

AUTOMOTIVE VENTURES

AUTO INTEL REPORT \\ AUGUST 2021



WELCOME TO THE

AUGUST 2021

AUTURES INTEL REPORT

In this issue, we provide a refresh of some of the frameworks we've provided in the past. Feel free to use these slides in your investor presentations and board decks if they're helpful.

We look at four significant (and large) deals in the AutoTech space last month: J.D. Power's acquisition of Darwin Automotive, the announced SPAC merger of Olive.com/PayLink with MDH Acquisition Corp., ACV's acquisition of MAX Digital and CarMax's investment in UVEye.

And we have a new slate of "Companies to Watch" for August.

As always, please send me a note if there's anything I've missed, or if there's any content that I can add in future editions that will be helpful.

Many thanks and have a great month!

Steve Greenfield steve@automotiveventures.com

>> CONTENTS

- 05 WHITEPAPERS AVAILABLE
- 06 IN THE NEWS
- 08 THEY SAID IT
- 09 POINT OF VIEW
- 11 AUTOMOTIVE TECHNOLOGY LANDSCAPE
- 14 AUTO TECH TRANSACTIONS
- 21 KEY TRANSACTION OVERVIEW
- 26 COMPANIES TO WATCH
- **30 COMPANY VALUATIONS**
- 33 AUTO INDUSTRY OVERVIEW
- 40 DEALER SOFTWARE SPEND
- 43 AUTOMOTIVE ADVERTISING
- 49 WHOLESALE AUCTIONS
- 56 AUTOTECH'S GOT TALENT

>>> WHITEPAPERS AVAILABLE

AUCTION DISRUPTORS (CAROFFER To industry's first instant webloke bidding platform) CCAROFFER CONCIDENT FREE TO DOWNLOAD













> IN THE NEWS,

Car Sales Continue Hot Streak, but Market Shows Signs of Cooling THE WALL STREET JOURNAL.

Proposed capital gains tax increase spurs car dealers to sell **Automotive News** July 19, 2021

'The Market Is Insane': Cars Are Sold Even Before They Hit the Lot July 15, 2021

The New York Times

Hot Used-Car Market Boosts Auto Lenders and Borrowers July 26, 2021 THE WALL STREET JOURNAL.

Dow Tops 35000 as Stocks Rise to Records

July 23, 2021

THE WALL STREET JOURNAL.

Automakers Are Still Betting Billions On Startups.

July 22, 2021

crunchbase news

TSMC Expects Auto-Chip Shortage to Abate

THE WALL STREET JOURNAL. This Quarter

July 15, 2021

Selling Your Used Car? You Could Turn a **Profit**

July 18, 2021

THE WALL STREET JOURNAL.

AutoNation Reports All-Time Record Quarterly EPS

July 19, 2021

BUSINESS

Intel CEO Says Chip Shortage Could Stretch Into 2023

July 22, 2021

THE WALL STREET JOURNAL.

Wall Street hits record on robust June iobs data

July 2, 2021



dealership groups

Automotive News July 19, 2021

F&I profits soar at largest U.S.

>>> THEY SAID IT



"During the quarter, total revenue grew 87% over 2019, while total gross profit increased to 125% compared to 2019. On a same store basis. compared to 2019, we recorded a 20% increase in new vehicle revenues, 49% increase in used vehicle revenues, 39% increase in F&I income, and 3% increase in service body and parts revenues."

- Bryan DeBoer, Lithia President & CEO "Today, we reported alltime record quarterly results with adjusted earnings per share from continuing operations of \$4.83; an increase of 243% compared to last year. This marks AutoNation's fifth consecutive all-time record quarter...Our second quarter samestore revenue was an industry-leading record \$7 billion, which is up 54% compared to same period a year ago and up 33% compared to 2019."

Mike Jackson,
 AutoNation CEO &
 Director

"While I expect the shortages to bottom out in the second half, it will take another one to two years before the industry is able to completely catch up with demand."

- Pat Gelsinger, Intel CEO





GREENFIELD'S POINT OF VIEW

>>>> GREENFIELD'S POINT OF VIEW

The Resource Edition

I'm flattered when I see some of our slides show up in other company investor or board presentations. I'm honored to be able to give back to the industry by providing helpful frameworks.

In this issue, I've gone back and refreshed a number of these slides. It means delivering you a longer-than-usual monthly Intel Report, but I thought the industry would benefit from having all of these in one place.

Feel free to use these as you see fit and let me know if any questions arise or if you have suggestions or sources for more accurate assumptions.

Thank You

Whether you're looking to raise money or sell your business let me know how I can help. I am personally committed to the best outcomes for automotive technology entrepreneurs and their teams.

At Automotive Ventures, we will continue to publish content that helps you understand and navigate through the ambiguity and change coming to the industry. And we will continue to offer services to entrepreneurs to ensure they

can build the best businesses and achieve the best outcomes when they're ready to sell.

It's an exciting time to be in an industry that is going to see more change in the next 10 years than it's seen in the past 100. No matter where you are in the ecosystem, we can help. I look forward to taking this journey with you.

Thank you for your continued support.

Steve Greenfield

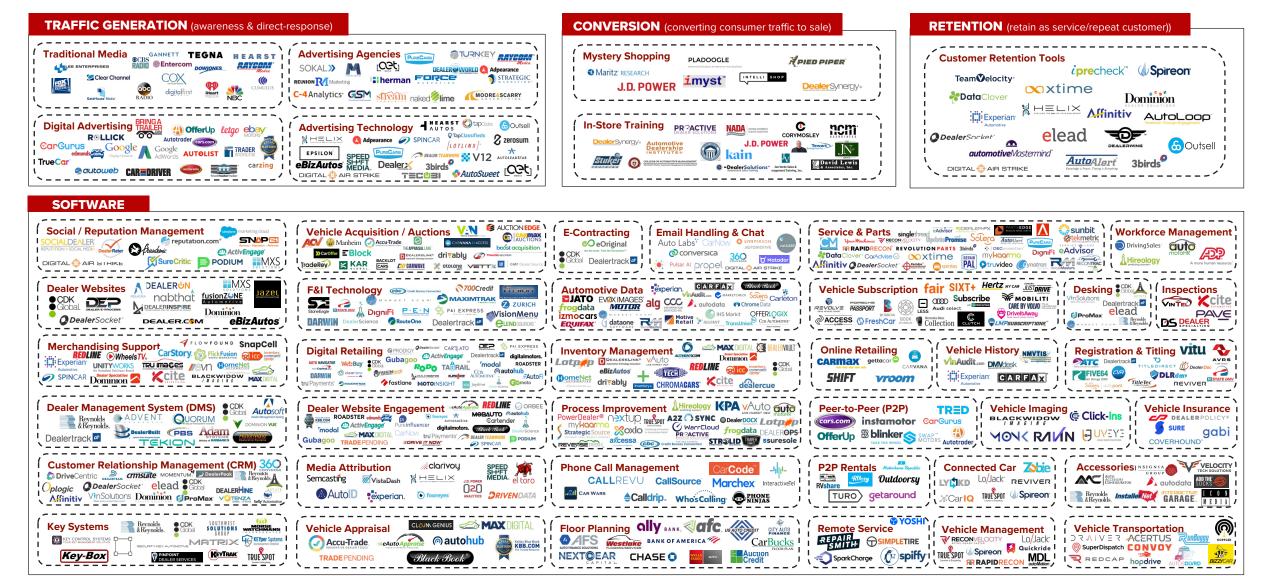
CEO and Founder
Automotive Ventures



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>>> AUTOMOTIVE TECHNOLOGY LANDSCAPE





