Sohn London – Nov 29

**Spinoff of Insurance Auto Auctions (IAA)**

NYSE: KAR (11/26/18: $57.15)
Implied IAA Market Price: $20.77
IAA Target Price: $29.76 | **43.3% Blended Upside**

Nelson Dong
University of Pennsylvania – The Wharton School, Class of 2019
nelsondong2005@gmail.com | ndong@wharton.upenn.edu | ndong@sas.upenn.edu
KAR, an auto auction company, is spinning off IAA, its salvage auto division into a separate entity.

Reasons for Mispricing
- Stock fell on weakened *new auto* outlook, completely irrelevant to IAA
- Investors struggle to separate IAA (SpinCo) from KAR (RemainCo)

Reasons for Value Realization
- 1) 25% steel and aluminum tariffs generate demand for IAA services
- 2) Non-cyclical industry tailwinds bolster revenue drivers
- 3) IAA trades at material discount to only pure play rival Copart
- 4) *Spin allows IAA to change its capital allocation policy*

Recommendation
- *Long IAA* during when-issued trading
- Alternatively, long KAR pre-spin for an anticipated 1:1 distribution of shares in Q1 2019 – KAR is, as of market close 11/26/2018, trading at $57.15
- Blended price target = $29.76. represents 43.3% upside from current implied market value of $20.77 (giving KAR RemainCo an implied value of $36.38)
- *Catalysts:* announcement of the spin date, amendments to IAA's Form 10, initiation of the spin
But to understand the thesis, we must first understand the business.
IAA is an intermediary for sellers (insurance companies) trying to reach buyers (rebuilders and recyclers).

### KAR’s Operating Segments
- KAR Auction Services is an *auction-based auto resale business*
- Comprised of four segments:
  - ADESA
  - IAA
  - AFC
  - Corporate

- ADESA and IAA collectively operate 250 physical auction sites, though they do a combined 50+% of volume online

### IAA (Insurance Auto Auctions)
- **Salvage** auto auction business
  - 35% of KAR revenue
  - 28.3% EBITDA margin

#### 3 main categories of cars sold:
- **Total loss vehicles** = cost of repair exceeds ~75% of car's cash value
- **Recovered-theft** = stolen from owners, regardless of condition
- **Rental cars** = fleet vehicles whose lease terms expired

**How does it all work?**
- Sellers own vehicles until they’re sold at auction to recyclers and rebuilders
- IAA helps sellers of salvage vehicles reach the end-market for a *spread*
- Fixed fee from insurers (contract negotiable) and scalable fee from buyers (dep. on transaction size)

### Non-IAA Segments
- **Whole car auction business**
  - 56% of KAR revenue
  - 21.7% EBITDA margin

- **Floorplan (buyer inventory) financing business**
  - 9% of KAR revenue
  - 49.9% EBITDA margin

- **Corporate overhead**
  - Doesn’t produce revenue
  - -3.4% EBITDA margin contribution to KAR
IAA sells total loss vehicles and demonstrates an ability to throttle supply.

<table>
<thead>
<tr>
<th>Total Loss Vehicles</th>
<th>Supply Chain</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 85% of cars sold are total loss vehicles</td>
<td>• IAA is able to throttle supply (AKA bottleneck it)</td>
</tr>
<tr>
<td>• Total loss vehicles mostly sourced through insurance companies</td>
<td>• Works with suppliers like insurance companies and rental car companies to bottleneck supply through just-in-time inventory timing and warehousing</td>
</tr>
<tr>
<td>• Total loss vehicles comprise 13-15% of the total used auto market</td>
<td>• Just-in-time basis is 60-90 days</td>
</tr>
<tr>
<td>• 40% of IAA’s vehicles are running, meaning a significant portion that reach the market are not scrap, but repurposed</td>
<td>• IAA is well under its benchmark, meaning that the company is nowhere near to facing a backup in supply</td>
</tr>
</tbody>
</table>

What happens when a car is totaled?
1. Vehicle accident occurs
2. Auto insurance company evaluates car, finds cost of repair > some % of cash value (threshold can vary, usually around 70-75%)
3. Insurer deems car a total loss
4. Insurance purchases car at cash value
5. Insurance sells car through salvage auction

The implication?
• Any boon in salvage vehicle supply can only benefit IAA, as the company has the ability to throttle supply to match demand
• We’ll revisit this at a later point
It only gets better from here – IAA is a great business in a great industry.
IAA is a co-market leader in a winner-take-most duopoly with attractive characteristics.

