Executive Summary
Executive Summary

Momentum toward chemical safety is rising and the financial implications of mismanagement are becoming clear. The human health and environmental drivers—as well as the social, technological, economic, and political drivers—for businesses to reduce their chemical footprints are rapidly increasing.

Witness the global Sustainable Development Goals (SDGs), which delineate the importance of reducing and managing hazardous chemicals to meet the global goals of ensuring healthy lives, ensuring the availability of clean water, and ensuring sustainable consumption and production patterns (see box). The SDGs target hazardous chemicals because of their significant contributions to mental, behavioral, and neurological disorders; cancer; asthma; diabetes; and many other adverse health effects. A recent study of the disease and dysfunction costs of exposure to endocrine disrupting chemicals like Bisphenol A (BPA) estimated the costs to be €163 billion annually in the European Union alone.

Global regulations for chemicals management are increasing faster than for any other environmental issue, including climate change. The current suboptimal management of hazardous chemicals creates ever more frequent and larger costs to businesses from regulatory, reputation, and redesign risks.

Socially, public interest and pressure to avoid hazardous chemicals in products is rising rapidly across the globe. Technologically, the capacity for manufacturers to make safer products of equal performance and price is growing rapidly. Economically, corporations carry significant liabilities with hazardous chemicals in their products and supply chains. Politically, the regulatory environment for chemicals in products is becoming more complex.

Who We Are

The Chemical Footprint Project (CFP) is an initiative of investors, retailers, government agencies, non-governmental organizations (NGOs), and health care organizations that aspire to support healthy lives, clean water and air, and sustainable consumption and production patterns through the effective management of chemicals in products and supply chains. CFP
The Chemical Footprint Project

Signatories, representing over $2.3 trillion in assets under management and over $600 billion in purchasing power, are engaging corporations in CFP. As with carbon footprint reduction, the participants in CFP recognize that a global transition to a reduced chemical footprint is necessary. CFP gives Signatories an invaluable tool to discern which firms bear the highest chemical risk and which are best positioned to capture new markets with safer products.

Costs from these liabilities can run to the tens or hundreds of millions of dollars, tarnish reputations, and result in loss of market share and valuation. Until now, investors and purchasers had insufficient information to differentiate companies on their overall chemicals management approaches—thereby hiding the potential impacts of chemical risks on corporate performance.

INVESTORS
Hazardous chemicals present regulatory, reputation, and redesign risks to companies—risks for which investors have no common metric for evaluation. The CFP Survey directly addresses these risks by gathering data on: where companies stand in addressing current and future regulatory risks; the steps companies take to grow and maintain trust and be transparent about their chemical management practices; and what companies know about chemicals in their products and supply chains and the actions they take to use safer alternatives to hazardous chemicals.

As Dr. Jan Amrit Poser of the Switzerland-headquartered Bank J. Safra Sarasin Ltd., a leading sustainable private bank, highlights in the Foreword to this report, “The four pillars of the Chemical Footprint Project (CFP) Survey—Management Strategy, Chemical Inventory, Footprint Measurement, and Disclosure & Verification—are essential to assessing good chemicals management and governance practices. That is why Bank J. Safra Sarasin Ltd. supports CFP and strongly encourages all companies to participate in the survey.”

Companies cannot manage what they don’t measure. A lack of a common sustainability metric for chemical management presents significant risks to corporations. Tracking chemical inputs and measuring progress to safer chemicals is becoming an important metric in corporate reporting standards such as those developed by the Sustainability Accounting Standards Board (SASB).

Our annual CFP Survey and Report provide a clear map for benchmarking corporate progress away from hazardous chemicals to safer alternatives. The four pillars of CFP—Management Strategy, Chemical Inventory, Footprint Measurement, and Disclosure & Verification—enable participating companies to benchmark their progress internally and externally, and empower investors and purchasers to evaluate and hold companies accountable.

Value
Brands face significant hidden liabilities with chemicals of high concern (CoHCs) to human health and the environment in their products.