EV Manufacturers



ENVISICS Autonomy AEYE OUSTER **Q**UHNDER tu simple WAYMO

wejo Connectivity otonomo RIDECELL

Charging Infrastructure



Dealership Digitization





Micromobility Joyride ZOBA POPULUS Ride Report

Battery Technology



Commercial Vehicle Innovation



Mobility-as-a-Service





>>> JULY 2021 TRANSACTIONS







































































































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>>> 2021 TRANSACTIONS: JAN - MAR

Jan 2021



GROUP \$1.2b IPO





Feb 2021









Mar 2021







CRESTA

Investment by

PORSCHE



S3.4b SPAC

III



autozen

\$4.2m Financing















































(KEEPS

Investment by

SSM























































R/I/N

S15m Series A

× KAR







\$590m Series F

GROUP DAIMLER



\$200m Financing







ENEVATE

\$81m Series E

Fidelity



SmartHop

\$12m Series A

USV







Ήμ

\$2m Funding







>>> 2021 TRANSACTIONS: APR - JUN

Jerry

S28B Series **B**

Pulsar Al

Acquired By

SPINCAR

E/NRIDE

\$110m Series B

\$15m Series A

ROCSYS

\$6.3m Fundraising

FORWARD.one

Series C Funding

OD AUTOPAY

Merger

% rategenius

Passport \$90m Funding

Car rade...

Filed for IPO

SIXTH

STREET

WeRide

Apr 2021









Level 5

woven



MILE

\$66m Series B

SEARCH LIGHT

BlaBlaCar

\$115m Financing



AxleHire

S20m Series B

IDELIC

\$20m Funding

HIGHLAND AXA
Venture Partner







May 2021

PDM >

\$4m Fundraising

FUSE

(II) OCULII

\$55m Series B

CATAPULT CONDUCTIVE

Auction Frontier

KAR

:) Affectiva

Acquired by

smart eye

MotoRefi

\$45m financing

Goldman

@DealerSocket

Acquisition by

Solera

monoDrive

Acquisition By

carsales

Acquiring 49% of

TRADER

Sachs

Acquisition by





















mileauto

\$10.3m Seed Round



(S) HESAI

\$300M Series D

Ventures









CARRO

Jun 2021



DRIVENDATA

\$4.5M Series Seed B



Mister

Filed To Go Public

northvolt

\$2.75B Fundraising

PROPRIETA OMERS

noblr

Acquisition by

S USAA®



KENSINGTON

/o/

buser

\$138M Fundraise

Auto Exchange

Acquisition by

ÆΑ



TRACTABLE

\$60M Series D

INSIGHT GeorgianPartners

CABANA

S10M Series A

CRAFT

QUANERGY SPAC Merger

CITIC CAPITAL 中信資本





ΓR∃D

\$3M Fundraising

Joyride

\$3.7M Financing

Exeter

Acquisition by

WARBURG PINCUS































Lender Compliance Technologies

\$4.15M Series A

Шaabi

\$83.5M Series A

khosla ventures













WeRide 文选知行

\$310M Fundraising

locoNav

QUIET CAPITAL

Zong

\$190M Series D

ELECTRIC ERA

S3M Seed Round

REMUS

KEEP T R U C K I N

\$190M Series E

G2 VENTURE PARTNERS

prnwprnw ♣

€65M Fundraising

212

mi xiaomi

S37M Series B









>>> 2020 TRANSACTIONS

classifieds acquired by Adevinta



















































































































\$7m Financing



Class A stock



























Lightico

\$13m Financing



finn.auto

€20 million

Series A



AFFIVAL

\$5.4b+ SPAC

(((



















































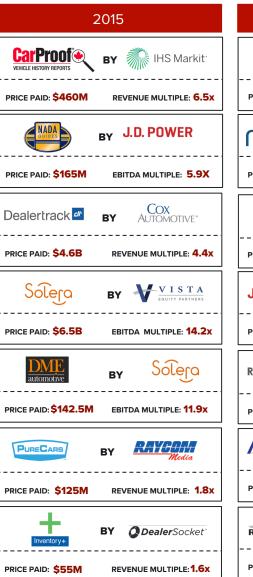


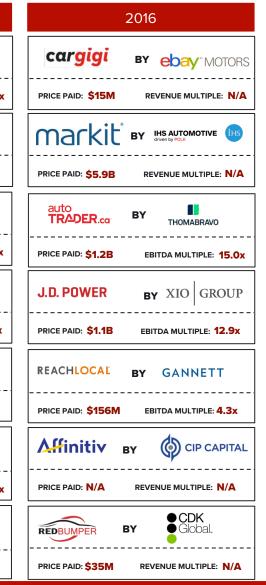
>>> MOST IMPORTANT AUTO TECH DEALS BY YEAR: 2012-2016





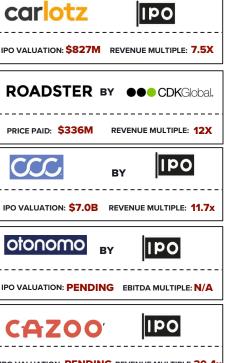






>>> MOST IMPORTANT AUTO TECH DEALS BY YEAR: 2017-2021





PRICE PAID: \$404M

PRICE PAID: \$120M REVENUE MULTIPLE: 6.0x

2021

IPO



PRICE PAID: \$205M

REVENUE MULTIPLE: 10.0x

IPO VALUATION: \$3.0B REVENUE MULTIPLE: 15.2x



CARMAX

EBITDA MULTIPLE: 11.5x

EBITDA MULTIPLE: 16.5x

PRICE PAID: \$1.2B



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>>> DEAL DETAILS: DARWIN AUTOMOTIVE & J.D. POWER

OVERVIEW OF TRANSACTION

- J.D. Power announced it has acquired Superior Integrated Solutions, also known as Darwin Automotive, in what is one of the largest AutoTech acquisitions ever.
- Darwin is a leading provider of automotive F&I software used by automotive dealerships. Superior was founded by Phil Battista in 2014, which then launched the Darwin brand in 2017.

SIGNIFICANCE TO INDUSTRY

- Darwin is a leader in F&I software and digital retailing with more than 7,700 dealers using its technology. The Darwin Automotive Platform is an industry-leading F&I menu software application, supporting both showroom and digital sales with highly personalized, customer-focused tools to select vehicle financing and protection options.
- Widely adopted by the largest dealer groups in the United States, the Darwin Automotive Platform is used in one-third of all new-vehicle transactions today.
- The whole digital retailing space has been red hot this past month, as we witnessed Roadster selling to CDK Global, and Gubagoo selling to Reynolds & Reynolds.

J.D. POWER

Acquires



Transaction details not disclosed

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>>> DEAL DETAILS: OLIVE / PAYLINK & MDH SPAC

OVERVIEW OF TRANSACTION

- Vehicle protection plans provider Olive.com and its affiliate PayLink Direct have agreed to go public in a deal with Franklin McLarty's MDH Acquisition Corp. that will give the combined business a valuation of about \$960 million dollars including debt.
- McLarty, who has links to three prominent U.S. dealership groups, is chairman of SPAC MDH, which launched in February.

SIGNIFICANCE TO INDUSTRY

- Olive.com sells extended vehicle warranties online to replace manufacturer guarantees once they expire. It mostly covers cars that are from six to 12 years old.
- PayLink Direct is a leading financial services company that specializes in providing interest free payment plans for the purchase of VSCs and other F&I products when purchased outside of an initial loan.
 Since the company's inception in 2006, PayLink Direct's infrastructure has processed more than 1.6 million service contracts and originated more than \$3.7 billion in receivables.
- I believe we see more innovation and M&A in the traditional F&I space.



