

What will enable alpha growth?

A metric known as alpha growth measures a company's ability to grow faster than its market. Traditionally, semiconductor companies haven't stacked up well against players in other industries when it comes to this indicator—but there are ways to close the gap.

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There are many ways to measure a company's performance, but few that are as powerful as alpha growth, which is a term used to describe a company's ability to grow faster than its market. After all, as the old saying notes, a rising tide lifts all boats. But there is real value in knowing which boats rise the fastest. As discussed in *The Granularity of Growth*,¹ we consider the portion of growth that doesn't come from portfolio momentum to be alpha growth. (The term is based on the definition of alpha in the investment world, that is, the risk-adjusted return of an investment above and beyond the return created by the market as a whole, known as beta. This sort of alpha is seen as a measure of manager skill in a hedge fund, mutual fund,

or similar investment vehicle.) What are the ingredients of alpha growth? Essentially, three elements that require active leadership from the management team must be combined: gaining market share by defining new markets or expanding into related or adjacent markets, ensuring superior execution in sales and product development, and selectively deploying M&A skills to enhance revenue growth through targeted acquisitions.

In a wide range of industries, we have found the alpha-growth metric (measuring nonportfolio-based momentum) accounts for roughly 55 percent of long-term growth. The semiconductor industry, however, is a laggard, with only about

¹ In *The Granularity of Growth* (New York: Wiley, 2008), Mehrdad Baghai, Sven Smit, and Patrick Viguier detailed a new, data-driven approach to formulating growth strategies. It allows companies to uncover, understand, and capture potential growth opportunities and then deploy them at scale.



27 percent of growth attributable to alpha growth over the last decade. High performers do exist, and they tend to be standouts because high levels of alpha growth correlate strongly with the creation of shareholder value and economic profit (Exhibit 1).

As core growth rates in the semiconductor industry decelerate in the years ahead, alpha

growth will become ever more critical to sustaining long-term growth. A formal analysis of more than 700 large companies from a range of industries suggests there are definite steps a company can take to improve its share of alpha growth. The majority of this article will focus on four steps that semiconductor players can take to enhance the share of growth attributable to alpha growth.

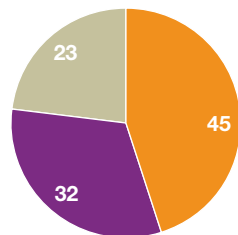
Exhibit 1

Alpha growth accounts for about 55% of long-term growth throughout all industries.

Companies analyzed during the period 1999–2008, %

Portfolio momentum M&A Share gains

Overall sample of companies¹



Growth decomposition by industry²

Industry	Portfolio momentum	M&A	Share gains	Number of companies
High tech	42	25	33	70
Travel and logistics	42	26	31	29
Financial institutions	42	31	27	117
Retail and wholesale	48	27	25	46
Health care	41	34	25	64
Media and entertainment	36	41	23	36
Consumer goods	43	36	21	96
Electric power and natural gas	48	34	18	69
Telecommunications	57	25	18	55
Chemicals	49	36	16	30
Basic materials	50	35	15	40
Average	45	32	23	
		Alpha growth = 55		

¹Based on multivariate regression; analysis excludes three outliers (also excluded from their respective sectors): Google, Virgin Blue, and Wynn Resorts.

²Figures may not add up to 100%, because of rounding.

Source: McKinsey growth-decomposition database of information from 720 large companies

At the highest level, those steps include expanding beyond the company's comfort zone to explore related markets, creating wholly new markets, developing a strong focus on product innovation and sales excellence, and leveraging M&A selectively to build scale or add needed capabilities. Before we discuss these steps in detail, though, we present more evidence of the efficacy of alpha growth as a metric and put it into proper context vis-à-vis other measures of business performance.

How alpha growth drives value

When we set out to analyze growth across the semiconductor industry, we leveraged McKinsey's proprietary databases and we discovered that over a five-year period, from 2003 to 2008, 73 percent of growth was attributable to choice of market—in other words, the rising tide. However, revenue growth due to successful M&A was responsible for a healthy 18 percent of growth. The rarest form of growth was due to increases in market share; such growth accounted for 9 percent of gains during this period. Both M&A-derived growth and gains from increasing market share result in alpha growth.

As mentioned earlier, high levels of alpha growth are evident in semiconductor companies with high levels of shareholder value creation and economic profits. However, just as umbrellas don't cause rain to fall, companies can have respectable levels of alpha growth without generating economic profits or shareholder value. The difference is that those with positive alpha growth may be poised for growth (and negative economic profits in the near term), whereas other companies might be ahead of the pack at the moment but have already run out of gas (manifested in negative shareholder value creation).

