Equity Research
Consumer | Consumer Products

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Industry Report

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Industry Insights
The Popularity of Protein

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Executive Summary

Industry Insights is a new report in which we examine developments in the consumer packaged goods industry and that we plan to publish periodically. In this volume, we consider higher-protein foods and beverages. Our analysis includes assessments of market movements as reflected by consumption growth and market share trends, consumer preferences as evidenced by market food type and macronutrient choices, and influential brands swaying the level and division of growth. We also consider how industry participants are tailoring products, packaging, and processing to serve the growing high-protein need state across all aspects of eating occasions; and we share perspectives on which of our covered companies are best positioned to capitalized on this trend. To accomplish all of this, the report is structured using five main sections.

1. ***Preface* –** We discuss the three main macronutrients vital to body function, with a focus on proteins, which consist of units called amino acids strung together in complex formations. The body needs protein to build and repair tissues, to function and grow, and to help fight infection. The body uses extra protein for energy.

2. ***Market Overview* –** We discuss consumption growth and market share trends and how those fit into our investment thesis. More specific, the sales of high-protein foods and beverages have grown (and should continue to grow) at compound annual rates above those of the broader market and in turn added market share.

3. ***Consumer Behavior* –** We find consumers favoring higher protein foods and beverages across eating occasions. More specific, consumption trends indicate consumers are migrating to higher protein alternatives across dayparts (eggs versus cereal for breakfast) and within specific categories (nutrition versus granola in bars), as well as relevant influential brands.

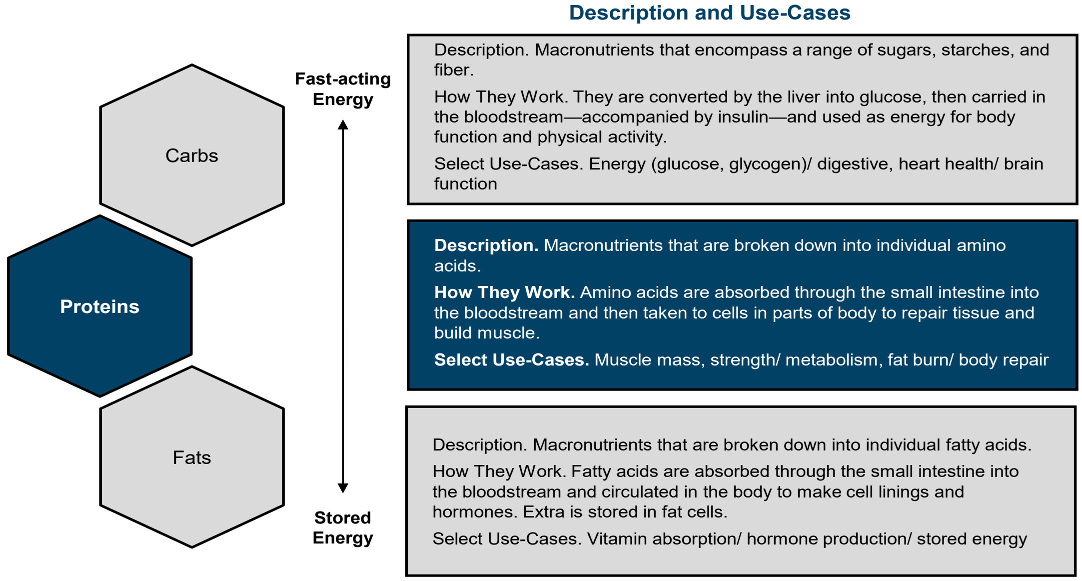
4. ***Industry Participant Motivations and Actions* –** For example, brand owners highlight the macronutrient profiles of foods and beverages; others increasingly fortify a wider variety of products with protein; and many emphasize protein-rich foods and beverages in product forms and packaging formats that are easy to shop, store, prepare, and consume.

5. ***Covered Companies* –** We assess the companies in our coverage that are best positioned to capitalize on the above trends. This includes BellRing Brands with its Premier Protein brand ready-to-drink protein shakes portfolio, Simply Good Foods via its Quest brand high-protein snacks franchise, and Vital Farms through its branded premium, pasture-raised eggs business.

Preface: Macronutrients

The three main macronutrients vital to body function are proteins, carbohydrates, and fats—combined, these supply 90% of the dry weight of the diet and 100% of its energy. Proteins, carbohydrates, and fats are digested in the intestine, where they are broken down into their basic units: proteins into amino acids, carbohydrates into sugars, and fats into fatty acids and glycerol. The body uses these basic units to build substances it needs for growth, maintenance, and activity. For purposes of this report, we largely focus on proteins and the market for beverages and foods distinctly marketed, purchased, and consumed for their protein-rich macronutrient profiles.

Exhibit 1
The Popularity of Protein
Macronutrient Profiles



Source: William Blair Equity Research

Proteins consist of units called amino acids that are strung together in complex formations. The body needs protein to build and repair tissues, to function and grow, and to help fight infection. The body uses extra protein for energy. Because proteins are complex molecules, the body takes longer to break them down. As a result, they are a much slower and longer-lasting source of energy than carbohydrates. Federal guidelines for protein consumption amount to 0.36 grams per pound of body weight at minimum, equivalent to 54 grams for a 150-pound person and 72 grams for a 200-pound person. In addition, protein should account for 10% to 35% of daily calories. Adults who are trying to build muscle need more. Children also need more because they are growing. People who are limiting calories to lose weight typically need a higher amount of protein to prevent loss of muscle while they are losing weight.

There are 20 amino acids. The body synthesizes some of them from components within the body, but it cannot produce nine of the amino acids—called essential amino acids. These nine must be consumed in the diet. Everyone needs eight of these amino acids: isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine. Infants also need the ninth, known as histidine.

Protein can be found in seafood, lean meat and poultry, eggs, beans and peas, soy products, and nuts and seeds. Protein is also found in the dairy group. Protein from plant sources tends to be lower in saturated fat, contains no cholesterol, and provides fiber and other health-promoting nutrients. The efficiency with which the body can absorb essential amino acids varies from protein to protein. The body can use 100% of the protein in eggs and a high percentage of the proteins in milk and meats. The body can use a little less than half of the protein in most vegetables and cereals.

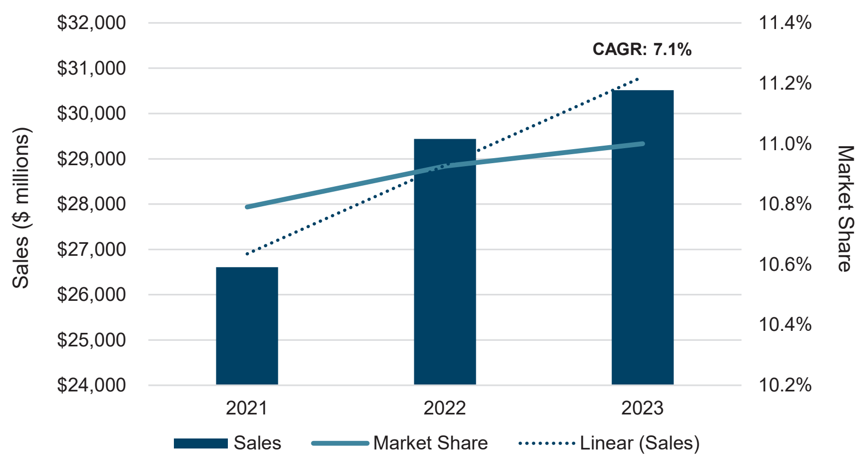
Market Overview

Throughout this report we use Circana data for estimates of measured-channel food (retail) sales, growth, and market share. In certain situations, we aggregate data across multiple food categories; and in other situations, we focus on one or more of these discrete product sets. Beverage data is only included where specifically noted. As such, the presented data is not meant to cover the entire universe of food and beverage sales, given both limitations related to channel coverage and decisions to focus on select food and beverage categories.

