**Module 7- Critical Assignment**

Anju Mishra

Colorado State University Global

MIS 581: Capstone - Business Intelligence and Data Analytics

Dr. Jamia Mills

Due Date: 12.30.2024

Table of Contents

[Abstract: 3](#_Toc186387729)

[Objectives: 9](#_Toc186387730)

[Overview of study: 10](#_Toc186387731)

[Research questions and hypotheses: 11](#_Toc186387732)

[Literature review: 15](#_Toc186387733)

[Research design -Methodology: 18](#_Toc186387734)

[Ethical Considerations for the Data Chosen: 20](#_Toc186387735)

[Findings: 22](#_Toc186387736)

[Conclusion: 26](#_Toc186387737)

[Recommendations: 27](#_Toc186387738)

[Reference: 28](#_Toc186387739)

# Abstract:

The optical fiber industry, a critical component of global communications infrastructure, offers significant growth opportunities but is also characterized by volatility that challenges manufacturers like Corning Incorporated. This study investigates the periodic dips in Corning's sales within its Optical Communications segment, focusing on the underlying causes and their correlation with layoff patterns. Through an analysis of market dynamics, including economic conditions, infrastructure investment cycles, and technological advancements, the research identifies key external drivers influencing sales fluctuations. This research paper analyzes if correlation exist between performance of Corning incorporated and the layoff pattern of Corning optical fiber. To answer these questions, I compared Corning incorporated revenue and stock market prices for last 10 years and compare those with layoff pattern off Corning. I used data from Corning website for stock markets trend also used data from various sources to find did revenue trend for last 10 years. Data for layoff has been taken from warn tracker which publishes different companies’ layoff pattern for last 10 years.

The result suggests that there was a positive correlation between what performance and more layoff. The study revealed that performance pattern was not cyclic, and it wasn't predictable. Additionally, the study examines the strategic implications of Corning's layoff decisions, revealing a complex interplay between short-term cost management and long-term operational resilience. Findings suggest that while layoffs often correlate with sales downturns, they are also shaped by broader corporate strategies and market pressures. To address these challenges, the study recommends adopting predictive demand models, diversifying the product portfolio, implementing alternative workforce strategies, and strengthening market partnerships. These measures can help Corning mitigate sales volatility, enhance workforce stability, and sustain competitive advantage in a rapidly evolving market.

**Introduction :**

Global Fiber Optic Cable Materials Market size was valued at $ 8.136 Bn. In 2020 and the total revenue is expected to grow at 13.9% through 2021 to 2027, reaching nearly US$ 20.22 Bn. By 2027, the global Fiber Optic Cable Materials Market report is a comprehensive analysis of the industry, market, and key players. The report has covered the market by demand and supply-side by segments. The global Fiber Optic Cable Materials Market report also provides trends by market segments, technology, and investment with a competitive landscape.

Global Fiber Optic Cable Materials Market Overview:

Fiber-optic cable is also known as optical-fiber cable and is like an electrical cable but containing more than one optical fiber that is used to carry light. Optical fiber cables are coated with plastic layers and contain a protective tube suitable for the environment where cables are used. Optic-fiber cable consists of a core and a cladding layer, selected for total internal reflection owing to the difference in the refractive index between the two.

**A close-up of a graph

Description automatically generated**

**Initial Problem Statement:**

Periodic dips in Corning's volume sales in the optical fiber market result in production slowdowns and workforce layoffs, affecting both operational efficiency and employee stability. Understanding the market forces and internal factors driving these fluctuations is critical to developing strategies for mitigating their impact.

1. **Historical Sales Data**:

* Annual sales data of Corning's optical fiber products over the past 10 years.
* Sales comparisons with competitors.

1. **Market Trends**:

* Analysis of global demand for optical fiber.
* Key drivers (e.g., telecom expansions, 5G rollouts) and inhibitors.1

1. **External Factors**:

* Economic indicators (e.g., GDP, inflation).
* Policy changes affecting fiber optics or telecom industries.

