TECH
mahindra

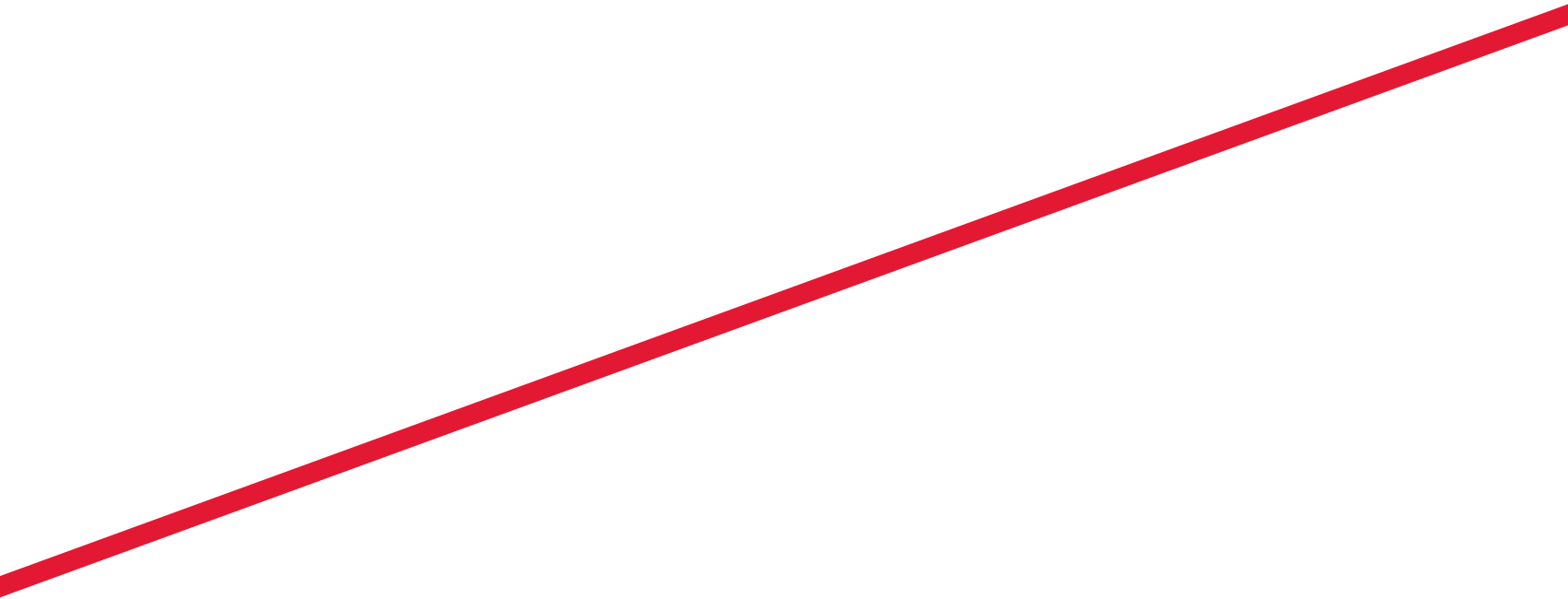**Impact Analysis**
Risks & Opportunities

Experience the Future. **NOW.**

Climate Risks & Opportunities

Impact Analysis – Risks

Model

Revenue	$ 6,607,000,000

Risk Identifier	Type of Risk	Potential Financial Impact	Financial Impact / Revenue (A)	Risk Measure (% Impact)	Risk Measure (Financial Impact)	Risk Impact Status	Likelihood	Avg. Likelihood % (B)	Exposure (A*B)	Magnitude of Impact
Risk 1	Acute physical	$ 1,269,910.41	0.0192%	Minor	Minor	Minor	Very likely	95.00%	0.0183%	Low
Risk 2	Emerging regulation	$ 3,754,372.58	0.0568%	Minor	Moderate	Minor	Likely	83.00%	0.0472%	Low
Risk 3	Market	$ 23,231,900.00	0.3516%	Moderate	Material	Moderate	Likely	83.00%	0.2918%	Medium-low

Impact Analysis – Risks

Matrices

MATRIX 1: RISK IMPACT

Low → High

CASE 2 \ CASE 1	Minor	Moderate	Significant	Material
Minor	Minor	Minor	Minor	Minor
Moderate	Minor	Moderate	Moderate	Moderate
Significant	Minor	Moderate	Significant	Significant
Material	Minor	Moderate	Significant	Material

