TCFD Insights Series

S&P 500

September 2022

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In 2021, 400 companies (80%) from the S&P 500 index, worth over US$28.2 trillion in market capitalization, responded to CDP's climate change questionnaire[1]. This factsheet presents an analysis of the disclosing organizations' alignment with the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD) and the reported financial impacts of climate-related risks and opportunities.

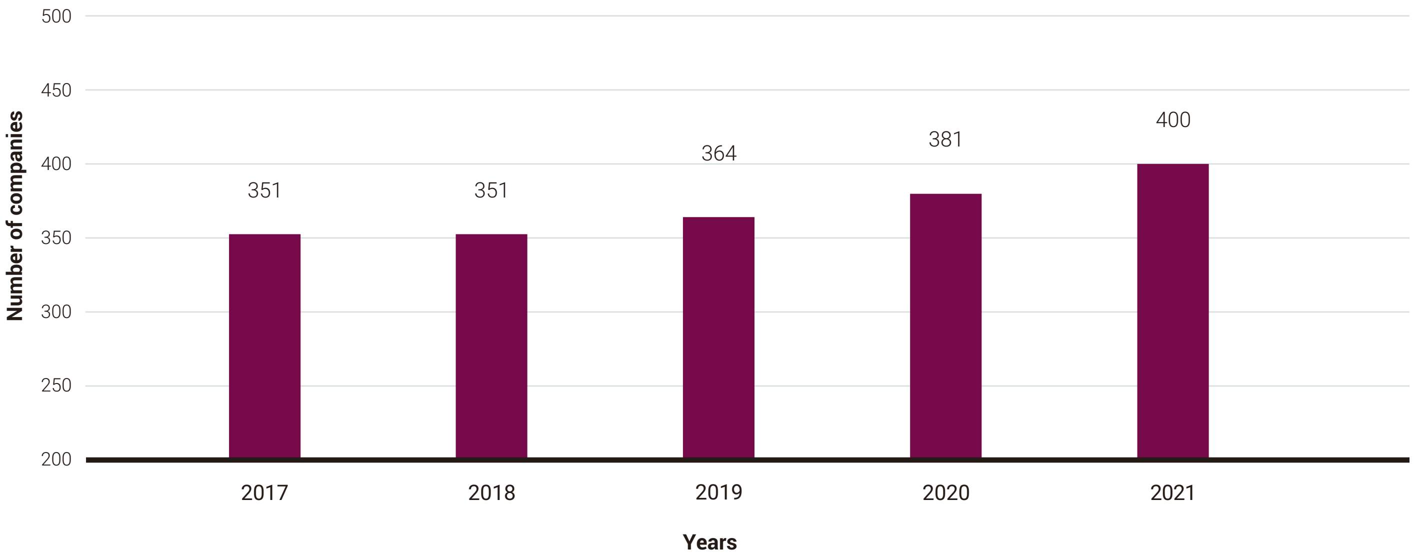
The TCFD recommendations were launched in 2017 to improve and increase reporting of climate-related financial information. Because now more than ever, capital markets need comprehensive, high-quality, and comparable information from companies on the impacts of climate change. These recommendations have sowed the seeds for a shift in the policy landscape as various jurisdictions have already mandated or are in the process of mandating climate-related disclosures[2]. A landmark development is the United States Securities and Exchange Commission's (SEC) announcement of its proposed climate disclosure rule[3].

View the webpage for more

1. This data reflects the S&P 500 index as of September 1 2020, and the companies' responses to CDP's 2021 Climate Change questionnaire.
2. TCFD status report - 2021
3. SEC proposed rules – March 2022

The SEC's rule largely tracks the TCFD recommendations. S&P 500 companies providing a high-quality disclosure through CDP are well prepared for the SEC requirements[4]. The number of CDP climate change disclosers from the index have increased about **10% over the last five years** (Figure 1)[5].