The IAA-Copart Duopoly

- IAA and its pure play competitor, Copart, each command **40% market share** in NA
- Next-largest peer controls **<3%**
- IAA works with virtually all major auto insurance companies (as does Copart)

Salvage Auto's Attractive Industry Characteristics

- Insurance companies have **given up** on attempting to reach the end-market themselves because they:
  - Need to own or lease real estate for yard operations or auction sites
  - Need to hire personnel for the function
  - Believe salvage has little overlap with other operations
- The result: IAA has substantial **bargaining power** over insurers – insurers have nowhere else to offload their total loss vehicles
- Smaller auction centers can’t compete due to **impossibly high barriers to entry**
  - Need for strong relationships with insurance companies
  - Being national in scale is a requisite
  - Whether auction is online or offline: requires large real estate commitment

How else does IAA maintain its edge?

- Catastrophe (CAT) Services
  - Key offering to insurance clients
- Tiered response:
  - Pre-CAT planning
  - On-scene response
  - Post-CAT management
- Uncertainty around **natural disasters** and weather-related events can cause extensive damage
- IAA maintains CAT-specific secured property and an extensive network of partners to operate towing services
- CAT Response Team prepares year-round for catastrophic events
- Effective catastrophe management strengthens IAA’s relationship with insurance companies
- **Recent example:** Hurricane Florence
Salvage auto is insulated from broader auto trends and is anti-recessionary.

**A Natural Moat**

- New auto has, for the past 3 years, hit pricing and volume highs
- Leading indicators show a potential reversal on the horizon:
  - New vehicle fleet purchases have decreased for the first time in 7 years
  - Lease penetration has begun to taper
  - Credit access is tightening, making it a difficult market for buyers
  - Rental sales have dropped from a record high in 2016
- But used auto actually has better performance during **recessionary periods**
- Even if used auto wasn’t insulated, new vehicles are decreasing as a proportion of the total U.S. vehicle fleet, halving between 1970 and 2018. Currently, only ~6% of vehicles on the road are new

**IAA saw higher volumes and better pricing during the 2007-2008 crisis**

- Used auto becomes substitute for new auto in recessionary periods
- Running salvage vehicles became more in-demand from consumer end-market

The value of used vehicles continues to increase steadily over time
Of course, I wouldn’t be talking about IAA if I didn’t think it was cheap.
Why the Discount?

- Weakened end-market volumes in Europe and China caused Copart to miss Q3 earnings
- Copart’s aggressive European expansion introduced a large short-term SG&A drag to the business
- Copart’s weakness weighed on KAR shares – somewhat corroborated when ADESA posted on low end of guidance…

**Copart failed to deliver largely because:**
- EBITDA margins in Europe are ~9% lower than NA margin
- Vehicle sales and revenue growth dropped off after:
  - Tailwinds from Hurricane Harvey
  - Aggressive M&A activity, which fueled inorganic revenue growth

KAR’s non-NA exposure (mostly UK) is due to ADESA, which is following market leader Cox (Manheim) into international markets after Cox’s early foray

- **But** IAA beat guidance with 12% YoY revenue growth and 6% YoY volume growth
- And IAA hardly has international exposure

**Something doesn’t add up…**
- Copart fell ~25%, KAR fell ~12% due to its high correlation
- IAA was simply **collateral damage** due to its consolidation under KAR
- Artificial price deflation provides a potential buying opportunity for KAR shares ahead of the spin and distribution
There are multiple ways to win with IAA (four, to be exact).
Sohn London Idea Contest – KAR US Equity (IAA Spinoff) – Nelson Dong