Market Share and Growth

Based on select general merchandise aisles and frozen and refrigerated foods departments, sales of high-protein foods—that is, those with claims such as high protein, more protein, or other protein claims on the packaging—increased at an estimated compound annual rate of more than 7% from 2021 to 2023. In addition, this set of high-protein food products grew market share from 10.8% to 11.0% during the same two-year period. Moreover, high-protein foods grew faster than those not labeled as such in both the refrigerated and frozen foods departments, and at a rate higher than or comparable to multiple general merchandise aisles.

Exhibit 2
The Popularity of Protein
High-Protein Food Growth and Market Share



Note: High protein foods are defined are those with protein claims (high, more, other) on the package. The presented data includes select general merchandise aisles, and refrigerated and frozen foods departments.
Source: Circana, William Blair Equity Research

Consumer Interest

Protein is showing up in more packaged foods as consumer interest in high-protein products is high. Online activity is one indication—Google searches for "high protein" have surged over the past few years. Separately, according to Brandwatch, online search interest in "high protein" reached a five-year high in 2023 (and has remained high since), and the number of people talking about high protein online increased by 32% in the 12-month period ending May 2023.

Exhibit 3
The Popularity of Protein
Google Searches for Term "High Protein"

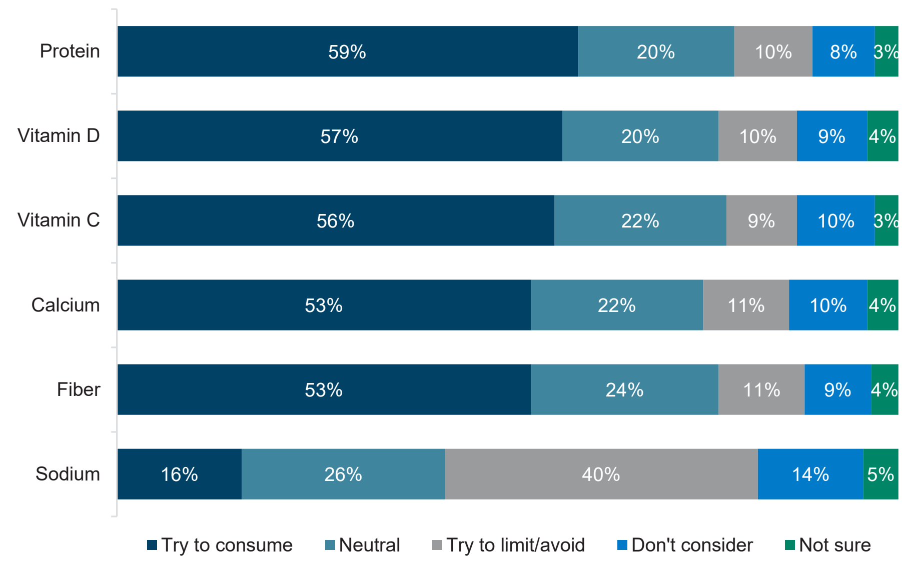
Note: Y-axis represents relative search interest; 100 represents peak popularity
Source: Google Trends

Interest is most pronounced among consumers driving packaged food industry growth. That is, millennials are most likely to talk about a high-protein diet, with 52% of all online mentions around "high protein" coming from adults in the 25- to 40-year-old age range. Moreover, it is not just athletes looking to boost their protein intake. According to the International Food Council, 67% of consumers say they are looking to add more protein to their diet and a third of consumers say protein content is an indicator of health.

Demand Underpinnings
Protein is an indispensable macronutrient that has many health benefits, from muscle building, to losing weight, to immune system and tissue repair, and many contemporary dietitians recommend meals with at least 25 grams of protein. As such, it is perhaps not surprising that protein is a top nutrient being sought by consumers of all age. In fact, according to the International Food Information Council (IFIC), protein is the No. 1 nutrient that consumers say they "try to consume," ranking higher than vitamin D, vitamin C, fiber, and calcium.

Exhibit 4
The Popularity of Protein
Protein Is Highly Sought by Consumers

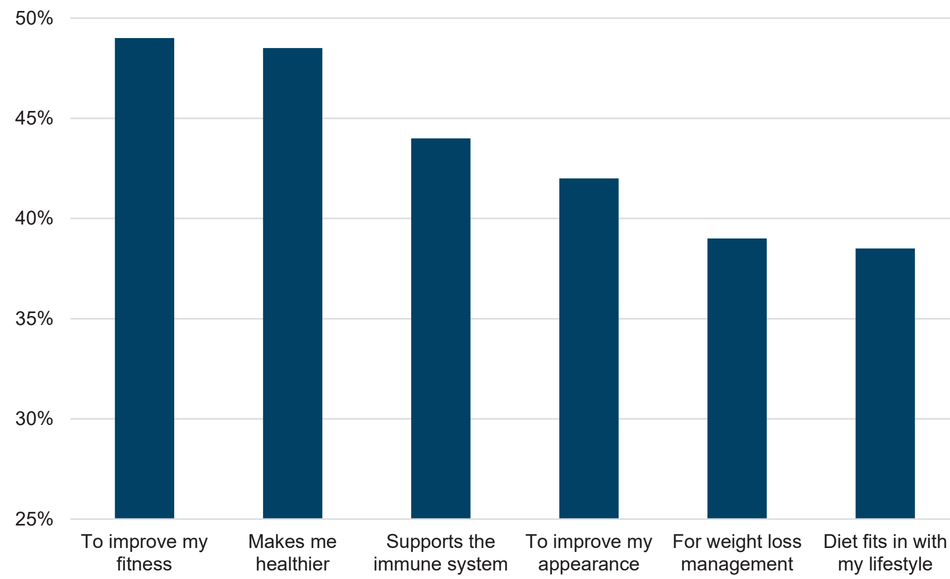
Do you want to consume or avoid the following nutrients?



Note: % of respondents specifying their intent for each option
Sources: Food Information Council

The popularity of high-protein foods and beverages positively correlates with consumers' pursuits of fitness and health, as well as the perceived benefits of protein. According to Euromonitor International's Health and Nutrition Survey, the top two reasons given for following a high-protein diet are "to improve my fitness" and "makes me healthier." A focus on weight wellness is also a driver of increased protein consumption as many believe consuming higher amounts of protein over carbohydrates aid in weight loss. For information on the role of protein in helping stem the loss of lean muscle mass of consumers on weight loss (GLP-1) medications, see our earlier note News You Can Use: Perspectives on GLP-1s and Potential Bearing on Packaged Foods and Beverages.