SPAC IPO



MDH Acquisition Corp

Anticipated \$960m total valuation, including debt

>>> DEAL DETAILS: MAX DIGITAL & ACV

OVERVIEW OF TRANSACTION

• ACV Auctions announced its acquisition this week of MAX Digital, a pioneer in automotive data and merchandising products and best known for its flagship inventory management system FirstLook. The transaction is valued at \$60 million.

SIGNIFICANCE TO INDUSTRY

- We've seen a blurring of lines between the wholesale and retail spaces of the automotive landscape, as historical silos are collapsing.
- The acquisition allows ACV to expand its suite of digital capabilities to offer new inventory and pricing guidance, merchandising and sales enablement tools that will help dealers run their businesses more efficiently and profitably. MAX Digital joins ACV's growing network of brands that includes ACV Auctions, ACV Transportation, ACV Capital, and True360.
- The MAX Digital news comes on the back of news that auction company The XLerate Group acquired Liquid Motors. That combination will help serve consignors and buyers, both digitally and in-lane. Liquid Motors provides "One Click" wholesale auction management tools for auto dealers to easily and efficiently market their vehicles across most major online wholesale marketplaces.



\$60m Acquisition of



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>>> DEAL DETAILS: UV EYE & CARMAX

OVERVIEW OF TRANSACTION

- UVeye, an automated vehicle-inspection systems developer, announced a \$60 million dollar Series C funding that includes investment from CarMax, W. R. Berkley Corporation and FIT Ventures, along with a group of Israeli institutional investors.
- Prior investors include Volvo, Hyundai and Toyota.
- The latest round puts its total investment above \$90 million dollars.
- UVeye has set up partnerships with dealer groups, auto auctions and vehicle fleets.

SIGNIFICANCE TO INDUSTRY

- Accurately representing a vehicle's cosmetic and mechanical condition is key to enabling online B2B vehicle transactions.
- CarMax has the third largest auction network in the USA, with over 75 physical locations and over 425k wholesale units sold per year.
- CarMax recently acquired Edmunds, as they accelerate the number of units purchased directly from consumers and embrace their "omni-channel" sales approach (hybrid of both online and in-store sales).

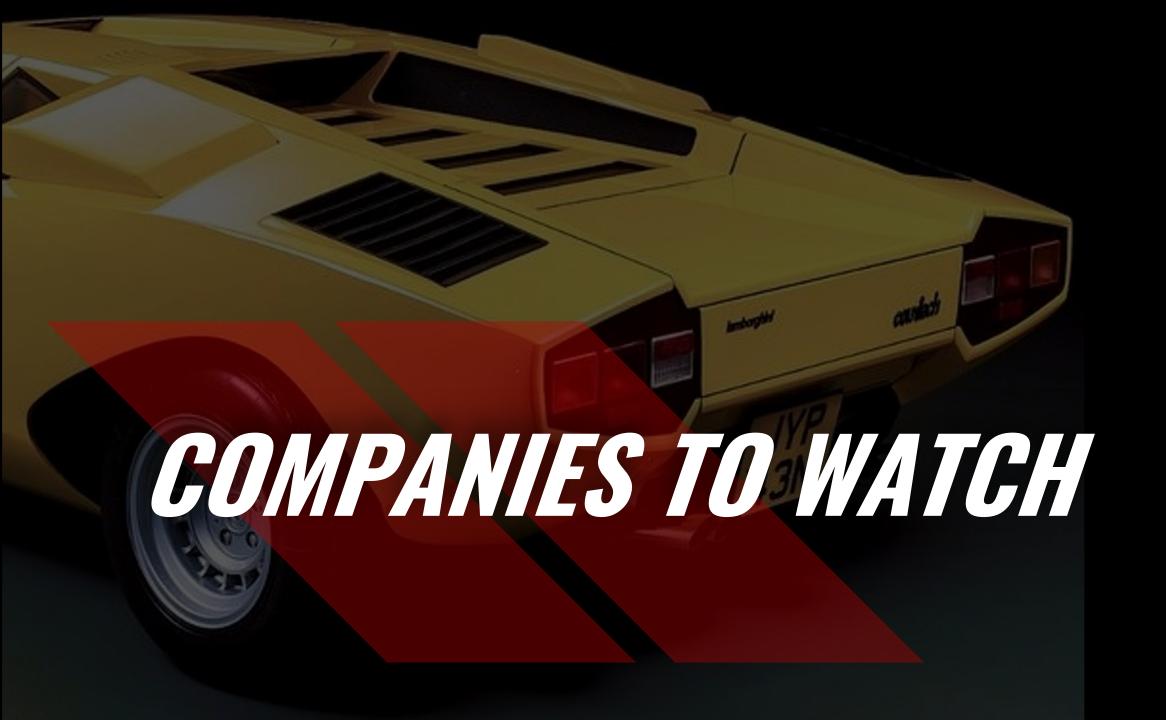


VEHICLE INSPECTION SYSTEMS

\$60m Series C



Undisclosed Valuation



>>> AUGUST COMPANIES TO WATCH



wepaythemax.com

Do you need cash fast? AUTOBUY makes selling your quality pre-owned vehicle fast and easy by buying your used vehicle for the maximum price possible. Call us - regardless of your used vehicle's condition - and set up a free appraisal with one of our expert buyers. We Pay the MAXTM.



drivekyte.com

Rental cars delivered to your door. Reserve a new, clean car and a driver will bring it to you, whenever you need it. Reserve a Kyte and a driver will bring it to you, on demand. When you're done, a driver will pick up your Kyte from the location of your choice.



claimgenius.com

The industry's full-service Al-based auto claims solution for the global automotive industry. Helps to reduce claim processing time by up to 50%, reduce claim costs by up to 50%, increase claim accuracy and increase customer retention.



autofleet.io

The leading Vehicle as a Service platform for fleets. Electrify your fleet today: Design and launch the optimal electrification strategy for your operation, receive results in days. Launch on-demand delivery and ride services and leverage unutilized vehicles.



dixontech.net

Helping dealers grow and retain their customer base. Status+ is a Service CRM Tool. Recon+ decreases your time to market and points out any bottlenecks by measuring your process through every step. Acquisition+ allows dealers to connect with private sellers with the fastest moving vehicles through an automated texting campaign.



quotible.com

Engage customers, book appointments & sell more cars. With Quotible's automated lead response & communication software, you are able to deliver a great first impression and maximize sales opportunities—every time.



iserviceauto.com

iService Auto is a customer engagement company that provides software to bridge the gap between car owners and automotive dealerships through trust, transparency, and effective communication. They offer dealers a 20% increase in gross profit, or a full refund.



autozen.com

Where selling your car is easy, fast, and fair. Autozen has created the most comfortable way to sell your car. Get the benefits of shopping your car around to hundreds of buyers, without leaving your home. No haggling. No obligations. No stress.





