

MARKET INSIGHT ANIMAL HEALTH

INTRODUCTION

Fueled by the popularity of pet ownership and a global population hungry for meat and dairy products, the animal health industry continues its strong growth trajectory. Shown to the right are key categories of both consumer spending and industry investment segmented by pets/companion animals and livestock/farm animals.

The charts below break out the market by sector, product, and geography with growth drivers for both established and developing regions. The stock charts show equity performance of companion animal and farm animal health companies vs. the S&P 500 over the last 3 years.

M&A and capital raising activity in the animal health/nutrition space reflects the industry's high growth, with a number of recent deals that have disclosed transaction values highlighted on the back of this industry snapshot.

We hope this is a helpful resource and look forward to hopefully further discussing what we're seeing in the space and ways we may be able to add value to your company's strategic priorities.

Companion Animal

- Pet supplies
- Food/treats and toys
- Vet services
- Diagnostics
- OTC Health

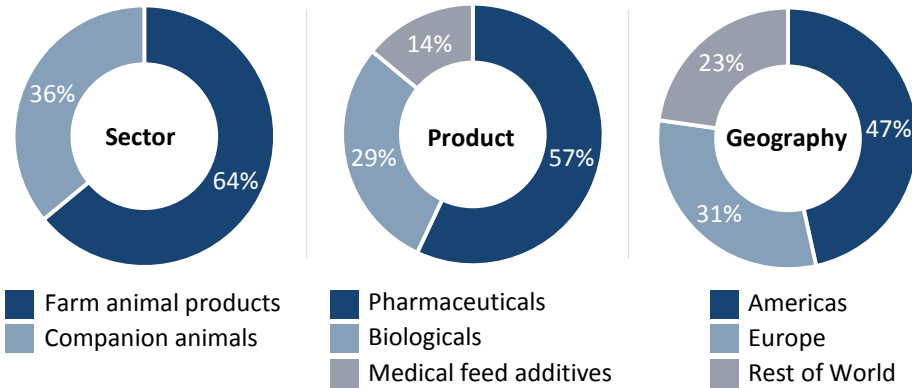
- Medicines
- Parasiticides
- Medical food additives
- Vaccines

Farm Animal

- Nutrition
- Genetics
- Herd health management
- Food Safety
- Diagnostics

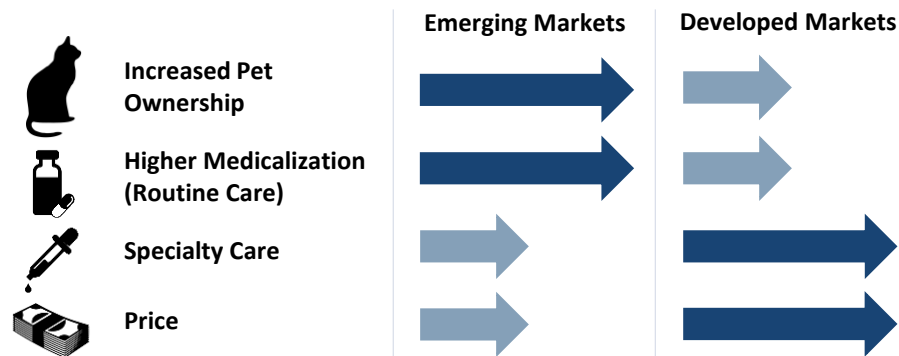
Sources: Life Science Leader; Zoetis

ANIMAL HEALTH MARKET BREAKDOWN



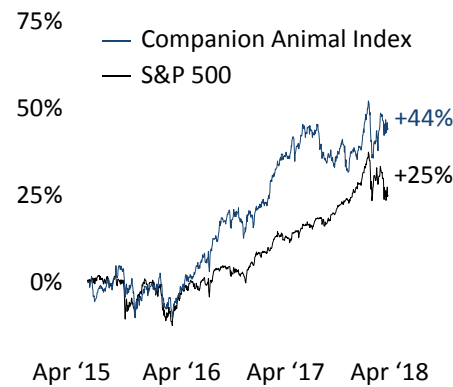
Sources: Global Animal Medicines Association; Vetnosis

DRIVERS OF COMPANION ANIMAL CARE GROWTH

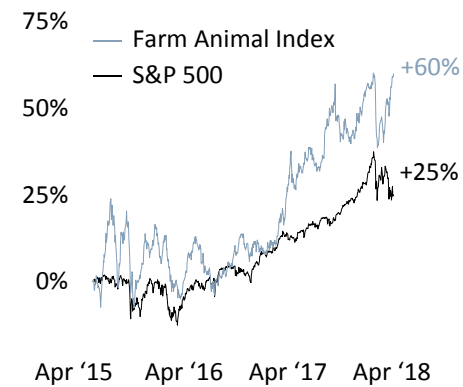


ANIMAL HEALTH EQUITY PERFORMANCE

Companion Animal Index vs. S&P 500



Farm Animal Index vs. S&P 500



With Americans spending freely on pet drugs, insurance, and supplies for their animal companions, related stocks have been outperforming the broader market by roughly 20% vs. the S&P 500 over the last 3 years. Farm animal equities have been even stronger, up 35% over the general market index.

