

# SAGUARO

CAPITAL MANAGEMENT

# Saguaro Insights

## Sleep Number

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# sleep number®

## Sleep Number (SNBR)

Good fiction puts into words something we feel to be true but often can't express. Consider the parable of the Chinese farmer:

*A farmer and his son had a beloved horse who helped the family earn a living. One day, the horse ran away, and their neighbors exclaimed, "Your horse ran away, what terrible luck!" The farmer replied, "Maybe so, maybe not."*

*A few days later, the horse returned home, leading a few wild horses back to the farm as well. The neighbors shouted out, "Your horse has returned, and brought several horses home with him. What great luck!" The farmer replied, "Maybe so, maybe not."*

*Later that week, the farmer's son was trying to break one of the horses, and she threw him to the ground, breaking his leg. The neighbors cried, "Your son broke his leg, what terrible luck!" The farmer replied, "Maybe so, maybe not."*

*A few weeks later, soldiers from the national army marched through town, recruiting all boys for the army. They did not take the farmer's son, because he had a broken leg. The neighbors shouted, "Your boy is spared, what tremendous luck!" To which the farmer replied, "Maybe so, maybe not. We'll see."*

In a grad school investment course, one of my classmates was assigned Select Comfort (the precursor to Sleep Number) to analyze. I pitied him for having to waste time on a faddish company with a novelty-type product. "What terrible luck!" When he pitched it to the class as a buy, we laughed and mocked: "Inflatable beds?!"<sup>1</sup> Beware Karma. Shortly thereafter, at my first job out of school, we did a mattress industry deep dive. My boss assigned me Select Comfort. Determined to avoid laughter and mockery, I set out to prove that an inflatable mattress company would never qualify for investment on my watch.

The fastest way to demonstrate a poor investment idea is by reviewing and explaining the numbers, specifically subpar returns, a shaky balance sheet, or an inability to generate cash. Imagine my frustration to find SNBR's returns 3-4x their cost of capital, a fortress balance sheet and cash flow that was not only consistent but prodigious. The numbers weren't just industry-leading, but better than many universally acknowledged "great companies." Despite selling about 1-2% of all mattress units, Select Comfort was capturing 5-8% of industry revenue. "What great luck!" Next, I reviewed their performance during the financial crisis. In 2009, they nearly defaulted, and the stock crashed to \$0.25 per share! Revenue fell from \$800mn in '07 to \$550mn in '10. Management unwisely borrowed money to repurchase stock<sup>2</sup> in 2007 and launched a disastrous \$20mn ERP system transition in 2008.<sup>3</sup> These cash issues, combined with fear around future losses in 2009 put them at risk of default. "What terrible luck!" Instead, Sleep Number generated cash in 2009 and in every year of the GFC. Though net income was negative in 2009, they trimmed so much cost that profit was substantive in 2010

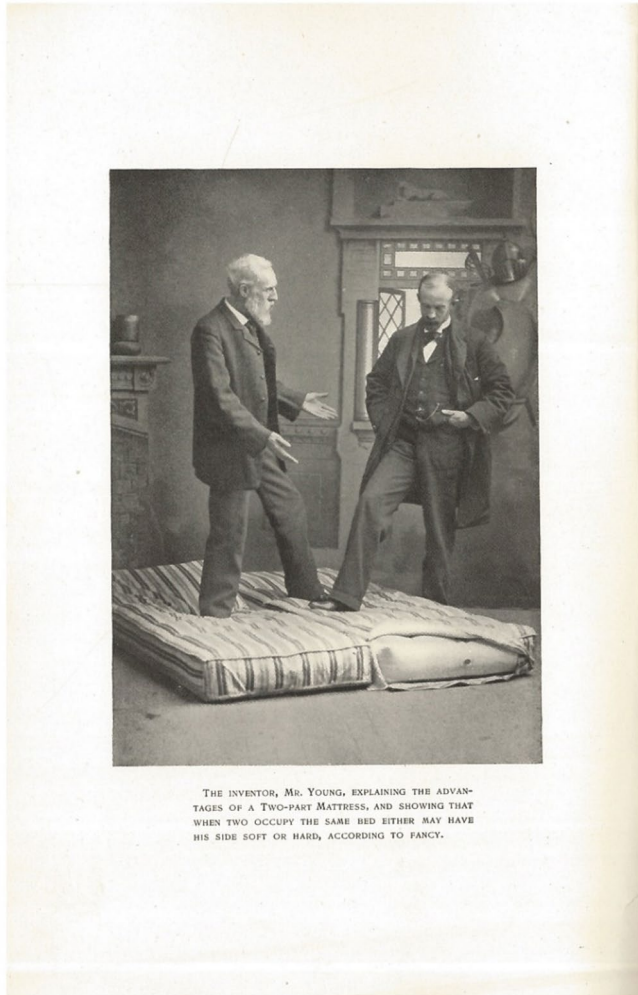
<sup>1</sup> John Lytle, if you ever read this, *mea culpa*.

