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New Rec: KAR Auction Services (KAR: $24.76) July 10, 2019

Position: Source of funds **Potential downside: 31%**

$MM	2Q19e	3Q19e	4Q19e	1Q20e	F2019e	F2020e
Revs	674.5	644.6	605.1	652.4	2,614	2,474
Adj. EBITDA	112.6	106.1	97.0	102.4	546.6	436.0
Adj. EPS	0.26	0.23	0.18	0.20	1.37	0.79
Cns Revs*	na	na	na	731.5	2,680	2,820
CnsAdj EBITDA*	na	na	na	129.0	534.0	566.9
CnsAdj EPS*	na	na	na	0.33	1.29	1.52

*2019 quarterly consensus numbers have not yet been adjusted for the spin-off of IAA

Shares Out: 133.8 MM **Market Cap: 3.31B** **FYE: Dec**

For more information on this name, please email brian@offwallstreet.com, or call Brian Rogers at 617 868 7880.

Concept:
1. KAR's online auction business seems likely to cannibalize the company's core physical auction operations, resulting in deleveraging of fixed costs and lower profitability.
2. Low barriers to entry to online auction business should result in more players, more intense price competition, and lower market share for KAR.
3. Ongoing technology investments to support the secular shift from physical to digital auctions could also pressure margins more than bulls anticipate.
4. Cyclical headwinds are emerging. Whole car auction volumes could peak in 2019 and may weaken more than expected.

Summary: Following the spin-off of the salvage car auction business (IAA) on 6/28/19, KAR Auction Services (KAR) consists of ADESA, the company's whole car auction segment, and AFC, the company's floorplan financing unit. On a pro-forma basis, at the end of FY2018 (Dec 31, 2018), KAR generated annual revenue of $2,443M and adjusted EBITDA of $498M (20.4% adj. EBITDA margin). In FY2018, ADESA accounted for ~86% of total revenue and ~92% of total Adj. EBITDA while AFC represented ~14% of total company revenue and ~34% of total adj. EBITDA. Corporate expenses accounted for ~26% of total adj. EBITDA in FY2018.

KAR's ADESA business segment is the second largest whole car auction provider in North America, with about ~30% market share, behind market leader Manheim at an estimated 40%. ADESA utilizes a multi-channel auction model, offering car dealers and commercial customers both online services (TradeRev, OPENLANE, ADESA Remarketing Limited, Cars on the Web) and physical auctions at 75 locations.

Historically, ADESA's revenue and margins benefitted from high barriers to entry in the legacy physical auction market, as challenging permitting requirements and high infrastructure costs kept competitive threats at bay. In recent years, however, a number of new online mobile auction platforms funded by venture and private equity have emerged in an effort to disrupt the dealer-to-dealer space and the physical wholesale car auction market.

In response to budding digital disruption, in October 2017, KAR purchased TradeRev, an online dealer-to-dealer auction platform, to compete with new entrants such as ACV Auctions, EBlock, Manheim Express, BacklotCars and others. Despite higher than expected spending on technology and roll-out initiatives and ~$53M in losses in FY2018, bulls seem confident that TradeRev will scale and turn profitable in FY2020, allowing ADESA to fend off new competition and maintain at least 30% market share in the whole car auction market. Furthermore, bulls and KAR management contend that the online dealer-to-dealer market is supplemental, and not apt to cannibalize the company's legacy physical auction business.

Our discussions with automotive dealers suggest TradeRev and other digital platforms like it are, indeed, cannibalizing physical auction volumes. Negative volume growth at ADESA's physical auctions in recent quarters supports this view and suggests that online adoption at dealers may be at an inflection point. We note that TradeRev has lower revenue per unit (~$250 vs. ~$400) and lower gross profit per unit (~$188 vs. $200) than physical auctions, resulting in a secular headwind for operating profitability at KAR. Given the high fixed costs associated with physical auctions, we expect a mix shift from physical to online to result in lower than anticipated physical auction productivity, fixed cost deleveraging, and lower than expected operating profitability at ADESA.

We note that new online entrants, backed by venture and PE capital, appear to have first mover advantage, superior technology and service and are growing faster with less cash burn than TradeRev. The lower barriers to entry versus ADESA's legacy physical auction business should result in more intense price competition and lower market share for ADESA.

Based on our research, dealers appear to be using multiple online platforms in conjunction with physical auctions, resulting in "cherry picking," where the highest quality cars are being sold upstream, which should result in lower unit volume growth, and lower margins at ADESA's physical auctions. Faced with fewer units up for auction at its physical locations, ADESA appears to be engaging in more intense discounting and promotional activity to attract dealer volumes.

KAR's AFC floor financing business may not be insulated from the intensifying competitive car auction marketplace. With AFC providing floor financing for ~83% of vehicles purchased by dealers at ADESA's auctions, lower unit volumes at ADESA's physical auctions and market share losses online may threaten AFC revenue growth and profitability.

The secular shift to online auctions appears set to accelerate, necessitating more investments in digital technology at KAR. While bulls forecast TradeRev to turn breakeven in FY2020, we expect losses at TradeRev may be deeper and longer lasting driven by ongoing technology investments to support the secular shift from physical to digital auctions.

Finally, after 7 years of strong industry volume growth, cyclical headwinds are emerging. Whole car auction volumes appear set to peak in 2019 and may weaken more than bulls expect, driven by declines in off-lease vehicle supply, lower new car retail sales and higher upstream dealer retention of popular truck and SUV trade-ins for certified pre-owned (CPO) resale. Furthermore, there has been an increasing trend among commercial sellers (rental car firms, CarMax, OEMs, etc.) toward vertically integrating remarketing activities, and wholesaling their vehicles directly to used car dealers or to consumers, thereby circumventing ADESA's auction services and fees.

We expect revenue of $2,614M in 2019 and $2,474M in 2020, compared to "street" expectations of $2,680M and $2,820M. We forecast adjusted EBITDA margin of 16.7% in 2019 and 17.6% in 2020 versus "street" consensus expectations of 15.7% for 2019 and 20.1% for 2020, respectively. Finally, we look for EPS of $1.37 in 2019 and $0.79 in 2020 versus the "street's" forecast of $1.29 and $1.52. Our fair value estimate of about $17 is approximately 9.0X our 2020 EBITDA estimate and equates to an FCF yield of ~7.9%.

Borrow information: KAR

Supply Quantity	Shares Sold Short	Available to Borrow	Date
36.9mm	5.8mm	31.1mm	7.10.2019

Source: OWS/Prime Brokers Estimates

Background:

KAR provides used car auction services and dealer floor financing in North America, the United Kingdom and Europe. On 6/28/19 KAR completed the spin-off of IAA, the company's salvage auction business. With the spin-off complete, KAR now operates 2 primary businesses, ADESA and AFC. On a pro-forma basis, at the end of FY2018 (Dec 31, 2018), KAR generated annual revenue of $2,443M and adjusted EBITDA of $498M (20.4% adj. EBITDA margin). In FY2018, ADESA accounted for ~86% of total revenue and ~92% of total Adj. EBITDA while AFC represented ~14% of total company revenue and ~34% of total adj. EBITDA. Corporate expenses accounted for ~26% of total adj. EBITDA in FY2018.