Low ↓ High

MATRIX 2: RISK SEVERITY

Low → High

IMPACT \ PROBABILITY	0.20%	0.40%	0.60%	0.80%	1.00%
0.50%	0.00%	0.00%	0.00%	0.00%	0.01%
5.00%	0.01%	0.02%	0.03%	0.04%	0.05%
16.50%	0.03%	0.07%	0.10%	0.13%	0.17%
49.50%	0.10%	0.20%	0.30%	0.40%	0.50%
75.00%	0.15%	0.30%	0.45%	0.60%	0.75%
83.00%	0.17%	0.33%	0.50%	0.66%	0.83%
95.00%	0.19%	0.38%	0.57%	0.76%	0.95%
99.50%	0.20%	0.40%	0.60%	0.80%	1.00%

Low ↓ High

Impact Analysis – Risks

Legends

LEGEND 1: RISK IMPACT		
Range	**Impact**	**Level**
0.75% - 1.00%	Material	
0.50% - 0.75%	Significant	
0.25% - 0.50%	Moderate	
0% - 0.25%	Minor	

LEGEND 2: LIKELIHOOD	
Range	**Likelihood**
99%-100%	Virtually certain
90%-100%	Very likely
66%-100%	Likely
50%-100%	More likely than not
33%-66%	About as likely as not
0%-33%	Unlikely
0%-10%	Very unlikely
0-1%	Exceptionally unlikely

LEGEND 3: SEVERITY		
Range	**Impact**	**Level**
1.00%	High	
0.80%	Medium-high	
0.60%	Medium	
0.40%	Medium-low	
0.20%	Low	

Risk Indicators

Material ≥ 0.75% or USD 10 million on revenue, whichever is lower

Significant > 0.50% but ≤ 75% or USD 7.5 million on revenue, whichever is lower

Moderate > 0.25% but ≤ 50% or USD 5 million on revenue, whichever is lower

Minor ≤ 0.25% or < USD 2.5 million on revenue, whichever is lower

Impact Analysis – Risks

Steps

- **Step 1:** The risks are categorized into various types on the basis of their occurence, i.e., Acute Physical, Regulatory etc.

- **Step 2:** The potential financial impact from the risk is then, calculated based on company metrics.

- **Step 3:** The metric (Financial Impact / Revenue) shows the % of financial impact on the company's revenue arising out of the risk.

- **Step 4:** Now, Risk Measure identifies the impact of risk based on 2 cases, i.e. the % impact of risk and the actual financial impact of risk on company's revenue, whichever is lower:
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- **Step 5:** Based on the value of Risk measures, the Magnitude of Impact can be deduced through 'Matrix 1' which will decide the potential impact of the risk.

- **Step 6:** Based on the guidance provided by CDP on Climate Change, the risks are categorized on the basis of the likelihood of occurence for an organization, i.e., "Likely", "Very Likely" etc. along with their range of probabilities. An average of the range of probabilities is then, deduced to obtain the possibility of the likelihood of occurence of the risk.

- **Step 7:** Risk Exposure is a product of the Average likelihood of occurence and the % Impact on Revenue (Financial Impact/Revenue). Additionally, 'Matrix 2' shows a range of corresponding severities of these risks.

- **Step 8:** The severity of the risks is decided, based on historical analysis, to measure the consequences or impact of the same on the organization, i.e., "High", "Medium-high" etc. as can be seen from the legend 'Severity'.

Impact Analysis – Risks

Illustration

- If the annual revenue of an organization is USD 5,997.80 million and the potential financial impact from a risk is USD 0.13 million, then, the proportion of potential financial impact with respect to the annual revenue is 0.0022%

$$p = (0.13/5,997.80) \times 100 = 0.0022\%$$

where, p = percentage loss on revenue

- On the basis of 'Risk Indicators', the Potential financial figure can be used to deduce the Risk Measure as well.

- Now, if the likelihood of occurence of this risk is "Very Likely" and it's corresponding probability of occurence is 95%, then, the Risk Measure can be calculated as

$$Exposure = p * 95\% = 0.0021\%$$

where, p = percentage loss on revenue

- We will compare this value to the Risk Severity matrix and categorize the risk in accordance with the Risk Indicators which states that 0.0021% is "Low risk" and is highlighted with the corresponding color.