Exhibit 5
The Popularity of Protein
Reasons for Following a High Protein Diet



Source: Euromonitor International Health and Nutrition Survey

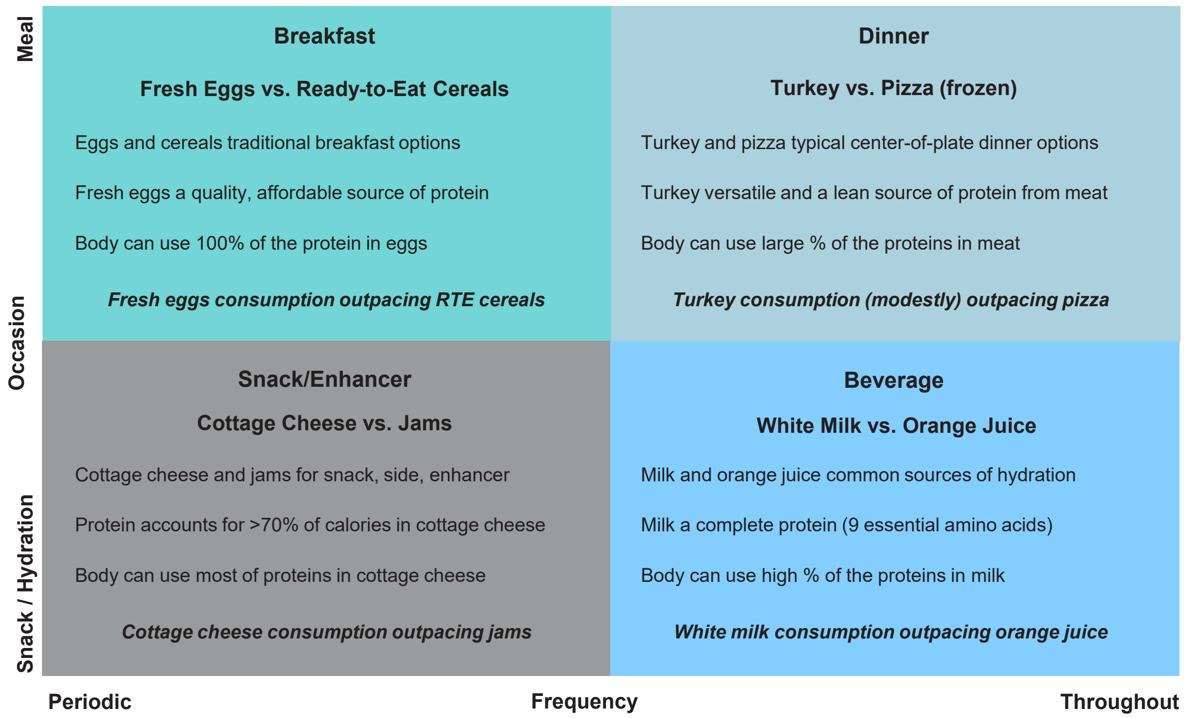
We believe protein demand should stay strong because it is an ingredient that has universal recognition among consumers. Most consumers view protein positively, notably for its role in muscle building and workout recovery. The research on protein is extensive when it comes to health benefits, whereas macronutrients such as fat or carbohydrates have gone in and out of fashion—lauded some years and vilified in others. In essence, protein benefits by serving relevant consumer need states and by evading the stigmas of other macronutrients; as well as by offering satiety, an attribute increasingly important to consumers across day parts.

Consumer Behavior

Food Type Preferences

Consistent with the market dynamics discussed above, consumers appear to favor higher-protein foods and beverages across eating occasions and dayparts. More specific, our review of food consumption trends across a variety of consumption situations—breakfast, snacking, lunch or dinner, and hydration—would indicate that consumers are migrating to higher-protein alternatives. In essence, it appears consumers increasingly want to live fit and be well, perceive that increasing the amount of protein in their diets is means to these ends, and are voting with their pocketbooks for higher-protein foods and beverages to help them on their journeys.

Exhibit 6
The Popularity of Protein
Preference for Protein-Rich Food Types



Source: William Blair Equity Research

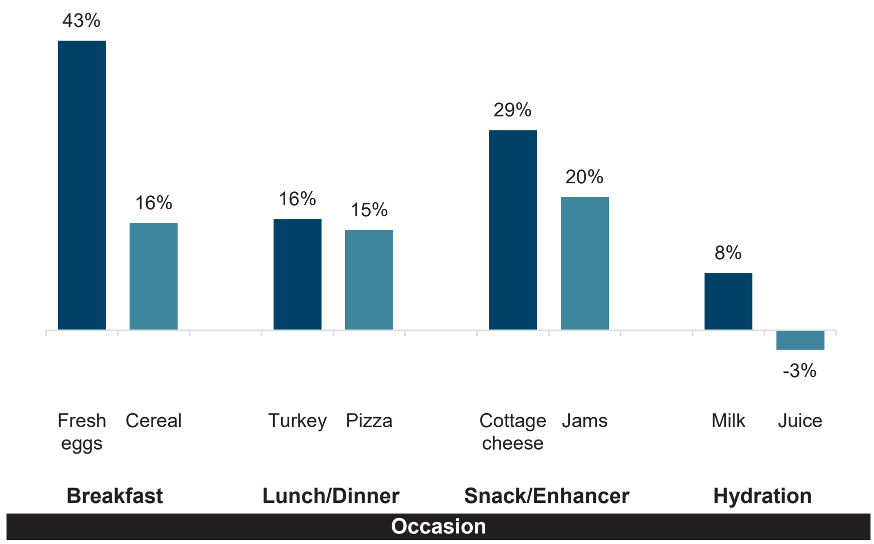
With respect to foods typically consumed at breakfast, we considered fresh eggs and ready-to-eat cereals as proxies for higher-protein and lower-protein options, respectively. From 2021 to 2023, cumulative measured channel consumption growth for fresh eggs (up 43%) was nearly three times that of ready-to-eat cereals (up 16%). This is likely due in part to the value proposition of fresh eggs as a nutritious and affordable source of complete and highly digestible protein, as well as other vital nutrients including choline, which contributes to heart health and brain development.

In terms of foods often consumed at lunch or dinner, we considered frozen/refrigerated turkey and frozen pizza as proxies for higher-protein and lower-protein choices, respectively. From 2021 to 2023, cumulative measured channel consumption growth for frozen/refrigerated turkey (up 16%) was slightly higher than that for frozen pizza (up 15%). This may be related in part to turkey's position as a health source of high-quality protein and potential support of various aspects of health, including muscle growth and maintenance, due to its rich supply of nutrients. This said, the performance of pizza was not far off that of turkey, perhaps because it can also be a reasonable source of protein with cheese and meat toppings.

When it comes to foods consumed as a snack or side or used as an enhancer, we assessed cottage cheese and jams as stand-ins for higher-protein and lower-protein alternatives, respectively. From 2021 to 2023, cumulative measured channel consumption growth for cottage cheese (up 29%) was about 50% higher than that of jams (up 20%). This seemingly could be due in part to cottage cheeses macronutrient profile as a type of cheese that is low in fat and calories yet high in protein—with one cup providing 28 grams of protein.

Lastly, with respect to beverages, we evaluated (refrigerated white) milk and (orange) juice as proxies for higher-protein and lower-protein choices, respectively. From 2021 to 2023, cumulative measured channel consumption growth for milk (up 8%) significantly outperformed that of juice (down 3%). This may be because milk is a good source of protein (with one cup providing 8 grams of protein) and contains hundreds of different fatty acids including CLA and omega-3s, linked to health benefits including reduced risk of diabetes and heart disease.

Exhibit 7
The Popularity of Protein
Consumers Favoring Higher-Protein Foods Across Occasions



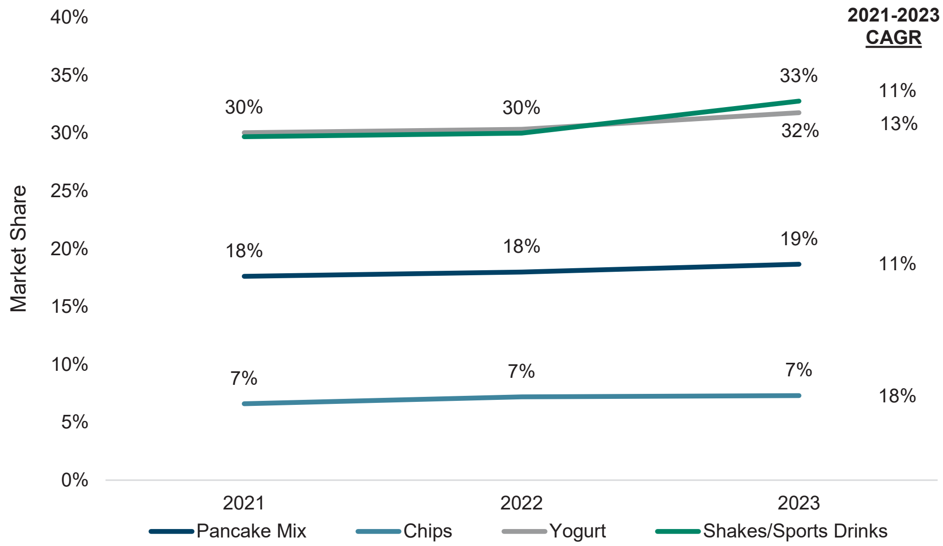
Note: High protein foods are defined are those with protein claims (high, more, other) on the package. Cereal is ready-to-eat; turkey and pizza are refrigerated/frozen; milk is white; juice is orange.