ADESA, the company's whole car auction services business, is the second largest provider of used vehicle auction services in North America with ~30% market share. Manheim, a subsidiary of Cox Enterprises, is the market leader with ~40% market share in North America. In 2018 ADESA operated a network of 75 whole car auction locations and multiple online auction platforms (TradeRev, ADESA.com, Openlane, ADESA Remarketing Limited, etc.) through which the company facilitated the sale of ~3.5M used vehicles.

Vehicles at ADESA's auctions are sold by used vehicle dealers, vehicle manufacturers and their captive finance companies, financial institutions, commercial fleet operators and rental car companies to franchised and independent used vehicle dealers. Revenue at ADESA is generated through auction fees from both buyers and sellers, as well as providing ancillary services, including transportation, reconditioning, inspections, vehicle research, data and analytics and titling. Buyer fees are based on a tiered pricing structure, with fees increasing as the sale price increases, while seller's fees are typically fixed. Accordingly, revenues at ADESA benefitted in recent years from rising used car prices.

KAR's AFC business segment provides short-term (30-90 days) floorplan financing to independent used vehicle dealers. In 2018 AFC serviced ~1.8M loan transactions and had ~12,300 active dealers with an average line of credit (LOC) of ~$270,000, with no one dealer representing more than 1.6% of the loan portfolio. In 2018, an average of ~15 vehicles per active dealer were floor planned, with an average value outstanding of $10,200 per vehicle.

Approximately 50% of AFC's revenue is generated through transaction fees and 50% is derived from interest rate charges to dealers based on outstanding loan balances. In recent years, revenue at AFC benefitted from rising interest rates and LOC balances due to increased prices for used cars.

AFC provides floor financing through 127 locations which are located at or near physical auctions held by ADESA, IAA and others. In 2018, 83% of the vehicles floor planned by AFC were vehicles purchased by dealers at auction. According to KAR, a presence at or in close geographic proximity to ADESA auctions gives AFC the ability to better assess the vehicles and to stay in close contact with active dealers to better manage risk and collections.

AFC faces competition from banks, credit unions and independent auctions who provide floorplan financing to local auction customers. We note that ACV Auctions recently partnered with NextGear Capital, a subsidiary of Cox Enterprises, to provide floorplan financing to independent dealers. Given the rapid adoption of ACV's online auction platform by car dealers at the expense of physical auction locations like ADESA, NextGear Capital's partnership with ACV may threaten AFC's floorplan financing business more than bulls expect.

Discussion:

1. KAR's online auction business seems likely to cannibalize the company's core physical auction operations, resulting in deleveraging of fixed costs and lower profitability.

Due to the increased viability of the Internet as a marketing and distribution channel, new competition has arisen from online wholesale and retail vehicle selling platforms, including ACV Auctions, EBlock, Manheim Express, BacklotCars and others. These online selling platforms have little meaningful physical real estate presence, live auction overhead, or storage costs, allowing them to charge lower fees compared to traditional physical auctions. Furthermore, the online process enables dealers to access a national buyer pool, ensuring quicker inventory turnover and, often, higher used car sales prices.

In response to digital disruption in the marketplace, in August 2014, KAR acquired a 50% interest in TradeRev, an online dealer-to-dealer auction platform, for $30M. In October 2017 KAR purchased the remaining 50% of TradeRev for $50M and an additional $75M in contingencies. Higher than expected spending on technology and roll-out initiatives across 128 markets in the U.S. pressured SG&A at ADESA and contributed to ~$53M in losses at TradeRev in FY2018. While KAR management forecasts breakeven results sometime in FY2020, additional investment spending to expand into 176 markets is expected to result in losses of ~$60M in FY2019.

Along with higher expenses and larger losses than originally anticipated, TradeRev more than doubled total unit sales in FY2018 to 117,000 vehicles, and management estimates that over 200,000 vehicles will be sold on the platform in FY2019 (up 70%+ Y/Y). KAR bulls seem confident that TradeRev will scale and turn profitable in FY2020, allowing ADESA to fend off new competition and maintain at least 30% market share in the whole car auction market. Furthermore, bulls and KAR management contend that the online dealer-to-dealer market is supplemental, not cannibalistic to the company's physical auction business. According to KAR management, TradeRev enables the company to tap into the estimated ~5M unit dealer-to-dealer wholesale used vehicle marketplace, a market previously not served by its physical auction locations.

However, our discussions with automotive dealers suggest TradeRev and other digital platforms like it are, indeed, cannibalizing physical auction volumes. While many automotive dealers told us they still use a combination of online and physical auctions, some dealers are now selling 80%-90% of their wholesale units through online platforms like ACV, with the remainder going to physical auction.

The online adoption rate by dealers appears to be at or near an inflection point, as word spreads regarding the convenience and cost effectiveness of online wholesale selling platforms. With no set-up or subscription fee, and no need to transport the used vehicle off the lot, there is little risk for a dealer to test online auction selling platforms. Dealers that currently use an online platform for wholesale buying and selling told us the application allows them to spend more time at the dealership selling cars and less time at auctions.

Dealers highlighted several factors that contributed to their decision to shift more wholesale units online at the expense of physical auctions, including more frequent auction times, a broader and more geographically diverse buyer pool, no storage and transportation costs unless the car is sold, transparent and accurate vehicle condition reports and more transparent pricing, and faster inventory turn.

Even Manheim acknowledges that online attendance at its auctions is outpacing physical attendance, suggesting the role of physical auctions is likely to change dramatically in the years ahead, with negative consequences for unit volume at legacy physical auction companies like ADESA. At the NADA show in January 2019, Grace Huang, President of Cox Automotive Inventory Solutions group that includes Manheim, said "[2019] is going to be the year of the tipping point [for digital's market share]."

Negative unit volume growth at ADESA's physical auctions in recent quarters supports our thesis that TradeRev and other online platforms may be cannibalizing volumes at ADESA's physical auction locations. As shown in Table 1 below, we estimate ADESA's physical wholesale auction volumes in North America peaked in FY2017 and have declined for the last 5 quarters in a row.

Table 1: ADESA's Physical Unit Volumes & Total Vehicle Unit Volumes (2016-1Q19)

	FY2016	FY2017	FY2018	1Q18	2Q18	3Q18	4Q18	1Q19
Physical Unit Volume in N.A.	1,673,300	1,717,200	1,597,120	421,440	417,220	402,960	373,060	406,350
Y/Y % Chg	13.1%	2.6%	-7.0%	-8.0%	-6.9%	-5.3%	-1.7%	-3.6%
Total Vehicle Unit Volume	2,885,000	3,180,000	3,472,000	878,000	907,000	876,000	811,000	945,000
Y/Y % Chg	17.0%	10.2%	9.2%	7.3%	9.3%	11.2%	9.0%	7.6%

Source: OWS estimates, KAR financial documents

We note that TradeRev has lower target revenue per unit (~$250 vs. ~$400) and lower target gross profit per unit (~$188 vs. $200) than physical auctions, resulting in a secular headwind for KAR's operating profitability. Furthermore, with no sign-up fees and no pre-transaction vehicle transportation required (cars sold online are transported directly from dealer lots rather than from auction lots), switching costs for dealers are low, making it difficult for ADESA to push pricing up and command the premium fees for its legacy physical business. Given the high fixed costs associated with physical auctions and the lower gross profit dollars associated with online transactions, we expect the ongoing mix shift from physical to online to result in lower than anticipated physical auction productivity, fixed cost deleveraging, and weaker than expected operating profitability at ADESA.