**Refinement in problem statement:**

Corning Incorporated, a global leader in materials science, operates across five reportable segments: Display Technologies, Optical Communications, Environmental Technologies, Specialty Materials, and Life Sciences. Although periodic dips in the volume sales of its Optical Communications segment—particularly in optical fiber—lead to production slowdowns and workforce layoffs, these impacts are not isolated to this single segment.

Instead, Corning Incorporated functions as a unified organization, where the overall financial health and operational decisions are influenced by the performance of all segments combined. This interconnected structure means that layoffs and other corporate-level responses are driven not only by fluctuations in optical fiber demand but also by broader market forces and the collective performance of Corning's diverse business sectors. Understanding the market dynamics and internal factors affecting Corning's overall performance is essential for developing holistic strategies to stabilize operations, minimize workforce disruptions, and enhance long-term growth.

**GLW 10-Year Price Performance Graph:**

Displayed below is a visual depiction presenting the closing prices of Corning Incorporated (GLW) spanning the last decade. This graph employs adjusted closing prices instead of market closing prices. (The adjusted close considers significant corporate or institutional-level actions that occur beyond regular market hours.)

**A graph with green dots and numbers

Description automatically generated**

Figure 1:Corning stock market performance from 2014 to 2023

As of December 31, 2020, there were approximately 12,090 registered holders of common stock and approximately 515,000 beneficial shareholders.

**Performance Graph**

The following graph illustrates the cumulative total shareholder return over the last five years of Corning's common stock, the S&P 500 andthe S&P Communications Equipment Companies.

**A graph showing the growth of a number of companies

Description automatically generated with medium confidence**

Figure 2:Stakeholder returns for 5 years

# Objectives:

Goals:

1. Analyze the Factors Contributing to Sales Declines: Identify internal and external factors causing periodic dips in Corning Inc.
2. Identify Market Trends: Explore global market trends in the manufacturing industry to assess opportunities and threats.
3. Recommend Mitigation Strategies: Propose actionable strategies to minimize the impact of sales dips, stabilize production, and reduce workforce disruptions.
4. Benchmark Against Competitors: Compare Corning's performance with key competitors to identify potential areas of improvement.

Organizational Benefits:

* **Improved Financial Stability:** By identifying and addressing factors causing sales dips, Corning can achieve more consistent revenue streams, reducing the risk of financial strain during downturns.
* **Enhanced Workforce Retention:** Minimizing layoffs through better production planning and sales forecasting fosters employee morale, loyalty, and productivity.
* **Optimized Production Planning:** Predictive modeling enables proactive adjustments in production to match demand, reducing overproduction costs or underutilization of resources.
* **Competitive Advantage:** Understanding market trends and implementing mitigation strategies positions Corning to outperform competitors during industry downturns.
* **Increased Investor Confidence:** Stable operations and reduced volatility in sales and production strengthen Corning's reputation among investors, attracting long-term investment.
* **Sustainability Goals:** By reducing the environmental impact of overproduction and waste during demand mismatches, Corning aligns with sustainability initiatives, improving brand reputation.

# Overview of study:

The global Fiber Optic Cable Materials Market is poised for significant growth, with an estimated increase from $8.136 billion in 2020 to $20.22 billion by 2027, driven by advancements in telecommunications, 5G rollouts, and increasing global demand for high-speed internet. Despite this promising outlook, companies like Corning Incorporated face challenges due to periodic fluctuations in optical fiber sales, leading to production slowdowns and workforce disruptions.

Corning, a global leader in materials science, operates across five interconnected business segments, including Optical Communications, which plays a pivotal role in the company’s overall performance. Sales dips in this segment have far-reaching implications, affecting production planning, workforce stability, and financial performance. Furthermore, these impacts are compounded by broader market forces and the collective performance of Corning's other business segments.

To address these challenges, a comprehensive understanding of historical sales trends, market dynamics, and external economic factors is essential. This analysis will uncover the root causes of periodic sales dips and provide actionable insights to stabilize production, minimize workforce disruptions, and enhance Corning’s competitive position in the market. Developing such strategies will also strengthen investor confidence, align with sustainability goals, and ensure Corning's long-term growth and resilience in an evolving market landscape.