INVESTORS
Hazardous chemicals present regulatory, reputation, and redesign risks to companies—risks for which investors have no common metric for evaluation. The CFP Survey directly addresses these risks by gathering data on: where companies stand in addressing current and future regulatory risks; the steps companies take to grow and maintain trust and be transparent about their chemical management practices; and what companies know about chemicals in their products and supply chains and the actions they take to use safer alternatives to hazardous chemicals.

As Dr. Jan Amrit Poser of the Switzerland-headquartered Bank J. Safra Sarasin Ltd., a leading sustainable private bank, highlights in the Foreword to this report, “The four pillars of the Chemical Footprint Project (CFP) Survey—Management Strategy, Chemical Inventory, Footprint Measurement, and Disclosure & Verification—are essential to assessing good chemicals management and governance practices. That is why Bank J. Safra Sarasin Ltd. supports CFP and strongly encourages all companies to participate in the survey.” CFP aligns investors with companies to advance changes in chemicals management that will be healthy for people and the planet and advances chemical-related metrics that matter to investors, including SASB’s standards and the global SDGs.

PURCHASERS
Before the advent of CFP, businesses, health care organizations, and government agencies lacked a common third-party standard for evaluating whether suppliers systematically manage their chemical risks and if they have a plan for continuous improvement to safer chemicals use. CFP provides large purchasers with data that readily enable comparisons of suppliers on their

The four pillars of CFP “are essential to assessing good chemicals management and governance practices. That is why Bank J. Safra Sarasin Ltd. supports CFP and strongly encourages all companies to participate in the survey.”

— Dr. Jan Amrit Poser of Bank J. Safra Sarasin Ltd.
corporate-wide chemical footprints. The CFP Survey empowers purchasers to request chemical footprint data from suppliers and enables purchasers to recognize and reward suppliers for performance. 

CFP aligns with the mission and values of many organizations. Health care providers, for example, see CFP as aligned with their mission to protect the health and wellbeing of their patients, workers, and communities. Similarly, many retailers recognize their role in protecting the health of their customers and are working to ensure safer chemicals in products. These retailers see CFP as supporting these efforts. 

Purchaser Signatories—CVS Health, Kaiser Permanente, Dignity Health, Advocate Healthcare, Partners Healthcare, Vizient, and others— are engaging their suppliers in the CFP Survey. Dignity Health, the fifth largest health care system in the U.S., highlighted in its annual sustainability report that they “advanced CFP by requesting that 18 of our leading suppliers participate in the first annual business survey. Our goal was to create a quantitative framework and set a new standard for evaluating companies on policies, programs, and practices for managing chemicals.”

Dignity Health “advanced CFP by requesting that 18 of our leading suppliers participate in the first annual business survey. Our goal was to create a quantitative framework and set a new standard for evaluating companies on policies, programs, and practices for managing chemicals.”

BRANDS AND MANUFACTURERS
Companies report that participating in the Survey brings unanticipated benefits to their organization through productive conversations across their organizations, actionable metrics to inform goals and priorities, increased customer and supplier engagement, and new opportunities to lead and learn. The CFP Survey supports brands and manufacturers in their efforts to reduce the regulatory, reputation, and redesign risks associated with hazardous chemicals and to communicate those efforts publicly. Prior to CFP, companies lacked the means to publicly demonstrate their
Participating companies in the 2016 CFP Survey had annual revenues over $670 billion.

overall chemicals management performance using an independent, third-party tool. With CFP, brands and manufacturers have a common language for communicating to investors and large customers their progress on their journey to safer chemicals.

Findings
The results from the 2016 CFP Survey reveal how 24 companies manage chemicals in their products and supply chains. They provide a snapshot of chemicals management policies and practices beyond regulatory compliance across a diverse set of businesses.

