottom fall further behind.



¹Tracks the available performance data of all spin-offs that took place from 1993 to 2012 with deal value >\$500 million and deal intensity >10% of market capitalization at time of completion (132 deals).
²Performance tracked following closing price at end of first day of trading. Companies that are actively involved in both acquiring and divesting create as much as 1.5 to 4.7 percentage points higher shareholder returns than those focused primarily on acquisitions.

overstating their importance to sales and synergies, and effectively burying the discussion in process.

A key method to address this tendency is to put in place a scoring system, based on algorithms and tailored by criteria linked specifically to a company's industry and strategy. It's possible to rate, for example, growth versus margin, required management resources, operations complexity, and how much an asset distracts managers and resources from other activities that create more value. With those criteria in mind, executives can then be asked to articulate a reason to retain low-scoring businesses. The result could be a list of businesses to consider divesting.

Executives at one Fortune 100 company, for instance, compel leaders of business divisions to identify annually the three least core, highest-potential divestiture candidates and detail the rationale for keeping them—typically based heavily on size, growth potential, and burden to manage. Corporate leaders themselves make the final decision to keep or divest, explicitly removing that responsibility from the division leader's hands. This overcomes internal conflicts and biases before they obstruct critical decision-making processes.

Expand your view on the pool of potential buyers

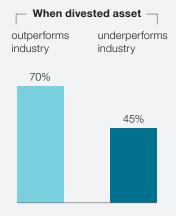
It can be hard for executives to know the true value of a noncore business, since their perspective is often so anchored to their own perceptions of it that they can't fully appreciate its *potential* value to others. This is especially true if the business has been a laggard relative to peers, difficult to manage, or just a neglected part of the portfolio. The challenge is to take a fresh, deep view and clearly identify which attributes of a deal might attract a broader pool of better owners willing to pay more for an asset.

There's almost always significant value at stake, especially on issues of talent retention, service agreements, and the organizational structure of the parent company once the divestiture is complete. On such issues, even seemingly minor details that the buyer and seller appreciate differently can meaningfully change the value of a deal. In a recent divestiture in the pharmaceuticals industry, for example, production agreements controlling a shared supply chain constrained the buyer to just a fifth of the sales it could have made in some regions if the deal had more flexibly allowed for growth. Similarly, a recent divestiture in the defense industry was complicated by ownership-control clauses in contracts with suppliers and customers that restricted the pool of buyers. And in the technology and industrial sectors, decisions about allocating and licensing intellectual property can affect the value of a deal for both buyer and seller-and have implications for customer relationships as well.

Savvy managers know it isn't easy to counteract cognitive biases, such as anchoring, even

Exhibit 2 Divestors are more likely to outperform when their divested companies also outperform.

% of time divesting company outperforms industry peers a year after divestiture¹



¹Based on TRS performance of spin-offs worth >\$500 million from 1993 to 2012 (173 deals); assessed against relevant industry benchmarks per Morgan Stanley Capital International index to control for industry impact on relative performance.

when you're aware of them. But working to identify and address these issues early on can expand initial thinking and better direct a seller's search for a buyer. Most managers start by talking to bankers, the more obvious potential owners, and CEOs in the industry. But these groups often share the same biases. A broader search might require talking to CEOs of a wider set of potential owners, privateequity managers, or experts outside the seller's immediate circle of industry insiders to secure different perspectives on a deal's potential sources of value to others. One highly successful CEO we know, who has considerable experience in divestitures, reports that discussions with external experts, such as retired industry executives or boutique advisers with deep industry experience, often help him overcome the biases he knows he has and add substantial value to his deals.

Invest for mutual success

Poorly prepared deals become costly distractions to parent-company managers, creating dissatisfaction

among shared customers, causing top talent to flee the divested company, and depressing morale at both companies. Even deals where companies would prefer to sell a business for as much as they can get and just walk away can come back to haunt the seller if the divested business greatly stumbles before sale or alienates mutual suppliers or a shared customer base. The impact on postdeal performance can also be substantial for buyer and seller alike-and their fates appear to be linked. In our analysis, divestiture deals are either successful for both the divesting company and the acquirer or failures for both nearly twothirds of the time. The case of spin-offs is once again illustrative; our analysis suggests the divesting company is dramatically more likely to outperform industry peers when its spin-off also exceeds relevant industry benchmarks (Exhibit 2).

For many deals, senior leaders should focus as much attention on preparing divestiture candidates for postdeal success as they do on negotiating the best price relative to its book value. That includes, for example, defining what success will look like for the divested asset after a deal closes. Its performance measures are often quite different from that of its former parent, reflecting a wide range of new internal and external stakeholders, all with their own motivations. Those measures should be realigned with the new owner as early as possible in our experience, as early as 12 months before a deal closes. That requires the divesting company to develop a deep understanding of the asset's potential sources of value.

The CEO of one industrial company takes the time to develop meticulous memos and support documentation that go well beyond the usual business case, for instance, outlining specific elements of strategy and high-potential operational improvements. In his experience, this extra attention is valuable for him as well as the new owners of a divested asset, and it greatly increases the quality of execution.

Ensuring success also requires that the right managerial talent is involved. Many deal leaders we speak to lament the lack of adequate resources for executing divestitures, especially when compared with the resources typically committed to an acquisition. This is a costly imbalance. Once candidates have been identified, senior managers should be tasked with implementing a highly structured process, including investing in select operational improvements and accelerating disentanglement initiatives. It is critical to keep managers motivated by communicating their high value to the company, reinforcing a sense of opportunity connected to the divestiture, and instilling as much confidence as possible that performance will be rewarded. The impact will reverberate and have beneficial impact across the organization and on the parent company's postdeal performance.