<sup>2</sup> They spent \$134mn on share repurchases in 2007, then spent 2008 & 2009 praying for cash.

<sup>3</sup> The new CIO wanted to move from Oracle to SAP. He chose to attempt the transition with only in-house talent and no consultants. Costs went above \$20mn. Project took longer than expected. Ultimately, it was cancelled during the crisis resulting in a full write-off of \$27.6mn during 2008. Yuck.

despite sales being down another 10%. A three-year hold led to a 12,000% gain in the stock. I was unable to disqualify the company based on the numbers, so I turned to their history.

Air mattresses date to the mid-1800s, and they've been considered low-end ever since. People use them for camping, guests, and flotation devices. This might never have changed if not for the summer



THE INVENTOR, MR. YOUNG, EXPLAINING THE ADVANTAGES OF A TWO-PART MATTRESS, AND SHOWING THAT WHEN TWO OCCUPY THE SAME BED EITHER MAY HAVE HIS SIDE SOFT OR HARD, ACCORDING TO FANCY.

of love. In 1967, Charles Hall was a design student at San Francisco State University obsessed with functionality over appearance. He wanted to design the world's most comfortable chair. He took a bag, filled it with cornstarch, and put it in a wooden frame. It swallowed the first person who sat down. Jell-O didn't work either, and both started to stink after a few days. He tried water, but it didn't work for a chair. So, he switched to a bed, added a heater, and voila, the waterbed was born. Not only did he make an "A" in his design class, but the other students fell in love with the bed. At the end-of-year product fair, when students got to the waterbed booth, they didn't leave. The class partied on the bed until kicked out of the fair. A year later, after some further tinkering, Hall released his eight-foot square bed to the world. He dubbed it, "the pleasure pit".

As you can imagine, mattress companies and department stores of the time weren't interested, so he sold directly. In San Francisco, he sold them to famous musicians, including Jefferson Airplane and the Smothers Brothers, a nudist colony, and even Hugh Hefner, who ordered one upholstered in

green velvet. An advertising slogan of the time says it all: "Two things are better on a waterbed. One of them is sleep." Before long every young adult wanted a waterbed and hundreds of competitors joined the fray. The bed became associated with both the hippie counterculture and the sexual revolution. Wait, what does this have to do with Sleep Number, a Chinese parable, and investing? I promise we'll get there. While waterbeds made waves in the mattress industry, waterbed companies didn't make money, and the waterbed has virtually disappeared. Their lasting contribution may be that consumers began to demand more from mattresses. Consumers loved the feeling of floating and the alleviation of pressure points. The modern reader also needs to understand that by the mid-1980s, one out of every five beds sold in America was a waterbed. These beds also had drawbacks. First, water beds are heavy, a king can weigh up to 3,200 lbs. Second, they are almost impossible to move, draining them is

not easy. Third, they run the risk of leaking. Most apartment leases to this day have a clause forbidding waterbeds. In short, they aren't good upstairs, with kids/pets, or if you rent. Enter serial entrepreneur Robert "Bob" Walker.