Chemical Footprinting is Moving to the Mainstream
The diversity of companies participating in the CFP Survey highlights the relevance and value of chemical footprinting across the business community. Companies participating in the 2016 CFP Survey have annual revenues over $670 billion and market cap valuations over $730 billion. They sell formulated products and articles. They range in size from small national brands to large multinational corporations. Their products include apparel and footwear, building products and furnishings, household and personal care products, electronics, toys, medical devices, and packaging (see box, left).

Of the 24 companies that participated in the 2016 Survey:
• 22 agreed to be listed publicly (see box, p. 5),
• three agreed to list their responses and score on the CFP website,
• two agreed to list their responses on the CFP website, and
• 11 participated in both the 2015 and 2016 Surveys, and
• two completed the Survey for a division of their company, rather than the entire company.
Companies demonstrate leadership by participating in the CFP Survey. They open themselves to evaluating and benchmarking their chemicals management practices to a rigorous third-party standard. These companies recognize that sound chemicals management is a journey that requires continuous improvement, and they now have a clear baseline to measure and publicly report on their progress.

FOR THE FIRST TIME EVER, COMPANIES ARE QUANTITATIVELY MEASURING AND REPORTING THEIR CHEMICAL FOOTPRINT

Companies participating in the 2016 Survey are breaking new ground by demonstrating how to calculate an organization-wide chemical footprint. In the 2016 CFP Survey, 42% of participating companies calculated their chemical footprints. Firms were given the option to calculate their footprint based on two lists—the European Union’s REACH Candidate List of Substances of Very High Concern (approximately 170 chemicals are on the Candidate List of SVHCs) and the CFP Chemicals of High Concern (over 2,000 chemicals are on the CFP’s CoHCs list, which is based on GreenScreen® List Translator and includes the REACH SVHCs). The 21% of companies that calculated their chemical footprint by mass shipped or sold products with 631 million pounds of CoHCs in 2015. Companies reporting their chemical footprint now have clear metrics for evaluating progress to safer chemicals, including reducing the number and mass of CoHCs in products. A highlight in the 2016 CFP Survey responses is that 13% of companies reduced their use of CoHCs in products by 416 million pounds over the past two years.

Quantitative chemical footprinting is the new metric for assessing corporate performance. It can help companies meet the SDGs and report to the SASB standards, which ask companies to report on chemicals of concern by percent of revenue sales.

CFP SURVEY RESULTS ENABLE BENCHMARKING AND GAP ANALYSIS

Are you a small company selling articles or a large company selling both formulated products and articles? Where is your company or your supplier on the journey to sound chemicals management?

The CFP Survey results provide metrics for benchmarking chemicals management performance based on company size, type of products sold, and CFP pillar. The 2016 Survey results divide into two broad categories of companies based on type of products sold: 1) companies that sell formulated products, either only formulated products or both formulated products and

### Companies Disclosing Their Participation in the 2016 CFP Survey

- adidas AG
- Alima Pure
- Angelica Corporation
- Beautycounter
- Becton Dickinson and Co. (BD)
- Case Medical, Inc.
- Construction Specialties, Inc.
- GOJO Industries, Inc.
- Herman Miller, Inc.
- HP Inc.
- Inpro Corporation
- Johnson & Johnson
- Kimball Hospitality Inc.
- Levi Strauss & Co.
- nora systems, Inc.
- Radio Flyer
- Replenish
- Seagate Technology PLC
- Sealed Air Corporation
- Seventh Generation
- Wal-Mart Stores, Inc.
- WaterWipes

---

**Thirteen percent of companies reduced their use of CoHCs in products by 416 million pounds over the past two years.**

---
articles; and 2) companies that sell only articles. Articles\(^8\) are typically “hard” products such as furniture, electronics, apparel, etc., while formulated products are typically liquid-based products such as cleaners, paints, personal care products, detergents, etc.

Companies that sell formulated products differ significantly from companies that sell only articles. Formulated product companies recognize that their products contain chemicals and they often specify the chemicals in the products they sell. Governments regulate the handling, shipping, disposal, as well as the labeling of formulated products much more rigorously than articles. Companies selling articles see their products as made from materials and may not consider the chemical content of those materials unless asked or required by customers or regulations.