- Similarly, this analysis may be performed for Potential financial impact on the Gross Profit or any other financial metrics of an organization.

Impact Analysis – Opportunities

Model

Revenue	$ 6,607,000,000

Identifier	Type of Opportunity	Potential Financial impact	Financial Impact / Revenue (A)	Opportunity Measure (% Impact)	Opportunity Measure (Financial Impact)	Opportunity Impact Status	Likelihood	Avg. Likelihood % (B)	Realization (A*B)	Magnitude of Impact
Opp1	Energy source	$ 692,364.18	0.0105%	Minor	Minor	Minor	Likely	83.00%	0.0087%	Low
Opp2	Products and services	$ 1,650,000.00	0.0250%	Minor	Minor	Minor	Likely	83.00%	0.0207%	Low
Opp3	Resilience	$ 4,000,000.00	0.0605%	Minor	Moderate	Moderate	Likely	83.00%	0.0502%	Low

Impact Analysis – Opportunities

Matrices

MATRIX 1: OPPORTUNITY IMPACT

		Low → High			
CASE 2 / CASE 1		Minor	Moderate	Significant	Material
Low	Minor	Minor	Moderate	Significant	Material
	Moderate	Moderate	Moderate	Significant	Material
	Significant	Significant	Significant	Significant	Material
High	Material	Material	Material	Material	Material

MATRIX 2: OPPORTUNITY

IMPACT / PROBABILITY	Low → High				High
	0.20%	0.40%	0.60%	0.80%	1.00%
Low	0.50%	0.00%	0.00%	0.00%	0.00%	0.01%
	5.00%	0.01%	0.02%	0.03%	0.04%	0.05%
	16.50%	0.03%	0.07%	0.10%	0.13%	0.17%
	49.50%	0.10%	0.20%	0.30%	0.40%	0.50%
	75.00%	0.15%	0.30%	0.45%	0.60%	0.75%
	83.00%	0.17%	0.33%	0.50%	0.66%	0.83%
	95.00%	0.19%	0.38%	0.57%	0.76%	0.95%
High	99.50%	0.20%	0.40%	0.60%	0.80%	1.00%

Impact Analysis – Opportunities

Legends

LEGEND 1: OPPORTUNITY IMPACT

Range	Impact	Level
0.75% - 1.00%	Material	
0.50% - 0.75%	Significant	
0.25% - 0.50%	Moderate	
0% - 0.25%	Minor	

LEGEND 2: LIKELIHOOD

Range	Likelihood
99%-100%	Virtually certain
90%-100%	Very likely
66%-100%	Likely
50%-100%	More likely than not
33%-66%	About as likely as not
0%-33%	Unlikely
0%-10%	Very unlikely
0-1%	Exceptionally unlikely

LEGEND 3: OPPORTUNITY

Range	Impact	Level
1.00%	High	
0.80%	Medium-high	
0.60%	Medium	
0.40%	Medium-low	
0.20%	Low	

Opportunity Indicators

Material ≥ 0.75% or USD 10 million on revenue, whichever is higher

Significant > 0.50% but ≤ 75% or USD 7.5 million on revenue, whichever is higher

Moderate > 0.25% but ≤ 50% or USD 5 million on revenue, whichever is higher

Material ≤ 0.25% or < USD 2.5 million on revenue, whichever is higher

Impact Analysis – Opportunities

Steps

- **Step 1:** The opportunities are categorized into various types on the basis of their occurence, i.e., Efficiency, Resilience etc.

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    - <u>Opportunity Measure (% Impact)</u> – This signifies the avg. opportunity appetite of the organization w.r.t the provided opportunity in terms of % financial impact on its revenue.
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- **Step 5:** Based on the value of Opportunity measures, the Magnitude of Impact can be deduced through 'Matrix 1' which will decide the potential impact of the opportunity.

- **Step 6:** The opportunities are categorized on the basis of the likelihood of occurence for the organization, i.e., "Likely", "Very Likely" etc. along with their range of probabilities. An average of the range of probabilities is then, deduced to obtain a possibility of likelihood of realization of the opportunity.