2. Low barriers to entry to online auction business should result in more players, more price competition, and lower market share for KAR.

Despite the apparent increase in competition from online platforms, bulls expect ADESA's duopoly status, defensive business model and high free cash flow structure to remain unaffected. Bulls maintain that physical auctions will co-exist with online auctions and that TradeRev will enable ADESA to offer a fully integrated suite of online and physical auction services, allowing the company to maintain or grow its ~30% market share in North America.

Alternatively, our research suggests the online dealer-to-dealer marketplace has lower barriers to entry than ADESA's legacy physical auction business, potentially resulting in more intense price competition, lower margins and lower market share for ADESA compared to the legacy physical auction market. With no physical locations required, the excessive permitting hurdles and high infrastructure costs that served as barriers to entry in the physical auction market are nonexistent in the online auction industry, allowing new entrants to thrive.

For example, since 2015, online wholesale auction platform ACV Auctions raised ~$145M from venture and private equity firms, including Bessemer Ventures and Bain Capital. Backed by well-heeled venture and private equity firms, new online entrants experienced rapid growth over the last 3 years. Combined, we estimate ACV, BacklotCars, EBlock, TradeRev and Manheim Express now control ~5% of the wholesale auction market, up from 0% in 2015.

Based on what we have seen, the online wholesale auction market appears to be experiencing a "land grab" for dealer share. Bulls expect KAR's increased investment in TradeRev to result in rapid dealer acceptance and unit volume growth, allowing the platform to eventually turn a profit in FY2020. We are not convinced the land grab will be as smooth or as profitable for TradeRev as bulls hope. With few barriers to entry, new players continue to enter the online wholesale vehicle market and competition appears set to intensify.

For example, EBlock, founded in 2016 and the fastest growing online auction platform in Canada, launched in the U.S. in January 2019 with headquarters in Burlington, VT. To lead the EBlock's expansion across North America, the company tapped 17-year auction industry veteran, Jason McClenahan, as COO with previous experience at ADESA Canada and TradeRev U.S. According to company press releases, EBlock has an aggressive hiring plan for sales and operations personnel and is offering lucrative incentives to dealers who come on board early.

Among the online platforms we investigated, ACV Auctions appears to have first mover advantage, superior technology and service and is growing faster with less cash burn than competitors like TradeRev. Based on our discussions with dealers and executives at online platforms, we estimate ACV now has over 500 employees and sells over 20,000 wholesale vehicles per month on its auction platform, up from 10,000 in October 2018 and 3,000 in October 2017. On an annualized basis, we estimate ~2% of all wholesale vehicles sold at auction today are sold on ACV's online platform. By comparison, in 1Q19 TradeRev sold 31,000 vehicles on its platform, or ~10,300 per month.

According to company press releases and marketing videos from March and April 2019, by the end of 2019 ACV will be in 140 markets from ME to CA, up from 30 at the start of 2018. ACV has over 10,000 registered buyers and is doubling volume on its platform every 3-4 months. In March 2019, ACV sold over $110M in vehicle inventory, tripling year-over-year sales. By contrast, unit volume growth at TradeRev appears to have stalled over the last 4 quarters. As shown in Table 2 below, TradeRev unit volume peaked in 3Q18 at 35,000 before falling -11.4% Q/Q to 31,000 in 4Q18 and 1Q19.

Table 2: TradeRev Unit Volume (4Q17-1Q19)

	4Q17	**1Q18**	**2Q18**	**3Q18**	**4Q18**	**1Q19**
TradeRev Unit Volume	19,000	22,000	30,000	35,000	31,000	31,000
Y/Y % Chg	NA	NA	NA	118.8%	63.2%	40.9%
Q/Q % Chg		15.8%	36.4%	16.7%	-11.4%	0.0%

Source: OWS estimates, KAR financial documents and transcripts

While KAR is guiding to over 200,000 units for TradeRev in 2019, we are skeptical the company will achieve this target. Like all platforms, there appear to be network effects in the online wholesale auction market, whereby the auction with the most bidders attracts the most sellers. With a national presence, ACV appears to offer wholesale sellers access to the largest buyer pool. Dealers told us they regularly transact with buyers that are 300-400 miles away as compared to transacting with the same local buyers at physical auctions. While not every dealer thinks the online wholesale marketplace will be a "winner take all" market, based on our research, ACV appears to have the greatest scale, liquidity and volume, and is the clear frontrunner.

In addition to superior network density and volume, some dealers told us that trust is an important factor when deciding which online platform to work with. According to one, "Manheim and ADESA are so big, you get lost in the soup." Other dealers expressed similar dissatisfaction with the incumbents with remarks like "promises, promises," and "they take advantage of you." While some dealers are reluctant to try out new online platforms and prefer to do things "the old-fashioned way," based on our conversations with dealers, it appears many dealers have a genuine distrust for the major auction houses like ADESA, suggesting the company's legacy status may not be as beneficial to TradeRev or the company's fully integrated approach as some bulls think.

For its part, ACV markets itself as a facilitator or referee of dealer-to-dealer transactions, ensuring fair pricing, accuracy and transparency for all parties involved. Dealers tell us that ACV's vehicle condition reports (VCRs) are superior to VCRs at physical auctions and are a major competitive advantage over alternative online platforms. VCRs at ACV are conducted at dealer lots by trained inspectors who take 30-40 hi-resolution photos of the car and gather data on the vehicle for auction, including fluid levels, OBD2 scans, paint meter readings and tire tread depths so dealers know exactly what they are buying.

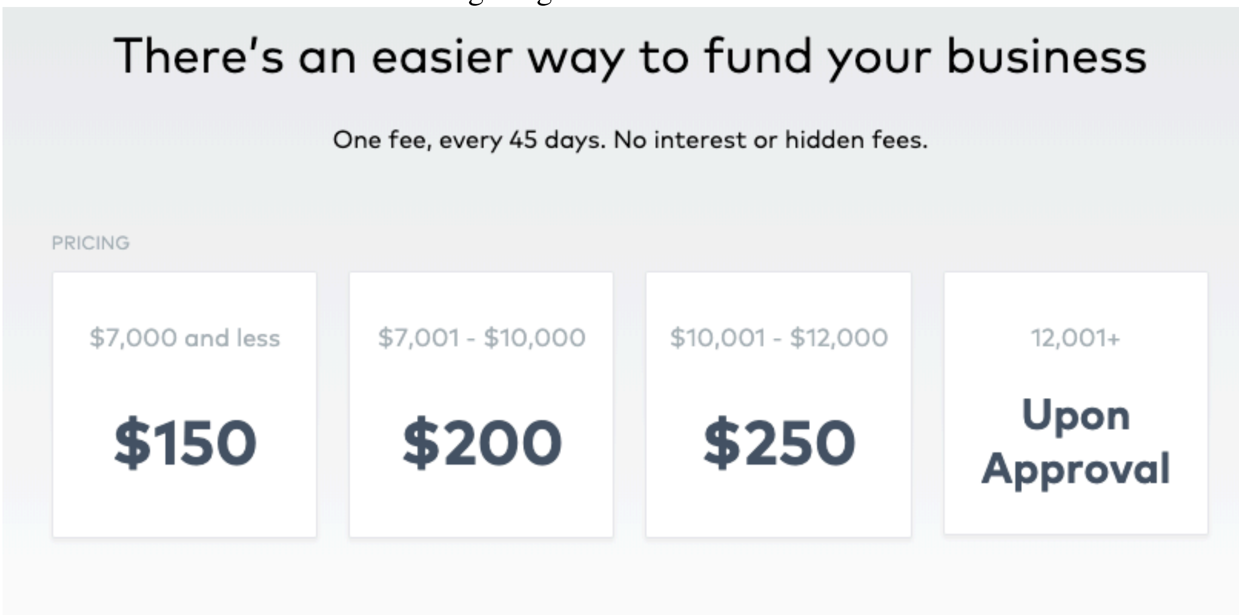
In January 2019, ACV introduced ACV AMP technology that allows dealers on the ACV platform to hear engine sounds of vehicles they are considering buying. Over time, the company plans to utilize data and analytics to make the AMP technology and other vehicle condition report features on its platform more accurate at diagnosing vehicle troubles than inspecting and listening to the car in person. As a result of ACV's comprehensive and accurate VCRs, dealers told us that they can trust that the vehicle is as described, ensuring fewer transactions result in arbitration and sellers don't get stuck with unwanted inventory. According to dealers, the sell rate on ACV is 60%-80% as compared to 50%-60% at most physical auctions like ADESA.

