

Financial Management Practices in the Food and Nutrition Industry: A Comprehensive Review

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Abstract

This comprehensive review is a deep exploration of the financial management practices within the food and nutrition industry. It underscores the paramount importance of these practices and their far-reaching influence on the sector's long-term sustainability and viability. The review encompasses a wide array of critical aspects, including budgeting, cost control, revenue management, working capital management, and risk mitigation. Within this comprehensive examination, practical insights and recommendations emerge. Industry stakeholders will find valuable guidance on how to optimize their financial management strategies, adapt to evolving market dynamics, and secure their positions in a highly competitive field. Moreover, this review extends its reach to regulatory bodies, proposing policy measures that can foster a conducive environment for responsible financial practices, ensuring consumer protection and industry integrity. Lastly, the review ventures into the realm of emerging technologies, shedding light on their potential impacts on financial strategies within the industry. By considering the evolving landscape influenced by technology, industry leaders can proactively position themselves for future success. This review offers a holistic view of financial management practices in the food and nutrition sector. It equips stakeholders with actionable insights, presents policy avenues for regulators, and anticipates the transformative potential of evolving technologies, ultimately empowering decision-makers in this dynamic industry.

Keywords: *food industry, nutrition sector, food production, dietary guidelines, food processing, nutritional health*

I. Introduction

The food and nutrition industry are not only a cornerstone of human sustenance but also a vast economic sector with a global reach. As the demand for healthier food options and nutritional awareness continues to rise, this industry's significance has grown exponentially. Amidst this backdrop, the effective management of finances plays a pivotal role in sustaining the operations, growth, and competitiveness of businesses within the food and nutrition sector. This comprehensive review delves into the intricacies of financial management practices within the food and nutrition

industry, aiming to uncover the essential strategies and principles that drive success in this dynamic field. Financial management, encompassing budgeting, cost control, revenue optimization, working capital management, and risk mitigation, stands as a critical determinant of a company's ability to navigate the unique challenges and seize the abundant opportunities within the industry. We embark on a journey to explore the various facets of financial management in the food and nutrition sector. By examining best practices, industry-specific approaches, and the overarching principles that underpin sound financial decision-making, we aim to shed light on the strategies that empower businesses to thrive in an ever-evolving market. The findings of this comprehensive review offer valuable insights not only to industry professionals and stakeholders but also to policymakers and researchers seeking to enhance the financial resilience and sustainability of businesses operating in the food and nutrition domain. As we delve into the intricacies of financial management within this dynamic industry, we invite the reader to embark on a journey of discovery, innovation, and financial prudence in the realm of food and nutrition. Certainly, the food and nutrition industry encompass a broad spectrum of businesses and activities related to the production, processing, distribution, and consumption of food and nutritional products. It plays a crucial role in ensuring that people have access to safe, nutritious, and diverse food options. Here are some key aspects of the food and nutrition industry:

A. Food and nutrition industry

The food and nutrition industry are an expansive and vital sector that plays a central role in global health and well-being. This multifaceted industry encompasses a wide array of activities, from the cultivation of crops and raising of livestock to food processing, distribution, and consumption. Beyond nourishing populations, it integrates scientific research, public health initiatives, and the promotion of healthy dietary practices. At its core, the industry commences with agriculture, where crops are cultivated and livestock is raised to provide the essential raw materials for food production. This phase involves a range of practices, including planting, harvesting, animal husbandry, and aquaculture. Following production, the raw agricultural products undergo various processing stages to transform into packaged, ready-to-consume foods. Food processing employs techniques such as cooking, canning, freezing, and packaging to convert raw ingredients into processed foods that are convenient and safe for consumption. Efficient and secure distribution is imperative to ensure that food products reach consumers. This distribution network encompasses transportation, warehousing, and retailing through supermarkets, grocery stores, foodservice establishments, and the burgeoning realm of online platforms. Central to the industry's mission is its relationship with nutrition and health. It plays a vital role in supporting research efforts that aim to understand the nutritional composition of foods and their impact on human health. This knowledge underpins dietary guidelines, nutritional labeling, and educational campaigns aimed at promoting healthy eating habits. The industry's global significance is underscored by its critical role in public health, economies, and societies worldwide. Ensuring access to nutritious food is essential in the fight against malnutrition and diet-related diseases, including obesity, diabetes, and cardiovascular conditions. Economically, the food and nutrition industry stand as a major contributor to national and global economies. It provides livelihoods for millions of individuals engaged in agriculture, food production, retail, and various related services. Additionally, it represents a substantial portion of a country's Gross Domestic Product (GDP). While the industry is central to our lives, it is not without its challenges. Disparities in access to nutritious food, concerns about food security in the face of climate change and population growth, food safety issues, and the need for effective nutrition education remain significant challenges. Nonetheless, the industry is continually evolving to address these challenges and meet changing consumer preferences. Notable trends include the rise of plant-based foods, the emergence of functional foods, a growing emphasis on sustainability and responsible sourcing, the proliferation of e-commerce in food retail, and advancements in nutritional genomics.