- **Step 7:** Opportunity Realization is a product of the Average likelihood of occurence and the % Impact on Revenue (Financial Impact/Revenue). Additionally, 'Matrix 2' shows a range of corresponding severities of these opportunities.

- **Step 8:** The severity of the opportunities is decided, based on historical analysis, to measure the consequences or impact of the same on the organization, i.e., "High", "Medium-high" etc. as can be seen from the legend 'Severity'.

Impact Analysis – Opportunities

Illustration

- If the annual revenue of an organization is USD 5,997.80 million and the potential financial impact from an opportunity is USD 0.13 million, then, the proportion of potential financial impact with respect to the annual revenue is 0.0022%

$$p = (0.13/5,997.80) \times 100 = 0.0022\%$$
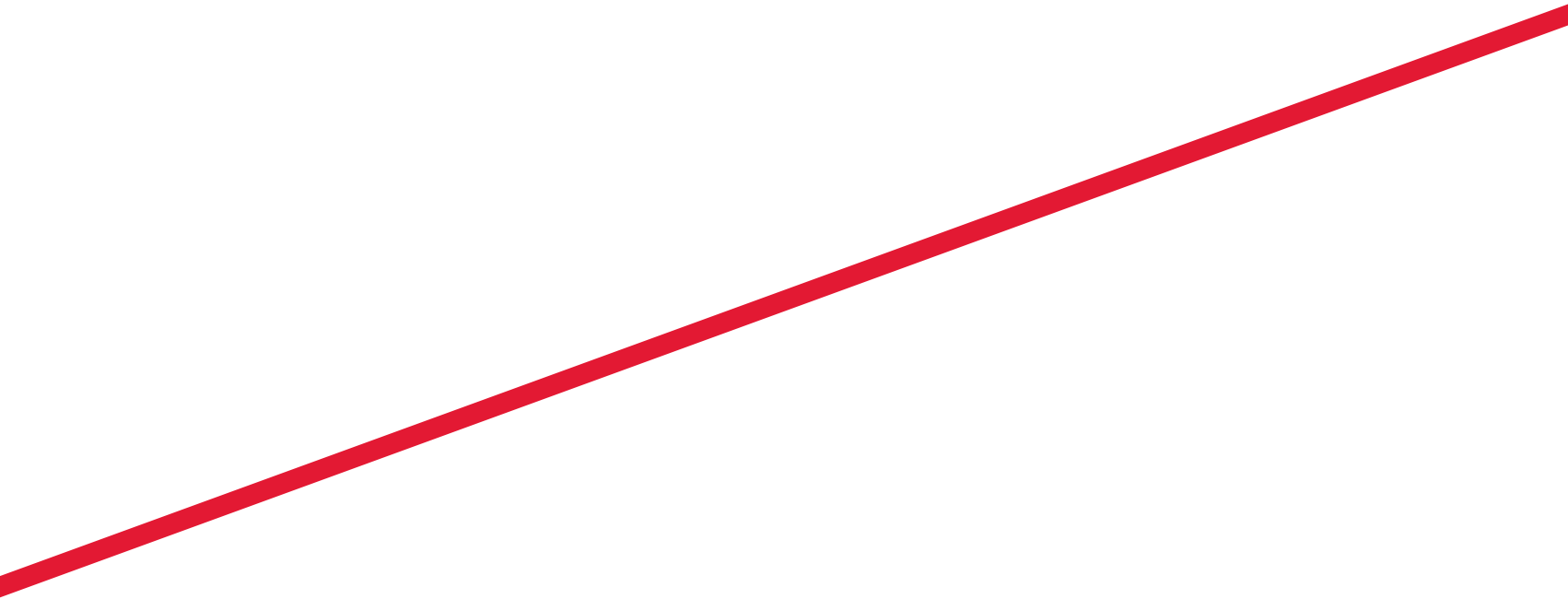
where, p = percentage gain on revenue

- On the basis of 'Opportunity Indicators', the Potential financial figure can be used to deduce the Opportunity Measure as well.

- Now, if the likelihood of realisation of this opportunity is "Very Likely" and it's corresponding probability of occurence is 95%, then, the Opportunity Measure can be calculated as

$$\text{Realisation} = p \times 95\% = 0.0021\%$$

where, p = percentage gain on revenue

- We will compare this value to the Opportunity matrix and categorize the opportunities in accordance with the Opportunity Indicators which states that 0.0021% is a Low Opportunity and is highlighted with the corresponding color.