Source: Circana, William Blair Equity Research

Intra-category Shifts

We also find consumers are favoring high-protein foods and beverages within categories such as pancake mixes, salty snacks (chips), yogurt, and shakes/juices. In these categories, the higher-protein segments—that is, those consisting of products with specific protein claims—are growing more rapidly than lower-protein alternatives and are gaining market share. In essence, when comparable food types are assessed side by side, consumers are increasingly voting, with their wallets, for the option(s) offering more protein—presumably for health, fitness, and/or weight wellness purposes.

Exhibit 8
The Popularity of Protein
Consumers Opting for Higher-Protein Versions of Favorite Foods



Source: Circana, William Blair Equity Research

Brand Trendsetters

Key brands are capitalizing on the consumer demand by offering protein-oriented foods and beverages in various categories. These brands, some of which are owned by private businesses and others stewarded by public companies, include names such as Vital Farms in eggs, Kodiak in pancake mix, Quest in salty snacks (chips), Oikos in yogurt, and Premier Protein in nutrition/sports drinks. We believe these, and others pursuing a protein-rich value proposition, have and can continue to drive outsized growth and gain market share relative to lower protein and/or higher carbohydrate alternatives in their respective categories.

Vital Farms

Vital Farms is an ethically minded food company that is disrupting the U.S. food system by bringing premium pasture-raised eggs from a network of family farms to a national audience. From 2021 to 2023, Vital Farms consumption grew at a compound annual rate of 36% in measured retail channels. This growth was volume driven. In addition, roughly 90% of this growth was due to velocity gains based on sales per million-dollar ACV (a measure akin to same-shelf sales growth) and the balance aided by distribution in the form of increased ACV (a measure of availability in retail food stores), which now sits at about 50%.

Exhibit 9
The Popularity of Protein
Vital Farms - Point-of-Sale Measures

	Year			Quarter Ending				L4W		
Fresh Eggs	**2021**	**2022**	**2023**	**10/1/23**	**12/31/23**	**3/31/24**	**6/30/24**	**5/5/24**	**6/2/24**	**6/30/24**
Sales										
Dollar ($ in millions)	$212	$316	$391	$97	$114	$131	$132	$40	$41	$41
% change	*36%*	*49%*	*24%*	*20%*	*14%*	*44%*	*47%*	*48%*	*52%*	*46%*
Volume (in millions)	445	597	624	155	185	207	209	63	65	65
% change	*35%*	*34%*	*4%*	*3%*	*4%*	*45%*	*47%*	*44%*	*54%*	*48%*
Price per volume	$0.48	$0.53	$0.63	$0.63	$0.62	$0.63	$0.63	$0.63	$0.63	$0.63
% change	*0%*	*11%*	*19%*	*16%*	*10%*	*0%*	*0%*	*3%*	*-1%*	*-2%*
Velocity										
Sales per million $ ACV	$214	$302	$373	$87	$104	$100	$98	$29	$31	$31
% change		*41%*	*24%*	*16%*	*1%*	*0%*	*17%*	*9%*	*28%*	*21%*
Sales per point of distribution	$2.26	$2.73	$2.90	$0.85	$0.98	$1.11	$1.03	$0.34	$0.35	$0.33
% change	*37%*	*21%*	*6%*	*4%*	*-1%*	*23%*	*28%*	*24%*	*34%*	*23%*
Sales per store selling	$12,160	$15,596	$18,694	$4,865	$5,715	$6,426	$6,458	$1,999	$2,039	$2,018
% change	*17%*	*28%*	*20%*	*14%*	*7%*	*34%*	*45%*	*43%*	*48%*	*42%*
Distribution										
All commodity volume (ACV %)	47.0%	50.9%	52.0%	49.0%	50.4%	50.5%	50.0%	49.3%	49.4%	49.3%
bps change	*350*	*389*	*108*	*114*	*498*	*521*	*21*	*549*	*52*	*80*
Total points of distribution (TDPs)	94	116	135	114	116	118	128	117	117	124
% change	*-1%*	*23%*	*17%*	*15%*	*16%*	*18%*	*15%*	*19%*	*14%*	*18%*
Average items per store	1.7	1.9	2.2	1.9	2.0	2.0	2.1	2.0	2.0	2.1
% change	*-10%*	*10%*	*15%*	*10%*	*8%*	*8%*	*12%*	*11%*	*10%*	*15%*

Sources: Circana, William Blair Equity Research

Kodiak

Kodiak is committed to inspiring better eating choices and active living with great-tasting products—including pancakes and waffles, other baking mixes, hot cereals, and bars—that are 100% whole grain, protein-packed, and non-GMO. From 2021 to 2023, Kodiak consumption grew at a compound annual rate of 13% in measured retail channels. This growth was volume driven. In addition, roughly one-third of this growth was due to velocity gains based on sales per million-dollar ACV and the balance aided by distribution in the form of increased ACV, which now is about 70%.

Exhibit 10
The Popularity of Protein
Kodiak - Point-of-Sale Measures

	Year			Quarter Ending				L4W		
Pancake Mixes	**2021**	**2022**	**2023**	**7/2/23**	**10/1/23**	**12/31/23**	**3/31/24**	**4/21/24**	**5/19/24**	**6/16/24**
Sales										
Dollar ($ in millions)	$93	$108	$119	$29	$31	$28	$33	$10	$10	$10
% change	*11%*	*17%*	*10%*	*11%*	*12%*	*5%*	*4%*	*6%*	*11%*	*15%*
Volume (in millions)	19	21	22	5	6	5	6	2	2	2
% change	*10%*	*7%*	*5%*	*7%*	*10%*	*4%*	*7%*	*6%*	*13%*	*19%*
Price per volume	$4.81	$5.27	$5.49	$5.52	$5.39	$5.58	$5.36	$5.27	$5.52	$5.39
% change	*1%*	*9%*	*4%*	*4%*	*2%*	*1%*	*-2%*	*0%*	*-2%*	*-3%*
Velocity										
Sales per million $ ACV	$69	$75	$76	$18	$19	$18	$21	$6	$6	$6
% change	*1%*	*9%*	*1%*	*-1%*	*4%*	*-1%*	*1%*	*4%*	*6%*	*13%*
Sales per point of distribution	$0.19	$0.18	$0.17	$0.05	$0.05	$0.05	$0.06	$0.02	$0.02	$0.02
% change	*12%*	*-2%*	*-9%*	*-6%*	*5%*	*0%*	*9%*	*8%*	*7%*	*8%*
Sales per store selling	$3,223	$3,534	$3,820	$959	$1,036	$941	$1,107	$351	$336	$346
% change	*12%*	*10%*	*8%*	*9%*	*12%*	*7%*	*4%*	*7%*	*10%*	*14%*
Distribution										
All commodity volume (ACV %)	71.2%	73.2%	73.4%	72.0%	71.8%	72.0%	72.2%	71.1%	70.7%	70.7%
bps change	*212*	*199*	*22*	*133*	*(27)*	*(165)*	*(120)*	*(92)*	*(92)*	*(80)*
Total points of distribution (TDPs)	495	592	714	561	568	571	577	525	524	525
% change	*-1%*	*20%*	*21%*	*18%*	*7%*	*5%*	*-4%*	*-1%*	*4%*	*6%*
Average items per store	5.9	7.0	8.2	6.6	6.6	6.7	6.7	6.1	6.1	6.1
% change	*-1%*	*18%*	*18%*	*16%*	*5%*	*4%*	*-4%*	*-1%*	*4%*	*6%*

Sources: Circana, William Blair Equity Research

Quest

Quest markets and sells high-protein products across a variety of categories—including chips, bars, cookies, and shakes—that provide craveable healthy alternatives to traditional products. From 2021 to 2023, Quest chips consumption grew at a compound annual rate of 43% in measured retail channels. This growth was volume driven. In addition, roughly two-thirds of this growth was due to velocity gains based on sales per million-dollar ACV and the balance aided by distribution in the form of increased ACV, which is approaching 80%.