Ultimately, any high-performing semiconductor company should aspire to generate profitable alpha growth. To do so is to join the industry's elite and to ensure that the organization has tapped into a long-term source of quality growth. We believe there are four levers that will allow companies to develop profitable alpha growth; each is explored in detail in the following section.

Actively pursuing alpha growth

Quality growth is not necessarily easy to come by in an industry as cutthroat as the semiconductor sector. After all, a company may make rapid gains with one runaway success—but that scenario is not one that can be banked on. Instead, we prefer to look for more sustainable platforms for growth, such as alpha growth.

At a high level, there are two main inputs into alpha growth: a dedicated focus on finding the right expansion opportunities and flawless execution with regard to product innovation, sales strategies, and targeted M&A capabilities.

Terra incognita

The first lever involves tapping latent growth opportunities—in essence, going where no one has gone before. Our analysis of companies with a distinctive ability to create new markets surfaced five notable traits that they share. First, they tend to adopt an expansive—or even creative—view of market opportunities worth assessing. They also place bold bets when entering new markets. They share a culture of informed risk taking, with no pulled punches or half measures. These companies also work to encourage rapid decision making and avoid so-called analysis paralysis, which could prevent them from making any significant moves at all. They work to predefine the elements that

make for successful expansion and enforce discipline to ensure that projects that are not meeting targets are abandoned. The final characteristic these companies have in common is that they leverage their core capabilities to prioritize the markets to play in. By blending current talent with future markets, these companies can develop distinctive concepts and products that will set them apart from rivals (Exhibit 2).

A good example of this lever in action would be the bold bet Texas Instruments made on the digital-signal-processor (DSP) market in the early 1980s. At the time, the United States was just beginning to emerge from a double-dip recession, and semiconductor demand was at a low ebb. At the worst of this downturn, a company executive became convinced that a dedicated signal-processing chip had the potential to become a substantial success. The programmable-products division tasked its design team to build a processor for a market that did not exist yet. By early 1982, a prototype single-chip DSP achieved an operating speed of

five million instructions per second, putting it on par with many mainframe computers of the era.

Similarly, in the mid-2000s, Cypress Semiconductor adopted a new strategy, focusing on programmable products. The strategy built on an existing business line, which produced USB microcontrollers but expanded its remit to include programmable-system-on-a-chip (PSOC) products. It should be noted that PSOCs do not require leading-edge fabs, thus helping the company's margins. As this business gained momentum in 2007, with Cypress's PSOC powering the clickwheel for Apple's popular iPod music player, the company was able to sell off six noncore businesses. Now, that same PSOC product line is scaling into new applications, such as mobile handsets and portable medical devices.

Expanded focus

In addition to placing bets on wholly new markets, a second lever for driving alpha growth involves expanding into adjacent markets, located one or two steps from current products or services. Qualcomm, for example, parlayed its

Exhibit 2

Companies with a distinctive ability to create new markets exhibit several characteristics.

- **Adopt an expansive view** of which market to play in—and think creatively
- **Make bold bets** when entering a new market—do not take a 50/50 approach—and foster a culture of informed risk taking
- **Avoid analysis paralysis**, which could prevent the company from entering a new space even if it presents a real growth opportunity
- **Be ready to move on** by predefining what success looks like and be willing to abandon projects when necessary
- **Leverage core capabilities** to prioritize which markets to play in, as they can be a source of distinctiveness

expertise in nanoscale chip fabrication into the launch of its mirasol display technology, which is powered by microelectromechanical systems. SanDisk followed a similar approach, leveraging its core competencies related to production of flash memory and channeling it into the design of the Sansa line of MP3 players.

SunPower Corporation designs and manufactures high-efficiency crystalline silicon photovoltaic cells, roof tiles, and solar panels based on a silicon all-back-contact solar cell invented at Stanford University. In 2002, Cypress Semiconductor spent \$150 million to buy a stake in the company, giving it access to the solar-panel market. By 2005, SunPower's revenues had grown significantly; it was then spun off from Cypress in a public offering. Cypress's \$150 million stake was worth \$1.1 billion on transaction day.

Whether looking inside your existing product portfolio or considering complementary products outside it, these examples serve to illustrate the opportunities in services or new product categories that often can be uncovered.

Maniacal focus on execution

A maniacal focus on execution is a no-regret move and can have significant impact when supplemented by business-model disruption and distinctive capability building. While 40 percent of market-share growth is driven by business-model disruption (being an attacker or being attacked), another 40 percent is driven by a truly distinctive capability that leads to competitive advantage. An example of this would be Toyota's quality system. The remaining 20 percent is driven by relentless execution, or performing day-to-day tasks a bit better every day.