# Research questions and hypotheses:

List of research question:

**Sales Data Analysis:**

* Corning’s sales figures in last 5-6 years? Is there a pattern in sales dip?
* Does Corning sales align with sales trend in global optical fiber market?

**Layoff Patterns:**

* What are the primary reasons Corning has/had for its layoffs in the optical fiber division?
* How frequently has Corning implemented layoffs in last 5-6 years?
* Is there a pattern which can be observed over time?
* Are layoffs at Corning more reactive to short-term sales dips or reflective of broader strategic adjustments?

**Alignment with Sales Trends:**

* Does Corning’s layoff periods correlate with declines or stagnations in optical fiber sales?
* What external market factors, such as demand for optical fiber or economic downturns, coincide with Corning's layoffs?

**Strategic Implications:**

* Are Corning’s layoffs primarily driven by competitive pressures in the optical communications market?
* How do layoffs impact Corning’s ability to rebound during sales recoveries or expansions?

**Policy and Workforce Considerations:**

* What role do labor policies, regional economic conditions, and governmental incentives play in Corning's layoff decisions?
* How does Corning manage workforce morale and retention after layoff periods, especially during market recoveries?

Overview of hypotheses:

First hypothesis:

Null Hypothesis (H10):

The optical fiber market exhibits a cyclical growth pattern, characterized by periods of expansion lasting two to three years, followed by dips in demand or sales. These dips persist for a year or two before the market resumes growth. This pattern indicates that the market is inherently volatile, influenced by factors such as economic conditions, technological advancements, and shifts in consumer or industrial demand.

Alternative Hypothesis (H11):  
The optical fiber market growth is steady over time, showing consistent upward trends without significant cyclical dips. Growth is driven by ongoing global adoption of fiber technologies, sustained investments in infrastructure like 5G and FTTH (Fiber to the Home), and increasing demand for high-speed internet, with minimal interruptions caused by economic or technological factors.

Second hypothesis:

Null Hypothesis (H20):  
The optical fiber market’s periodic growth and unpredictable dips lead to significant financial challenges for manufacturers like Corning. These challenges, including revenue shortfalls and reduced profitability, directly contribute to operational cost-cutting measures such as massive layoffs. This implies a strong dependency of Corning’s workforce strategies on the cyclical and volatile nature of the optical fiber market.

Alternative Hypothesis (H21):  
The optical fiber market’s growth or loss is irrelevant to massive layoffs at Corning Incorporated. Layoffs are driven by other factors, such as internal strategic decisions, technological shifts, operational restructuring, or competitive pressures, rather than directly correlating with sales trends or market performance. This suggests layoffs may be part of broader corporate strategies unrelated to short-term market dynamics.

# Literature review:

**Layoff in Corning 2003-Mar 4, 2003:**

This article mentioning shut down of a plant in State College, Pa., and eliminating 1,000 jobs, or 4.3 percent of its work force, as a joint venture ends production of glass used in television sets.

As per article during the shutdown Corning was still expecting a first-quarter net loss of $10 million to $50 million, or a loss of 1 cent to 4 cents a share. That excludes $320 million in costs for asbestos litigation and to exit the optical switching business and a $5 million gain from debt repurchases.

As per the chief financial officer James flaws “The plant shutdown will improve the company's cash flow and "assist us in achieving our profitability goal for the full year"

**Corning Inc. to lay off hundreds at two local plants-May 13, 2020:**

In May 2020 Corning announced, company will lay off between 300 and 400 employees at its Erwin plant, which makes catalytic converters, and its diesel facility, also in Erwin, according to Warren Baker, president of Local 1000 of the United Steel Workers. The two plants employ about 1,000 people between them.

When this article published, that was the third round of layoffs Corning Inc. has imposed since March. Earlier, workers were laid off from the company's headquarters along with its research and development facility, according to Warren (Corning official).

The layoffs were anticipated given the current state of the economy and the COVID-19 crisis, Warren said. Local 1000 represents about 1,900 Corning Inc. employees in the Southern Tier.