While livestock growth is largely attributable to increasing global demand for meat and dairy products, analysts credit the economy (encouraging more pet adoptions and loosening up wallets of people who already have one) and millennials (putting off having kids but making room for a dog or cat) for the companion animal health run-up.

"Americans sometimes take care of their pets better than they take care of their own health"
 —Mark Massaro, Analyst at Canaccord Genuity

Sources: Bloomberg; CapitalIQ

M&A TRANSACTIONS SNAPSHOT

Driven by large deals involving major food companies (General Mills, Cargill) or animal health divisions of big pharma (Lilly's Elanco, Boehringer's Vetmedica), M&A activity has helped contribute to recent industry growth of 4-5%. As far as the future? "Animal health will see more mergers between the smaller companies in coming years. I think we've come to an end of a cycle of big mergers. We've seen Boehringer Ingelheim and Merial coming together, which impacted the top five. I think we're going to see less deals like that in the future, but then there's such a big gulf between the top players in animal health and the smaller firms."¹ While larger deals have the highest disclosed valuations, the market is strong with median transaction multiples over 11x EBITDA.

Sources: ¹Joe Harvey, Editor of Animal Pharm; CapitalIQ

Announced Date	Company Acquired	Buyer	Enterprise Value (EV)	Last Twelve Months (LTM) Revenue	Last Twelve Months (LTM) EBITDA	EV / LTM Revenue	EV / LTM EBITDA
Feb-18	Blue Buffalo Pet Products	General Mills	\$8,043.9	\$1,276.8	\$314.2	6.3x	25.6x
Jun-17	Selecta	Cheiljedang	\$318.1	\$302.9	NA	1.1x	NA
Nov-17	Nexvet Biopharma	Zoetis	\$81.4	NA	NA	NA	NA
Dec-16	AllStock	Apim Animal Health	\$1.3	\$1.2	NA	1.1x	NA
Dec-16	Biovet	Huvepharma	\$5.5	\$8.9	\$1.0	0.6x	5.3x
Oct-16	Vetmedica Vaccines	Elanco, Eli Lilly Animal Health	\$885.0	NA	NA	NA	NA
Jan-16	Brovel	Dechra Pharmaceuticals	\$6.0	\$3.8	NA	1.6x	NA
Jan-16	MVP Laboratories	Phibro Animal Health	\$46.5	NA	NA	NA	NA
Dec-15	Merial, Sanofi Animal Health	Boehringer Ingelheim	\$12,457.0	NA	NA	NA	NA
Nov-15	National Consumer Outdoors	Central Garden & Pet	\$61.0	NA	NA	NA	11.3
Aug-15	IMS Pet Industries	Central Garden & Pet	\$25.0	NA	NA	NA	NA
May-15	Animal Health International	Patterson Companies	\$1,100.0	\$1,500.7	\$68.0	0.7x	16.2x
Apr-15	Ridley	Alltech	\$429.3	\$613.3	\$52.7	0.7x	8.1x
Nov-14	Abbott Animal Health	Zoetis	\$255.0	NA	NA	NA	NA
Oct-14	Eli Lilly, Two Veterinary	Virbac	\$410.0	NA	NA	NA	NA
Oct-14	Nutreco	Cargill	\$4,078.0	\$6,114.0	\$364.1	0.7x	11.2x
Jun-14	Ceva Sante Animale	MBO	\$2,164.9	NA	NA	NA	NA
Apr-14	Novartis Animal Health	Elanco	\$5,350.0	\$1,100.8	NA	4.9x	NA

\$ amounts in USD millions

NA - Not Available

NM - Not Meaningful

Median

Average

Median	\$364.0	\$613.3	\$68.0	1.1x	11.3x
Average	\$1,984.3	\$1,213.6	\$160.0	2.0x	13.0x

CAPITAL RAISES SNAPSHOT

The animal health divisions of big pharma companies that dominate the industry landscape have been busy consolidating, but smaller players continue to be the most active in the equity and debt markets based on the volume of capital raises, as shown to the right.