**Trump’s Tariffs**

- **25%** on steel imports
- **10%** on aluminum imports
- Enacted in March 2018
- Domestic HRC steel, metal scrap, and steel rebar prices have already diverged from European and Chinese imports
- Helps to bolster upward trend in spread per transaction

**How does it work?**

- Tariffs increase demand for domestic steel and aluminum, which increases demand for domestic scrap metal
- Vehicle parts recycling fuels **40%** of total domestic scrap
- Industries that require commodity inputs flock to vehicle scrap
- Increases demand from IAA buyers (recyclers and dismantlers)

**Spread per Vehicle Sold (USD)**

**Steel rebar, spot prices**

**Hot-rolled coil steel prices**
The light vehicle fleet is growing and miles driven are increasing, bolstering the total addressable market.

- Light vehicle fleet has grown at a **1.6% CAGR** to 297mm since 2003
- 4-5mm change hands at salvage auctions per year. At $500+/vehicle per transaction, this represented a market opportunity of $2.3bn in FY2017. IAA sold 2.37mm vehicles in 2017 and will likely exceed 2.5mm by EOY 2018.
- NA is seeing an increase in miles driven in NA to ~270mm miles annually, which has grown at a ~1% CAGR since 2002
- 15-year trend of decreasing accidents per million miles driven brought on by improving safety standards has been reversed by increases in **on-the-road distractions** like texting and mobile phone use (~25%)
The light vehicle fleet is aging, resulting in an increase the proportion of total loss vehicles.

- Average vehicle age on the road in NA has grown at a **1.6% CAGR** from 8.4 years to 12 years since 1995
- Aging of the vehicle fleet is a byproduct of higher quality auto engineering
- Increase in longevity is coupled with the **increasing complexity** of auto manufacturing
- As more complex vehicles necessitate parts particular to a make/model, the replacement of parts becomes **costlier**
- Manufacturers continue to add equipment, even to lower-end models
- After an accident, vehicle repair is more likely to be deemed a total loss
- Over time, total loss cases as a proportion of insurance claims have hovered around 14% – but between 2014 and 2018, that proportion has consistently increased to **18.8%**

**Salvage Rate by Vehicle Age**

- 0%: 3.3%
- 1-3 Years: 5.0%
- 4-6 Years: 9.2%
- 7+ Years: 22.6%

**Average Light Vehicle Age (2002-2016)**

- 2002: 8.5
- 2003: 9.0
- 2004: 9.5
- 2005: 10.0
- 2006: 10.5
- 2007: 11.0
- 2008: 11.3
- 2009: 11.6
- 2010: 11.4
- 2011: 12.0
- 2012: 12.3
- 2013: 12.7
- 2014: 13.0
- 2015: 13.3
- 2016: 13.6

**Total Loss % of Total Claims**

- 2008: 14.0%
- 2009: 14.2%
- 2010: 13.9%
- 2011: 14.3%
- 2012: 14.1%
- 2013: 15.0%
- 2014: 16.9%
- 2015: 18.0%
- 2016: 18.0%
- 2017: 18.0%

**Revisiting an earlier point**

- Ability to limit supply is **crucial**
- Because IAA operates far below supply capacity, boons to supply:
  1. Boost volume and margins
  2. Allow IAA to preserve its supply-side transaction fee due to supplier relationships and warehousing practices
Thesis 2 – Structural Tailwinds

The proportion of individuals with gap insurance is increasing, which increases probability of total loss.

- **Gap insurance** = covers difference between cash value and balance owed on financing (*negative equity* on a car)
  - Penetration rate of 30-35% (National Auto Dealers Association)
  - Gap insurance can cover up to a certain % of the car’s value to bridge the gap between value and loan balance
- Individuals with gap insurance who experience an accident are **more likely to be totaled** due to moral hazard
- The proportion of drivers with gap insurance has **been rising over time**
- A rise in the drivers with gap insurance leads to a **rise in total loss cases**

The cyclical cherry on top: more rental car lease terms have been expiring.

