

# Investing in the growing sleep-health economy

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There are billions of dollars stuffed into the mattress! That's the amount that American consumers spend on bedding, white noise machines, medicine, sleep coaches, and a long list of other products and services to help get a better night's sleep. According to the Centers for Disease Control and Prevention (CDC), more than one in three Americans does not get enough sleep – roughly the same number of Americans who are obese.

Sleep insufficiency exacts a high human cost in physical and mental health, as well as a considerable economic toll in lost productivity. The multibillion-dollar sleep-health economy is a response to this growing problem and opens a wide range of attractive market opportunities for both private equity investors and consumer-oriented companies.

#### The rising costs of sleep insufficiency

Sleep insufficiency, which is defined as sleeping less than seven hours a night, can be the result of mild sleeping challenges or disorders such as insomnia, narcolepsy, apnea, and restless legs syndrome. Sleep insufficiency leads to short- and long-term health problems as well as lost productivity.

- **Immediate health and performance problems.** Sleep insufficiency can weaken the immune system and impair cognitive performance. Sleep-deprived people can have mild cognitive impairment, such as slower reaction times, or can experience more serious problems, such as errors in judgment and decision making.<sup>1</sup> These effects can lead to both a decrease in work performance and an increase in accidents. The National Transportation Safety Board says that in 20 percent of the crashes it investigates, fatigue is the cause of operator error.<sup>2</sup> The Automobile Association of America has found a driver's risk of getting in an accident increases exponentially with levels of sleep insufficiency and has concluded that lack of sleep can have effects similar to alcohol on judgment and reflexes (Exhibit 1).<sup>3</sup>
- **Chronic health effects.** Over the long term, sleep insufficiency can have more serious health implications. It is correlated with an increased risk of several chronic conditions, including obesity, diabetes, high blood pressure, heart disease, stroke, and mental distress, according to CDC data.<sup>4</sup> The RAND Corporation has estimated that the mortality rate for individuals who consistently get fewer than six hours of sleep per night is 13 percent higher than for those who routinely sleep seven or more hours per night.<sup>5</sup>

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1 Institute of Medicine of the National Academies, *Sleep Disorders and Sleep Deprivation: An Unmet Public Health Problem*, Harvey R. Colten and Bruce M. Altevogt, editors, National Academy of Sciences, 2006.

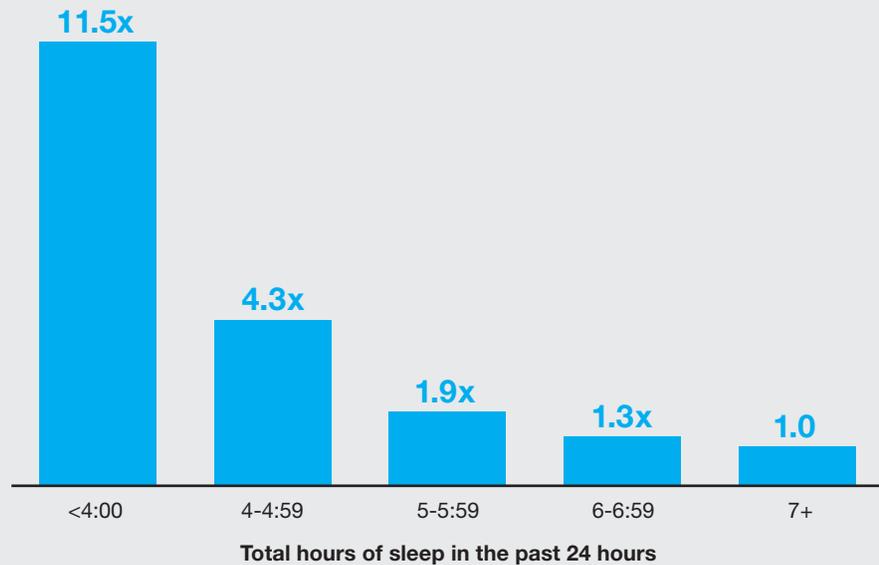
2 "NTSB 2016, Most wanted list of transportation safety improvements," National Transportation Safety Board, 2016.

3 *Acute sleep deprivation and risk of motor vehicle crash involvement*, AAA Foundation for Traffic Safety, December 2016.

4 "Prevalence of healthy sleep duration among adults—United States, 2014," *Morbidity and Mortality Weekly Report*, February 19, 2016.

5 Marco Hafner, Martin Stepanek, Jirka Taylor, Wendy M. Troxel, Christian van Stolk, *Why sleep matters—the economic costs of insufficient sleep: A cross-country comparative analysis*, RAND Corporation, November 30, 2016.