Bob thought a market opening existed for a premium product with the waterbed's benefits but without the drawbacks. His vision was a traditional mattress but with an adjustable air chamber in place of the innerspring. This bed would work with traditional bed frames and could be plugged into any wall outlet. He founded Comfortaire in 1980, and the world's first adjustable air mattress came to market.

Eventually, a disagreement pushed Bob out of Comfortaire before he could get his idea to critical mass. *"What terrible luck!"* So, in 1987, Bob did what any good entrepreneur would do: he founded another adjustable air mattress company, Select Comfort. Based in Minneapolis for its full 35-year life, Select Comfort didn't start strong. Despite write-ups in *Bedroom* and *Playboy*, being a prize on the *Price is Right*, and all of Walker's hustle, his direct sales model wasn't working. After four years, revenue still hadn't cracked \$1mn and half of their sales were to the U.S. military for troops serving overseas. Inspired by another Minneapolis direct-to-consumer company, NordicTrack and its successful cross-country exercise machines, Walker was convinced his model would work with more capital. He found three venture capital firms who agreed and sold majority control. He stepped down as CEO but stayed on as the Chief R&D Officer. National ads in papers and magazines immediately boosted revenue, but new



management believed they were missing out on sales because customers wanted to try before they bought.<sup>4</sup> SNBR approached several malls about opening a store but were rebuffed as mall owners didn't think a single-brand mattress store would draw enough traffic. The wisdom of the day said, "mattresses are best sold in furniture or department stores." A single mall in St. Paul, Minnesota decided to let them open a kiosk with a couple of mattresses for a brief test run. The rest is history.

People went crazy for the beds, and the kiosk was over-run. The company raised more money and went all-in on the retail strategy. They blew through \$1mn in sales and by 1993 had 18 stores and sales of \$13.6mn. For the next 10 years Sleep Number beds popped up everywhere. They sold via direct marketing, a referral program, at airports, in B&Bs, and boutique hotels. They gathered a real board featuring John Scully (former CEO of Apple and Pepsi), Ken Macke (CEO of Dayton Hudson), Tom Albani (CEO of Electrolux), and David Kollat (President of Victoria's Secret). By 1996, they had over 100 stores and \$100mm in revenue. Half of their sales were direct<sup>5</sup>, and half were via their retail stores. They were a top-20 company on the Inc. 100<sup>6</sup> and added their second manufacturing facility. By 1999,

<sup>4</sup> Modern bed-in-a-box companies like Casper, Purple, etc. faced the same issue. Many are now opening retail stores and trying to replicate the Sleep Number story.

<sup>5</sup> Direct sales included phone, online, infomercials, etc.

<sup>6</sup> For 1997, #6 for the 100 fastest growing companies.



they were ready to IPO.<sup>7</sup> The stock started hot as they launched selectcomfort.com and struck an agreement with Bed Bath & Beyond to place 150 kiosks/departments in stores by the end of 2001. Finally, growth cooled a bit, and SNBR saw a transition with a new CEO in 2000 and founder Robert “Bob” Walker leaving in 2001.<sup>8</sup> Simmons, the industry’s 200lb Gorilla, sensed an opportunity and tried to bring an adjustable air mattress to market. Through a product infringement lawsuit, SNBR was able to protect their IP and defend their niche. For over 20 years, no other major manufacturer has been able to overcome this obstacle (or has even tried). SNBR prospered until the GFC, which we’ve already discussed. That harrowing experience proved the resiliency of the Sleep Number business model and led to renewed focus on innovation and improving the world’s sleep.