B. Significance of financial management in the industry

Effective financial management plays a pivotal role in the industry, with far-reaching impacts on its economic stability, growth, and long-term sustainability. It serves as the compass for strategic decision-making, ensuring optimal resource allocation, risk mitigation, and the ability to seize opportunities in a highly dynamic and competitive landscape. In an industry as diverse and essential as food and nutrition, astute financial management not only safeguards financial health but also enhances resilience and adaptability to ever-evolving market trends and challenges. Financial management's industry impact are shown in the figure 1.

- *Cost Control*: The food and nutrition industry face continuous cost pressures. Financial management practices such as cost analysis and control help businesses maintain competitiveness by keeping operational costs in check without compromising on quality and safety.
- *Risk Mitigation*: Financial risks abound in this industry, including supply chain disruptions, price volatility, and regulatory changes. Sound financial management practices provide the tools and strategies to mitigate these risks and ensure business continuity.
- *Strategic Planning*: Financial management plays a crucial role in strategic planning. It enables businesses to set realistic goals, evaluate investment opportunities, and chart a path for sustainable growth. Without robust financial planning, businesses may make decisions based on incomplete information or inadequate financial resources.
- *Working Capital Management*: In an industry with seasonal variations and cash flow challenges, working capital management is vital. Effective management ensures that businesses have the necessary liquidity to cover day-to-day operations, meet unexpected expenses, and invest in growth opportunities.
- *Compliance and Accountability*: Financial management practices help ensure compliance with regulatory requirements, accounting standards, and tax obligations. This not only avoids legal issues but also builds trust with stakeholders, including customers and investors.



Fig 1: Financial Management's Industry Impact

II. Financial Management Practices

A. Budgeting and financial planning

Budgeting and financial planning are essential practices in the food and nutrition industry, serving as the cornerstones of financial management. These practices are particularly vital in an industry marked by fluctuating costs, evolving consumer preferences, and intense competition. Here's an in-depth look at how budgeting and financial planning are integral to the industry's success:

Budgeting

Operating Budgets are at the heart of financial management. These budgets are designed to oversee day-to-day financial operations, encompassing essential elements such as sales forecasts, production costs, marketing expenses, and overhead. They provide a roadmap for allocating resources efficiently, ensuring that daily operations remain within budgeted limits, and aligning spending with revenue projections. Capital Budgets, on the other hand, shift the focus to long-term investments, such as new equipment, facility expansions, or technological advancements. In the food and nutrition industry, where innovation and capacity enhancements are crucial, capital budgets play a pivotal role. They help businesses plan and allocate resources strategically, ensuring that capital investments align with broader organizational goals. Cash Flow Budgets offer a critical perspective on the inflow and outflow of cash over a specified period. This tool is indispensable in an industry characterized by seasonal fluctuations and cash flow challenges. Cash flow budgets facilitate the management of immediate financial obligations, ensuring that businesses can meet payroll, pay suppliers, and handle unforeseen expenses effectively. Master Budgets provide an integrated view of the organization's financial plan. By consolidating various component budgets, including operating, capital, and cash flow budgets, master budgets offer a comprehensive overview. They aid in holistic financial planning, enabling businesses to make informed decisions, allocate resources efficiently, and remain agile in the face of market dynamics.

Financial Planning

In addition to budgeting, financial planning is a continuous process that involves setting strategic financial goals, assessing resources, and developing strategies to achieve those objectives. In the food and nutrition industry, where margins can be thin, robust financial planning is a cornerstone of success.