Figure ES-1 compares companies selling formulated products (either only formulated products or both formulated products and articles) on the basis of company size for each of the four CFP Pillars as well as the average overall score for all of the Pillars combined. The patterns in Figure ES-1 reveal that:

- large companies scored higher for the Management Strategy and Chemical Inventory Pillars,
- small companies scored higher for the Footprint Measurement and Disclosure & Verification Pillars, and
- small and large companies scored similarly for of all of the Pillars combined.

**FIGURE ES-1. All CFP Pillars: Small and Large Companies Selling Formulated Products**

(average percent of points)

<table>
<thead>
<tr>
<th>CFP Pillar</th>
<th>Small and Large Companies Selling Formulated Products (average percent points by CFP Pillar)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0–20%</td>
</tr>
<tr>
<td>Management Strategy</td>
<td>Small – 50%</td>
</tr>
<tr>
<td></td>
<td>Large – 86%</td>
</tr>
<tr>
<td>Chemical Inventory</td>
<td>Small – 65%</td>
</tr>
<tr>
<td></td>
<td>Large – 82%</td>
</tr>
<tr>
<td>Footprint Measurement</td>
<td>Small – 70%</td>
</tr>
<tr>
<td></td>
<td>Large – 56%</td>
</tr>
<tr>
<td>Disclosure &amp; Verification</td>
<td>Small – 37%</td>
</tr>
<tr>
<td></td>
<td>Large – 15%</td>
</tr>
</tbody>
</table>
For sellers of formulated products, size was not a differentiating factor. Rather the data reveal for companies participating in the Survey that large companies scored higher for metrics that require developing and implementing policies, systems, and procedures for safer chemicals, while small companies scored higher for footprinting and disclosure, likely because many of the small firms participating in CFP avoid hazardous chemicals by design and are committed to greater transparency.

The learning opportunity for small companies selling formulated products is how to integrate their practices into formal organizational policies and develop or adopt systems for managing data and engaging suppliers.

For sellers of formulated products, size was not a differentiating factor. Rather the data reveal for companies participating in the Survey that large companies scored higher for metrics that require developing and implementing policies, systems, and procedures for safer chemicals, while small companies scored higher for footprinting and disclosure, likely because many of the small firms participating in CFP avoid hazardous chemicals by design and are committed to greater transparency.

The learning opportunity for small companies selling formulated products is how to integrate their practices into formal organizational policies and develop or adopt systems for managing data and engaging suppliers.

For companies selling only articles, a clear pattern emerged across all pillars related to company size. In general, large companies scored higher overall, followed by medium companies, and then small companies (see Figure ES-2). The four CFP Pillars detailed in Figure ES-2 reinforce that pattern:

- large companies selling articles scored highest for every CFP Pillar, though by just a fraction for Management Strategy;
- medium companies selling articles scored higher than small companies for every CFP Pillar except Disclosure & Verification; and
- small companies selling articles are on the learning curve for how to implement environmentally sound chemicals management practices.

For sellers of formulated products, size was not a differentiating factor. Rather the data reveal for companies participating in the Survey that large companies scored higher for metrics that require developing and implementing policies, systems, and procedures for safer chemicals, while small companies scored higher for footprinting and disclosure, likely because many of the small firms participating in CFP avoid hazardous chemicals by design and are committed to greater transparency.

The learning opportunity for small companies selling formulated products is how to integrate their practices into formal organizational policies and develop or adopt systems for managing data and engaging suppliers.