While more attention is being paid to the space in recent years, "animal health and nutrition is an under-appreciated sector in terms of venture funding"¹ largely because many life science investors still gravitate towards the human space due to the larger market. However, there are an increasing number of "niche opportunities to leverage the application of human health technologies in animals. If the investment structure is clearly defined up-front, investors can obtain synergies from the data collected, and use a shorter, less costly animal health opportunity to generate liquidity."¹

Sources: ¹Brett Morris, Investment Manager of TechAccel; CapitalIQ

Announced Date	Company	Company Description	Investment Size	Type
Jan-18	Panion Animal Health	Develops treatments for animals suffering from chronic diseases and disorders	\$1.2	Convertible debt (PIPE)
Jan-18	Cambridge Technologies	Manufactures veterinary biologics/vaccines	\$3.5	Growth equity
Jun-17	Jaguar Animal Health	Develops and sells naturally derived health solutions	\$1.7	Convertible debt (PIPE)
May-17	Integrated Animal Health	Develops and sells farm and pet feeds, supplements, and health products	\$5.0	Growth equity
May-17	Calysta	Develops and produces commercial aquaculture and livestock feed	\$40.0	Growth equity
Dec-16	KnipBio	Develops biotechnology for healthy animal nutrition	\$2.0	Venture capital
Nov-16	Jaguar Animal Health	Develops and sells naturally derived health solutions	\$1.0	Growth equity (PIPE)
Oct-16	ImmuCell	Develops and sells animal health products for dairy and beef	\$3.5	Growth equity (PIPE)
Jun-16	Jaguar Animal Health	Develops and sells naturally derived health solutions	\$4.7	Growth equity (PIPE)
May-16	WooGene B&G	Develops and sells livestock feed product functionality	\$10.9	Convertible debt (PIPE)
Apr-16	Kemin	Manufactures ingredients for animal health and nutrition	\$50.0	Convertible debt
Feb-16	Calysta	Develops and produces commercial aquaculture and livestock feed	\$30.0	Venture capital
Jan-16	Parneitl Pharmaceuticals	Develops and sells pharmaceutical veterinary solutions	\$15.0	Growth equity (PIPE)
Dec-15	Kimipharm	Manufactures and sells veterinary pharmaceuticals/vaccines	\$7.7	Convertible debt (PIPE)
Nov-15	SmartVet	Manufactures and sells medicines and vaccines for livestock and wildlife	\$5.0	Venture capital (crowd funding)
Oct-15	AgLogica	Develops novel behavior monitoring systems to manage animal health problems	\$3.5	Venture capital
Jun-15	Nutrisinc	Produces and supplies protein-based nutrition products for animal nutrition	\$5.2	Growth equity
Apr-15	Nutrisinc	Produces and supplies protein-based nutrition products for animal nutrition	\$1.6	Growth equity
Feb-15	KnipBio	Develops biotechnology for healthy animal nutrition	\$1.6	Venture capital
Jan-15	Calysta	Develops and produces commercial aquaculture and livestock feed	\$10.0	Venture capital
Dec-14	Jaguar Animal Health	Develops and sells naturally derived health solutions	\$1.0	Venture capital
Nov-14	SmartVet	Manufactures and sells medicines and vaccines for livestock and wildlife	\$5.0	Venture capital
Nov-14	ELIAS Animal Health	Develops treatments for cancer in companion animals	\$2.0	Venture capital
Nov-14	BioSourcing	Produces biologicals for animal health	\$6.2	Venture capital
Sep-14	Bluestar Adisseo	Develops, produces, and sells feed additives for animal nutrition	\$110.1	Growth equity (PIPE)
Aug-14	Jaguar Animal Health	Develops and sells naturally derived health solutions	\$1.1	Venture capital
Apr-14	Alivira Animal Health	Manufactures and sells veterinary products for livestock and companion animals	\$19.9	Venture capital

\$ amounts in USD millions

ABOUT BOURNE PARTNERS

As an industry-focused advisor of companies seeking capital markets solutions, such as raising capital or exploring M&A opportunities, we provide value-added insight and transaction services to maximize client value. Exclusively focused in healthcare, our team has a deep track record of transaction success, together raising over \$2 billion in equity and debt capital and executing over \$5 billion in healthcare and pharmaceutical M&A transactions. We hope this market snapshot is a helpful reference and please feel free to reach out with any questions or to discuss ways Bourne Partners may be able to add value to your company.

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