Based on our research, dealers appear to be using multiple online platforms in conjunction with physical auctions, resulting in "cherry picking," where the highest quality cars are being sold upstream, resulting in lower unit volume growth, revenue growth and margins at ADESA's physical auctions. Faced with fewer units up for auction at its physical locations, ADESA appears to be engaging in more intense discounting and promotional activity to attract dealer volumes, potentially pressuring margins. Dealers told us that physical auctions are in "panic mode." To attract more sellers to its physical auctions, dealers reported that ADESA is offering sellers free vehicle transportation and no seller fees in June, July and August.

KAR's AFC floor financing business may not be insulated from the intensifying competitive car auction marketplace. With AFC providing floor financing for ~83% of vehicles purchased by dealers at ADESA's auctions, lower unit volumes at ADESA's physical auctions and market share losses online may threaten revenue growth and profitability at AFC, as well.

Online platforms like ACV currently work with all major floorplans, but the company is apparently testing an exclusive floorplan finance offering that would allow the company to use its scale and volume to offer dealers superior financing terms. As shown in Tables 3 and 4 below, other online platforms like BacklotCars have their own competitive twist on floor financing.

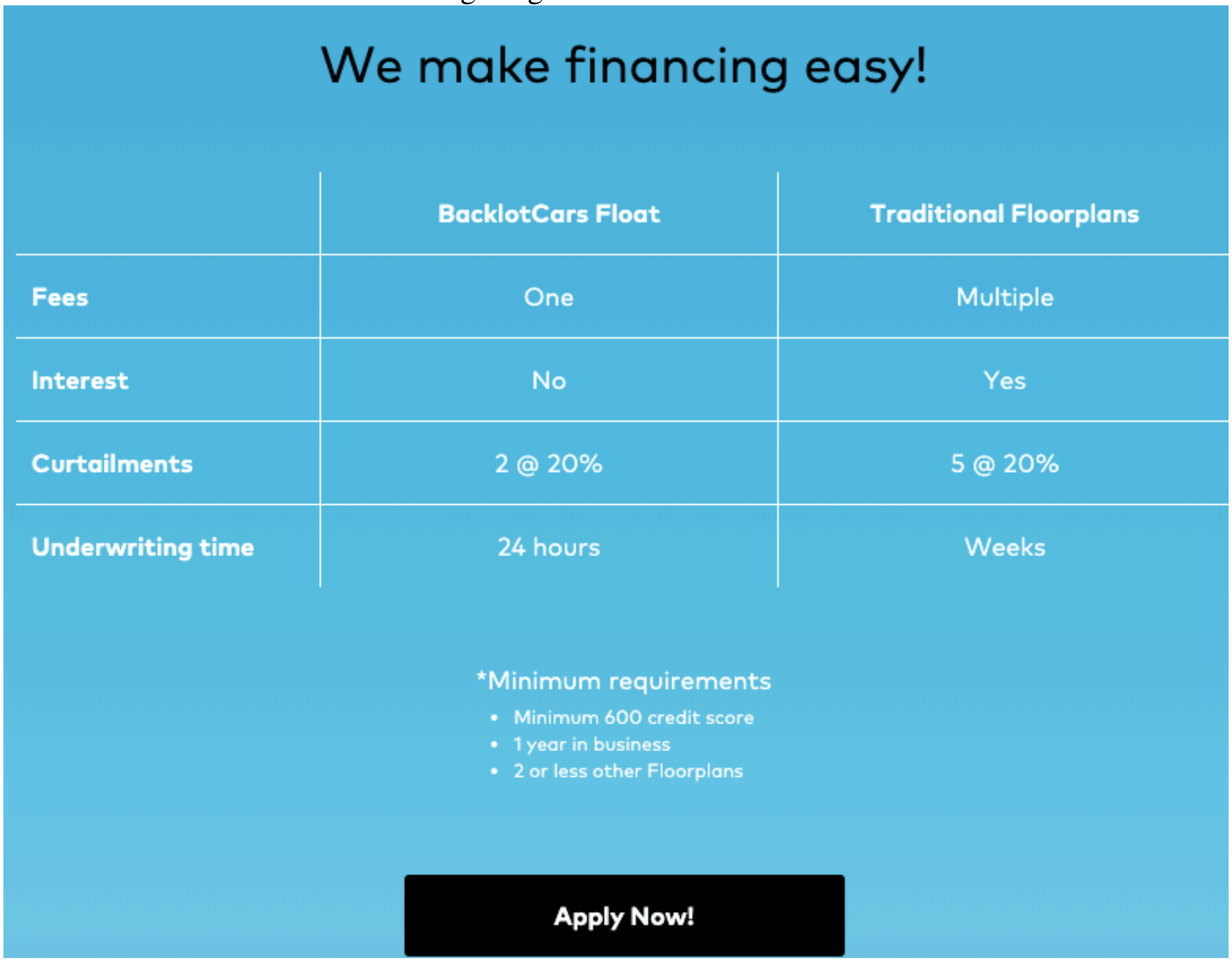
Table 3: BacklotCars Float Financing Program



Source: www.backlotcars.com

Through a financing program called Float, BacklotCars offers dealers a simple fee structure whereby every 45 days the dealer pays one price, based on the sales price of the car, with no surprise fees or interest. As shown in Table 4 below, the marketing for BacklotCar's Float program appears to target traditional floor financing companies like AFC. Competition in the floor financing market appears set to intensify.

Table 4: BacklotCars Float Financing Program



We make financing easy!

	BacklotCars Float	Traditional Floorplans
Fees	One	Multiple
Interest	No	Yes
Curtailments	2 @ 20%	5 @ 20%
Underwriting time	24 hours	Weeks

*Minimum requirements
- Minimum 600 credit score
- 1 year in business
- 2 or less other Floorplans

Apply Now!

Source: www.backlotcars.com

3. Ongoing technology investments to support the secular shift from physical to digital auctions could pressure KAR margins more than bulls anticipate.