**Corning Layoffs – September 23, 2024:**

Corning recently made headlines with the announcement of roughly 1,000 job cuts, equivalent to approximately 4.3% of its total workforce. The layoffs are primarily due to the closure of a plant in State College, Pennsylvania, which was involved in a joint venture producing glass for television sets

 Additionally, the company is laying off over 100 employees at its Erwin plant in New York as part of a strategic shift. This shift involves the transfer of production to other facilities and is part of a broader restructuring effort to improve efficiency and align the workforce with market demands.

**Corning’s Financial Situation**

Despite the layoffs, Corning’s financial outlook remains strong. The company’s “Springboard” plan aims to add more than $3 billion in annualized sales and achieve an operating margin target of 20% by the end of 2026.

This plan involves implementing price increases in Display Technologies and delivering segment net income of $900 million to $950 million in 2025 while maintaining a net income margin of 25%. Furthermore, in Optical Communications, Enterprise sales are expected to grow by over 40% year over year in the third quarter, driven by the strong adoption of new optical connectivity products for generative AI used inside data centers.

**Impact of layoff-Company’s views:**

The Corning layoffs are undoubtedly a significant event, impacting the lives of many employees. However, the company’s restructuring efforts, strong financial situation, and focus on innovation indicate that Corning is adapting to the ever-changing market demands. As a leading technology company, Corning’s commitment to research and development is essential for its continued success.

# Research design -Methodology:

Research Method and Statistical Tests:

1. **Data Collection:**
   * Collect historical data on optical fiber market growth trends, sales figures, and economic indicators over the last decade.
   * Analyze Corning's sales data and records of layoffs to identify patterns.
   * Include industry reports, market analyses, and competitor performance for benchmarking.
2. **Statistical Tests:**
   * **Trend Analysis:** Use time series analysis to evaluate growth patterns in the optical fiber market and identify cyclical trends.
   * **Correlation Analysis:** Examine the relationship between market dips and Corning's sales figures to determine alignment.
   * **Regression Analysis:** Test the impact of market trends on Corning’s layoffs.
   * **Chi-Square Test:** Test for independence between market growth/loss and Corning’s layoffs.
   * **ANOVA (Analysis of Variance):** Compare Corning’s layoff data during different market conditions to assess variance and consistency.
3. **Hypothesis Testing:**
   * Use statistical software to conduct hypothesis testing.
   * Apply significance levels (e.g., p-value < 0.05) to accept or reject the null hypotheses.

Statistical Models and Tools:

a. Time Series Analysis:

* Objective: Analyze last 10-year optical fiber market growth trends and identify any patterns (for H10).
* Model: Moving Average or Seasonal Decomposition of Time Series (STL) to detect periodic growth and dips in the market.

b. Correlation Analysis:

* Objective: Measure the strength of the relationship between optical fiber market trends and Corning’s financial performance and layoffs.
* Model: Pearson or Spearman correlation to assess linear or rank-based relationships.

c. Regression Analysis:

* Objective: Predict layoffs based on sales data and market conditions (for H20).
* Model: Linear or multiple regression to quantify the impact of market trends on layoffs.

d. Hypothesis Testing:

* Objective: Statistically confirm or reject the null hypotheses.
* Tools:
  + T-Test: Compare average growth rates in stable versus dip periods.
  + Chi-Square Test: Determine the independence of market trends and layoff occurrences.
  + ANOVA (Analysis of Variance): Evaluate if significant differences exist in layoff patterns across different market growth phases.

e. Software and Tools:

* Data Analysis Tools: Python, R or Excel. I am using excel more for data clean up and data alignment.
* Visualization Tools: Tableau, SAS for trend and pattern visualization.
* Statistical Software: SAS, or JMP for advanced statistical testing.

# Ethical Considerations for the Data Chosen:

When analyzing data related to market trends, corporate financial performance, and layoffs, it’s essential to address the ethical implications of data usage. Below are the key considerations:

**1. Data Privacy and Confidentiality:**

* **Employee Data:** Layoff information may contain sensitive employee details, such as demographics, job roles, and reasons for termination. I am ensuring this data is anonymized and aggregated is crucial to protect individual privacy.
* **Company Data:** Proprietary or confidential financial data from Corning or competitors is not getting disclosed inappropriately or used without explicit permission.
* **Ethical Handling:** Using only publicly available or authorized datasets and avoid any unethical acquisition of internal documents or private information.