Since day one, Sleep Number’s biggest roadblock to growth has been perception. People still believe that air mattresses are either cheap or only for the elderly. Current CEO Shelly Ibach has spent the



past decade dispelling these notions. Under her watch, SNBR has released several game-changing products from their DualTemp layer offering, the SleepIQ app, and the 360 Smart Bed that all improve sleep quality. Their partnerships with the NFL<sup>9</sup> and the Mayo Clinic reinforce the message that this company is about health and wellness at the highest level. “What great luck!” Do you see anything in their history

to disqualify them? My final thought was that its early lack of a solid business plan might have led to a faulty business model, so that’s where I turned next.

The way to disqualify a business model is to demonstrate that it doesn't produce cash or that it is at a structural disadvantage to peers. We already know that the Sleep Number model produces cash, and lots of it. So how about the industry? McKinsey estimates that the total “sleep economy” is worth roughly \$30-\$40B per year. The International Sleep Product Association (ISPA) estimates this “economy” has grown at roughly 5% for the last 20 years. Our own work suggests a 4% CAGR<sup>10</sup> for the last 100+ years. Despite this size and growth, the industry is commoditized and highly competitive; you need something to stand out. Most industry profits have been made by scale advantages within a limited geographic region. Like cement and aggregates, mattresses with innersprings are big, bulky, and expensive to ship. A large producer can generate a cost advantage in a local market where it wouldn’t make sense for someone else to enter, and they can sell for less than the competitor who has to ship interstate. The big companies (Tempur-Sealy, Stearns & Foster, and Serta Simmons) took advantage of this by buying regional players around the country. This industry structure is also what the bed-in-a-box companies tried to circumnavigate by shipping compact, foam mattresses directly

<sup>7</sup> Charles Schwab & Co. was a first-time co-manager for the IPO. They used direct mail to send 250K postcards to Schwab account holders who also owned SNBR beds to get them to invest in the IPO. It is believed that this helped boost the proceeds of the offering.

<sup>8</sup> To found Bixby Energy. In 2014, he was convicted and sentenced to 25 years for fraud, tax evasion, witness tampering, and conspiracy. As you’d imagine, Sleep Number doesn’t talk about this much.

<sup>9</sup> ~80% of NFL players own a Sleep Number bed, per Sleep Number data.

<sup>10</sup> CAGR = Compound Annual Growth Rate.

to the consumer. Unfortunately for them, they didn't understand that anyone with capital could do the same thing. SNBR's mattresses, by contrast, are filled with air. Air is not only cheaper than steel but can be removed. This makes their mattresses compact and light enough to ship, giving SNBR an advantage over the industry.

Most mattresses are sold by specialty bedding retailers, home furnishing stores, mass merchants, national discount stores, or online marketers. The industry's problem is advertising effectiveness. Even if I run a successful campaign to drive traffic to a retailer, once the customer is in the store, both the customer and the manufacturers, are at the mercy of the salesperson. That salesperson doesn't care what drove you to the store, they care about which mattress they are currently incentivized to sell. It's cutthroat. SNBR is the only vertically

integrated player and happens to be the 2nd largest bedding retailer in the US<sup>11</sup> with 650+ stores nationally. When they drive you to their store with advertising, there is no competition. They simply need to convert, and convert they do. If you haven't been to a Sleep Number store, we suggest you check it out for yourself and ask for the "full ride" (Bryan enjoyed the demo). If you can afford it, we think there is a good chance you'll choose SNBR for your next mattress. SNBR's vertical integration is the envy of the industry, and something competitors are trying to



imitate. The retail footprint doesn't just give them better control of the consumer experience but also allows for huge leverage of their ad spend. Additionally, since they don't sell through other channels, they don't need a large inventory. They build every bed to order, which greatly reduces their cash needs relative to peers. On top of this, we believe they currently have the industry's largest R&D spend and a AAA-rated patent portfolio,<sup>12</sup> with about 380 patents globally, that is growing at a double-digit pace. No one is encroaching on their turf without a fight. Ever.

<sup>11</sup> And the 5<sup>th</sup> largest bedding manufacturer, per company filings.

<sup>12</sup> Per Quant IP.

