

Animal Tracks

Paws Up: Survey Says Robust 3Q Veterinary Demand; Sustained Confidence in ZTS

Life Science Tools and Diagnostics | Channel Check

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- **Impressive growth in 3Q veterinary practice volume, revenue:** According to our proprietary survey of 75 US companion animal veterinarians, 80% of practices experienced positive volume growth in 3Q (vs. 71% in 2Q), increasing 3.0% on a weighted avg. basis, an acceleration relative to the previous quarter's increase of 1.6% and the best trend since our 1Q16 survey, indicating a potential bolus in veterinary demand as well as a strong ongoing recovery as practices eased social distancing protocols and resumed routine and elective procedures amidst state reopenings. Practice revenues were in-line with overall traffic, increasing 3.0% on a weighted average basis (vs. +1.6% in 2Q), with growth across categories including new patient traffic (+2.7%), acute care visits (+2.1%), and diagnostic testing volumes (+2.0%). Sentiment from respondents was optimistic on demand trends for the next 12 months, with 81% expecting positive growth in patient traffic and 88% of respondents expecting positive growth in practice revenues, suggesting abating headwinds from COVID-19. All in, our results suggest that veterinarians were largely successful in their ability to operate under modified conditions (>61% of practices curbside pickup-only), reinforcing our confidence in the resilience of the Animal Health sector.
- **ZTS—Leading the Animal Kingdom:** The majority (53%) of respondents selected **Zoetis** (ZTS, Outperform) as the best positioned in Animal Health, noting its high-impact and comprehensive innovative portfolio. Responses regarding its potential blockbuster Simparica Trio (launched in April) were encouraging, with over half (52%) of respondents either already prescribing (31%) or planning to prescribe Simparica Trio (21%). Feedback on its atopic dermatitis portfolio was incrementally positive, with 57% expecting to prescribe more Apoquel in 2020/2021 (vs. 2019), and the advantages of Cytopoint are increasingly resonating with overwhelmingly constructive feedback, suggesting upside to our underlying 2020 estimates. The vast majority (76%) of respondents expressed willingness to prescribe ZTS's upcoming monoclonal antibody candidate to treat feline pain (est. US 2021), underscoring the dire need for the product. All in, our results underscore the continued traction of new innovative products in ZTS' Companion business (50% of sales).
- **Boosting Target Prices:** We are raising our Target Price for **Zoetis** (ZTS, Outperform) to \$192 (from \$182), **IDEXX Laboratories** (IDXX, Outperform) to \$442 (from \$422), **Elanco Animal Health** (ELAN, Neutral) to \$33 (from \$27), **Chewy** (CHWY, Outperform) to \$74 (from \$62), **Petmed Express** (PETS, Underperform) to \$24 (from \$20), **Covetrus** (CVET, Neutral) to \$17 (from \$14), and **Patterson Companies** (PDCO, Outperform) to \$35 (from \$34) on the encouraging demand metrics from our survey indicating a faster-than-expected COVID recovery.

- **Dog'nostics—Building optimism:** Our survey results indicate ongoing optimism in future diagnostic testing volumes with 72% of respondents expecting diagnostic testing to rise over the NTM (vs. 73% in 2Q). In addition to these positive indicators of recovering dog'nostic fundamentals, we maintain our conviction in the long-term growth prospects for **IDEXX Laboratories** (IDXX, Outperform), amidst continued lackluster traction for competitors' offerings, where IDXX holds majority (57%) share in equipment and 49% share in reference labs based on our cohort, and where we view ZTS/ABAXIS integration efforts and reference lab adoption remain in early stages.
- **CHWY's rise continues—heightened channel shifts:** An impressive 91% and 81% of respondents view **Chewy** (CHWY, Outperform) as gaining share in the pet Rx and the OTC market, respectively, suggesting building traction for CHWY's newer pharmacy offerings. Utilization of e-prescription management platforms remains in its nascent stages, as 58% of respondents use either **Vets First Choice (Covetrus/VFC, 31%)** or **Vetsource (27%)** for e-prescription management, and sales generated from online platforms represent only 4.4% of practice revenue, and ad hoc commentary continues to indicate that the platforms fail to compete with CHWY's pricing and pet owner mindshare. Importantly, 31% of respondents expressed willingness to partner with CHWY instead of VFC/Vetsource if the economics were favorable (vs. 32% in 2Q). While vet commentary on CHWY remains naturally contentious, our view is that it is steadily gaining share in the pet medication space, particularly as manufacturers sell directly to e-commerce channels and as COVID accelerates shifts to online channels.

Table of Contents

Veterinary survey takeaways	5
3Q Survey Executive Summary by Company	5
State of the Industry	8
3Q Practice volume & revenues: Recovery underway.....	9
Seasonal factors – Slight positive impact noted	12
NTM and 4Q outlook	13
Animal health supply chain.....	15
E-Commerce Platforms	17
Chewy takes a bite of the Rx market	24
Practice management software	25
Amazon, negligible presence to date	26
Dog'nostics dynamics	26
Diagnostic testing momentum continues	26
Diagnostic equipment share analysis: IDEXX remains clear leader	28
Factors influencing point-of-care equipment purchases	29
Diagnostic equipment shifts minimal	30
Innovation Tracker: Initial Feedback for IDXX's Digital Cytology Offering	32
Initial Traction for IDXX's ProCyte One Hematology Analyzer	33
Foray into In-Clinic Fecal Analysis: ZTS's VetScan Imagyst	34
Reference laboratory dynamics: A duopolistic market, limited share shift, with minimal ZTS traction yet, as expected	34
Animal Pharm: A look at Animal Health therapeutics.....	38
Fleas and Ticks: A look at Simparica (ZTS) and Credelio (ELAN)	38
Assessing veterinarians appetite for a triple combination parasiticide	39
Apoquel – A notable driver in veterinary medicine (Zoetis)	41
Cytopoint (Zoetis): Cited as the most impactful new product	42
Addressing feline pain: Overwhelming demand for a feline chronic pain product	43
Galliprant (Elanco): Demand Steady	44
Entyce (Elanco): Solid trajectory for appetite stimulant	46

Generics	47
Relevant detailed commentary.....	49
Zoetis	59
IDEXX Laboratories	61
Elanco Animal Health	63
Chewy	65
Covetrus	67
Patterson Companies	69
PetMed Express	71

Veterinary survey takeaways

We commissioned a survey of 75 practicing veterinarians dispersed across 26 states in the U.S., with the highest number of responses in Texas (9), Florida (9), New York (8), Colorado (8), Massachusetts (4), and New Jersey (4). Respondents were exclusively small/companion animal veterinarians with an average tenure of 20 years, in line with previous surveys (historical avg. = 20 years). Of note, the vast majority of respondents were from independently-owned offices (71%) or from corporate chains of over 100 hospitals (16%), a breakdown we will monitor as consolidation plays a greater role in the industry.

3Q Survey Executive Summary by Company

- **Zoetis (ZTS, Outperform)—Top pick in Animal Health:** We are encouraged by the seemingly abating impact of COVID-19 in the quarter, as evidenced by +3.0% patient visit growth and +3.0% practice revenue growth. We also highlight that only two respondents cited pharmaceutical sales as a revenue category experiencing headwinds related to COVID-19, with channel shifts to online growing rapidly, helping to support prescription sales. All in, the survey results continue to bode well for ZTS's US Companion Animal business (32% of sales) longer term, where the majority (53%) of vets selected ZTS as the best positioned animal health company.

Focus will be on 4Q and beyond following a potential bolus in demand in 3Q and amid ongoing COVID uncertainty, where we view animal health constituents are uniquely well-positioned, as veterinarians have seemingly adapted to socially distanced curbside pickup models (>61% of respondents are currently operating under curbside pickup-only models) that allow practices to remain open and retain revenues regardless of COVID-19 case trends.

In our survey, veterinarians were optimistic on the potential blockbuster **Simparica Trio**, its recently-launched flea/tick/heartworm combination product. According to our survey, **52% of respondents either currently prescribe Simparica Trio (31%) or plan to prescribe Simparica Trio (21%)**, an impressive feat given its recent launch in April 2020 amidst COVID. Importantly, only 21% of respondents view that the launch has been negatively impacted by COVID-19 and social distancing protocols, an encouraging dynamic despite the reduced opportunities for veterinarian/pet owner interaction inherent in a curbside pickup model. All in, the results increase our confidence in ZTS's expectations for essentially three full quarters of Simparica Trio sales, amounting to an estimated \$125 million in 2020 sales, net of existing parasiticide cannibalization. See our analysis of the broader flea/tick/heartworm market in our note ([Animal Tracks: Triple Check](#)).

Our survey also revealed continued broad-based enthusiasm for **Cytopoint**, with 15% of respondents ranking the monoclonal antibody as one of the most impactful products to practice sales currently, more than any other product in our survey, with the top four products cited stemming from ZTS. Cytopoint sales rose 60% in 2019, to \$206 million, and we forecast a 24% rise in 2020, to \$256 million, with growth of +31% internationally and +23% in the US, supported by the overwhelmingly positive feedback in the survey.

A vast majority of respondents (76% vs. 77% in 2Q) expressed willingness to prescribe ZTS's upcoming monoclonal antibody candidate to treat **feline pain**, cited as the most critical unmet need in animal health, which ZTS recently filed for approval and expects to launch in 2021. Even more respondents (79%) view there is a meaningful opportunity to use this product to treat chronic feline pain, indicating a vast and severely underpenetrated market opportunity for ZTS to capture should this product be approved.

In **Dog'nostics**, while ABAXIS integration from 2018-2019 was slightly slower than initially expected, ZTS now has an integrated field force (fully staffed internationally) and is better positioned to more seamlessly bundle ZTS therapeutics with the legacy ABAXIS portfolio with opportunities to expand internationally and into livestock longer term. The addition of several domestic reference labs (ZNLabs, Phoenix Central Lab, and Ethos Diagnostic

Science) over the past year should create further cross-selling opportunities, which we view should offer substantial opportunities for future growth, leveraging its extensive sales footprint, consistent with commentary from our survey. While ZTS remains in the early stages of its expansion into diagnostics services and equipment, we highlight **53% of respondents expect ZTS to eventually be successful in bundling therapeutics with diagnostics, and 13% either use ZTS (1%) or express willingness to switch (12%) to ZTS as their primary reference lab provider.**

- **Elanco Animal Health (ELAN, Neutral):** Our cohort of vets ranked ELAN as the third best positioned Animal Health company, behind ZTS and Merial/Boehringer Ingelheim. Digging into its product portfolio, respondents were encouragingly positive on Galliprant where the majority (71%) prescribe the product (up from 63% in 2Q), and 26% noted they prefer it over alternatives (i.e., Rimadyl—Zoetis). In addition to the aforementioned Galliprant feedback, Entyce (another product from its Aratana acquisition) traction continues to build, with 63% of respondents prescribing or planning to prescribe the inappetence therapy (vs. 61% in 2Q). Note, 7% and 5% of respondents ranked Galliprant and Entyce, respectively, as among the most impactful recent products in veterinary medicine, with one respondent also noting Nocita.

Regarding its flea/tick portfolio, traction remains modest for Credelio, with 13% of respondents noting they recommend Credelio (vs. 15% in 2Q and 21% in 1Q). Clients not prescribing the product attributed the decision to having too other many options, their preferences for competing offerings, and its cost being prohibitive.

- **IDEXX Laboratories (IDXX, Outperform):** Our survey results indicate ongoing optimism in future diagnostic testing volumes, with **72% of respondents expecting diagnostic testing to rise over the NTM (vs. 73% in 2Q).** We remain encouraged by the clear leadership of IDEXX, sustained rapid testing volumes, and enthusiasm for new offerings in our survey, helping to strengthen our conviction in IDEXX's longer term growth prospects as its direct sales effort matures and expands with compelling advantages in a comprehensive test/instrument/service portfolio, innovative product launches (i.e., Digital Cytology, ProCyte One Hematology Analyzer), cohesive IT systems, and an expanding global presence.

In terms of equipment share shifts, IDEXX was a net gainer over ZTS, with one respondent noting they switched from ABAXIS to IDEXX in the last 12 months, though our results emphasize the stickiness of diagnostic relationships, as 75% of respondents do not expect to switch vendors over the next 12 months.

We highlight that only seven respondents reported using VetScan SA, ABAXIS/ZTS's urine sediment analyzer launched in March 2018, 12 respondents reported using ABAXIS's FLEX4 rapid test (vs. 14 in 2Q), and only one respondent cited ZTS as their primary reference lab provider, emphasizing IDEXX's still compelling competitive positioning.

- **Distributors — Covetrus (CVET, Neutral), AmerisourceBergen's MWI (ABC, Outperform), Patterson Companies (PDCO, Outperform):** In our survey, 35% of respondents cited CVET as their primary distributor, overtaking ABC's MWI (29%). While CVET admittedly faced missteps in the months following its February 8, 2019 spin from HSIC with lofty growth aspirations and synergy targets thereon, we are encouraged by its newfound commitment to operational discipline and execution in its core distribution business, where management highlighted strengthening customer relationships and plans to drive operating leverage by rationalizing its SG&A spend, leveraging its global scale in product sourcing, and optimizing its salesforce in our recent NDR ([see On the Virtual Road with Management](#)).

In terms of e-Rx platforms, in our survey, 58% of veterinarians use either VFC (31%) or Vetsource (27%), vs. 30% and 22%, respectively in 2Q. Utilization thereon remains relatively low in its early days (representing 3.7% of practice revenue for VFC users and 5.3% for Vetsource), and while we are encouraged by the ramping onboarding of the relatively new solution (particularly in a COVID world, as evidenced by +66% VFC growth and +37% same-store sales growth in 2Q), we view building contributions will not fully

offset near term pressures from e-commerce competitors with new pharmacy offerings and direct manufacturer relationships with alternative channels. While veterinarians have seemingly warmed to e-commerce platforms like Vets First Choice, underscoring their inherent value proposition in helping veterinarians drive revenue growth and profitability, particularly amidst COVID-related shifts to online, much of the justification for veterinary adoption is to fend off competition from alternative e-commerce retailers such as **Chewy** (CHWY, Outperform). Our results indicate that CHWY is making incremental progress in this market, heightening the competitive dynamics in the space and contributing to our view that the market is evolving quicker than expected.

- **Online Pharmacy – Chewy (CHWY, Outperform), PetMed Express (PETS, Underperform):** Approximately 77% (vs. 69% in 2Q) of participants have experienced increased competition (as it relates to both prescription and OTC medications) from alternative retailers such as **PetMed Express** (PETS, or 1-800-PETMEDS), **Chewy** (CHWY, or Chewy.com), or other big box/online/omni-channel retailers. The heightened competition likely stems from an accelerated shift to online sales amidst COVID-19 social distancing protocols, in addition to longer-term drivers including cheaper options for the consumer, a greater desire to price shop amongst consumers, heightened awareness of online pharmacies, as well as convenience given the advent of online shopping. Of note, manufacturers are now proactively supporting online players, establishing MAP pricing strategies.

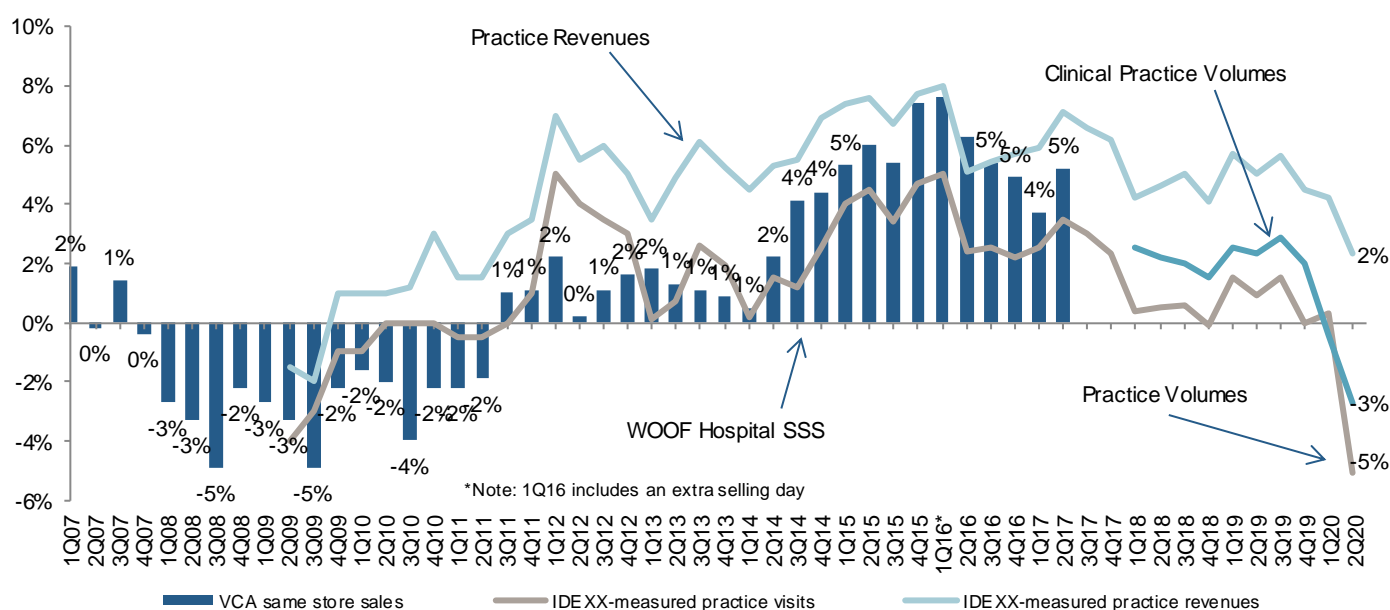
While the increased use of alternative channels in some ways bodes well for PETS, 25% of respondents believe PETS is losing share in prescription sales, and 27% believe it is losing share in OTC sales. Meanwhile, **respondents view CHWY is making notable headway in the marketplace, with 91% and 81% viewing it is gaining share in prescription and OTC sales, respectively.** Additionally, 31% of respondents (vs. 32% in 2Q) expressed willingness to partner with CHWY over VFC/ Vetsource if the economics were more favorable, indicating that CHWY is also making some headway in its effort to partner with veterinarians. As a reminder, Chewy launched an online pharmacy in July 2018, underscoring what we view as PETS's lack of meaningful differentiation relative to its retail/e-commerce competitors.

State of the Industry

With the economic malaise, veterinary utilization trends in the U.S. were weaker over the 2008-2011 timeframe, with a sharp decline in veterinary clinic traffic on weakening pet ownership trends and lower patient adherence. Veterinary office visits declined 2% in 2010, on the heels of an estimated 3% decline in 2009, according to the American Veterinary Medical Association (AVMA), and patient visits/week dropped to 66 patients, on average, from 75 historically (76, according to our latest survey, -5.1% yoy). However, the declining trends began to abate in 2011, and veterinary clinic traffic rebounded relatively quickly in 2012.

As a frame of reference, prior to the economic downturn, annual practice revenues historically increased 7-13% annually, on average, with 76% of treatment fee increases exceeding inflation¹. However, lower patient volumes disproportionately weighed on practice revenues during a challenging economic backdrop in 2008-2011.

Figure 1: Veterinary Hospital same store revenue & volume reported by IDEXX & VCA



Source: Company data, Credit Suisse estimates

From 2008-2011, lackluster routine veterinary visits were the industry's largest battle, as reflected in declining quarterly same store volumes from VCA, the leading standalone animal hospital chain (816 hospitals). However, in 3Q11, VCA reported its first positive same store hospital sales trend in 11 consecutive quarters, signaling an inflection point in veterinary demand.

While we acknowledge inherent differences with the current COVID-19 situation compared to prior recessionary environments, we highlight the resiliency of the animal health sector, where veterinary clinic traffic and sales rebounded relatively rapidly in 2012 post-recession. COVID-19 has undoubtedly impacted our animal health companies, but our favorable view on the sector remains unchanged, where we expect sustained momentum in veterinary clinic volumes and practice revenues in medium and long-term despite near-term disruptions, helped by the

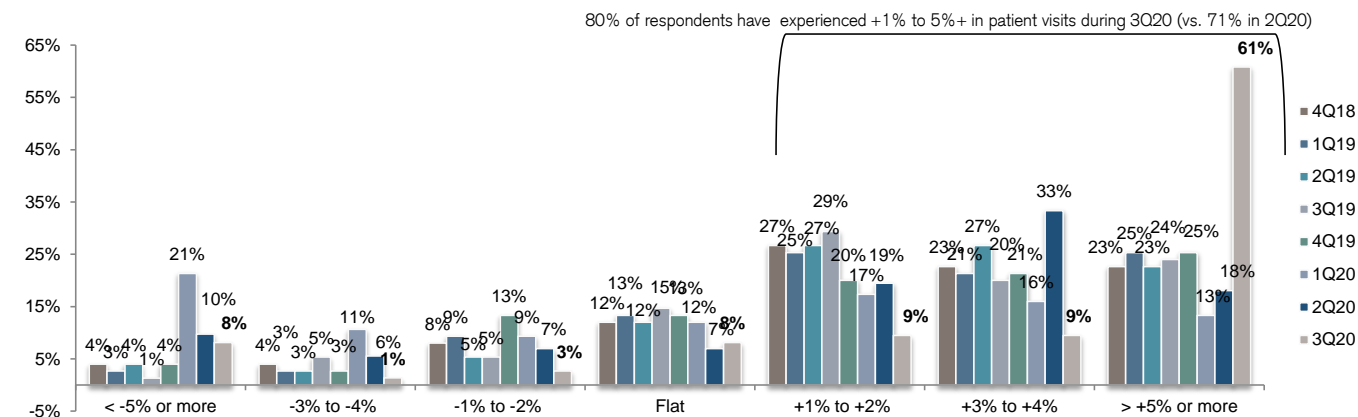
¹ NCEVI: Update on Veterinary Demographics & Economic Trends, May 2011

proliferation of more advanced diagnostic testing capabilities, patient communications platforms, improving patient adherence, expanding pet ownership, innovative clinical technologies, and sophisticated therapeutics.

3Q Practice volume & revenues: Recovery underway

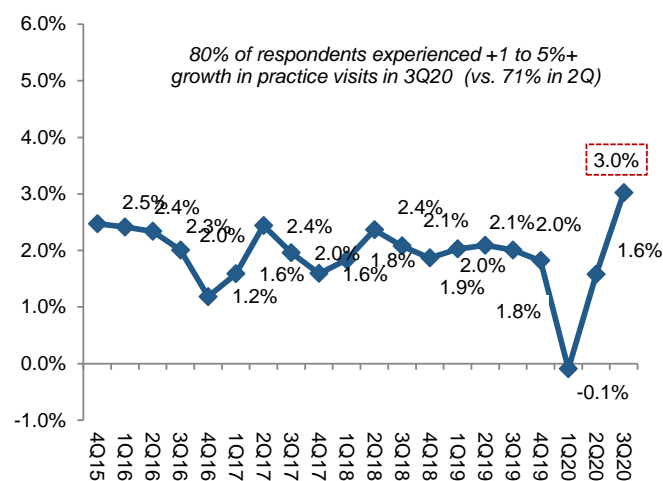
Turning to our survey work, 80% of respondents experienced positive growth in patient visits in 3Q20 (vs. 71% in 2Q20, 59% in 1Q20, and 80% in 4Q19) with total traffic increasing 3.0% on a weighted average basis, an acceleration relative to the previous quarter's increase of +1.6% and reflecting the highest growth in our survey's history, indicating a potential bolus in demand as well as an impressive ongoing recovery as practices continue to ease social distancing protocols and resume routine and elective procedures amidst state reopenings. Approximately 61% of respondents reported +5% or more growth in patient volume over the past three months, well above our historical average of 23%. Additionally, only 12% of respondents reported declines in patient visits in 3Q20, an encouraging deceleration relative to the 2Q experience (22%) and our historical avg. of 14%.

Figure 2: Quarterly veterinary clinic visits (yoy growth) – Respondent distribution



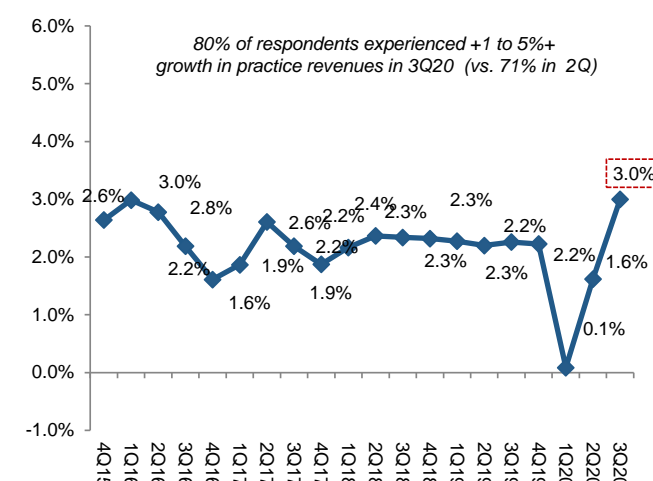
Source: Company data, Credit Suisse, N=75

Figure 3: Quarterly clinic traffic growth



Source: Company data, Credit Suisse, N=74.

Figure 4: Quarterly clinic revenue growth



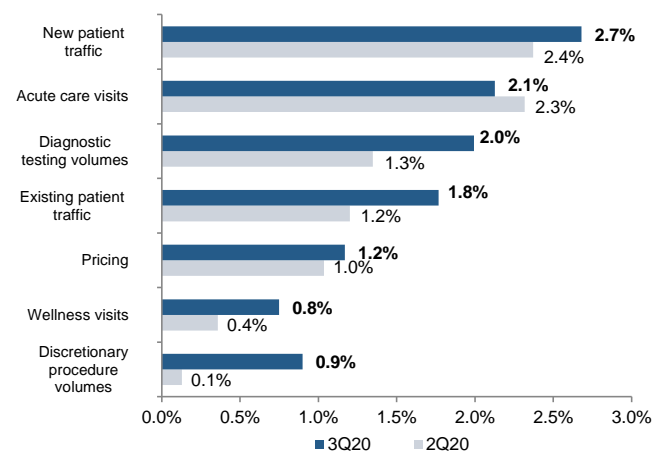
Source: Company data, Credit Suisse, N=69.

Practice revenues were in-line with overall traffic, increasing an impressive 3.0% on a weighted average basis (vs. +1.6% in 2Q, +0.1% in 1Q, and +2.2% in 4Q), reflecting the highest

reported growth since 1Q16. Encouragingly, only 7% of vets reported revenue declines of 5% or greater (albeit slightly above our historical average of 4%), and 12% of respondents reported declines, below our historical average of 13%.

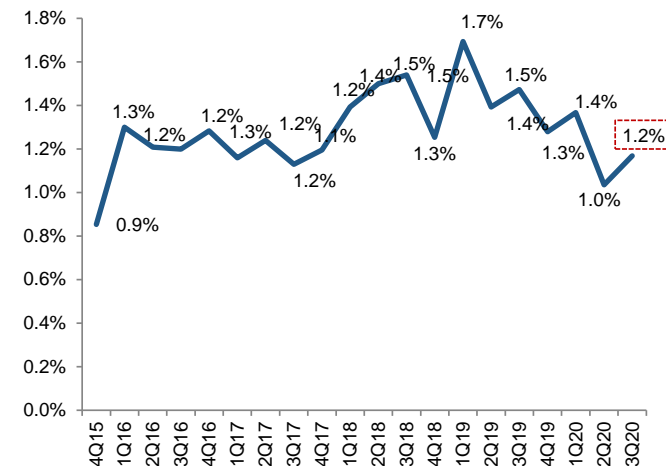
Importantly, we note that practice revenues were driven by new patient traffic (+2.7%), acute care visits (+2.1%), diagnostic testing volumes (+2.0%), existing patient traffic (+1.8%), pricing (+1.2%), discretionary procedure volumes (+0.9%), and wellness visits (+0.8%). Of note, pricing has had an average impact of +1.2% on practice revenues in the past 12 months, a dynamic that has seemingly been unaffected by COVID-19, consistent with industry commentary that has alluded to sustained price capture from both pharmaceutical and diagnostics companies.

Figure 5: Factors impacting practice revenues – New patient traffic, diagnostics, acute care, price remain prominent drivers



Source: Company data, Credit Suisse, N=75

Figure 6: Pricing impact on practice revenue growth – sustained price capture



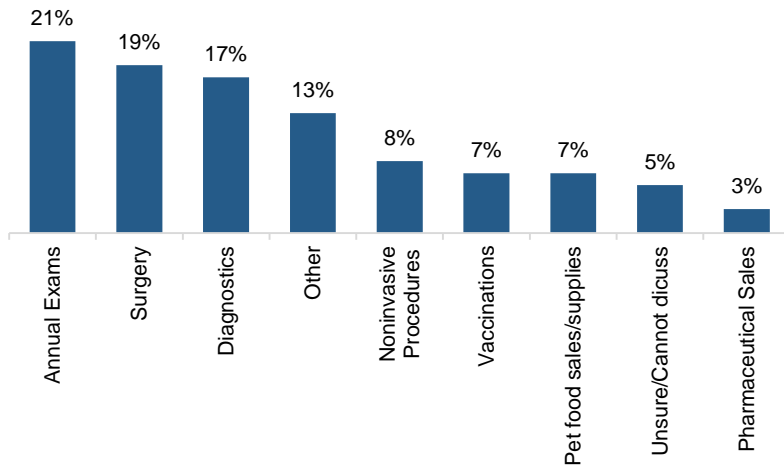
Source: Company data, Credit Suisse, N=75

COVID-19 Impact and Response in 3Q

We are encouraged by the robust increases in patient traffic and practice revenue across our cohort in 3Q as well as the limited reports of patient traffic/practice revenue declines, potentially indicating a bolus of demand for veterinary services following COVID-related lockdown. The veterinary industry recovery has been impressive over the past several quarters, emphasizing the resilience of the animal health sector and demonstrating the flexibility of veterinarians to adapt to measures such as curbside pick-up and drop-off.

However, with the pandemic ongoing, we asked our cohort about the impact of COVID-19 on their practices in 3Q. Similar to past recessionary environments when routine veterinary visits were slightly slower to recover than other visit types, veterinarians reported that annual exams (21%) were the categories of revenues most significantly impacted by COVID, with surgeries (19%) and diagnostics (17%) also facing headwinds. More encouragingly to our companion animal manufacturing and diagnostics companies, only two respondents (3%) cited pharmaceutical sales as the category most impacted by COVID-19, while five respondents (7%) reported headwinds to revenues associated with vaccinations.

Figure 7: Categories of Practice Revenues Most Impacted by COVID-19

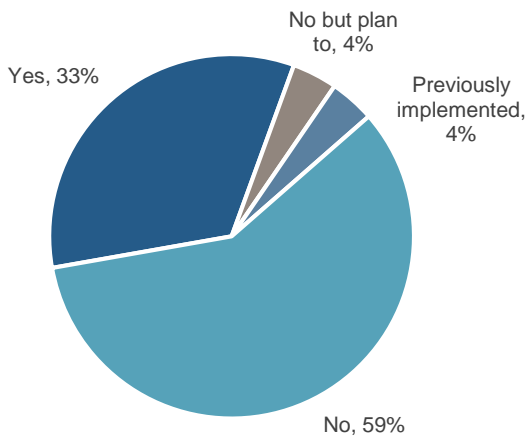


Source: Company data, Credit Suisse, N=75

In light of initial COVID impacts on visit traffic and practice revenues, many veterinarians have implemented telemedicine/remote visits and curbside pickup/drop-off procedures to retain visits that may have otherwise been lost due to social distancing protocols. 33% of respondents have implemented telemedicine/ remote visits in response to the pandemic, and a majority (61%) are currently operating under a curbside pickup-only model (vs. 72% in 2Q), with an additional 24% of practices operating under a hybrid curbside pickup and in-person visit model.