Figure 1: S&P 500 companies disclosing through CDP's climate change questionnaire



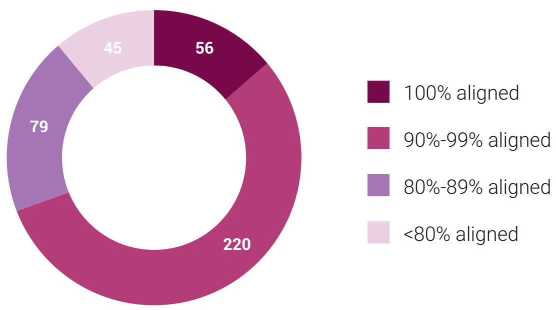
Key findings

- Only **14%** of the disclosing S&P 500 companies provided information on all of the TCFD-related questions.
- While more than 80% of the disclosing companies identified climate-related risks, only **63%** covered their entire value chain in their risks assessment process.
- In aggregate, the reported financial benefits of climate-related opportunities are about **15** times higher than the potential financial impact of climate-related risks.
- The maximum financial benefits of opportunities far outweigh the costs to materialize them (aggregated across all sectors).
- Out of the companies that identified exposure to climate-related risks and opportunities, one-third did not provide potential financial impact estimates.

TCFD alignment overview

1 The vast majority of the sample companies disclosed against at least 80% the TCFD tagged questions in the CDP climate change questionnaire, however some companies are lagging behind (**Figure 2**)[6].

Figure 2: TCFD alignment – count of disclosing companies



4. 3 vital things about the SEC's new proposed rule and where CDP fits in.
5. Updates in S&P 500 constituents are factored in. The cut-offs are September of the reporting year i.e., September 2016 for 2017 disclosure cycle.
6. A company disclosure is counted as fully or 100% aligned with TCFD recommendations if the information has been provided against all the 25 TCFD-aligned questions; 90-99% aligned are responding to 23-24 questions; 80-89% aligned are responding to 20-22; and <80% refers to the rest of companies that are responding to less than 20 questions. This doesn't represent the qualitative assessment of the response.

2

Alignment varies significantly across the four TCFD thematic areas. Most companies responded comprehensively in governance and metrics & targets sections, however, many failed to provide information on strategy and risk management.

Table 1: S&P 500 disclosing companies' alignment with TCFD thematic areas and performance against key indicators

Thematic Area	Aligned disclosures (% of sample)[7]	Key indicators	Response (% of sample)
Governance	93%	Disclosed having board level oversight for climate related issues	97%
Strategy	30%	Strategy or financial planning being influenced by climate-related risks and opportunities	95%
		Disclosed having developed a low-carbon transition plan	40%
		Reported using both quantitative and qualitative scenario analysis	42%
Risk management	45%	Have processes to identify and assess climate-related risks and opportunities	96%
		Reported covering the whole value chain in their risks assessments	63%
Metrics and targets	79%	Disclosed having active emissions target in the reporting year	84%
		Have targets approved by the SBTi[8]	16%
		Reported both Scope 1 and Scope 2 emissions	96%
		Reported at least one category for the Scope 3 emissions[9]	85%
		Disclosing implementation of an internal carbon price	22%

7. The percentages in this column reflect the proportion of companies that are aligned with all the indicators (captured within the CDP questionnaire) within each thematic area. These include the key indicators but are not limited to them.
8. Verified with SBTi with a cutoff date of 31st December 2020.
9. The Task Force encourages organizations to disclose scope 3 emissions - subject to materiality. CDP analysis shows that a high proportion (85%) of disclosing S&P 500 companies reported scope 3 emissions however the proportion is relatively low in material categories in comparison with categories that aren't material to the nature of business such as employees commuting and business travel. CDP's Technical Note: Relevance of Scope 3 Categories by Sector responds to this need and signposts the categories that companies should be measuring and taking action to mitigate.

Climate-related risks and opportunities in focus

Identification of climate-related risks and opportunities with substantial financial or strategic impact on businesses:

80%
identified both climate-related risks and opportunities

9%
of the sample identified only climate-related opportunities

1%
Identified only climate-related risks

10%
have not identified any climate risks and opportunities, or have not provided a response

Risks and opportunities in the value chain

Most companies reported acute physical risks due to changing climate and opportunities related to their products and services (**Figure 3**). A majority of the reported risks are in companies' direct operations. This could be because only 63% of the disclosing organizations include all value chain stages in their risk assessment processes (**Table 1**).

Financial implications of climate-related risks and opportunities

Out of the companies that identified being exposed to climate-related risks and opportunities, **one-third did not provide potential financial impact estimates**. Among the commonly stated reasons for this are the sensitive nature of this information and difficulty in providing an estimate for certain types of risks.