Strategic financial planning involves setting realistic goals, evaluating investment opportunities, and charting a course for sustainable growth. It ensures that businesses are well-prepared to navigate the challenges and seize the opportunities presented by shifting consumer preferences and market trends. Working Capital Management is a critical component of financial planning. In an industry prone to fluctuations, effective management of working capital is vital for covering day-to-day operations, addressing unforeseen expenses, and investing in growth initiatives. Cost Control and Risk Mitigation are central to financial planning. Effective cost control measures help businesses maintain competitiveness by managing operational expenses without compromising quality. Meanwhile, risk mitigation strategies address the financial risks associated with supply chain disruptions, price volatility, and regulatory changes.

B. Cost control and management

Cost control and management are pivotal in the food and nutrition industry, where operating expenses, ingredient costs, and waste reduction can significantly impact profitability. Here, we delve into the importance and strategies of cost control and management within this sector. Efficient cost control is

essential for ensuring the financial viability of businesses in the food and nutrition industry. With thin profit margins and competitive pressures, keeping a close eye on expenses can make the difference between success and failure. One critical aspect of cost control is the prudent management of ingredient costs. Ingredient prices can be volatile, and businesses must navigate fluctuations to maintain profitability. Strategic sourcing, supplier negotiations, and inventory management are essential components of managing ingredient costs effectively. Waste reduction is another crucial element of cost control. Given the perishable nature of many food products, minimizing waste is not only environmentally responsible but also financially beneficial. Businesses can implement inventory management systems, portion control measures, and staff training to reduce food waste and associated costs. Labor costs represent a significant portion of expenses in the food and nutrition industry. Efficient staffing, staff training, and labor scheduling are essential for cost control. Businesses should balance providing excellent customer service with managing labor costs to optimize their workforce. Advanced technology and data analytics play a growing role in cost management. Businesses can leverage data to identify cost-saving opportunities, optimize supply chain operations, and improve resource allocation. This data-driven approach enables proactive cost control and informed decision-making. Cost management also involves monitoring overhead expenses, such as rent, utilities, and marketing. Evaluating the cost-effectiveness of these expenditures and exploring ways to reduce overhead can contribute to overall cost control.

C. Revenue management and pricing strategies

Effective revenue management and pricing strategies are essential components of success in the food and nutrition industry, where competition is fierce, and consumer demands can vary significantly. Here, we explore the key elements of revenue management and pricing strategies within this sector:

1. Value-Based Pricing

Implementing a value-based pricing strategy involves setting prices based on the perceived value of products or services to customers. In the food and nutrition industry, this can be influenced by factors such as product quality, brand reputation, nutritional benefits, and unique features. By aligning pricing with the perceived value, businesses can capture market share and maintain customer loyalty.

2. Cost-Plus Pricing:

Cost-plus pricing involves calculating the cost of production, including ingredients, labor, and overhead, and adding a predetermined markup to establish the selling price. This approach ensures that costs are covered while providing a margin for profit. It is especially relevant when transparency and cost recovery are essential.

3. Competitive Pricing:

Monitoring and adjusting prices in response to competitors' pricing strategies is a common practice in the food and nutrition industry. Maintaining competitive prices ensures that a business remains attractive to consumers while staying relevant within the market.

4. Demand Forecasting

Accurate demand forecasting is critical for pricing strategies. By leveraging historical data, market trends, and predictive analytics, businesses can adjust pricing and inventory levels to meet expected demand, avoiding overstocking or stockouts.

5. Online Sales Optimization

For businesses with an online presence, optimizing e-commerce platforms, leveraging online advertising, and utilizing data analytics are essential for improving online sales and pricing strategies. Incorporating these revenue management and pricing strategies into the food and nutrition industry allows businesses to strike a balance between profitability and customer satisfaction. By continually assessing market dynamics, consumer preferences, and competitive pressures, organizations can adapt their pricing strategies to maximize revenue while delivering value to their customers.

D. Working capital management

Efficient working capital management is essential for businesses operating in the food and nutrition industry. This sector faces unique challenges, including fluctuations in demand, seasonal variations, and perishable inventory, making it imperative to manage working capital effectively. One of the key aspects of working capital management is cash flow forecasting. Given the industry's dynamic nature, accurate cash flow predictions are crucial. Businesses must anticipate when cash will be needed to cover expenses, allocate resources judiciously, and be prepared for unexpected financial demands. Inventory management is another critical component. Striking the right balance between maintaining sufficient inventory levels to meet customer demand and avoiding overstocking is a constant challenge. Implementing just-in-time (JIT) inventory practices and utilizing advanced inventory management software can help optimize stock levels, reduce waste, and control carrying costs. Effective management of supplier relationships can significantly impact working capital. In some cases, businesses may need working capital financing options, such as short-term loans or lines of credit, to bridge gaps during periods of increased demand or unforeseen expenses. These financial tools provide additional liquidity when necessary. Leveraging technology and automation is a modern approach to working capital management. Financial technology (FinTech) solutions and accounting software provide real-time insights into cash flow, inventory, and accounts receivable, facilitating better decision-making and resource allocation. Key performance indicators (KPIs) play a vital role in assessing working capital health. Metrics like the current ratio, quick ratio, and cash conversion cycle offer valuable insights into the efficiency of working capital management. Monitoring these KPIs helps identify areas for improvement and ensures the business remains financially agile.