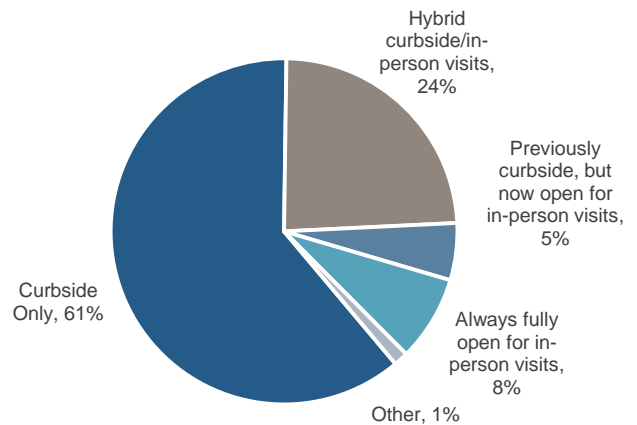
We highlight that veterinarians continued to be successful in their responses to social distancing mandates in 3Q, as no veterinarians in our survey were closed in July, August, or September (consistent with 2Q). With the vast majority of respondents operating under curbside access throughout the quarter, we view the average increases in patient visits (+3.0%) and revenues (+3.0%) as positive indicators of practices' ability to operate under modified conditions.

Figure 8: Has your practice implemented telemedicine or other types of remote visits in response to COVID-19?

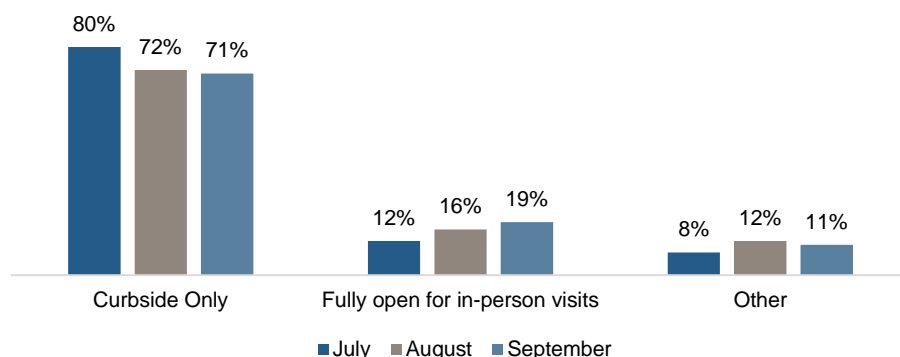


Source: Company data, Credit Suisse estimates, N=75

Figure 9: Has your practice implemented curbside pickup or other social distancing measures in response to COVID-19?



Source: Company data, Credit Suisse estimates, N=75

Figure 10: What best describes your response to COVID-19 for each month?

Source: Company data, Credit Suisse, N=75

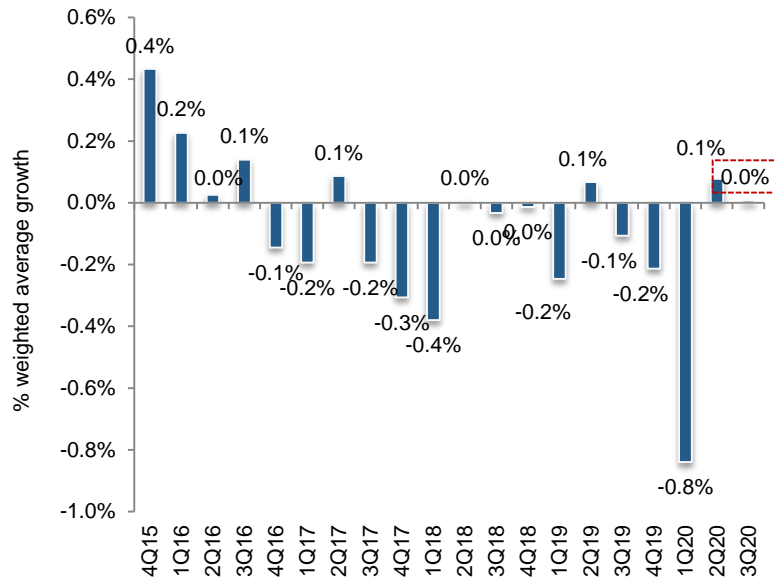
In terms of other COVID impacts, we note that around half (52%) of veterinarians have experienced supply shortages in the past quarter, with 29 veterinarians citing shortages of personal protective equipment (PPE), including masks, gowns, gloves, and cleaning supplies such as rubbing alcohol. Importantly, only eight veterinarians noted shortages/backorders of pharmaceuticals.

Seasonal factors – Slight positive impact noted

Heightened veterinary demand and clinic traffic typically coincide with the onset of the flea and tick season, which occurs during the warmer spring and summer months. An earlier or later onset of milder weather trends can expedite or delay the season and at times cause extreme volatility in veterinary office visits. While we typically view weather as a relatively misguided explanation for fluctuations in earnings trends for companies, there is a seemingly strong correlation between the flea and tick season, weather, and annual veterinary office visits.

Importantly, 17% of respondents view this year's flea and tick season has been harsher and started earlier than in the prior year, while 49% noted this year has been similar to the 2019 experience. In terms of weather, on a weighted average basis, respondents noted a flat impact in 3Q, compared to +0.1% in 2Q, -0.8% in 1Q, and -0.2% in 4Q, with only 5% of respondents reporting a decline in practice volumes due to inclement weather conditions (vs. 4% in 2Q, 25% in 1Q, and 13% in 4Q).

Figure 11: Impact of weather on practice volumes

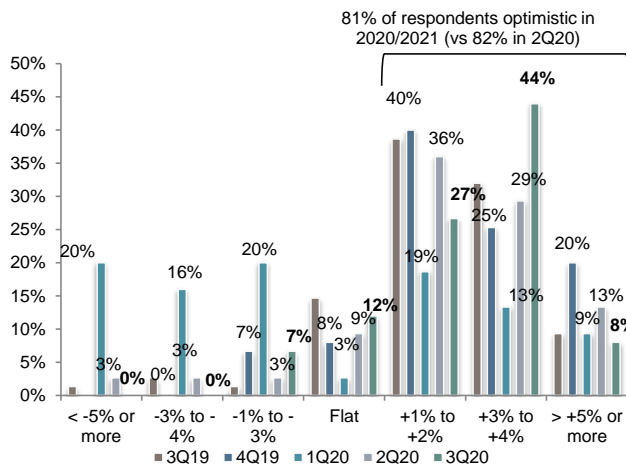


Source: Company data, Credit Suisse, N=71

NTM and 4Q outlook

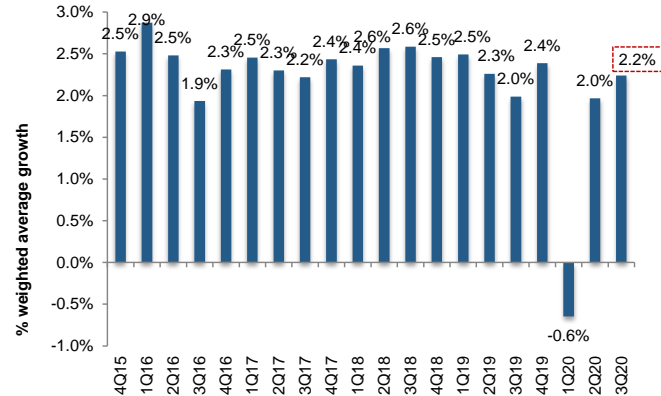
Sentiment from respondents was optimistic on demand trends for the next 12 months, with 81% of veterinarians expecting positive growth in patient traffic, in line with the 82% experience reported in 2Q. Meanwhile, only 7% of veterinarians in our survey expect declines in patient visits, vs. 8% in 2Q, 56% in 1Q, and 7% in 4Q. On a weighted average basis, respondents expect patient visits to increase +2.2% over the next 12 months, which compares to +2.0% in 2Q, -0.6% in 1Q, and +2.4% in 4Q.

Figure 12: Clinic traffic outlook NTM – Respondent distribution



Source: Company data, Credit Suisse, N=73

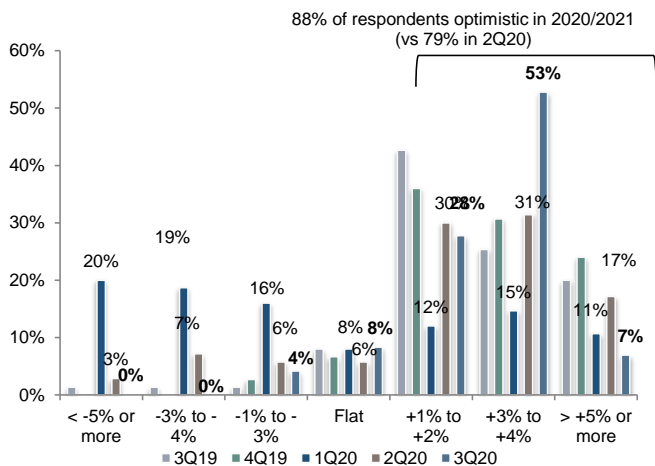
Figure 13: Clinic traffic NTM outlook on a weighted average basis



Source: Company data, Credit Suisse, N=73

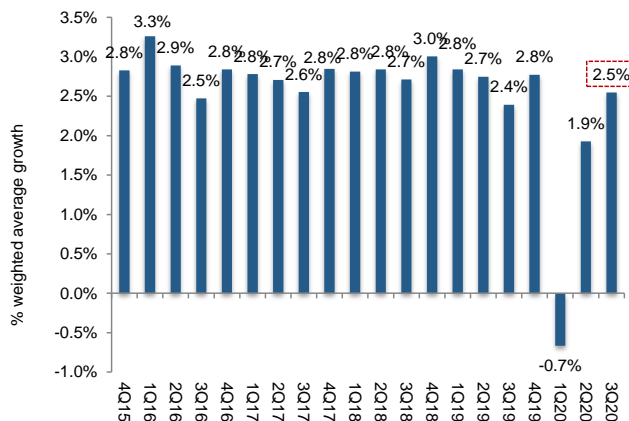
Veterinarians have similar expectations of practice revenues, expecting a weighted average increase of +2.5% over the next 12 months, compared to +1.9% in 2Q, -0.7% in 1Q, and +2.8% in 4Q. Approximately 88% of respondents expect positive growth in practice revenues in the NTM, an encouraging acceleration from the 79% recorded in 2Q (historical average: 88%), with only 4% of respondents expecting declines in practice revenues (vs. 16% in 2Q), below our historical average of 6%, suggesting abating pessimism on the impact of COVID-19.

Figure 14: Practice revenue outlook NTM – Respondent distribution



Source: Company data, Credit Suisse, N=74

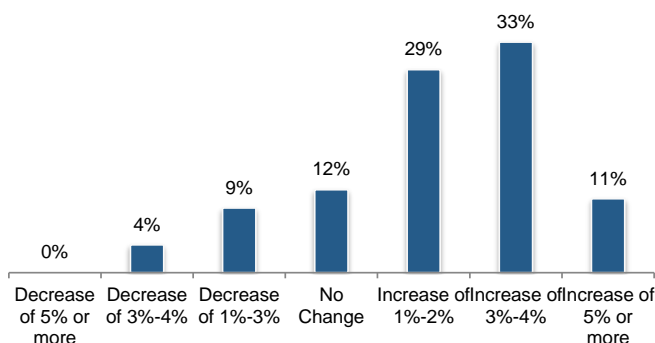
Figure 15: Practice revenue NTM outlook on a weighted average basis



Source: Company data, Credit Suisse, N=74

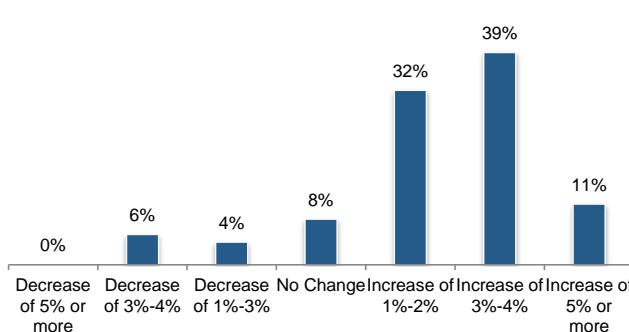
Veterinary sentiment about the upcoming quarter (October, November, and December) in terms of both patient visits and practice revenues is relatively in-line with their expectation for the next 12 months in total. In terms of demand trends for the next three months, 74% of veterinarians expect increases in patient traffic (vs. 79% in 2Q), while 14% of veterinarians in our survey expect declines in patient visits (vs. 17% in 2Q). On a weighted average basis, respondents expect patient visits to increase 1.9% over the next three months. Veterinarians are even more optimistic regarding practice revenues, expecting a weighted average increase of +2.1% over the next three months, with 82% of respondents expecting an increase vs. only 10% expecting a decline in revenues. While the duration of the COVID impact remains unknown, these results indicate that veterinarians expect that the worst of the COVID-19 impact has passed.

Figure 16: 2Q Patient traffic outlook – Respondent distribution: +1.9% weighted average increase



Source: Company data, Credit Suisse, N=73

Figure 17: 2Q Practice revenue outlook – Respondent distribution: +2.1% weighted average increase



Source: Company data, Credit Suisse, N=74

Analysis of veterinary practice revenue streams

Our survey data shows that veterinary practices expect to generate the greatest percentage of revenue from annual exams (20%), surgery (19%), diagnostics (17%), and vaccinations (15%), followed closely by pharmaceutical sales (12%).

Over the next five years, veterinarians expect practice revenue mix to skew more towards annual exams (21%), surgery (21%), and diagnostics (20%), with vaccinations (12%) and pharmaceutical sales (9%) likely representing a lower proportion of revenue, an unsurprising dynamic.

More specifically, pharmaceutical sales represent the category in which veterinarians expect to see the greatest change over the next five years (-276 bps), consistent with our 2Q survey with likely share loss to alternative channels (i.e., Chewy.com/PetSmart).

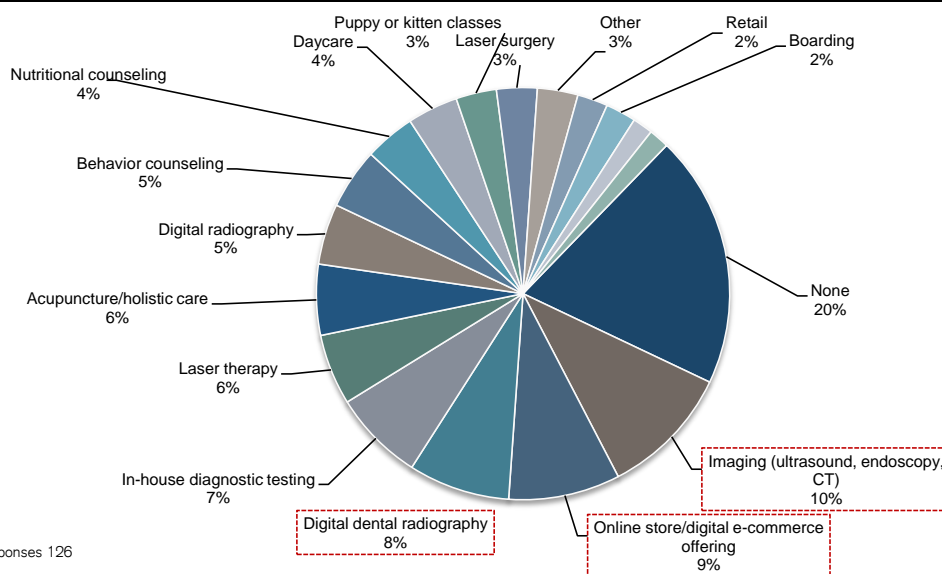
Figure 18: Practice Revenue Mix, LTM vs. Next Five Years

Revenue Stream	Last 12 Months	In Five Years	Increasing/Decreasing
Annual exams	20%	21%	+
Surgery	19%	21%	+
Diagnostics	17%	20%	+
Vaccinations	15%	14%	-
Pharmaceutical sales	12%	9%	-
Noninvasive procedures	8%	9%	+
Pet food/supplies	4%	3%	-
Other	5%	3%	-

Source: Company data, Credit Suisse, N=75

Veterinarians' primary focus is further evident in their plans for capital expenditures over the next 12 months. Amongst our cohort, imaging (10%) represented the service most likely to be upgraded over the next 12 months. Also notable were e-commerce offering (9%) and digital dental radiography (8%). We note that 20% of respondents do not plan to upgrade any services over the next 12 months (vs. 31% in 2Q), slightly below our historical average (22%), an encouraging indicator of normalizing capital expenditure priorities amidst COVID-19.

Figure 19: What services are you most likely to add or upgrade over the next 12 months?

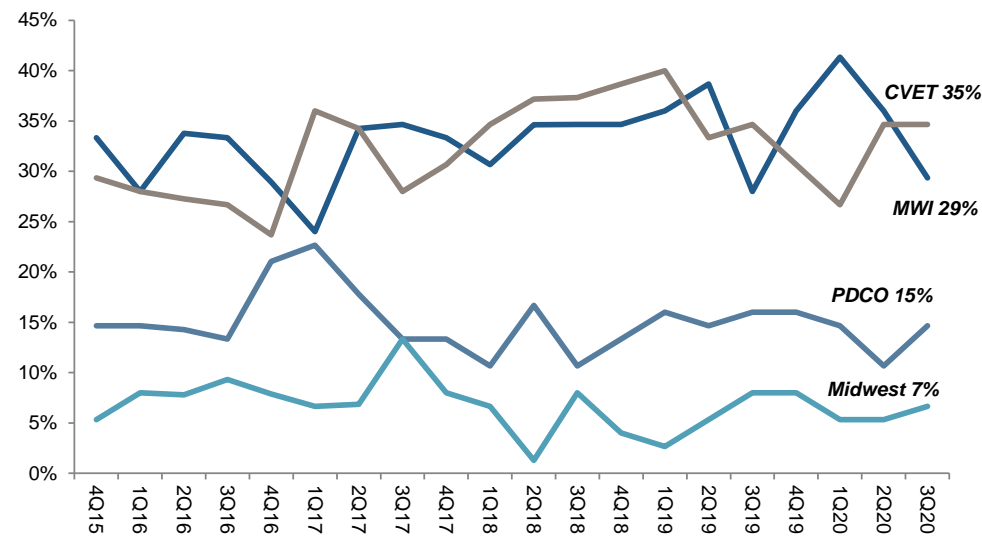


Source: Company data, Credit Suisse, N=75

Animal health supply chain

Based on our survey, **Henry Schein Animal Health** (est. 92% of **Covetrus** revenue) and MWI (a subsidiary of **AmerisourceBergen**) were the most common primary distributors, representing 35% and 29% share of the cohort, respectively. Approximately 15% of survey participants reported **Patterson Companies** as their primary distributor, in line with recent surveys (11% in 2Q, 15% in 1Q, and 16% in 4Q), albeit acknowledging sample size. We note that a clinic's primary supplier typically handles 80% of the relevant distribution business.

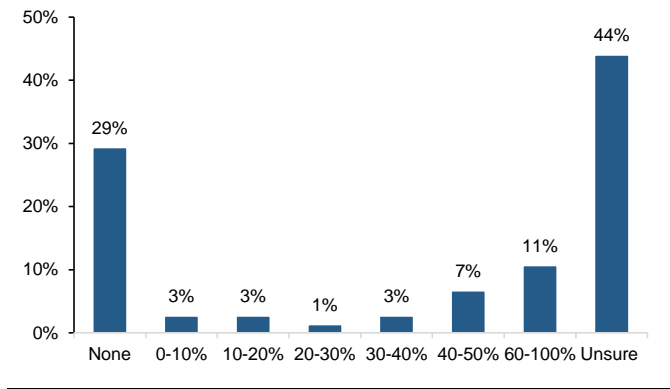
Figure 20: Primary animal health distributor mix



Source: Company data, Credit Suisse, N=75

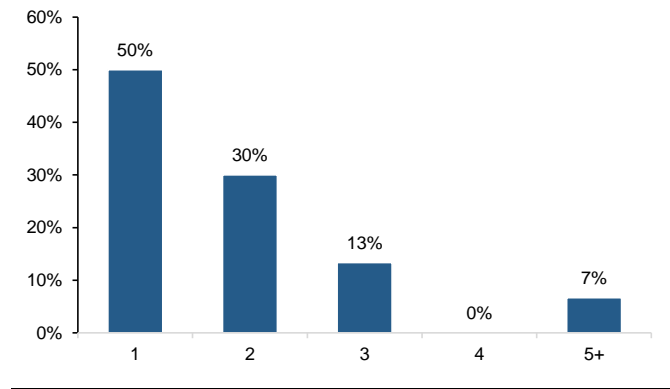
In addition, we asked veterinarians about their participation in group purchasing organizations (GPOs). Around a quarter (27%) of vets reported using GPOs, with 11% using GPOs for 60%+ of their purchases. Among the 27% who use GPOs, 50% use only one, 30% use two, 13% use three, and 7% use five or more.

Figure 21: GPO utilization among our cohort (as % of purchases)



Source: Credit Suisse, N=75

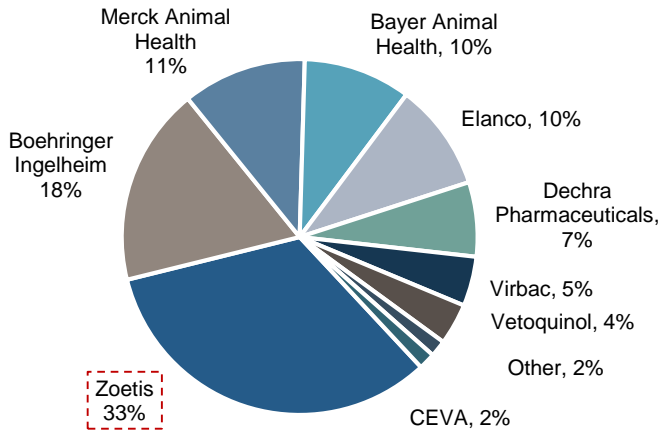
Figure 22: Among users of GPOs, how many GPOs do you work with/have a contract with?



Source: Credit Suisse, N=30

Recently, pharmaceutical manufacturers such as **Zoetis** (ZTS) and **Elanco** (ELAN) have begun selling products directly to veterinarians and e-commerce platforms such as **Chewy** (CHWY), rather than sell their products solely through distributors. Importantly, 33% of respondents noted purchasing directly from ZTS as opposed to purchasing from primary distributors (vs. 35% in 2Q).

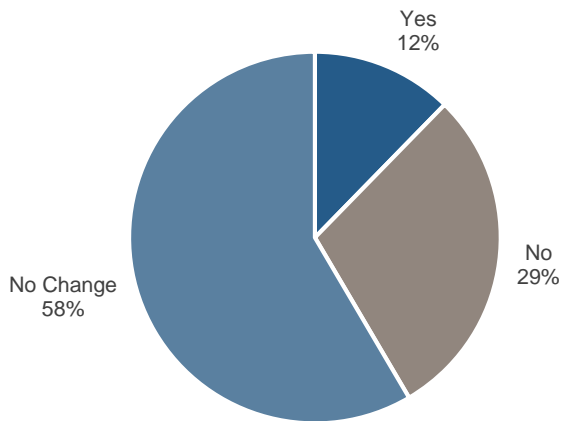
Figure 23: Which manufacturer do you order pharmacy products directly from (vs. through a distributor such as MWI, CVET or Patterson)?



Source: Company data, Credit Suisse, N=75

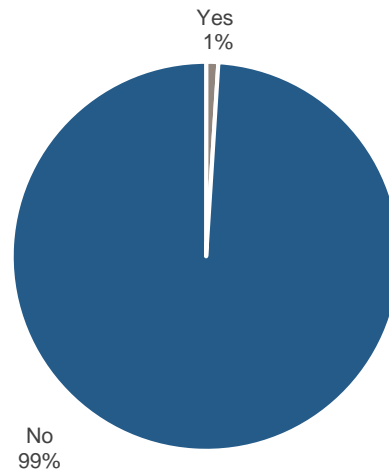
However, our survey results indicate continued stickiness of primary distributors, as 88% of veterinarians responded that they do not expect to purchase a greater portion of pharmaceutical products directly from product manufacturers vs. distributors. Additionally, only 1% of veterinarians reported that they changed their primary distributor relationship over the past six months, further emphasizing the stickiness of distributor relationships.

Figure 24: Do you expect to purchase a greater proportion of pharmaceutical products direct from product manufacturers?



Source: Company data, Credit Suisse, N=75

Figure 25: Have you changed your primary distributor relationship over the past 6 months?

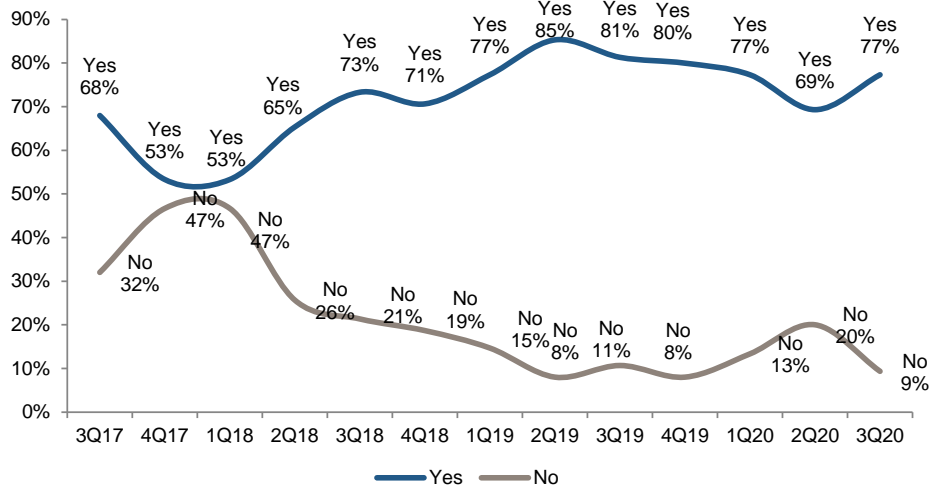


Source: Company data, Credit Suisse, N=75

E-Commerce Platforms

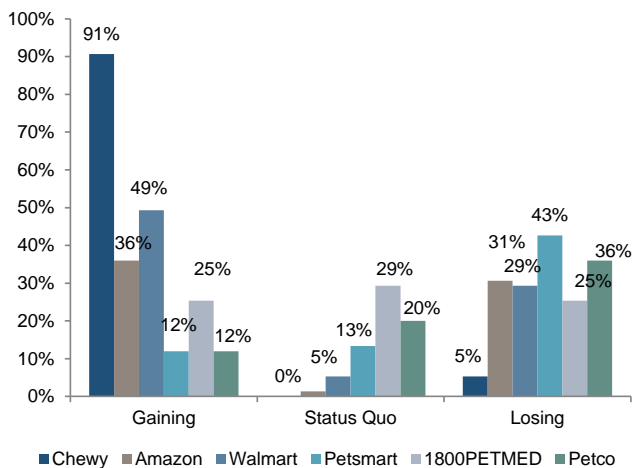
In terms of competing e-commerce platforms, over the past 12 months, 77% of respondents have experienced increased competition (as it relates to both prescription and OTC medications) from alternative channels such as **Chewy** and **PetMed Express** (PETS, or 1-800-PETMEDS) or other big box/omni-channel retailers. Key drivers of the trend likely include COVID-19 dynamics, cheaper options for the consumer, stronger marketing/advertising from retailers, smarter online shoppers, and a greater propensity for consumers to price shop.

Figure 26: Have you experienced increased competition from online retailers (i.e., Chewy, PetMed Express) over LTM?



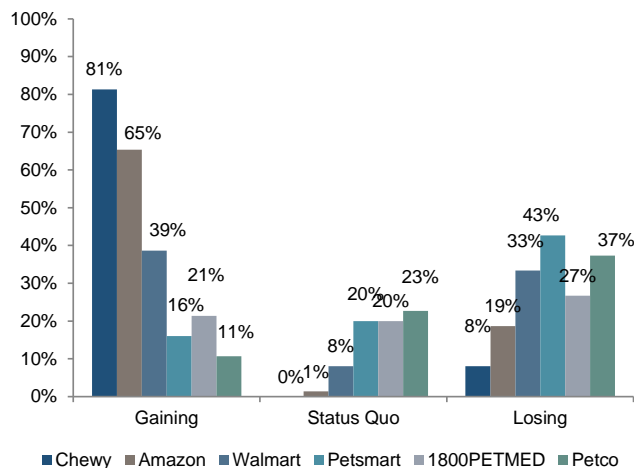
Source: Company data, Credit Suisse, N=75

Figure 27: Sales of Pet Prescriptions: Veterinarians' Perception of Share Shifts Among Pet Retailers



Source: Company data, Credit Suisse estimates

Figure 28: Sales of Pet OTC Medications: Veterinary Perception of Pet Retailers Share Shifts



Source: Company data, Credit Suisse estimates

According to our survey, veterinarians who noted no change or decreasing competitive pressures from third-party retailers referenced that they keep their pricing competitive, that competition is the same as last year, or that they educate clients on the value of their in-clinic pharmacy. All in, survey results and open-ended commentary from our cohort broadly suggest increasing use of alternative channels, a dynamic likely accelerated by COVID-related channel shifts to online spending. We highlight **Elanco** (ELAN) has seemingly capitalized on this trend, more than doubling its revenue in the alternative category in 2018 and 2019 with also noted partnerships with e-commerce channels such as Chewy. Others, including Zoetis, now proactively work with Chewy and other e-commerce channels.

Online Veterinary Pharmacy & Pharmacy Management Platforms

Over half (60% vs. 57% in 2Q) of survey participants partner or have their own home delivery e-commerce solution for pet medications, not only as a competitive response to alternative

online pharmacies but also to improve patient adherence, inventory management, and practice revenue and profitability. The most popular pet medication management platforms amongst our cohort are Vets First Choice (31%) and Vetsource (27%).

Background: As a reminder, **Henry Schein** (HSIC, Neutral) and Vets First Choice announced on April 23rd, 2018 that Henry Schein's animal health distribution business would be spun off and immediately merge with Vets First Choice, with the resulting entity to become a public company known as **Covetrus** (CVET, Neutral). The deal closed on February 7, 2019 and CVET is now a publicly-traded standalone entity (see our initiation note: [A Vet's First Choice, but Paws on Valuation](#)).

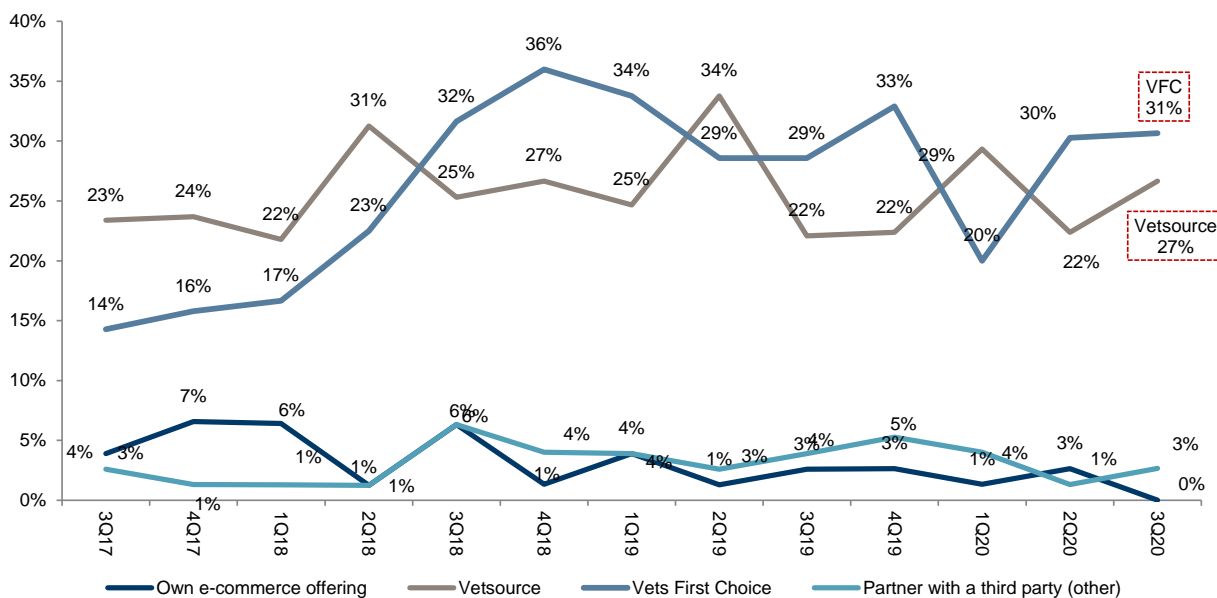
Services like Vets First Choice (~5% of CVET sales) and competitor Vetsource specifically seek to drive better economics (and pet medication adherence) for veterinary practices by providing a customized online platform connecting companion animal veterinarians with pet owners, offering online pharmacy/home-delivery, medication management, specialty compounding services, along with value-added data, analytics, and patient communication solutions.