One leading technology company has dedicated divestiture leaders with years of experience in charge of running companies until they are sold. Another large medical-products company often puts top managers in charge of divesting units to maximize business growth and facilitate the hand-off to buyers. This has earned the company a reputation as a seller of great businesses, attracting potential buyers for future deals, smoothing negotiations and buyer due diligence, and greatly accelerating sales process times and value creation.

Divestitures are a critical but often overlooked and undermanaged part of shaping a company's portfolio of businesses. Investing the right resources before a sale can help attract better suitors who will make stronger offers for a deal that creates more value for them—and who create fewer headaches down the road.

² David Fubini, Michael Park, and Kim Thomas, "Profitably parting ways: Getting more value from divestitures," *McKinsey on Finance*, February 2013, mckinsey.com.

³ Lee Dranikoff, Tim Koller, and Antoon Schneider,
 "Divesting proactively," *McKinsey on Finance*, June 2002, mckinsey.com.

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¹ Including mergers.



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Why emerging-market companies acquire abroad

Long focused on deals to acquire technology, brands, or know-how, more emerging-market companies have begun using M&A to tap into new markets.

David Cogman, Patrick Jaslowitzer, and Marc Steffen Rapp

After years of using cross-border deals to acquire strategic and natural resources, multinational companies headquartered in emerging markets are increasingly looking to penetrate new markets just like multinationals in developed markets do.

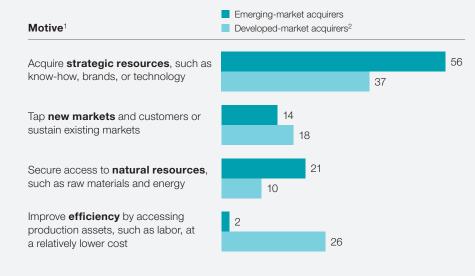
Growth in such deals over the 14-year period from 2000 to 2013 reached double digits on an annual basis, and by 2013, deal activity accounted for about 37 percent of the world market for crossborder deals. Moreover, when we analyzed more than 1,000 cross-border acquisitions¹ by emergingmarket companies and categorized them by the most common reasons companies pursue acquisitions, we found that the main reason emerging-market companies reach across borders has been to fill capability gaps caused by limited access to strategic resources, such as technology, management capabilities, or other intangible assets in their home markets (Exhibit 1).² Over the longer term, only about a third of cross-border M&A deals by emerging-market companies have been made to enter new markets, acquire natural resources, or improve efficiency deal types that are more common among developedmarket buyers.

That pattern, however, is changing. As emergingmarket companies have developed and matured, they've completed fewer deals in pursuit of strategic resources and more deals to tap into new markets, often located in other emerging countries (Exhibit 2).³ Companies that followed this rationale include Latam Airlines Group, which merged its Chilean LAN Airlines with TAM Airlines of Brazil in 2012, and the Philippine food and beverage company San Miguel Corporation, which acquired Australia's National Foods in 2005. In general, market seekers are mostly from nondurable consumergoods industries or wholesale and retail.

Around every fifth dollar spent for cross-border M&A by emerging-market companies has been in pursuit of natural resources—though the scarcity of certain resources, such as rare earths, has not led to proportionately more deals to secure access to them since 2010. Well-known landmark transactions of this type include the acquisition of Canadian mining company Inco by Brazilian metals and mining company Vale in 2006 and the takeover of Udmurtneft, a large Russian oil asset, by Chinese oil and gas company Sinopec that same year. These companies tend to generate most of their revenues in the domestic market and are disproportionately large. Often, naturalresource seekers are state-owned enterprises, such as Sinopec or Russian gas giant Gazprom.

The least common reason for emerging-market companies to acquire abroad is in pursuit of efficiency. Motivated by low labor costs or specific government policies related to import barriers or investment incentives, acquirers move manufacturing capacity to foreign markets by acquiring production-related companies abroad. The small but admittedly growing portion of efficiency-

Exhibit 1 Cross-border deals by emerging-market companies have mostly been in pursuit of strategic resources.

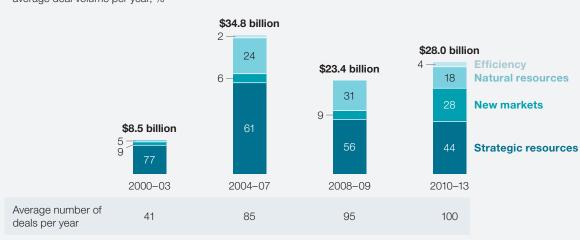


% of cross-border deal value in 1,095 emerging-market acquisitions, 2000–13

¹Other strategic motives account for 6% of emerging-market and 10% of developed-market M&A deal value. Figures may not sum to 100%, because of rounding.

²Based on 6,957 acquisitions by developed-market acquirers between 2000 and 2013.

Exhibit 2 Since 2010, emerging-market companies have shifted their focus to new markets.



1,095 cross-border acquisitions by emerging-market companies, 2000–13, average deal volume per year, $\%^1$

¹Totals do not sum to 100%, because other strategic motives have been excluded.

seeking M&A by emerging-market bidders mainly flows into other emerging countries, where production factors are comparatively cheap. Notable examples of such deals are the acquisition of Malaysia's Titan Chemical Corporation by South Korea's Honam Petrochemical in 2010, or Singapore-based Biosensors International Group's takeover of Chinese JW Medical Systems in 2011.