E. Risk management and financial sustainability

The food and nutrition industry faces a myriad of risks, including supply chain disruptions, regulatory changes, market volatility, and consumer preferences that can change rapidly. To ensure financial sustainability in this dynamic sector, effective risk management is imperative. One fundamental aspect of risk management is identifying and assessing potential risks. Businesses in the industry must conduct comprehensive risk assessments, considering both internal and external factors that can impact operations and finances. This process helps in prioritizing risks and determining their potential impact on financial sustainability. Once risks are identified, mitigation strategies must be developed. For example, supply chain risks can be mitigated by diversifying suppliers or establishing contingency plans for sourcing essential ingredients. Regulatory risks can be managed through compliance efforts and staying informed about evolving regulations. Financial sustainability also hinges on having a robust contingency plan. Businesses should establish financial reserves to address unexpected challenges or downturns. These reserves act as a buffer during times of economic uncertainty or unexpected events, ensuring that operations can continue even in adverse conditions. Insurance plays a vital role in risk management. Businesses should assess their insurance needs carefully, ensuring coverage for various types of risks, including property damage, liability, and business interruption. Adequate insurance coverage can protect against financial setbacks in the event of unforeseen disasters. Maintaining a strong financial foundation is another critical aspect of financial sustainability. This involves prudent financial management practices, including budgeting,

cost control, and efficient use of working capital. By ensuring financial stability during normal operations, businesses are better equipped to weather unforeseen challenges.

III. Recommendations and Implications

Financial Management Recommendations & Implications provides actionable insights for industry stakeholders, offering guidance on enhancing financial strategies. It also outlines potential consequences and outcomes, aiding decision-makers in understanding the implications of their financial choices within the food and nutrition industry's dynamic landscape. Figure 2 shows the Financial management recommendations & implications.

For Businesses:

1. *Innovation Focus:*
 - Emphasize innovation to remain competitive and meet evolving consumer demands.
 - Invest in research and development for innovative products, such as healthier options, sustainable packaging, and plant-based alternatives.
2. *Supply Chain Resilience:*
 - Build supply chain resilience to handle disruptions effectively.
 - Diversify the supplier base, use advanced tracking technologies, and create contingency plans.
3. *Sustainability Integration:*
 - Prioritize sustainability in business strategies.
 - Reduce food waste, minimize environmental impact, and prioritize responsible ingredient sourcing.
4. *Regulatory Compliance and Safety:*
 - Maintain compliance with evolving regulations.
 - Prioritize food safety and quality assurance to build consumer trust and mitigate legal and reputational risks.
5. *Digital Transformation:*
 - Embrace digital technologies for wider audience reach.
 - Invest in user-friendly websites, online sales platforms, and an active social media presence to adapt to changing consumer behaviors.

These recommendations can help businesses in the food and nutrition industry navigate the competitive landscape and achieve long-term success.

For Regulators:

Regulators play a central role in ensuring the safety and integrity of the food and nutrition industry. To promote industry growth while safeguarding consumers, regulators should consider the following recommendations:

1. *Streamlined Regulations:* Aim for clear and consistent regulations that facilitate compliance for businesses of all sizes. Simplified regulatory frameworks can reduce administrative burdens while ensuring high standards of safety and quality.
2. *Transparency and Education:* Promote transparency in labeling and marketing practices. Educate consumers about nutritional information and empower them to make informed choices. Clear and accurate labeling can enhance trust between consumers and the industry.
3. *Support Innovation:* Encourage innovation in product development and sustainable practices. Create frameworks that reward companies for adopting environmentally friendly and health-conscious approaches. This can drive industry-wide improvements.