Figure 29: Comparing offerings at Vets First Choice vs. Vetsource

	Vets First Choice	Vetsource
Dispensing fee	26% fee on suggested retail price for transactions.	15% fulfillment fee on wholesale price for most products; pharmacy fee where applicable.
Startup fee	No	No
Does the hospital control pricing and catalog?	Yes	Yes
Who services their compounding?	Roadrunner Pharmacy	Wedgewood & Road and Riddle Pharmacies
Do they sell parasiticide single doses?	Yes	Yes
Do they carry generics?	Yes	Yes
Do they integrate with software and prepopulate a client list?	Yes	Yes
Do they have built-in secure e-merchant services?	Yes	Yes
When is the call center open? (all times EST)	9 am - 9 pm M-F 10 am - 3 pm, Sat	8 am - 8 pm, M-F 10 am - 4 pm, Sat
Do they offer Rx compliance reports?	Yes	Coming soon

Source: Company data, Credit Suisse estimates

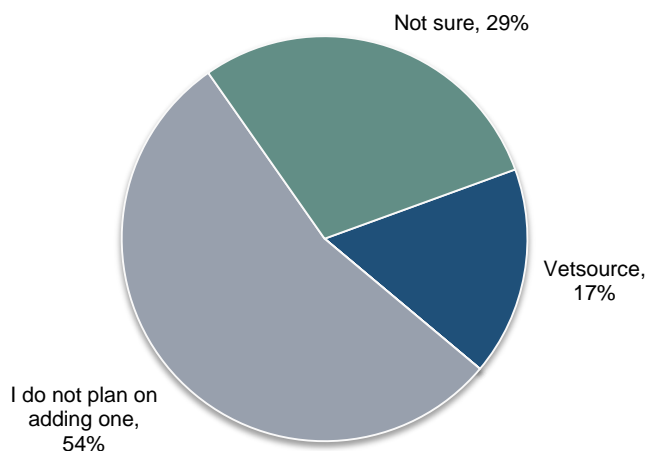
Figure 30: Do you have your own online e-commerce offering for pet medications/other products?



Source: Company data, Credit Suisse, N=75

Among respondents not deploying an e-commerce offering, four plan to utilize Vetsource in the future. We highlight Vets First Choice had 10,900 practices using its platform as of 2Q20, up 25% from June 30, 2019 levels.

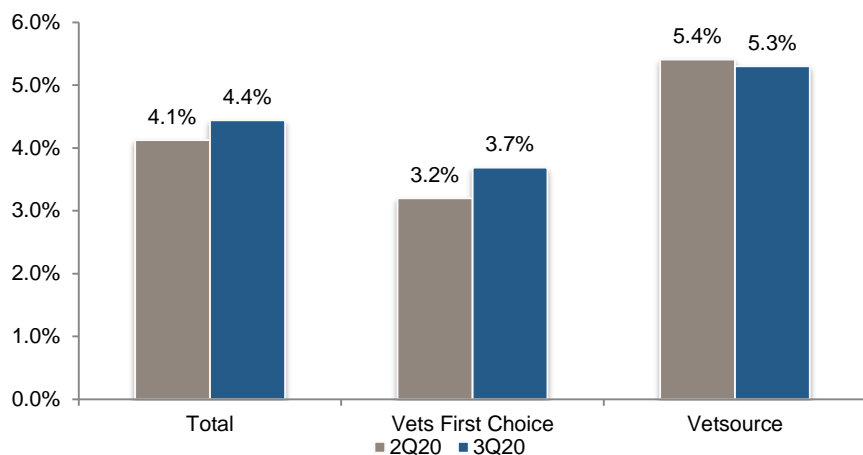
Figure 31: Do you plan on adding an e-commerce offering? If so, who do you plan on partnering with (Excludes vets that already have an offering)



Source: Company data, Credit Suisse, N=24

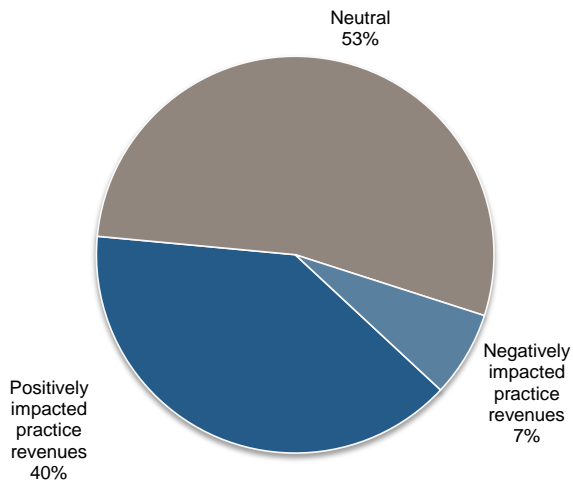
Collectively, 43% of respondents using an e-commerce offering currently reported it has improved practice revenue (vs. 48% in 2Q), with 50% reporting no impact. On average, 4.4% of practice revenues are generated from e-commerce, highlighting greenfield opportunity for continued e-commerce growth in veterinary practices.

Figure 32: % of practice revenues generated through an e-commerce platform



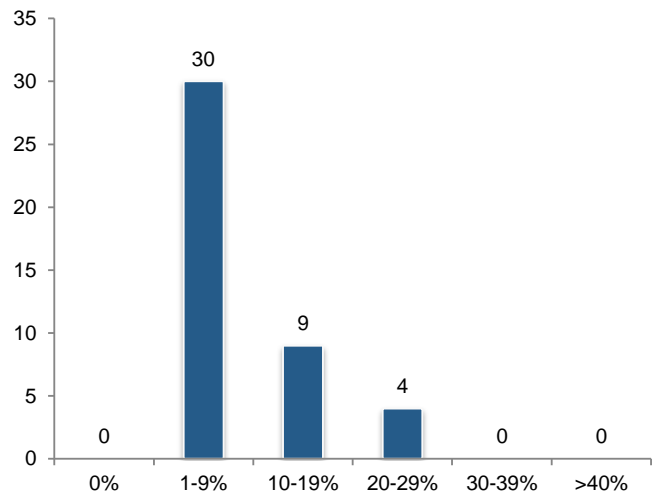
Source: Company data, Credit Suisse estimates; Average across users of e-commerce/mail-order pharmacy platforms

Figure 33: How has your e-commerce offering impacted practice revenue? (including VFC and Vetsource)



Source: Company data, Credit Suisse, N=43

Figure 34: % of practice revenues generated from your e-commerce platform in 3-5 years?

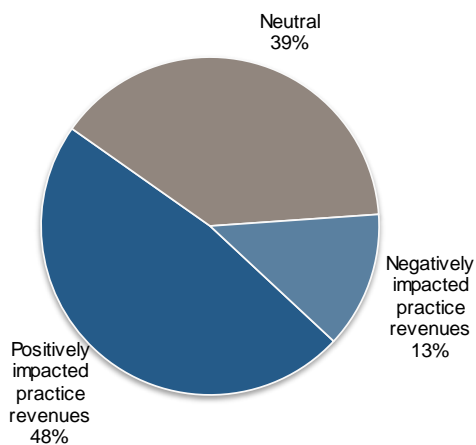


Source: Company data, Credit Suisse, N=43

By platform, slightly less than half (39%) of respondents that use Vets First Choice believe it has positively impacted their practice revenues, while only three respondents feel it negatively impacted topline growth. This compares to the 48% of users that viewed Vets First Choice positively impacted practice revenues in our 2Q survey, a slight deceleration in the trend. While this could simply be attributable to sampling, we view it underscores that e-commerce platforms remain in early stages of adoption, and there remains a significant runway for greater adoption and veterinary buy-in.

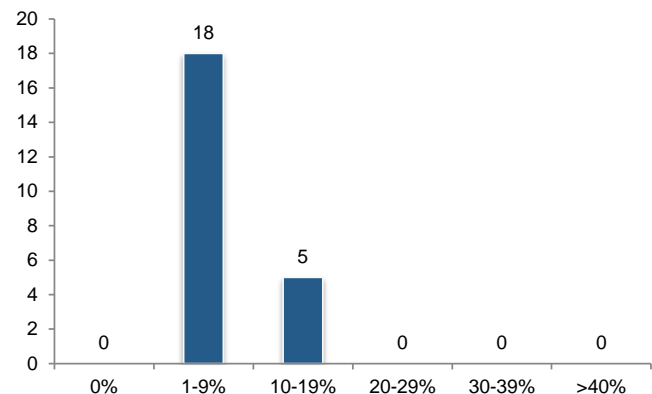
Also among Vets First Choice users, 18 participants reported the percentage of revenue they anticipate to generate through the platform in the next 3-5 years is between 1-9% (see Figure 36), albeit acknowledging the limited sample size of VFC users. Interestingly, no respondents reported anticipating a 20% or greater proportion of revenues, which in our view exemplifies the need for Vets First Choice to continue to educate and market proactively to veterinarians, to both new and existing clients.

Figure 35: Vets First Choice impact on practice revenues



Source: Company data, Credit Suisse, N=23

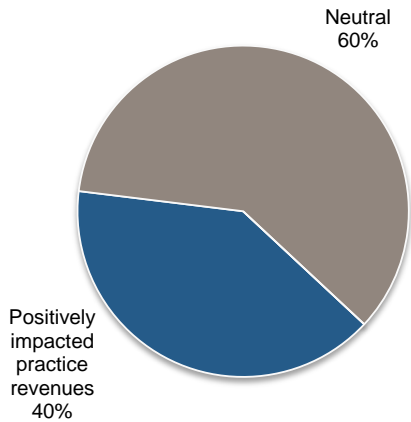
Figure 36: Vets First Choice—% revenue generated through e-commerce platform in next 3-5 years?



Source: Company data, Credit Suisse, N=23

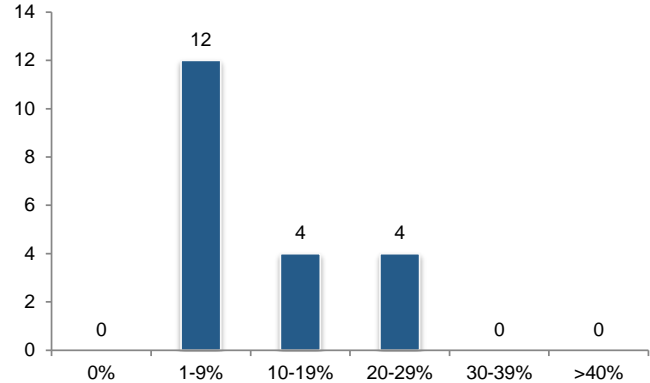
Feedback on Vetsource was similar, with 40% of respondents viewing the platform positively impacted revenues and no respondents viewing it negatively impacted revenues. Also among Vetsource users, twelve veterinarians anticipate a 1-9% proportion of revenue to come from e-commerce (see Figure 38), while only four respondents reported that they think e-commerce will generate more than 20% of practice revenues in the next 3-5 years, further emphasizing the opportunity to educate veterinarians on the value-add of alternative platforms.

Figure 37: Vetsource impact on practice revenues



Source: Company data, Credit Suisse, N=20

Figure 38: Vetsource—% of revenue generated through e-commerce platform in next 3-5 years?

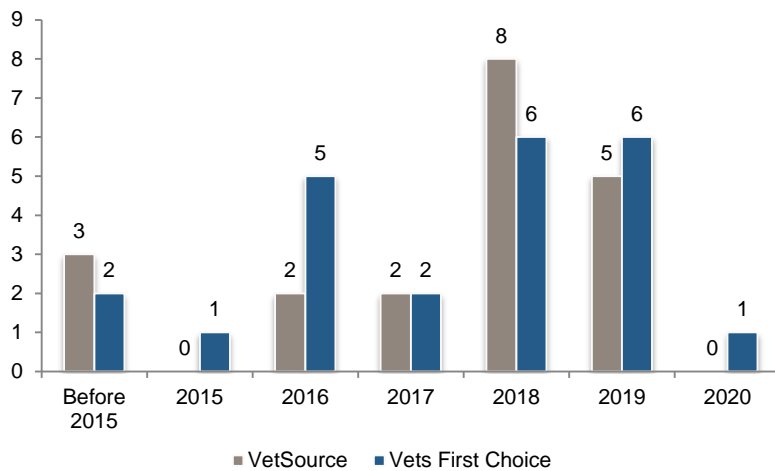


Source: Company data, Credit Suisse, N=20

Of note, out of our entire cohort, only a relatively small percentage of practice revenues are generated through e-commerce platforms, another reason to believe animal health e-commerce is in nascent stages. Excluding vets that do not offer e-commerce platforms, an average of 4.4% of practice revenues are derived from e-commerce platforms (vs. 4.1% in 2Q, 4.7% in 1Q, and 5.8% in 4Q), leaving ample room for greater adoption.

Note, among the 43 veterinarians that have adopted e-commerce offerings through VFC or Vetsource, 12% began using the service before 2015, compared to 10% in 2Q. Interestingly, we noted a slight difference in perception of e-commerce platforms across more recent and longer term adopters. Among veterinarians adopting platforms after 2017, 44% view it has improved practice revenues, versus 35% among those adopting before 2017.

Figure 39: In what year did you begin using your e-commerce offering?



Source: Company data, Credit Suisse estimates, N=43

While still in the early days of adoption, general feedback from our cohort with regard to e-commerce / mail-order pharmacy offerings skewed more positively, with several noting it is useful, helpful, or beneficial, that it increases compliance, and is convenient for the client and the veterinarian. Others highlighted it is becoming increasingly important, particularly to compete with e-commerce retailers such as Chewy.

Negative feedback on the e-commerce platforms included high pricing relative to other clinics and online stores, that it is not a meaningful source of clinic profits, that the platforms detract from in-clinic pharmaceutical sales, and that the platforms are labor-intensive and not worth the effort for the amount of profit they generate. Interestingly, several respondents noted that the platforms are ineffective in competing against Chewy, as online shoppers can more easily find better prices elsewhere. See ad hoc commentary from our cohort in Figure 40 below.

Figure 40: Ad Hoc Commentary on e-commerce offerings (vets that utilize specific platforms, as noted)

Vets First Choice		
Positive	Neutral	Negative
Better than Chewy/1800 Petmeds. Clinic gets some revenue.	Good but Chewy.com is too problematic.	Takes away clinic income.
It's one more way to link clients to practice.	Great idea but not price competitive with other online pharmacies.	I would be more supportive of them, if there were financial kick backs or some sort of rewards for using the product.
If marketed properly by management would be a substantial improvement in capturing online sales.	It's at least a way to compete with Amazon, Pet Meds, etc.	Does not keep them from buying food at Chewy so far.
I think a new need for growth.	Haven't maximized it's usefulness yet.	I don't get paid on this from a commission standpoint so I'd rather not use it and have things available in house so I get commission pay.
Augments our inventory.	Convenient but doesn't offer much revenue.	
I think it is helpful. People are going to purchase online anyways so I would obviously prefer they do so directly through us.	It helps to combat the other online resources but still prices can't compare with companies like Chewy.	
Helps with clients who insist on ordering online their prescriptions		

Vetsource		
Positive	Neutral	Negative
Helpful to younger clientele.	Nothing to lose, but Chewy competition is fierce.	It's a waste of time due to expense to client and low margin.
I think it helps keep our weekly cost of goods down.	Used for orphan products only.	Hard to convert clients from online businesses.
Very useful.	It's ok; they should give vets a cut of production.	Do not like it, do not want it. Practice consultant insists that I try it.
To stay competitive it is the way to go.	Most clients take products home after in office visits.	It is of limited benefit.
It is the future of retail.	Slowly growing it.	I prefer not to profit share with them.
Helpful to send online purchases through the clinic rather than other sources.		

Other		
Positive	Neutral	Negative
I think more people are moving to online purchasing, which includes for their pets.	Likely this is the future.	Not feasible.
Could provide a service and be profitable.	Underutilized at this time; need more guidance.	Necessary evil.
It would be helpful to expand our pharmacy.	Would be considered if there was a need and the system was convenient to use.	Just one more thing to keep track of, most of my colleagues consider them a pain.
Definitely will be helpful and keep us competitive with online pharmacies.	It has to be reliable and provide the same level of customer care to both my clients and my doctors/staff that we provide at our business.	I don't want to use it, but may be forced into it.
It has been a big help in reducing the need for in house inventory.		Difficult to set up and decreased profits from convenient in-house dispensing.
Good idea.		Honestly I am tired of being used by big corporations to make them money. My daughter is in veterinary school now and taking out 300K in debt and when she gets out she will be used by every big corporations (pet food companies, on-line companies like Chewy and Petmeds to make them money, while she stays in debt. It is very wrong how corporation use veterinarians.
It would be helpful..		Lose control of immediately offering the medicine at the clinic and control price/directions.

Source: Company data, Credit Suisse

Chewy takes a bite of the Rx market

Across our survey, veterinarians have increasingly commented on heightened competition in both OTC and prescription retail from Chewy (CHWY). As we noted previously, an impressive 91% of respondents and 81% of respondents view CHWY is gaining market share in sales of prescription and OTC medications, respectively. Ad hoc commentary on CHWY has also become more frequent, with several respondents noting that they feel the need to use e-commerce offerings such as Vetsource and VFC to fend off competition from retailers such as CHWY, while also noting that CHWY's prices are difficult to match.

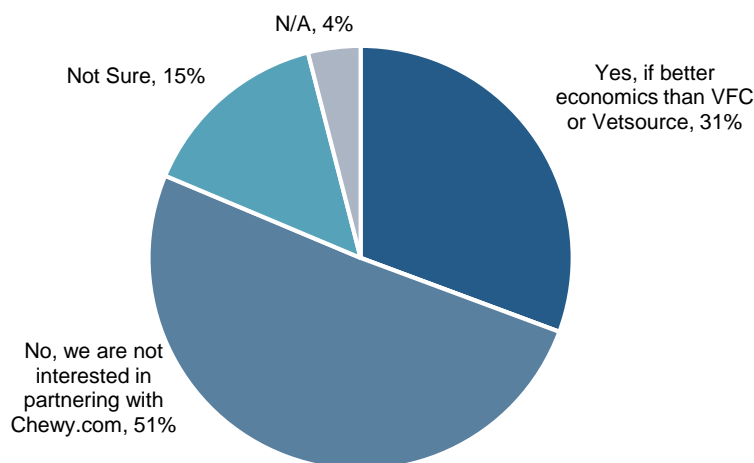
CHWY's e-commerce market share is clearly strengthening, and its impact on the space will continue to evolve thanks to its entry into the e-commerce prescription market with the 2018

launch of its newest segment, Chewy Pharmacy. This segment poses direct competition to PETS as well as existing third-party platforms Vetsource and VFC, as Chewy has expressed interest in partnering with vet clinics to enhance its prescription fulfillment services, indicating willingness to share economics with the veterinarians. Recently, CHWY launched a pilot veterinary adjudication platform, likely one of several models it is developing to work with veterinarians most effectively.

In light of these dynamics, we asked veterinarians whether they would consider partnering with CHWY instead of alternative mail-order pharmacy offerings such as Vetsource or Vets First Choice if the economics were relatively more favorable. Surprisingly, given negative veterinary sentiment towards CHWY, 23 respondents (31%, vs. 32% in 2Q) said that they would partner with CHWY if the economics were more favorable. Of the respondents who would consider partnering with CHWY, many noted that customers seem to like using CHWY and that such a partnership may be beneficial to retain some prescription income from CHWY.

We acknowledge that many of the remaining 51% of respondents who are not willing to partner with CHWY remained profoundly negative towards the company in their commentary (not a major surprise), citing mistrust and the fear that CHWY would encroach further on practice revenues. While perception of the company is mixed and highly contentious, these results suggest CHWY may be able to gradually penetrate the veterinary prescription market.

Figure 41: Would you consider partnering with Chewy instead of alternative mail-order pharmacy offerings?



Source: Company data, Credit Suisse, N=75

Practice management software

We also polled our cohort on practice management software utilization. The leading practice management software among our cohort was IDEXX's Cornerstone, used by 32% of our veterinarians, followed by legacy Henry Schein Animal Health's AVImark (29%). As shown in Figure 42, other popular practice management systems included Henry Schein Animal Health's ImproMed Infinity (9%), independent offerings Vetter (3%), eVetPractice (3%), and ezyVet (4%), as well as PDCO's IntraVet (3%).

For background, the vast majority of veterinary practices have a practice information system (PIMS), a sticky business for which we estimate only ~3% of veterinarians change PIMS annually. However, IDEXX management has noted it sees greenfield opportunities in PIMS applications and middleware, which is software that connects various applications to various PIMS systems.

Figure 42: Practice management system utilization

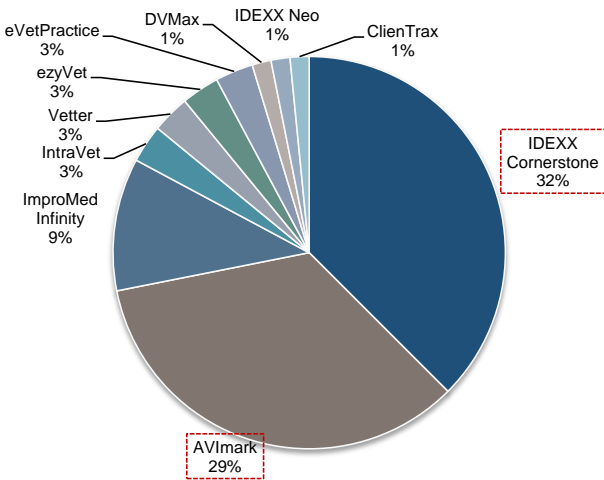
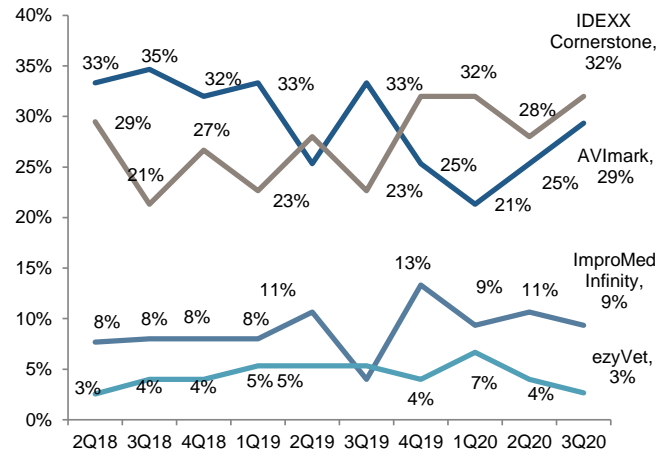


Figure 43: Leading PIMS utilization trends



Source: Company data, Credit Suisse, N=75

Source: Company data, Credit Suisse, N=75

Amazon, negligible presence to date

We also asked participants about purchases they may make for their practices from Amazon. According to our survey, our cohort of veterinarians make very limited purchases via Amazon, consistent with previous surveys, mainly pertaining to miscellaneous office supplies and other small maintenance items. In the next three to five years, respondents expect an increase in purchases from Amazon for office supplies (29% vs. 18% in 2Q) and a modest increase in basic consumables (11% of respondents vs. 5% in 2Q). Only 6% of respondents expect to purchase their drug product supplies (OTC or prescription) and 3% expect to purchase equipment from the leading e-commerce retailer.

Figure 44: % of Purchases through Amazon currently

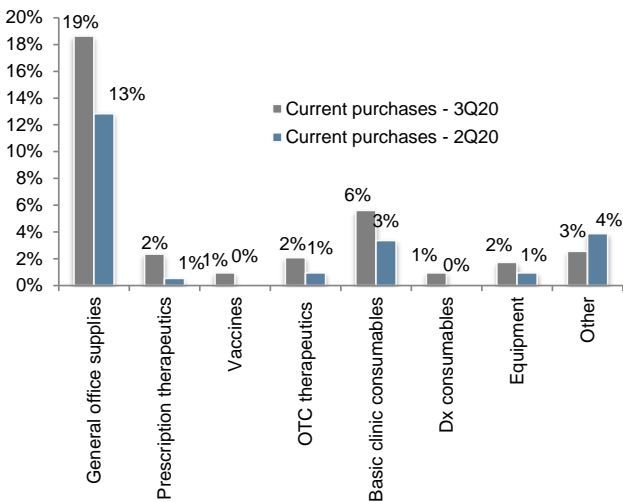
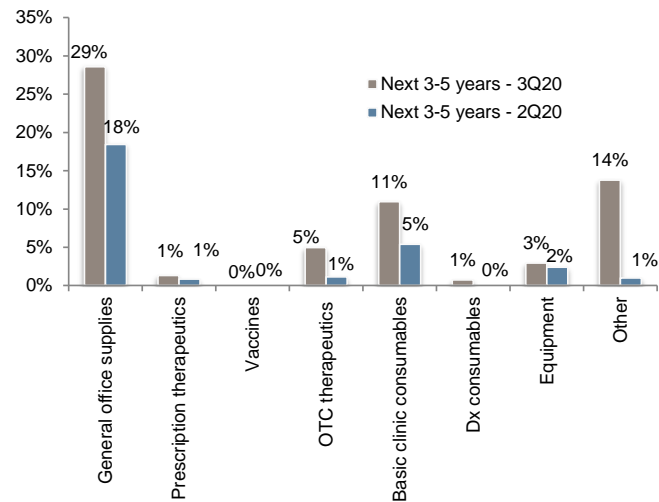


Figure 45: % of Purchases through Amazon expected in next 3-5 years



Source: Company data, Credit Suisse, N=75

Source: Company data, Credit Suisse, N=75

Dog'nostics dynamics

Diagnostic testing momentum continues

Based on our survey, veterinarians outsource 41% of diagnostic tests to reference laboratories, slightly below our estimated industry average of ~50% (see Figure 46). Preferences vary by

practice depending on type of test, location of clinic, and current contract/bundling terms with relevant vendors. Over the past 12 months, 56% of respondents view diagnostic testing (both in-clinic and outsourced) increased, with only 5% reporting declines despite the impact of COVID-19 earlier in the year.

We note that respondents are even more optimistic on future testing volumes, with 72% of respondents in our survey (vs. 73% in 2Q) expecting diagnostic testing volumes (both point-of-care and outsourced) to increase over the next 12 months, with also a reversal in the number of veterinarians (4% of respondents vs. 28% in 1Q) expecting a decrease in testing volumes. While respondents remain slightly more cautious on future testing volumes relative to our historical average (79% of respondents expecting testing volumes to increase), we view the reversal in 1Q sentiment as an encouraging indicator of ongoing recovery in the sector.

Figure 46: Average percent testing by modality

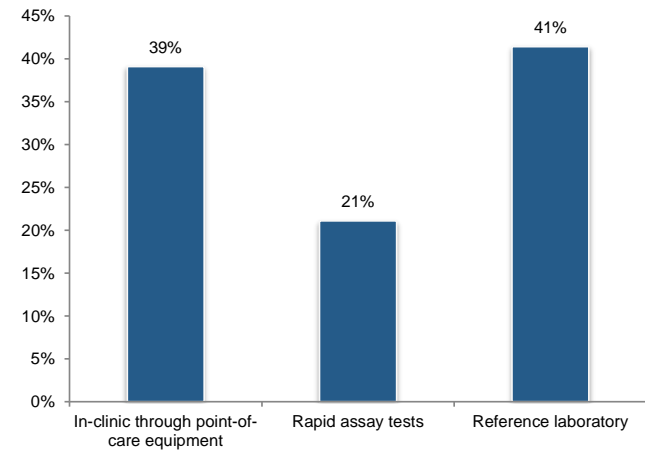
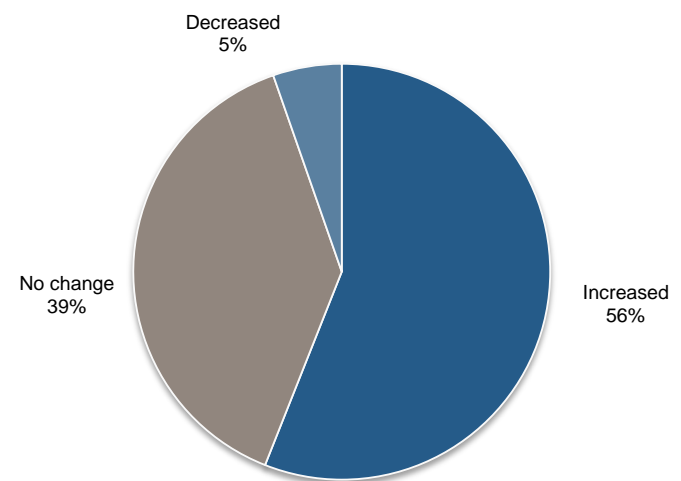


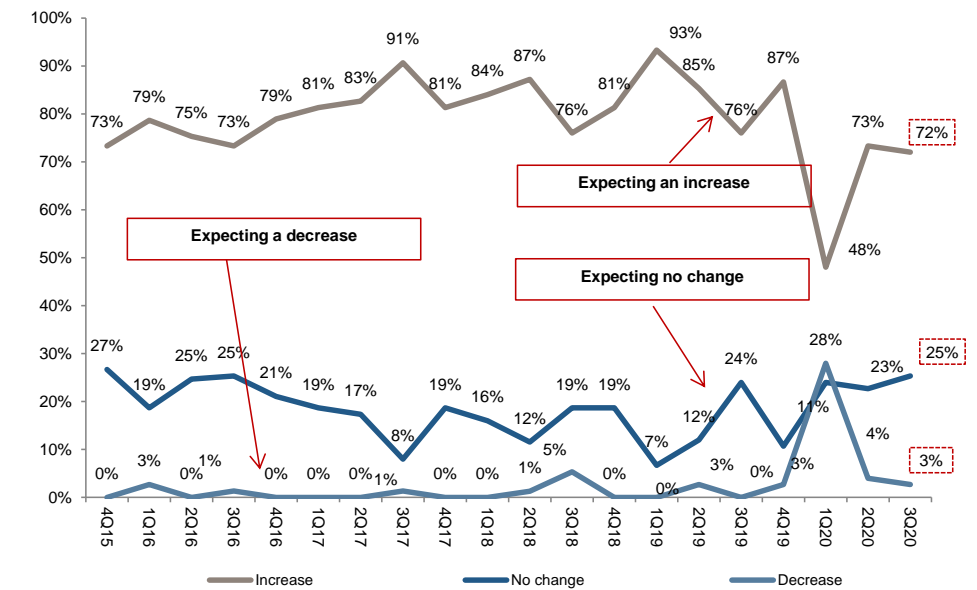
Figure 47: 56% view diagnostic testing has increased over the past 12 months



Source: Company data, Credit Suisse, N=75

Source: Company data, Credit Suisse, N=75

Figure 48: Diagnostic testing outlook: 72% expect diagnostic testing (point-of-care & outsourced) to increase over the NTM (vs. 73% in 2Q)



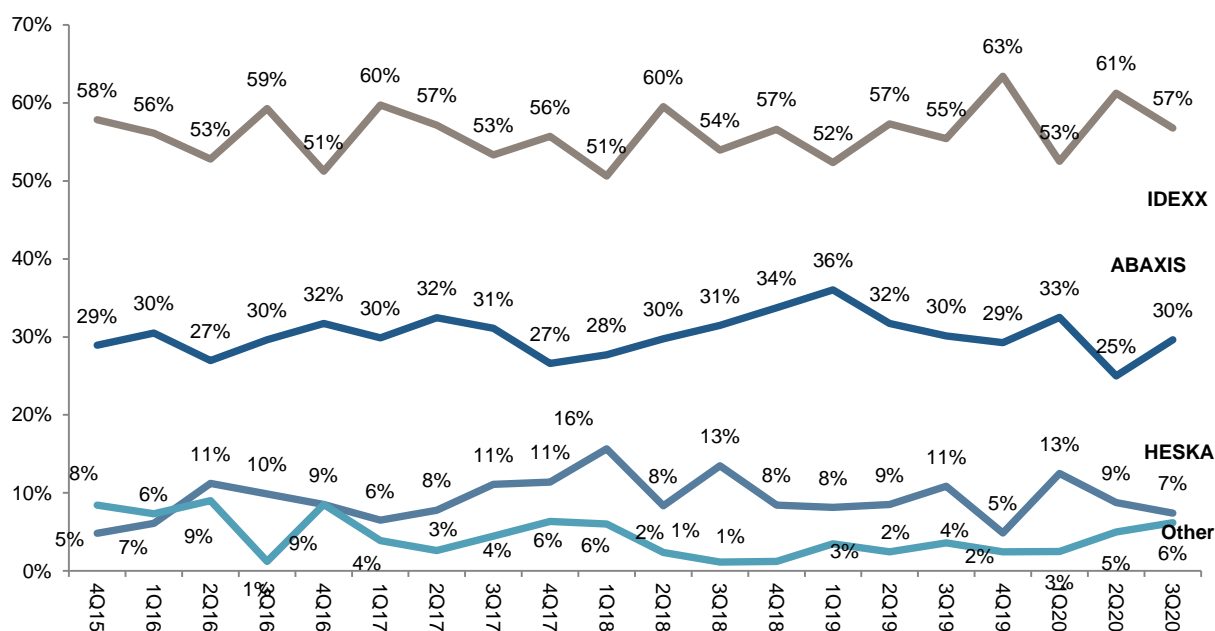
Source: Company data, Credit Suisse, N=75

Diagnostic equipment share analysis: IDEXX remains clear leader

IDEXX remains the leader in in-clinic dog'nostics with 57% share amongst our cohort of veterinarians. At a distant second, **ABAXIS's** share stands at 30% (vs. 25% in 2Q). **HESKA's** share stands at 7% (vs. 9% in 2Q), albeit acknowledging sample-size biases.