Exhibit 11
The Popularity of Protein
Quest - Salty Snacks - Point-of-Sale Measures

	Year			Quarter Ending				L4W		
Salty Snacks	**2021**	**2022**	**2023**	**7/2/23**	**10/1/23**	**12/31/23**	**3/31/24**	**4/21/24**	**5/19/24**	**6/16/24**
Sales										
Dollar ($ in millions)	$82	$124	$168	$44	$45	$39	$57	$19	$20	$20
% change	*137%*	*50%*	*36%*	*33%*	*37%*	*45%*	*42%*	*48%*	*44%*	*55%*
Volume (in millions)	3	4	5	1	1	1	2	1	1	1
% change	*141%*	*35%*	*26%*	*21%*	*31%*	*46%*	*45%*	*49%*	*45%*	*55%*
Price per volume	$29.59	$32.97	$35.65	$35.93	$36.03	$35.29	$34.43	$35.75	$35.79	$35.80
% change	*-2%*	*11%*	*8%*	*10%*	*4%*	*-1%*	*-2%*	*-1%*	*-1%*	*0%*
Velocity										
Sales per million $ ACV	$70	$90	$113	$30	$31	$27	$37	$13	$13	$13
% change	*79%*	*28%*	*26%*	*12%*	*21%*	*31%*	*33%*	*40%*	*37%*	*45%*
Sales per point of distribution	$0.27	$0.27	$0.30	$0.10	$0.09	$0.08	$0.11	$0.04	$0.04	$0.04
% change	*62%*	*-1%*	*13%*	*-7%*	*9%*	*16%*	*7%*	*13%*	*12%*	*20%*
Sales per store selling	$1,612	$1,679	$1,712	$514	$514	$441	$609	$230	$232	$232
% change	*72%*	*4%*	*2%*	*-18%*	*-4%*	*13%*	*13%*	*25%*	*22%*	*35%*
Distribution										
All commodity volume (ACV %)	62.3%	73.6%	78.9%	76.0%	76.2%	77.5%	78.7%	76.5%	76.5%	76.4%
bps change	*1,113*	*1,129*	*525*	*1,482*	*1,061*	*433*	*412*	*289*	*222*	*190*
Total points of distribution (TDPs)	305	463	556	437	478	488	523	497	498	502
% change	*46%*	*52%*	*20%*	*44%*	*25%*	*25%*	*33%*	*32%*	*28%*	*29%*
Average items per store	4.2	5.6	6.4	5.2	5.7	5.8	6.1	5.9	5.9	6.0
% change	*19%*	*32%*	*16%*	*24%*	*12%*	*20%*	*27%*	*28%*	*26%*	*26%*

Sources: Circana, William Blair Equity Research

Oikos

Oikos is a yogurt brand owned by Danone that provides high-protein products packed with nine essential amino acids. Oikos' products—Triple Zero, Pro, Pro Drinks, Pro Shots, and Remix—range from 10 grams to 23 grams of protein with no added sugar. From 2021 to 2023, Oikos consumption grew at a compound annual rate of 25% in measured retail channels. This growth was volume driven. In addition, roughly 60% of this growth was due to velocity gains based on sales per million-dollar ACV and the balance aided by distribution in the form of increased ACV, which now sits at about 75%.

Exhibit 12
The Popularity of Protein
Oikos - Point-of-Sale Measures

	Year			Quarter Ending				L4W		
Yogurt	**2021**	**2022**	**2023**	**7/2/23**	**10/1/23**	**12/31/23**	**3/31/24**	**4/21/24**	**5/19/24**	**6/16/24**
Sales										
Dollar ($ in millions)	$439	$529	$680	$173	$178	$164	$206	$68	$70	$71
% change	*4%*	*21%*	*29%*	*30%*	*29%*	*25%*	*25%*	*29%*	*31%*	*32%*
Volume (in millions)	161	174	212	54	56	51	62	20	21	21
% change	*2%*	*8%*	*21%*	*21%*	*24%*	*22%*	*20%*	*22%*	*25%*	*24%*
Price per volume	$2.73	$3.04	$3.22	$3.24	$3.20	$3.24	$3.32	$3.40	$3.43	$3.44
% change	*2%*	*11%*	*6%*	*7%*	*4%*	*3%*	*4%*	*5%*	*5%*	*7%*
Velocity										
Sales per million $ ACV	$317	$365	$419	$108	$107	$98	$120	$40	$41	$41
% change	*-1%*	*15%*	*15%*	*18%*	*15%*	*13%*	*16%*	*20%*	*22%*	*24%*
Sales per point of distribution	$0.23	$0.34	$0.46	$0.14	$0.13	$0.13	$0.16	$0.05	$0.05	$0.05
% change	*4%*	*45%*	*36%*	*48%*	*33%*	*32%*	*24%*	*24%*	*19%*	*21%*
Sales per store selling	$8,289	$9,951	$17,443	$5,196	$5,369	$4,989	$6,186	$2,086	$2,108	$2,119
% change	*0%*	*20%*	*75%*	*91%*	*90%*	*89%*	*41%*	*29%*	*27%*	*28%*
Distribution										
All commodity volume (ACV %)	77.6%	76.9%	76.6%	73.7%	73.5%	74.9%	75.0%	74.3%	74.1%	74.1%
bps change	*31*	*(63)*	*(35)*	*(156)*	*(176)*	*(205)*	*(165)*	*39*	*69*	*63*
Total points of distribution (TDPs)	1,884	1,570	1,484	1,251	1,328	1,241	1,318	1,252	1,305	1,311
% change	*0%*	*-17%*	*-5%*	*-13%*	*-3%*	*-5%*	*1%*	*4%*	*10%*	*9%*
Average items per store	19.6	16.7	15.5	13.5	14.3	13.8	14.7	14.0	14.5	14.6
% change	*0%*	*-15%*	*-7%*	*-12%*	*-3%*	*-2%*	*7%*	*8%*	*9%*	*8%*

Sources: Circana, William Blair Equity Research

Premier Protein

Premier Protein is a lifestyle brand consisting of ready-to-drink protein shakes and ready-to-mix protein powders. The flagship protein shake is available in 14 flavors and contains 30 grams of protein with just 1 gram of sugar and 160 calories. From 2021 to 2023, Premier Protein consumption grew at a compound annual rate of 20% in measured retail channels. This growth was largely volume driven. In addition, roughly two-thirds of this growth was due to velocity gains based on sales per million-dollar ACV and the balance aided by distribution in the form of increased ACV, which now stands at about 80%.