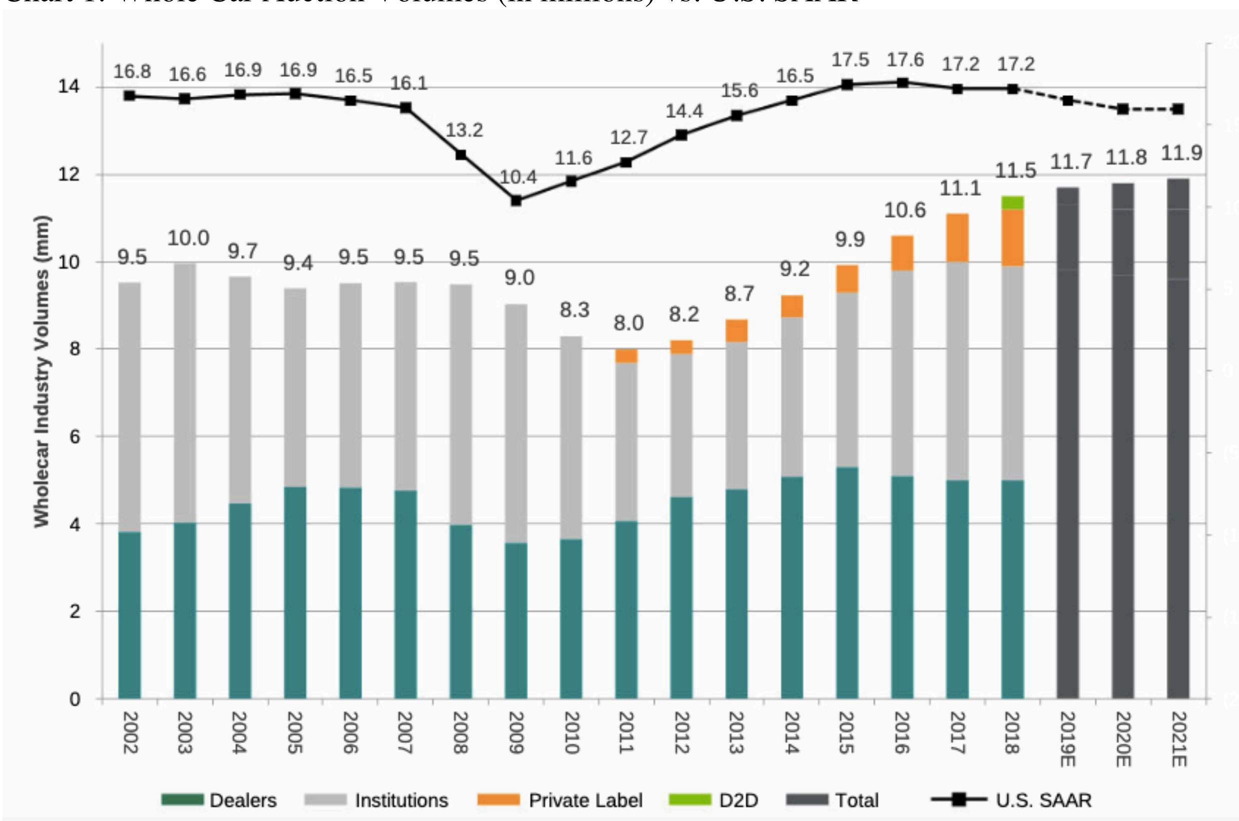
The secular shift to online auctions appears set to accelerate, necessitating more investments in digital technology by KAR. In FY2019 KAR expects capital expenditures of $154M, with 50% targeting technology investments. To compete with well-funded online competitors like ACV, KAR will likely have to innovate its online features and services at a faster pace than its legacy auction business and it will have to allocate more resources to lower margin ancillary services such as data analytics. While bulls forecast TradeRev to generate peak losses of $60M in FY2019 and turn breakeven in FY2020, we expect losses at TradeRev may be deeper and longer lasting, driven by ongoing technology investments to support the secular shift from physical to digital auctions.

4. Cyclical headwinds to KAR's business may be emerging. Whole car auction volumes could peak in 2019 and could disappoint thereafter.

After 7 years of strong industry volume growth, cyclical headwinds appear to be emerging in the whole car auction market. Whole car auction volumes appear set to peak in 2019 and may then weaken more than bulls expect, driven by declines in off-lease vehicle supply, lower new car retail sales, and higher upstream dealer retention of popular truck and SUV trade-ins for certified pre-owned (CPO) resale.

As shown in Chart 1 below, the whole car auction industry has strong correlation with U.S. SAAR. With new car sales in the U.S. past peak, a peak in whole car auction volumes may be imminent.

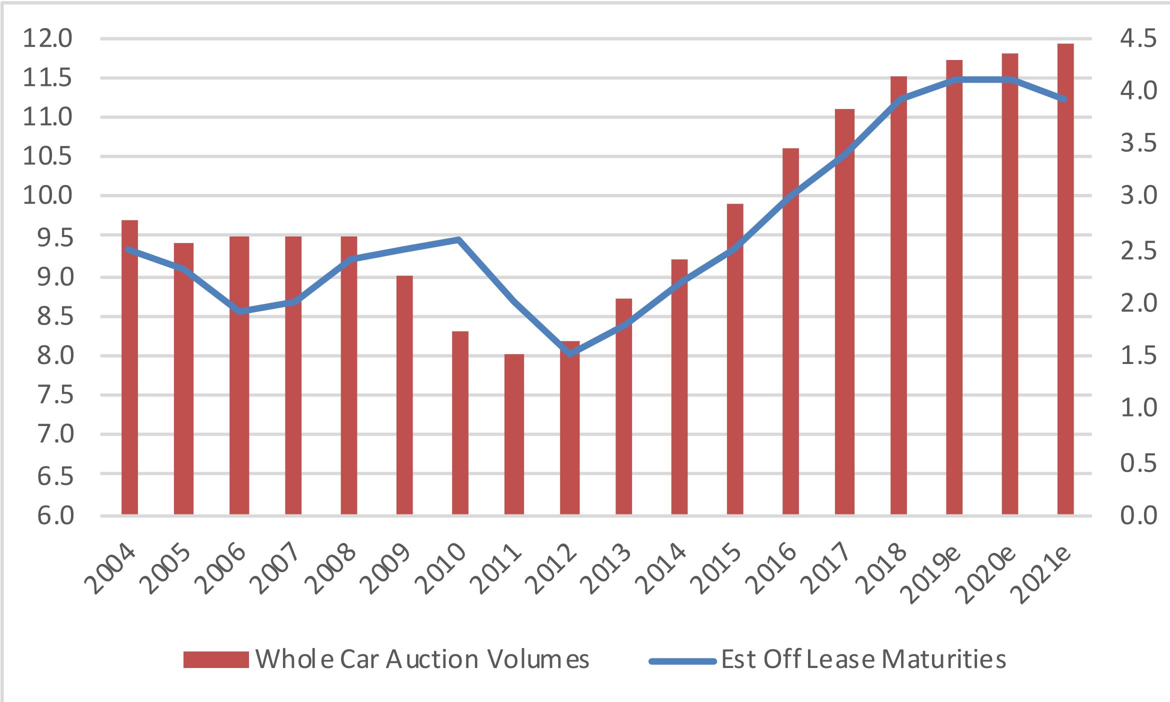
Chart 1: Whole Car Auction Volumes (in millions) vs. U.S. SAAR



Source: KAR presentations, Wards Auto

The whole car auction industry is strongly correlated with off-lease originations, as highlighted in Chart 2 below. According to Cox Automotive, growth in off-lease vehicles in the U.S. has reached its peak and off-lease volumes may be set to shrink over the next few years.