- The proportion of off-lease volumes has increased to 30% since 2010 at a ~16% CAGR
- When a fleet vehicle’s lease term ends, it’s **returned to the captive finance company**, and a portion of those are transacted through salvage auctions
- While the rental fleet phenomenon reflects new auto cyclicality, it moves on a **3-year time lag**, since that’s the average rental car lease term
  - Should continue to boost IAA’s non-total loss volume for at least 3 years

Source: gap-insurance.com
Source: U.S. News & World Report

Source: gap-insurance.com
Source: U.S. News & World Report
Investors have ascribed Copart a “margin premium.” Historically, Copart has traded anywhere between a 30-60% (even 70% at some point) EBITDA premium over IAA. Confused? You aren’t alone.
Thesis 3 – Is Copart’s Premium Warranted?

Copart still trades at 40% premium to KAR despite the many similarities. What are the differences, then?

- 28.3% EBITDA margin
- 37.3% EBITDAR margin
- 60% online, 40% physical
- 40% market share in NA

Qualities Unique to IAA

- Leases the majority of its auction sites; decided in 2002 not to spend capex on land
  - Rent expense is ~9-12% of IAA revenue
  - 20-year lock-up with 6 contractual rent bumps
- However: SG&A margin is ~9% once excluding its vestigial amortization of goodwill from its 2007 buyout
- Runs a hybrid model of in-person and online auctions
  - Creates stalwart-like niche in salvage auto
  - Live auctions give buyers the chance to see running cars, which may be a concern for older vehicles
  - Older buyers like the free coffee, pizza, donuts, etc.
  - Model is very high-touch, which serves as a differentiator in product offering to customers in the NA market

Qualities Unique to CPRT

- Owns the majority of its operating yards
  - Rent expense is ~2-3% of CPRT revenue
  - However: SG&A margin is ~10% due mostly to the depreciation on its lots – larger than that of IAA
  - Runs a pure online model, which means there are no auction sites. Copart’s real estate is exclusively for yard operations – this has given Copart its “cold and callous” reputation with consumers
- Copart has made an aggressive international expansion centered around Europe and other underserved markets
  - Growing pains in the way of SG&A drag
  - Tighter regulation in Europe
  - Margin pressure in European markets is higher due to higher land density (NA is relatively sparse)
Is it because of Copart’s international presence, higher margins, or 100% online model?

- Copart was founded in 1982, 11 years before IAA’s establishment in 1993
  - As such, still seen as the original, incumbent player in the market
- Copart was quick to move into the international market, with a foothold in the following countries:
  - UK, Germany, Bahrain, Brazil, India, Ireland, Oman, Spain, UAE
- The auction business in international markets is fully online, leveraging existing international buyer network
  - But IAA also has an extensive international buyer network
- 60% of IAA’s business is online, and IAA’s potential international expansion post-spin will increase its online presence as a % of volume
  - Copart is ahead, but not by much. IAA has the infrastructure to catch up

<table>
<thead>
<tr>
<th>IAA Salvage Services</th>
<th>FY2015</th>
<th>FY2016</th>
<th>FY2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>994.4</td>
<td>1,098.0</td>
<td>1,219.2</td>
</tr>
<tr>
<td>COGS as % of revenue</td>
<td>-63.7%</td>
<td>-64.5%</td>
<td>-63.8%</td>
</tr>
<tr>
<td>Gross margin</td>
<td>36.3%</td>
<td>35.5%</td>
<td>36.2%</td>
</tr>
<tr>
<td>SG&amp;A as % of revenue</td>
<td>-9.9%</td>
<td>-9.5%</td>
<td>-8.8%</td>
</tr>
<tr>
<td>DA&amp;A as % of revenue</td>
<td>-8.1%</td>
<td>-8.0%</td>
<td>-7.6%</td>
</tr>
<tr>
<td>EBIT margin</td>
<td>18.3%</td>
<td>18.0%</td>
<td>19.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Copart</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>1,288.4</td>
<td>1,448.0</td>
<td>1,805.7</td>
</tr>
<tr>
<td>COGS as % of revenue</td>
<td>-57.1%</td>
<td>-56.4%</td>
<td>-57.8%</td>
</tr>
<tr>
<td>Gross margin</td>
<td>42.9%</td>
<td>43.6%</td>
<td>42.2%</td>
</tr>
<tr>
<td>SG&amp;A as % of revenue</td>
<td>-10.9%</td>
<td>-10.5%</td>
<td>-9.8%</td>
</tr>
<tr>
<td>DA&amp;A as % of revenue</td>
<td>-6.0%</td>
<td>-7.6%</td>
<td></td>
</tr>
<tr>
<td>Impairment as % of revenue</td>
<td>0.0%</td>
<td>-1.3%</td>
<td>-0.1%</td>
</tr>
<tr>
<td>EBIT margin</td>
<td>32.0%</td>
<td>31.9%</td>
<td>32.4%</td>
</tr>
</tbody>
</table>