Exhibit 13
The Popularity of Protein
Premier Protein - Point-of-Sale Measures

Nutrition/Sports Drinks	Year 2021	Year 2022	Year 2023	Quarter Ending 7/2/23	Quarter Ending 10/1/23	Quarter Ending 12/31/23	Quarter Ending 3/31/24	L4W 4/21/24	L4W 5/19/24	L4W 6/16/24
Sales										
Dollar ($ in millions)	$704	$740	$1,005	$254	$273	$253	$287	$85	$90	$90
% change	*34%*	*5%*	*36%*	*37%*	*38%*	*39%*	*27%*	*13%*	*11%*	*14%*
Volume (in millions)	4,442	4,201	5,183	1,310	1,389	1,303	1,527	445	462	463
% change	*30%*	*-5%*	*23%*	*24%*	*27%*	*34%*	*29%*	*14%*	*11%*	*15%*
Price per volume	$0.16	$0.18	$0.19	$0.19	$0.20	$0.19	$0.19	$0.19	$0.19	$0.19
% change	*3%*	*11%*	*10%*	*11%*	*9%*	*4%*	*-1%*	*-1%*	*0%*	*0%*
Velocity										
Sales per million $ ACV	$524	$535	$671	$171	$178	$164	$183	$55	$57	$58
% change	*25%*	*2%*	*25%*	*27%*	*27%*	*29%*	*21%*	*9%*	*5%*	*9%*
Sales per point of distribution	$0.59	$0.62	$0.76	$0.27	$0.26	$0.22	$0.24	$0.08	$0.08	$0.08
% change	*13%*	*5%*	*22%*	*21%*	*12%*	*2%*	*-8%*	*-13%*	*-14%*	*-13%*
Sales per store selling	$7,693	$8,042	$10,960	$2,968	$3,154	$2,904	$3,400	$1,212	$1,287	$1,284
% change	*30%*	*5%*	*36%*	*38%*	*39%*	*38%*	*30%*	*27%*	*25%*	*26%*
Distribution										
All commodity volume (ACV %)	81.3%	80.8%	80.5%	78.7%	78.6%	80.3%	80.1%	75.5%	77.1%	77.2%
bps change	*91*	*(52)*	*(33)*	*(3)*	*11*	*11*	*15*	*(271)*	*(55)*	*(14)*
Total points of distribution (TDPs)	1,192	1,192	1,329	943	1,060	1,168	1,220	1,033	1,086	1,105
% change	*19%*	*0%*	*12%*	*13%*	*23%*	*36%*	*38%*	*29%*	*29%*	*32%*
Average items per store	12.9	13.0	14.4	10.4	11.6	12.7	13.3	11.6	12.0	12.2
% change	*17%*	*1%*	*11%*	*12%*	*21%*	*33%*	*36%*	*31%*	*29%*	*31%*

Sources: Circana, William Blair Equity Research

Industry Participant Motivation and Actions

Brand Owners

Brand owners are (or should be) motivated to serve high-growth consumer need states, through the formulation and commercialization of brands and product lines that offer high protein; and do so in forms and packaging formats that are convenient for people to shop, store, prepare, and consume.

Formulas

Given the rise in consumer interest in and preference for protein-rich foods and beverages, brand owners are highlighting the macronutrient profiles of foods such as milk, eggs, tofu, fish, beef, and poultry, and many are increasingly fortifying a wider variety of foods with protein including appetizers, meals, snacks, and beverages.

For example, General Mills is releasing a new line of Wheaties ready-to-eat cereals, boosted with gluten and soy, with more than 20 grams of protein per serving to serve “today’s modern athletes who are striving to be better every day.” The company also recently introduced high-protein varieties of Yoplait yogurt and Annie’s macaroni and cheese. Separately, Kellogg has a high-protein Special K cereal and protein meal bars in addition to high-protein Kashi waffles, and ConAgra offers Health Choice MAX, a line of easy-to-prepare frozen meals with high protein levels. Furthermore, Mars recently introduced a new line of Snickers bars with high protein (20 grams) for snacking; Chobani offers Complete, a line of high protein yogurts and drinks; and Coca-Cola sells Fairlife ultra-filtered (concentrated) milk with a higher-than-normal protein content.

Exhibit 14
The Popularity of Protein
Product and Processing Innovation

Meals	**Snacks/Enhancers**	**Beverages**

Select Examples	**Select Examples**	**Select Examples**
Breakfast cereals	Nutrition bars	Dairy / plant-based milks
Pancakes / waffles	Salty snacks	Ready-to-drink shakes
Handhelds	Yogurt	Sports drinks
Refrigerated / frozen meals	Confections	Enhanced waters

Source: Company reports, William Blair Equity Research

Also noteworthy are Mama's Creations (led by former Mondelez executive Adam Michaels), which is offering convenient fresh meals that include proteins such as meatballs and chicken to help become a one-stop shop for deli solutions; and Legendary Foods (established by Quest founder Ron Penna), which is reimagining traditional snacks such as baked goods and crunchy chips with high-protein nutrition to help change the way people eat.

Formats

Consumers also want protein-rich products that prioritize convenience and provide shortcuts across all aspects of eating occasions. As such, brand owners are emphasizing product forms and packaging formats that are easy to shop, store, prepare, eat, and dispose of—whether at home, at work, or on the go.

For example, Kraft Heinz recently unveiled 360CRISP, a new platform for the microwave that creates crispy, crunchy products (like baking in the oven) that started with Lunchables and will span multiple brands over time. Nestle recently introduced a new line of frozen meals called Protein Kick, which are higher in protein and lower in carbohydrates and easy to prepare and ready to eat from the microwave, and PepsiCo offers a line of Quaker instant cereal with "protein packed" oats in microwaveable bowls. In addition, BellRing offers ready-to-drink protein shakes in aseptic cartons that are easy to shop (on shelf) and easy to store (at room temperature at home), and Vital Farms sells pasture-raised hard-boiled eggs (pre-peeled and packaged) that are ready to eat and portable for consumption on the go.

Exhibit 15
The Popularity of Protein
Packaging and Preparation Innovation

Packaging	Form	Preparation

Packaging	Form	Preparation
Select Examples	**Select Examples**	**Select Examples**
Aseptic (shelf-stable)	Cooked in advance	Crisp out of the microwave
Microwaveable bowls	Ready-to-mix powders	Pre-kitted products (salad)
Re-sealable packaging	Single-serve portions	Heat and eat solutions (deli)

Source: Company reports, William Blair Equity Research

Also noteworthy is Gainful (co-founded in 2017 by Eric Wu and Jahaan Ansari and since 2022 led by CEO Dean Kelly), a personal nutrition company whose products are precision formulated by registered dietitians to provide people with supplements, including protein, suited to their unique physiology, dietary restrictions, and fitness goals. Convenience has been central to the value proposition from the start, with the brand having built a following online and then expanding beyond its DTC roots by launching nationwide in Target.

Retailers

One of the most important metrics for retailers is gross profit return on space, used to optimize category-level assortments (at the shelf). In simple form, this requires that each category is planogrammed with space allocations to brands, products, and facings, to generate the greatest gross profit dollar return on space.

To be clear, such category-level decisions are not made in isolation, as they must be considered in the context of the category's role in delivering total store (box) profitability. Still, it is a rule of thumb that helps drive decision-making. In practice, what this means is brands and products with the best combination of gross margin (more specific, absolute gross profit dollars per unit) and velocity (unit volume or turnover) generate the greatest gross profit dollar return per unit of shelf space and in turn tend to get rewarded with more and better shelf space over time.

We note protein-rich foods and beverages often command a price premium relative to alternatives, and with consumer interest in and demand for such products rising, these products are attractive to retailers given their ability to drive strong incremental returns on space. In addition, with younger consumers (millennials) most likely to talk about a high-protein diet and middle-to-upper income consumers likely more willing and/or able to pay a premium for protein-rich products, we believe such offerings help retailers attract appealing cohorts that can help drive basket and ticket.