ZTS views more meaningful opportunities in nascent international diagnostics markets with also broader opportunities for diagnostics innovation in Livestock longer term. While ABAXIS integration from 2018-2019 was slightly slower than initially expected, we view 2019 was a successful year for ZTS to build its diagnostic base and stabilize its field force, now fully integrated and staffed internationally, allowing it to continue to grow its POC diagnostics portfolio +DD in 2020 and execute on bundling strategies (see note, [ZTS: Diagnosing 4Q: Following up with ZTS and Key 10-K Takeaways](#)), acknowledging its dog'nostics strategy remains in early stages. In the interim, we expect IDEXX to maintain or gain share, given its more comprehensive and advanced testing portfolio.

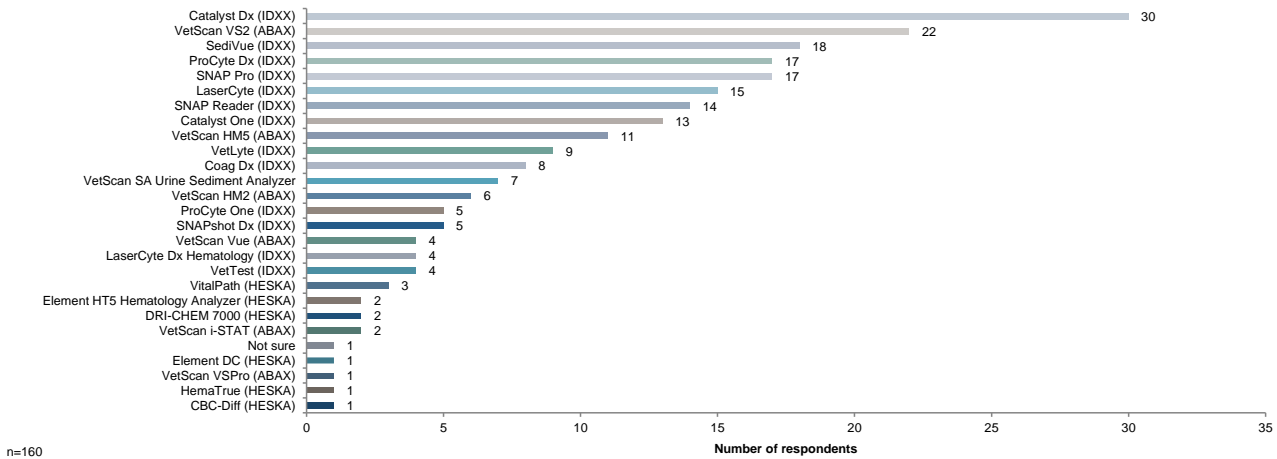
Figure 49: Diagnostic point-of-care market share dynamics



Source: Company data, Credit Suisse, N=75

Of note, IDEXX's Catalyst Dx ranked as the most popular instrument among our cohort, used by 30 respondents. Importantly, eight of the top 10 most popular instruments were all IDEXX instruments, though we note that ZTS's VetScan VS2 came in second with 22 respondents. Utilization of IDEXX's SediVue was strong as well, as the third most popular instrument, representing 18 respondents, an encouraging dynamic.

Figure 50: Point-of-care diagnostics equipment mix

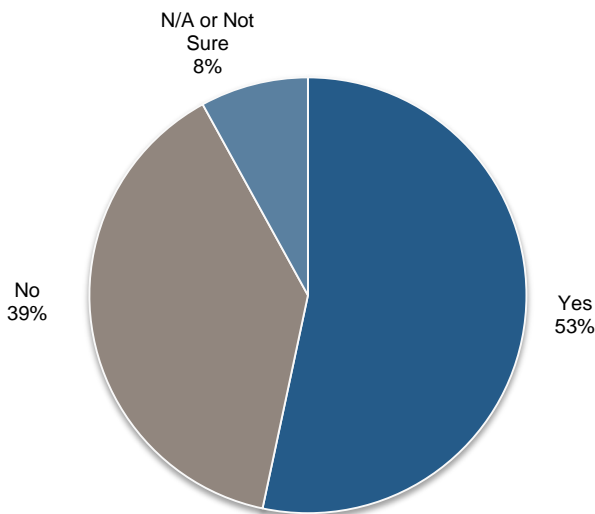


Source: Company data, Credit Suisse, N=75

Of note, 20 respondents (27%) reported using an in-clinic chemistry analyzer on 10% or less of patient visits, suggesting room for meaningful upside in consumables utilization with greater adoption of in-clinic testing.

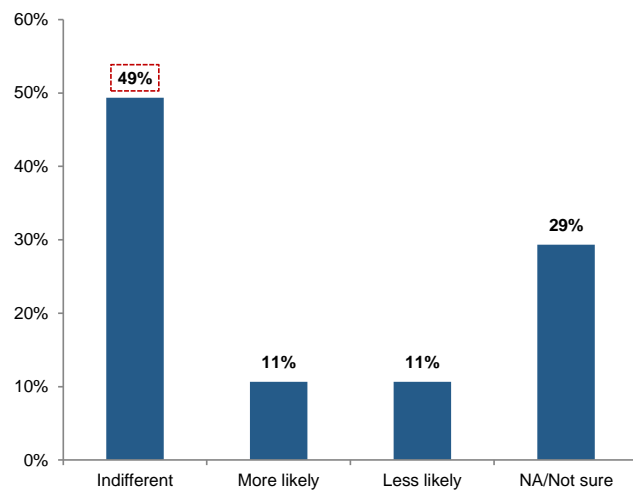
Further, in our survey, we asked respondents if they would be more or less inclined to use ABAXIS products now that the company is owned by Zoetis. We found that the majority (49%) of veterinarians are indifferent towards the new ownership, while 11% are less likely and 11% are more likely to use ABAXIS products. Of note, 53% of respondents expect Zoetis to be successful in bundling diagnostics and therapeutics.

Figure 51: Do you view Zoetis will be successful in bundling pharmaceuticals with diagnostics?



Source: Company data, Credit Suisse, N=75

Figure 52: Are you more likely to use ABAXIS instruments/consumables now that the company is owned by Zoetis?



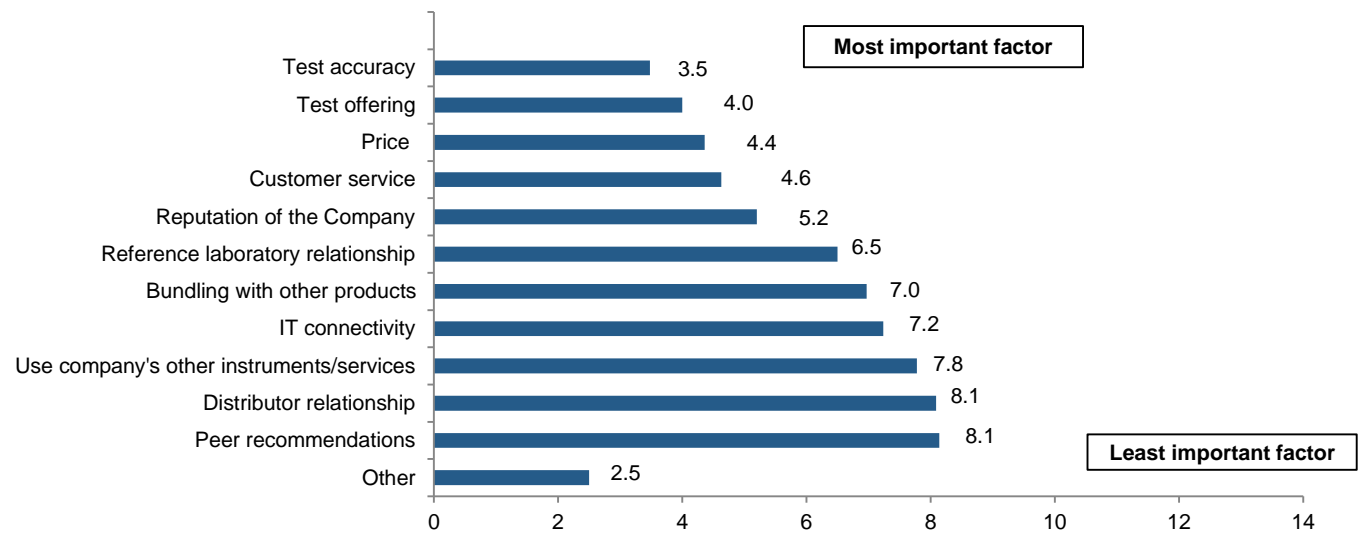
Source: Company data, Credit Suisse, N=75

Factors influencing point-of-care equipment purchases

Test accuracy, the breadth of test offerings, cost, the quality of customer service, and the distributor's reputation were the primary factors for choosing a particular line of diagnostic equipment, commentary that is largely consistent with results from our previous surveys. Of

note, we estimate ZTS will likely migrate to a more direct sales channel (vs. leveraging third party distributors) for its diagnostics business over time.

Figure 53: Most important factors influencing point-of-care diagnostic equipment purchases



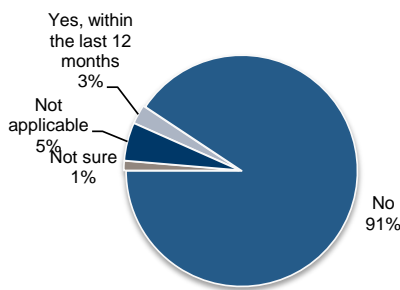
Source: Company data, Credit Suisse, N-75

Diagnostic equipment shifts minimal

The vast majority of respondents (91%, vs. 89% in 2Q) have not switched primary diagnostic equipment vendors over the past year.

Key diagnostic equipment shifts: Among surveyed participants, two respondents have switched diagnostic equipment vendors over the past 12 months. Motivating factors for switches include higher accuracy, customer service, and expanded testing options.

Figure 54: Have you switched point-of-care diagnostic equipment recently?



Source: Company data, Credit Suisse estimates

Figure 55: Commentary from veterinarians that switched POC diagnostic equipment over LTM

Switched from	To	Rationale	When?
ABAXIS	IDEXX	Lack of Test Options, Inaccurate Results & Customer Service	Within the last 12 months
HESKA	IDEXX	Inaccurate Results & Customer Service	Within the last 12 months

Source: Company data, Credit Suisse estimates

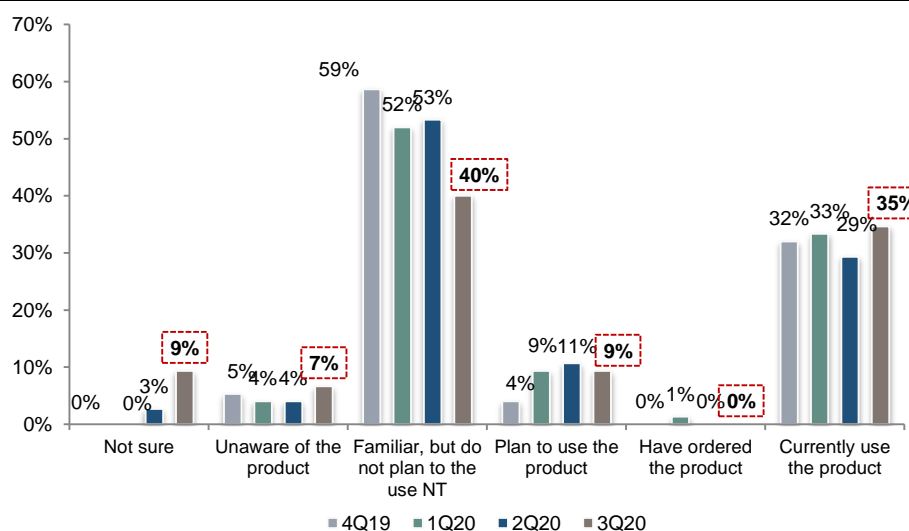
Furthermore, only five respondents will definitively change their primary diagnostic equipment vendors over the next 12 months (one switching from ABAXIS to IDEXX, one switching from IDEXX to ABAXIS, one switching from Heska to IDXX, one switching from Heska to ABAXIS, and one adding IDEXX), emphasizing significant brand loyalty and the overall stickiness of the business model, with the respondents citing significant pricing, customer service, IT integration and better equipment as the primary factors for switching.

IDEXX's SediVue Dx (Urine Analyzer), Competing ABAXIS Urine Sediment Analyzer

SediVue utilization relatively steady: Our survey findings indicate 35% of respondents currently use SediVue (vs. 29% in 2Q, 33% in 1Q, and 32% in 4Q) and an additional 9% noted that they plan to order SediVue in the future (vs. 11% in 2Q). Of note, 40% of respondents do not plan on adding the product near term, slightly below the 53% noted in 2Q and our survey's 55% historical average. Importantly, only 7% of respondents were unaware of the product, just above the average experience over the last 12 months (5%), a sign that the product has likely progressed into broader veterinary consciousness.

Feedback from our survey participants highlighted the advantages of SediVue as a useful tool that drives additional diagnostic testing and provides accurate and quick sediment analysis, requiring less tech time. On the other hand, participants less inclined to use SediVue pointed to preferences for manual testing or reference labs, a lack of confidence in the results, and that the analyzer does not do enough.

Figure 56: Would you add SediVue to your in-clinic diagnostic offering?

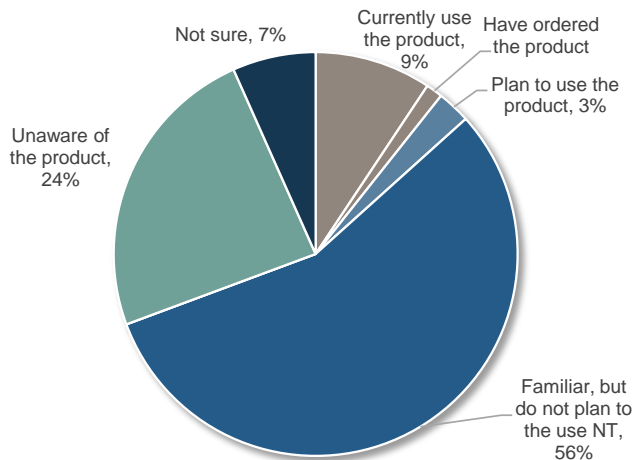


Source: Company data, Credit Suisse, N=75

■ **SediVue background:** SediVue replaces an 18-20 minute process reliant on a microscope with an automated analysis. It generates results in three minutes from five drops of urine that can be integrated into IDEXX's cohesive IT framework. SediVue captures 70 digital images that are automatically prioritized for more accurate readings relative to conventional methods. Rapid assessment is inherently important in urine testing, given inherent instability of a urine sample, with testing needed within 30 minutes of collection for more informative, reliable results. IDEXX placed 2,393 total SediVues globally in 2019 (-12% yoy).

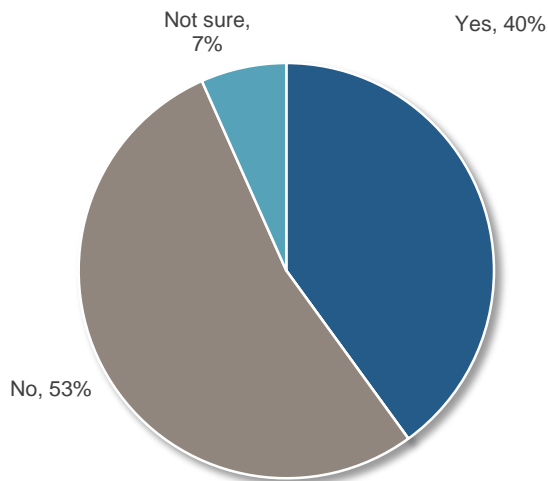
ABAXIS competing product: In 2018, ABAXIS/Zoetis launched a competing urine sediment analyzer, VetScan SA Urine Sediment Analyzer. Our survey indicates that this product remains underpenetrated, as only seven respondents (9%) currently use the product, while 56% have no plans to use the product and 24% remain unaware of the product. However, we view there is room for this product to improve, as our survey results indicate that urinalysis is an increasingly important diagnostic capability. Of the veterinarians who have a urine sediment analyzer, 40% responded that the percent of visits where the veterinarian performs urinalysis has meaningfully changed since adding the equipment.

Figure 57: Would you add the VetScan SA Urine Sediment Analyzer to your in-clinic diagnostic offering?



Source: Company data, Credit Suisse, N=75

Figure 58: Has the % of visits where you perform a urinalysis changed meaningfully since adding your Urine Sediment Analyzer?



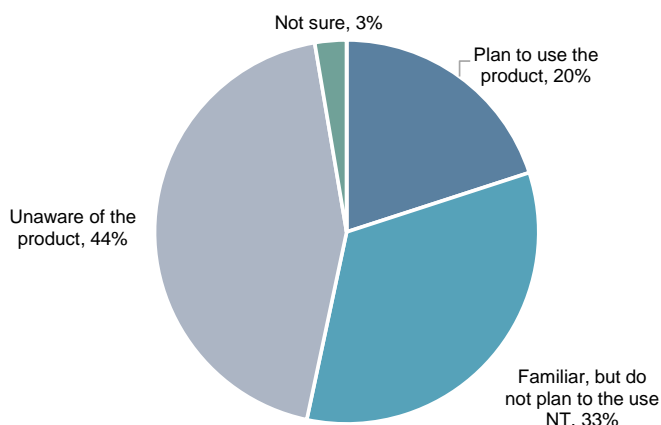
Source: Company data, Credit Suisse, N=30

Innovation Tracker: Initial Feedback for IDXX’s Digital Cytology Offering

IDXX has long been the innovation leader in dog’nostics, and our survey indicates encouraging initial traction for its newest Digital Cytology offering. By way of background, in February 2019, IDXX launched Digital Cytology, a service + instrument offering powered by its VetConnect PLUS software that enables veterinarians to receive cytology interpretations in just two hours (vs. days) by connecting to a network of over 100 pathologists globally. Per our conversations with management at VMX this year (see [Live from VMX](#)), this service is fully integrated into IDXX lab services, and results can be interpreted using IDXX workflow solutions, creating a seamless and rapid reporting process. List price for the cytology slide scanner instrument is in the \$15-18K range (albeit before bundling/promotions), and IDXX charges 20% more for the test analysis (vs. traditional reference laboratory service), representing a price of ~\$20/test.

According to our survey, 15 respondents (20%) plan to use the Digital Cytology platform in the future (vs. 9% in 2Q), with 44% of respondents still unaware of the offering (vs. 59% in 2Q), an unsurprising dynamic considering its recent launch. We note that ad hoc commentary was encouraging, indicating significant runway for adoption, with many respondents noting that such an offering would be extremely useful and time-saving, although several veterinarians cited concerns about price as an inhibiting factor.

Figure 59: Would you add Digital Cytology to your in-clinic diagnostic offering?



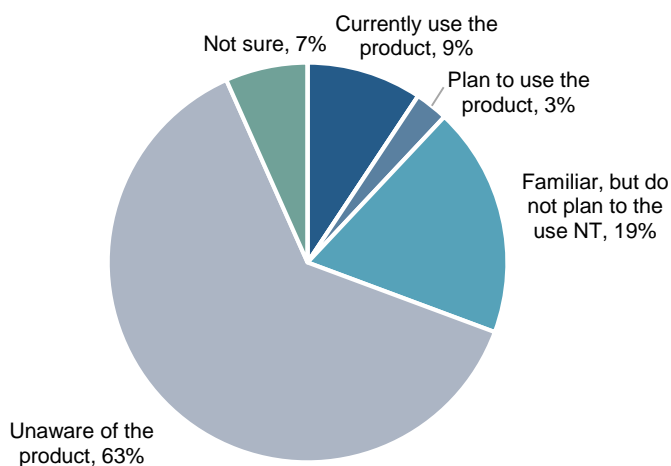
Source: Company data, Credit Suisse, N=75

Initial Traction for IDXX’s ProCyte One Hematology Analyzer

At its investor day in August (see [The Virtual Maine Event 2020](#)), IDXX announced the upcoming launch of the ProCyte One Hematology Analyzer, its newest point of care hematology offering which should appeal to a broader market relative to legacy ProCyte Dx thanks to its more economical mid-to-high teens (\$15-\$20K) price point and workflow simplicity driven by plug-and-play reagents, AI, advanced quality control, and clinical decision support. ProCyte One is well suited for broader general practices and international labs with more limited space, where its fee for run model allows the customer to avoid carrying additional inventory. Combined with ProCyte Dx, ProCyte One gives IDXX the broadest POC hematology offering for customers. IDXX is planning a large-scale rollout of the instrument in 2021, where it views there are an estimated ~96,500 incremental Hematology placement opportunities globally (22,000 North America), including 75,000 competitive and greenfield placements and 21,500 LaserCyte and VetAutoread upgrades, representing a meaningful opportunity for further expansion.

Given that ProCyte One has not yet been fully rolled out, we were impressed that seven respondents (9%) currently use the product. Unsurprisingly, 63% of respondents remain unaware of the product, a dynamic we expect to improve over the coming quarters.

Figure 60: Would you add ProCyte One to your in-clinic diagnostic offering?



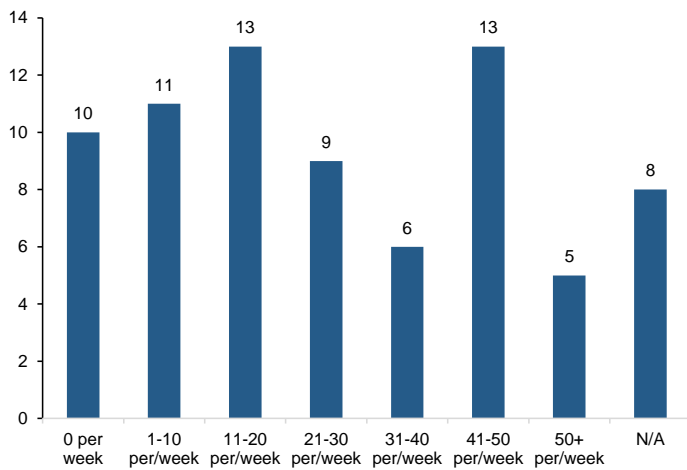
Source: Company data, Credit Suisse, N=75

Foray into In-Clinic Fecal Analysis: ZTS’s VetScan Imagyst

In its most recent POC innovation, ZTS has recently launched the VetScan Imagyst, an in-clinic pathology system that serves as both a microscope and scanner fully integrated with AI-based image recognition technology to deliver rapid test results. Its initial primary modality is to conduct in-clinic analysis of fecal samples to detect parasites, allowing veterinarians to test and diagnose pets in one visit.

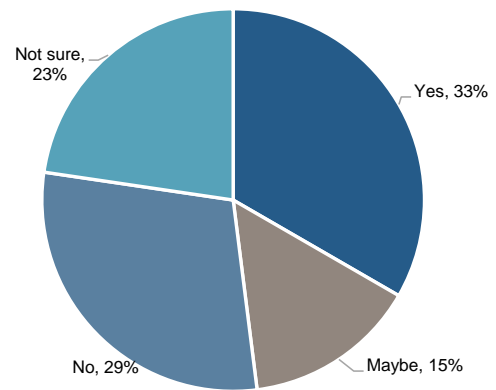
VetScan Imagyst remains in its early stages of rollout and adoption, where 71% of respondents are unaware of the product, though four respondents (5%) plan to use the product in the future. When we asked about opportunity for in-clinic fecal screening, we found that respondents would perform an average of 20 tests/week with the offering, where 33% of respondents view there is a meaningful opportunity to conduct more in-clinic fecal testing and analysis.

Figure 61: Number of fecal rapid tests respondents would conduct per week using VetScan Imagyst



Source: Credit Suisse, N=75

Figure 62: 33% of respondents view there is an opportunity to conduct more in-clinic fecal testing and analysis

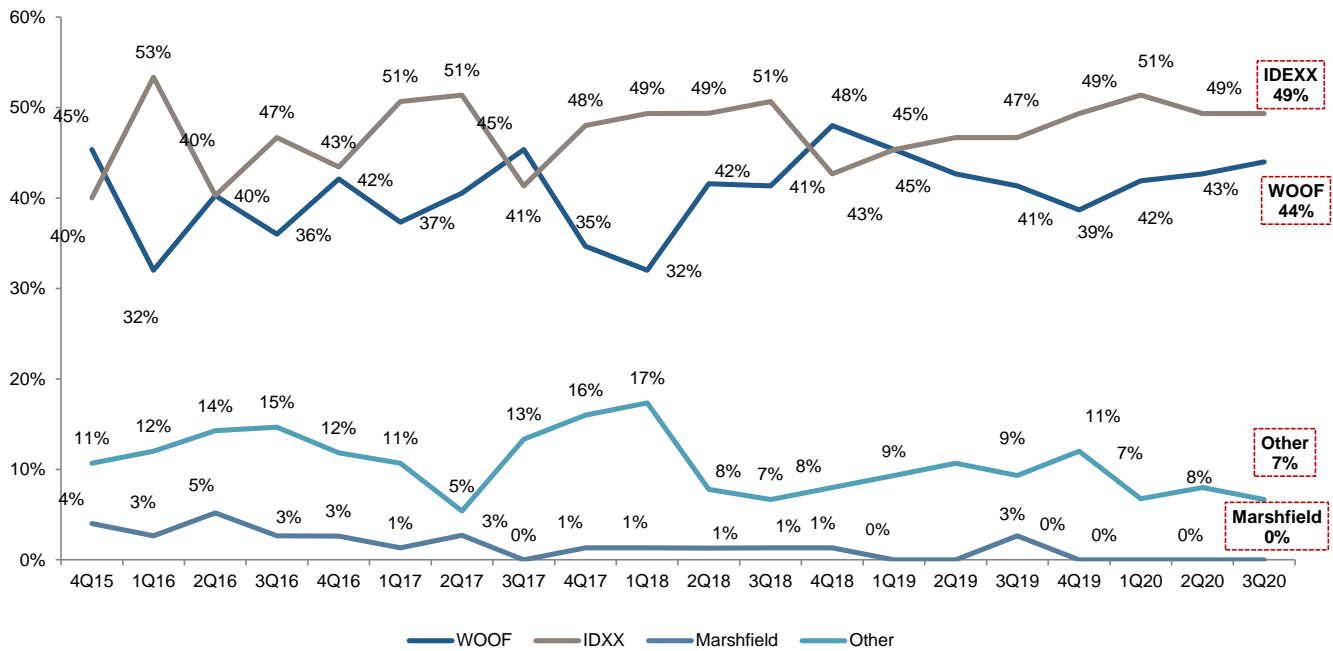


Source: Credit Suisse, N=75

Reference laboratory dynamics: A duopolistic market, limited share shift, with minimal ZTS traction yet, as expected

The reference laboratory competitive landscape has historically been a duopolistic market split between IDEXX and VCA. While ZTS has recently expanded further into this market, this duopolistic market split remains the case according to our survey, with 93% of respondents using IDEXX (49%) or VCA (44%) as their primary reference laboratory service provider. Of note, one respondent uses ZNLabs, which was recently acquired by ZTS.

Figure 63: Reference laboratory mix (primary reference laboratory service provider)

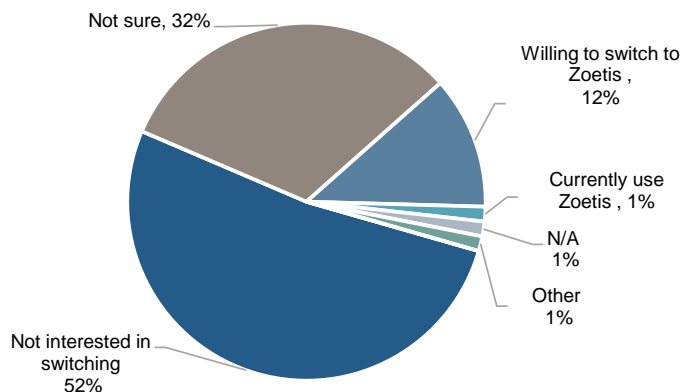


Source: Company data, Credit Suisse, N=75 [Note: Marshfield recently purchased by IDEXX Laboratories]

As a reminder, ZTS recently acquired three full service reference labs, Phoenix Central Lab, ZNLabs, and Ethos Diagnostic Science (see [Dog'nostics Deal Activity Continues](#)) and announced plans to scale its offering over the next 3-5 years through inorganic investments in similar reference labs with significant share in respective MSAs as well as through diligent organic initiatives. Despite the national strength of IDXX and Antech (VCA), ZTS is confident in its ability to scale its reference laboratory offering in each relevant region of focus, given the strength of its current salesforce and customer relationships, particularly now that it has major regional anchors in the Pacific Northwest and the Midwest. While it does not expect to be a significant national player in the next two years, 10-15% of reference lab contracts renew each year, so in 3-5 years it expects to use its current “buy and build” strategy in each geography to gain share, allowing it to realize significant longer-term bundling opportunities, linking its broader diagnostics platform, associated data, and therapeutics offering.

As expected, our survey results indicate that ZTS’s traction in the space may be slow, as the majority (53%) of respondents are not aware of ZTS’s recent expansion into reference labs, and only one respondent noted currently using ZTS as their primary reference lab provider. However, we view there is runway for ZTS to grow in the space, as 12% of respondents (vs. 21% in 2Q) would be willing to switch to ZTS as their primary reference lab provider if the bundling opportunities were favorable, still a relatively significant number considering the stickiness of reference lab relationships.

Figure 64: Would you switch to Zoetis as your primary reference laboratory provider if you were able to bundle Zoetis pharmaceutical products with the outsourced reference laboratory offerings?



Source: Company data, Credit Suisse, N=75

Two respondents noted changing their reference laboratory provider over the past 12 months. As shown in Figure 65, one respondent switched from VCA Antech to IDEXX and one switched from VetPath to IDEXX and ZTS, both citing enhanced bundling capabilities as the primary reason for switching.

Figure 65: Rationale from veterinarians that switched reference laboratories

Switching from	To	Rationale	When did you switch?
VCA	IDEXX	Bundling capabilities with in-house diagnostics	Within the last 12 months
VetPath	IDEXX & ZTS	Bundling capabilities; Fater shipping	Within the last 12 months

Source: Company data, Credit Suisse estimates

Of our survey participants, one respondent anticipates switching to a different reference laboratory provider over the next 12 months. The switches are detailed below in Figure 66. As shown in that figure, the survey participant plans to switch from IDEXX to VCA as a result of more favorable pricing. Eight members (11%) of our cohort were undecided on whether they would switch reference labs in the NTM.