Exhibit 1 | Crash risk of sleep-deprived drivers vs. drivers who slept 7+ hours



SOURCE: AAA Foundation for Traffic Safety, 2016

- **Lost productivity.** Not surprisingly, sleep insufficiency also leads to higher levels of absenteeism and “presenteeism”—employees who show up for work when they are ill or impaired. A RAND study estimated this adds up to more than 1.2 million lost work days per year and that the cumulative economic impact of productivity losses and higher mortality rates could be over \$400 billion, or 2 percent of GDP.<sup>6</sup> To put this into perspective, this impact is larger than the GDP of countries such as Austria or Norway and works out to a cost of over \$1,600 per year for every American adult.

#### Rising awareness is motivating consumers to act

Americans have started waking up to the mental, physical, and economic costs of sleep insufficiency. Consumers are increasingly including sleep in their definition of healthy lifestyles, along with diet and exercise, and some employers are even including sleep in their wellness programs and outfitting their offices with nap rooms. For example, the US Army’s “performance triad” puts sleep on par with diet and physical fitness as pillars of soldier performance.<sup>7</sup> The heightened awareness may already be having an effect. According to the US Department of Labor’s annual American Time Use Survey, the average American has increased sleeping time by 17 minutes per night since 2005.<sup>8</sup> This is only the start; some 100 million Americans are still looking for a consistent, good night’s sleep.

6 Ibid.

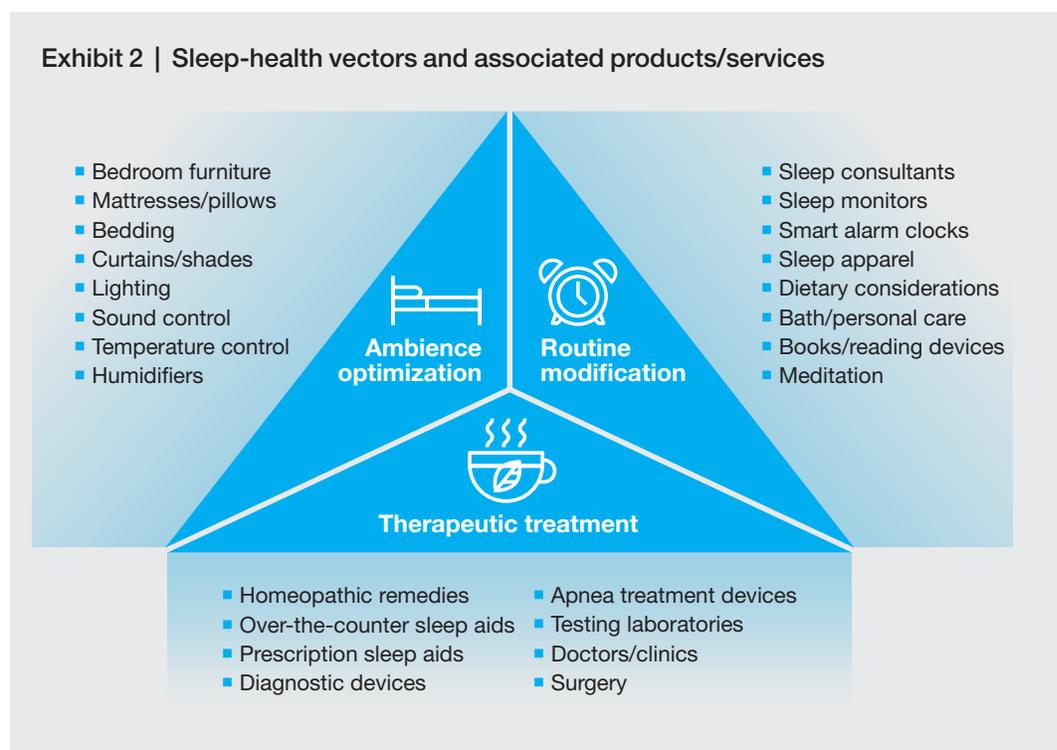
7 US Army, “Performance Triad,” armymedicine.mil.

8 American Time Use Survey, Bureau of Labor Statistics.

## Unlocking a broad range of business opportunities

An ecosystem of manufacturers, retailers, health service providers, and pharmaceutical companies has formed around sleep health. They offer a growing array of products and services to help Americans treat sleep insufficiency. The sleep-health industry is collectively estimated to be worth between \$30 billion to \$40 billion and has historically grown by more than 8 percent per year, with few signs of slowing down.<sup>9</sup>

Sleep health presents a variety of opportunities for a wide mix of consumer-facing companies and investors. That's because sleep health can be addressed through three types of solutions: ambience optimization, routine modification, and therapeutic treatment (Exhibit 2).



