

SONOVIA – Update Report

June 13, 2021



Stock Exchange
TASE



Symbol
SONO



Sector
TECHNOLOGY



Sub-sector
ELECTRONICS & OPTICS



Stock price target
NIS 30.7



Closing price
NIS 17.5



Market cap
NIS 262.5 Mn



No. of shares
14.9 Mn



Average Daily Trading Volume
201 stocks



Stock Performance
(Since Jan. 2021)
0.84%

Significant milestone achieved towards the commercialization of the company's technology and transition to sales; price target remains unchanged

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

Strategy and market - Sonovia's ultrasonic technology aims to disrupt the textile wet-finishing industry – the 2nd most polluting industry globally – by integrating with existing textile finishing lines and proprietary chemical formulations. Sonovia operates within a \$15.8 billion market for functional textile finishing agents and textile dyeing.

Sonovia exclusively holds the global commercialization rights for two patents on the use of sound waves to impart anti-pathogenic properties through metallic compounds and has also filed a temporary patent application for its development in the field of water repellency; The company is in a strategic partnership with Brückner Trockentechnik GmbH & Co. - A German textile machine manufacturer with international operations, and performs several pilots with leading international brands and manufacturers; The company recently entered into a strategic agreement with Delta-Galil to assimilate an industrial machine at Delta's Innovation Center at Karmiel and to promote the technology sales to Delta's leading customers.

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. However, it remains to be seen whether Sonovia succeeds in ramping up its sales.

Valuation - We value Sonovia's equity at NIS 458 million; price target to be in the range of NIS 29.6 to NIS 31.8 with a mean of NIS 30.7.

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



Lead Analyst

Dr. Tiran Rothman

Equity.Research@frost.com

Tel.: +972-9-9502888

Significant developments since the publication of our [last update](#):

- On June 1, 2021, the company announced a strategic partnership with Delta. We see this as **a significant step towards the company's transition to sales of machinery and chemical compounds**, along with the expression of trust by a leading textile supplier in Sonovia's technology. Under the agreement, an industrial machine will be established at Delta's Innovation Center in Karmiel to pilot Sonovia's technology integration into leading international sportswear, lingerie, and fashion brands.
- On June 3, 2021, Sonovia announced an initial success as part of a non-binding pilot with Nur Ink Innovations. The pilot also examined the possibility of using digital printing with water-based pigment ink developed by Nur Ink Innovations on fabrics treated by Sonovia's technology. Tests conducted at an independent laboratory showed that the fabrics treated as aforesaid showed high efficacy against bacteria (at a rate of 99.9%).
- On May 13, 2021, the company announced the appointment of a market maker of the company's shares. This move is expected to increase the company's shares liquidity.
- On April 22, 2021, the **company filed a provisional patent application in the US, for an applicative treatment for water repellency**. This application follows the company's report of successful water repellency testing for fabrics, in collaboration with one of the world's largest suppliers of waterproof fabrics. If approved, the company could rely on the temporary application to file a regular patent until April 2022. To this date, we do not include the company's water repellency applicative treatment in our valuation. However, we do note that successful development and commercialization of a water repellency applicative treatment would significantly bolster Sonovia's competitive position and brand and would open a new and lucrative commercial market (valued at some \$800M per annum).

Sonovia is transitioning from a company primarily engaged in development to a mature company with substantial sales. **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.**

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.¹ The result:

- High performance: Sonovia's anti-pathogenic application displays 99.9% elimination of viruses, including SARS-COV-2, bacteria, and fungi;

¹ Chemical and water consumption varies per application.

- High durability: Fabrics treated with Sonovia’s technology exhibit high durability to industrial and home laundry as well as to high temperatures;²
- 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
Applicability to all textile compositions	Requires different formulas and chemical binders	Only synthetic	Yes
Durability to industrial laundry	Moderate to poor	Very high	Very high ³
Durability to home laundry	Moderate	High	Moderate (expected to improve with R&D) ⁴
Durability to high-heat	Low	High	High
Cost-effectiveness	High	Low	High
Sustainability	Moderate to poor	Poor	High
Scalability	High	Low	High

Source: Sonovia and F&S analysis

Sonovia operates two distinct departments:

- (1) The personal safety department, which currently operates a D2C 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.
- (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

² Additional durability assessments to different washing protocols need to be executed.

³ Pending additional assessments

⁴ 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 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.

Therefore, we view Sonovia as a good investment opportunity and value the company at NIS 458.4 million

Financial Analysis & Valuation

We conducted Sonovia's valuation under the DCF valuation method as Sonovia already has revenues and a solid business model. We also explored for industry multiples as benchmarking for Sonovia's value.

We also calculated Sonovia's equity value based on the following parameters:

- Non-operational assets/liabilities - Company had \$17.7M cash as of 31/12/2020 with no loans.
- CapEx – Over the life of an asset, total depreciation will be equal to the net capital expenditure. Sonovia plans to outsource the production of its' chemical formulations to leading chemical manufacturers. Thus, we don't expect any significant CapEx investment on behalf of the company in the forecasted period.
- Working capital (WC) changes – based on the current balance sheet and future WC needs, we assume 60 days of working capital needs.
- CAPM – we calculate CAPM to be at 19.61% (see appendix A).

