For private equity investors, the medical technology industry holds significant promise, with a record of strong profitability, resilient demand, and encouraging growth prospects. Technology is not only changing the way health care is delivered but unlocking new business models for forward-looking organizations.

Amid this promise are some challenges, however. Even before the COVID-19 crisis, medtech faced pricing pressure, mature product portfolios, and increasing pressure from regulators and providers to show true differentiation. PE investors seeking to capitalize on the medtech opportunity therefore need to take a step back and understand the dynamics of the industry, the positioning and value creation potential of specific assets, and the implications of recent events. No easy task.

We have analyzed the global medtech landscape and identified six investment themes that will support short-, medium-, and long-term value creation. Collectively, the themes give PE investors a strategic way to think about—and capitalize on—the opportunities in the marketplace.

The Medtech Industry in Context
Medtech is a large component of the overall health care industry, with total annual revenue of about $510 billion in 2019. But it is far from a single, homogeneous block. We see five core segments:

- Medical equipment such as MRI and ultrasound machines
- Medical devices like artificial joints, stents, and other surgical implants
- Medical consumables including bandages, syringes, and similar single-use products
- In vitro diagnostics including equipment used to test samples from the human body, such as blood or tissue
- Life science tools such as analytical...
instruments and equipment used in research

As Exhibit 1 shows, each segment has its own size and trajectory, but the overall industry grew at 2% to 3% annually from 2012 through 2016, and then slightly faster through 2019.

The medtech industry overall features significant fragmentation. The ten largest companies collectively hold only about 40% of the market in aggregate, and no company generates more than 8% of revenue. Individual segments, however, are much more consolidated. For example, in the orthopedics segment, the top four companies control about 80% of the market. Big organizations can generate value through scale (for example, serving the big provider systems or capturing a greater share of spending within a given medical ward), and for that reason the largest companies in the industry are seeking to get larger. They do this through concerted M&A initiatives to generate scale efficiencies, acquire relevant R&D, and, in many cases, access faster-growth segments and geographic markets, such as developing countries.

In addition to those large players, the industry also has a long list of small and midsize contenders that can deliver significant value in different segments, geographic regions, and therapeutic specialties. For PE investors, that fragmentation makes medtech attractive, because it is possible to buy and combine multiple small companies in order to unlock greater value, drive innovation, and create technology and geographic strongholds.

**Strong Growth Trends—and Some Caveats**

Overall, the industry is poised to benefit from several promising growth trends. Ongoing demographic trends—the aging of populations in many developed markets and a higher prevalence of chronic lifestyle illnesses such as obesity, heart disease, and diabetes—signal continued and growing demand for medtech products. Emerging markets where more and more people have increased access to care are another source of potential growth.

At the same time, the way that health care is delivered is changing. Treatments are moving out of traditional settings like hos-
hospitals and physicians’ offices and into outpatient clinics and patient homes, with consumers making more decisions and playing a greater role in their own care. That shift increases the potential for innovation to create market opportunities, as technology and connectivity put medtech products into a wider range of settings and enable new business models with the potential to create growth.

Despite these factors, several limitations will reduce the industry’s ability to boost profits in line with growth. One is pricing pressure. As governments allocate increasing amounts of their budgets to provide health care for citizens, they are recognizing that fiscal trends are simply unsustainable. The financial crisis in 2008 was a clear catalyst. As a result, they are seeking to reduce continued high spending growth in health care, at times by capping pricing for some health care products and services and limiting reimbursement. To do this, some governments and payers are demanding proof of value or clear evidence of how the product or service is different from less expensive options (while still ensuring the quality of products and services).

Commercial changes are another factor. In the past, medtech products were primarily sold through experienced and highly qualified sales reps who made sales calls to individual physicians, surgeons, and key stakeholders—an approach known as the “milkman” model. If a health care professional was trained on a specific product and liked it, she could buy it. Today, given the increased consolidation and professionalization in the health care industry, individual physicians have less influence on purchasing decisions. Instead, the procurement function is centralized at a higher level, for some categories at the hospital or health system level or, for state-run health ministries, at a regional or even a national level. As a result, medtech companies often need to offer larger discounts in order to win a smaller number of higher-volume accounts.