Figure 66: Commentary from veterinarians that will switch reference labs NTM

Switching from	To	Rationale
IDEXX	VCA	Pricing

Source: Company data, Credit Suisse estimates

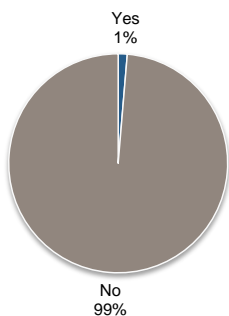
Rapid tests update

As a reminder, increased competition is more relevant to IDEXX's more vulnerable rapid assay products (11% of 2019 revenues), one of its most profitable segments. According to our survey, only one respondent (1%) switched rapid assay brands over the past 12 months (vs. 3% in 2Q, 6% historical average). The respondent shifted from IDEXX to FLEX4 (ABAXIS). All in, Zoetis was a net gainer over IDEXX.

Interestingly, 12 respondents noted using ABAXIS's (now owned by Zoetis) FLEX4 rapid test (launched in March 2018), just below our 2Q survey (14 respondents). While the product has now been on the marketplace for over a year, we note veterinarians are slow to adopt new technology.

As a reminder, at the American Society for Rickettsiology on June 16-19, 2018, IDEXX unveiled a study (sponsored by IDEXX, Cornell, and NC State) identifying superior performance of the SNAP 4Dx Plus rapid assay vs. ABAXIS' recently launched FLEX4 test in diagnosing relevant vector-borne diseases (see note, [IDXX: Oh, SNAP! Flexing rapid assay muscle](#)). We acknowledge IDEXX's rapid assay platform is inherently more vulnerable to competition (potentially exacerbated by the pending Zoetis/ABAXIS transaction).

Figure 67: Have you switched primary brands of rapid tests over the past 12 months



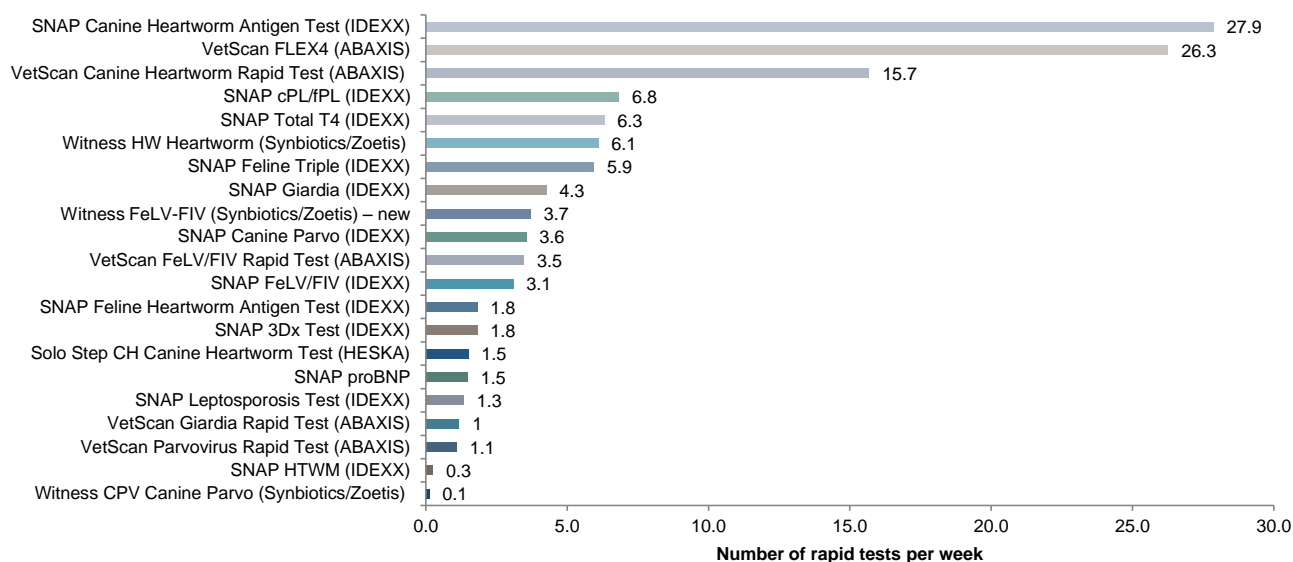
Source: Company data, Credit Suisse, N=75

Figure 68: Commentary from veterinarians who switched rapid test brands over the past 12 months

Switching from	To	Number of Respondents
IDEXX	FLEX4 (ABAXIS)	1

Source: Company data, Credit Suisse estimates

Veterinarians noted specific areas of unmet needs in rapid tests including COVID-19, canine inflammatory bowel disease, feline infectious peritonitis (FIP), cancer detection, canine upper respiratory disease (kennel cough), fungal assay, cognitive function/dementia, and fecal antigen testing, pointing to areas of potential innovation for diagnostics companies.

Figure 69: Number of rapid tests per week

Source: Company data, Credit Suisse, N=75

Animal Pharm: A look at Animal Health therapeutics

Turning to companion animal therapeutics, we asked respondents about their view of animal health pharmaceutical company positioning. In terms of the best positioned companies, Zoetis was the top ranked company, followed by BI/Merial, consistent with past surveys. Ad hoc commentary from respondents is included in the back of this note. We detail product-specific analysis below.

Figure 70: Which Animal Health Therapeutics Company is Best Positioned in Terms of Innovation and Competitive Positioning of Overall Portfolio?

Overall Rank	Company	Average Rank
1	Zoetis	2.7
2	Merial / BI	3.1
3	Elanco	3.9
4	Merck	4.2
5	Bayer	4.8
6	Virbac	5.9
7	Dechra	6.6
8	Vetoquinol	7.0
9	Ceva	7.3
10	Other	9.6

Source: Company data, Credit Suisse, N=75

Fleas and Ticks: A look at Simparica (ZTS) and Credelio (ELAN)

Contributions from Simparica, Zoetis's flea/tick product, accelerated 35% to \$214 million in 2019. Simparica is part of the massive ~\$3 billion canine flea/tick category (~\$2 billion oral, \$1 billion topical). To put in perspective, initial annual sales of competing products NexGard (Boehringer Ingelheim/Merial) and Bravecto (Merck) were \$270 million and \$180 million, respectively. Although Simparica's age requirement (>6 months in the US) puts it at somewhat of a disadvantage against NexGard and **Elanco's** Credelio, it achieved blockbuster status in 2018, with \$158 million in sales (+72%), and we forecast +10% growth in 2020.

Several head-to-head studies have assessed the onset of Simparica, highlighting the speed of eradication and duration as competitive advantages over other chewable parasiticides (NexGard, Bravecto). The speed at which a parasiticide can eliminate fleas/ticks is critical in preventing reproduction, infestation, and transmission of vector-borne diseases. Simparica's consistent protection over a five-week period (vs. 4-week NexGard) is also an advantage, limiting potential gaps in protection, which Zoetis has highlighted in recently launched DTC campaigns.

While Simparica is approved for dogs ages 6-months+ (vs. 8 weeks for NexGard and Credelio), we view the advantages in rapid action and duration as partially offsetting, particularly in the relatively new chewable category. We view Zoetis as also inherently well positioned with its leading global presence, dedication to DTC advertising, and the largest direct sales force in the industry.

- Overall, Simparica is prescribed to 24% of our respondents' patients (vs. 21% in 2Q), and while we do not anticipate Simparica will become the leader in the chewable flea/tick category, its continued growth has proven there is room for multiple players.
- According to our survey, various different factors play a role in which flea/tick medication the veterinarian chooses, including price (20%), age (17%), the size of the dog (4%), and other factors (including a mix of the aforementioned factors, 25%).
- For Credelio, traction remains modest, building at a slower pace. In 3Q, 13% of respondents noted they recommend Credelio (vs. 15% in 2Q and 21% in 1Q). Launched in January 2018, Credelio was the fourth flea/tick chewable combination product to market, and Elanco attributed strong organic Companion Animal sales growth in 2018 (+18%) in part to the product's launch. Commentary from our respondents noted advantages include the ability to administer it to young puppies (minimum age: 8 weeks is comparable to NexGard but younger than Simparica and Bravecto) as well as its efficacy and cost effectiveness. Clients not prescribing Credelio attributed the decision to having too other many options, their preferences for competing offerings, and its cost being prohibitive.

Figure 71: Do you actively prescribe ELAN's Credelio?

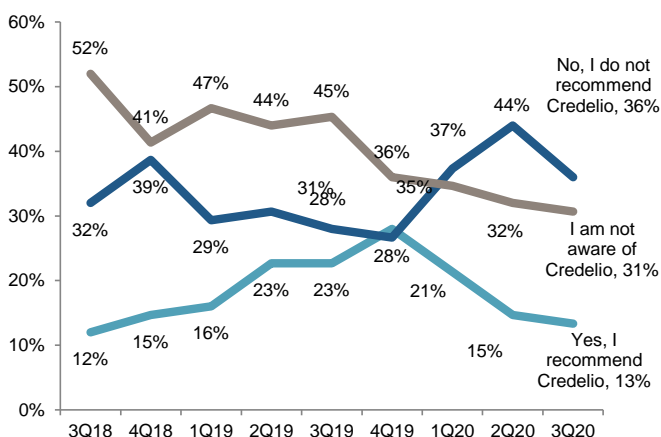
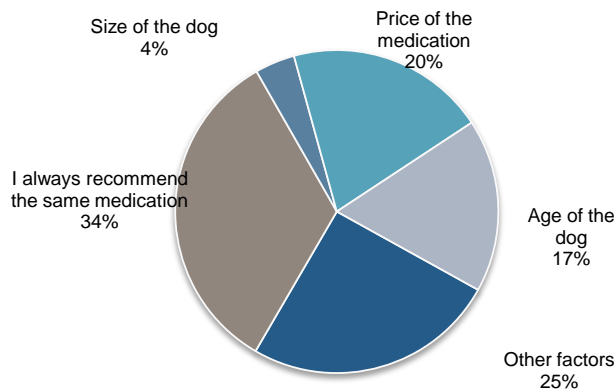


Figure 72: Flea/Tick medication determinants



Source: Company data, Credit Suisse, N=75

Source: Company data, Credit Suisse, N=75

Assessing veterinarians appetite for a triple combination parasiticide

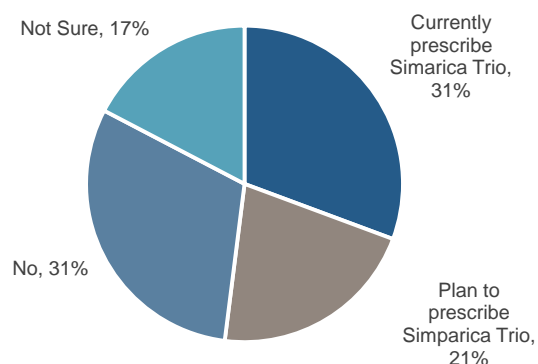
We also asked respondents about whether they would be inclined to prescribe a monthly chewable preventative with flea, tick, and heartworm indications. As a reminder, Zoetis recently launched such a product, known as Simparica Trio, in the US in April 2020, following phased commercial launches in Italy, Spain, and the UK, with additional international market launches ongoing. The label, as expected, includes the puppy indication with no meaningful label caveats. The next generation flea/tick/heartworm combination parasiticide is considered the 'holy-grail' of companion animal health, and ZTS is the first to US market, with the only triple combination offering likely through 2020, and second to the OUS market, where BI's NexGard Spectra is

currently available in the EU and Australia. In our view, likely domestic competitors in the next year include BI's NexGard Spectra, with potential launches from Merck and Elanco further out.

Among respondents, 52% either currently prescribe Simparica Trio (31%, vs. 29% in 2Q) or plan to prescribe Simparica Trio (21%, vs. 27% in 2Q), over current parasiticide options. Reasons for being likely to prescribe triple combination products include all-in-one protection, simplification for the pet owner, greater compliance, and that a single product is ideal. Respondents who were unsure or unlikely to prescribe the product cited concerns over efficacy as the top inhibitor. While the commentary on the product skewed positive, we note that veterinary adoption of new products can be slow-moving; among the 22 veterinarians already prescribing Simparica Trio, respondents prescribe the product to 31% of patients, on average, indicating meaningful runway for continued penetration.

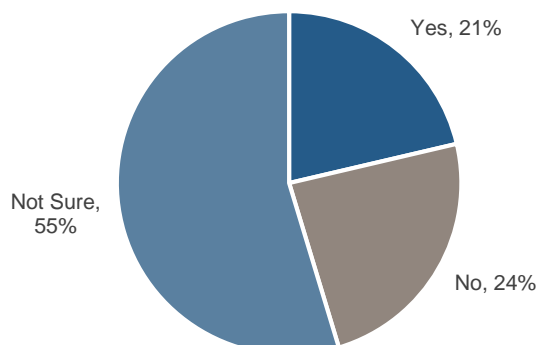
Importantly, only 21% of respondents view that the launch has been negatively impacted by COVID-19 and social distancing protocols, an encouraging dynamic despite the reduced opportunities for veterinarian/pet owner interaction inherent in a curbside pickup model. We highlight that several of the respondents who do not view that the launch was negatively impacted by COVID noted they are continuing to see high volumes of patient visits at their practices. All in, the results increase our confidence in ZTS's expectations for essentially three full quarters of Simparica Trio sales, amounting to an estimated \$125 million in 2020 sales, net of existing parasiticide cannibalization

Figure 73: Would/Do you prescribe Simparica Trio over current parasiticide options?



Source: Company data, Credit Suisse, N=75

Figure 74: Do you view COVID has negatively impacted the launch of Simparica Trio?



Source: Company data, Credit Suisse, N=75

We underscore Zoetis's positioning for gains as it is under-indexed in the parasiticide category, where it generated \$966 million in revenue in 2019 (15% of total revenue, includes Revolution/Stronghold, Simparica, ProHeart, and Livestock products). In light of its positioning, we view ZTS has more to gain from a Triple combination product, with the potential to capture share from competitors' older generation products, including those of BI/Merial, who will likely suffer more in terms of cannibalization given its already sizeable annual sales totals from NexGard. We note that, of respondents switching to Simparica Trio, 22 respondents plan to switch/have already switched from prescribing ELAN products, 14 plan to switch/have switched from prescribing BI products, and six plan to switch/have switched from ZTS products.

Figure 75: Potential Cannibalization: Respondents Switching from Various Parasiticides to Simparica Trio

Product	Manufacturer	Count
Interceptor Plus	Elanco	11
Trifexis	Elanco	9
Nexgard	BI	8
Heartgard	BI	6
Simparica	Zoetis	6
Sentinel	Novartis	3
Bravecto	Merck	3
Credelio	Elanco	2
Advantix	Bayer (ELAN)	1

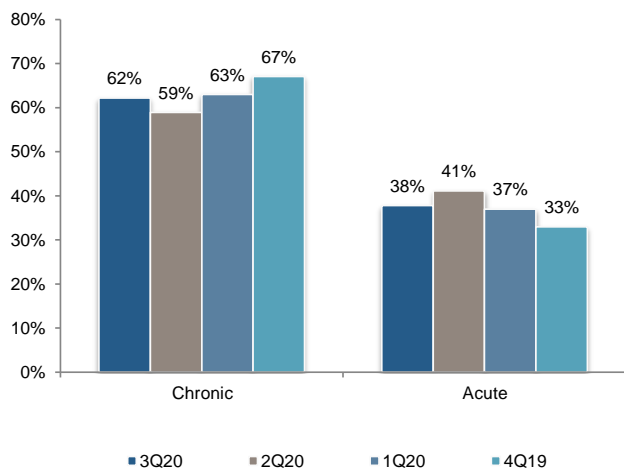
Source: Company data, Credit Suisse, N=39

Apoquel – A notable driver in veterinary medicine (Zoetis)

According to our survey, 57% (vs. 51% in 2Q) of surveyed veterinarians expect to prescribe Apoquel to a greater number of patients in the NTM. Zoetis has achieved 60% penetration (revenue share >80%) of the US atopic dermatitis market as of the end of 2019, and we estimate 2020 sales of Apoquel will total \$605 million, representing +9% growth over 2019. We forecast Cytopoint will grow +24% yoy, leading to \$861 million in sales from Zoetis’s Atopic Dermatitis portfolio in 2020 (13% of total sales). Drivers of continued growth include greater penetration, price increases in existing markets, and the launch of Apoquel in China (2H19) and Cytopoint in various markets.

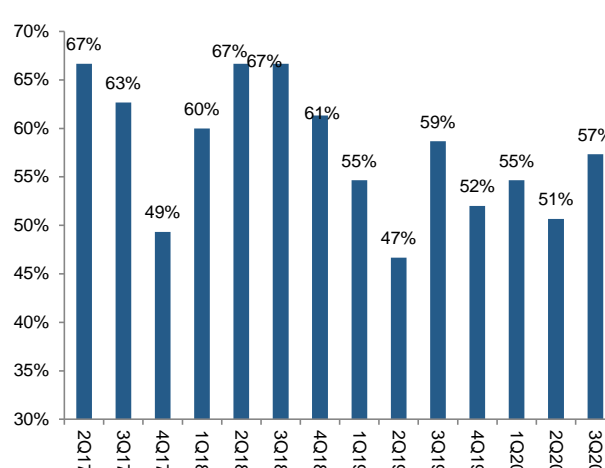
Based on our cohort of practices in this survey, on average, 62% of Apoquel prescriptions are dispensed for chronic cases (vs. 59% in 2Q), with 38% being used to treat acute cases, dynamic that Zoetis has highlighted as driving greater penetration for the product longer term.

Figure 76: 62% of Apoquel scripts are used to treat chronic (vs. acute) cases, on avg., according to respondents



Source: Company data, Credit Suisse, N=75

Figure 77: 57% of respondents view there is a meaningful opportunity to treat more cases with Apoquel



Source: Company data, Credit Suisse, N=75

We also asked veterinarians which new products are having a notable impact on practice revenues this year, and 25% of participants highlighted either one or both of the products in Zoetis’s atopic dermatitis portfolio (Cytopoint – 15%, Apoquel – 11%), impressive given Apoquel is now in its sixth year on the market. Additionally, 3Q represented the eighth consecutive quarter with **Kindred Biosciences’s** Mirataz receiving notable attention, with one respondent mentioning it as among the most impactful products (vs. four in 2Q). ProHeart 12, launched by Zoetis in July 2019, was also noted as a meaningful launch by 7% of respondents,

possibly indicating ramping veterinary adoption of the newly-launched product. Encouragingly, Simparica Trio was the third most commonly cited product, noted by 9% of respondents, an encouraging sign for its recent launch.

Figure 78: Products making an impact on practice revenues in 3Q20

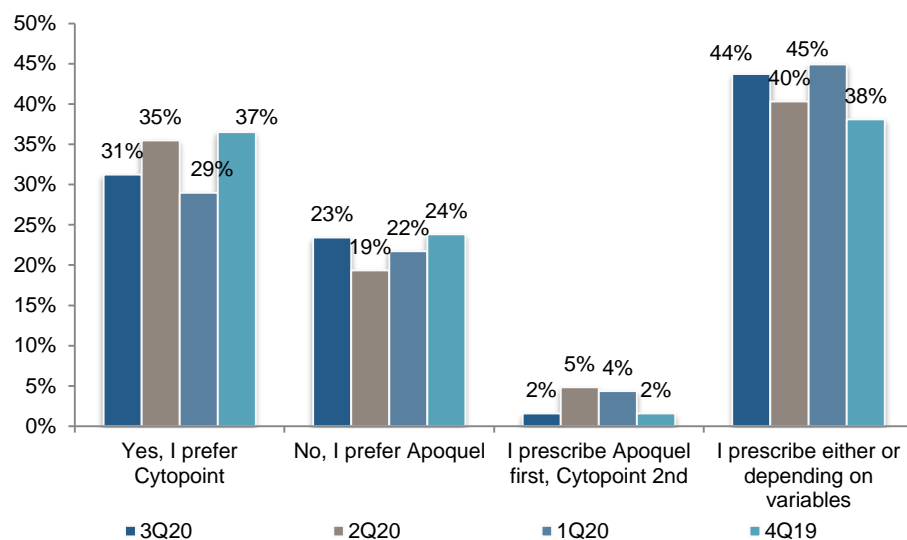
Product	Company	Therapeutic area	Number of respondents	Percentage of respondents
Cytopoint	Zoetis	Atopic dermatitis	11	15%
Apoquel	Zoetis	Atopic dermatitis	8	11%
Simparica Trio	Zoetis	Chew able flea/tick/heartworm	7	9%
ProHeart	Zoetis	Heartworm injectable	5	7%
Galliprant	Elanco	Osteoporosis Pain Relief	5	7%
Entyce	Aratana Therapeutics	Weight management	4	5%
Cerenia	Zoetis	Vomiting	2	3%
SediVue	IDEXX	In-house Urinalysis	2	3%
Mirataz	Kindred Biosciences	Weight management	1	1%
Convenia	Zoetis	Antibiotic	1	1%
Bravecto	Merck	Chew able flea/tick	1	1%
WITNESS Lepto	Zoetis	Rapid Testing for Leptospira	1	1%
Nocita	Aratana Therapeutics	Post-operation pain	1	1%

Source: Company data, Credit Suisse, N=75

Cytopoint (Zoetis): Cited as the most impactful new product

In late December 2016, Zoetis received full USDA licensure for Cytopoint (IL-31), a monoclonal antibody for atopic dermatitis. Approximately 85% of respondent currently prescribe Cytopoint to patients (vs. 83% in 2Q, 85% average), evidencing its continued penetration. Feedback was overwhelmingly positive, with many veterinarians highlighting the advantages of the therapeutic for immunosuppressed dogs vs. Apoquel or steroidal alternatives, efficacy, low side effects, and successful adoption by customers. While Cytopoint is offered at a premium price point relative to Apoquel, mentioned by some of our participants as a prohibitive factor (particularly for pet owners with large dogs), ZTS has noted positive feedback from customers with no material pushback on pricing.

Given concerns regarding the potential cannibalization of Apoquel sales, we asked veterinarians whether they preferred to prescribe Cytopoint over Apoquel. Of the 64 veterinarians who treat atopic dermatitis cases at their practices with these products, 31% stated they prefer to prescribe Cytopoint over Apoquel to patients (vs. 35% in 2Q and 29% in 1Q), while 23% noted they prefer Apoquel over Cytopoint (vs. 19% in 2Q and 22% in 1Q). Approximately 44% of surveyed veterinarians stated that they carry both Apoquel and Cytopoint and will choose their route of treatment depending on various criteria (i.e., immunocompromised, size of dog, cost, client preference, severity of itching, chronic vs. acute case, dog's palatability with Apoquel or other relevant medications).

Figure 79: Do you prescribe Cytopoint over Apoquel?

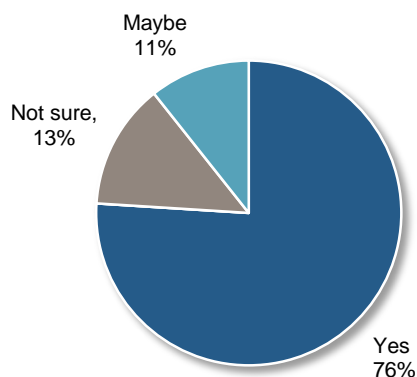
Source: Company data, Credit Suisse, N=62

Addressing feline pain: Overwhelming demand for a feline chronic pain product

Recently, Zoetis announced that it has filed for a monoclonal antibody candidate to address osteoarthritic pain in felines, and it expects to launch this product in 2021. By way of background, cats are globally under-medicalized relative to dogs for a variety of reasons, as they tend to mask pain and to be behaviorally difficult to medicate. As a result, there is currently a lack of therapeutics available to felines, particularly in regards to pain, as the canine equivalent Rimadyl (ZTS) is toxic to cats.

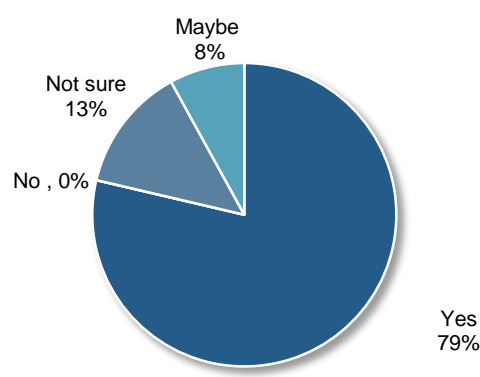
According to our survey, the vast majority of respondents (76%, vs. 77% in 2Q) expressed willingness to prescribe this product assuming it is safe and effective. Notably, no respondents said that they would not prescribe the product, though ten respondents (13%, vs. 12% in 2Q) were unsure, citing safety and efficacy concerns. Even more respondents (79%, vs. 87% in 2Q) view there is a meaningful opportunity to use this product to treat chronic feline pain, indicating a vast and severely underpenetrated market opportunity for ZTS to capture should this product be approved. Veterinary commentary on a possible feline pain product echoed these enthusiastic results, as the majority of respondents noted that therapeutic options for cats are limited and that pain in cats is a common and critical unmet need.

Figure 80: Would you prescribe a monoclonal antibody product to control chronic pain in felines?



Source: Company data, Credit Suisse, N=75

Figure 81: Do you view there is a meaningful opportunity to treat chronic feline pain?



Source: Company data, Credit Suisse, N=75

We note that the majority (51%) of respondents cited feline chronic pain as the most critical unmet need in animal health, further underscoring the potential market opportunity for the product. At a distant second, 17% of respondents cited periodontal disease as a critical unmet need, as well as epilepsy (8%), lymphoma (4%) and osteosarcoma (4%). See Figure 82.

Figure 82: Which of the following do you consider the most critical unmet need in veterinary medicine?

Critical unmet need	% of respondents
1 Feline Chronic Pain	51%
2 Periodontal disease	17%
3 Epilepsy	8%
4 Lymphoma (B-cell and T-cell)	4%
5 Osteosarcoma	4%
6 Non-surgical contraception	4%
7 Canine Chronic Pain	3%
8 Osteoarthritis	3%
9 Anemia	3%
10 Diabetes	1%
11 Inappetance (Appetite stimulant)	1%
12 Chemotherapy-induced diarrhea	1%

Source: Company data, Credit Suisse, N=75

Galliprant (Elanco): Demand Steady

In January 2017, in collaboration with Elanco Animal Health, Aratana Therapeutics launched Galliprant in the US for the control of pain and inflammation associated with osteoarthritis in dogs, a potential alternative to Zoetis's leading offering Rimadyl, among others (see Figure 83), in a competitive therapeutic category.

Figure 83: FDA approved canine pain medications

Brand Name	Active Ingredient	Generic?	Manufacturer
Etogesic	Etodolac	Yes	Not currently marketed
Rimadyl	Carprofen	No	Zoetis
Vetprofen	Carprofen	Yes	Vetoquinol/Belcher Pharmaceuticals
Carprieve	Carprofen	Yes	Norbrook Laboratories
Novocox	Carprofen	Yes	Dechra Pharmaceuticals
Quellin	Carprofen	Yes	Bayer Animal Health
Metacam	Meloxicam	No	Merial/BIVI
Orocam	Meloxicam	Yes	Abbott
Loxicom	Meloxicam	Yes	Norbrook Laboratories
Meloxidyl	Meloxicam	Yes	Ceva
Deramaxx	Deracoxib	No	Elanco
Previcox	Firocoxib	No	Merial/BIVI
Onsior	Robenacoxib	No	Elanco
Zubrin	Tepoxalin	No	Merck Animal Health
Galliprant	Grapiprant	No	Elanco/Aratana

Source: Company data, Credit Suisse

Figure 84: FDA approved feline pain medications

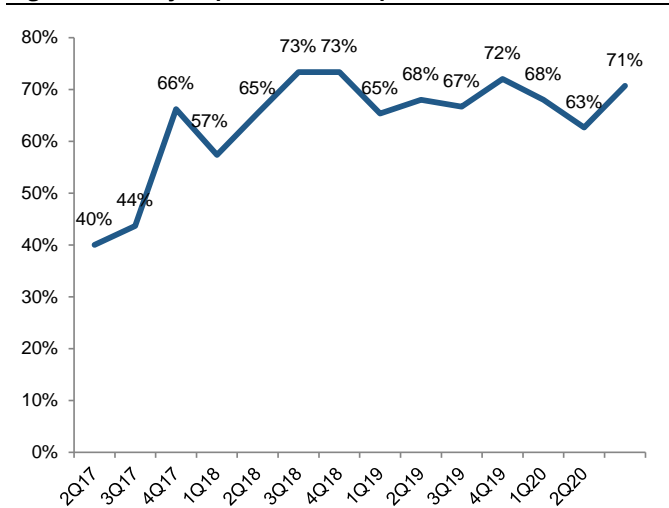
Brand Name	Active Ingredient	Generic?	Manufacturer
Onsior	Robenacoxib	No	Elanco
Metacam	Meloxicam	No	Merial/BIVI

Source: Company data, Credit Suisse

Galliprant is an EP4 prostaglandin receptor antagonist for the treatment of osteoarthritis pain and inflammation in dogs. Galliprant is licensed from human pharma company RaQualia Pharma, and it is part of the ppirant chemical class that uniquely blocks the prostaglandin EP4 receptor, a key receptor involved in pain with the potential for a significantly improved safety profile over current standards of care (NSAIDs such as Carprofen and Meloxicam).

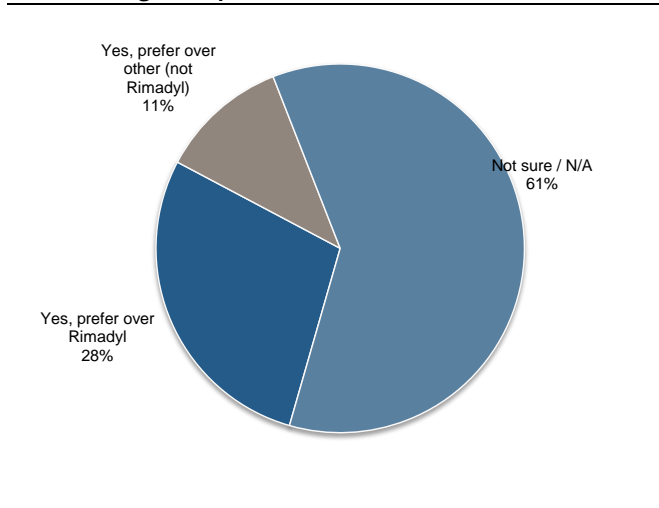
Survey feedback on Galliprant remains positive as a safer and more efficacious alternative to Rimadyl and other NSAIDs. Many respondents noted that it has less side effects than competing NSAIDs and is safe for senior pets. More mixed reviews identified pricing as the most common prohibitive factor in addition to satisfaction with alternatives (Rimadyl and generic versions of Rimadyl, such as Dechra’s Carprofen and Bayer’s Quellin) as well as safety concerns. However, a majority – 71% of participants – already prescribes the product. Importantly, of the 53 veterinarians who currently prescribe Galliprant, 21 respondents (39%) highlight that they prefer Galliprant over existing leading treatments such as Rimadyl (Zoetis).

Figure 85: Do you prescribe Galliprant?



Source: Company data, Credit Suisse, N=75

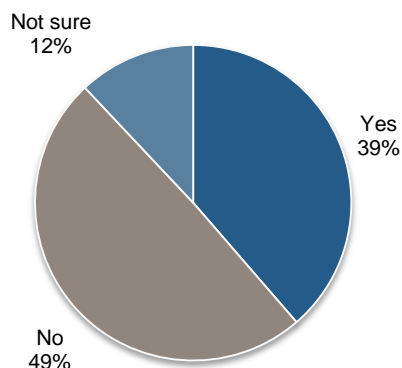
Figure 86: Do you plan on / already prescribe Galliprant over existing therapies?



Source: Company data, Credit Suisse, N=53

Of note, while there have been previous shipment delays for Galliprant, among surveyed participants, 39% of participants experienced shipment delays across any product, but Galliprant was not mentioned. We note that COVID-related PPE shortages BI’s Vetmedin, and ophthalmics were the most commonly cited products experiencing delays in delivery and notable supply shortages, with several respondents also noting that all product shipments are somewhat delayed due to COVID-19.

Figure 87: Did you experience any delays or notable supply shortages across products over the past three months?