- Adj. EBITDA margin
- Copart has higher adjusted EBITDA margins mostly due to lower COGS, but the difference disappears after measuring IAA on an EBITDAR basis
  - IAA’s EBIT margin can be highly misleading due to significant amortization of goodwill step-up on 2007 buyout – will eventually disappear from B/S
  - Margins are similar before rent – under John Kett, IAA has gradually purchased leased properties. Further progress serves to eliminate the margin differential

Conclusion: Upside can be attributable to growth or value. Copart is already penetrated internationally, limiting further growth, giving IAA greater upside potential
- NA market is more or less fully penetrated, with little opportunity for growth beyond organic increases in volumes and pricing trends
- The only places salvage auto can go to are Europe and emerging markets
Thesis 3 – Is Copart’s Premium Warranted? Possible Explanations

Maybe it’s because Copart’s capital structure is more debt-free than IAA’s?

**But how informative is cap structure?**
- Copart only runs *0.25x* Net Debt/EBITDA while KAR runs *2.8x* in the form of term loans, revolver, and capital leases
- ~34% of KAR’s total debt is attributable to its AFC, which runs debt in the form of receivable-collateralized obligations
- IAA’s post-spin cap structure is set to be *3.5x* Net Debt/EBITDA, but without refi or new debt issuance
- Historically, KAR levered up *almost exclusively* in anticipation of acquisitions (like ADESA’s $432mm acquisition spree in 2016)

**Conclusion: IAA’s debt is likely healthy, and anticipated to be paid down quickly since the 3.5x leverage is simply a hand-me-down from KAR**
- Management has a history of being excellent capital allocators
- Debt is only taken on for growth purposes
- Otherwise, it’s paid down quickly – if IAA has capital deployment opportunities, management will put capital to work

### KAR Debt

<table>
<thead>
<tr>
<th>Security</th>
<th>Coupon</th>
<th>Balance</th>
<th>Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revolver</td>
<td>L + 200bps</td>
<td>$0</td>
<td>2021</td>
</tr>
<tr>
<td>Term Loan B-4</td>
<td>L + 225bps</td>
<td>$710</td>
<td>2021</td>
</tr>
<tr>
<td>Term Loan B-5</td>
<td>L + 250bps</td>
<td>$1,040</td>
<td>2023</td>
</tr>
<tr>
<td>Senior Notes</td>
<td>5.125%</td>
<td>$950</td>
<td>2025</td>
</tr>
<tr>
<td>Capital Leases</td>
<td></td>
<td>$44</td>
<td></td>
</tr>
<tr>
<td>Total Debt</td>
<td></td>
<td>$2,744</td>
<td></td>
</tr>
<tr>
<td>(-) Available Cash</td>
<td></td>
<td>($265)</td>
<td></td>
</tr>
<tr>
<td>Net Debt</td>
<td></td>
<td>$2,479</td>
<td></td>
</tr>
</tbody>
</table>

- Revolver remains undrawn
- No debt in recent memory has been issued for IAA-specific purposes, which means either an expedient paydown or utilization for growth endeavors like international expansion
**Thesis 4 – Opportunities for Improved Capital Allocation**