>>> 2021 COMPANIES TO WATCH

FEB MAR APR MAY SEP OCT NOV **DEC JAN** JUN JUL **AUG** l**cot**i FIXED OPS D | G | T A L CARPAY Eriendemic AUTOBUY /// NUBRAKES wrapmate carpav.com_ nubrakes.com friendemic.com wrapmate.com dealerwing.com AutoAp* autoAPR° kyte. DEALERTRADE network. carma **NEMODATA blyncsy** RECALL CHECKED nemodata.ai drivekyte.com carmaproject.com blyncsy.com zipdeal.com autoapr.com dealertrades.net autoap.com sfara Installer Net PARKMYFLEET.COM CLAIM GENIUS QUANTUM CRISPIFY RoboTire quantum5.ai parkmyfleet.com claimgenius.com robotire.com sfara.com five64.com crispify.io Spiffit w ampUp TRAVER **Dealer**× SparkCharge LifeSaver Pureinfluencer autofleet sparkcharge.io pureinfluencer.com dealerx.com ampup.io spiffit.com lifesaver-app.com autofleet.io raverconnect.com FAPID **CALPRO** DIXON TECHNOLOGIES widewail
 widewail TECUSI doilande **Car**Capital ADAS SOLUTIONS tecobi.com carcapital.com widewail.com dollaride.com dixontech.net govintel.com LHCL Karus **STRØLID** RecalRabbit quotible carbly TapClassifieds LUGL INFORMED AUTOTECH informed.iq quotible.com strolid.com getcarbly.com karus.ai recallrabbit.com tapclassifieds.com fuseautotech.com **Kcite** truvideo TRACTABLE **(i**SERVICE MOTORQ ? ? BLUESPACE truvideo.com tractable.ai motorq.com xciteauto.com bluespace.ai iserviceauto.com CarlQ U MON **©** Click-Ins Griiip REINVENTAUCTIONS autozen click-ins.com monkvision.ai griiip.com gocariq.com autozen.com

>>> 2020 COMPANIES TO WATCH



www.autohub.io



FIXD

https://qet.fixdapp.com

DigniFi

www.dignifi.com

www.privacy4cars.com

DIGITAL

††GENERATIONS

www.generationsdigital.com





=AutoFi

www.autofi.com

www.darwinautomotive.com

digitalmotors:

www.digitalmotors.com

♠ PRODIGY

https://getprodigy.com

www.edealerdirect.com

@-DFALFR

ADVENT

www.adventresources.com



DRIVENDATA

www.driven-data.com

A2Z (SYNC

www.a2zsync.com

as**Tech**)

https://astech.com

() spiffy

www.getspiffy.com

https://pave.bot

Quickride

www.goguickride.com





inSearch X

www.insearchx.com

B AUTO GROUP

www.cbautogroupinc.com

BLACKWIDOW

www.blackwidowimaging.com

C DEALERPOLICY

www.dealerpolicy.com





boost acquisition

www.boostacquisition.com

ACERTUS

https://acertusdelivers.com

gettacar 🥯

www.gettacar.com

TRUSCORE

www.tscpo.com





https://360converge.com

WORK TRUCK

SOLUTIONS

www.worktrucksolutions.com

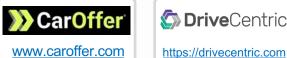
Spireon



www.winfooz.com







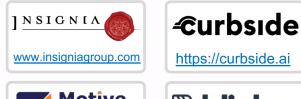








www.motiveretail.com





https://curbside.ai



www.ravin.ai







www.suresale.com www.fluency.inc



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https://zerosum.ai







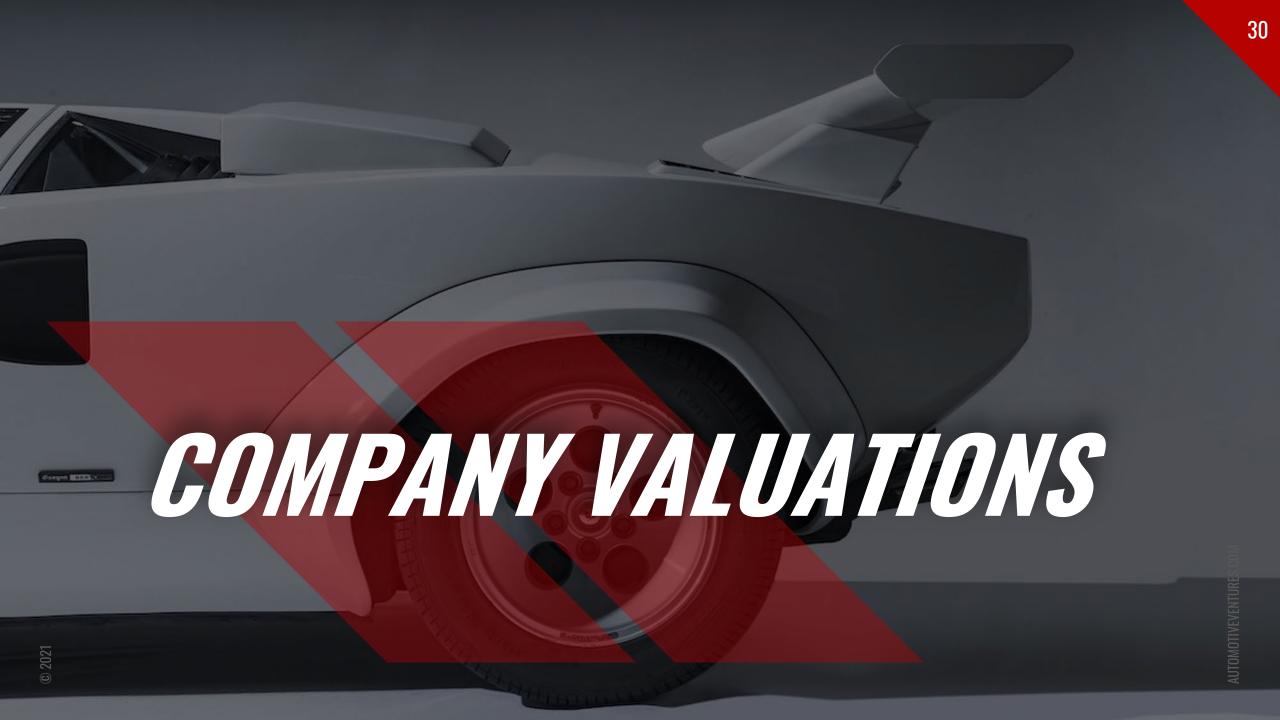




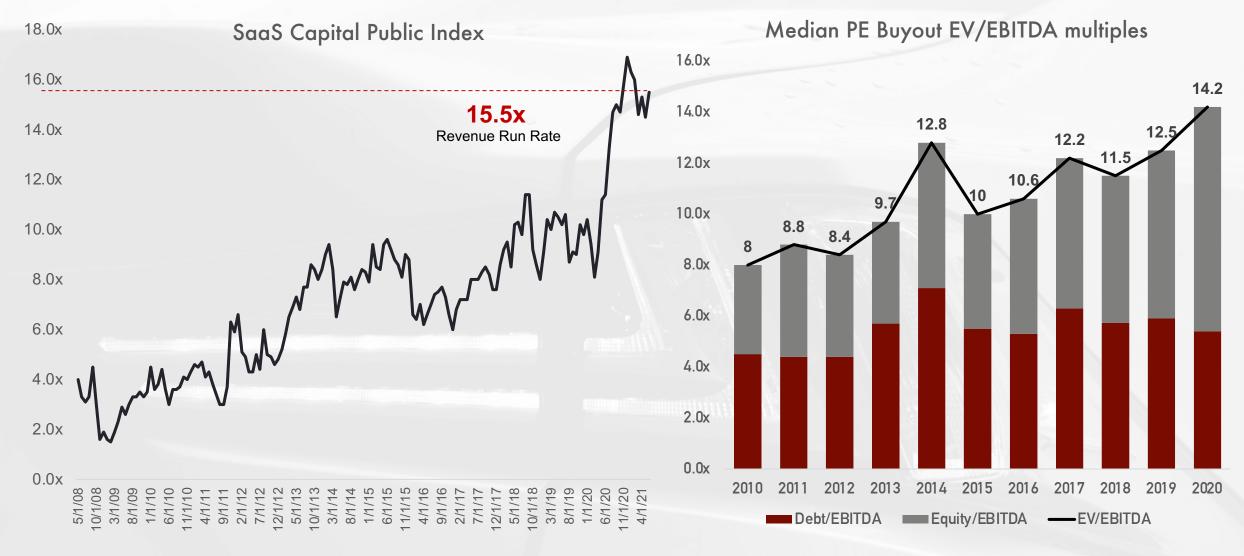








>>> PUBLIC MARKET SAAS AND PE BUYOUT MULTIPLES



Source: The SaaS Capital Index Source: PitchBook



>>> AUTOMOTIVE TECHNOLOGY TRANSACTION MULTIPLES

Business Model	Definition	Revenue Multiple
Pure SaaS	Uses software to provide customers with a service. Creates, develops, hosts, and updates the product. Has access to a global market and can scale without increasing product delivery costs.	10.0x+
Tech- Enabled Services	Brings new or innovative user-experiences using existing technologies to the market. Consumes and/or creates technology (physical infrastructure, hardware or software) designed and configured into a solution delivered to an end user customer.	3.0x-5.0x
Pure Services	A business that generates income by providing services instead of selling physical products.	1.0x-2.0x

