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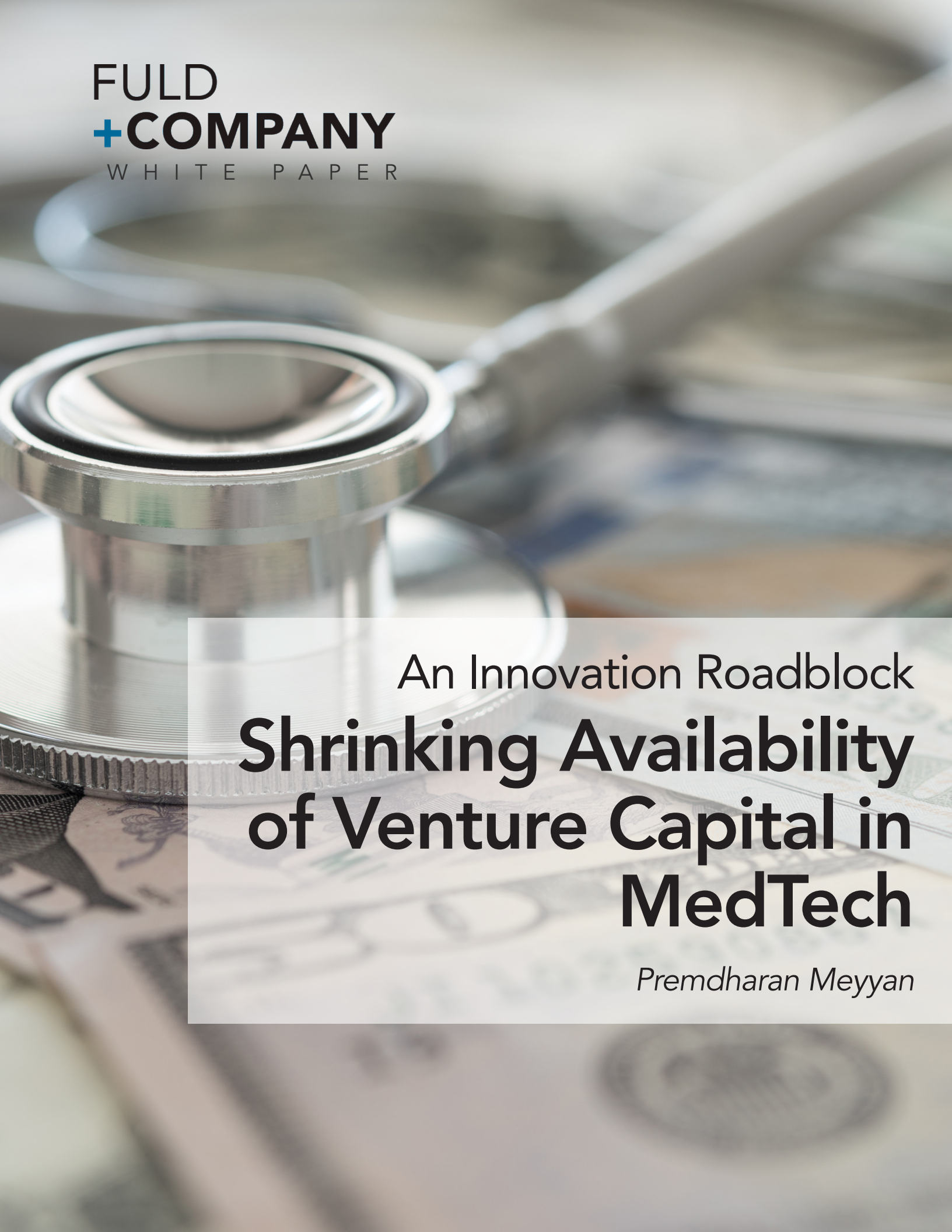

An Innovation Roadblock

Shrinking Availability of Venture Capital in MedTech

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Contributions

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INTRODUCTION

The medical device sector, like many health segments, is driven by the usual suspects: a growing elderly population, rising prevalence of debilitating diseases, increased importance on quality-of-life, and innovation through painstaking research and development (R&D) efforts. The latter, the only factor that industry players has any influence over, presents significant potential to cause a paradigm shift in how we approach the treatment and management of diseases. By extension, innovation, whether in technological hardware or software or other key elements, could drive explosive growth across numerous product segments. What's the challenge, then? In a word: funding.