**2. Data Accuracy and Representation:**

* **Bias in Data Sources:** Ensuring that the data collected from reports, databases, and articles accurately represents the optical fiber market and does not favor specific perspectives.
* **Transparency in Analysis:** Clearly disclosing the limitations and assumptions in data analysis to avoid misrepresentation of findings.

**3. Informed Consent:**

* When using survey data or interviews, ensuring participants provide informed consent, understanding the purpose of the research and how their responses will be used.

**4. Misuse of Findings:**

* **Impact on Employees:** Conclusions about layoffs and their correlation with sales trends could influence public perception of Corning and its workforce policies. Avoid drawing overly simplistic or generalized conclusions that may unfairly stigmatize the company or its management.
* **Market Implications:** Insights from market trends could potentially affect investor or stakeholder decisions. Present findings responsibly to avoid contributing to misinformation or market manipulation.

**5. Ethical Data Analysis:**

* Avoiding cherry-picking data or selectively analyzing trends to support preconceived hypotheses.
* Ensuring that statistical methods are applied correctly, and findings are reported objectively, even if they contradict initial expectations.

**6. Broader Societal Impact:**

* **Employee Welfare:** Highlight the human impact of layoffs in the analysis, such as their effects on employee well-being and local economies.
* **Corporate Accountability:** going to use the research to encourage ethical corporate practices rather than targeting or blaming any single entity.

Ethical considerations are critical in maintaining the integrity of research. By ensuring data privacy, accuracy, transparency, and responsible reporting, I am going to contribute to a balanced and constructive analysis of Corning’s market trends and layoffs.

# Findings:

Corning market trends:

A screenshot of a graph

Description automatically generatedCorning annual/quarterly revenue history and growth rate from 2010 to 2024. Revenue can be defined as the amount of money a company receives from its customers in exchange for the sales of goods or services. Revenue is the top line item on an income statement from which all costs and expenses are subtracted to arrive at net income.

*Figure 3: Revenue details table*

A graph with blue dots and lines

Description automatically generatedA screenshot of a graph

Description automatically generated*Figure 5: Last 14 years revenue for Corning*

Figure 4: Stock market trend for last 5 year for Corning

As per the finding of revenue and stock market, 2016, 2020 and 2024 were the year where Corning had revenue dip and dip in stock market.

Layoff data for the years when Corning had loss in revenue and stock market:

Corning Incorporated filed 10 WARN layoff notices from Mar 2016 to May 2024.706 employees were laid off in total from these layoffs

A table of information with text

Description automatically generated with medium confidence

This data is in line with the stock market and revenue data as layoff is also showing in 2016, 2020 and 2024.

A graph of sales growth

Description automatically generated

Figure 6: Corning optical fiber revenue trend

Findings result in accepting or rejecting the hypothesis:

As per the result the second null hypothesis has been failed to reject. I have mentioned the second null hypothesis in this section, which is mentioned in previous section just to recap and emphasize the point.

Correction Analysis:

The Correlation analysis performed for yearly revenue changes vs layoff in last few years and the correlation shows -0.63 which shows good correlation.

A screenshot of a computer screen

Description automatically generated

Figure 7: Pearson correlation factor

**Showing correlation with the bar and line chart:**

A graph with blue lines and a graph with blue lines

Description automatically generated with medium confidence

Figure 8: Bar chart showing revenue vs layoff

Second hypothesis:

Null Hypothesis (H20):  
The optical fiber market’s periodic growth and unpredictable dips lead to significant financial challenges for manufacturers like Corning. These challenges, including revenue shortfalls and reduced profitability, directly contribute to operational cost-cutting measures such as massive layoffs. This implies a strong dependency of Corning’s workforce strategies on the cyclical and volatile nature of the optical fiber market.

Key take away from the hypothesis section:

* First hypothesis, optical fiber market exhibits a cyclical growth pattern which is not evident from the data.
* First hypothesis also mentioned, pattern indicates that the market is inherently volatile, which is not evident from data too.
* From second hypothesis, it mentions Corning faces unpredictable dips lead to significant financial challenges which is getting supported by data as 2020 Covid was unpredictable.

https://www.stargazette.com/story/news/local/2020/05/13/corning-inc-lay-off-hundreds-workers-two-local-plants/5183974002/

* Second hypothesis also mention about the financial dip and workforce layoff is related to each other and data is supporting that.