¹ Including deals valued at 1 percent or more of the acquirer's total assets (excluding financial companies) by acquirers from Brazil, Chile, China, Colombia, Egypt, Hong Kong, India, Indonesia, Malaysia, Mexico, Peru, Philippines, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Taiwan, Thailand, and Turkey. Our developed-market data cover acquirers from all high-income Organisation for Economic Co-operation and Development countries.

² More specifically, our measures are based on median R&D intensity and intangible assets per industry (for asset-seeking motive), median sales growth per industry (for market-seeking motive), median staff cost per industry (for efficiency-seeking motive), and target-company affiliation with the natural-resource industry (for natural resource–seeking motive). We calculate these industry measures for each year in each country of our sample and assign the respective

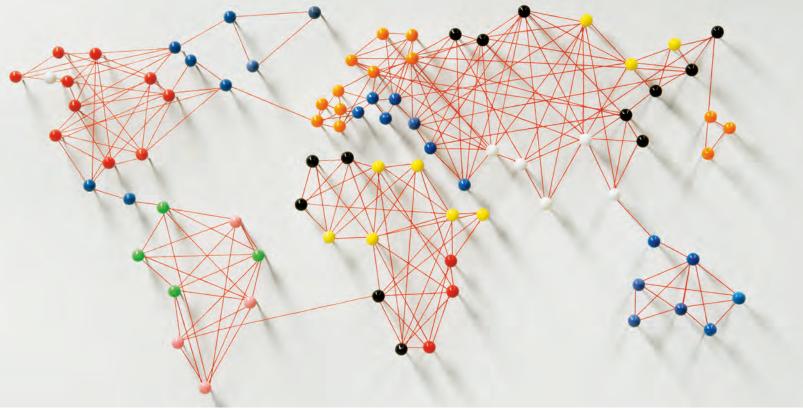
values to all acquiring and target companies. By comparing the variables' standardized differences between both companies involved in a deal, we are eventually able to identify a transaction's dominant strategic motive.

³ We also analyzed the deal-type distribution per country and found that companies in traditional emerging markets, such as Brazil, China, India, and Russia, focus on seeking assets and natural resources, while buyers from potentially more economically advanced countries, such as Chile, Mexico, and South Korea, strongly engage in market and efficiency seeking.

The authors wish to thank Jan Krause for his contributions to this article.

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Mapping the value of diversification

Expanding your focus tends to add more value in emerging economies than in developed ones.

Francisco Caudillo, Skief Houben, and JehanZeb Noor

Executives are always looking for ways to expand their businesses, and diversification is one approach they regularly ask about. The answer is always unambiguous: diversifying, in itself, is neither good nor bad; what matters is whether a company can add value. Although more than 70 percent of large companies around the world already operate in more than two industries, our research finds that creating value through diversification is a lot easier in emerging economies than in developed ones.

In fact, when we compared the returns of more than 4,500 companies around the world¹ with their level of diversification,² we found that in emerging

economies, the most diversified companies created the highest excess returns, 3.6 percent, compared with –2.7 percent for pure players (Exhibit 1). By contrast, in developed economies, we uncovered almost no difference in excess TRS for any degree of focus or diversification.

As we so often find, cause and effect are not clear. However, underlying market and ownership structures could play a role. For instance, the fierce competition for capital in developed economies probably ensures that market dynamics allocate resources to the best owners, so diversification without cash synergies across businesses confers little or no advantage. In contrast, many

Exhibit 1 Diversification creates more value in emerging economies than in developed ones.

	Level of concentration, ¹ 2012, %	Number of industries, ² 2012	Excess TRS CAGR, ³ 2002–12, %		 Average value 95% confidence interval
			Developed markets	Emerging markets	3
Diversified	<33	5–10	-0.2		3.6
Moderately diversified	33–55	3–6	0.2		2.2
Focused	56–99	2–4	0.0	—	0.0
Pure players	100	1	-0.1	,	-2.7

Note: n = 4,576 global companies with revenues >€1 billion in 2012, excluding financial industries.

¹Level of diversification calculated by Herfindahl-Hirschman Index (measures level of concentration by summing the squares of the revenue shares of a company's activities).

²Based on the Standard Industrial Classification system.

³Excess TRS calculated as company TRS minus reference TRS based on 10 high-level industries (Global Industry Classification Standard) per developed or emerging market.

Source: McKinsey analysis

Exhibit 2 Respondents from diversified companies in the emerging world report that they have structural advantages that help them create value.

% of emerging-market respondents; multiple answers allowed, n = 149

More opportunities to reinvest retained earnings in new businesses

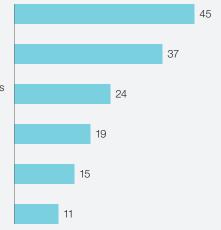
Easier to leverage relationships with governmental and regulatory officials

Easier to attract talent (ie, more career opportunities for managerial talent in emerging markets)

Easier to attract investors (ie, a more diversified portfolio means more diversified risks)

Better access to capital

Other



Source: McKinsey survey on growth beyond the core, Nov 2014

diversified companies in emerging economies are family owned or controlled, which can ensure opportunities to reinvest, better access to local and regional governments or to regulatory insights, and the ability to attract talent (Exhibit 2). That translates into higher revenues, profits, and returns to shareholders. Francisco Caudillo (Francisco_Caudillo@McKinsey .com) is a specialist in McKinsey's Miami office, Skief Houben (Skief_Houben@McKinsey.com) is an associate principal in the Amsterdam office, and JehanZeb Noor (JehanZeb_Noor@McKinsey.com) is a principal in the Chicago office.

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¹ Companies with 2012 revenues over €1 billion, excluding financial companies.

² Using the Standard Industrial Classification system.