Figure 3: Reported climate-related risks and opportunities in the value chain stages

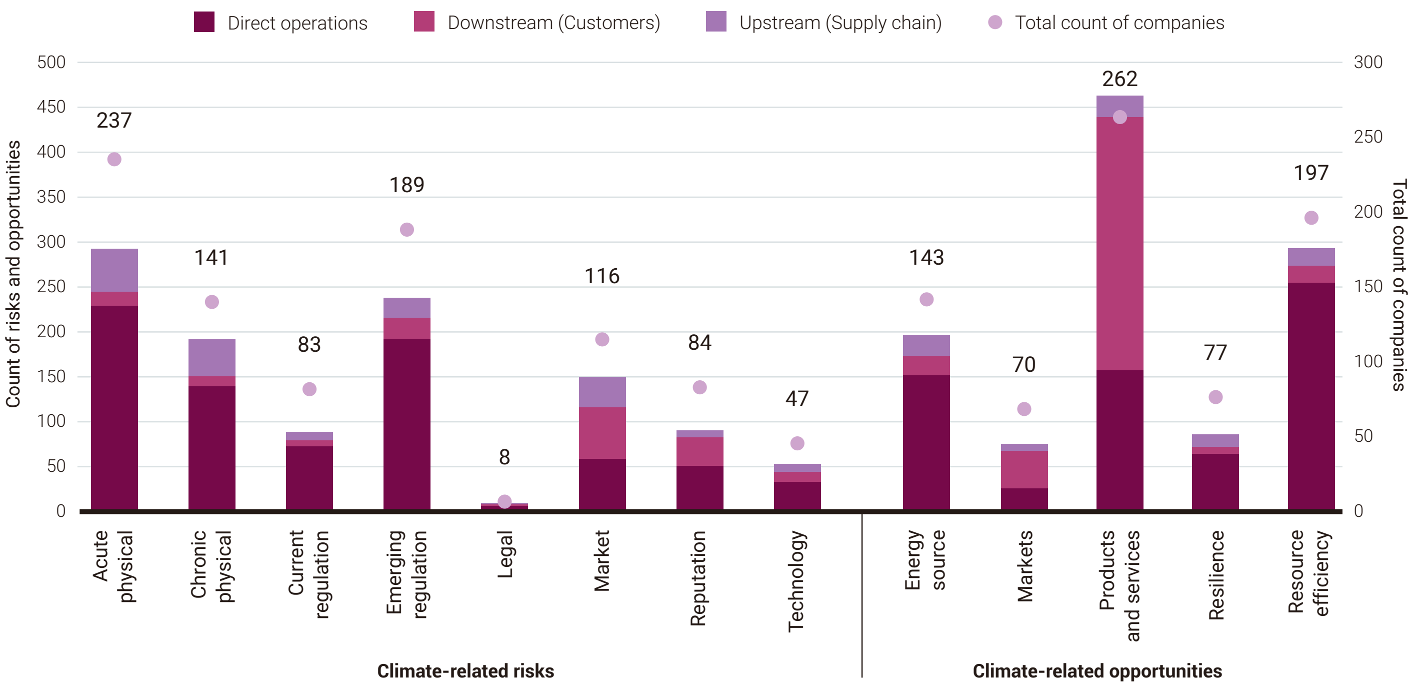
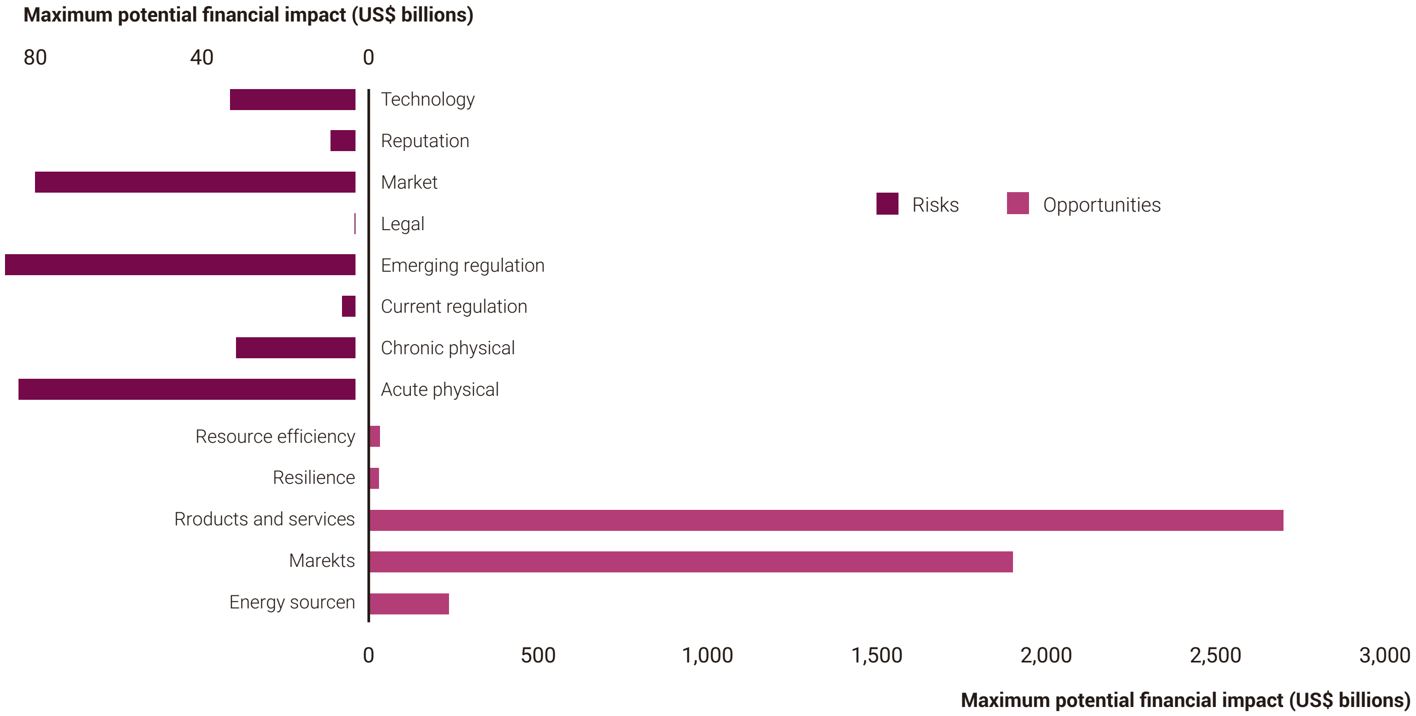