Source: Company data, Credit Suisse, N=75

Figure 88: Delayed Products

Product	Respondents
Vetmedin (Bl)	6
Ophthalmics	4
PPE	4
Various vaccines	1
Carpofen (generic Rimadyl)	1
Clindamycin (generic)	1

Source: Company data, Credit Suisse

Entyce (Elanco): Solid trajectory for appetite stimulant

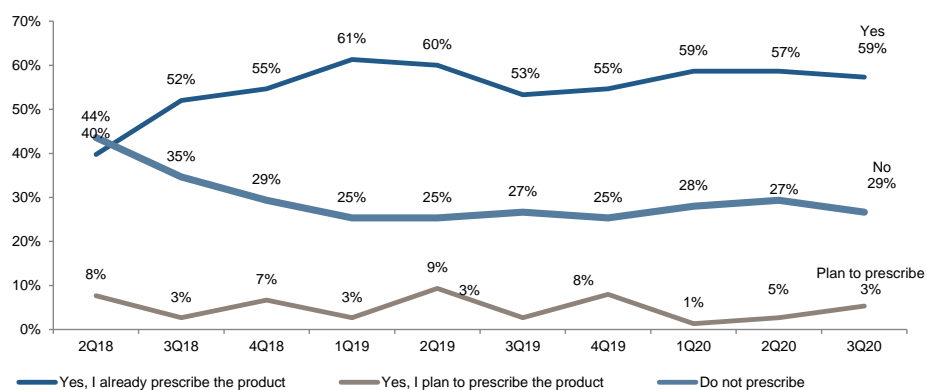
Aratana (now ELAN) announced the launch of Entyce, its canine appetite stimulant, in October 2017 ([see note](#)). Nearly 10 million dogs are diagnosed with inappetence each year, which is often a first sign of disease in pets, and malnutrition can exacerbate underlying disease. While product sales (\$4.6 million) in 2018 were somewhat lackluster, Aratana received orders for Entyce from over 13,000 veterinary clinics during the year, with >70% re-order rates.

In 2019, Aratana (ELAN) targeted more frequent and longer duration uses of Entyce, with plans to stimulate demand by focusing on peer-to-peer education and implementing case studies about chronic conditions. One survey respondent noted they prefer Entyce as an option for appetite stimulation in chronic cases.

With no meaningful restrictions in the product label and no meaningful competitors, we conservatively estimate Entyce annual sales of ~\$28 million at 35% peak market share for the canine indication in the US in 2028, not including potential sales from the development of Entyce for felines.

As a reminder, ELAN is also striving to launch Entyce for felines, though it has acknowledged Entyce for canines has been used off-label for felines. Entyce for cats received a technical section complete letter for safety from the FDA on February 27th, 2019, and Aratana was expected to complete enrollment for the pivotal study for weight management in felines with chronic kidney disease in ~mid-2019.

This product would compete with *Kindred Biosciences's* (KIN) Mirataz, a transdermal ointment for the management of weight loss in cats, which was commercialized in July 2018. In 2H18, Mirataz generated \$2.0 million in revenue. Two respondents commented that they prefer mirtazapine (the active ingredient in Mirataz) to Entyce, but positive respondents noted that they prefer the liquid option of Entyce and prescribe it before other products in cases of inappetence.

Figure 89: Do you currently prescribe Elanco's Entyce?

Source: Company data, Credit Suisse estimates

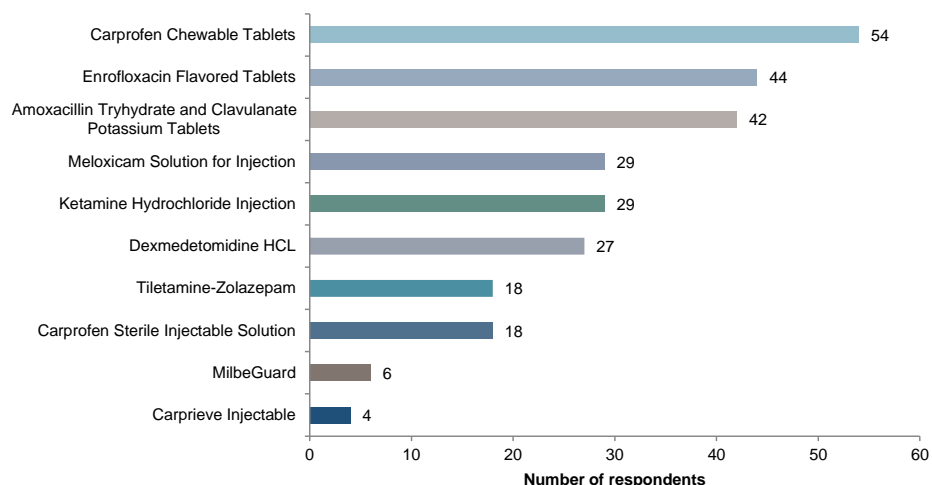
Based on our survey, Entyce traction continues to build, albeit at a lower rate, with 63% of our cohort now prescribing or planning to prescribe the product (vs. 61% in 2Q and 60% in 1Q). Furthermore, we highlight only four of respondents view Entyce made a significant impact on their respective practices in the past year (See Figure 89), vs. two in 2Q.

Generics

According to our survey, almost all respondents (91%) prescribe some generic medications through their clinics. Specific to veterinary medicine, the most popular prescribed generics were Carprofen chewable tablets, a generic version of Zoetis's Rimadyl (54 respondents); Dechra Pharmaceuticals' (DPH-GB) Enrofloxacin Flavored Tablets (44); DPH's Amoxicillin Tryhydrate and Clavulanate Potassium Tablets (42); DPH's Meloxicam Solution for Injection (29), and Ketamine Hydrochlorine Injectable (29). Please refer to Figure Error: Reference source not found! below.

Of note, six respondents (8%) prescribe MilbeGuard, Ceva's newly launched generic version of ELAN's Interceptor. As a reminder, Ceva announced the launch of a generic version of ELAN's Interceptor a legacy Novartis Animal Health heartworm preventative chewable product, at VMX in January 2019 ([see note](#)). Importantly, Ceva's product lacks an important tapeworm indication which is included in ELAN's Interceptor Plus.

Figure 90: Most popular generics amongst surveyed veterinarians



Source: Company data, Credit Suisse, N=68

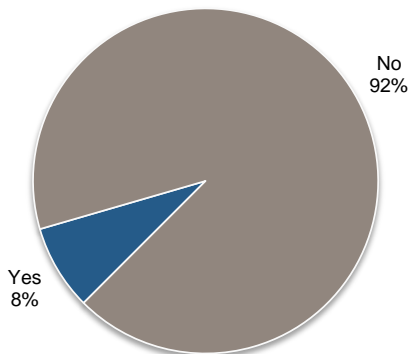
Figure 91: Popular generics and their uses

Product	Manufacturer	Use	# of respondents
Carprofen Chew able Tablets	Various	Canine pain, generic Rimadyl (Zoetis)	54
Enrofloxacin Flavored Tablets	Dechra	Antibiotic, generic Baytril (Bayer)	44
Amoxicillin Trihydrate and Clavulanate Po	Dechra	Antibiotic, generic Clavamox (Zoetis)	42
Meloxicam Solution for Injection	Dechra	Generic Metacam (Boehringer Ingelheim) for pain	29
Ketamine Hydrochlorine Injection	Various manufacturers	Anesthetic	29
Dexmedeomidine HCL	Dechra	Sedative, generic Dexdomitor (Zoetis)	27
Tiletamine-Zolazepam	Dechra	Anesthesia, generic Telazol (Zoetis)	18
Carprofen Sterile Injectable Solution	Various	Canine pain, generic Rimadyl (Zoetis)	18
Milbeguard	Ceva	Canine endoparasiticides, generic Interceptor (Zoetis)	6
Carprieve Injectable	Norbrook	Canine pain, generic Rimadyl (Zoetis)	4
Other	Various	Various	3

Source: Company data, Credit Suisse, N=68

However, we note 8% of veterinarians in our cohort have added new generics to their offerings over the past three months, below the historical average of 12%.

Figure 92: Have you added more/new generics over the past three months?



Source: Company data, Credit Suisse, N=75

Of note, in 1Q17, Zoetis moved to minimum volume agreements with distributors for certain products (Rimadyl, Clavamox), which should help to offset the elimination of previous exclusive

contracts with distributors. While we acknowledge this has expanded distributor access to various other branded and generic products (namely from Dechra/Putney and Vetoquinol), we continue to view the threat from generics as relatively limited with a variety of unique dynamics contributing to relatively low generic penetration. With no third-party payors/pharmacy benefit managers, brand-to-generic conversion limitations, or other legislation prohibiting economic participation, veterinarians are less incentivized to promote generic alternatives. More broadly, we view the durability of Zoetis's broader portfolio as sustainable with the average lifespan of its top 24 products at approximately 30 years.

Relevant detailed commentary

Ad hoc commentary was mixed with more of a positive bias with regards to the general thoughts and outlook on the veterinary business. More specific relevant responses are detailed below:

Veterinarians Perception of Companion Animal Pharmaceutical Manufacturers

Respondents that selected Zoetis as best positioned:

- “Zoetis is the most innovative and has a unique product line.”
- “Good products and marketing.”
- “Zoetis has launched many new products at competitive prices. Great tech support to vets and clients.”
- “The reach and reputation of Zoetis make it well positioned.”
- “ProHeart.”
- “Zoetis has highest potential for new innovations.”
- “Zoetis ranks high in product innovation and customer service.”
- “Range of products available, especially unique products.”
- “Monoclonal products with Zoetis.”
- “Zoetis - ProHeart 12, Convenia. Whoever can make long-lasting injectables is going to win market share.”
- “Innovation and diversity and most effective products.”
- “Simparica Trio looks to be a major hit.”
- “Zoetis is focused on the items that are most common such as pain, allergies, and parasite control.”
- “Zoetis has injectable products that cannot be outsourced to online pharmacy.”
- “Zoetis always seems to have the latest cool products like Simparica Trio and Apoquel.”
- “Zoetis is pretty much becoming a monopoly.”
- “Zoetis seems to be the most aggressive in acquiring and consolidating other vet companies. In addition, their products hold strong by not having generics like Cerenia, Convenia and ProHeart.”

- “Zoetis seems to have the most active company reps and the most innovative products at this time.”

Respondents that selected Merial/BI as best positioned:

- “Merial and Zoetis have quality products.”
- “Breadth of portfolio and new products.”
- “Just seem like they are more visible with products, etc.”
- “BI is a good company.”

Respondents that selected Merck as best positioned:

- “Merck seems to have the biggest profile.”
- “Marketing exposure.”
- “Merck is a top notch company.”
- “Most exposure among clinics.”
- “History.”
- “Merck and Zoetis have the most popular parasiticide products.”

Respondents that selected Elanco as best positioned:

- “They have been most forward-thinking in innovation.”
- “Most aggressive company trying to gain market share.”
- “Interceptor Plus with Credelio covers all parasites in my area. Zoetis has long established vaccine portfolio but may be pricing themselves out of market.”
- “We mostly use Trifexis and Simparica when making recommendations.”

Feedback on Simparica Trio/combination flea/tick/heartworm product

Positive

- “I think it’s a great idea for compliance.”
- “I think it is great for clients and pets.”
- “Very high likelihood of use by most clients.”
- “I would be thrilled about offering this type of product.”
- “I expect it to take over other products.”
- “There is a market for all these products. We have to remember 70% of pet owners don’t see a veterinarian. There’s room for new products.”
- “I think there is a great possibility of it taking major market share. Convenience is key.”
- “I think it will increase compliance with owners.”
- “Should sell well.”
- “I think it’s a great product! I feel it could really take off in areas where ticks are a big problem.”
- “Better than collar.”
- “Seems to be met with happy customer satisfaction.”
- “I believe it will have a large amount of traction.”
- “Good spectrum, convenient, cost effective.”

- “People love a true all in one.”
- “For my patients that use oral, I like the simplicity of only a single dose every month.”
- “We are trying to switch them to Trio from Trifexis.”
- “I think it’s great to have one product that does so much.”
- “Good single solution, labeled for puppies.”
- “It would be much better for owner compliance and I look forward to carrying and prescribing.”
- “I think clients will find it easier to use and will increase compliance.”
- “Many clients are requesting a product that has this combination.”

Mixed

- “I think this is great, but the cost has to justify the convenience.”
- “Great idea but MUST have all worms covered including tapes and whips. Alternative products are available that do all.”
- “I think the potential is great. It has to have some price value to it as well.”
- “I think if it were the same price it would quickly have huge market share- many people use Trifexis since it is less expensive, not out of convenience.”
- “It’s a good idea, but only if it can match the 3 month Bravecto label, or longer efficacy.”
- “I believe that it will be good as long as the product is palatable and has minimal side effects (esp. liver and nervous system associated.)”

Negative

- “I feel the more change, the more confused clients get. Many would prefer the ‘same’ year after year.”
- “They will outsource to online pharmacy.”
- “It does not protect against whipworms and we have a large problem with whipworms in our practice area.”
- “Satisfied with current offerings.”
- “People love the 3 months of Bravecto, don’t want to go back to a monthly preventative.”
- “I would be concerned about the patients w/ neuro side effects.”
- “Our area does not warrant year round combo therapy.”
- “No tapeworm.”
- “The cost is still too high for my clients to justify using this product.”
- “We prescribe 12 months of heartworm and six months of flea/tick in my state. A combo product that costs more than the price of what we sell makes no economic sense.”
- “Combos are more expensive to try to sell when the main concern is heartworm over fleas.”

Feedback on a potential feline pain product

Positive

- “Much needed if it’s safe and effective.”
- “Absolutely necessary product... Very eager to start using it.”
- “We need more options for cats.”

- “This would fill a major gap in feline pain management options.”
- “High need for pain management in cats.”
- “This would make me so happy!”
- “It will be the only realistic long-term feline pain control option available.”
- “Very needed.”
- “We need more options for feline pain control!”
- “Amazing concept.”
- “We need something safe for cats!”
- “We need good pain meds for cats.”
- Very limited treatment available for feline osteoarthritis
- “Very high demand.”
- “If approved there is no other product in the US for on label use.”
- “All NSAIDS are pretty dangerous to cats. This could be safer.”
- “Good opportunity and option for cats.”
- We need better medications for feline OA
- “We really need better pain meds for cats.”
- “It will likely be the safest product for cats to control chronic pain.”
- “Options for treatment of chronic feline pain are somewhat limited. It would be wonderful to have a product labeled for that use.”

Mixed

- “I will need to learn more about this, but we need better pain meds for cats.”

Feedback on ZTS’s Cytopoint

Positive

- “I think it works great and is safe.”
- “It’s fantastic: safe and effective.”
- “Very effective. Well accepted by clients”
- “Like for small dogs.”
- “Love Cytopoint, find it very effective and don’t need to worry about compliance.”
- “Great clinical response for patient and owner.”
- “Best product in many years!”
- “Works when Apoquel does not.”
- “It works very well and clients are very happy.”
- “Happy with it. Works in most cases.”
- “Wonderful product and a godsend for many patients.”
- “Excellent efficacy.”
- “It’s excellent! We need the feline version ASAP.”
- “I love this product, works efficiently and quickly.”

- "Love it, effective and convenient."
- "It works great in about 80% of dogs in my experience."
- "Great for clients that cannot give pills."

Mixed

- "It works well for some & not for others."
- "Can work well but often it doesn't do much."
- "Great product -cost prohibitive on larger dogs."
- "Works well in some cases, hit or miss."
- "Love it. I wish it was available in a multidose vial to help bring down cost of treatment for dogs > 40 lbs."

Negative

- "Expensive."
- "Still too costly."
- "Not as effective as Apoquel generally speaking."
- "Too expensive for repetitive use."
- "Lots of treatment failure,"

Feedback on ELAN / PETX's Galliprant

Positive

- "Geriatric dog NSAID of choice."
- "Improvement on Carprofen."
- "Good choice for chronic use w/o as much hepatic/renal concern."
- "Excellent for dogs with underlying disease."
- "For dogs that can't tolerate Rimadyl."
- "Works well in most dogs."
- "Fewer side effects."
- "Safer for liver and kidneys, less GI side effects."
- "Like it for patients with liver/kidney disease."
- "Yes, safest NSAID."
- "It has a very good safety profile so I use it for chronic pain."
- "Used primarily based upon body weight but also in cases where other NSAIDs have been of poor efficacy."
- "Good choice for geriatrics."
- "Very safe."
- "It's nice to have an NSAID that's better for liver and kidney disease patients."
- "It's a great pain medication."

Mixed

- "We use Galliprant rarely in patients w/ elevated liver /kidney values."

- "I've used it but usually go with Carprofen."

Negative

- "Still using other older options."
- "Other NSAIDs preferred."
- "I am content with our current pain management."
- "Too expensive."
- "Doesn't work."

Feedback on ELAN / PETX's Entyce

Positive

- "Effective and easy."
- "Works well."
- "Great product for dogs."
- "Works well for appetite stimulation right away, especially hospice cases."
- "The best appetite stimulant in dogs."
- "It's the best appetite stimulant for dogs. There's very little competition."
- "Good option for dogs."
- "It works well."
- "It's a great appetite stimulant."
- "Great to have an on-label drug/alternative to mirtazapine."

Mixed

- "Limited use due to long term restrictions."
- "I like how it is more effectively than mirtazapine, but it's so expensive!!!"
- "Excellent but pricey."

Negative

- "Haven't seen a need for it."
- "Didn't work."
- "Still use Mirtazapine."
- "Too expensive."
- "Rarely need it."

Retailer Competition

Respondents who experienced increased competition:

- "Chewy."
- "More clients are aware of the availability online."
- "Chewy prices are hard to beat."
- "Ease for owners."
- "Cost and convenience."

- “Better prices.”
- “Cheaper.”
- “Coronavirus has increased client on line shopping habits.”
- “People are ordering more of everything online.”
- “Chewy advertising.”
- “Increased client awareness.”
- “Usually there is some type of incentive to get clients hooked into buying on line -they don't realize that lost revenue is causing service to increase in price.”
- “Owners are more aware of these companies.”
- “Their prices are unbeatable.”
- “COVID means people have really preferred ordering things online to avoid contact with humans.”
- “COVID.”
- “Cheaper.”
- “Lower prices.”
- “More players.”
- “Easy for clients and they think it's cheaper.”
- “People just go to Chewy.”
- “They are undercutting prices.”
- “Cost and variability of products.”
- “It is easier for people.”
- “Many owners are looking for more competitive prices.”
- “Increased prescription requests from Chewy and Allivet primarily.”
- “People think it is cheaper and they don't have to go out during COVID.”

Respondents who did not experience increased competition:

- “We already did have a lot of competition.”
- “We have people pick up written prescriptions and deal with it themselves.”
- “We price fairly and competitively.”
- “We educate clients on value of in house prescriptions.”
- “Stable.”

Feedback on a potential partnership with Chewy

Positive:

- “Better to join them then to lose the income to them.”
- “Positive.”
- “I actually think this would be a great partnership if done correctly. Chewy has a great reputation for excellent customer service.”
- “I think it's a great idea, especially for veterinarians who do minimal to no retail. Chewy has great customer service and clients like working with them.”

- “They certainly are popular with clients and seem to have good client satisfaction.”
- “I don't know much about this but it could be beneficial for everyone.”
- “They have an established market so would be a good idea to work with them.”
- “Excellent.”
- “There are polar opinions on Chewy in the veterinary community. My experiences have been favorable and with the additional veterinary input I would think it would be good for all concerned.”
- “They've improved with client/veterinary relationship.”
- “I think this is a good idea.”
- “As long they develop a positive economic relationship with veterinarians to achieve symbiotic relationship.”
- “Probably would work well.”

Mixed

- “Not sure how it would help my hospital's revenue.”
- “Would have to be proven first for me to consider. Previous negative experience.”
- “It would have to benefit the veterinarian in some way.”
- “I think many vets have viewed them as an enemy and relationship building will need to be done. Perhaps if they offered a better % of the money it would help.”
- “They've alienated a lot of vets already - authorizing scripts that had been declined, signatures showing up on declined scripts/patients vets have not seen, bashing vets to clients, etc. So they have a long way to go if they want to form a relationship with vets.”
- “I would have to hear their pitch.”
- “If they do not make it financially beneficial, vets will continue in house or their own online store.”
- “It would depend on the assurance that there are veterinarians on Chewy's staff are involved in the product selection and source.”

Negative

- “Chewy has a long history of treating veterinary clinics poorly, and I doubt many practices will be willing to work with them.”
- “I don't think it will be a good idea because Chewy is often viewed as huge competition for revenue from veterinary clinics.”
- “I hate Chewy. They lie to our clients, fill Rx's incorrectly, and undercut our prices.”
- “Too little too late.”
- “I think it will hurt the smaller private practices like ours, and I am still skeptical about the quality of their products.”
- “Their attention to detail is poor and I wouldn't trust their quality control at this time.”
- “Concern about quality of products.”
- “Chewy has done everything in its power to cut vets out of the picture and take the market share for themselves as well as gather the data of all of our clients. They have done this by undermining vets to clients and putting clients in charge of making prescription requests. They inundate clinics with Rx request faxes, take up valuable staff time, and do not compensate at all for these services. They dispense medications without approval and

dispense the wrong medications often. The new platform does not compensate vets or vet clinics and is only designed to drive more customers to Chewy. In order to even consider working with them, they would need to change their model dramatically so that the vet is the one who submits the Rx, not the client. They would also need to improve their compliance and quality control, stop using bootleg or diverted products/guarantee product quality, and compensate veterinarians for selling products for them. I do not see that happening.”

- “I can’t imagine the economics working.”
- “Wolf in sheep’s clothing.”

Feedback on IDEXX's Digital Cytology Offering

Positive

- “Sounds very helpful.”
- “Could prove to be very useful.”
- “It will be useful to get cytology results faster.”
- “Can only be a plus.”
- “Would be very helpful in surgical planning.”
- “Sounds very interesting and useful.”
- “We have an excellent cytologist on staff, however she is close to retiring and I think this offering with be invaluable once we lose her.”
- “If accurate, that turnaround is fantastic.”
- “Would be very helpful to give a diagnosis (or non-diagnosis) that quickly.”
- “I think it would be great to have same day results.”
- “This would be a boon to practitioners.”
- “It would be useful since results usually take 1-2 days.”
- “It will be very valuable to provide quick answer in the clinic to clients.”
- “I believe this will be a very innovative product which will improve treatment and diagnostic options for clients.”

Mixed

- “Helpful in getting quick results but I would be hesitant of accuracy of results.”
- “Depending on the cost it would be very useful for some owners who want immediate results.”
- “Depends immensely on the accuracy of such a product. But could be very helpful in terms of timing turn around that we receive from the nearby university.”
- “Might be usable, depending on cost.”
- “I don't think this would be that useful to us because we get results pretty quickly on our cytological evaluations”
- “Depends on pricing. I typically read my own cytology to save client expense.”

Negative

- “I don’t think it’ll be very useful. There is value in having a boarded pathologist read cytology and for the typical in house cytology it is easy for a tech to read.”
- “The machine is large and takes up a lot of space.”

- “Still prefer to have a boarded specialist read my slides.”
- “It would not be helpful.”

Figure 83: Companion Animal Parasiticide Landscape

Product Name	Company	Active Ingredients	Brand or Generic	Prescription-Only?	Parasites										Mode of Administration	Frequency of Dosage	Minimum Age	Minimum Weight (lbs)	Isolate Cats (# of hours)	Known Year of launch	Known Blockbuster Status						
					Flea	Black-legged tick	American dog tick	Lone star tick	Brown dog tick	Gulf coast tick	Mosquitoes	Flies	Ear Mites	Lice								Sarcoptic Mange	Heartworm	Hookworm	Roundworm	Whipworm	Tapeworm
External parasiticides																											
Advantage II	Bayer	imidacloprid, pyriproxyfen	Brand	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Topical	Monthly	7 Weeks	3	24	2011	Yes (Advantage)
Advantus	Bayer	imidacloprid	Brand	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Quick Kill	10 Weeks	4	N/A	2017	-
K9 Advantix II	Bayer	imidacloprid, permethrin, pyriproxyfen	Brand	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Topical	Monthly	7 Weeks	4	24	2011	-
Seresto	Bayer	imidacloprid, flumethrin	Brand	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Collar	8 Months	7 Weeks	2.5	0.5	2013	Yes
Frontline	BI/Merial	fipronil, (s)-methoprene, pyriproxyfen	Brand	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Topical	Monthly	8 Weeks	4	24	1996	Yes
NexGard	BI/Merial	afoxolaner	Brand	Rx	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Oral	Monthly	8 Weeks	4	N/A	2014	Yes
Capstar	Elanco	nitenpyram	Brand	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Quick Kill	4 Weeks	2	N/A	2000	-
Comfortis	Elanco	spinosad	Brand	Rx	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	14 Weeks	3.3	N/A	2007	-
Credelio	Elanco	lotilaner	Brand	Rx	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Oral	Monthly	8 Weeks	4.4	N/A	2018	-
Parastar	Elanco	fipronil	Generic	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Topical	Monthly	8 Weeks	4	24	2011	-
Parastar Plus	Elanco	fipronil, cyphenothrin	Brand	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Topical	Monthly	12 Weeks	4	24	2014	-
Activyl	Merck	indoxacarb	Brand	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Topical	6 Months	8 Weeks	4	N/A	2011	-
Bravecto Chewable	Merck	fluralaner	Brand	Rx	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Oral	12 Weeks	6 Months	4.4	N/A	2014	Yes (Bravecto)
Bravecto Topical	Merck	fluralaner	Brand	Rx	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Topical	12 Weeks	6 Months	4.4	N/A	2016	Yes (Bravecto)
Scalibor Protector Band	Merck	deltamethrin	Brand	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Collar	6 Months	12 Weeks	-	N/A	pre-2007	-
Effipro Plus Topical	Virbac	fipronil, pyriproxyfen	Generic	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Topical	Monthly	8 Weeks	5	24	2016	-
Effitix Plus Topical	Virbac	fipronil, permethrin, pyriproxyfen	Generic	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Topical	Monthly	8 Weeks	5	24	2016	-
Effitix Topical	Virbac	fipronil, permethrin	Generic	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Topical	Monthly	8 Weeks	-	N/A	2012	-
Preventic Tick Collar	Virbac	amitraz	Brand	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Collar	3 Months	12 Weeks	-	N/A	1985	-
Simparica	Zoetis	sarolaner	Brand	Rx	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Oral	Monthly	6 Months	2.8	N/A	2016	Yes
Internal parasiticides																											
Drontal Plus	Bayer	praziquantel, pyrantel pamoate, febantel	Brand	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	3 Weeks	2	N/A	1994	Yes (Drontal, incl. cats)
Heartgard Chewables	BI/Merial	ivermectin	Brand	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	6 Weeks	-	N/A	1987	Yes (Heartgard)
Heartgard Plus Chewables	BI/Merial	ivermectin, pyrantel	Brand	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	6 Weeks	-	N/A	1993	Yes (Heartgard)
Heartgard Tablets	BI/Merial	ivermectin	Brand	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	6 Weeks	-	N/A	1987	Yes (Heartgard)
MilbeGuard	Ceva	milbemycin oxime	Generic	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	4 Weeks	2	N/A	2019	-
Interceptor	Elanco	milbemycin oxime	Brand	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	4 Weeks	2	N/A	Late-1980s	Yes (Interceptor Plus)
Interceptor Plus	Elanco	milbemycin oxime, praziquantel	Brand	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	6 Weeks	2	N/A	2015	Yes (Interceptor Plus)
Tri-Heart Plus	Merck	ivermectin, pyrantel	Generic	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	6 Weeks	-	N/A	2003	-
Iverhart Max	Virbac	ivermectin, pyrantel, praziquantel	Generic	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	8 Weeks	-	N/A	2006	-
Iverhart Max Soft Chew	Virbac	ivermectin, pyrantel, praziquantel	Generic	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	8 Weeks	-	N/A	2018	-
Iverhart Plus	Virbac	ivermectin, pyrantel	Generic	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	6 Weeks	-	N/A	2002	-
ProHeart Injectable	Zoetis	moxidectin	Brand	Rx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Injectable	6 Months	6 Months	-	N/A	2001	-
Combination Flea/Tick/Heartworm																											
Advantage Multi	Bayer	imidacloprid, moxidectin	Brand	Rx	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Topical	Monthly	7 Weeks	3	0.5	2007	Yes (Advantage)
Trifexis	Elanco	spinosad, milbemycin oxime	Brand	Rx	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	8 Weeks	5	N/A	2011	Yes
Sentinel	Virbac	milbemycin oxime, lufenuron	Brand	Rx	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	4 Weeks	2	N/A	1997	Yes (Sentinel)
Sentinel Spectrum	Virbac	milbemycin oxime, lufenuron, praziquantel	Brand	Rx	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Oral	Monthly	6 Weeks	2	N/A	2014	Yes (Sentinel)
Revolution	Zoetis	selamectin	Brand	Rx	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Topical	Monthly	6 Weeks	-	N/A	1999	Yes

Source: Company data, Credit Suisse estimates

Zoetis

Raising Target Price

Life Science Tools and Diagnostics

ZTS

Target price (12M, US\$)

192.00

Outperform

Previous target price (12M, US\$)	182.00
Price (9 Oct 20, US\$)	165.43
52-week price range	165.43 - 92.66
Enterprise value (US\$ m)	79,666

Research Analysts

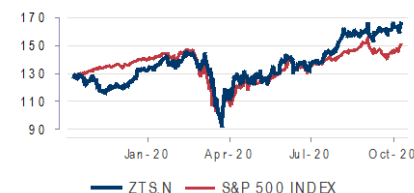
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Share price performance



On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13 Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$128.47

Quarterly EPS	Q1	Q2	Q3	Q4
2019A	0.88	0.90	0.94	0.92
2020E	0.95	0.89	0.92	0.88
2021E	0.99	1.02	1.08	1.04

- **Raising Target Price:** We are raising our target price to \$192 (46.4x our 2021 EPS estimate) from \$182 on the higher view on greater conviction in its LT growth prospects and on our survey's encouraging demand metrics indicating a faster-than-expected COVID recovery.
- Risks include shifts in fundamental demand, slower traction for new products/pipeline.