Getting a better handle on currency risk

When exchange rates are volatile, companies rush to stem potential losses. What risks should they hedge—and how?

Marc Goedhart, Tim Koller, and Werner Rehm

Recent swings in global currencies have brought exchange-rate risk back to the forefront for companies working with suppliers, production, or customers in different currencies. Although official, or "nominal," exchange rates tend to draw the most attention, what really matters to companies are changes in real terms—that is, when currency changes are adjusted for differences in inflation. In an ideal world, if prices were to fall as currency values rose, or vice versa, then the purchasing power of companies' cash flows would be stable, and there would be no real currency risk. That often works itself out over the long term, but not for all currencies and not necessarily in the short term. Many companies seem to manage only the most visible risks, such as exposure from a large transaction in a developing nation, which can be hedged with financial instruments, including currency futures, swaps, or options. But these tactics don't work for every currency risk—and companies often face far greater exposure from less obvious risks that are much more difficult to manage, including risk that stems from mismatches between costs and investments in one currency and revenues in another.

What follows is a refresher course of sorts on currency-risk management for companies seeking to get a better handle on the potential impact of Mathematical risk-management tools can help managers analyze their risk, but it is even more important to understand where and how exchange rates can distort the value of a company through portfolio risks, structural risks, and transaction risks.

currency-rate changes. The most important lesson is that managers can't always hedge against every currency risk—and often shouldn't try. But once managers understand how different risks work and interact, they can better measure and manage them with the help of a few general tips we've collected from experience.

Decide which currency risks to manage

Understanding where and how currency fluctuations affect a company's cash flows is not straightforward. Many different factors—from macroeconomic trends across countries to competitive behavior within market segments determine how currency rates affect a business's cash flows. Mathematical risk-management tools¹ can help managers analyze their risk, but it is even more important to understand where and how exchange rates can distort the value of a company through portfolio risks, structural risks, and transaction risks. Each influences value and cash flows in different ways and requires a different approach for risk management.

Portfolio risks. Any company with business operations in foreign currencies will be exposed to so-called currency portfolio risks. Take, for instance, a Dutch food retailer operating stores in the Netherlands and the United States. Due to the nature of the supply chain, costs and revenues for its retail stores are mostly set in local currency unexposed to exchange rates. But the company is inevitably exposed to portfolio risk because cash flows from its US operations will fluctuate with the exchange rate when translated into euros for financial statements, performance management, or investor communications.² Portfolio risk by itself is rarely large enough to cause financial distress for a company. In this case, a 5 percent change in the exchange rate, up or down, would lead to the same 5 percent change in the company's cash flows from its foreign operations. It could not annihilate the cash flow or turn a positive cash flow into a negative one.³

Because portfolio risk is unlikely to cause financial distress, this is in general not a risk that companies need to actively manage.⁴ In addition, the exposure is different for different shareholders, depending on their home currency. For example, it would be hard to decide whether a global company with global shareholders, such as consumergoods company Unilever, should hedge its exposure measured in British pounds, euros, or dollars. Fortunately, shareholders can easily hedge Unilever's portfolio currency exposure by themselves via futures positions, if they desire to do so.

Structural risks. These risks occur when a company's cash inflows and outflows react differently to currency changes. Take, for example, a German brewing company's beer exports to the United States. Because it generates sales in US

dollars but incurs costs for these sales in euros, the company is exposed to both portfolio risk and to structural risk—which has a much bigger impact on its net cash flow from US operations (Exhibit 1). Let's assume that the company's US operations generate a cash margin of 15 percent of sales in dollars, with all costs in euros. In this hypothetical case, a mere 5 percent drop in the dollar would deflate the cash margin to 11 percent. In dollars, that would be a 28 percent decline in cash flow; in euros, it's nearly 32 percent.⁵

Structural risk can significantly affect a company's cash flows and even trigger financial distress,

especially when cash-earnings margins are thin. For our German brewer, for example, a 17 percent drop in the dollar would turn cash flows from US operations negative. Of course, inflation could bring prices in the United States and Germany back in line with the exchange rates between the dollar and the euro, but this could take several years.⁶

Because they are rooted in a fundamental mismatch in cash flows, structural risks are also the most difficult to manage.⁷ The German brewing company exporting to the United States cannot use financial instruments to hedge the structural

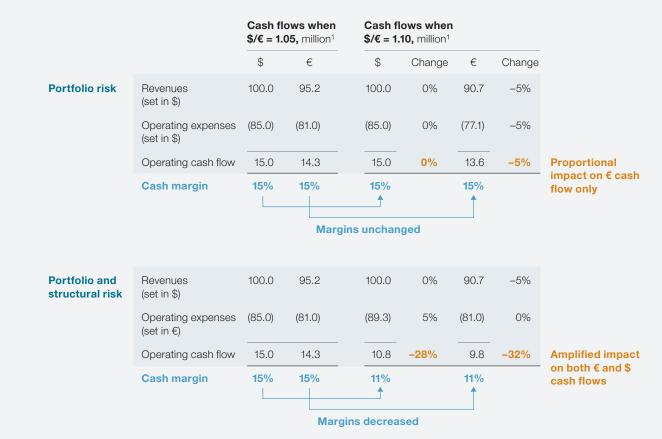


Exhibit 1 Structural and portfolio risk have different impact on cash flow.

¹Figures may not sum, because of rounding.

risk because of the size and duration of the exposure (it would require hedging the full amount of dollar-denominated revenues for all future years in business). The only effective way to reduce structural exposure is to reduce the underlying mismatch of cash flows. For example, automobile manufacturers from Germany and Japan having shifted production to the United States, thereby lowering their structural exposure to the dollar.⁸ Such "natural hedges" only work if the associated costs aren't too high and if they don't put competitive advantages at risk. The German brewer can only sell its beer as a premium import in the US market if it is brewed in Germany.