For companies selling only articles, a clear pattern emerged across all pillars related to company size. In general, large companies scored higher overall, followed by medium companies, and then small companies (see Figure ES-2). The four CFP Pillars detailed in Figure ES-2 reinforce that pattern:

- large companies selling articles scored highest for every CFP Pillar, though by just a fraction for Management Strategy;
- medium companies selling articles scored higher than small companies for every CFP Pillar except Disclosure & Verification; and
- small companies selling articles are on the learning curve for how to implement environmentally sound chemicals management practices.
We attribute the higher scores for large companies selling articles to their greater awareness of hazardous chemicals in their products and supply chains, greater resources to manage hazardous chemicals including resources for supply chain engagement and creating/managing databases, and greater need to have corporate policies in place to develop and implement chemical management systems. Small companies in particular are encouraged to tap into the technical knowledge of peers and leverage resources available from governments, universities, and NGOs to offset their resource disadvantages. Note that due to the small sample size, these findings represent insights gleaned from the available data set and are not definitive.

CFP IDENTIFIES CLEAR STEPS TO ENVIRONMENTALLY SOUND CHEMICALS MANAGEMENT
The SDG Goal 12—ensure sustainable consumption and production patterns—includes “environmentally sound management of chemicals” as an indicator for meeting this goal. The CFP Survey results reveal clear steps companies can take to improve their “sound management of chemicals” and achieve the SDG goal of sustainable consumption and production, including:

- **Corporate Policy:** establish a comprehensive chemicals policy.
- **Inventory:** know the chemicals in your company’s products and supply chains.
- **Measurement:** quantitatively measure your company’s chemical footprint, set measurable goals, and monitor progress to these goals.
- **Transparency:** engage the public, institutional customers, and investors in your firm’s journey to effective chemicals management by sharing publicly your CFP answers and score.

Companies taking these actions will be well on the path to the environmentally sound management of chemicals in their products and supply chains.
Conclusions & Next Steps

Regulatory requirements, customer demands, media attention, NGO advocacy, product recalls, and market opportunities are driving companies to develop and implement comprehensive chemicals management programs that track chemicals from initial use to ultimate fate, and to identify and select safer alternatives to hazardous chemicals. Chemical footprinting drives change in chemicals management and progress to safer materials through greater transparency, stronger supplier relationships, deeper supply chain knowledge, and clear metrics for assessing chemicals management and measuring progress.

The CFP 2016 Survey results reveal that:

- **Chemical footprinting is moving to the mainstream:** a diversity of companies across sectors and sizes now participates in the CFP Survey—demonstrating its relevance and application to a broad array of companies that sell and or manufacture building products and furnishings, packaging, medical devices, electronics, toys, apparel and footwear, and household and personal products.

- **Companies are quantitatively measuring their chemical footprint:** with the growing demand for quantitative metrics that relate to impacts, the 2016 results now provide quantitative information on metric tons of CoHCs used and reduced over time. As the body of data gathered grows, it will enable more rigorous analysis, benchmarking, and measurement of progress to reducing chemical footprints. The data collected align with requirements in the SASB standards for apparel and footwear, building products and furnishings, household and personal products, and toys and sporting goods.

- **Data are now available for benchmarking and gap analysis:** investors and purchasers now have access to data that enables the benchmarking of firms on their progress to sound chemicals management based on the four CFP Pillars. Brands and manufacturers now can assess where they stand relative to peers and identify and prioritize opportunities for improvement.

- **CFP identifies clear steps to environmentally sound chemicals management:** the CFP Pillars and related Indicators provide clear steps to how organizations can improve their chemicals management practices.

The CFP Survey is conducted annually. We will release the new Survey in the fourth quarter (Q4) of 2017 with the deadline for Surveys to be completed in the first quarter (Q1) of 2018.

Coming Soon: The 3 Rs Report

In the third quarter (Q3) of 2017 CFP will release a deep-dive analysis of the CFP Survey results from the perspective of investors, with a focus on the Regulation, Reputation, and Redesign risks of chemicals.

Join us!

Join us on the journey to create business opportunities, reduce business risks, and ensure that the chemicals in us, on us, and around us are safe and healthy for people and the planet.

The Chemical Footprint Project welcomes Signatories and Responders.

Signatories are investors and institutional purchasers that engage companies in participating in CFP Responders are brands, manufacturers, and suppliers that participate in the annual CFP Survey.

www.chemicalfootprint.org