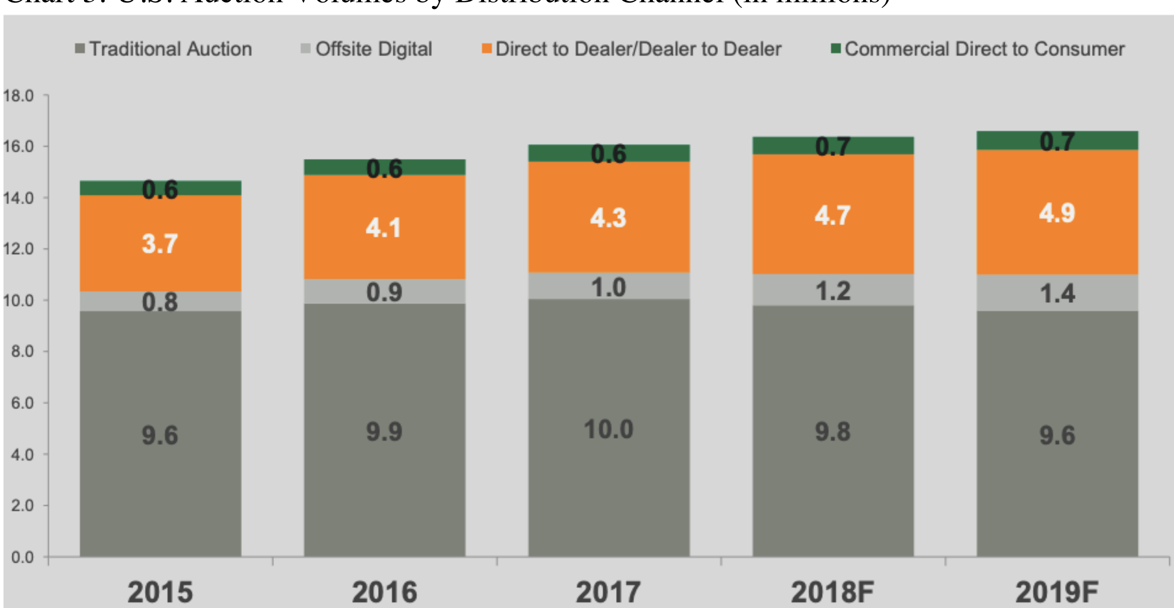
Chart 2: Whole Car Auction Volumes vs. Off-Lease Vehicle Maturities (in millions)



Source: KAR presentations, Wards Auto, Manheim

Furthermore, there has been an increasing trend among commercial sellers (rental car firms, CarMax, OEMs, etc.) toward vertically integrating remarketing activities and wholesaling their vehicles directly to used car dealers or to consumers, thereby circumventing ADESA's auction services and fees. As shown in Chart 3 below, channel growth in the wholesale auction market is expected come from digital and upstream channels, at the expense of traditional physical auctions.

Chart 3: U.S. Auction Volumes by Distribution Channel (in millions)



Source: Cox Automotive

5. Recent Results

On May 7, KAR reported FQ1 19 earnings results that missed consensus. KAR reported adjusted EPS of $0.70, below the consensus estimate of $0.78. Revenue of $1,047M was modestly ahead of consensus of $1,008M.

Adjusted EBITDA margin of 22.1% was below consensus of 24.0%, driven by weaker than expected results at KAR's ADESA whole car auction business. Higher investment spending to support growth at TradeRev also pressured margins in the quarter.

On June 28th KAR completed the spin-off of IAA, the company's whole car vehicle salvage business. Post the spin-off, KAR management provided full year FY2019 financial guidance. The company does not provide revenue guidance. The outlook calls for adjusted EBITDA of $530M-$550M and net income from continuing operations of $123M-$137M. KAR provided FY2019 adjusted EPS guidance of $1.24-$1.34. Capital expenditures for the full year are expected to be $154M.

KAR is scheduled to report FQ2 19 financial results on Aug 6.

6. Financial Assumptions

a) Revenue assumptions

On a consolidated basis, we expect revenue from continuing operations of $2,614M in FY2019 and $2,474M in FY2020. "Street" consensus estimates call for revenue of $2,680M in FY2019 and $2,820M in FY2020.

For KAR's ADESA whole car auction business, we forecast revenue of $2,275M in FY2019 and $2,149M in FY2020, up +8.2% Y/Y and down -5.5% Y/Y, respectively. Our revenue forecast for ADESA is driven by our expectation for total vehicles sold to increase +4.7% Y/Y in FY2019 and to decline -3.0% Y/Y in FY2020. We expect total vehicles sold at ADESA to peak in FY2019 at ~3.6M before falling to ~3.5M in FY2020, driven by market share losses at ADESA's physical auctions, declines in off-lease vehicle supply, lower new car retail sales and higher upstream dealer retention of popular truck and SUV trade-ins for certified pre-owned (CPO) resale. Furthermore, we expect increased competition from online auction platforms to result in more aggressive discounting and incentives at ADESA's physical auction locations, pressuring revenue per vehicle sold.

For KAR's AFC floor financing operations, we forecast revenue of $339M in FY2019 and $325M in FY2020, down -0.5% Y/Y and down -4.1% Y/Y, respectively. We expect loan transactions to decline -1.9% Y/Y in FY2019 and -4.2% Y/Y in FY2020, driven by our expectation for market share losses at ADESA's physical auctions.

b) Adjusted EBITDA and margin assumptions.

Table 1 shows KAR's historical adj. EBITDA from continuing operations, adj. EBITDA margin and our estimates for the next 2 years. We forecast adj. EBITDA from continuing operations of $437M in FY2019 and $436M in FY2020 as compared to consensus of $424M and $567M, respectively. We expect adj. EBITDA margin to decline by 390 bps Y/Y in FY2019 to 16.7% and increase 90 bps in FY2020 to 17.6%, due to higher technology expenses to support growth at TradeRev, more promotional and incentive activity at ADESA, fixed cost deleveraging from market share losses at ADESA and a mix shift from physical to digital auctions, partially offset by cost reduction efforts and a higher mix of high margin online business. By comparison, consensus estimates assume an adj. EBITDA margin rate from continuing operations of 15.7% in FY2019 and 20.1% in FY2020.

Table 1: KAR Historical and OWS Estimated Adj. EBITDA & Margin

In millions $	FY2018a	FY2019e	FY2020e
Adj. EBITDA	$502	$437	$436
Adj EBITDA margin	20.6%	16.7%	17.6%
Y/Y change		(390)	90

Source: OWS estimates, company reports

c) FCF

We estimate capital spending $154M in FY2019 and $133M in FY2020 to be allocated primarily to technology investments. We forecast FCF of $178M in FY2019 and $179M in FY2020.

KAR uses its FCF to fund expected dividends, acquisitions and share repurchases. We assume KAR maintains a dividend payout of approximately $0.16 per quarter, equating to 40%-50% of FCF, in line with management's guidance. Our model does not contemplate additional acquisitions. Instead, we assume KAR uses the remainder of its FCF to repurchase shares.