Figure 4: Reported maximum potential financial impacts associated with risk and opportunity types



over
56%
of companies (224) reported potential financial impacts of climate-related risks.

65%
are associated with transition risks.

60%
of companies (238) disclosed the value of climate-related opportunities aggregates up to US$4.8 trillion.

Financial impacts of climate-related risks:

- 224 companies (a little over 56% of the sample) reported potential financial impacts of climate-related risks. The reported estimates are in the range of US$272 billion to US$334 billion in aggregate, of which about 65% is associated with transition risks.
- The highest impact values reported are associated with emerging regulations followed by acute physical and market-related risks **(Figure 4)**.
- Approximately 40% (~US$103 to 142 billion) of the total financial impact range is assessed as "likely", "very likely" and "virtually certain" to occur.
- The majority (46%) of the financial impact of physical risks was projected as materializing over the short term, whereas for transitional risks, most (59%) was expected to occur over the long term.

Financial impacts of climate-related opportunities:

- The maximum potential value of climate-related opportunities disclosed by 238 companies (60% of the sample) aggregates up to US$4.8 trillion which is about 15 times higher than the financial impact of the risks.
- Majority of reported financial impacts of the climate-related opportunities are associated with products and services (~54%) and new markets or types of assets that may help organizations to diversify their activities (~40%).
- About 60% (up to US$3 trillion) of the total financial impact of the climate-related opportunities is reported to be “likely”, “very likely” or “virtually certain” to occur.
- The majority (~US$2.8 trillion) is expected to materialize over the long-term.