**Answers for research question from the hypothesis result and from various data analysis:**

**Sales Data Analysis:**

* Corning’s sales figures in last 10 years? Is there a pattern in sales dip?
* Does Corning sales align with sales trend in global optical fiber market?

There is no pattern which can be seen from Data, however as Corning share news for expansion or putting a new plant then either on that year or next year Corning revenue goes for a dip. Below I have shared news of 2013, 2017 and 2020 where Corning announced either announce expansion or new plant inauguration and dip in stock prices can be seen in bar chart either same year or next year.

**Corporate Communications**

Corning Celebrates Opening Ceremony of Optical Fiber Plant in India

CORNING, N.Y. | Corning Incorporated | September 26, 2013

**Chief Minister Prithviraj Chavan inaugurates the Corning facility at Chakan, Maharashtra**

[Corning Incorporated](http://www.corning.com/" \o "Corning Incorporated) (NYSE:GLW) today hosted an inauguration ceremony for its new optical fiber manufacturing facility in India. Located in Chakan, near Pune, in the Maharashtra Industrial Development Corporation (MIDC) Phase II industrial park, the plant is the company’s first manufacturing facility in India.

<https://www.corning.com/worldwide/en/about-us/news-events/news-releases/2013/09/news_center_news_releases_2013_2013092601.html>

**Optical Communications**

Corning Opens Optical Fiber Manufacturing Plant in Poland to Meet Growing Demand for High-Speed Connectivity in Europe

CORNING, N.Y. | Corning Incorporated | September 08, 2022

**The facility is one of the largest in the European Union; part of Corning’s globally focused investment in fiber and cable manufacturing**

[Corning Incorporated](https://www.corning.com/worldwide/en.html) (NYSE: GLW) today formally opened a new optical fiber manufacturing facility in Mszczonów, Poland, to meet growing demand for high-speed connectivity in the European Union and surrounding regions.

The facility, one of the largest optical fiber plants in the European Union, is Corning’s latest in a series of global investments in fiber and cable manufacturing totaling more than $500 million since 2020, supported by growing demand and strong customer commitments.

https://www.corning.com/worldwide/en/about-us/news-events/news-releases/2022/09/corning-opens-optical-fiber-manufacturing-plant-in-poland-to-meet-growing-demand-for-high-speed-connectivity-in-europe.html

**Optical Communications**

Corning Celebrates Opening of Fiber Optic Cable Manufacturing Facility

CORNING, N.Y. | Corning Incorporated | January 26, 2018

**Newton, N.C., facility will employ more than 200 people; help meet growing demand for bandwidth**

[Corning Incorporated](http://www.corning.com/worldwide/en/about-us/news-events/news-releases.html) (NYSE: GLW) today formally opened a new cable manufacturing facility in Newton, North Carolina, in the latest expansion of [its Optical Communications](http://www.corning.com/worldwide/en/products/communication-networks/products.html) business to meet growing worldwide demand for its optical fiber and cable.

The facility, which will employ more than 200 people, is part of Corning’s previously announced plan to invest more than $250 million in its optical fiber, cable, and solutions manufacturing facilities. In North Carolina, Corning is expanding its fiber manufacturing facility near Concord and its cable facilities in Winston-Salem and Hickory, in addition to opening the Newton plant.

https://www.corning.com/worldwide/en/about-us/news-events/news-releases/2018/01/corning-celebrates-opening-of-fiber-optic-cable-manufacturing-facility.html

**Layoff Patterns:**

* What are the primary reasons Corning has/had for its layoffs in the optical fiber division?
* How frequently has Corning implemented layoffs in last 10 years?
* Is there a pattern which can be observed over time?
* Are layoffs at Corning more reactive to short-term sales dips or reflective of broader strategic adjustments?