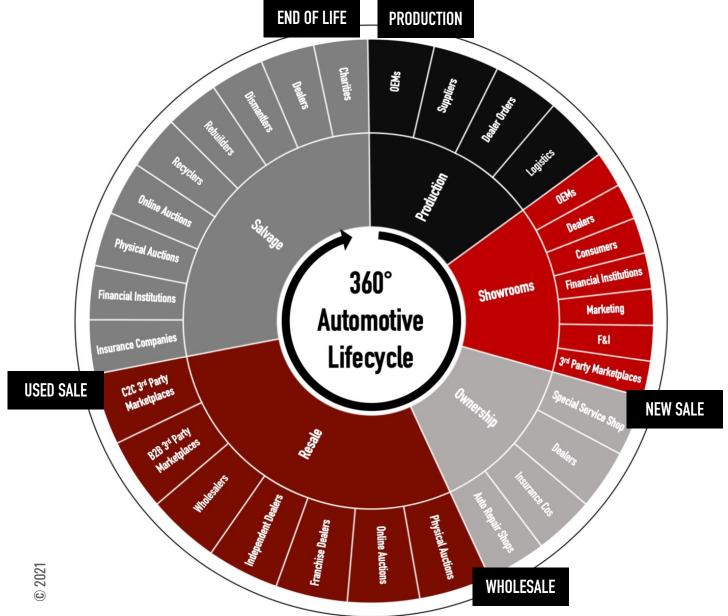
Multiples higher for companies that have:

- 1. Predictable, recurring revenue
- 2. Low churn
- 3. High gross margins
- 4. High growth rates
- 5. High annual revenue growth
- 6. Strong upsell opportunities





>>> OVERVIEW OF THE AUTOMOTIVE LIFECYCLE



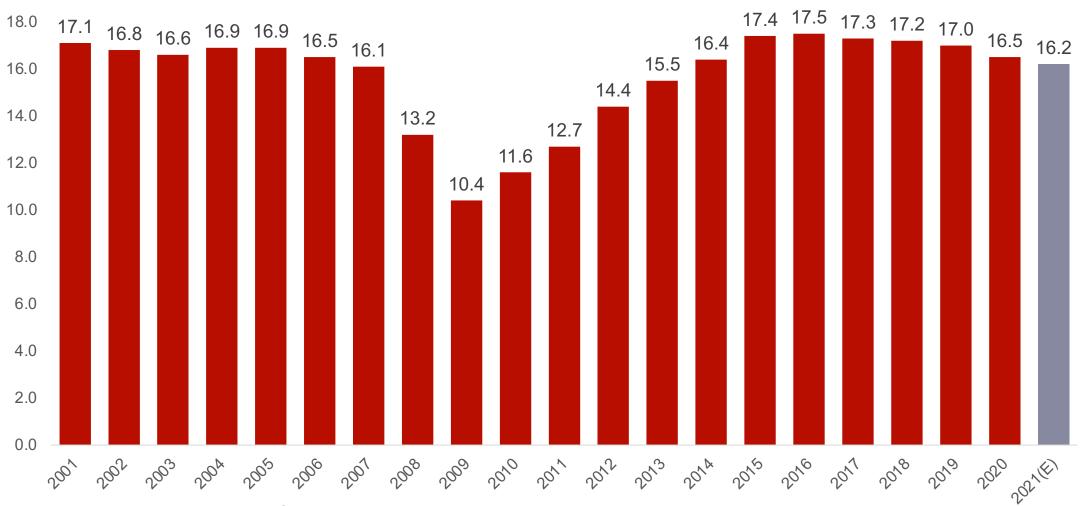
THE AUTOMOTIVE
LIFECYCLE IS
MULTI-FACED AND
SUPPORTS
THOUSANDS OF
RELATED
COMPANIES

AUTOMOTIVEVENTURES.COM

NEW VEHICLE SALES

(millions) 20.0

© 2021

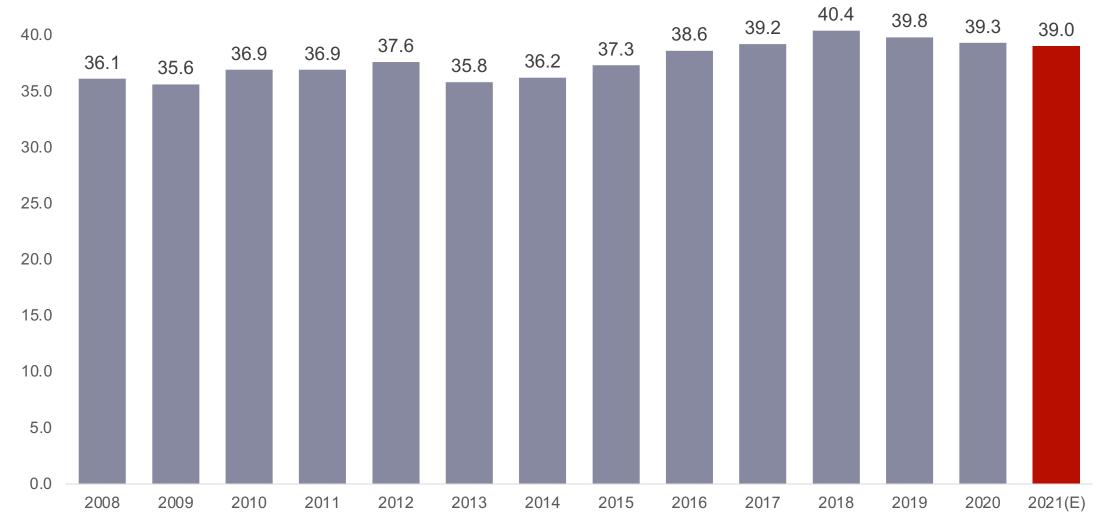


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>>> USED VEHICLE SALES

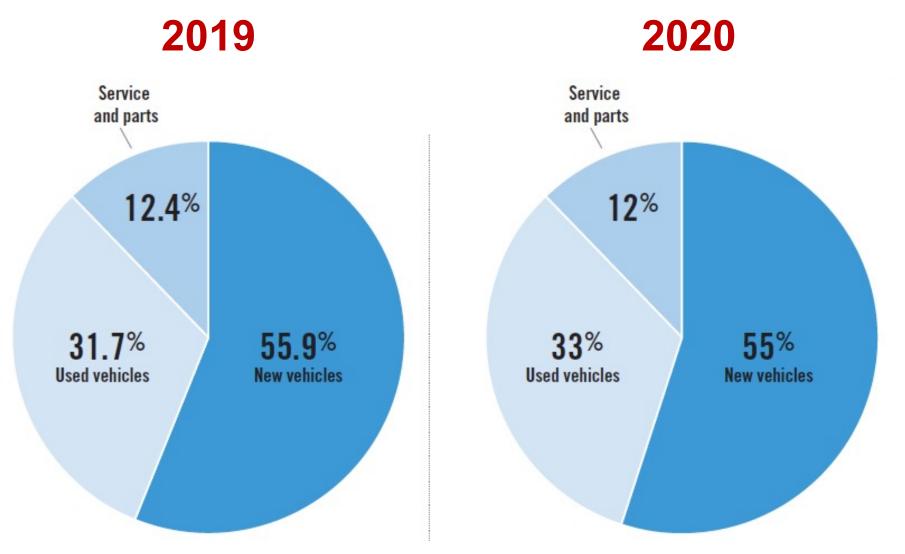


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>>> SHARE OF TOTAL FRANCHISE DEALERSHIP SALES DOLLARS



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>>> WHERE DOES A FRANCHISE DEALER SPEND THEIR MONEY?