Table 2: KAR's Historical and Estimated FCF

	FY18a	1Q19a	2Q19e	3Q19e	4Q19e	FY19e	1Q20e	2Q20e	3Q20e	4Q20e	FY20e
Net Income	328.1	77.8	25.3	21.2	14.8	139.1	17.3	21.0	16.5	10.3	65.2
D&A	269.9	66.1	41.8	41.1	40.9	189.8	42.7	42.0	41.1	40.8	166.6
Other non-cash adjustments	72.6	28.0	14.1	17.5	21.4	81.0	27.0	14.1	17.5	21.4	80.0
Working capital	79.3	(78.2)	0.0	0.0	0.0	(78.2)	0.0	0.0	0.0	0.0	0.0
OCF	749.9	93.7	81.2	79.8	77.1	331.7	87.1	77.1	75.1	72.5	311.8
Capital expenditures	198.0	54.0	33.3	33.3	33.3	154.0	33.3	33.3	33.3	33.3	133.3
Proceeds from sale of PP&E	0.6	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.4
Net CapEx	197.4	53.9	33.2	33.2	33.2	153.6	33.2	33.2	33.2	33.2	132.9
Cap Ex / Depreciation	73.4%	81.7%	79.8%	81.2%	81.5%	81.1%	78.0%	79.4%	81.1%	81.7%	80.0%
FCF	552.5	39.8	47.9	46.5	43.9	178.1	53.9	43.9	41.9	39.3	178.9
Dividends	188.3	46.5	21.6	21.5	21.5	111.1	21.5	21.5	21.5	21.6	86.1
Acquisitions	45.2	120.7	0.0	0.0	0.0	120.7	0.0	0.0	0.0	0.0	0.0
Share buybacks	150.0	0.0	0.0	25.0	22.4	47.4	32.3	22.4	20.4	17.7	92.7
Divs Paid as a % of FCF	34.1%	116.8%	45.0%	46.2%	49.0%	62.3%	40.0%	49.0%	51.3%	55.0%	48.1%

Source: OWS estimates, company reports

d) Other items

We forecast D&A expense of $190M in FY2019 and $167M in FY2020, in line with management's guidance. We assume net interest expense of $192M in FY2019 and $180M in FY2020, respectively, in line with management's guidance. We forecast a tax rate of 27.6% in FY2019 and 29.0% FY2020, in line with "street" assumptions and management's guidance. Our share count assumptions are 133.1M in FY2019 and 129.4M in FY2020. Our share count assumptions are lower than those of the "street" as our financial model assumes KAR uses the majority of its excess FCF after dividends to repurchase shares. We forecast a dividend payout of $0.84 in FY2019, down 40% Y/Y and $0.67 in FY2020, down 20% Y/Y, reflecting KAR management's guidance for dividends to account for 40%-50% of FCF. Finally, we expect adjusted EPS of $1.37 in FY2019 and $0.79 in FY2020 versus the "street's forecast of $1.29 and $1.52, respectively.

7. Valuation

At $24.76, KAR shares currently trade at 10.3X the FY2020 consensus adjusted EBITDA estimate of $566.9M. We expect investors to rerate shares of KAR lower as the emergence of alternative digital vehicle auction platforms, the migration of vehicle auction volumes online and macro headwinds result in lower market share, reduced auction volumes, escalating discount activity and deleveraging of fixed costs. Our fair value estimate of $17.00 is approximately 9.0X our FY2020 adjusted EBITDA estimate of $436M. Our $17 valuation equates to an FCF yield of ~7.9%.

8. Risks

The primary risk to our thesis is an acquisition that could change the competitive position of the company in the whole car auction market. We note that recent acquisitions by KAR have been relatively small and have focused chiefly on lower margin ancillary services and data analytics.

A second risk is that industry whole car volumes remain elevated or continue to grow in the years ahead, resulting in more robust macro tailwinds than we contemplate in our forecast. We note that KAR expects industry volumes to remain above 11.0M units through 2020 as compared to 11.6M in 2018.

Finally, with the spin-off of IAA, KAR may be able to reduce corporate expenses more than we expect. A significant cost reduction effort could result in higher adjusted EBITDA margins than we forecast.

9. Financial Statements

Qtrly Inc Statement	1Q19a	2Q19e	3Q19e	4Q19e	1Q20e
Segment Revenues:					
IAA	357.2				
ADESA	599.7	590.8	561.2	523.1	566.5
AFC	89.9	83.7	83.5	81.9	85.9
Total Revenues	1,046.8	674.5	644.6	605.1	652.4
COGS	612.3	385.2	365.9	344.6	370.4
SG&A	207.6	166.8	162.9	153.7	170.6
D&A	66.1	41.8	41.1	40.9	42.7
Segment Operating Income:					
IAA	85.7				
ADESA	67.4	69.1	63.1	54.2	59.6
AFC	57.1	51.7	51.8	51.0	53.9
Corporate	(49.4)	(40.1)	(40.0)	(39.3)	(44.9)
Total Oper Income	160.8	80.7	74.9	65.9	68.7
Interest Expense	56.9	45.0	45.0	45.0	45.0
Other (Income) Expense	(2.0)	0.0	0.0	0.0	(0.8)
Pretax Income	105.9	35.7	29.9	20.9	24.4
Inc Taxes	28.1	10.3	8.7	6.1	7.1
Net Income	77.8	25.3	21.2	14.8	17.3
Acquired Amortization Expense	21.2	13.0	13.0	13.0	13.0
IAA Separation Costs	1.1	0.0	0.0	0.0	0.0
Income Taxes	(6.3)	(3.7)	(3.7)	(3.7)	(3.7)
Adj. Net Income	93.8	34.6	30.5	24.1	26.6
Adj EPS	$0.70	$0.26	$0.23	$0.18	$0.20
F.D. Shares	133.8	133.8	132.8	131.9	130.6

Y/Y % Change	1Q19a	2Q19e	3Q19e	4Q19e	1Q20e
IAA	5.9%				
ADESA	13.6%	9.7%	6.5%	2.9%	-5.5%
AFC	5.6%	-1.6%	-2.3%	-3.9%	-4.4%
Total Revenues	10.1%	8.2%	5.3%	1.9%	-5.4%
Operating Profit	1.9%	-54.1%	-49.7%	-53.7%	-57.3%
Pretax Income	-9.0%	-72.2%	-70.9%	-76.4%	-76.9%
Adj. Net Income	-16.2%	-69.0%	-67.8%	-71.2%	-71.6%
Adj EPS	-14.9%	-68.6%	-67.1%	-70.5%	-70.9%
F.D. Shares	-1.5%	-1.3%	-2.1%	-2.2%	-2.4%

As a % of Sales	1Q19a	2Q19e	3Q19e	4Q19e	1Q20e
IAA Op Profit	24.0%				
ADESA Op Profit	11.2%	11.7%	11.2%	10.4%	10.5%
AFC Op Profit	63.5%	61.7%	62.0%	62.3%	62.8%
Total Operating Profit	15.4%	12.0%	11.6%	10.9%	10.5%
Pretax Income	10.1%	5.3%	4.6%	3.4%	3.7%
Tax Rate	26.5%	29.0%	29.0%	29.0%	29.0%
Adj Net Income	9.0%	5.1%	4.7%	4.0%	4.1%