Covered Companies

BellRing Brands
With a portfolio singularly focused on high-protein foods and beverages, BellRing is as well positioned as any company to capitalize on consumers' desire to have ample protein in their diet. BellRing is a leader in the global convenient nutrition market with a concentrated brand portfolio comprising top high-protein foods and beverages including Premier Protein ready-to-drink protein shakes and Dymatize ready-to-mix protein powders. The company has ample runway for growth through greater household penetration (currently less than 20%) as more consumers adopt these products for general health and weight wellness as well as core fitness, and via buy rate expansion as use-cases expand to include more consumption occasions and dayparts. Separately, BellRing has enhanced (and continues to enhance) its network of manufacturing partners, giving it the capacity to support demand; lean into new products, trade promotion, and brand marketing; and service customers with high fill rates. Collectively, we believe these factors support multiple years of double-digit sales growth with strong margins and cash generation.

Simply Good Foods
With a substantial portion of its portfolio focused on high-protein foods and beverages, Simply Good Foods is also well positioned to capitalize on consumers' desire for protein-rich diets. Simply Goods is a leader in the nutritious snacking market with a brand portfolio comprised in part of top high-protein foods and beverages, including Quest protein bars, chips, cookies, crackers, and confections, and OWYN ready-to-drink plant-based protein shakes. These brands have substantial sales upside by driving greater household penetration (currently less than 20%) as more consumers are drawn to these products as better-for-you alternatives as well as core active nutrition; and via usage intensification as form factor and category expansion support more use-cases. Separately, Simply Goods has a robust network of manufacturing partners to support demand for its core brands and products as well as platform expansion (such as Quest has done in chips and soon in sweet baked goods), a business model that delivers strong margins and free cash flow generation, and a clean balance sheet that provides capital allocation optionality.

Vital Farms
With a portfolio focused on a high-protein food category, Vital Farms is well positioned to benefit from consumers' desire to introduce more protein into their diets. Vital Farms is a leader in the fresh eggs category and, more specific, the top brand in the rapidly growing pasture-raised egg segment. As noted, eggs are a nutritious and affordable source of complete and highly digestible protein, as well as other vital nutrients including choline, that contribute to heart health and brain development. The brand has ample headroom for growth by increasing household penetration (target from 10 million to 30 million over the next several years) as more consumers migrate toward high-quality and ethically sourced and produced (pasture raised) eggs, enabled by greater distribution and availability as the brand is expanded to more grocery stores and more items are added to existing locations. Separately, Vital Farms has established a differentiated network of more than 300 family farms and its own egg washing and processing facility, which provide a resilient and reliable supply of high-quality eggs; is successfully scaling to achieve higher profit margins; and has a net cash positive balance sheet supporting investments in growth capacity.

Exhibit 16
The Popularity of Protein
BellRing Brands - Earnings Model

	2022	2023	1Q24 Dec-23	2Q24 Mar-24	3Q24E Jun-24	4Q24E Sep-24	2024E	2025E
Income Statement								
Total sales	**$1,371.5**	**$1,666.8**	**$430.4**	**$494.6**	**$494.9**	**$520.0**	**$1,940.0**	**$2,134.0**
Cost of goods sold	949.7	1,136.6	282.4	330.3	335.1	351.5	1,299.3	1,430.2
Gross profit	421.8	530.2	148.0	164.3	159.9	168.5	640.7	703.8
Selling, general, and administrative expen	163.0	208.1	52.6	66.5	67.3	65.8	252.2	287.9
Amortization of intangible assets	19.7	19.5	22.2	4.2	4.3	4.3	35.0	17.2
Other operating expenses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Operating income	**$239.1**	**$302.6**	**$73.2**	**$93.6**	**$88.2**	**$98.4**	**$353.5**	**$398.7**
Interest expense	49.2	66.9	14.9	14.5	14.5	14.5	58.4	51.9
Other expense (income)	17.6	0.0	(17.4)	0.0	0.0	0.0	(17.4)	0.0
Pretax income	172.3	235.7	75.7	79.1	73.7	83.9	312.5	346.8
Income taxes	29.6	51.3	18.4	19.9	18.7	21.3	78.3	87.4
Net income including noncontrolling interest	142.7	184.4	57.3	59.2	55.0	62.6	234.1	259.4
Noncontrolling interest	33.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income (Non-GAAP)	109.0	184.4	57.3	59.2	55.0	62.6	234.1	259.4
Diluted shares outstanding	93.8	134.1	133.0	133.0	133.0	133.0	133.0	133.0
EPS	**$1.52**	**$1.38**	**$0.43**	**$0.45**	**$0.41**	**$0.47**	**$1.76**	**$1.95**
EBITDA	**$271.4**	**$338.3**	**$100.5**	**$103.7**	**$97.8**	**$108.0**	**$410.0**	**$440.0**
Margin analysis								
Gross margin	30.8%	31.8%	34.4%	33.2%	32.3%	32.4%	33.0%	33.0%
Selling, general, and administrative expen	11.9%	12.5%	12.2%	13.4%	13.6%	12.7%	13.0%	13.5%
Other expense (income)	1.4%	1.2%	5.2%	0.8%	0.9%	0.8%	1.8%	0.8%
Operating income	17.4%	18.2%	17.0%	18.9%	17.8%	18.9%	18.2%	18.7%
Tax rate	17.2%	21.8%	24.3%	25.2%	25.4%	25.4%	25.1%	25.2%
EBITDA	**19.8%**	**20.3%**	**23.4%**	**21.0%**	**19.8%**	**20.8%**	**21.1%**	**20.6%**
Year-over-year comparison								
Total sales	**10.0%**	**21.5%**	**18.7%**	**28.3%**	**11.0%**	**10.0%**	**16.4%**	**10.0%**
Gross profit	9.2%	25.7%	21.5%	40.3%	17.6%	8.5%	20.8%	9.9%
Selling, general, and administrative expen	0.5%	27.7%	28.9%	25.2%	26.5%	7.8%	21.2%	14.1%
Amortization of intangible assets	-61.5%	-1.0%	353.1%	-12.5%	-12.1%	-12.0%	79.6%	-50.9%
Operating income	38.3%	26.6%	-3.8%	58.1%	13.3%	10.1%	16.8%	12.8%
EPS	**-49.4%**	**-9.6%**	**29.6%**	**87.7%**	**21.1%**	**1.1%**	**28.0%**	**10.8%**
EBITDA	**16.0%**	**24.6%**	**18.4%**	**52.5%**	**12.5%**	**9.6%**	**21.2%**	**7.3%**

Note: figures are adjusted to represent operating earnings.
Source: FactSet and William Blair Equity Research