This brings us to the third leg of the business model: data. SNBR's beds gather a large quantity of data on every sleeper, every night. Heart rate, breathing rate, motion, restlessness, etc. The data quality is on par with a PSG or polysomnography sleep study, but one conducted daily.<sup>13</sup> They have 15B hours of

“Today, sleepers can choose to provide their physician with their 360° smart bed sleep data, as it can be used to help health care practitioners have an accurate, real-world, longitudinal view of their patients’ sleep health over time. Tomorrow, we expect to be able to proactively care for its sleepers and monitor their general wellness and chronic sleep and health-related issues such as sleep apnea and heart disease.”

-Article from Sleep Number

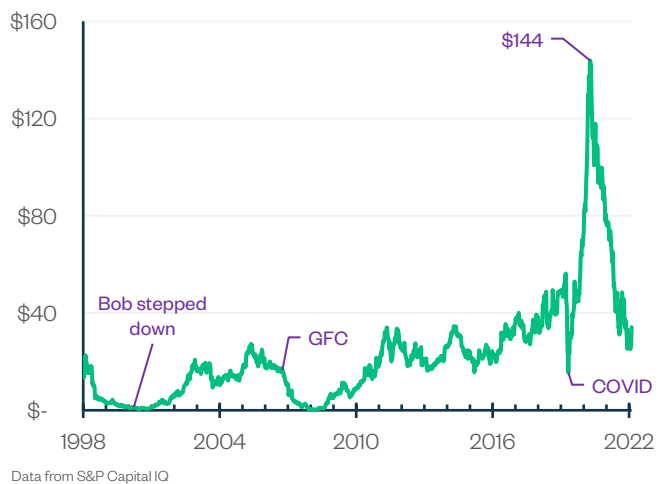
this data and counting. Studies are being conducted using this data in partnership with both the Mayo Clinic and the American Cancer Society.<sup>14</sup> They’ve also created a 4-person scientific Advisory Board with members from the University of Chicago, Harvard, the Mayo Clinic, and the University of Pittsburgh. Their purpose is to help guide use of this data in improving both health and sleep outcomes for millions. This data is not replicable. They gather all of it from a single sensor placed on each air pump<sup>15</sup> and interpolate everything from changes in pressure over time. The cost of replicating this data in a non-adjustable air mattress would be prohibitive as it would likely require hundreds, if not thousands of linked sensors.<sup>16</sup> Sleep Number is not currently monetizing this data in any way. Conclusion: SNBR has the best numbers in the industry, a solid 35-year history

that shows resilience, and a business model that is the envy of their peers. After presenting my research, the team decided Sleep Number qualified for investment. I bought a new mattress. “*What tremendous luck.*”

So, if an adjustable air mattress company truly is one of the 100 best small and medium-sized businesses on the planet, why is its stock down -75%? Let’s start in Spring 2020.

During COVID, we heard an analyst say, “no one will go into a store and lie down on one of their beds ever again.” This sentiment took the stock to \$15 and a market cap of under \$400mn. Even SNBR was worried, furloughing almost 2,000 workers, and CEO Shelly Ibach forgoing her salary. What nobody considered was that everyone would be stuck at home with extra cash and nothing to do. Everyone remodeled and upgraded. SNBR has perhaps the best direct-to-consumer offering in the industry. They prospered. A year later the stock was

**SNBR's Stock History**



<sup>13</sup> Per Sleep Number Management

<sup>14</sup> To be fair, it appears these studies are at least partially funded by Sleep Number.

<sup>15</sup> Most beds feature two; one for each chamber/sleeper.