\$775K per Dealership \$12.9B for the Industry \$4.09M per Dealership 11.1% of Total Expense \$68.8B for the Industry \$1.2M per **Dealership** Rent \$20.4B for the Industry 58.9% of Total Expense \$554K per Dealership \$9.2B for the Industry **17.1%** 7.9% of Total Expense of Total Expense Advertising \$360K per Dealership \$6.0B for the Industry 5.1% of Total Expense Payroll Other Software

Total Franchise Dealer Expense per Year

\$7.0M per Franchise Dealership \$116.8B for Industry

© 2021

>>> U.S. DEALERSHIP SEGMENTATION

	Large Franchised (top 100 Groups)	Medium Franchised (next 1,000 groups)	Small Franchised (the rest)	Large Independent (e.g. CarMax)	Small Independent	Buy-Here-Pay- Here
# Locations	3K (AutoNews)	5K	8.5K	2,000	23K (NIADA)	8,000 (NIADA)
Lot Size (Inventory)	~400	~300	~100	>200	<100	<25
Total Sales/Store/Year	3,500	2,250	1,000	2,000	300	100
New Cars Sold/Year	5.5M	6.25M	5.5M	NA	NA	NA
Used Cars Sold/Year	5.0M	5.0M	3.0M	4.0M	6.9M	800K
Avg. Vehicle Price	\$15K+	\$15K+	\$15K+	\$10K+	\$5K - \$10K	<\$5K
Avg. Consumer Credit	Very High	Very High	Very High	High	Med	Low
Unique Value Prop	Reputation/ Size	Reputation/ Size	Reputation	Reputation/ Size	Local	Local; Credit Challenged
Ad Spend per Car	\$266 (NADA)	\$266 (NADA)	\$266 (NADA)	\$250 (NIADA)	\$250 (NIADA)	\$250 (NIADA)
Total Ad Spend/Year/ Store	\$931,000	\$599,000	\$266,000	\$500,000	\$75,000	\$25,000
Total Ad Spend/Year for Segment	\$2.79B	\$3.0B	\$2.26B	\$1.00B	\$1. 73 B	\$200M

Sources: NADA; NIADA; Automotive News; Automotive Ventures Research





>>> TOTAL ADDRESSABLE MARKET (TAM) VERY LARGE FOR BOTH ADVERTISING & SAAS

	FRANCHISE DEALER AD SPEND	FRANCHISE DEALER SAAS	OEM AD SPEND	OEM CO-OP (TO FRANCHISE DEALERS)	INDEPENDENT DEALER AD SPEND	INDEPENDENT SAAS	FINANCE
COUNT	16.5k Rooftops	16.5k Rooftops	30 OEMs	30 OEMs	35k Rooftops	35k Rooftops	1,500 Finance Companies
DRIVER	\$37.5K/Month	\$29K/Month	\$900 per New Car 11.7M Retail New Vehicles	\$550/New Car 11.7M Retail NCs	64 Units/Month \$100 per Unit \$6K Ad Budget	\$1,000/Month	11.7M New Units 15M Used Units (through Franchise Dealers) Total: 26.7M Units \$200 Marketing Fee/Unit
ANNUAL SPEND	\$7.5B	\$5.7B	\$10.6B	\$6.5B	\$2.7B	\$420M	\$5.3B
SUCCESS METRICS	 Traffic to dealer website Foot traffic to dealership Incremental sales 	 Increased sales Decreased expenses Increased Parts and Service Revenue Improved operations 	 Increased sales Increased market share Brand loyalty 	 Increased sales Increased market share Increased loyalty 	Traffic to dealer website Increased sales	Increased salesDecreased costsBetter operations	Loan "attach" rateIncreased salesIncreased revenueIncreased profit

Sources: NADA; NIADA; Automotive News; Automotive Ventures Research



>>> AVERAGE FRANCHISE DEALER SOFTWARE SPEND

Software Product	Cost per Month
Dealer Management System (DMS)	\$6,500
Customer Management System (CRM)	\$2,000
Website	\$1,500
Website Conversion Tools	\$1,500
Digital Retailing	\$1,000
Inventory/Pricing: \$2K	\$2,000
Vehicle History Reports	\$1,500
Inventory/Merchandising Tool	\$100
Social/Reputation	\$100
F&I Technology	\$600
Vehicle Appraisal	\$200
Chat	\$500
Phone Call Management	\$1,000

Software Product	Cost per Month
Desking	\$300
Fixed Ops CRM	\$700
Fixed Ops Communication	\$200
Fixed Ops Applications	\$2,500
Parts Pricing/Analytics	\$500
Parts Ecommerce	\$500
Body Shop Software	\$2,000
HR/Workforce Management	\$500
Vehicle Image/Video Capture	\$500
Accessories	\$200
Vehicle/Lot Tracking	\$300
Recon Tracking	\$500
Other	\$1,500

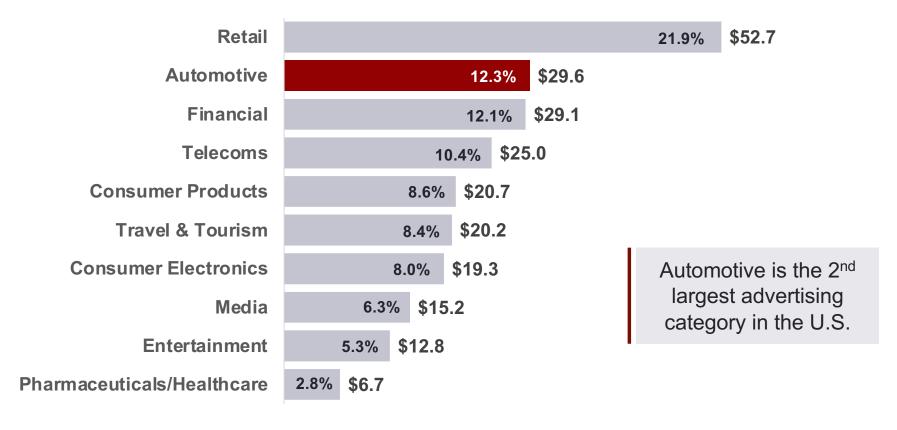
Total Software Spend Per Month: ~\$29,000



>>> AUTOMOTIVE IS 2ND LARGEST AD VERTICAL

Top 10 Ad-Spending Verticals in the US (\$B)

(by share of total media advertising spend in 2019)