**KAR’s management are industry veterans and proven capital allocators.**

*Jim Hallett – CEO and Chairman of the Board of KAR Auction Services*
- Joined company in 1993 as president of ADESA Canada
- Has served as CEO of KAR Auction Services since 2009
- Has received numerous industry awards, including the Ring of Honor from the National Independent Dealers Association
- EY Entrepreneur of the Year 2014 for the Services category

*John Kett – CEO and President of Insurance Auto Auctions (IAA)*
- Joined company in 2001 as SVP of planning and business development
- Has served as CEO of Insurance Auto Auctions since 2014
- Has nearly **tripled** the number of corporate-owned auction facilities since assuming the CEO role
- On SkillsUSA's Youth Development Foundation Committee

*John Hammer – President of ADESA*
- Joined company in 2009 in a leadership role in the AFC business
- Held leadership roles as CEO, President, and COO of AFC
- 25-year track record of successful results in whole, retail, financing
- Spent 17 years in roles at Ally Financial, AutoNation, and Mercedes-Benz Financial

**IAA executive management have steered a successful turnaround of the company from its 2004-era distress**
- Previous management were poor allocators
- Tom O’Brien (now retired), John Kett, and other founding members of the team helped steer IAA’s turnaround
- Current management cohort started together at an auto-glass company in Chicago
  - Tight-knit group
  - Bureaucracy is weighing IAA down, as KAR’s **first priority is ADESA**
  - Hence the lack of investment in IAA
“John Kett will blossom once he’s free from the yolk of KAR. KAR’s bureaucracy is weighing IAA down.”

- Former IAA VP (2001-2016)
Whether or not we think the premium is warranted, IAA’s spin into a pure play will bring the business model more in-line with Copart’s and make it more operationally efficient, helping IAA close the gap with Copart.

### KAR’s Current Capital Allocation Policy

<table>
<thead>
<tr>
<th>KAR’s Policy</th>
<th>Allocation</th>
<th>Purpose for Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capex</td>
<td>18-20% of adjusted EBITDA</td>
<td>Make investments in technology and physical assets</td>
</tr>
<tr>
<td>Dividends</td>
<td>45-50% of FCF</td>
<td>Return value to shareholders</td>
</tr>
<tr>
<td>Strategic Investments</td>
<td>Variable sum</td>
<td>International expansion, acquisitions that leverage cyclical recoveries</td>
</tr>
<tr>
<td>Share Repurchases</td>
<td>Variable sum ($220mm remaining under current plan)</td>
<td>Manage cash and leverage</td>
</tr>
</tbody>
</table>

### IAA’s Potential New Capital Allocation Policy

<table>
<thead>
<tr>
<th>IAA’s Policy</th>
<th>Allocation</th>
<th>Purpose for Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Principal Repayment</td>
<td>Variable % of $300mm+ FCF generation</td>
<td>De-lever early to reduce interest expense</td>
</tr>
<tr>
<td>Lease Buyouts</td>
<td>Variable sum</td>
<td>Decrease lease expense and gain depreciation tax shield</td>
</tr>
<tr>
<td>Strategic Investments</td>
<td>Variable sum</td>
<td>International expansion, as NA market is nearly fully-penetrated</td>
</tr>
</tbody>
</table>

**The difference?**

- Each of IAA’s capital deployment opportunities **align its operating model more closely with Copart’s.**
Thesis 4 – Opportunities for Improved Capital Allocation

Each area of capital deployment serves to close the last remaining gaps between IAA and Copart.