The growing requirement for differentiation and proof of value creates both opportunities and challenges for the medtech industry. Rather than primarily selling products on a per-unit basis, forward-thinking companies are developing more comprehensive solutions (including services) that can create value throughout a patient’s journey. These solutions often have a higher price point but ultimately save money for purchasers such as clinicians and hospitals. However, the shift to such models will take time and create many winners—and losers—along the way.

Six Investment Themes

To make sense of the dynamics, PE firms need to establish specific strategies for how to invest in medtech. To that end, our analysis of the industry identified six specific investment themes. (We also analyzed how these themes might change as a result of the pandemic; see the sidebar, “The Impact of COVID-19 on Medtech.”)

**Deliver superior outcomes.** First, identify companies that offer innovative products capable of delivering markedly better outcomes, for both patients and providers. For instance, many companies offer wheelchairs with various capabilities and functions, but the medtech company Permobil makes products, including a wheelchair that allows users to stand with support rather than just sit, that can dramatically improve the quality of life for people who use them. The design is more expensive than that of basic wheelchairs, but it offers a better experience and quality of life—and may even improve cardiovascular and musculoskeletal health.

Similarly, a medical center in the Netherlands opened a new facility and needed to equip it with hospital beds. Rather than buying basic versions, the facility worked with a medtech manufacturer to design a smarter, connected hospital bed. It can weigh patients without requiring them to get out of bed to stand on a scale and it automatically notifies nurses if a patient does get out of bed—a dangerous situation for certain types of conditions. By automating that process, the bed saves nurses significant time and reduces complications from falls.
COVID-19 has created major disruptions for virtually every sector, including medtech, and though the pandemic’s final impact is still uncertain, some things are already clear. Unlike previous economic crises, this one is directly linked to the health care industry. Overall, we remain positive regarding the market fundamentals for the industry, as we believe it will accelerate a number of trends already underway. These include the adoption of technology (such as virtual care), a continued shift to outpatient settings, tighter budgets, and a strong focus on patient outcomes and differentiation to justify pricing.

Moreover, the pandemic will affect different segments within medtech to varying degrees and along varying timelines. For example, some manufacturers of advanced medtech equipment are likely to be hit by depressed capex investments among hospitals and health systems. At the same time, those providing ICU and lab-testing equipment will benefit from crisis-related spending to increase capacity in the short to medium term. Similarly, the consumables segment has performed well because of strong demand for some product categories. Perhaps the greatest uncertainty is the impact on products and services related to elective surgeries. We expect to see a phased recovery, based in part on the classification of risk groups, as the pace of those procedures slowly gains momentum.

The exhibit below summarizes the likely impact of COVID-19 on our six investment themes.

### THE IMPACT OF COVID-19 ON MEDTECH

<table>
<thead>
<tr>
<th>INVESTMENT THEME</th>
<th>COVID-19 IMPACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliver superior outcomes</td>
<td>Likely positive impact in the medium to long term, as health care systems shift to value-based care, which will lower overall costs</td>
</tr>
<tr>
<td>Focus on innovation</td>
<td>Potential negative impact given constrained health care budgets and limited interest in highly innovative products</td>
</tr>
<tr>
<td>Own the patient journey</td>
<td>No major impact from COVID-19 per se, but positive results could be seen if companies are able to digitize the care journey for some patients (such as those with chronic conditions)</td>
</tr>
<tr>
<td>Capitalize on the consumerization of health care</td>
<td>Positive impact given that COVID-19 will accelerate the usage of virtual tools, including tech for applications such as remote monitoring, giving patients increased control over and influence on their own care</td>
</tr>
<tr>
<td>Develop value-based products</td>
<td>Very positive impact because tightened budgets will likely favor value-based products, in both the short and long term</td>
</tr>
<tr>
<td>Improve efficiency</td>
<td>Positive impact because tightened budgets for health care providers will carry over to medtech companies and push them to look for new ways to improve efficiency (such as through outsourcing)</td>
</tr>
</tbody>
</table>

Source: BCG analysis.
Focus on innovation. Technology is allowing companies to develop radically different products and services that function more effectively, cost less to produce, or offer other types of benefits. For example, some are now exploring the use of 3D printing to create custom orthopedic implants, developing robotic surgery infrastructure, or investigating products to address unmet needs in conditions such as refractory epilepsy. Medtech still offers the opportunity to develop groundbreaking products to address key unmet needs. However, some binary risk is associated with this approach to investing, and prudent assessment of needs, the pipeline, and the ability to differentiate is key.