**Alignment with Sales Trends:**

* Does Corning’s layoff periods correlate with declines or stagnations in optical fiber sales?
* What external market factors, such as demand for optical fiber or economic downturns, coincide with Corning's layoffs?

Layoff trend is very closely related to dip in sales and revenue. The statistical relation shows good correlation. There is no frequency which can be defined however in last 10 years 9 layoffs has been done by Corning. Pattern can be seen as Corning invest money in expansion or inauguration and then if market hit low sale then it get difficult to manage money for Corning and layoff seems more viable option to increase cashflow.

**Strategic Implications:**

* Are Corning’s layoffs primarily driven by competitive pressures in the optical communications market?

## Comparison with other optical fiber and cable supplier:

## A graph with numbers and lines Description automatically generatedOFS Capital - 13 Year Stock Price History | OFS

Figure 9:Sales trend for OFS for last 10 years

**FOCI Fiber Optic Communications, Inc last 10 years trend**

**A screenshot of a graph

Description automatically generated**

Figure 10:Revenue trend for last 5 year for FOCI

From the graph it looks like other optical fiber and cable manufacturer were not having the same revenue loss in 2022-23 as Corning had, however OFS also had revenue loss in 2020 which relates to Covid pandemic timeline. This also relates that Corning remains under competitive pressure and sees more dips in year by year than competition.

* How do layoffs impact Corning’s ability to rebound during sales recoveries or expansions?

Mostly Corning re hire the same employees which they let go during the layoff however I have seen, to spread good words Corning also use social platforms like LinkedIn and Facebook and that trend of sharing good news grows during the time of re hiring for example Corning currently sharing lot of post of Corning activities in social media.

**Policy and Workforce Considerations:**

* What role do labor policies, regional economic conditions, and governmental incentives play in Corning's layoff decisions?

As per the below article, Corning follows all the rules and regulation of state related to layoff for example severance package.

**Corning Incorporated announces layoffs**

Wednesday, January 15th 2020, 3:42 PM EST

**CORNING, N.Y. (WENY) –** Corning Inc. is laying off employees in the Corning area, company officials confirmed to WENY News Wednesday. According to Corporate Sustainability Manager Joe Dunning, the reductions are “taking effect immediately”. Dunning did not disclose how many employees were being laid off “for competitive reasons”; however, he did say it is a “very small percentage” of the non-manufacturing workforce. When asked about the reason for the layoffs, Dunning said, “We are taking actions to address current macro-economic headwinds that include adjusting our costs and capacity while, at the same time, maintaining focus on key growth initiatives**.” All affected employees are reportedly receiving severance packages”.** According to media reports out of North Carolina, Corning, Inc. is also laying off an unspecified number of employees at its Wilmington plant.

<https://www.weny.com/story/41568741/corning-incorporated-announces-layoffs>

* How does Corning manage workforce morale and retention after layoff periods, especially during market recoveries?

To maintain morale of other employees, Corning at different level of leadership shares the company’s economical condition and reason behind layoffs which provides some sentiments that it was necessary step. When market recovers Corning tried to hire the same employees.

**Conclusion:**

This study delves into the challenges faced by Corning Incorporated due to periodic dips in sales within the Optical Communications segment, particularly in the optical fiber market. While the optical fiber industry exhibits promising growth potential, with a projected global market valuation of $20.22 billion by 2027, its inherent volatility poses significant operational and strategic challenges for manufacturers like Corning.

Through a detailed analysis of sales trends, market dynamics, and layoff patterns, several critical insights have emerged:

1. **Sales Trends and Market Dynamics:**  
   Corning's sales figures in the optical fiber market show periodic dips, which appear to be aligned with broader market cycles influenced by economic conditions, infrastructure investment patterns, and technological advancements such as 5G rollouts. This cyclical nature underscores the importance of understanding external market drivers and inhibitors to anticipate and mitigate these downturns.
2. **Layoff Patterns and Strategic Implications:**  
   Layoffs at Corning often correlate with declines or stagnations in optical fiber sales but are also influenced by broader corporate strategies, such as operational restructuring and competitive pressures. While layoffs provide short-term cost relief, they can undermine long-term recovery efforts by disrupting workforce morale, institutional knowledge, and production capabilities.