Understanding where and how currency risks offset one another in a company's portfolio across businesses and time is critical for effective management of these risks.

> *Transaction risks*. As the most visible currency risks a company faces, transaction risks are also the simplest to measure and manage. These occur as a result of timing differences between a contractual commitment and actual cash flows. Suppose a company manufactures a product in China and sells it in the United States for a price set in dollars. If the payment terms allow the buyer to pay days or weeks later, the company's cash flow will be exposed by currency movements while it waits for settlement.⁹ Transaction risks typically affect short-term cash flows and are unlikely to put a company into financial difficulties except

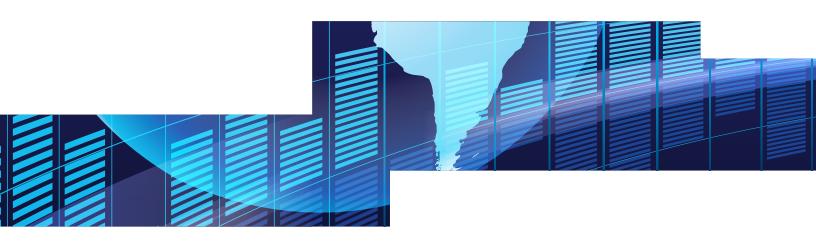
for extreme cases—for example, when it commits to very large purchases or sales that are fixed in a foreign currency.

Managing transaction risk is relatively straightforward with financial instruments because each transaction is clearly definable and mostly short term. Many companies have hedging programs for their operating cash flows from foreign operations.

Which currency risks can be managed?

Companies may have good reasons for managing currency risk-for example, to facilitate planning and performance management or for tax purposes.¹⁰ In general, they should not manage currency risk just for the sake of lowering cash-flow volatility or boosting share price. Shareholders are well aware of the currency risks faced by the companies they invest in and can manage any associated volatility themselves by appropriately diversifying their investment portfolio. Furthermore, in the long term, currency fluctuations tend to be offset by price changes, thereby reducing currency risk in real terms. As academic research shows, investors therefore do not require a risk premium for bearing currency risk, and companies with lower currency risk will not experience a lower cost of capital.¹¹

Instead, managers should focus on those currency risks that could lead to financial disruption or distress. Deciding how much currency risk is acceptable should be similar to deciding how much debt is acceptable: it depends on a company's risk appetite. That risk appetite could be expressed as a target default probability, cash flow at risk, or simply a target coverage ratio or credit rating. Given the target, managers should identify which currency risks are acceptable and which are not. When natural hedges are not an option, companies need to be prepared to reduce their chances of distress in other ways, for example, by adopting



a capital structure with less debt relative to peers that don't have currency risk.

There are many frameworks and step-by-step guides for measuring and managing a company's currency risk.¹² Rather than enumerating yet another set of steps, we offer instead several higherlevel recommendations for managers.

Take a holistic perspective

Currency risks should not be managed in isolation, as they may well offset one another. For example, if a European airline were to order a Boeing aircraft, priced in dollars, for delivery a year from now, it might buy the dollars it will need today or enter into a forward contract to buy them in a year. That allows it to hedge against a drop in the euro so that the cost of the aircraft is fixed in dollars at today's exchange rate. But if the airline also has long-term net cash inflows from passenger tariffs set in dollars, then that transaction hedge effectively increases, rather than decreases, its exposure to changes in the dollar. Understanding where and how currency risks offset one another in a company's portfolio across businesses and time is critical for effective management of these risks.

Focus on cash flow, not earnings

Unfortunately, current accounting practices do not draw the attention of managers and investors to the most important types of currency risk. For example, a company's income statement contains information about "foreign-exchange income or gains," and its equity account shows the cumulative adjustments from translating foreign currency– denominated assets and liabilities to the home country's balance sheet. But the amounts reported show only parts of a company's transaction and portfolio risk.

The most important impact of currency changes, which comes from structural risk, finds its way into the income statement through movements in revenues and costs but not as an explicit line item. In fact, standard financial reports can even lead to the wrong conclusions about a company's exposure to movements in currency rates or commodity prices by overemphasizing the accounting effect on earnings rather than the real effect on cash flows.¹³ Managers should focus on the potential risk to cash flows rather than on accounting risks such as fluctuations in reported operating profit, foreign-exchange income/gains, or translation results in equity.

Understand limitations of financial instruments

Financial instruments such as futures, swaps, and options can effectively hedge well-specified, short-term currency risks such as transaction risks. But the most important risks are often not as well specified or long term. Take the example of a US consumer-goods company exporting to China. Its cash-flow exposure to changes in the renminbi exchange rate depends on competitor actions and consumer preferences. Moreover, since the company has made long-term investments in consumer brands and distribution channels, its exposure is large and stretched out over many years. Indeed, the size and duration of such risks make it impossible to effectively hedge with financial instruments.

In some cases, hedging short-term structural risks can buy time for management to react with operational or strategic measures, such as renegotiating pricing contracts, finding opportunities for cost reductions, or relocating production. For example, airlines can hedge their fuel costs, but such a move is only effective for about 12 to 18 months. That reprieve can secure cash flows for fixed commitments, giving airlines time to cut costs or raise prices to respond to fuel-price changes.

Be more transparent with investors

Companies today often describe their currencyhedging strategy in detail in their financial reports. Unfortunately, these strategies mainly address transaction or short-term structural risks and fail to provide shareholders any real insights into the type and size of long-term structural risks a company faces—or which of them it actively manages and why. And they often focus on the accounting impact of currency risk and their efforts to mitigate it rather than the impact on cash flow.