Own the patient journey. As noted, health care is moving beyond traditional settings, particularly for chronic conditions that require ongoing treatment. That creates opportunities for medtech companies to interact with patients in new ways. For example, a medtech company can have a line of clinical products sold via traditional channels to physicians and hospitals and an over-the-counter line that it can sell directly to patients. Or it can offer adjacent product lines that treat related conditions. For example, a global vision care company sells over-the-counter allergy treatments, contact lenses, and other vision care products, as well as advanced ophthalmic surgery tools and services to surgeons. Combining offerings in this way helps medtech companies evolve beyond individual transactions and move toward a broader engagement with the patient.

Capitalize on the consumerization of health care. Health care is changing in ways that give consumers more input into and control over their own care. A good example is the diabetes segment. Patients have always needed to monitor their own diet and insulin levels, and new technologies continue to emerge to give them smarter tools in that effort. Several companies now offer mobile apps that enable patients to stay on top of their diabetes independently. The apps send data securely via the cloud to physicians and issue alerts in situations that may require more direct support. Interacting directly with patients as consumers in this way requires different capabilities for many medtech companies, which typically have deeper expertise and relationships with clinicians. But it will likely lead to expanding opportunities as the consumerization of care continues.

Develop value-priced products. Given the increase in pricing pressures affecting the health care industry, investors can identify medtech companies that offer lower-cost products of good quality. Many procurement functions are acutely conscious of product pricing—and often have explicit incentives to find the least-expensive option in a given product category. This is particularly true for consumable products such as bandages, catheters, and some wound care products, where qualitative differences may not be as critical. Companies that can identify those opportunities and offer products that are competitive in terms of quality and functionality—yet at lower prices—will be attractive to providers.

Improve efficiency. Last, PE companies can apply the classic levers of improving efficiency and reducing costs. The industry has long enjoyed high profit margins and has only recently needed to become more operationally efficient, so many medtech companies have significant room for improvement. In fact, our analysis found that medtech has a significantly higher cost structure than other industries indicating room for further optimization. (See Exhibit 2.) For example, some companies could benefit from further outsourcing their production to contract manufacturing organizations. Others could improve procurement and consolidate their supplier network to become more efficient as well as strengthen regulatory performance and resilience in case of supply chain challenges. Still others could use technology to automate support functions or rethink their commercial model. Of the six themes we identified, this is perhaps the most familiar to PE investors, as it is the type of work they do for portfolio investments in virtually all sectors.
PRIVATE EQUITY FIRMS can find attractive investment targets in the medtech industry. But success is far from assured. Among other challenges, COVID-19 raises the level of uncertainty about the industry’s prospects, and identifying the right trends will be critical for success. By understanding the dynamics that will shape the industry’s future—many positive but some negative—and applying the investment themes we identified, PE firms can equip themselves for success.

About the Authors
Victor Corzo is a managing director and partner in the Stockholm office of Boston Consulting Group. You may contact him by email at corzo.victor@bcg.com.

Bob Lavoie is a managing director and senior partner in the firm’s New York office. You may contact him by email at lavoie.bob@bcg.com.

Charles Hendren is a partner in BCG’s Stockholm office. You may contact him by email at hendren.charles@bcg.com.

Sanna Dahlgren is a principal in the firm’s Stockholm office. You may contact her by email at dahlgren.sanna@bcg.com.

Boston Consulting Group partners with leaders in business and society to tackle their most important challenges and capture their greatest opportunities. BCG was the pioneer in business strategy when it was founded in 1963. Today, we help clients with total transformation—inspiring complex change, enabling organizations to grow, building competitive advantage, and driving bottom-line impact.

To succeed, organizations must blend digital and human capabilities. Our diverse, global teams bring deep industry and functional expertise and a range of perspectives to spark change. BCG delivers solutions.
through leading-edge management consulting along with technology and design, corporate and digital ventures—and business purpose. We work in a uniquely collaborative model across the firm and throughout all levels of the client organization, generating results that allow our clients to thrive.

© Boston Consulting Group 2020. All rights reserved. 7/20

For information or permission to reprint, please contact BCG at permissions@bcg.com. To find the latest BCG content and register to receive e-alerts on this topic or others, please visit bcg.com. Follow Boston Consulting Group on Facebook and Twitter.