Financial and valuation metrics

Year	12/19A	12/20E	12/21E	12/22E
EPS (CS adj.) (US\$)	3.64	3.64	4.13	4.58
Prev. EPS (US\$)	-	-	-	-
Revenue (US\$ m)	6,260.0	6,434.6	6,949.3	7,363.4
EBITDA (US\$ m)	2,515.0	2,664.2	2,969.6	3,237.9
P/OCF (x)	25.4	29.7	26.6	24.4
EV/EBITDA (current)	32.5	29.9	26.5	23.9
Net debt (US\$ m)	3,019	1,063	64	-1,190
ROIC (%)	37.92	37.10	41.50	45.11
Number of shares (m)	475.14	IC (current, US\$ m)		5,027.13
Net debt (Next Qtr., US\$ m)	-	Dividend (current, US\$)		-
Net debt/tot eq (Next Qtr., %)	-			-

Source: Company data, Refinitiv, Credit Suisse estimates

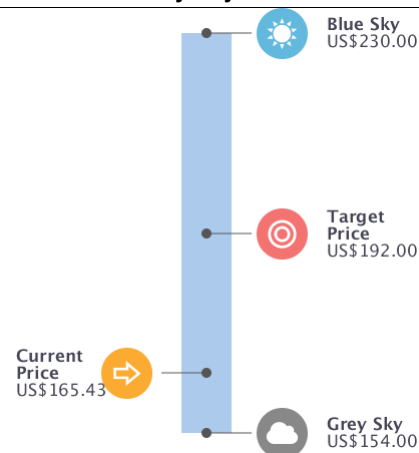
Zoetis (ZTS)Price (09 Oct 2020): **US\$165.43**Target Price: (from 182.00) **192.00**Analyst: **Erin Wright**Rating: **Outperform**

Income Statement	12/19A	12/20E	12/21E	12/22E
Revenue (US\$ m)	6,260.0	6,434.6	6,949.3	7,363.4
EBITDA (US\$ m)	2,515	2,664	2,970	3,238
Depr. & amort.	(185)	(218)	(220)	(220)
EBIT (US\$)	2,330	2,446	2,750	3,018
Net interest exp	(223)	(241)	(244)	(244)
PBT (US\$)	2,145	2,193	2,486	2,754
Income taxes	(390)	(450)	(510)	(565)
Minorities	-0	-0	-0	-0
Net profit (US\$)	1,755	1,743	1,976	2,189
Reported net income (US\$)	1,755	1,743	1,976	2,189
Other NPAT adjustments	0	0	0	0
Adjusted net income	1,755	1,743	1,976	2,189
Cash Flow	12/19A	12/20E	12/21E	12/22E
EBIT	2,330	2,446	2,750	3,018
Net interest	(223)	(241)	(244)	(244)
Change in working capital	-	-	-	-
Cash flow from operations	2,515	2,664	2,970	3,238
CAPEX	(460)	(474)	(488)	(503)
Free cashflow to the firm	2,055	2,190	2,482	2,735
Acquisitions	-	-	-	-
Divestments	-	-	-	-
Cash flow from investments	(460)	(474)	(488)	(503)
Net share issue(/repurchase)	-	-	-	-
Dividends paid	(202)	(202)	(202)	(202)
Changes in Net Cash/Debt	332	1,956	998	1,254
Balance Sheet (US\$)	12/19A	12/20E	12/21E	12/22E
Assets				
Cash & cash equivalents	1,934	3,890	4,889	6,143
Account receivables	1,014	1,099	1,106	1,126
Other current assets	0	(0)	0	0
Total current assets	4,349	6,468	7,492	8,800
Total fixed assets	-	-	-	-
Investment securities	-	-	-	-
Total assets	7,240	9,359	10,383	11,692
Liabilities				
Total current liabilities	279	228	228	231
Total liabilities	5,232	5,181	5,181	5,184
Total liabilities and equity	7,240	9,359	10,383	11,692
Net debt	3,019	1,063	64	(1,190)
Per share	12/19A	12/20E	12/21E	12/22E
No. of shares (wtd avg)	482	479	478	478
CS adj. EPS	3.64	3.64	4.13	4.58
Prev. EPS (US\$)	-	-	-	-
Dividend (US\$)	0.42	0.42	0.42	0.42
Free cash flow per share	4.27	4.57	5.19	5.73
Earnings	12/19A	12/20E	12/21E	12/22E
Sales growth (%)	7.5	2.8	8.0	6.0
EBIT growth (%)	13.5	5.0	12.4	9.8
Net profit growth (%)	15.1	(0.7)	13.3	10.8
EPS growth (%)	16.3	(0.1)	13.6	10.9
EBITDA margin (%)	40.2	41.4	42.7	44.0
EBIT margin (%)	37.2	38.0	39.6	41.0
Pretax margin (%)	34.3	34.1	35.8	37.4
Net margin (%)	28.0	27.1	28.4	29.7
Valuation	12/19A	12/20E	12/21E	12/22E
EV/Sales (x)	13.04	12.38	11.32	10.51
P/E (x)	45.4	45.4	40.0	36.1
Price to book (x)	39.7	19.0	15.2	12.1
Asset turnover	0.9	0.7	0.7	0.6
Returns	12/19A	12/20E	12/21E	12/22E
ROE stated-return on (%)	94.9	56.4	42.1	37.4
ROIC (%)	37.9	37.1	41.5	45.1
Gearing	12/19A	12/20E	12/21E	12/22E
Net debt/equity (%)	150.3	25.4	1.2	(18.3)
Interest coverage ratio (X)	10.4	10.2	11.3	12.4
Quarterly EPS	Q1	Q2	Q3	Q4
2019A	0.88	0.90	0.94	0.92
2020E	0.95	0.89	0.92	0.88
2021E	0.99	1.02	1.08	1.04

Source: Company data, Refinitiv, Credit Suisse estimates

Company Background

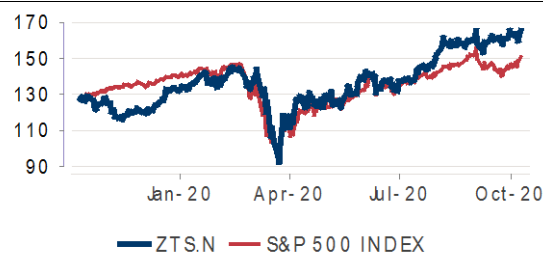
ZTS is the global leader in the development of animal health therapeutics for livestock and companion animals. Its diversified portfolio of 300 product lines is directly marketed in 70 countries with the industry's largest sales force.

Blue/Grey Sky Scenario**Our Blue Sky Scenario (US\$) (from 218.00) 230.00**

Our \$230/share blue sky scenario assumes more meaningful profit contribution from operational efficiency initiatives, greater than expected adoption of future and recently launched products, substantial share gains, as well as stronger than anticipated growth in animal health fundamentals.

Our Grey Sky Scenario (US\$) (from 146.00) 154.00

Our \$154/share grey sky scenario assumes a lower than expected ramp in profitability, weaker traction of new products, potential distribution and manufacturing disruptions, FX or macroeconomic headwinds, and weakness in companion and production animal fundamentals.

Share price performance

On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13
Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$128.47

IDEXX Laboratories

Raising Target Price

Life Science Tools and Diagnostics

- **Raising Target Price:** We are lifting our target price to \$442 (47.1x our 2021 EBITDA estimate) from \$422, on heightened conviction in the visibility and sustainability of its growth trajectory and leadership positioning, as well as on our survey's encouraging demand metrics indicating a faster-than-expected COVID recovery.
- Risks include heightened competition and shifts in demand.

IDXX

Target price (12M, US\$)

442.00**Outperform**

Previous target price (12M, US\$)	422.00
Price (9 Oct 20, US\$)	400.65
52-week price range	406.31 - 182.94
Enterprise value (US\$ m)	34,871

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Financial and valuation metrics

Year	12/19A	12/20E	12/21E	12/22E
EPS (CS adj.) (US\$)	4.89	5.71	6.56	7.55
Prev. EPS (US\$)	-	-	-	-
Revenue (US\$ m)	2,406.9	2,601.2	2,877.2	3,152.8
EBITDA (US\$ m)	640.9	734.8	826.8	930.3
P/OCF (x)	35.7	47.0	41.7	37.0
EV/EBITDA (current)	54.6	47.5	41.7	37.0
Net debt (US\$ m)	897	794	378	378
ROIC (%)	50.99	66.42	161.61	184.43
Number of shares (m)	85.05	IC (current, US\$ m)		888.12
Net debt (Next Qtr., US\$ m)	-	Dividend (current, US\$)		-
Net debt/tot eq (Next Qtr., %)	-			-

Source: Company data, Refinitiv, Credit Suisse estimates

Share price performance



On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13 Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$276.8

Quarterly EPS	Q1	Q2	Q3	Q4
2019A	1.17	1.43	1.24	1.04
2020E	1.29	1.72	1.43	1.26
2021E	1.61	1.74	1.70	1.51

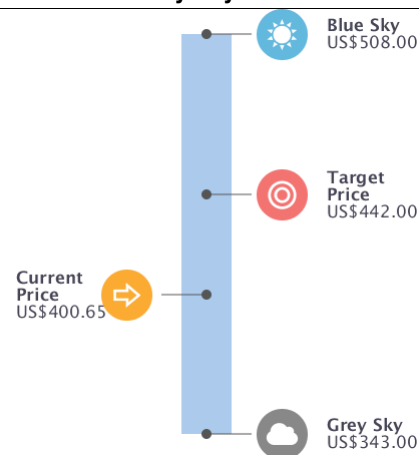
IDEXX Laboratories (IDXX)Analyst: **Erin Wright**Price (09 Oct 2020): **US\$400.65** Target Price: (from 422.00) **442.00**Rating: **Outperform**

Income Statement	12/19A	12/20E	12/21E	12/22E
Revenue (US\$ m)	2,406.9	2,601.2	2,877.2	3,152.8
EBITDA (US\$ m)	641	735	827	930
Depr. & amort.	(88)	(94)	(94)	(94)
EBIT (US\$)	553	641	732	836
Net interest exp	(31)	(36)	(38)	(38)
PBT (US\$)	522	605	695	798
Income taxes	(94)	(113)	(129)	(149)
Minorities	-	-	-	-
Net profit (US\$)	428	492	565	649
Reported net income (US\$)	428	492	565	649
Other NPAT adjustments	0	0	0	0
Adjusted net income	428	492	565	649
Cash Flow	12/19A	12/20E	12/21E	12/22E
EBIT	553	641	732	836
Net interest	(31)	(36)	(38)	(38)
Change in working capital	-	-	-	-
Cash flow from operations	641	735	827	930
CAPEX	(165)	(170)	(175)	(175)
Free cashflow to the firm	476	565	652	755
Acquisitions	-	-	-	-
Divestments	-	-	-	-
Cash flow from investments	(165)	(170)	(175)	(175)
Net share issue/repurchase	-	-	-	-
Dividends paid	0	0	0	0
Changes in Net Cash/Debt	(21)	103	416	0
Balance Sheet (US\$)	12/19A	12/20E	12/21E	12/22E
Assets				
Cash & cash equivalents	90	105	522	522
Account receivables	274	274	274	274
Other current assets	0	(0)	0	0
Total current assets	559	574	990	990
Total fixed assets	-	-	-	-
Investment securities	-	-	-	-
Total assets	1,051	963	1,230	1,230
Liabilities				
Total current liabilities	72	72	72	72
Total liabilities	1,060	972	1,239	1,239
Total liabilities and equity	1,051	963	1,230	1,230
Net debt	897	794	378	378
Per share	12/19A	12/20E	12/21E	12/22E
No. of shares (wtd avg)	88	86	86	86
CS adj. EPS	4.89	5.71	6.56	7.55
Prev. EPS (US\$)	-	-	-	-
Dividend (US\$)	0.00	0.00	0.00	0.00
Free cash flow per share	5.44	6.55	7.57	8.78
Earnings	12/19A	12/20E	12/21E	12/22E
Sales growth (%)	8.8	8.1	10.6	9.6
EBIT growth (%)	12.5	15.9	14.3	14.1
Net profit growth (%)	13.5	15.1	14.8	14.9
EPS growth (%)	14.7	16.7	15.0	15.0
EBITDA margin (%)	26.6	28.2	28.7	29.5
EBIT margin (%)	23.0	24.6	25.5	26.5
Pretax margin (%)	21.7	23.3	24.1	25.3
Net margin (%)	17.8	18.9	19.6	20.6
Valuation	12/19A	12/20E	12/21E	12/22E
EV/Sales (x)	14.53	13.41	11.98	10.93
P/E (x)	82.0	70.2	61.0	53.1
Price to book (x)	(3797.4)	(3743.1)	(3737.4)	(3732.2)
Asset turnover	2.3	2.7	2.3	2.6
Returns	12/19A	12/20E	12/21E	12/22E
ROE stated-return on (%)	(4633.3)	(5331.4)	(6122.7)	(7034.4)
ROIC (%)	51.0	66.4	161.6	184.4
Gearing	12/19A	12/20E	12/21E	12/22E
Net debt/equity (%)	(9718.9)	(8602.5)	(4094.2)	(4094.2)
Interest coverage ratio (X)	18.1	17.9	19.4	22.2
Quarterly EPS	Q1	Q2	Q3	Q4
2019A	1.17	1.43	1.24	1.04
2020E	1.29	1.72	1.43	1.26
2021E	1.61	1.74	1.70	1.51

Source: Company data, Refinitiv, Credit Suisse estimates

Company Background

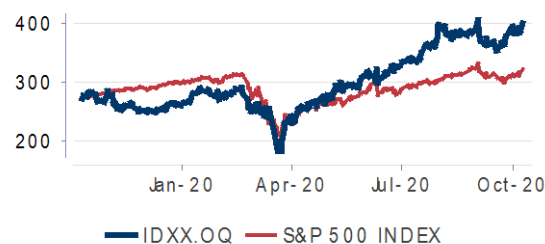
IDXX is the global leader in diagnostic point-of-care equipment and reference laboratory services for companion animals. It also provides IT systems and diagnostics for livestock and water quality markets.

Blue/Grey Sky Scenario**Our Blue Sky Scenario (US\$)****(from 485.00) 508.00**

Our \$508/share blue sky scenario assumes meaningful market share gains in reference laboratory and point-of-care, accelerated global expansion, greater contributions from innovative new product launches, technological advances, and greater than expected growth in the broader animal health industry fundamentals.

Our Grey Sky Scenario (US\$)**(from 327.00) 343.00**

Our \$343/share grey sky scenario assumes market share loss, stronger than expected macroeconomic and FX headwinds with an increasingly global footprint, less adoption/traction for future product launches, and deteriorating veterinary health fundamentals.

Share price performance

On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13
Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$276.8

Elanco Animal Health

Raising Target Price

Life Science Tools and Diagnostics

- **Raising Target Price:** We are lifting our target price to \$33 (32.3x our 2021 EPS estimate) from \$27 on the higher view on our survey's encouraging demand metrics indicating a faster-than-expected COVID recovery.
- Risks include integration miscues, potential disruption associated with recent changes in distribution strategy, macro/epidemiological factors, regulatory environment, and competitive dynamics.

ELAN

Target price (12M, US\$)

33.00**Neutral**

Previous target price (12M, US\$)	27.00
Price (9 Oct 20, US\$)	33.10
52-week price range	33.10 - 16.68
Enterprise value (US\$ m)	18,555

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Financial and valuation metrics

Year	12/19A	12/20E	12/21E	12/22E
EPS (CS adj.) (US\$)	1.22	0.93	1.02	1.25
Prev. EPS (US\$)	-	-	-	-
Revenue (US\$ m)	4,789.7	4,556.9	4,628.9	4,760.8
EBITDA (US\$ m)	1,035.7	1,012.7	1,079.4	1,206.7
P/OCF (x)	58.2	34.1	19.6	16.9
EV/EBITDA (current)	14.7	18.3	16.6	14.9
Net debt (US\$ m)	2,021	5,352	4,722	4,722
ROIC (%)	8.23	4.28	4.57	5.26
Number of shares (m)	398.90	IC (current, US\$ m)		10,733.30
Net debt (Next Qtr., US\$ m)	-	Dividend (current, US\$)		-
Net debt/tot eq (Next Qtr., %)	-			-

Source: Company data, Refinitiv, Credit Suisse estimates

Share price performance



On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13 Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$26.89

Quarterly EPS	Q1	Q2	Q3	Q4
2019A	0.36	0.50	0.25	0.12
2020E	0.35	0.24	0.13	0.21
2021E	-	-	-	-

Elanco Animal Health (ELAN)

Analyst: **Erin Wright**Rating: **Neutral**Price (09 Oct 2020): **US\$33.1**Target Price: (from 27.00) **33.00**

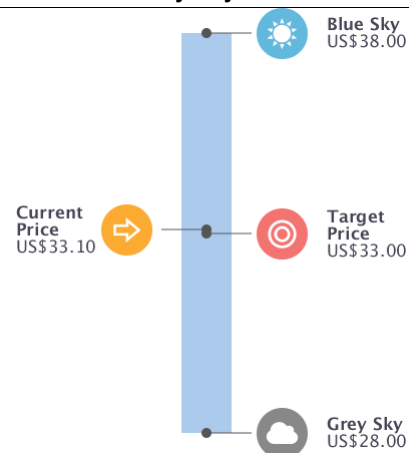
Income Statement	12/19A	12/20E	12/21E	12/22E
Revenue (US\$ m)	4,789.7	4,556.9	4,628.9	4,760.8
EBITDA (US\$ m)	1,036	1,013	1,079	1,207
Depr. & amort.	(163)	(158)	(192)	(186)
EBIT (US\$)	873	855	888	1,021
Net interest exp	(339)	(260)	(220)	(210)
PBT (US\$)	534	567	642	784
Income taxes	6	(133)	(145)	(177)
Minorities	-	-	-	-
Net profit (US\$)	540	434	497	607
Reported net income (US\$)	540	434	497	607
Other NPAT adjustments	0	0	0	0
Adjusted net income	540	434	497	607
Cash Flow	12/19A	12/20E	12/21E	12/22E
EBIT	873	855	888	1,021
Net interest	(339)	(260)	(220)	(210)
Change in working capital	0	(78)	0	0
Cash flow from operations	224	454	821	955
CAPEX	(140)	(93)	(185)	(185)
Free cashflow to the firm	84	361	636	770
Acquisitions	-	-	-	-
Divestments	0	337	0	0
Cash flow from investments	(235)	(4,987)	(185)	(185)
Net share issue(/repurchase)	0	1,220	0	0
Dividends paid	0	0	0	0
Changes in Net Cash/Debt	(228)	(3,331)	630	0
Balance Sheet (US\$)	12/19A	12/20E	12/21E	12/22E
Assets				
Cash & cash equivalents	345	591	420	420
Account receivables	821	605	541	541
Other current assets	303	334	334	334
Total current assets	2,988	2,954	2,685	2,685
Total fixed assets	1,288	1,188	1,049	1,049
Investment securities	0	0	0	0
Total assets	13,361	18,214	17,806	17,806
Liabilities				
Total current liabilities	1,035	1,031	1,031	1,031
Total liabilities	4,648	8,287	7,487	7,487
Total liabilities and equity	13,361	18,214	17,806	17,806
Net debt	2,021	5,352	4,722	4,722
Per share	12/19A	12/20E	12/21E	12/22E
No. of shares (wtd avg)	443	467	487	487
CS adj. EPS	1.22	0.93	1.02	1.25
Prev. EPS (US\$)	-	-	-	-
Dividend (US\$)	0.00	0.00	0.00	0.00
Free cash flow per share	0.19	0.77	1.31	1.58
Earnings	12/19A	12/20E	12/21E	12/22E
Sales growth (%)	0.0	(4.9)	1.6	2.8
EBIT growth (%)	1.3	(2.1)	3.9	15.0
Net profit growth (%)	(13.6)	(19.6)	14.5	22.2
EPS growth (%)	(18.0)	(23.8)	9.8	22.2
EBITDA margin (%)	21.6	22.2	23.3	25.3
EBIT margin (%)	18.2	18.8	19.2	21.4
Pretax margin (%)	11.1	12.5	13.9	16.5
Net margin (%)	11.3	9.5	10.7	12.8
Valuation	12/19A	12/20E	12/21E	12/22E
EV/Sales (x)	3.18	4.07	3.87	3.77
P/E (x)	27.1	35.6	32.4	26.5
Price to book (x)	3055.9	(722.4)	47.8	47.8
Asset turnover	0.4	0.3	0.3	0.3
Returns	12/19A	12/20E	12/21E	12/22E
ROE stated-return on (%)	(6909.6)	(5231.4)	314.7	180.1
ROIC (%)	8.2	4.3	4.6	5.3
Gearing	12/19A	12/20E	12/21E	12/22E
Net debt/equity (%)	23.2	53.9	45.8	45.8
Interest coverage ratio (X)	2.6	3.3	4.0	4.9
Quarterly EPS	Q1	Q2	Q3	Q4
2019A	0.36	0.50	0.25	0.12
2020E	0.35	0.24	0.13	0.21
2021E	-	-	-	-

Source: Company data, Refinitiv, Credit Suisse estimates

Company Background

ELAN is the second largest animal health pharmaceutical company, focused on the development of therapeutics and supplements for livestock and companion animals. Its diversified portfolio includes over 125 brands marketed in 90 countries.

Blue/Grey Sky Scenario



Our Blue Sky Scenario (US\$)

(from 31.00) **38.00**

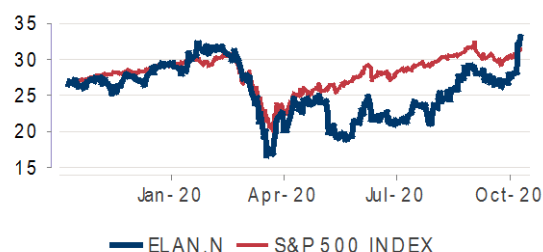
Our \$38 blue sky scenario assumes greater than expected adoption of product launches, expedited R&D pipeline success, and a more meaningful profit ramp from ongoing operational efficiency initiatives.

Our Grey Sky Scenario (US\$)

(from 23.00) **28.00**

Our \$28 grey sky scenario assumes a more Draconian fundamental backdrop for companion and production animal health fundamentals, greater competitive headwinds from new or existing product lines, and a lower than expected ramp in profitability as it separates from its parent.

Share price performance



On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13
Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$26.89

Chewy

Raising Target Price

Life Science Tools and Diagnostics

- **Raising Target Price:** We are lifting our target price to \$74 (3.6x our 2021 Sales estimate) from \$62 on evidence of traction in CHWY's emerging Pharmacy segment as well as on encouraging demand metrics indicating a faster-than-expected COVID recovery.
- Risks include competition, demand shifts, advertising spend, ownership.

CHWY

Target price (12M, US\$)

74.00**Outperform**

Previous target price (12M, US\$)	62.00
Price (9 Oct 20, US\$)	61.58
52-week price range	70.10 - 22.13
Enterprise value (US\$ m)	25,148

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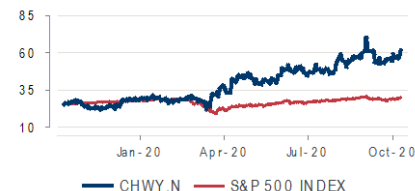
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Financial and valuation metrics

Year	2/19A	2/20E	2/21E	2/22E
EPS (Excl. ESO) (US\$)	-0.63	-0.37	-0.14	0.17
EPS (CS adj.,)	-0.63	-0.37	-0.14	0.17
Prev. EPS (CS adj., US\$)	-	-	-	-
P/E (CS adj.) (x)	-97.2	-166.7	-440.7	366.1
P/E rel. (CS adj., %)	-457.5	-634.5	-2115.2	2052.3
Revenue (US\$ m)	4,846.7	6,809.1	8,312.8	9,996.0
Net Debt (US\$ m)	-212	-202	-128	-128
OCFPS (US\$)	0.12	0.25	0.17	0.17
P/OCF (x)	526.5	247.1	363.4	363.4
Number of shares (m)	411.67			3.17
BV/share (Next Qtr., US\$)	.0			P/BVPS (x)
Net debt (Next Qtr., US\$ m)	-201.9			6113.1
Dividend yield (%)	-			Dividend (current, US\$)

Source: Company data, Refinitiv, Credit Suisse estimates

Share price performance



On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13 Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$26.04

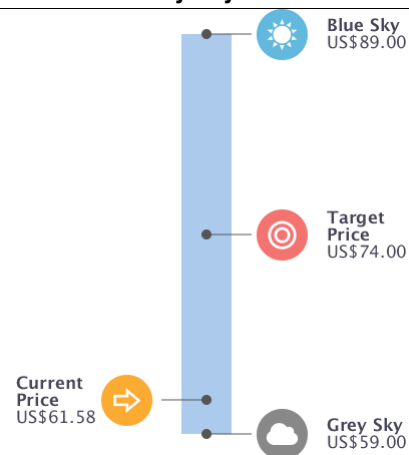
Quarterly EPS	Q1	Q2	Q3	Q4
2019A	-0.08	-0.21	-0.20	-0.15
2020E	-0.12	-0.08	-0.09	-0.07
2021E	-0.05	-0.02	-0.04	-0.03

Chewy (CHWY)Price (09 Oct 2020): **US\$61.58**Target Price: (from 62.00) **74.00**Analyst: **Erin Wright**Rating: **Outperform**

Income Statement	2/19A	2/20E	2/21E	2/22E
Revenue (US\$ m)	4,846.7	6,809.1	8,312.8	9,996.0
EBITDA	(81.0)	4.5	71.7	214.0
Operating profit	(252.7)	(147.1)	(54.2)	88.1
Recurring profit	(252.4)	(149.1)	(56.4)	86.0
Cash Flow	2/19A	2/20E	2/21E	2/22E
Cash flow from operations	47	101	68	68
CAPEX	(49)	(131)	(143)	(143)
Free cashflow to the firm	(2)	(30)	(75)	(75)
Cash flow from investments	(50)	(135)	(143)	(143)
Net share issue/(repurchase)	110	0	0	0
Dividends paid	0	0	0	0
Issuance (retirement) of debt	(0)	(1)	(1)	(1)
Other	17	25	1	1
Cashflow from financing activities	127	24	1	1
Effect of exchange rates	0	0	0	0
Changes in Net Cash/Debt	124	(10)	(74)	0
Net debt at end	(212)	(202)	(128)	(128)
Balance Sheet (\$US)	2/19A	2/20E	2/21E	2/22E
Assets				
Other current assets	19	32	31	31
Total current assets	630	681	698	698
Total assets	932	1,139	1,268	1,268
Liabilities				
Short-term debt	0	0	0	0
Total current liabilities	1,101	1,237	1,356	1,356
Long-term debt	0	0	0	0
Total liabilities	1,336	1,551	1,669	1,669
Shareholder equity	(404)	(412)	(401)	(401)
Total liabilities and equity	932	1,139	1,268	1,268
Net debt	(212)	(202)	(128)	(128)
Per share	2/19A	2/20E	2/21E	2/22E
No. of shares (wtd avg)	398	404	404	404
CS adj. EPS	(0.63)	(0.37)	(0.14)	0.17
Prev. EPS (US\$)	-	-	-	-
Dividend (US\$)	0.00	0.00	0.00	0.00
Free cash flow per share	(0.01)	(0.07)	(0.18)	(0.18)
Earnings	2/19A	2/20E	2/21E	2/22E
Sales growth (%)	37.2	40.5	22.1	20.2
Net profit growth (%)	4.3	40.9	62.2	220.4
EPS growth (%)	5.6	41.7	62.2	220.4
EBIT margin (%)	(5.2)	(2.2)	(0.7)	0.9
Valuation	2/19A	2/20E	2/21E	2/22E
EV/Sales (x)	5.19	3.69	3.03	2.52
EV/EBIT (x)	(99.5)	(171.0)	(465.2)	286.2
P/E (x)	(97.2)	(166.7)	(440.7)	366.1
Quarterly EPS	Q1	Q2	Q3	Q4
2019A	-0.08	-0.21	-0.20	-0.15
2020E	-0.12	-0.08	-0.09	-0.07
2021E	-0.05	-0.02	-0.04	-0.03

Company Background

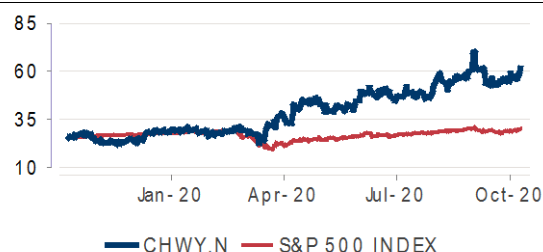
Chewy, Inc. (CHWY) is a pure play online pet "e-tailer" with a customer centric perspective on providing pet parents across the U.S. with delivery service for high quality brands and products.

Blue/Grey Sky Scenario**Our Blue Sky Scenario (US\$)****(from 74.00) 89.00**

Our \$89/share blue sky scenario is predicated on faster than expected customer growth, supported by incremental marketing and Autoship traction, expansion into new geographies, and better than expected operating margin expansion.

Our Grey Sky Scenario (US\$)**(from 50.00) 59.00**

Our \$59/share grey sky scenario is based on lower than expected customer growth due to competition in other e-commerce platforms and a lower than expected ramp in profitability.

Share price performance

On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13
Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$26.04

Source: Company data, Refinitiv, Credit Suisse estimates

Covetrus

Raising Target Price

Life Science Tools and Diagnostics

CVET

Target price (12M, US\$)

17.00**Neutral^[M]**

Previous target price (12M, US\$)	14.00
Price (9 Oct 20, US\$)	25.73
52-week price range	26.54 - 5.64
Enterprise value (US\$ m)	3,542

[M] = Stock Considered Volatile (see Disclosure Appendix)

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Financial and valuation metrics

Year	12/19A	12/20E	12/21E	12/22E
EPS (CS adj.) (US\$)	0.60	0.76	0.80	1.02
Prev. EPS (US\$)	-	-	-	-
Revenue (US\$ m)	4,000.0	4,161.9	4,441.9	4,768.2
EBITDA (US\$ m)	199.0	204.0	217.8	260.5
P/OCF (x)	14.3	19.1	11.3	4.0
EV/EBITDA (current)	19.9	17.4	15.3	9.9
Net debt (US\$ m)	1,057	639	421	-312
ROIC (%)	4.58	5.67	6.29	10.54
Number of shares (m)	112.83	IC (current, US\$ m)		2,323.00
Net debt (Next Qtr., US\$ m)	-	Dividend (current, US\$)		-
Net debt/tot eq (Next Qtr., %)	-			-

Source: Company data, Refinitiv, Credit Suisse estimates

Share price performance



On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13 Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$11.32

Quarterly EPS	Q1	Q2	Q3	Q4
2019A	0.12	0.13	0.17	0.18
2020E	0.18	0.27	0.16	0.16
2021E	0.18	0.21	0.19	0.21

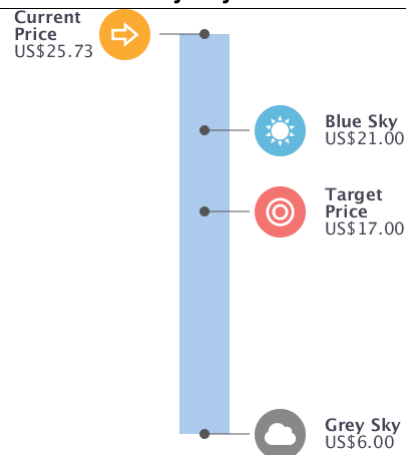
Covetrus (CVET)Price (09 Oct 2020): **US\$25.73**Target Price: **(from 14.00) 17.00**Analyst: **Erin Wright**Rating: **Neutral [V]**

Income Statement	12/19A	12/20E	12/21E	12/22E
Revenue (US\$ m)	4,000.0	4,161.9	4,441.9	4,768.2
EBITDA (US\$ m)	199	204	218	260
Depr. & amort.	(53)	(30)	(32)	(32)
EBIT (US\$)	146	174	186	228
Net interest exp	(55)	(55)	(56)	(56)
PBT (US\$)	90	119	130	172
Income taxes	(24)	(33)	(36)	(47)
Minorities	1	-0	-0	-0
Net profit (US\$)	66	86	94	125
Reported net income (US\$)	66	86	94	125
Other NPAT adjustments	0	0	0	0
Adjusted net income	66	86	94	125
Cash Flow	12/19A	12/20E	12/21E	12/22E
EBIT	146	174	186	228
Net interest	(55)	(55)	(56)	(56)
Change in working capital	(5)	(47)	(32)	452
Cash flow from operations	103	153	270	785
CAPEX	(39)	(50)	(52)	(52)
Free cashflow to the firm	64	103	218	733
Acquisitions	-	-	-	-
Divestments	0	4	0	0
Cash flow from investments	(65)	45	(52)	(52)
Net share issue/repurchase	0	4	0	0
Dividends paid	0	0	0	0
Changes in Net Cash/Debt	97	418	218	733
Balance Sheet (US\$)	12/19A	12/20E	12/21E	12/22E
Assets				
Cash & cash equivalents	130	455	609	609
Account receivables	493	554	590	215
Other current assets	81	41	41	41
Total current assets	1,340	1,612	1,809	1,002
Total fixed assets	93	112	132	152
Investment securities	131	214	214	214
Total assets	3,361	3,596	3,677	2,754
Liabilities				
Total current liabilities	829	766	776	422
Total liabilities	2,095	2,011	1,957	870
Total liabilities and equity	3,361	3,596	3,677	2,754
Net debt	1,057	639	421	(312)
Per share	12/19A	12/20E	12/21E	12/22E
No. of shares (wtd avg)	112	114	118	122
CS adj. EPS	0.60	0.76	0.80	1.02
Prev. EPS (US\$)	-	-	-	-
Dividend (US\$)	0.00	0.00	0.00	0.00
Free cash flow per share	0.57	0.91	1.84	5.99
Earnings	12/19A	12/20E	12/21E	12/22E
Sales growth (%)	0.5	4.0	6.7	7.3
EBIT growth (%)	(12.9)	19.2	6.7	23.0
Net profit growth (%)	(28.2)	29.9	9.0	32.9
EPS growth (%)	(28.4)	27.1	5.2	28.2
EBITDA margin (%)	5.0	4.9	4.9	5.5
EBIT margin (%)	3.6	4.2	4.2	4.8
Pretax margin (%)	2.3	2.9	2.9	3.6
Net margin (%)	1.7	2.1	2.1	2.6
Valuation	12/19A	12/20E	12/21E	12/22E
EV/Sales (x)	0.99	0.85	0.75	0.54
P/E (x)	43.2	34.0	32.3	25.2
Price to book (x)	2.3	2.2	2.1	1.9
Asset turnover	1.2	1.2	1.2	1.7
Returns	12/19A	12/20E	12/21E	12/22E
ROE stated-return on (%)	4.3	6.7	6.7	8.1
ROIC (%)	4.6	5.7	6.3	10.5
Gearing	12/19A	12/20E	12/21E	12/22E
Net debt/equity (%)	83.5	40.3	24.5	(16.6)
Interest coverage ratio (X)	2.7	3.2	3.3	4.1
Quarterly EPS	Q1	Q2	Q3	Q4
2019A	0.12	0.13	0.17	0.18
2020E	0.18	0.27	0.16	0.16
2021E	0.18	0.21	0.19	0.21

Source: Company data, Refinitiv, Credit Suisse estimates

Company Background

CVET is one of the largest animal health distributors globally, providing a comprehensive services and technology platform dedicated to supporting the companion animal, equine, and large animal veterinary markets.