There are two functions within each semiconductor company that can add to the overall company's alpha growth meaningfully if they are focused tightly on best-in-class performance. These are the product-development and sales teams.

As part of our research effort, we studied a broad range of corporations that excel in these two areas, and from that we discovered five characteristics that top performers share. First, they leverage existing core capabilities in product innovation and brainstorm unique ways to combine their abilities with external sources of intellectual property. Atmel, for example, acquired Quantum Research Group in 2008. Quantum was a supplier of capacitive-sensing solutions. By leveraging its existing micro-controller expertise and blending this with Quantum's know-how, the combined company developed its line of maXTouch controllers, which was worth \$140 million for Atmel within two years due to its inclusion in a broad range of Android-based smartphones.

Successful companies also cultivate close collaboration between their R&D and marketing functions to ensure that cross-functional teams make all important product-development decisions. A third trait is having in place a robust, consistent framework for evaluating ideas, examining potential financial impact, and assessing the strategic fit of the idea, as well as its feasibility and the positives or negatives of the timing of any potential launch.

Leaders also go to great lengths to engage customers early in the product-development cycle. Research and qualitative comments from key customers are used to shape initial concepts,

as well as specific elements of early and midstage prototypes.

Last, these companies nurture a formal innovation culture, setting a foundation to welcome new thinking and support the development of new ideas, while also underlining the importance of continually improving ideas throughout the development cycle. Taken together, these five traits represent best-in-class capabilities for introducing new products.

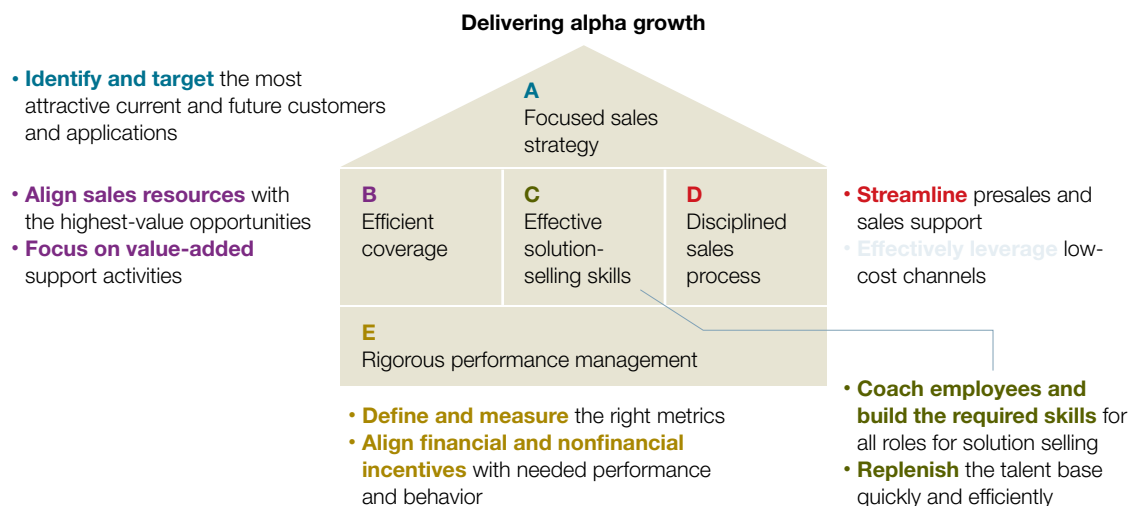
Turning to sales—the engine that transforms those new products or services into revenues—there is a five-pronged approach to developing alpha growth (Exhibit 3). A focused sales strategy is the first element. Such a strategy must identify and target the most attractive customers. Many companies identify key accounts and gear investments toward them, but best-in-class companies develop account-level perspectives on where the company can expect to find near-term profits.

The second element is an efficient coverage model. By efficient, we mean that the right sales resources must be devoted to the highest-value opportunities at each point in the account’s life cycle (for example, with regard to “hunter” and “farmer” sales coverage). In addition, top performers need to develop the solution-selling skills of the sales force. It is not enough to roll out training in, say, value pricing. The pool of talent must be replenished regularly. Sales campaigns should focus on building mind share among distributors and include the company’s products in a broader set of IT systems—a genuine solution for customers.

The fourth element is a truly efficient sales process. While some are content to streamline quoting or simplify distributor sales models, the best companies take things further. They define a crisp set of processes with clarity and coordination among the internal teams involved in the sale. They also develop automated tools and resources to minimize the administrative burden on sales teams.