<sup>16</sup> This data could also be replicated if sleepers were willing to purchase and wear enough equipment to run their own PSG study every night. Apple Watch and other tracker devices can detect some of this data, but not all, and consumers rarely forget to “put on” their bed and don’t need to charge it. The passive nature of this data collection is a big reason it is so robust.



at \$144, an 824% gain. *“What great luck!”* That too may have been a bit overdone, and the company has been pummeled as 1) growth didn’t continue at an accelerated pace forever, 2) it got lumped in with other COVID beneficiary stocks, 3) SNBR has had a major supply-chain issue with one specific microchip, and 4) consumer demand has weakened in the back half of 2022. SNBR stock ended the year at \$26, valuing the whole company at just under \$600mn. *“What terrible luck!”*

There is no denying that the current environment for SNBR is ugly. Both sales and demand were down -16% in Q3<sup>17</sup> (in-line with the industry), and likely won’t be better in Q4. Their chip shortages<sup>18</sup> should persist until mid-year 2023 when they transition to a new adjustable base with different chips. EBIT was down -83%. At this level of EBIT, they will come close to their 5x EBITDAR debt covenant. If we were trying to generate returns this Q, we wouldn’t play here. We aren’t short-term. Sleep Number has faced this situation before and gone on to thrive. They’ll survive this time too. 1.) Even in a disastrous Q3, they still generated cash. 2) Their debt is with banks they know well, not a syndicate, and they’ve already demonstrated the ability to flex covenants if needed. From a debt perspective, we view this as a solid BB type of company, with very little to no existential risk. 3.) They have already cut \$150mn in run-rate costs from the business and are looking for more.<sup>19</sup> Unless you believe that “no one will go into a store and lie down on one of their beds ever again,” then this is a “when” recovery, not an “if.” SNBR’s model has survived worse, it will continue to generate cash, and they will thrive again.

So, if SNBR survives, what might it be worth? Well, in our bear case scenario, we have the company suffering a 25% top-line recession for the next 2 years (2023 & 2024), margins declining to -10% and taking 5 years (2027) to return to 9%.<sup>20</sup> They would lose about \$180mn through this process (they lost \$35mn in the financial crisis). They can survive the above from a cash and debt perspective.<sup>21</sup> Demanding an outsized return for the risk and assuming they lose market share in perpetuity, we still value the stock at about \$33. It’s selling at or below this low-end estimate of value. I won’t waste your time on our mid-point or high-end values, but they are significantly higher. I will however point you to the street’s historic valuation methodology for SNBR. In good times, they value it at 20x EPS. SNBR did \$6.15 of EPS in 2021.<sup>22</sup> Just recently, management believed that by following their long-established playbook of opening new stores, charging for innovation, and buying back shares when discounted, that \$17.00 of EPS was achievable by 2026.<sup>23</sup> Imagine what the street would do if that happened (the current stock price is roughly 2x that EPS). So, the company has strong numbers, even in a downturn, an amazing history, a proven business model, and a valuation at or below our lower-end estimate of value. Is SNBR a great investment? *“Maybe so, maybe not.”* Like the Chinese farmer, we don’t worry about good or bad luck. Instead, we spend our time looking for great businesses that are also priced in such a way that it hardly matters what happens. If things go poorly, we don’t lose much, but if they go well... By following this classic investment wisdom, we maintain an even temperament and earn the luxury to sit back and say, *“we’ll see.”*

<sup>17</sup> Per Sleep Number’s Q3 Earnings Call.

<sup>18</sup> All stem from a single supplier.

<sup>19</sup> Per Sleep Number’s Q3 Earnings Call.

<sup>20</sup> This is unrealistic given SNBR’s history of never losing money for more than one year.

<sup>21</sup> While the current debt covenants would likely be tripped in this scenario, we believe their banks would be willing to work with them through this process for an appropriate fee.

<sup>22</sup> This implies a \$120.00 stock. We would consider a 4x return from current prices to be a very good return over our 5yr time horizon.

<sup>23</sup> That would imply a \$340 stock (The mythical 10x bagger). While we would NEVER invest on such a basis, revenue of \$3.2B, EBIT of \$290mn and a strongly reduced share-count don’t seem impossible to us. We also note that management did hit their previous EPS goal (which was also audacious).