Sensitivity analysis

The table below presents Sonovia's price matched with different capitalization rates (along with a 1.5% growth rate). We set a range of 0.5% change from our CAPM model (see Appendix A). The company has 14,968,144 shares as of 10/06/2021.

Cap. Rate (%)	Price target (NIS)
18.61	33.0
19.11	31.8
19.61	30.7
20.11	29.6
20.61	28.6

Valuation summary

We conducted Sonovia's valuation using market benchmarks such as market multiples; and analyzed bottom-up valuation using the DCF method. Given all the findings mentioned above and assessments. We value the company's stock price target to be in the range of NIS 29.6 and NIS 31.8; with a mean of NIS 30.7.

About Frost & Sullivan

Frost & Sullivan* is a leading global consulting, and market & technology research firm that employs staff of 1,800, which includes analysts, experts, and growth strategy consultants at approximately 50 branches across 6 continents, including in Herzliya Pituach, Israel. Frost & Sullivan's equity research utilizes the experience and know-how accumulated over the course of 55 years in medical technologies, life sciences, technology, energy, and other industrial fields, including the publication of tens of thousands of market and technology research reports, economic analyses and valuations. For additional information on Frost & Sullivan's capabilities, visit: www.frost.com. For access to our reports and further information on our Independent Equity Research program visit: www.frost.com/equityresearch.

*Frost & Sullivan Research and Consulting Ltd., a wholly owned subsidiary of Frost & Sullivan, is registered and licensed in Israel to practice as an investment adviser.

What is Independent Equity Research?

Nearly all equity research is nowadays performed by stock brokers, investment banks, and other entities which have a financial interest in the stock being analyzed. On the other hand, Independent Equity Research is a boutique service offered by only a few firms worldwide. The aim of such research is to provide an unbiased opinion on the state of the company and potential forthcoming changes, including in their share price. The analysis does not constitute investment advice, and analysts are prohibited from trading any securities being analyzed. Furthermore, a company like Frost & Sullivan conducting Independent Equity Research services is reimbursed by a third party entity and not the company directly. Compensation is received up front to further secure the independence of the coverage.

Analysis Program with the Tel Aviv Stock Exchange (TASE)

Frost & Sullivan is delighted to have been selected to participate in the Analysis Program initiated by the Tel Aviv Stock Exchange Analysis (TASE). Within the framework of the program, Frost & Sullivan produces equity research reports on Technology and Biomed (Healthcare) companies that are listed on the TASE, and disseminates them on exchange message boards and through leading business media channels. Key goals of the program are to enhance global awareness of these companies and to enable more informed investment decisions by investors that are interested in "hot" Israeli Hi-Tech and Healthcare companies. The terms of the program are governed by the agreement that we signed with the TASE and the Israel Securities Authority (ISA) regulations.

For further inquiries, please contact our lead analyst:

Dr. Tiran Rothman **T:** +972 (0) 9 950 2888 **E:** equity.research@frost.com

Disclaimers, disclosures, and insights for more responsible investment decisions

Definitions: "Frost & Sullivan" – A company registered in California, USA with branches and subsidiaries in other regions, including in Israel, and including any other relevant Frost & Sullivan entities, such as Frost & Sullivan Research & Consulting Ltd. ("FSRC"), a wholly owned subsidiary of Frost & Sullivan that is registered in Israel – as applicable. "The Company" or "Participant" – The company that is analyzed in the report; "Report", "Research Note" or "Analysis" – The content, or any part thereof where applicable, contained in a document such as a Research Note and/or any other previous or later document authored by "Frost & Sullivan", regardless if it has been authored in the frame of the "Analysis Program", if included in the database at www.frost.com and regardless of the Analysis format-online, a digital file or hard copy; "Invest", "Investment" or "Investment decision" – Any decision and/or a recommendation to Buy, Hold or Sell any security of The Company. The purpose of the Report is to enable a more informed investment decision. Yet, nothing in a Report shall constitute a recommendation or solicitation to make any Investment Decision, so Frost & Sullivan takes no responsibility and shall not be deemed responsible for any specific decision, including an Investment Decision, and will not be liable for any actual, consequential, or punitive damages directly or indirectly related to The Report. Without derogating from the generality of the above, you shall consider the following clarifications, disclosure recommendations, and disclaimers. The Report does not include any personal or personalized advice as it cannot consider the particular investment criteria, needs, preferences, priorities, limitations, financial situation, risk aversion, and any other particular circumstances and factors that shall impact an investment decision. Nevertheless, according to the Israeli law, this report can serve as a *raison d'être* off which an individual/entity may make an investment decision.