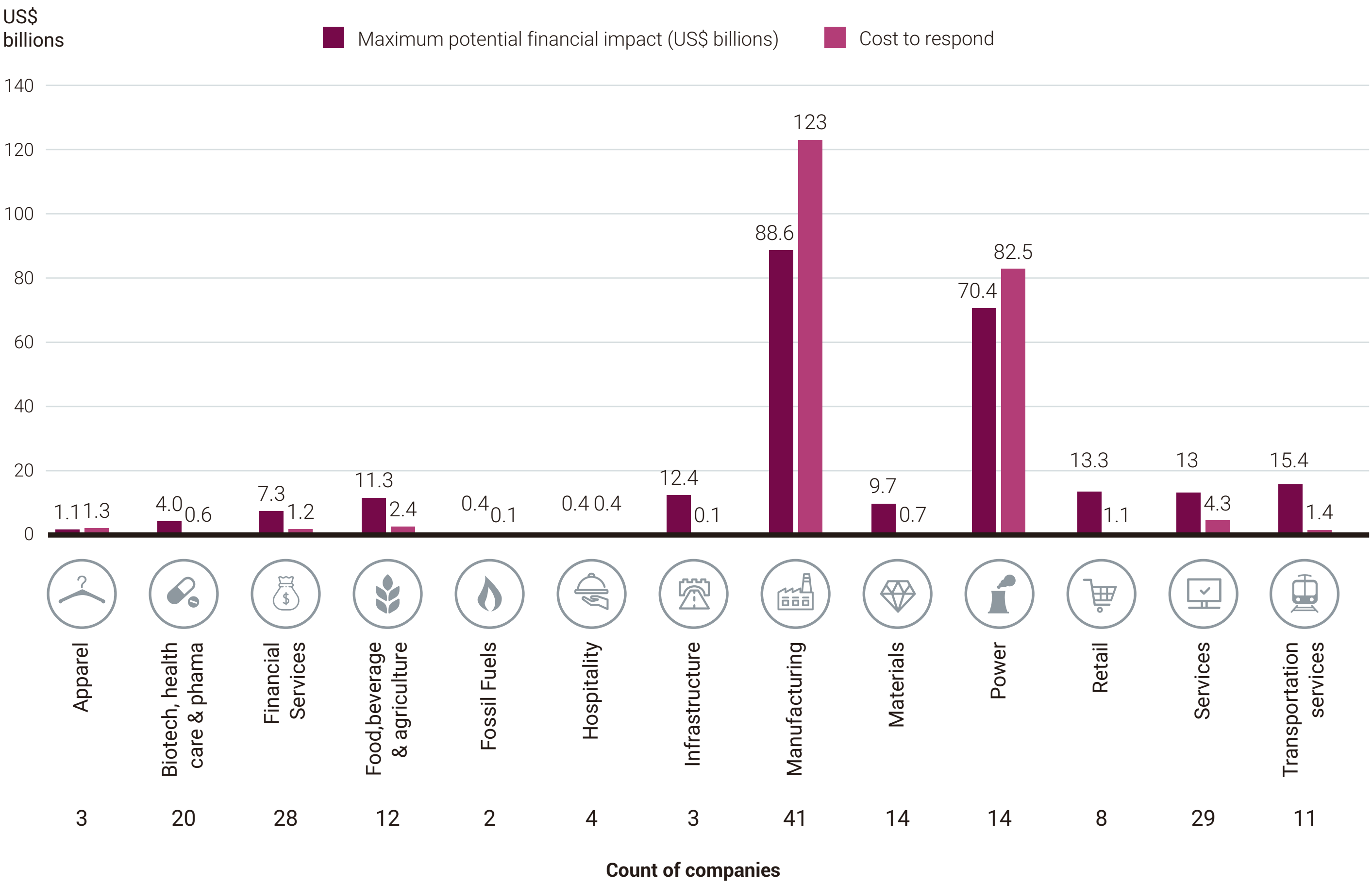
Financial impact of climate-related risks and opportunities VS. response/materialization costs

A subset of the companies that reported the financial impact values also reported the costs to respond to risks or to materialize the opportunities[10]. The reported figures vary significantly across industry groups and risk/opportunity type (**Figure 5** and **Figure 6**), however the cost to respond generally remained lower than the estimated financial impact with the exception of power and manufacturing sector (only for risks).

- The power sector faces a push to undergo significant business model changes due to emerging climate regulation and customer behavioral changes (transition risks). The cost to respond to these risks are high because the assets in this sector are long-lived and require substantial capital investments. Therefore, retiring them early and acquiring new assets would incur a high cost.
- Companies in the manufacturing sector associate the high cost with responding to transition risks. Carbon pricing mechanism and mandates on existing products and services will require them to acquire new assets as well as invest in low carbon emission operations and R&D for new products to widen their portfolio.