- Similarly, this analysis may be performed for Potential financial impact on the Gross Profit or any other financial metrics of an organization.

Water Risks & Opportunities

Impact Analysis – Risks

Model

Revenue	$ 6,607,000,000

DIRECT OPERATIONS

Country/Area	River Basin	Type of Risk	Potential Financial Impact	Financial Impact / Revenue (A)	Risk Measure (% Impact)	Risk Measure (Financial Impact)	Risk Impact Status	Likelihood	Avg. Likelihood % (B)	Exposure (A*B)	Magnitude of Impact
India	Ganges - Brahmaputra	Chronic physical	$ 194,789.00	0.0029%	Minor	Minor	Minor	Very likely	95.00%	0.0028%	Low
India	Godavari	Chronic physical	$ 238,248.04	0.0036%	Minor	Minor	Minor	Very likely	95.00%	0.0034%	Low
India	Krishna	Chronic physical	$ 120,739.43	0.0018%	Minor	Minor	Minor	Very likely	95.00%	0.0017%	Low
India	Cauvery River	Acute physical	$ 320,256.17	0.0048%	Minor	Minor	Minor	Very likely	95.00%	0.0046%	Low
India	Indus	Chronic physical	$ 29,284.03	0.0004%	Minor	Minor	Minor	Very likely	95.00%	0.0004%	Low
Mexico	Verde	Acute physical	$ 28,534.61	0.0004%	Minor	Minor	Minor	Very likely	95.00%	0.0004%	Low

SUPPLY CHAIN

Country/Area	River Basin	Type of Risk	Potential Financial Impact (Min.)	Potential Financial Impact (Max.)	Potential Financial Impact (Avg.)	Financial Impact / Revenue (A)	Risk Measure (% Impact)	Risk Measure (Financial Impact)	Risk Impact Status	Likelihood	Avg. Likelihood % (B)	Exposure (A*B)	Magnitude of Impact
India	Godavari	Chronic physical	$ 138,190.52	$ 276,381.05	$ 207,285.79	0.0031%	Minor	Minor	Minor	Very likely	95.00%	0.0030%	Low

Impact Analysis – Risks

Matrices

MATRIX 1: RISK IMPACT

Low ———————————————————→ High

CASE 2 \ CASE 1	Minor	Moderate	Significant	Material
Minor	Minor	Minor	Minor	Minor
Moderate	Minor	Moderate	Moderate	Moderate
Significant	Minor	Moderate	Significant	Significant
Material	Minor	Moderate	Significant	Material

(Low ↓ High on left axis)

MATRIX 2: RISK SEVERITY

Low ———————————————————→ High

IMPACT \ PROBABILITY	0.20%	0.40%	0.60%	0.80%	1.00%
0.50%	0.00%	0.00%	0.00%	0.00%	0.01%
5.00%	0.01%	0.02%	0.03%	0.04%	0.05%
16.50%	0.03%	0.07%	0.10%	0.13%	0.17%
49.50%	0.10%	0.20%	0.30%	0.40%	0.50%
75.00%	0.15%	0.30%	0.45%	0.60%	0.75%
83.00%	0.17%	0.33%	0.50%	0.66%	0.83%
95.00%	0.19%	0.38%	0.57%	0.76%	0.95%
99.50%	0.20%	0.40%	0.60%	0.80%	1.00%

(Low ↓ High on left axis)

Impact Analysis – Risks

Legends

LEGEND 1: RISK IMPACT

Range	Impact	Level
0.75% - 1.00%	Material	🟥
0.50% - 0.75%	Significant	🟧
0.25% - 0.50%	Moderate	🟨
0% - 0.25%	Minor	🟩

LEGEND 2: LIKELIHOOD

Range	Likelihood
99%-100%	Virtually certain
90%-100%	Very likely
66%-100%	Likely
50%-100%	More likely than not
33%-66%	About as likely as not
0%-33%	Unlikely
0%-10%	Very unlikely
0-1%	Exceptionally unlikely

LEGEND 3: SEVERITY

Range	Impact	Level
1.00%	High	🟥
0.80%	Medium-high	🟧
0.60%	Medium	🟦
0.40%	Medium-low	🟨
0.20%	Low	🟩

Risk Indicators

Material ≥ 0.75% or USD 10M on revenue, whichever is lower

Significant > 0.50% but ≤ 75% or USD 7.5M on revenue, whichever is lower

Moderate > 0.25% but ≤ 50% or USD 5M on revenue, whichever is lower

Minor ≤ 0.25% or < USD 2.5M on revenue, whichever is lower

Impact Analysis – Risks

Steps

- **Step 1:** The risks are categorized into various types on the basis of their occurence, i.e., Acute Physical, Regulatory etc.