Exhibit 3

A sales strategy aligned to create alpha growth has five key elements.



The final building block is a robust performance-management system. Peak performers track metrics such as design wins and share gain in addition to traditional sales data. They also fit these metrics into a real-time dashboard that generates live updates from the field, instead of at day's end. With all five of these upgrades in place, semiconductor companies can expect to see genuine improvement in sales conversion, revenues, and profits—as well as in alpha growth.

Selective M&A

The fourth lever involves developing a targeted approach to both M&A and business-development activity. From our study of top-performing institutions, we determined that these leaders share four attributes. They develop two or three M&A archetypes, such as buying scale versus buying in related markets or in specific geographies. The archetypes should align with the company's overall strategy, and the aim should be building platforms rather than becoming a conglomerate. Cisco Systems provides a good example of a programmatic approach to M&A. Between January 2005 and June 2008, Cisco acquired 48 companies, and 55 percent of them were companies in related markets. Its overall strategy is to create a lineup of standard, scalable products it can drive through its strong channel network. Seventy-nine percent of those 48 deals were worth less than \$250 million. These smaller acquisitions generally focused on tuck-in technologies that built out Cisco's existing market positions. Twenty-one percent of the deals came at prices above \$250 million, and here the company was largely purchasing new platforms.

IBM, on the other hand, prefers to buy scope. During the same period, it made 63 acquisitions,

and fully 80 percent of those deals brought a new technology or service into the company's portfolio. And approximately 80 percent of those deals came in under \$250 million. More rarely, IBM will purchase scale; 16 percent of the deals in this period gave it substantial reach into a new market. Company executives have noted that they found software deals in the range of \$100 million to \$400 million provide it with an outsize internal rate of return. Given the company's formidable global footprint, only 4 percent of its deals brought entrée into a new geography.

What are the ingredients of a world-class M&A process? First, companies that excel develop a proactive and systematic set of processes to screen for and assess M&A opportunities. Next, they develop a formalized M&A playbook, covering every aspect of the company's M&A strategy, governance structure, deal-team staffing and other organizational elements of the M&A system, and key documents such as detailed process descriptions, due-diligence checklists, valuation tools, and go/no-go criteria. The final element is a rigorous approach to merger management, with a focus on value creation.

To ensure that things progress according to plan, the M&A team should rigorously track post-merger activities and operating metrics in addition to traditional financial metrics. That said, it's not purely about numbers. Culture is crucial to successful merger integration, as are lines of communication. Based on extensive postmerger-integration work with clients, we advise that M&A teams plan three times as much communication as they might initially expect. Teams should risk overcommunicating with all relevant stakeholders. As a final thought, M&A teams should work to leverage the integration to

build skills among line leaders and more junior team members that will be useful in future deals.

Putting the pieces together

With all of the elements listed above, semiconductor companies can move from their current idea of growth to one that will prove more sustainable over the long term. Many opportunities exist to make the types of changes that lead to alpha growth. As part of our research, we identified two categories of opportunities that seem perfectly suited to semiconductor companies seeking this kind of growth; they exist in both software and services. Just as Apple acquired Siri in 2010, other leading technology companies have begun leveraging software acquisitions to launch distinctive products. Service-based companies, such as Netflix or Mint.com, are another area we believe might interest semiconductor companies.

However, before running off after a shiny new acquisition, semiconductor players must know where they stand. We believe it is critical for companies to understand their position with regard to shareholder value creation, economic profits, and alpha growth. Furthermore, it is crucial to know whether existing growth is by design or default. It is also useful to know where your corporation stands vis-à-vis competitors across these three financial metrics. With those facts in hand, it is possible to develop the right strategic posture for various markets.

In addition, it is important to identify the specific levers that will allow your company to attain the ideal mix of alpha growth, economic profit, and shareholder value creation. That is as much a matter of having the right capabilities in place as of excelling in execution.

However, distinctive execution is a key ingredient. Companies must set proper targets, track the right metrics, and deploy appropriate resources to achieve peak performance.

The last piece of the puzzle is having the right M&A strategy in place before M&A becomes mainstream in the semiconductor industry. Now is the time to begin building M&A muscle; once the right M&A plan is in place, it can contribute strongly to an enterprise's alpha growth.



Given the intense competition in the semiconductor industry, it is no surprise that companies count on innovative products and services in order to grow. But over the longer term, that means a company is only as successful as its most recent product launch. Alpha growth, on the other hand, is the key to quality, sustainable increases in revenues and profits. It blends organic improvements with strategic acquisitions—and it ultimately separates the leaders from the rest of the pack. ○