4. *Collaboration*: Foster collaboration between regulators, businesses, and consumer advocacy groups. An open dialogue can help address emerging challenges, identify best practices, and develop effective solutions that benefit all stakeholders.
5. *Surveillance and Enforcement*: Invest in surveillance and enforcement capabilities to detect and respond to food safety and quality issues promptly. Robust monitoring systems can prevent and address potential risks efficiently.

For Consumers:

Consumers hold significant influence over the food and nutrition industry through their purchasing choices. To make informed decisions and support positive industry practices, consumers should consider these recommendations:

1. *Education*: Take the time to educate oneself about nutrition, food labels, and sustainability practices. Informed consumers can make healthier and more environmentally conscious choices.
2. *Demand Transparency*: Support businesses that prioritize transparency in labeling and sourcing. Advocate for clear and accurate information to make informed purchasing decisions.
3. *Sustainability Awareness*: Choose products and brands that demonstrate a commitment to sustainability. Support businesses that reduce food waste, minimize environmental impact, and use responsible sourcing.
4. *Health-Conscious Choices*: Prioritize health-conscious options that align with personal dietary and nutritional goals. Encourage companies to provide healthier alternatives and promote balanced diets.
5. *Consumer Activism*: Engage in consumer activism by supporting initiatives and organizations that advocate for food safety, quality, and sustainability. Consumer collective action can drive positive industry change.

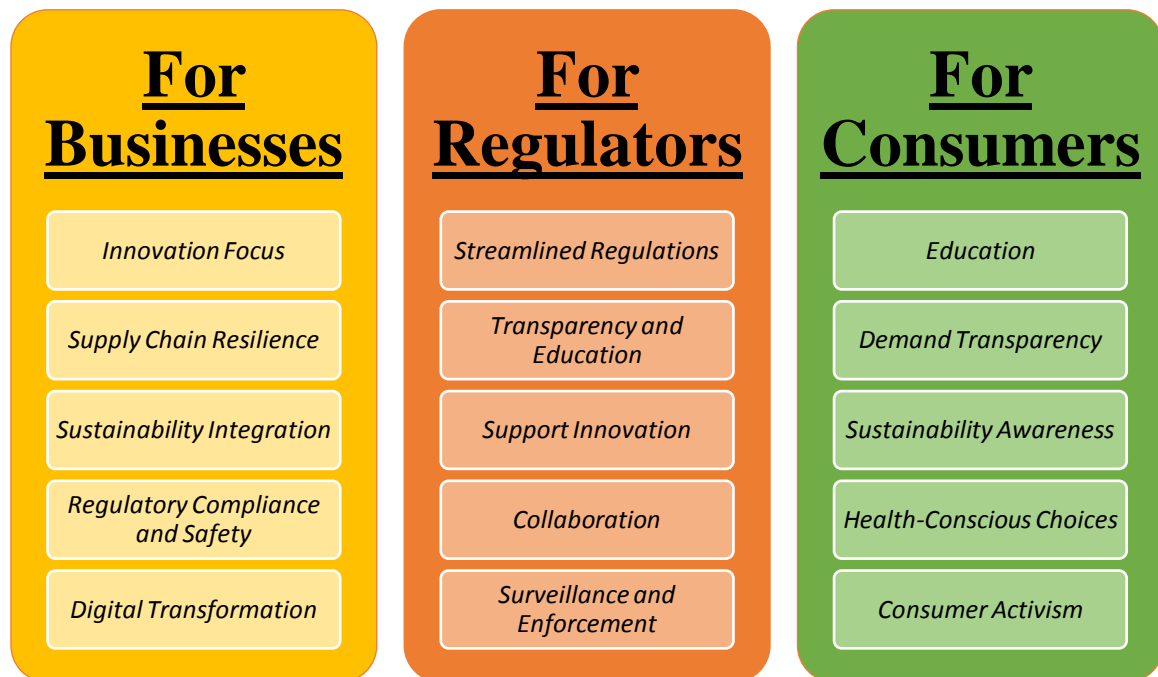


Fig 2: Recommendations and Implications

B. Policy suggestions for regulatory bodies

Regulatory bodies hold a pivotal role in the food and nutrition industry, ensuring the safety, quality, and fairness of products and practices. To address the evolving challenges and dynamics of this sector, the following policy suggestions are offered to enhance regulatory effectiveness:

- *Allergen Labeling and Safety*: Enhanced allergen labeling requirements and safety protocols are necessary. Regulatory bodies should strengthen regulations surrounding allergen identification and management. These measures are crucial to prevent life-threatening allergic reactions, safeguard public health, and cater to the needs of individuals with food allergies.
- *Food Safety and Traceability*: Continuously improve food safety and traceability regulations. Rigorous monitoring and enforcement of safety standards, combined with advanced traceability technologies, can enhance the industry's ability to prevent, detect, and respond to foodborne illnesses and contamination events.
- *Nutrition Education and Promotion*: Collaborate with industry stakeholders to promote nutrition education and healthier eating habits. Regulatory bodies can encourage businesses to provide healthier alternatives and support balanced diets through policies that incentivize nutritious product development and marketing.
- *Consumer Protection and Advocacy*: Strengthen consumer protection measures and advocacy efforts. Regulatory bodies should empower consumers to make informed choices by actively monitoring and addressing misleading advertising, fraudulent practices, and deceptive marketing within the industry.
- *Global Harmonization*: Promote global harmonization of food and nutrition regulations to facilitate international trade while ensuring consistent standards for safety and quality. Regulatory bodies can engage in discussions and agreements that align regulatory frameworks across borders.

These policy suggestions aim to support regulatory bodies in their mission to safeguard public health, maintain industry integrity, and adapt to the evolving landscape of the food and nutrition industry. By fostering transparency, sustainability, safety, and collaboration, regulatory bodies can help ensure a resilient and responsible industry that serves the needs and expectations of consumers and businesses alike.

C. Potential impacts of evolving technologies on financial practices

The food and nutrition industry is undergoing rapid technological transformation, which is poised to have a profound impact on financial practices. Here are potential impacts to consider:

1. *Blockchain for Transparency*: Blockchain technology can revolutionize supply chain transparency. It allows for immutable and transparent record-keeping, enabling consumers and regulators to trace the origins of products accurately. This can enhance financial practices by reducing fraud, ensuring product quality, and streamlining compliance efforts.
2. *Automation and Robotics*: Automation and robotics are increasingly used in food production and logistics. By automating routine tasks, businesses can reduce labor costs, minimize errors, and enhance production efficiency. The impact on financial practices includes improved cost control, more accurate budgeting, and the ability to allocate resources strategically.

3. *Internet of Things (IoT)*: IoT devices, such as sensors and connected equipment, provide real-time monitoring of production processes and product quality. This technology can lead to more efficient resource utilization, reduced waste, and enhanced inventory management, ultimately affecting financial performance positively.
4. *Cloud-Based Accounting and Financial Software*: Cloud-based accounting and financial software solutions offer scalability, accessibility, and cost-efficiency. Businesses can streamline financial management processes, including budgeting, forecasting, and reporting, leading to improved financial practices.
5. *Supply Chain Optimization*: Advanced technologies, such as predictive analytics and autonomous vehicles, optimize supply chain operations. This can result in reduced transportation costs, lower inventory carrying costs, and more efficient procurement, all of which have direct financial implications.
6. *Personalized Marketing*: Technology enables personalized marketing efforts through AI-driven recommendations and targeted advertising. While enhancing customer engagement, this can also influence purchasing behavior and impact revenue streams, requiring adjustments in financial planning and forecasting.
7. *Cybersecurity Concerns*: With increased reliance on technology, the industry faces cybersecurity challenges. Data breaches and cyberattacks can have significant financial repercussions. Consequently, businesses must allocate resources to robust cybersecurity measures and risk management strategies.

Conclusion

In conclusion, this comprehensive review provides a deep dive into the realm of financial management practices within the food and nutrition industry, shedding light on their pivotal significance. The industry's critical role in global health and nutrition underscores the paramount importance of efficient financial management. Throughout this review, we have meticulously examined various facets of financial management, including budgeting, cost control, revenue management, working capital management, and risk mitigation. This exploration has unveiled the central role that financial strategies play in fostering the sector's enduring growth and resilience. Moreover, our discussions have extended beyond theoretical insights. We have offered practical recommendations tailored to industry stakeholders and presented policy suggestions aimed at regulatory bodies. Additionally, we have contemplated the transformative potential of emerging technologies, emphasizing the imperative nature of adaptability within the ever-evolving food and nutrition industry landscape. Decision-makers with actionable insights, providing a compass for navigating the multifaceted domain of financial decisions, regulatory dynamics, and technological advancements. By doing so, it ensures that the industry continues to make a positive impact on global health and nutrition, guided by sound financial management practices.

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