- **Step 2:** The potential financial impact from the risk is then, calculated based on company metrics.

- **Step 3:** The metric (Financial Impact / Revenue) shows the % of financial impact on the company's revenue arising out of the risk.

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- **Step 5:** Based on the value of Risk measures, the Magnitude of Impact can be deduced through 'Matrix 1' which will decide the potential impact of the risk.

- **Step 6:** Based on the guidance provided by CDP on Climate Change, the risks are categorized on the basis of the likelihood of occurence for an organization, i.e., "Likely", "Very Likely" etc. along with their range of probabilities. An average of the range of probabilities is then, deduced to obtain the possibility of the likelihood of occurence of the risk.

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Impact Analysis – Risks

Illustration

- If the annual revenue of an organization is USD 5,997.80 million and the potential financial impact from a risk is USD 0.13 million, then, the proportion of potential financial impact with respect to the annual revenue is 0.0022%

$$p = (0.13/5,997.80) \times 100 = 0.0022\%$$

where, p = percentage loss on revenue

- On the basis of 'Risk Indicators', the Potential financial figure can be used to deduce the Risk Measure as well.

- Now, if the likelihood of occurence of this risk is "Very Likely" and it's corresponding probability of occurence is 95%, then, the Risk Measure can be calculated as

$$Exposure = p * 95\% = 0.0021\%$$

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- Similarly, this analysis may be performed for Potential financial impact on the Gross Profit or any other financial metrics of an organization.

Impact Analysis – Opportunities

Model

Revenue	$ 6,607,000,000

Type of opportunity	Potential financial impact	Financial Impact / Revenue (A)	Opportunity Measure (% Impact)	Opportunity Measure (Financial Impact)	Opportunity Impact Status	Likelihood	Avg. Likelihood % (B)	Realization (A*B)	Magnitude of Impact
Efficiency	$ 61,265.46	0.0009%	Minor	Minor	Minor	Very likely	95.00%	0.0009%	Low
Efficiency	$ 358,352.42	0.0054%	Minor	Minor	Minor	Very likely	95.00%	0.0052%	Low
Products and services	$ 36,509.68	0.0006%	Minor	Minor	Minor	Very likely	95.00%	0.0005%	Low

Impact Analysis – Opportunities

Matrices

MATRIX 1: OPPORTUNITY IMPACT

Low → High

CASE 2 \ CASE 1	Minor	Moderate	Significant	Material
Minor	Minor	Moderate	Significant	Material
Moderate	Moderate	Moderate	Significant	Material
Significant	Significant	Significant	Significant	Material
Material	Material	Material	Material	Material

(Low ↓ High)

MATRIX 2: OPPORTUNITY

Low → High

IMPACT \ PROBABILITY	0.20%	0.40%	0.60%	0.80%	1.00%
0.50%	0.00%	0.00%	0.00%	0.00%	0.01%
5.00%	0.01%	0.02%	0.03%	0.04%	0.05%
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(Low ↓ High)

Impact Analysis – Opportunities

Legends

LEGEND 1: OPPORTUNITY IMPACT

Range	Impact	Level
0.75% - 1.00%	Material	
0.50% - 0.75%	Significant	
0.25% - 0.50%	Moderate	
0% - 0.25%	Minor	

LEGEND 2: LIKELIHOOD

Range	Likelihood
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LEGEND 3: OPPORTUNITY

Range	Impact	Level
1.00%	High	
0.80%	Medium-high	
0.60%	Medium	
0.40%	Medium-low	
0.20%	Low	

Opportunity Indicators

Material ≥ 0.75% or USD 10 million on revenue, whichever is higher

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where, p = percentage gain on revenue

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Thank You

Disclaimer