Investors are better off when companies report the past impact of currency fluctuations on their operating earnings or, even better, on their operating cash flow. If relevant, this disclosure could be by business segment and by currency. Philips, for example, discloses key factors affecting its operating earnings, including currency changes. Ideally, this would be followed by an estimate of how the exchange rate would affect future revenues and operating profits. Alcoa includes estimates of the sensitivity of its net income to changes in five major exchange rates (Exhibit 2). This would also fit with best practice in forward revenue and earnings guidance: clarifying what managers can influence and what they cannot. It is surprising how few large international companies

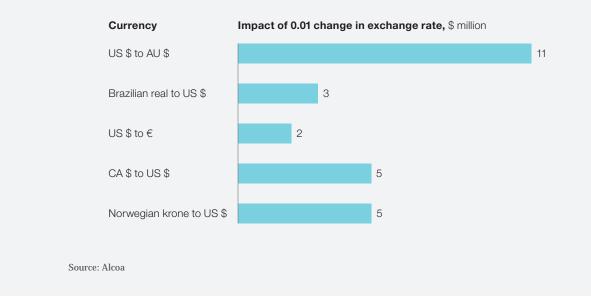


Exhibit 2 Alcoa reports the likely impact of currency shifts on its annual net income.

explain their key assumptions underlying forward guidance—an easy way to discuss risks and uncertainties with shareholders.



Companies are susceptible to a range of currency risks, but not all of them are risks they can or should try to manage. Managers would do well to take a holistic approach that focuses on the effect on cash flows rather than earnings and to be aware of the limitations of financial instruments. They should also be more transparent with investors about what risks they face and their efforts, if any, to hedge them.

¹ Including, for example, stochastic simulation, cash flow at risk, or scenario-analysis tools.

- ²This is also the case if no cash is repatriated back to the home country.
- ³We assume that all financing of foreign operations is in that foreign currency.
- ⁴ Of course, a company with large foreign operations could face financial distress from currency changes if it had very high leverage in its domestic currency. In that case, the company would in fact be exposed to "self-inflicted" structural risk by mismatching its operating and financing cash flows.
- ⁵ At unchanged US dollar prices and volumes. Note that the pure portfolio risk only decreases cash flow by an additional
 5 percent, which equals the difference between the cash-flow decrease in dollars (28 percent) and euros (32 percent).
- ⁶ Empirical research indicates that deviations in purchasing power tend to be reduced by 50 percent over an average of two to three years; see Alan M. Taylor and Mark P. Taylor,
- "The purchasing power parity debate," *Journal of Economic Perspectives*, 2004, Volume 18, Number 4, pp. 135–58, aeaweb.org.
- ⁷ Sometimes, structural risks are more subtle. In today's global markets, many product prices are set by global competition. For example, our German brewer would have far more limited US dollar exposure if all its competitors in the United States would be producing in the eurozone as well. Alternatively, it could be exposed to currency risk even if it sold only in the eurozone but with UK competitors producing in British pounds.

- ⁸ Similarly, arranging local funding of foreign operations will mitigate structural exposure (although the impact is usually limited, as financial expenses tend to be a small fraction of the total cost base).
- ⁹Note that purchasing-power parity does not help in reducing transaction risk: even if prices would completely adapt to moving exchanges rates, there are transactions for which companies have already fixed prices/terms.
- ¹⁰ For an overview of objectives for risk management, see, for example, René M. Stulz, chapter 3, in *Risk Management* and *Derivatives*, first edition, Cincinnati, OH: South-Western College/West, 2002.
- ¹¹ See, for example, Piet Sercu, chapter 19, in *International Finance: Theory into Practice*, first edition, Princeton, NJ: Princeton University Press, 2009.
- ¹² Bruno Coppé, Michael Graham, and Tim Koller, "Are you managing the right FX risk?," *McKinsey Quarterly*, 1996 Number 1.
- ¹³ For an example, see Coppé, Graham, and Koller, "Are you managing the right FX risk?"

For information on the impact of currency fluctuations on value creation, see Marc Goedhart, Tim Koller, and David Wessels, chapter 23, in *Valuation: Measuring and Managing the Value of Companies*, sixth edition, Hoboken, NJ: John Wiley & Sons, August 2015. The book can be ordered at wileyvaluation.com.

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Overcoming obstacles to effective scenario planning

Using scenarios to plan for uncertainty can broaden the mind but can fall prey to the mind's inner workings. Here's how to get more out of planning efforts.

Drew Erdmann, Bernardo Sichel, and Luk Yeung

When scenario planning has worked well, it has proved enormously useful to a wide range of organizations as a tool for making decisions under uncertainty. First popularized by Shell in the early 1970s, the approach should be a natural complement to other ways of developing strategy—especially when executives are as concerned about geopolitical dynamics as many are today. It would probably be more widely used if it hadn't been such a disappointment to many executives. In fact, 40 percent of those we surveyed in 2013 described it as having little effectiveness.

That scenario planning often underdelivers, in our observation, can be a simple matter of insufficient experience. Companies that infrequently use the approach lack the organizational muscle memory to do it right. Managers who are familiar with it assume they can just delegate it to subordinates. Those who are new to it can get caught up in the details, focusing on the assumptions behind sensitivity analyses, for example, without stopping to think about whether the uncertainties they're testing are the most important ones. Furthermore, in our experience, scenario planning can be hampered by the same deep-seated cognitive biases that it should be used to address, such as anchoring, neglecting low-probability events, or overconfidence.