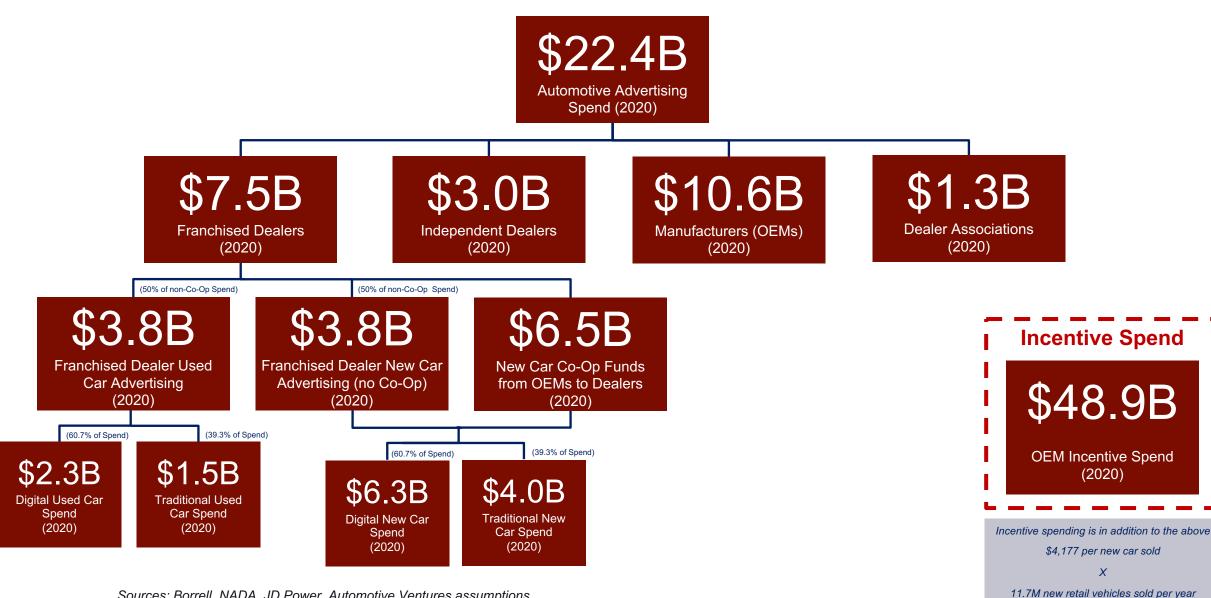


Sources:Statista.com
Automotive Ventures estimates

Total 2019 Ad spending: \$240.7 billion



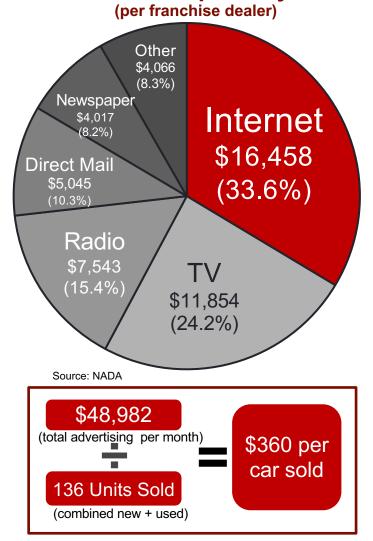
>>> SIZING THE AUTOMOTIVE ADVERTISING MARKET



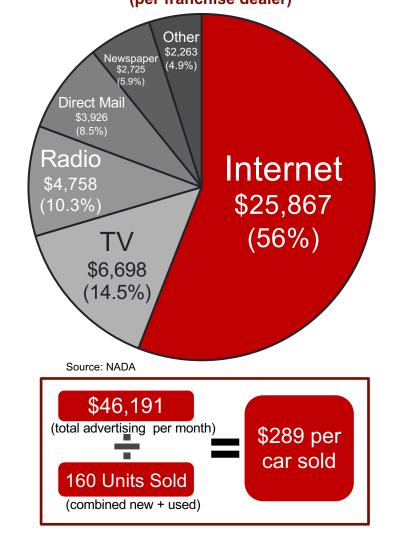
Sources: Borrell, NADA, JD Power, Automotive Ventures assumptions

>>> WHERE DO DEALERS SPEND AD DOLLARS?

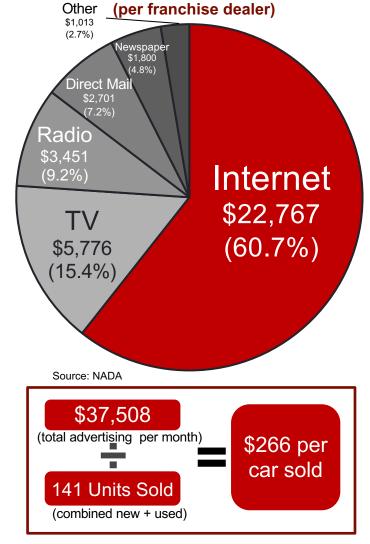
2016 Dealer Ad Spend by Month



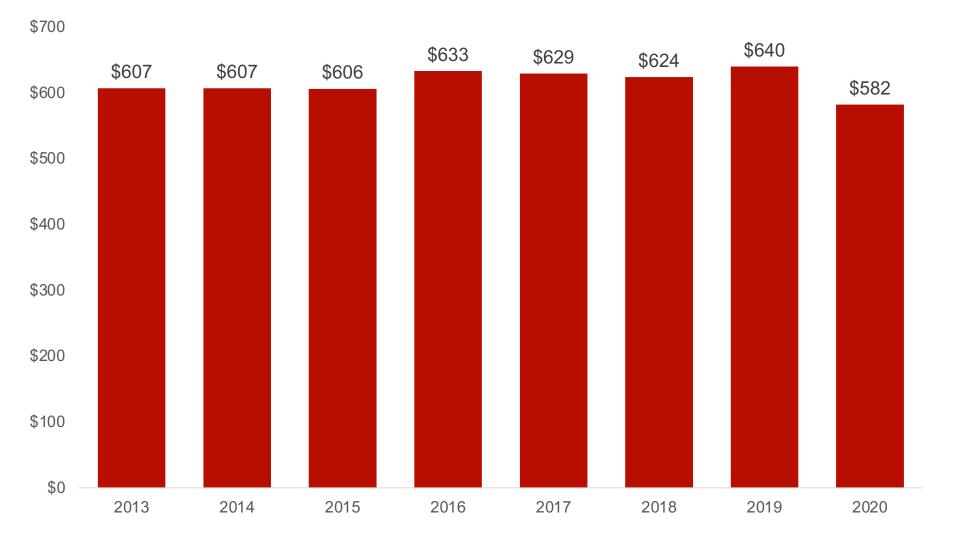
2019 Dealer Ad Spend by Month (per franchise dealer)



2020 Dealer Ad Spend by Month



>>> AVG FRANCHISE DEALER AD SPEND PER NEW UNIT SOLD

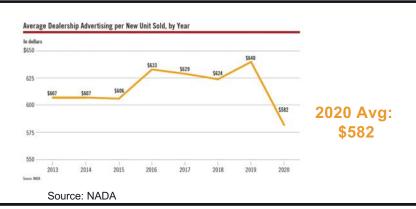


Note: NADA's methodology is to divide a franchise dealer's total marketing spend by the number of new cars sold. This doesn't include any allocation to used car advertising.

Source: NADA



>>> HOW MUCH IS BEING SPENT PER CAR SOLD?



NADA cites that the average dealer spends *around \$600 per car sold* in advertising expense. But this is misleading. Their methodology is to divide 100% of a dealer's advertising spend by only their new car sales.