1 Benefits of De-Levering
   • Post-spin, IAA plans to support $1.2bn in net debt at 3.5x EBITDA
   
   **Given:**
   • Interest expense is roughly 20% of per annum EBITDA
   • Could use $300+mm in FCF generation per year to pay off debt preemptively and lever down towards a 0.25x leverage ratio over 3-4 years
   
   **Result:**
   • Annual interest savings of ~$90mm by 2022 in a 4-year paydown plan
   • **Note:** de-levering only likely if there are no better opportunities for capital deployment

2 Benefits of Buying Out Leases
   • Option to purchase leases on its 186 auction sites
   • Converting properties from rent to own increases both capex and D&A tax shield
   • FASB-842 (1/1/2019): IAA might put more properties on the books
     • No longer possible to make 15-20 year deals, as before
   
   **Given:**
   • SG&A reduction of $0.8mm per property each year and $10mm discounted in perp
   • Property owners’ $0.44mm per asset NOI applied with a 6.5-7% blended cap rate
   
   **Result:**
   • Cost to purchase incremental property is $6.5mm, or $3.5mm NPV per purchase

3 Benefits of Int’l Expansion
   • IAA can expand with online auctions into highly underpenetrated European markets just as Copart has
   
   **Given:**
   • IAA has the benefit of hindsight (AKA second-mover advantage)
   • Copart’s attention is split between its many locales
   • IAA can focus its attention on the most promising market: Germany
   • In Germany, the number of bidders per auction is higher than that of NA
   
   **Result:**
   • IAA’s already globally-distributed online buyer base makes scaling internationally very feasible
   • Emerging markets can also be attractive…

Sohn London Idea Contest – KAR US Equity (IAA Spinoff) – Nelson Dong
“During the crisis, foreign buyers from West Africa and Eastern Europe were coming through the internet to purchase repurposed salvage vehicles and pushing up our pricing. Lots of used cars that get repurposed and sold in emerging markets can be very profitable, even if insurance companies total them. For example, in Lithuania, I met a worker who was straightening the car frame by hand. The repair shop was paying the guy $2 a week and selling the cars at a huge markup.”

- Former IAA VP (2001-2016)
The fundamentals corroborate the qualitative thesis, suggesting material upside.
### Key Drivers Projections

**Do these drivers look familiar?**
- Secular tailwinds mentioned in *‘Thesis 2’* contribute directly to IAA’s revenue trajectory
- The 5-7% industry volume CAGR assumption lies at the heart of the following calculations
- Some *conservative* assumptions:
  - Revenue per vehicle sold is flat-lined beyond EOY 2018 despite strong upward trend
  - Demand among scrap recyclers, repair shops, and international buyers are all likely to increase – buyers of running vehicles especially in the event of a recession
  - Assumes scenario in which lease buyouts slowly and gradually increase capex
- **Note:** this build represents IAA’s standalone business before applying an appropriate and proportional amount of corporate overhead

**IAA Segment (Income Statement)**

<table>
<thead>
<tr>
<th>FY2018</th>
<th>FY2019</th>
<th>FY2020</th>
<th>FY2021</th>
<th>FY2022</th>
<th>FY2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAA Salvage Services revenue</td>
<td>1,357.4</td>
<td>1,438.8</td>
<td>1,525.1</td>
<td>1,616.6</td>
<td>1,713.6</td>
</tr>
<tr>
<td>Revenue per vehicle sold</td>
<td>540.5</td>
<td>540.5</td>
<td>540.5</td>
<td>540.5</td>
<td>540.5</td>
</tr>
<tr>
<td>Gross profit</td>
<td>521.9</td>
<td>553.0</td>
<td>586.2</td>
<td>621.3</td>
<td>658.6</td>
</tr>
<tr>
<td>Operating expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of services (exclusive of depreciation and amortization)</td>
<td>835.5</td>
<td>885.8</td>
<td>939.0</td>
<td>995.3</td>
<td>1,055.0</td>
</tr>
<tr>
<td>Selling, general and administrative</td>
<td>120.8</td>
<td>129.0</td>
<td>136.8</td>
<td>145.0</td>
<td>153.7</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>97.4</td>
<td>97.9</td>
<td>98.4</td>
<td>98.9</td>
<td>99.4</td>
</tr>
<tr>
<td>Total operating expenses</td>
<td>1,053.7</td>
<td>1,112.7</td>
<td>1,174.1</td>
<td>1,239.2</td>
<td>1,308.1</td>
</tr>
<tr>
<td>Operating profit</td>
<td>303.7</td>
<td>326.0</td>
<td>351.0</td>
<td>377.5</td>
<td>405.5</td>
</tr>
<tr>
<td>EBITDA</td>
<td>401.1</td>
<td>423.9</td>
<td>449.4</td>
<td>476.3</td>
<td>504.9</td>
</tr>
<tr>
<td>Vehicles sold</td>
<td>2,511,140</td>
<td>2,661,808</td>
<td>2,821,517</td>
<td>2,990,808</td>
<td>3,170,256</td>
</tr>
</tbody>
</table>