- **Ambience optimization.** Turning the bedroom into a sleep sanctuary offers a wealth of growth and investment opportunities, starting with the \$8 billion mattress market and the multibillion-dollar bedding industry.<sup>10</sup> The big news in this segment is the rise of start-ups that are disrupting the mattress business. A bunch of e-commerce brands now sell high-quality memory-foam mattresses at prices lower than those of traditional manufacturers, including a handful that are promoting mattresses made from plant-based foams and natural flame-retardant materials. Meanwhile, innovative bedding companies are touting the functional benefits of sheets made from organic cotton, bamboo, and Tencel, a fiber made from wood cellulose that claims to offer better breathability and moisture absorption than cotton. Many of these bedding companies are also selling wool comforters and duvets,

9 Maureen Mackey, "Sleepless in America: A \$32.4 billion business," *Fiscal Times*, July 23, 2012. <http://www.consumerreports.org/sleep/why-americans-cant-sleep/>

10 *2015 mattress industry report of sales and trends*, International Sleep Products Association, May 2016.

which they claim offer greater temperature regulation and moisture control than down and reduce dust mites. In addition to makers of mattresses and bedding, sellers of home goods and home-improvement services can benefit from America's sleep problem because consumers are advised to remake the entire bedroom to promote sleep—with blackout curtains, noise-blocking sound machines, humidifiers, and thermostats that automatically cool the room to match the typical drop in core body temperature during sleep.

- **Routine modification.** Most parents understand the value of establishing a consistent bedtime routine for young children, yet few adults have regular bedtime routines that set them up for a good night's sleep. This could change as more sleep experts advocate the benefits of routine modification as a method of preparing your body and mind to get to sleep faster and stay asleep longer. A healthy bedtime routine starts outside the bedroom—sipping a mug of warm (decaffeinated) tea in the kitchen or unwinding with a book or meditating in the living room. The next stop is the bathroom to use soothing health and beauty products before heading to the bedroom. In the bedroom, there are more sleep-management aids to facilitate a healthier sleep routine, including smartphone apps and smart devices to monitor the quality of sleep and awake sleepers at the optimal point in their sleep cycles. Even sleepwear is beginning to be turned into a sleep aid as apparel manufacturers integrate wearable technology and innovative new materials into their designs to soothe the body.
- **Therapeutic treatment.** Millions of Americans also turn to treatment-based remedies. Prescription medications generate well over \$1 billion a year in sales in the United States, while over-the-counter sleep aids generate hundreds of millions of dollars in additional sales. There is also a growing market for natural and homeopathic sleep products that contain melatonin, valerian, magnesium, L-theanine, or rutaecarpine, ingredients that users view as safer, nonaddictive alternatives to prescription medications.<sup>11</sup> Meanwhile, consumers with more severe sleeping challenges are turning increasingly to professional diagnostic and treatment options, creating more business for medical clinics, health service providers, and pharmaceutical companies. There are approximately 2,800 sleep labs across the country, which generate over \$7 billion a year in revenue—on track to reach \$10 billion in the next five years.<sup>12</sup> Sleep-apnea devices generate more than \$4 billion in sales.<sup>13</sup>

### The opportunity for private equity firms

The broad range of sleep-health products and services creates a plethora of entry points and investment theses for private equity firms to consider, ranging from potential roll-up strategies (e.g., mattresses and bedding) to building a holistic portfolio of sleep-health solutions (e.g., sleep labs, consultants, and monitoring tools). When looking at specific players in the space, it is important to assess them on three key dimensions: brand credibility, differentiation, and growth hooks. Brand credibility is table stakes, as consumers are not looking for gimmicks but rather demanding products and services with proven results. The bedrock of brand credibility is a clear reason to believe (e.g., specific mattress foam, active ingredients, doctors'

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11 Maureen Mackey, "Sleepless in America: A \$32.4 billion business," *Fiscal Times*, July 23, 2012; Nicole McDermott, "Do sleep aids really work?" *shape.com*.

12 David DiSalvo, "How the sleep industry is making billions from our sleepless nights", August 6, 2015, *forbes.com*.

13 *Sleep apnea devices market 2017*, *Businesswire.com*, February 3, 2017

endorsements) the company's product will deliver on the promised benefit. Second, the business needs to have a clear point of differentiation to separate it from the abundance of competitors in the space. The differentiation can be a specialized material, a new delivery mechanism, a unique business model, better customer service, or enhanced health claims. Finally, the business needs to prove it has legs beyond one core hero product or service to ensure that there is a pathway to sustain long-term growth. The underlying implication is that sleep health is an attractive place for private equity investment, but the investment opportunities need to be filtered through these three lenses to ensure they have consumer permission to scale long term.



Based on the growing awareness of the mental, physical, and economic costs of sleep insufficiency, consumers are increasingly seeking out new solutions. The benefits to be gained are real, and there's little doubt that the sleep-health economy will offer robust investment opportunities for private equity firms and growth opportunities for their consumer-focused portfolio companies over the next several years. For private equity firms, it's about identifying the sleep-oriented companies that have consumer permission to scale, while for portfolio companies, it's about pinpointing an authentic strategy to play in sleep health.

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