Exhibit 17
The Popularity of Protein
Simply Good Foods - Earnings Model

	2022	2023	1Q24 Nov-23	2Q24 Feb-24	3Q24 May-24	4Q24E Aug-24	2024E	2025E
Income Statement								
Total sales	**$1,168.7**	**$1,242.7**	**$308.7**	**$312.2**	**$334.8**	**$374.1**	**$1,329.8**	**$1,456.1**
Cost of goods sold	723.1	789.3	193.6	195.3	201.1	232.3	822.3	902.8
Gross profit	445.6	453.4	115.1	116.9	133.6	141.8	507.4	553.3
Distribution, Selling and Marketing Expens	121.7	119.5	32.0	34.6	36.5	39.2	142.3	151.4
General & Administrative	91.6	91.3	22.4	25.4	26.7	30.3	104.8	115.3
Depreciation and Amortization	17.3	17.4	4.4	4.2	4.1	4.1	16.8	16.7
Other expense (income)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Operating income	**$215.0**	**$225.2**	**$56.4**	**$52.7**	**$66.3**	**$68.2**	**$243.5**	**$269.8**
Interest expense	21.9	28.9	4.9	4.7	4.1	3.8	17.6	8.7
Other expense (income)	0.3	(0.1)	(0.0)	(0.0)	(0.5)	0.0	(0.5)	0.0
Pretax income	192.9	196.4	51.4	48.0	62.6	64.4	226.5	261.1
Income taxes	33.4	32.4	7.9	7.8	12.4	13.5	41.6	54.8
Net income	159.5	164.0	43.5	40.2	50.3	50.9	184.9	206.3
Diluted shares outstanding	100.6	100.9	101.1	101.3	101.3	101.3	101.2	101.3
EPS	**$1.59**	**$1.63**	**$0.43**	**$0.40**	**$0.50**	**$0.50**	**$1.83**	**$2.04**
EBITDA	**$234.0**	**$245.6**	**$62.0**	**$57.8**	**$71.9**	**$73.3**	**$265.0**	**$290.0**
Margin analysis								
Gross margin	38.1%	36.5%	37.3%	37.4%	39.9%	37.9%	38.2%	38.0%
Selling, general, & administrative	10.4%	9.6%	10.4%	11.1%	10.9%	10.5%	10.7%	10.4%
Other expense (income)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Operating income	18.4%	18.1%	18.3%	16.9%	19.8%	18.2%	18.3%	18.5%
Tax rate	17.3%	16.5%	15.5%	16.2%	19.8%	21.0%	18.4%	21.0%
EBITDA	**20.0%**	**19.8%**	**20.1%**	**18.5%**	**21.5%**	**19.6%**	**19.9%**	**19.9%**
Year-over-year comparison								
Total sales	**16.2%**	**6.3%**	**2.6%**	**5.3%**	**3.1%**	**16.8%**	**7.0%**	**9.5%**
Gross profit	8.7%	1.8%	3.7%	13.8%	12.1%	17.8%	11.9%	9.0%
Distribution, Selling and Marketing Expens	7.8%	-1.8%	12.1%	15.7%	20.9%	27.1%	19.1%	6.4%
General & Administrative	1.0%	-0.3%	0.4%	12.8%	15.0%	30.4%	14.8%	10.1%
Depreciation and Amortization	1.8%	0.8%	0.7%	-3.1%	-5.1%	-6.2%	-3.4%	-0.5%
Other expense (income)	NM	NM	NM	NM	NM	NM	NM	NM
Operating income	13.7%	4.8%	1.0%	14.6%	7.8%	10.1%	8.1%	10.8%
EPS	**25.4%**	**2.5%**	**3.4%**	**24.6%**	**14.0%**	**10.2%**	**12.4%**	**11.5%**
EBITDA	**12.9%**	**4.9%**	**2.0%**	**13.6%**	**7.9%**	**9.0%**	**7.9%**	**9.4%**

Note: figures are adjusted to represent operating earnings.
Source: FactSet and William Blair Equity Research

Exhibit 18
The Popularity of Protein
Vital Farms - Earnings Model

	2022	2023	1Q24 Mar-24	2Q24E Jun-24	3Q24E Sep-24	4Q24E Dec-24	2024E	2025E
Income Statement								
Total sales	**$362.1**	**$471.9**	**$147.9**	**$133.1**	**$136.4**	**$157.6**	**$575.0**	**$661.2**
Cost of goods sold	252.6	309.5	89.0	85.8	90.7	106.4	372.0	423.2
Gross profit	109.4	162.3	58.9	47.2	45.7	51.1	203.0	238.0
Selling, general, and administrative expen:	77.2	101.7	27.1	30.0	32.0	34.5	123.7	139.6
Shipping and distribution	30.1	27.3	7.6	6.9	7.1	8.2	29.8	34.4
Operating income	**$2.1**	**$33.3**	**$24.2**	**$10.3**	**$6.5**	**$8.5**	**$49.5**	**$64.0**
Interest expense (income)	(0.9)	(1.8)	(0.8)	(0.6)	(0.6)	(0.6)	(2.6)	(2.0)
Other expense (income)	0.2	2.8	0.3	0.0	0.0	0.0	0.3	0.0
Pretax income	2.8	32.2	24.7	10.9	7.1	9.1	51.9	66.0
Income taxes	1.6	6.6	5.7	2.7	1.8	2.3	12.5	16.5
Net income including noncontrolling interest	1.2	25.6	19.0	8.2	5.4	6.8	39.4	49.5
Noncontrolling interest	(0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income (Non-GAAP)	1.3	25.6	19.0	8.2	5.4	6.8	39.4	49.5
Diluted shares outstanding	43.5	43.3	43.8	43.8	43.8	43.8	43.8	43.8
EPS	**$0.03**	**$0.59**	**$0.43**	**$0.19**	**$0.12**	**$0.16**	**$0.90**	**$1.13**
EBITDA	**$16.2**	**$48.3**	**$29.1**	**$15.5**	**$11.7**	**$13.7**	**$70.0**	**$85.0**
Margin analysis								
Gross margin	30.2%	34.4%	39.8%	35.5%	33.5%	32.5%	35.3%	36.0%
Selling, general, and administrative expen:	21.3%	21.6%	18.3%	22.6%	23.5%	21.9%	21.5%	21.1%
Shipping and distribution	8.3%	5.8%	5.1%	5.2%	5.2%	5.2%	5.2%	5.2%
Operating income	0.6%	7.0%	16.3%	7.8%	4.8%	5.4%	8.6%	9.7%
Tax rate	56.6%	20.6%	23.1%	25.0%	25.0%	25.0%	24.1%	25.0%
EBITDA	**4.5%**	**10.2%**	**19.7%**	**11.7%**	**8.6%**	**8.7%**	**12.2%**	**12.9%**
Year-over-year comparison								
Total sales	**38.8%**	**30.3%**	**24.1%**	**25.0%**	**23.5%**	**16.0%**	**21.8%**	**15.0%**
Gross profit	32.0%	48.3%	38.0%	25.0%	24.6%	13.2%	25.0%	17.3%
Selling, general, and administrative expen:	33.5%	31.7%	13.3%	25.5%	27.8%	19.8%	21.6%	12.9%
Shipping and distribution	20.5%	-9.2%	-2.9%	18.2%	11.6%	11.8%	8.9%	15.4%
Operating income	3946.2%	1480.5%	121.8%	28.3%	25.2%	-6.8%	48.9%	29.3%
EPS	**-48.5%**	**1986.1%**	**163.3%**	**20.9%**	**16.6%**	**-6.6%**	**52.1%**	**25.7%**
EBITDA	**101.7%**	**197.8%**	**110.0%**	**36.8%**	**26.8%**	**-1.6%**	**44.8%**	**21.4%**

Note: figures are adjusted to represent operating earnings.
Source: FactSet and William Blair Equity Research

The prices of the common stock of other public companies mentioned in this report follow:

BellRing Brands (Outperform)	$55.20
Coca-Cola	$63.10
General Mills	$63.17
Kraft Heinz	$32.18
Mama's Creations	$7.14
Nestle S.A.	₣93.66
PepsiCo	$163.95
Simply Good Foods (Outperform)	$36.66
Vital Farms (Outperform)	$44.09
WK Kellogg	$16.02

IMPORTANT DISCLOSURES

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DOW JONES: 39753.80
S&P 500: 5584.54
NASDAQ: 18283.40

Additional information is available upon request.

Current Rating Distribution (as of July 12, 2024):

Coverage Universe	**Percent**	**Inv. Banking Relationships ***	**Percent**
Outperform (Buy)	72	Outperform (Buy)	8
Market Perform (Hold)	28	Market Perform (Hold)	1
Underperform (Sell)	1	Underperform (Sell)	0

*Percentage of companies in each rating category that are investment banking clients, defined as companies for which William Blair has received compensation for investment banking services within the past 12 months.

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