Frost & Sullivan makes no warranty nor representation, expressed or implied, as to the completeness and accuracy of the Report at the time of any investment decision, and no liability shall attach thereto, considering the following among other reasons: The Report may not include the most updated and relevant information from all relevant sources, including later Reports, if any, at the time of the investment decision, so any investment decision shall consider these; The Analysis considers data, information and assessments provided by the company and from sources that were published by third parties (however, even reliable sources contain unknown errors from time to time); the methodology focused on major known products, activities and target markets of the Company that may have a significant impact on its performance as per our discretion, but it may ignore other elements; the Company was not allowed to share any insider information; any investment decision must be based on a clear understanding of the technologies, products, business environments, and any other drivers and restraints of the company's performance, regardless if such information is mentioned in the Report or not; an investment decision shall consider any relevant updated information, such as the company's website and reports on Magna; information and assessments contained in the Report are obtained from sources believed by us to be reliable (however, any source may contain unknown errors. All expressions of opinions, forecasts or estimates reflect the judgment at the time of writing, based on the Company's latest financial report, and some additional information (they are subject to change without any notice). You shall consider the entire analysis contained in the Reports. No specific part of a Report, including any summary that is provided for convenience only, shall serve per se as a basis for any investment decision. In case you perceive a contradiction between any parts of the Report, you shall avoid any investment decision before such contradiction is resolved. Frost and Sullivan only produces research that falls under the non-monetary minor benefit group in MiFID II. As we do not seek payment from the asset management community and do not have any execution function, you are able to continue receiving our research under the new MiFID II regime. This applies to all forms of transmission, including email, website and financial platforms such as Bloomberg and Thomson.

Risks, valuation, and projections: Any stock price or equity value referred to in The Report may fluctuate. Past performance is not indicative of future performance, future returns are not guaranteed, and a loss of original capital may occur. Nothing contained in the Report is or should be relied on as, a promise or representation as to the future. The projected financial information is prepared expressly for use herein and is based upon the stated assumptions and Frost & Sullivan's analysis of information available at the time that this Report was prepared. There is no representation, warranty, or other assurance that any of the projections will be realized. The Report contains forward-looking statements, such as "anticipate", "continue", "estimate", "expect", "may", "will", "project", "should", "believe" and similar expressions. Undue reliance should not be placed on the forward-looking statements because there is no assurance that they will prove to be correct. Since forward-looking statements address future events and conditions, they involve inherent risks and uncertainties. Forward-looking information or statements contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results to be materially different from current projections. Macro level factors that are not directly analyzed in the Report, such as interest rates and exchange rates, any events related to the ecosystem, clients, suppliers, competitors, regulators, and others may fluctuate at any time. An investment decision must consider the Risks described in the Report and any other relevant Reports, if any, including the latest financial reports of the company. R&D activities shall be considered as high risk, even if such risks are not specifically discussed in the Report. Any investment decision shall consider the impact of negative and even worst case scenarios. Any relevant forward-looking statements as defined in Section 27A of the Securities Act of 1933 and Section 21E the Securities Exchange Act of 1934 (as amended) are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.

The Report shall include a description of the Participant and its business activities, which shall inter alia relate to matters such as: shareholders; management; products; relevant intellectual property; the business environment in which the Participant operates; the Participant's standing in such an environment including current and forecasted trends; a description of past and current financial positions of the Participant; and a forecast regarding future developments and any other matter which in the professional view of Frost & Sullivan (as defined below) should be addressed in a research Report (of the nature published) and which may affect the decision of a reasonable investor contemplating an investment in the Participant's securities. An equity research abstract shall accompany each Equity Research Report, describing the main points addressed. A thorough analysis and discussion will be included in Reports where the investment case has materially changed. The named lead analyst and analysts responsible for this Report certify that the views expressed in the Report accurately reflect their personal views about the Company and its securities and that no part of their compensation was, is, or will be directly or indirectly related to the specific recommendation or view contained in the Report. Neither said analysts nor Frost & Sullivan trade or directly own any securities in the company. The lead analyst has a limited investment advisor license for analysis only.

This research paper is not intended for, and should not be used by, investors in Australia. Frost & Sullivan does not hold an Australian financial services licence and is not regulated by the Australian Securities and Investments Commission in connection with the preparation of this research paper or its publication. This research paper is for information purposes only and should not be treated as an opinion, proposal, recommendation or advice for the investment in, holding or disposal of the securities described in it. It has been prepared without taking into account any client's individual circumstances and investors should therefore consider whether an investment in the securities described in this research paper (Securities) is appropriate for them having regard to their own circumstances. Investors should seek their own independent professional advice from an appropriately licensed person before making any such decision. Any advice contained within this research paper is only intended for wholesale investors. Recipients of this research paper, including the issuer of the Securities, are strictly prohibited from permitting retail investors to view, obtain or download a copy of the research paper or placing it on a website or other forum where a retail investor may obtain access to it.

© 2021 All rights reserved to Frost & Sullivan and Frost & Sullivan Research & Consulting Ltd. Any content, including any documents, may not be published, lent, reproduced, quoted or resold without the written permission of the companies.