Blue/Grey Sky Scenario**Our Blue Sky Scenario (US\$)****(from 17.00) 21.00**

Our \$21/share blue sky scenario is predicated on better than expected expansion of the companion animal market supported by CVET's innovative products and services, as well as greater than expected synergy capture.

Our Grey Sky Scenario (US\$)**(from 5.00) 6.00**

Our \$6/share grey sky scenario assumes vendor concentration and veterinary practice consolidation compress margins, with also lower than expected revenue synergy capture as veterinarians resist a wider spread acceptance of Vet First Choice's platform services.

Share price performance

On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13
Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$11.32

Patterson Companies

Raising Target Price

Life Science Tools and Diagnostics

PDCO

Target price (12M, US\$)

35.00**Outperform^[M]**

Previous target price (12M, US\$)	34.00
Price (9 Oct 20, US\$)	25.27
52-week price range	29.45 - 13.10
Enterprise value (US\$ m)	3,505

[M] = Stock Considered Volatile (see Disclosure Appendix)

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Financial and valuation metrics

Year	4/20A	4/21E	4/22E	4/23E
EPS (CS adj.) (US\$)	1.56	1.51	1.88	2.05
Prev. EPS (US\$)	-	-	-	-
Revenue (US\$ m)	5,490.0	5,410.8	5,671.2	5,864.4
EBITDA (US\$ m)	281.8	251.9	298.2	318.3
P/OCF (x)	6.1	9.5	8.0	7.5
EV/EBITDA (current)	12.0	13.9	11.8	11.0
Net debt (US\$ m)	961	1,072	1,072	1,072
ROIC (%)	7.03	5.60	6.43	6.52
Number of shares (m)	96.28	IC (current, US\$ m)		2,539.99
Net debt (Next Qtr., US\$ m)	-	Dividend (current, US\$)		-
Net debt/tot eq (Next Qtr., %)	-			-

Source: Company data, Refinitiv, Credit Suisse estimates

Share price performance



On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13 Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$17.085

Quarterly EPS	Q1	Q2	Q3	Q4
2020A	0.27	0.39	0.47	0.43
2021E	0.33	0.33	0.40	0.45
2022E	0.41	0.48	0.53	0.46

Patterson Companies (PDCO)

Price (09 Oct 2020): **US\$25.27**Target Price: (from 34.00) **35.00**Analyst: **Erin Wright**Rating: **Outperform [V]**

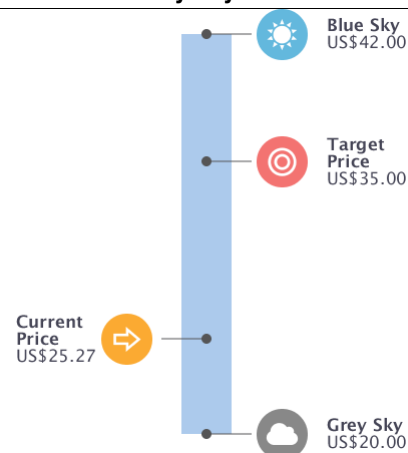
Income Statement	4/20A	4/21E	4/22E	4/23E
Revenue (US\$ m)	5,490.0	5,410.8	5,671.2	5,864.4
EBITDA (US\$ m)	282	252	298	318
Depr. & amort.	(45)	(42)	(42)	(42)
EBIT (US\$)	237	209	256	276
Net interest exp	(41)	(18)	(18)	(18)
PBT (US\$)	196	192	238	258
Income taxes	(48)	(48)	(60)	(65)
Minorities	-	-	-	-
Net profit (US\$)	148	143	178	193
Reported net income (US\$)	148	143	178	193
Other NPAT adjustments	0	0	0	0
Adjusted net income	148	143	178	193
Cash Flow	4/20A	4/21E	4/22E	4/23E
EBIT	237	209	256	276
Net interest	(41)	(18)	(18)	(18)
Change in working capital	-	-	-	-
Cash flow from operations	282	252	298	318
CAPEX	(67)	0	0	0
Free cashflow to the firm	215	252	298	318
Acquisitions	-	-	-	-
Divestments	-	-	-	-
Cash flow from investments	(67)	0	0	0
Net share issue(/repurchase)	-	-	-	-
Dividends paid	(135)	0	0	0
Changes in Net Cash/Debt	(3)	(111)	0	0
Balance Sheet (US\$)	4/20A	4/21E	4/22E	4/23E
Assets				
Cash & cash equivalents	111	0	0	0
Account receivables	648	648	56	56
Other current assets	52	51	2	2
Total current assets	1,394	1,361	58	58
Total fixed assets	67	0	0	0
Investment securities	-	-	-	-
Total assets	3,604	3,746	3,936	4,139
Liabilities				
Total current liabilities	1,027	1,026	1,038	1,048
Total liabilities	2,025	2,024	2,036	2,047
Total liabilities and equity	3,604	3,746	3,936	4,139
Net debt	961	1,072	1,072	1,072
Per share	4/20A	4/21E	4/22E	4/23E
No. of shares (wtd avg)	95	95	94	94
CS adj. EPS	1.56	1.51	1.88	2.05
Prev. EPS (US\$)	-	-	-	-
Dividend (US\$)	1.43	0.00	0.00	0.00
Free cash flow per share	2.27	2.66	3.16	3.38
Earnings	4/20A	4/21E	4/22E	4/23E
Sales growth (%)	(1.5)	(1.4)	4.8	3.4
EBIT growth (%)	15.9	(11.5)	22.1	7.9
Net profit growth (%)	12.8	(2.9)	24.1	8.5
EPS growth (%)	11.1	(2.8)	24.4	8.8
EBITDA margin (%)	5.1	4.7	5.3	5.4
EBIT margin (%)	4.3	3.9	4.5	4.7
Pretax margin (%)	3.6	3.5	4.2	4.4
Net margin (%)	2.7	2.6	3.1	3.3
Valuation	4/20A	4/21E	4/22E	4/23E
EV/Sales (x)	0.62	0.65	0.62	0.60
P/E (x)	16.2	16.7	13.4	12.3
Price to book (x)	1.5	1.3	1.2	1.1
Asset turnover	1.5	1.4	1.4	1.4
Returns	4/20A	4/21E	4/22E	4/23E
ROE stated-return on (%)	9.0	8.3	9.5	9.3
ROIC (%)	7.0	5.6	6.4	6.5
Gearing	4/20A	4/21E	4/22E	4/23E
Net debt/equity (%)	60.9	62.3	56.4	51.2
Interest coverage ratio (X)	5.8	11.8	14.4	15.5
Quarterly EPS	Q1	Q2	Q3	Q4
2020A	0.27	0.39	0.47	0.43
2021E	0.33	0.33	0.40	0.45
2022E	0.41	0.48	0.53	0.46

Source: Company data, Refinitiv, Credit Suisse estimates

Company Background

Patterson Companies is a distributor of consumables and equipment to office based dentists and veterinarians primarily in the US and UK.

Blue/Grey Sky Scenario



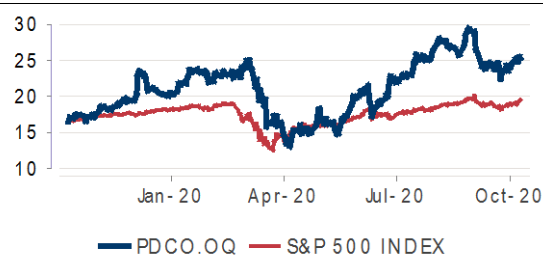
Our Blue Sky Scenario (US\$) (from 41.00) 42.00

Better fundamental performance or sentiment could drive upside to our target price with a blue sky scenario of \$42 for PDCO.

Our Grey Sky Scenario (US\$) 20.00

Weaker fundamental performance or sentiment could lead to downside versus our target price with a grey sky scenario of \$20 for PDCO.

Share price performance



On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13
Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$17.085

PetMed Express

Raising Target Price

Life Science Tools and Diagnostics

PETS

Target price (12M, US\$)

24.00Underperform^[M]

Previous target price (12M, US\$)	20.00
Price (9 Oct 20, US\$)	32.06
52-week price range	41.83 - 18.55
Enterprise value (US\$ m)	555

[M] = Stock Considered Volatile (see Disclosure Appendix)

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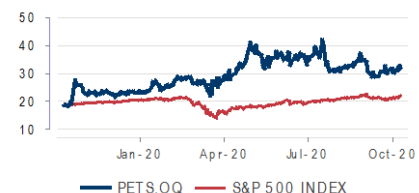
- Raising Target Price: We are raising our Target Price to \$24 (16.4x our 2021 EPS estimate) from \$20 on the higher view on encouraging veterinary demand metrics indicating a faster than expected COVID recovery.
- Risks include industry consolidation, competitive shifts.

Financial and valuation metrics

Year	3/20A	3/21E	3/22E	3/23E
EPS (Excl. ESO) (US\$)	1.29	1.45	1.48	1.54
EPS (CS adj.,)	1.29	1.45	1.48	1.54
Prev. EPS (CS adj., US\$)	-	-	-	-
P/E (CS adj.) (x)	24.9	22.1	21.7	20.8
P/E rel. (CS adj., %)	117.1	84.2	104.2	116.8
Revenue (US\$ m)	284.1	304.4	311.4	321.3
Net Debt (US\$ m)	-95	-95	-95	-95
OCFPS (US\$)	1.66	1.88	1.99	2.07
P/OCF (x)	19.3	17.1	16.1	15.5
Number of shares (m)	20.27	Price/Sales (x)		2.18
BV/share (Next Qtr., US\$)	-	P/BVPS (x)		5.6
Net debt (Next Qtr., US\$ m)	-	Dividend (current, US\$)		1.2
Dividend yield (%)	-			

Source: Company data, Refinitiv, Credit Suisse estimates

Share price performance



On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13 Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$18.79

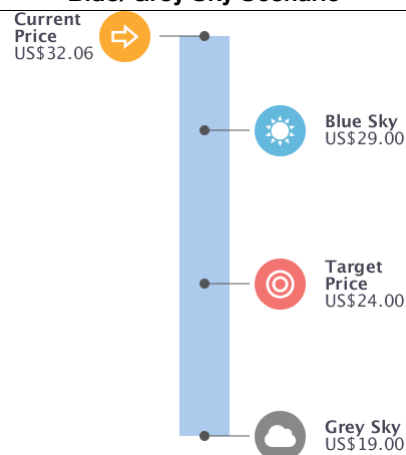
Quarterly EPS	Q1	Q2	Q3	Q4
2020A	0.26	0.33	0.34	0.35
2021E	0.39	0.38	0.33	0.35
2022E	-	-	-	-

PetMed Express (PETS)Price (09 Oct 2020): **US\$32.06**Target Price: (from 20.00) **24.00**Analyst: **Erin Wright**Rating: **Underperform [V]**

Income Statement	3/20A	3/21E	3/22E	3/23E
Revenue (US\$ m)	284.1	304.4	311.4	321.3
EBITDA	33.2	37.7	39.8	41.5
Operating profit	31.0	35.4	37.6	39.2
Recurring profit	33.9	36.8	39.0	40.6
Cash Flow	3/20A	3/21E	3/22E	3/23E
Cash flow from operations	33	38	40	41
CAPEX	0	0	0	0
Free cashflow to the firm	33	38	40	41
Cash flow from investments	0	0	0	0
Net share issue(/repurchase)	-	-	-	-
Dividends paid	(16)	(16)	(16)	(16)
Issuance (retirement) of debt	-	-	-	-
Other	0	0	0	0
Cashflow from financing activities	(16)	(16)	(16)	(16)
Effect of exchange rates	-	-	-	-
Changes in Net Cash/Debt	0	0	0	0
Net debt at end	(95)	(95)	(95)	(95)
Balance Sheet (\$US)	3/20A	3/21E	3/22E	3/23E
Assets				
Other current assets	0	0	0	0
Total current assets	119	119	119	119
Total assets	132	132	132	132
Liabilities				
Short-term debt	0	0	0	0
Total current liabilities	16	16	16	16
Long-term debt	0	0	0	0
Total liabilities	16	16	16	16
Shareholder equity	116	116	116	116
Total liabilities and equity	132	132	132	132
Net debt	(95)	(95)	(95)	(95)
Per share	3/20A	3/21E	3/22E	3/23E
No. of shares (wtd avg)	20	20	20	20
CS adj. EPS	1.29	1.45	1.48	1.54
Prev. EPS (US\$)	-	-	-	-
Dividend (US\$)	1.10	1.20	1.33	1.46
Free cash flow per share	1.66	1.88	1.99	2.07
Earnings	3/20A	3/21E	3/22E	3/23E
Sales growth (%)	0.2	7.1	2.3	3.2
Net profit growth (%)	(31.5)	12.3	2.0	4.2
EPS growth (%)	(30.0)	12.4	2.0	4.2
EBIT margin (%)	10.9	11.6	12.1	12.2
Valuation	3/20A	3/21E	3/22E	3/23E
EV/Sales (x)	1.95	1.82	1.78	1.73
EV/EBIT (x)	17.9	15.7	14.8	14.2
P/E (x)	24.9	22.1	21.7	20.8
Quarterly EPS	Q1	Q2	Q3	Q4
2020A	0.26	0.33	0.34	0.35
2021E	0.39	0.38	0.33	0.35
2022E	-	-	-	-

Company Background

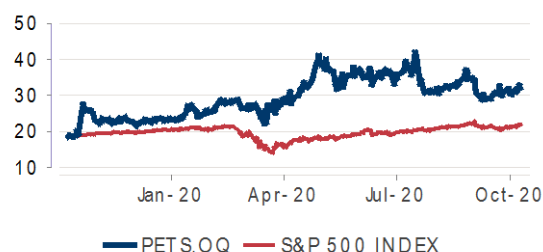
PETS, 1-800-PetMeds, operates a leading pet pharmacy in the US, marketing prescription and OTC pet medications.

Blue/Grey Sky Scenario**Our Blue Sky Scenario (US\$)****(from 24.00) 29.00**

Our \$29/share blue sky scenario assumes subsiding challenges from market dynamics and competitors, a significant rebound in new customer orders, more meaningful margin expansion, successful advertising and promotional strategies, and better than expected strength across the animal health industry.

Our Grey Sky Scenario (US\$)**(from 16.00) 19.00**

Our \$19/share grey sky scenario assumes increased resistance from veterinarians, distributors, and manufacturers, rising customer acquisition costs, inventory disruptions, and an unexpected deterioration in broader animal health fundamentals.

Share price performance

On 09-Oct-2020 the S&P 500 INDEX closed at 3477.13
Daily Oct11, 2019 - Oct09, 2020, 10/11/19 = US\$18.79

Source: Company data, Refinitiv, Credit Suisse estimates

Valuation, Methodology and Risks

Target Price and Rating

Valuation Methodology and Risks: (12 months) for Chewy (CHWY.N)

Method: Our \$74/share target price and Outperform rating are based on 3.6x 2021E EV/Sales, which reflects CHWY's rapid growth and longer term profit prospects driven by expanding autoship adoption, entry into its new pharmacy offering, rising private label penetration, and geographic expansion over time.

Risk: Risks to our \$74 target price and Outperform rating for CHWY include competition, consumer spending shifts, customer retention and advertising spend, regulatory changes, ownership structure, and stagnation in demand and pet ownership.

Target Price and Rating

Valuation Methodology and Risks: (12 months) for Covetrus (CVET.OQ)

Method: Our Neutral rating and \$17 target price is based on an enterprise value of 12.5x our estimated 2021 EBITDA, a discount to its closest, most recently traded public competitor MWI Veterinary (15.7x takeout valuation), and its broader animal health peer group (17.1x). We view its valuation adequately reflects its unique technology offerings as well as Supply Chain unit risks.

Risk: Risks to our \$17 target price and Neutral view for CVET include slower revenue or earnings growth from competition, veterinary practice consolidation, expansion of manufacturers' direct sales efforts, lower than expected synergy capture, slower integration of HSAH and VFC, and substantial indebtedness.

Target Price and Rating

Valuation Methodology and Risks: (12 months) for Elanco Animal Health (ELAN.N)

Method: Our \$33 TP, which helps drive our Neutral rating, is based on 2021E EV/EBITDA multiple of 14.9x, a discount to industry leader Zoetis (27.6x) and its peer group of animal health companies (21.5x), better reflecting reflects its innovation and profit opportunities as well as Bayer Animal Health integration risks. Given its organic revenue growth profile, profit margin opportunity, and its long term ROIC potential, we view a modest premium to the current valuation is warranted.

Risk: Risks to our \$33 TP and Neutral rating are slower revenue or earnings growth from competitive headwinds in its companion and food animal segments, execution risk related to cost structure initiatives, as well as weather-related, epidemiological, FX, or other macroeconomic headwinds.

Target Price and Rating

Valuation Methodology and Risks: (12 months) for IDEXX Laboratories (IDXX.OQ)

Method: Our \$442/share TP for IDXX is based on a 2021E EBITDA multiple of 47.1x, reflecting its growth prospects in an improving animal health market and competitive platform, in our view. Given multiple growth drivers and broader global opportunities, we believe an Outperform rating is warranted.

Risk: Downside risks to our \$442/share TP and Outperform rating for IDXX are revenue shortfalls on material inroads from reference laboratory or point-of-care instrument competitors, foreign currency fluctuations, severe weather disruptions, incremental costs associated with sales force and distributions changes, or macroeconomic headwinds impacting overall veterinary demand.

Target Price and Rating

Valuation Methodology and Risks: (12 months) for Patterson Companies (PDCO.OQ)

Method: Our \$35 target price and Outperform rating for PDCO is calculated utilizing a EV/EBITDA multiple of roughly 13.5x our calendar 2021 EBITDA estimate, which represents a discount to its dental peer group given its mixed track record of execution. We see value in ongoing operational efficiency initiatives, helped by a new management team and potential opportunities in broader vendor relationships.

Risk: Risks to our \$35 target price on PDCO shares and Outperform rating are: (1) a recession in the US economy, (2) the company's ability to accelerate its acquisition pace to generate incremental growth, and (3) the company's ability to improve the operations and improve margins, especially in its animal health business.

Target Price and Rating

Valuation Methodology and Risks: (12 months) for PetMed Express (PETS.OQ)

Method: Our PETS \$24 TP and Underperform rating are based on a CY22 P/E multiple of 15.9x and an EV/EBITDA multiple of 9.6x, a discount to its historical averages, but better reflecting its competitive challenges. Given multiple fundamental and competitive pressures, we view our Underperform rating as justified.

Risk: Risks to our PETS \$24 TP and Underperform rating are the emergence of compelling competitive advantages, materially higher pet retail demand, more productive promotional strategies, minimal inroads from competitors, regulatory changes, and acquisitions.

Target Price and Rating

Valuation Methodology and Risks: (12 months) for Zoetis (ZTS.N)

Method: Our ZTS \$192 target price and Outperform rating are based on 2021E P/E multiple of 46.4x, which is more aligned with its peer group of animal health products companies and reflects optimism regarding its profit margin profile. Given its underlying revenue growth profile, profit margin opportunity, and its long term ROIC potential, we rate ZTS Outperform.

Risk: Risks to our \$192 target price and Outperform rating for ZTS are slower revenue or earnings growth from weather-related, epidemiological, FX, or macroeconomic headwinds, execution risk to cost and capital structure initiatives, as well as activist involvement.

Companies Mentioned (Price as of 09-Oct-2020)

Amazon com Inc. (AMZN.OQ, \$3286.65)
AmerisourceBergen (ABC.N, \$96.86)
Bayer (BAYGn.DE, €46.73)
Chewy (CHWY.N, \$61.58, OUTPERFORM, TP \$74.0)
Covetrus (CVET.OQ, \$25.73, NEUTRAL[V], TP \$17.0)
Dechra Pharma (DPH.L, 3354.0p)
Elanco Animal Health (ELAN.N, \$33.1, NEUTRAL, TP \$33.0)
Henry Schein (HSIC.OQ, \$60.46)
Heska (HSKA.OQ, \$107.33)
IDEXX Laboratories (IDXX.OQ, \$400.65, OUTPERFORM, TP \$442.0)
Kindred Bio (KIN.OQ, \$4.85)
Merck & Co. (MRK.N, \$80.36)
Patterson Companies (PDCO.OQ, \$25.27, OUTPERFORM[V], TP \$35.0)
PetIQ (PETQ.OQ, \$33.18)
PetMed Express (PETS.OQ, \$32.06, UNDERPERFORM[V], TP \$24.0)
Phibro Animal Health (PAHC.OQ, \$18.46)
Virbac FR (VIRB.PA, €205.0)
Walmart Inc. (WMT.N, \$142.78)
Zoetis (ZTS.N, \$165.43, OUTPERFORM, TP \$192.0)

Disclosure Appendix

Analyst Certification

Erin Wilson Wright, Katie Tryhane, Haley Christofides and Matthew Urbik each certify, with respect to the companies or securities that the individual analyzes, that (1) the views expressed in this report accurately reflect his or her personal views about all of the subject companies and securities and (2) no part of his or her compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

3-Year Price and Rating History for Chewy (CHWY.N)

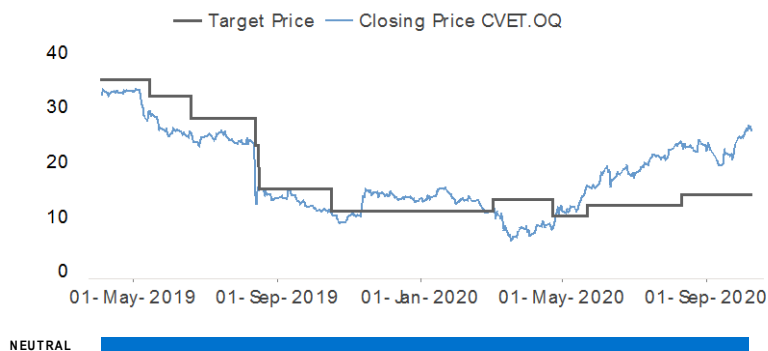
CHWY.N	Closing Price	Target Price	
Date	(US\$)	(US\$)	Rating
11-Nov-19	22.95	29.00	O *
08-Jan-20	28.62	34.00	
02-Apr-20	35.06	37.00	
17-Apr-20	43.78	46.00	
04-May-20	39.24		R
12-May-20	40.36	46.00	O
09-Jun-20	51.51	53.00	
10-Sep-20	59.69	62.00	

* Asterisk signifies initiation or assumption of coverage.

**3-Year Price and Rating History for Covetrus (CVET.OQ)**

CVET.OQ	Closing Price	Target Price	
Date	(US\$)	(US\$)	Rating
04-Apr-19	32.23	35.00	N *
15-May-19	29.28	32.00	
19-Jun-19	25.24	28.00	
13-Aug-19	13.89	23.00	
16-Aug-19	14.85	15.00	
17-Oct-19	10.65	11.00	
03-Mar-20	11.10	13.00	
23-Apr-20	7.92	10.00	
22-May-20	15.60	12.00	
11-Aug-20	23.09	14.00	

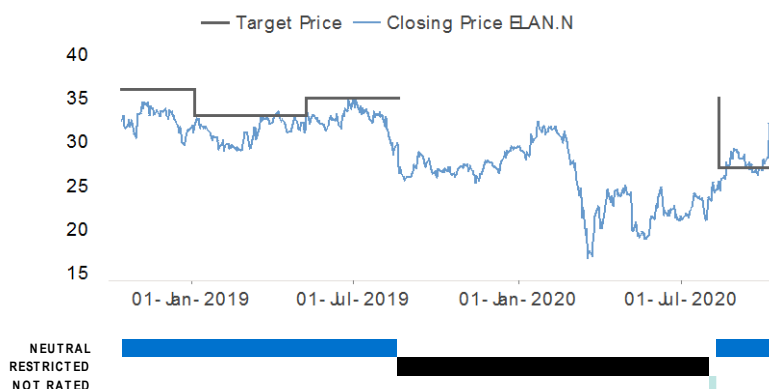
* Asterisk signifies initiation or assumption of coverage.



3-Year Price and Rating History for Elanco Animal Health (ELAN.N)

ELAN.N	Closing Price	Target Price	
Date	(US\$)	(US\$)	Rating
15-Oct-18	32.46	36.00	N *
04-Jan-19	31.83	33.00	
09-May-19	32.96	35.00	
20-Aug-19	27.26		R
04-Aug-20	24.80		NR
12-Aug-20	25.00	27.00	N

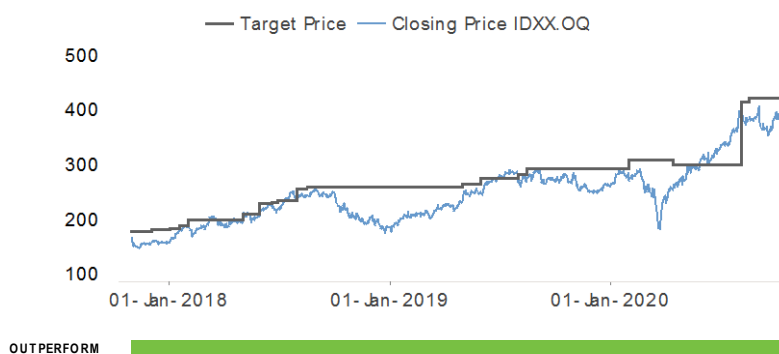
* Asterisk signifies initiation or assumption of coverage.



3-Year Price and Rating History for IDEXX Laboratories (IDXX.OQ)

IDXX.OQ	Closing Price	Target Price	
Date	(US\$)	(US\$)	Rating
31-Oct-17	166.17	178.00	O
03-Dec-17	155.00	181.00	
03-Jan-18	162.05	183.00	
19-Jan-18	180.63	188.00	
01-Feb-18	193.95	198.00	
04-May-18	212.20	209.00	
31-May-18	208.21	228.00	
20-Jun-18	224.98	231.00	
29-Jun-18	217.94	235.00	
01-Aug-18	236.15	255.00	
17-Aug-18	243.50	259.00	
01-May-19	234.06	265.00	
31-May-19	249.77	275.00	
01-Aug-19	268.30	282.00	
16-Aug-19	275.41	293.00	
31-Jan-20	271.01	308.00	
14-Apr-20	263.01	300.00	
04-Aug-20	390.25	415.00	
17-Aug-20	384.39	422.00	

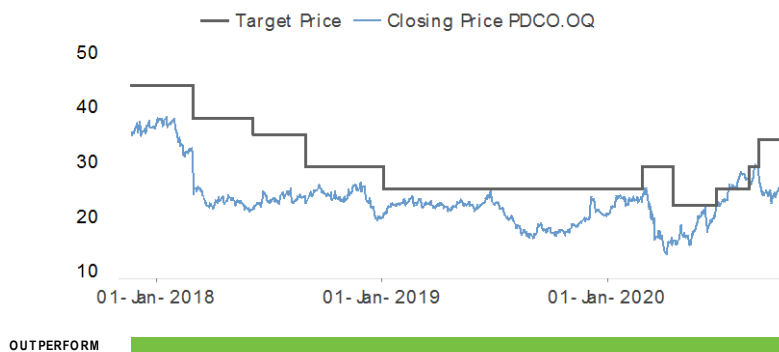
* Asterisk signifies initiation or assumption of coverage.



3-Year Price and Rating History for Patterson Companies (PDCO.OQ)

PDCO.OQ	Closing Price	Target Price	
Date	(US\$)	(US\$)	Rating
21-Nov-17	34.80	44.00	O
01-Mar-18	24.11	38.00	
06-Jun-18	21.50	35.00	
30-Aug-18	22.54	29.00	
04-Jan-19	20.55	25.00	
27-Feb-20	24.01	29.00	
17-Apr-20	15.56	22.00	
26-Jun-20	22.80	25.00	
18-Aug-20	26.45	29.00	
03-Sep-20	26.45	34.00	

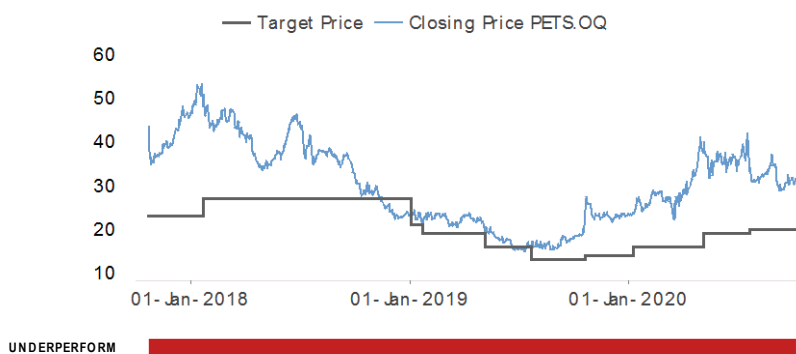
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3-Year Price and Rating History for PetMed Express (PETS.OQ)

PETS.OQ	Closing Price	Target Price	
Date	(US\$)	(US\$)	Rating
23-Oct-17	43.41	23.00	U
22-Jan-18	48.11	27.00	
04-Jan-19	23.25	21.00	
22-Jan-19	20.93	19.00	
06-May-19	19.71	16.00	
22-Jul-19	16.03	13.00	
21-Oct-19	26.00	14.00	
08-Jan-20	23.75	16.00	
04-May-20	37.49	19.00	
20-Jul-20	33.36	20.00	

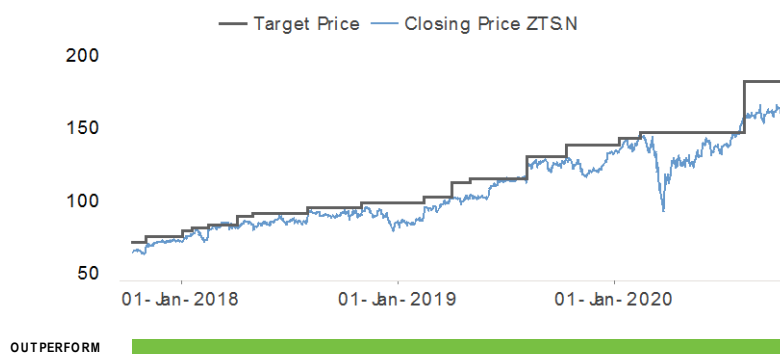
* Asterisk signifies initiation or assumption of coverage.



3-Year Price and Rating History for Zoetis (ZTS.N)

ZTS.N	Closing Price	Target Price	
Date	(US\$)	(US\$)	Rating
11-Oct-17	64.28	71.00	O
02-Nov-17	67.31	75.00	
03-Jan-18	72.10	79.00	
19-Jan-18	76.62	81.00	
15-Feb-18	78.50	83.00	
05-Apr-18	83.52	89.00	
02-May-18	79.90	91.00	
02-Aug-18	91.43	95.00	
01-Nov-18	94.25	98.00	
14-Feb-19	93.26	102.00	
02-Apr-19	102.04	112.00	
02-May-19	103.15	115.00	
06-Aug-19	121.17	130.00	
11-Oct-19	128.47	138.00	
08-Jan-20	133.29	143.00	
13-Feb-20	144.94	147.00	
06-Aug-20	161.33	182.00	

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Outperform (O) : The stock's total return is expected to outperform the relevant benchmark* over the next 12 months.

Neutral (N) : The stock's total return is expected to be in line with the relevant benchmark* over the next 12 months.

Underperform (U) : The stock's total return is expected to underperform the relevant benchmark* over the next 12 months.

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