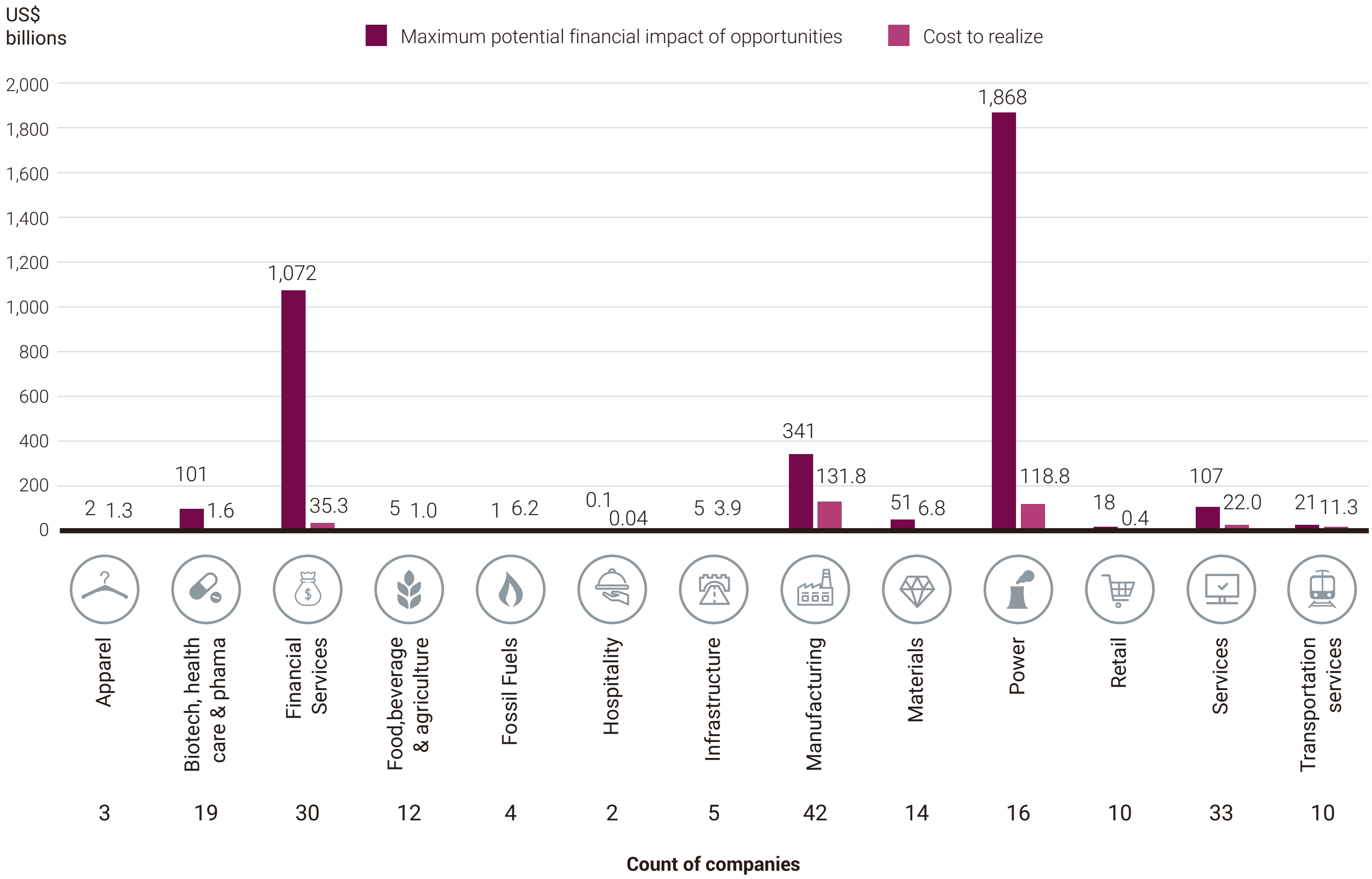
A key observation is that the maximum financial impact of opportunities (aggregated across all sectors) is about 10 times higher than the costs to materialize them (US$3.5 trillion vs. US$340 billion).

Figure 5: Maximum financial impact of risks and associated cost to respond across different industries



10. 189 and 200 companies disclosed the cost to respond/materialize estimates along with the potential financial impact of climate-related risks and opportunities respectively.

Figure 6: Maximum financial impact of opportunities and cost to realize across different industries



ABOUT CDP

CDP is a global non-profit that runs the world's environmental disclosure system for companies, cities, states and regions. Founded in 2000 and working with more than 680 financial institutions with over $130 trillion in assets, CDP pioneered using capital markets and corporate procurement to motivate companies to disclose their environmental impacts, and to reduce greenhouse gas emissions, safeguard water resources and protect forests. Over 14,000 organizations around the world disclosed data through CDP in 2021, including more than 13,000 companies worth over 64% of global market capitalization, and over 1,100 cities, states and regions. Fully TCFD aligned, CDP holds the largest environmental database in the world, and CDP scores are widely used to drive investment and procurement decisions towards a zero carbon, sustainable and resilient economy. CDP is a founding member of the Science Based Targets initiative, We Mean Business Coalition, The Investor Agenda and the Net Zero Asset Managers initiative.

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