A better way to calculate advertising spend per car sold (data below comes from NADA):

- 69 new vehicles per franchise dealer/month
- 73 used vehicles per franchise dealer/month

Total: 141 sales per month

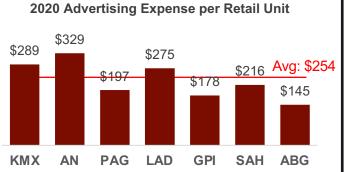
Total advertising spend per month: \$37,508

= \$266 per car sold
(if dividing by combination of both new and used car sales)

To substantiate this figure, we turn to the average advertising spend for the 7 publicly-traded dealer groups, for whom we can calculate average ad spend per unit sold:

\$254 per unit sold

(weighted average)



V

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We like this methodology better and feel it's more accurate to use the \$266/car sold figure.



WHOLESALE AUCTIONS

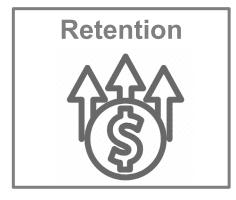
>>> FOUR SEGMENTS OF WHOLESALE AUCTION SELLERS

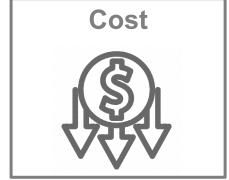
		Description	Drivers of Supply	Percent to Auction	Share of Market
titutional	Captive finance (off-lease)	Captive finance (e.g. Ford Credit) and other lenders typically remarket vehicle inventory at lease-end after offering vehicles to "grounding dealer" and then their franchised dealer base ("upstream" of the physical auction).	Leased car salesLease duration	~60%	~25%
Commercial/Institutional	Financial Institutions (repos)	Primarily subprime leaders (Buy Here Pay Here) offering repossessed vehicles. Often legally mandated to sell repos through auction (according to individual state laws).	Car sales to subprimeDefault rates	~90%	~10%
Comi	3 Fleets (rental cars, corporate)	Fleet segment includes rental car companies, fleet management companies and manufacturer (OEM) vehicles.	Fleet sizeAverage hold period	~20%	~10%
Dealer	Oealers (trade-ins, aged inventory)	Both franchise and independent dealerships liquidate unwanted trade-ins and aged inventory that they cannot sell.	Vehicle sales% with a trade in	~55-65%	~50%

Source: Automotive Ventures Estimates

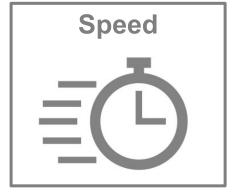
>>> WHAT MATTERS TO A CONSIGNOR (SELLER)?

WHAT MATTERS TO A **CONSIGNOR (SELLER)?**









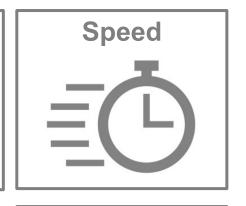
WHAT MATTERS TO A BUYER?











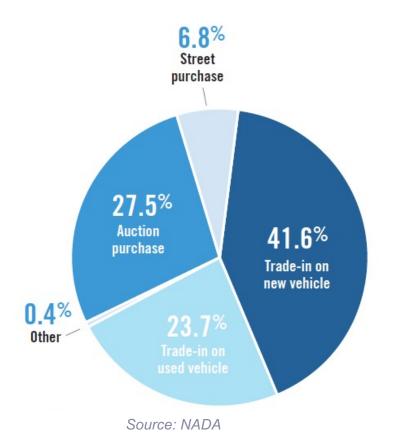




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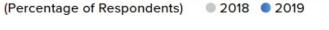
>>> SOURCES OF USED VEHICLES & DISPOSAL CHANNELS

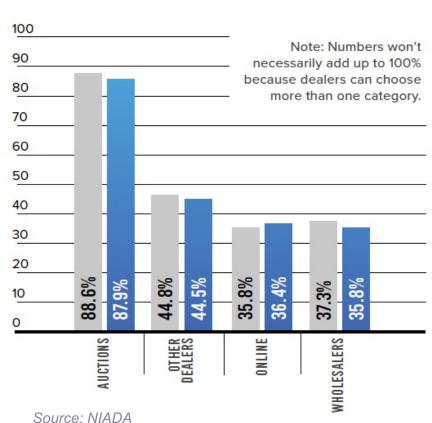
Franchise Dealer Sources of Used Vehicles Retailed (2020)



Independent Dealer Sources of Used Vehicles (2019 vs. 2018)

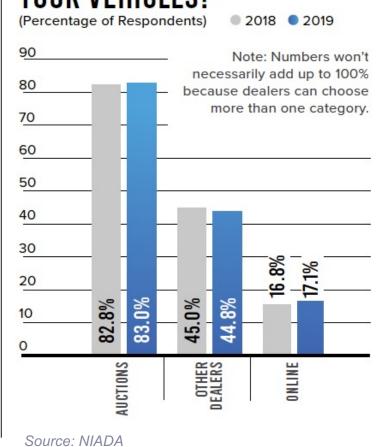
WHERE DO YOU BUY YOUR VEHICLES?





Independent Dealer Wholesale Disposition Channels (2019 vs. 2018)

HOW DO YOU WHOLESALE YOUR VEHICLES?



>>> WHOLESALE AUCTION SEGMENTS

	Main Players	Description	Share of Auction Volume
National Chains	MANHEIM ADESA	 Large chains of auctions (50+ sites) with a nationwide presence Outsized share of auction houses located in large, primary markets 	~70%
Regional Chains	Auto Auguorions WERICAN AUTO AUGUORIONS GROUP AUCTIONS	 Regional players (10+ sites), primarily in second-tier markets Growth through acquisition of independents, not startups 	~7%
Independent Auctions	INDIANA Auto Auction Indiana-auto-auctionnet	 Stand-alone auction houses not affiliated with larger brands Typically located in second-tier markets 	~20%
Technology Only Players	BACKLOT CARS CARS CON CARWAVE YOUR TRUSTED CAR DEALERSHIP NETWORK	 Digital-only auctions with no physical presence, operating regionally or nationwide Primarily focused on dealer consignment vehicles 	~3%

>>> THE PHYSICAL AUCTION DISRUPTORS

Benefiting from the COVID-fueled shift to digital

































BACKLOT CARS





>>> AUCTION CHANNELS AND MARKET SHARE

Market Share by Channel

High Medium Low None

Consignor Type

					_	• •	
Wholesale Channel	Description	Examples	OEM Captive Finance	Financial Institution (Repo)	Fleet	Franchise Dealers	Independent Dealers
Upstream Online	 Off-lease cars listed for sale online; closed (OEM dealer) & open options Car is on dealer's lot 	SmartAuction OPENLANE	40%	0%	0%	0%	0%
Dealer-to- Dealer/ Trade-Ins	 Direct-to-dealer, dealer-to-dealer or between dealers & wholesalers Car location can vary 	Accu-Trade. POWERED BY GALVES MARKET DATA	0%	0%	80%	20%	55%
Digital Trade Network	 Online or mobile live auction for dealers, primarily franchise Car is on dealer's lot 	TradeRey BACKLOT EXPRESS CARS CARWAVE	0%	0%	0%	10%	1%
Online Pre- & Post- Auction Sales	 Online sales with buy now or bid sale before and/or immediately after auction Car at dealer lot, in-transit, or at auction 	OVE.COM ADESA DEALERBLOCK	5%	5%	0%	10%	5%
Simulcast	Live stream of physical auctionRemote buyers for cars in the lane	ADESA Simulcast MANHEIM	25%	40%	10%	30%	9%
Physical Auction	Traditional in-person auctionCar is in the lane	MANHEIM **Erate GROUP AUCTIONS ADESA	30%	55%	10%	30%	30%
		Total	100%	100%	100%	100%	100%



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Steve Greenfield | Managing Director

- 15+ years in the automotive technology space
- CEO/Founder at Automotive Ventures
- Fmr. SVP Strategy & Business Development at TrueCar
- Fmr. VP of Business Development at AutoTrader.com





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