The findings till now suggest that Corning’s layoff decisions are influenced not only by short-term sales trends but also by broader strategic adjustments and market forces.

# Recommendations:

Based on the findings, the following recommendations aim to help Corning Incorporated address the challenges posed by sales fluctuations in the Optical Communications segment and optimize its operational and strategic resilience:

1. **Develop Predictive Sales and Demand Models**  
   Corning should leverage advanced data analytics and predictive modeling to better forecast demand fluctuations in the optical fiber market. Incorporating key economic indicators, technological adoption rates (e.g., 5G), and infrastructure investment trends into forecasting tools can help the company anticipate downturns and adjust its production and operational strategies accordingly.
2. **Enhance Workforce Management Strategies**  
   Instead of relying heavily on layoffs during sales downturns, Corning should explore alternative workforce management strategies. These might include flexible work arrangements, temporary workforce adjustments, or reskilling programs to retain talent while adapting to market demands. This approach would help maintain workforce morale and institutional knowledge, contributing to long-term competitiveness.
3. **Proactively Address Market Volatility**  
   Corning should implement strategic measures to address the inherent volatility of the optical fiber market. For example, establishing financial reserves during periods of high sales or adopting hedging strategies can provide a buffer against cyclical downturns and improve operational stability.
4. **Alternatives to Employment Downsizing for Temporary Downturns**

• Cut temporary staff.

• Eliminate overtime.

• Offer voluntary retirement.

• Freeze salaries.

• Cut salaries.

• Delay raises.

• Freeze hiring.

• Reduce work hours.

• Use temporary layoffs (furloughs).

• Use furloughs with incentives.

• Cancel business trips and costly perquisites.

• Reduce or suspend matching contributions to company-sponsored savings plans.

• Raise employee contributions to benefits plans.

• Postpone or eliminate bonuses

By adopting these recommendations, Corning can mitigate the challenges posed by sales volatility, enhance its operational resilience, and position itself for sustained growth in the optical fiber market.

# Reference:

Allied Market Research. (n.d.). Optical fiber market. Retrieved from <https://www.alliedmarketresearch.com/optical-fiber-market>

Corning Incorporated. (2020). Form 10-K Annual Report. Retrieved from <https://s203.q4cdn.com/212458750/files/doc_financials/2020/q4/10k20.pdf>

InformationWeek. (n.d.). Corning to cut 1,000 jobs, close plant. Retrieved from <https://www.informationweek.com/it-leadership/corning-to-cut-1-000-jobs-close-plant>

Markets and Markets. (n.d.). Search results for "optical fiber." Retrieved from <https://www.marketsandmarkets.com/search.asp?search=optical+fiber>

Maximize Market Research. (n.d.). Global fiber optic cable materials market. Retrieved from <https://www.maximizemarketresearch.com/market-report/global-fiber-optic-cable-materials-market/106666/>

Netcials. (n.d.). Stock 10-year history (NYSE: GLW) Corning Incorporated. Retrieved from <https://www.netcials.com/stock-10-year-history-nyse/GLW-Corning-Incorporated/>

Star-Gazette. (2020, May 13). Corning Inc. to lay off hundreds of workers at two local plants. Retrieved from <https://www.stargazette.com/story/news/local/2020/05/13/corning-inc-lay-off-hundreds-workers-two-local-plants/5183974002/>

The Biz Voice. (n.d.). Corning layoffs. Retrieved December 8, 2024, from <https://thebizvoice.com/corning-layoffs/>

WARN Tracker. (n.d.). Corning Incorporated. Retrieved December 8, 2024, from <https://www.warntracker.com/company/corning-incorporated>

Corning Incorporated. (n.d.). Stock information. Retrieved December 28, 2024, from <https://investor.corning.com/stock-info/>

Macrotrends. (n.d.). Corning revenue 2010-2024: GLW. Retrieved December 28, 2024, from <https://macrotrends.net/stocks/charts/GLW/corning/revenue>

Employment Downsizing and Its Alternatives: Mar 11,2009 https://www.shrm.org/content/dam/en/shrm/topics-tools/news/hr-magazine/Employment-Downsizing.pdf