

## SONOVIA – Update Report

September 5, 2021

Stock Exchange  
**TASE**Symbol  
**SONO**Sector  
**TECHNOLOGY**Sub-sector  
**ELECTRONICS & OPTICS**Stock price target  
**NIS 30.7**Closing price  
**NIS 10.4**Market cap  
**NIS 155.8 Mn**No. of shares  
**14.9 Mn**Average Daily  
Trading Volume  
**355 stocks**Stock Performance  
(Since Jan. 2021)  
**-41.7%**

Progress in the development of various formulations; completion of industrial machine development; preparing for industrial pilots; target price remains unchanged

**Sonovia develops ultrasonic technology that performs value-added treatments for textiles, endowing them with unique properties such as anti-pathogenicity and water repellency.**

**H1 highlights:**

- Completion of the development of the industrial machine version 2.0. Two such machines will be installed by the end of the year on Bruckner's industrial R&D line and the Delta-Galil Innovation Center and are intended for industrial pilots with potential customers as a final step before commercialization.
- The company has developed three anti-pathogenic chemical formulations (ZnO, Ag, ZPT) and a formulation to impart water-repellent properties in textiles. The company reported success in water-repellent testing on fabrics, 99.9% of effectiveness against the coronavirus, and presented the highest antibacterial activity level (5.7-log and above).
- A 230% increase in revenue from approximately USD 1.7 million in H1/2020 to approximately USD 5.7 million in H1/2021. Note that a decrease of approx. 27% in revenue was observed compared to the previous half. In addition, the company reported record revenue from product sales in August.

The company's technology is expected to integrate easily with existing production lines and has the potential to disrupt the textile application treatment industry - one of the highest polluting industries in the world. **We estimate that the market for functional textile finishing agents and textile dyeing is estimated at a combined value of approx. USD 15.8 billion.**

The company is nearing a critical stage of starting industrial pilots, the final stage before customer sales. **In our opinion, the company has real and significant potential to disrupt the textile wet-finishing industry through its technological platform. Sonovia's main challenge, as with other technology companies, will be the stage of increasing sales volumes.**

On the next page, we further elaborate on the main events in 2021.

Year	Revenues (000 USD)	EBITDA (000 USD)
2021E	12,000	365
2022E	16,607	665
2023E	28,641	5,083



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**Key events in the passing months and H1 2021:**

- The company has completed the development of an ultrasonic machine version 2.0. Two machines are expected to be installed by the end of 2021 at Bruckner's Industrial R&D line in Germany and at Delta's Innovation Center in Israel - and will be used by the parties to pilot Sonovia's technology in leading international sportswear, lingerie, and fashion brands. We view the decision made by Bruckner and Delta, two leading players in the textile industry, to choose Sonovia as a business partner as an expression of confidence in the company's capabilities and technology.
- Compliance with development goals - In general, the company is progressing according to the targets it committed to in the previous report, except for slight changes in expenditure expectations/schedules (about six months delay at most, mainly due to disruptions related to COVID-19). Recall, the company completed the development of an industrial machine and proved successful feasibility of a water-repellent application. At the same time, the company decided to postpone the development of the application to impart fire-retardant properties to textiles and the start date of a pilot to prove the feasibility of an application for dyeing denim fabrics.
- In April, the company announced the renewal and marketing of the sale of masks in European countries (except France), after successfully completing the adaptation of the chemical formulations to be based on materials approved for use in European countries.
- In April, the company **filed a temporary U.S. patent application for a textile waterproofing application**. This application followed the company reporting it had successfully exceeded requirements in tests for waterproofing fabric.
- In light of the company's research and development progress regarding durability for household laundry, the company is developing durability for industrial laundry to operate in the institutional market, such as health institutions, hotels, and workwear.
- A 176% increase in gross profit from approx. USD 1.45 million in H1/2020 to approx. USD 4 million in H1/2021. The gross profit ratio was approximately 70% of revenues, similar to its rate in 2020.
- A 24% increase in R&D expenses from approx. USD 750K in H1/2020 to approx. USD 930K in H1/2021.
- Moving from a net margin of approx. USD 430K in H1/2020 to a loss of approx. USD 980K H1/2021. This is mainly due to an increase in marketing and sales expenses, some of which were one-time expenses, such as setting up sites to sell the company's products.