Sohn London Idea Contest – KAR US Equity (IAA Spinoff) – Nelson Dong
Valuation – Multiples Approach

Calculating IAA’s current market value
• Can infer the implied market value of IAA from the market value of KAR
• Assumes that Net Debt/EBITDA between SpinCo and RemainCo are equal
• EV/EBITDA multiple remains the same across SpinCo and RemainCo
• Uses LTM EBITDA to reflect current market sentiment

Bear, base, and bull operating scenarios assume:
• Different multiple expansions
  • i.e. Bear case sees contraction
• Uses 2019 EBITDA to show future value
• Varies 2019 EBITDA around a baseline projection
• Levered at 3.5x Net Debt/EBITDA regardless of scenario
• Blended price target based on an equal-weight average
Valuation – Upside-Downside Profile (and DCF Sanity Check)

**Blended Upside:** 43.3%

**Bear Case**
- Target Price: 15.52
- Implied Price: 20.77
- Upside: -25%

**Base Case**
- Target Price: 29.05
- Implied Price: 20.77
- Upside: 40%

**Bull Case**
- Target Price: 44.73
- Implied Price: 20.77
- Upside: 115%

**Using the DCF to sanity check**
- Mults can’t always be trusted
- Valuation with simple and conservative assumptions
- Assumed 10% capex increase as a result of new capital allocation
- Terminal growth in-line with U.S. inflation target
- Yields rough share price of $32.63

**Blended Upside: 43.3%**
**Debunking Common Concerns**

### What About Gas Prices?
- Fluctuations in gas prices most prominently affect trucks and hybrids, not so much light vehicles.
- Distinction between *discretionary driving* and *mandatory driving*:
  - Miles driven relatively inelastic due to mandatory driving.
- *Modification in behavior* is actually the #1 driver of changes in miles driven, not gas prices.
  - Significant modification in behavior is mostly likely during financial shocks or deep recessions.
  - Even then, IAA and smaller competitors within used auto saw pricing power and volumes increase in these environments.
  - Negative impact is *mostly negated* by positive tailwinds brought on by the same environment.

### Financial Crisis Supply Shock
- The recession era created an unfavorable car buyers market which has had a residual impact on salvage auto supply in 2009-2011.
- The Obama administration introduced a *Cash for Clunkers* program to mitigate this trough.
  - Policy allowed drivers to swap their used cars for new vehicles during the period of 2009-2012.
  - According to industry experts, impact is immaterial and idiosyncratic.

### Autonomous Vehicles?
- Has the potential reduce rate of accidents to near-zero levels in the distant future.
  - *No foreseeability*, and current efforts have led to significant controversy and headline risk.
- *Highly unlikely* for affordable autonomous vehicles to reach and penetrate the market in next 5-10 years.
- *Highly unlikely* for the autonomous vehicle market to materialize and drive down accidents rates substantially in any reasonable frame of time.
- For now, the salvage auto auction business remains unchallenged.

---

**Number of Listings on IAA Website by Model Year**

![Graph showing number of listings on IAA website by model year]
Catalysts

1. Announcement of the spin date
2. Amendments to IAA’s Form 10
3. Initiation of the spin
Thank You!

A Special Thanks To:

Sohn Conference Foundation
Gerson Lehrman Group
Flora Butler
Lap Him Tong
George Arghyrou
Samuel Wood
Joseph Wilson

Michael Eliason
Stuart Landsverk
Stephane St-Hilaire
Michael Madden
Moon Bridge Management
Bernard Zhang