Medical technology companies exist to investigate and create new devices and methods of diagnosing, measuring, and treating health conditions. One has to look no further than the mobile hospital bed to understand the value these companies bring to patients, medical providers, and even insurers. Add to this most basic element, the bed, the more sophisticated intravenous and irrigation solutions, surgical care materials, renal and blood purification therapies, cardiovascular solutions such as stents, infusion pumps, and scores others, and one can appreciate the impact of the segment. Yet, each device requires significant investment at the basic research, commercial development, and market launch stages. And that funding is decreasing.

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RECENT TRENDS

Looking at recent trends, the money is not being heavily funneled into medical technology, or medtech. According to data from Pitchbook referenced in Silicon Valley Bank's mid-2017 report on Healthcare Investments and Exits, 2016 showed a marked decline in venture capital investment in the medical devices sector compared to previous years, with an 11% yearly decrease from $4.8bn in 2014 to $3.8bn in 2016. Available data also shows that 2017 may closely match or slightly decline from 2016, suggesting that there will not be a near-term reversal of this trend. While the continued M&A activity will continue to support small to mid-sized companies in the space, if this negative trend continues the lack of capital will most significantly impact seed-stage and other early-stage companies that may have strong intellectual property and market potential, but no cash to advance development.

DECLINE IN VENTURE CAPITAL INVESTMENT

2014
$4.8B

2016
$3.8B

What is contributing to this bleak outlook for innovators and entrepreneurs? Clearly, the regulatory environment for innovative device developers is as challenging as ever, further complicated by new value-based healthcare and reimbursement considerations that must be integrated into the development strategy when determining the true market potential of a novel device. Additionally,

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investors are simultaneously impatient and risk-averse as they always have been, which makes the long clinical and regulatory process associated with any new medical technology a dissuading factor to a large portion of the investment community. While this is not unexpected investor behavior, early stage companies with little to no track record may be relying on this funding to bring device concepts from design to clinical stage and beyond.

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However, there remain some viable financing options for younger companies in the space. Overall, 2017 was a healthy year for M&A activity in the devices sector, continuing the trend of multinationals scooping up smaller players with promising technologies. High-profile examples of this dynamic include deals between Abbott and St. Jude Medical, Johnson & Johnson and Abbott Medical Optics, Becton Dickinson and C.R. Bard. Yet, even considering deals with a relatively smaller price tag than those mentioned above, the acquired companies can be characterized as "mature" companies, with established operations and several products already on or close to market. While not surprising that these mature companies have additional financing opportunities available to them, with a few exceptions it is not these companies that are typically taking design and development risks that could disrupt the current treatment paradigms.

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IN SUMMARY

While declining availability of venture capital will not directly, or immediately cause a decline in device innovation, decreased investment does serve as a significant barrier for seed-stage companies that do not have the funding to advance the product to a point where M&A or other liquidity strategies make sense for the parties involved. Thus, large device firms and investors may be allowing potentially disruptive technologies, cost-effective alternatives to current treatments, and other device-based treatment solutions to fall by the wayside, impacting innovation and future growth potential in the space overall.

These circumstances may change moving forward due to recent advances in healthcare technology. As software companies and medical device companies become increasingly intertwined in select product segments, there will likely be an increased interest from investors outside of the traditional device investment community that may be willing to be more aggressive and bear additional risk in their financing strategies. A great of example of this shift is the development of Biometric and Medical Device Data Systems (MDDS), which combine hardware and software to transfer, store, and display medical data using a single system, and wearable medical devices that can be used for remote patient monitoring in clinical studies. With breakthroughs in these and related areas, investor interest may shift back to medical devices, ultimately driving new innovations forward. The key will be to leverage advancements in hot areas like Artificial Intelligence and Machine Learning (AI/ML), which resonates with forward-looking investors in a meaningful way when developing new technology.

Considering the current environment and the potential scenarios for the future, what should incumbent players do? Certainly, portfolio optimization, and associated

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resource optimization, are critical areas of focus. Companies with either primarily mature or novel devices must consider their competitiveness relative to firms that present a comprehensive array of offerings across the spectrum. Similarly, executives as well as investors must allocate sufficient resources to conduct regular, robust market assessments of the sector. Given the rampant change in the health industry overall, medtech executives must ensure that their research and development and their offerings address demand and incorporate policy, that is, reimbursement factors. In the same vein, these market assessments can arm executives with clarity into the early stage pipeline and allow them to ensure that they do not miss out on acquiring technologies that may synergize well with existing franchises.

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