Sonovia is transitioning from a company primarily engaged in development to a mature company with substantial sales. Unlike most startups, Sonovia is advancing in R&D with almost no losses (its cash balance is almost equal to what it was after the IPO). **We anticipate an increase in the company's revenues in the coming years alongside advances in technology development, increased marketing efforts, and rapid market penetration.**

To read more about the company and the market in which it operates, see our [initiation report](#).

## Investment Thesis

Sonovia is an Israeli high-tech company that focuses on the research and development of sound-based technology for performing value-added textile treatments in an environmentally friendly manner, which gives fabrics unique properties. Sonovia's anti-pathogenic application, which provides over 99% active protection against viruses (including covid-19), bacteria, and fungi, is already generating revenues (over \$9.5 million in 2020) and is tested by leading brands and manufacturers. The applicative water-repellent treatment developed by the company (for which the company filed a provisional patent application) was rated by an independent international laboratory, a rating of 100 under the international standard (AATCC-22), the highest rating under that standard. Additional applications - flame retardancy, dyeing, "DryFit", and more – are either in R&D, or in the company's R&D pipeline.

Sonovia operates within the textile industry, which is constantly growing yet is currently at a tipping point: Increased consumer awareness of and preference for textiles produced with a low ecological footprint, coupled with increasingly stringent regulation and enforcement of chemical use, are expected to drive a significant industrial change as manufacturers are already forced to seek innovative, 'green' solutions.

Sonovia's technology and its advantages over conventional methods and its ongoing activity with leading brands and OEMs across several key markets have the potential to disrupt the textile finishing and dyeing industries significantly and increase demand for new functional products. Realization of that potential depends greatly on successful entry into various verticals, achieving a global installation base, and creating brand awareness.

Sonovia's technology utilizes ultrasonic energy to physically infuse textiles with the required functional compounds, based on the required application, via a sustainable process. The Sono-finishing process eliminates the need for polymeric chemical binders and other harmful chemicals and dramatically reduces water and chemistry consumption in the process.<sup>1</sup> As an example of the effectiveness of the technology, here are the results of the company's anti-pathogenic application:

- High performance: Sonovia's anti-pathogenic application displays 99.9% elimination of viruses (including SARS-COV-2) and bacteria.

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<sup>1</sup> Chemical and water consumption varies per application.

- High durability: Fabrics treated with Sonovia's technology exhibit high durability to laundry as well as to high temperatures;<sup>2</sup>
- Versatility: Sonovia's technology applies to all types of textiles;
- Cost-effectiveness and sustainability: Sonovia's technology may reduce up to 95% of the water consumption compared with conventional textile wet-finishing and eliminate chemical binders' need.

### The Sono-finishing process vis-à-vis traditional methods – a comparative overview

	Padding	Extrusion	Sono-finishing
<b>Applicability to all textile compositions</b>	Requires different formulas and chemical binders	Only synthetic	Yes
<b>Durability to industrial laundry</b>	Moderate to poor	Very high	Very high <sup>3</sup>
<b>Durability to home laundry</b>	Moderate	High	Moderate (expected to improve with R&D) <sup>4</sup>
<b>Durability to high-heat</b>	Low	High	High
<b>Cost-effectiveness</b>	High	Low	High
<b>Sustainability</b>	Moderate to poor	Poor	High
<b>Scalability</b>	High	Low	High

Source: Sonovia and F&S analysis

Sonovia operates two distinct departments:

(1) The personal safety department, which currently operates a B2C model: Direct sales of branded personal protective products – such as the SonoMask – to end-clients in the private sector;

In 2020, SonoMask sales exceeded \$9.5 million. In H1/2021, revenues amounted to \$5.7 million.