Fortunately, an understanding of how such biases undermine scenario planning can mitigate

Exhibit

Better understanding several cognitive biases can help mitigate their impact on decision making.

The dos and don'ts of scenario planning								
Fight the urge to make decisions based on what you already know	Beware giving too much weight to unlikely events	Don't assume the future will look like the past	Combat overconfidence and excessive optimism	Encourage free and open debate				
What to do Review all trends likely to affect your company's business, especially inter- connections between issues and markets	What to do Evaluate and prioritize trends using first qualitative, then quantitative approaches	What to do Build scenarios around critical uncertainties, engaging top executives through experiential techniques	What to do Assess the impact of each scenario and develop strategic alternatives for each	What to do Instill the discipline of scenario-based thinking with systems, processes, and capabilities that sustain it				
What to avoid Relying on readily accessible information or evaluating trends only within the same geography or industry context	What to avoid Focusing on numerical precision early in the process	What to avoid Outsourcing or delegating the creation of scenarios to junior team members	What to avoid Planning for a scenario deemed most likely, to the exclusion of all others	What to avoid Using scenario planning as a one-off exercise or ignoring social dynamics such as groupthink				
Availability bias	Probability neglect	Stability bias	Optimism, over- confidence biases	Social biases				

their impact on decision making generally and improve the effectiveness of scenario planning itself. Management writers, including our McKinsey colleagues, have spilled oceans of ink writing about scenario planning.¹ In this article, we hope to provide a practical cheat sheet that helps managers become more aware of, and learn how to address, the most common biases that afflict the approach (exhibit).

Counter the tendency to make decisions based on what you already know: Availability bias

Scenario planning begins with intelligence gathering to understand and define a strategic problem. A planning team identifies emerging trends and potential disruptions that may affect the business. The output is typically a long list of trends, along with a high-level assessment of each trend's potential impact.

At this point, the process is most susceptible to the tendency people have to base decisions on information readily accessible in the decision maker's mind—an availability bias. For example, it's easy to fall into the trap of focusing on trends within your own industry or geography or on only part of a problem, perhaps because that's where information is most easily gathered. All this leads to blind spots. When scenario planners make an effort to understand the confluence of technological, economic, demographic, and cultural trends within and beyond their own countries, they're more likely to generate valuable counterintuitive ideas. For example, when a North American equipment manufacturer conducted a scenario-planning exercise about the growing importance of China, it began by focusing on the opportunity to sell equipment there. The assumption was that Chinese producers would buy the equipment to build products for their own local end customers—and that the company would need to make major investments to meet the Chinese producers' needs.

But when scenario planners looked closer, they realized there was another way for the company to participate in the growth of this market: it could sell equipment to buyers elsewhere, who were also targeting end customers in China. Given the buying power of Chinese producers, local regulatory issues, and the strong position of other global players, scenario analysis suggested that the company would be better off doubling down on equipment sales to non-Chinese companies that were rapidly penetrating this market.

Beware giving too much weight to unlikely events: Probability neglect

As scenario planning progresses, attention turns to the unknowns. The company evaluates and prioritizes emerging trends by their potential impact and their degree of uncertainty and then builds scenarios around the handful of residual uncertainties that typically emerge from the process.

The challenge here is that attempts to quantify what is intrinsically uncertain often lead to overscrutiny and analysis paralysis. Low-probability events can also easily be dismissed as outliers or overemphasized, creating a false sense of precision. Assigning low-probability events excessive weight, or completely ignoring them, is a phenomenon called probability neglect.

In scenario planning, it's critical to avoid the temptation to rush to model trends and uncertainties before assessing them qualitatively to set them in perspective and generate intuitions about how trends may collide and interact. This assessment should embrace several realities: some elements of the future are so uncertain they can't be quantified with any precision; simply evaluating the uncertainties' *relative* materiality to the business is valuable; and there are different levels of uncertainty, as our colleagues explained in a previous *McKinsey Quarterly* article.²

Following the financial crisis of 2008, it was common to say that everything was so unpredictable that planning was meaningless. Nonetheless, a telecommunications company used scenario planning to reduce the uncertainty to a manageable set of plausible scenarios. The starting point for reducing uncertainty was looking for ways to get beyond the fact that the company had no idea what GDP growth would be over the

It's critical to avoid the temptation to rush to model trends and uncertainties before assessing them qualitatively to set them in perspective. next few years. That was true, but when planners started looking carefully at different products and services in the portfolio, they realized that offerings at different stages of the life cycle had different levels of dependency on the macroeconomic environment. The company's diverse range of products and services included some that probably wouldn't have a bleak sales outlook even in severe downturns. These qualitative assessments helped the company to model the likely evolution of its markets more intelligently. That helped managers to bound the uncertainty, to create a set of leading indicators (beyond GDP) for each business to monitor, and to make the subsequent strategic dialogue far more tangible, with far less fear.

Counter assumptions that the future will look just like the past: Stability bias

As managers build scenarios, the implications for each uncertainty are extrapolated into the future to project different outcomes, and the combination of those outcomes becomes the basis for scenarios. The challenge, when managers anticipate the future, is to overcome a natural tendency to assume that it will look a lot like the past.