Annual Inc Statement	2016	2017	2018	2019e	2020e
Segment Revenues:					
IAA	1,098.0	1,219.2	1,326.8	357.2	
ADESA	1,765.3	1,937.5	2,101.9	2,274.8	2,148.7
AFC	286.8	301.3	340.9	339.0	325.3
Total Revenues	3,150.1	3,458.0	3,769.6	2,971.0	2,473.9
COGS	1,827.4	1,987.2	2,142.6	1,708.0	1,402.9
SG&A	583.1	640.2	732.8	659.7	635.6
D&A	240.6	264.6	269.9	189.8	166.6
Segment Operating Income:					
IAA	197.9	240.9	294.0	85.7	
ADESA	301.8	340.5	307.8	253.8	225.4
AFC	144.1	153.9	203.5	211.6	201.9
Corporate	(144.8)	(169.3)	(181.0)	(168.8)	(158.5)
Total Oper Income	499.0	566.0	624.3	382.2	268.8
Interest Expense	138.8	164.0	192.0	191.9	180.0
Other (Income) Expense	(0.5)	(1.9)	(3.5)	(2.0)	(3.0)
Pretax Income	360.7	403.9	435.8	192.3	91.8
Inc Taxes	132.9	36.0	107.7	53.2	26.6
Net Income	227.8	367.9	328.1	139.1	65.2
Acquired Amortization Expense	97.1	103.7	89.5	60.2	52.0
Other	5.4	(85.8)	7.8	1.1	0.0
Income Taxes	(38.3)	(35.1)	(23.4)	(17.4)	(14.8)
Adj Net Income	292.0	350.7	402.0	183.0	102.4
Adj. EPS	$2.06	$2.50	$2.96	$1.37	$0.79
F.D. Shares	139.1	138.0	135.7	133.1	129.3

Y/Y % Change	2016	2017	2018	2019e	2020e
IAA	10.4%	11.0%	8.8%		
ADESA	23.6%	9.8%	8.5%	8.2%	-5.5%
AFC	6.9%	5.1%	13.1%	-0.5%	-4.1%
Total Revenues	17.1%	9.8%	9.0%	-21.2%	-16.7%
Operating Profit	16.8%	13.4%	10.3%	-38.8%	-29.7%
Pretax Income	105.9%	12.0%	7.9%	-55.9%	-52.3%
Adj. Net Income	3.6%	61.5%	-10.8%	-57.6%	-53.2%
Adj EPS	6.0%	21.4%	18.5%	-53.7%	-42.4%
F.D. Shares	-2.2%	-0.8%	-1.7%	-1.9%	-2.8%

As a % of Sales	2016	2017	2018	2019e	2020e
IAA Op Profit	18.0%	19.8%	22.2%	24.0%	
ADESA Op Profit	17.1%	17.6%	14.6%	11.2%	10.5%
AFC Op Profit	50.2%	51.1%	59.7%	62.4%	62.1%
Total Operating Profit	15.8%	16.4%	16.6%	12.9%	10.9%
Pretax Income	11.5%	11.7%	11.6%	6.5%	3.7%
Tax Rate	36.8%	8.9%	24.7%	27.6%	29.0%
Adj Net Income	9.3%	10.1%	10.7%	6.2%	4.1%

10. Adj. EBITDA and FCF Estimates

Pro Forma Debt & Operating Leases	1,714
Market value	3,313
Pro Forma Cash	128
Estimated EV	4,899

	FY18	1Q19	2Q19	3Q19	4Q19	FY19	1Q20	2Q20	3Q20	4Q20	FY20
Consolidated EBITDA	893.8	228.3	121.8	115.3	106.2	571.6	111.6	116.0	108.8	99.7	436.0
Non-cash stock-based comp	24.3	7.7									
Loss on extinguishment of debt	0.0	0.0									
Acquisition related costs	7.3	3.9									
Securitization interest	(51.5)	(14.8)									
Minority interest	0.0	0.0									
Gain on previously held equity interest value	0.0	0.0									
(Gain)Loss on asset sales	0.0	0.0									
Severence	5.8	3.9									
Superstorm Sandy	0.0	0.0									
IAA separation costs	8.1	0.8									
Foreign currency gains/losses	3.9	(0.5)									
Other	2.3	1.5									
Subtotal addbacks	0.2	2.5	(9.2)	(9.2)	(9.2)	(25.0)	0.0	0.0	0.0	0.0	0.0
Adj. Consolidated EBITDA	894.0	230.8	112.6	106.1	97.0	546.6	111.6	116.0	108.8	99.7	436.0
Less: Reported IAA Adj. EBITDA	391.9	109.6									
KAR Adj EBITDA	502.1	121.2	112.6	106.1	97.0	437.0	111.6	116.0	108.8	99.7	436.0
KAR Adj. EBITDA Margin %	20.6%	17.6%	16.7%	16.5%	16.0%	16.7%	17.1%	18.1%	17.8%	17.4%	17.6%
EV/EBITDA	9.8					11.2					11.2

	FY18	1Q19	2Q19	3Q19	4Q19	FY19	1Q20	2Q20	3Q20	4Q20	FY20
Net Income	328.1	77.8	25.3	21.2	14.8	139.1	17.3	21.0	16.5	10.3	65.2
D&A	269.9	66.1	41.8	41.1	40.9	189.8	42.7	42.0	41.1	40.8	166.6
Other non-cash adjustments	72.6	28.0	14.1	17.5	21.4	81.0	27.0	14.1	17.5	21.4	80.0
Working capital	79.3	(78.2)	0.0	0.0	0.0	(78.2)	0.0	0.0	0.0	0.0	0.0
OCF	749.9	93.7	81.2	79.8	77.1	331.7	87.1	77.1	75.1	72.5	311.8
Capital expenditures	198.0	54.0	33.3	33.3	33.3	154.0	33.3	33.3	33.3	33.3	133.3
Proceeds from sale of PP&E	0.6	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.4
Net CapEx	197.4	53.9	33.2	33.2	33.2	153.6	33.2	33.2	33.2	33.2	132.9
Cap Ex / Depreciation	73.4%	81.7%	79.8%	81.2%	81.5%	81.1%	78.0%	79.4%	81.1%	81.7%	80.0%
FCF	552.5	39.8	47.9	46.5	43.9	178.1	53.9	43.9	41.9	39.3	178.9
Dividends	188.3	46.5	21.6	21.5	21.5	111.1	21.5	21.0	20.9	20.8	84.3
Acquisitions	45.2	120.7	0.0	0.0	0.0	120.7	0.0	0.0	0.0	0.0	0.0
Share buybacks	150.0	0.0	0.0	25.0	22.4	47.4	32.3	22.9	20.9	18.5	94.6
Divs Paid as a % of FCF	34.1%	116.8%	45.0%	46.2%	49.0%	62.3%	40.0%	47.8%	50.0%	53.0%	47.1%
Divs Paid as a % of Net Income	57.4%	59.8%	85.2%	101.4%	145.1%	79.8%	124.2%	99.7%	126.7%	202.6%	129.3%
FCF per Share	$4.07	$0.30	$0.36	$0.35	$0.33	$1.34	$0.41	$0.34	$0.33	$0.31	$1.38
Equity FCF Yield	16.7%					5.4%					5.4%