(2) The Sono-applications department, which is due to operate under a B2B model:

- Capital sales of machines; with Brückner Trockentechnik GmbH & Co. as the machinery partner, global market penetration is expected to be rapid and aggressive.
- Repeating sales of required chemical formulations are expected to become the company's core revenue stream (the current install base of the Brückner alone is over 5,000 machines).
- Potential revenues from "Sonovia-inside" trademark tags

<sup>2</sup> Additional durability assessments to different washing protocols need to be executed.

<sup>3</sup> Pending additional assessments

<sup>4</sup> Pending additional assessments

The company's vision is to develop the world's most green and advanced technology for applicative textile treatments.

Sonovia operates within the functional textile finishing agents market which was valued at \$5.2 billion in 2020 and is projected to exceed \$6.9 billion by 2027, at a CAGR of 3.9%. Sonovia estimates the TAM for its anti-pathogenic application for its four verticals – medical textiles, hospitality textiles, sportswear, and automotive upholstery – at an aggregated value of \$1.56 billion.

Sonovia also aims to enter the textile dyeing market, which was valued at \$9.4 billion in 2018 and is projected to reach \$15.5 billion by 2026, growing at a CAGR of 6.3% from 2019 to 2026. While Sonovia's entry into the textiles dyeing market is pending upon successful development and proof-of-concept, which are expected in the near future, its potential to disrupt the textile dyes market is equal – if not greater – than its potential to disrupt the textile finishing market.

In addition, the company operates under a European grant designed to support the fight against Hospital Acquired Infections (HAIs). Hospital Acquired Infections (HAIs) represent a persistent challenge in the healthcare sector, exacerbated by covid-19. HAIs affect hundreds of millions of patients worldwide each year, leading to significant morbidity and mortality as well as financial losses for health systems:

- 136,000 annual deaths in the US and Europe are attributed to HAIs.
- The direct financial burden of HAIs is estimated to account for €7 billion in Europe and \$6.5 billion in the US. Yet, research suggests that the total (direct + indirect) economic burden is significantly higher – up to \$45 billion per annum.

Textiles with anti-pathogenic properties show great promise in reducing the prevalence of HAIs and their associated economic burden. Evidence indicates that textiles treated with anti-pathogenic reduce HAIs rate dramatically and could result in cost reduction of up to €8,038 million. The severe impact of covid-19 on hospitals has elevated awareness of the speed and breadth with which HAIs spread in healthcare institutions and is expected to act as a catalyst on institutional demand for anti-pathogenic textiles, especially as novel solutions are proven effective in eliminating SARS-CoV-2 and other pathogens.

Covid-19 is also a catalyst for the rapidly growing interest in textiles with anti-pathogenic properties by additional verticals, such as the hospitality market, the sportswear market, and the automotive upholstery market. Sonovia holds a competitive advantage in the latter: Fabrics treated by Sonovia's durable anti-pathogenic application show elite anti-microbial and anti-viral performance while eliminating the use of hazardous chemicals.

**We believe Sonovia is on a path for growth and success on a global scale:**

- Sonovia develops a novel technological platform, envisioned to become the future incumbent technology for performing textile wet-finishing applications, in a versatile, cost-competitive and sustainable process.
- Sonovia's technology has been endorsed by the "*Fashion for Good*" accelerator and by the European Commission's SME program for its potential in fighting Hospital-acquired infections and dramatically reducing the ecological footprint of the fashion industry.
- Sonovia partnered with a globally-renowned designer and producer of finishing systems for textiles with a presence in 90 countries and an installed base of over 5,000 machines, and is already conducting pilot tests with leading brands in the fashion, sportswear, and automotive verticals, and has a clear strategy and R&D pipeline for the next 24 months.

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