Properly executed, scenario planning prompts participants to convert abstract hypotheses about uncertainties into narratives about tangible realities. It can thus help decision makers to experience new realities in ways that are both intellectual and sensory, as well as both rational and emotional. Good narratives, as Chip and Dan Heath have argued, not only help us perceive alternative futures but also inspire us to act in response to them.³

This experiential aspect is essential, and it's here that a critical mistake often occurs: decision makers outsource the creation of scenarios to junior team members or external vendors and reengage only in the final stages. This is problematic, in our experience, because when senior leaders aren't part of the process of developing scenarios, they are less likely to make sense of or act on them. Their natural bias toward stability is therefore more likely to hold sway. Case in point: a team in one North American manufacturer presented demand scenarios for the next decade to senior executives many times, but to no effect. Not until those executives debated, stress tested, and experienced the scenarios for themselves, in exercises such as writing a story framed as a retrospective written in the future—a so-called premortem⁴—did they commit themselves to strategic action and apply the insights of the scenarios to set new directions.

Combat overconfidence and excessive optimism

Once scenarios are defined, decision makers turn their attention to identifying the risks and opportunities that each scenario represents and compare them with those of the current business plan. At this point in the process, they will develop a new portfolio of potential strategic actions and contingency plans—as well as a clear understanding of the organizational, operational, and financial requirements of each.

Countless business initiatives fail because executives underestimate uncertainty and the chances of failure—and instead move directly to action. Many organizations reinforce this kind of behavior by rewarding managers who speak confidently about their plans more generously than managers who point out how things might go wrong.⁵ Overoptimism and overconfidence lead to projects that run over budget or time, to mergers and acquisitions that fall short of estimated cost and revenue synergies, and to business plans with unreasonable growth expectations.

Overoptimism and overconfidence can be countered by scenario planning but can also infect it. To stay on the right track, managers should Countless business initiatives fail because executives underestimate uncertainty and the chances of failure—and instead move directly to action.

avoid the temptation to choose the scenarios they deem most likely and to focus planning efforts solely on them. A good reality check is whether your scenario planning forces executives to consider unpalatable though plausible scenarios.

In the early 2010s, for instance, one energy company sought to assess the implications of oil and gas prices in North America for the company's portfolio of projects and investments. Of the pricing scenarios that managers created, one significantly challenged the attractiveness of several major business initiatives. The intense debate that ensued highlighted a number of important issues and turned out to be a dress rehearsal for challenges the company and the industry would face in the coming years. Evaluating the portfolio against all scenarios, good and bad, also made it clear that some initiatives would yield returns only in the most optimistic case. The company decided to put them on hold.

Initiatives were further evaluated according to two other criteria. The first was their "optionality": how easy they would be to scale up or down. The second was the flexibility of the timelines influenced, for example, by how much equity the company held in each initiative. The resulting portfolio contained no-regrets moves (projects or investments financially sound under all scenarios), real options (which required lower up-front investments but could be scaled up when the time was right), and big bets (demanding a large up-front investment to reserve the company's right to play in the space in the future). Such a portfolio avoids favoring what seems to be the most likely scenario, while allowing the organization to place (or opt out of) calculated choices, depending on how the market evolves.

Encourage free and open debate: Social biases

In an interview with the McKinsey Quarterly in 2010, Daniel Kahneman, winner of the Nobel Prize for his work in behavioral economics, said, "I'm really not optimistic [that individuals can debias themselves] If we could elevate the gossip about decision making by introducing terms such as 'anchoring,' from the study of errors, into the language of organizations, people could talk about other people's mistakes in a more refined way."⁶ Kahneman's intuition matches our strategydevelopment experience, which is why we emphasize making scenario planning part of a company's modus operandi rather than a one-off exercise. In fact, without institutional support, the biases described previously can be reinforced and amplified by the social biases of groupthink and "sunflower management" (the tendency for groups to align with the views of their leaders). Embedding an awareness of uncertainty, scenarios, and biases gives people the language and the license to keep one another in check.

A sustained ability to manage through trends and scenarios can also confer competitive advantage. IBM, for example, has been developing its annual Global Technology Outlook report for more than 30 years. Consistently refreshing this perspective has enhanced IBM's technological foresight and is, the company argues, an important enabler of "sound decisions and investments in future technology directions."⁷

To embed scenario thinking, organizations must institutionalize new mental habits and ways of working. This, our colleagues have argued, means that leaders must simultaneously instill a conviction that change is needed throughout the organization, role model the desired new behavior, reinforce processes and systems to counter bias, and ensure that the company acquires or builds the skills needed to support the new approach.⁸ To help the organization make better decisions under uncertainty, top managers should freely acknowledge their susceptibility to bias and create an open environment that welcomes dissent. At the same time, they must challenge themselves and their people to embrace new habits of thoughtsuch as thinking the unthinkable—when the company undertakes scenario planning. 🗖

- ¹ Charles Roxburgh, "The use and abuse of scenarios," November 2009, mckinsey.com.
- ² Hugh G. Courtney, Jane Kirkland, and S. Patrick Viguerie, "Strategy under uncertainty," *McKinsey Quarterly*, June 2000, mckinsey.com.
- ³ Lenny T. Mendonca and Matt Miller, "Crafting a message that sticks: An interview with Chip Heath," *McKinsey Quarterly*, 2007 Number 4.
- ⁴ In a premortem, you pretend to be writing at some point in the future to explain the failure of a course of action that's contemplated in the here and now. The idea is to get some idea of the problems before those actions are implemented.
- ⁵ Dan Lovallo and Olivier Sibony, "The case for behavioral strategy," *McKinsey Quarterly*, March 2010, mckinsey.com.
- ⁶ "Strategic decisions: When can you trust your gut?," *McKinsey Quarterly*, March 2010, mckinsey.com.
- ⁷ Global Technology Outlook, IBM Research, 2008, ibm.com.
- ⁸ Emily Lawson and Colin Price, "The psychology of change management," *McKinsey Quarterly*, June 2003, mckinsey.com.

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