

Monday, April 20, 2020

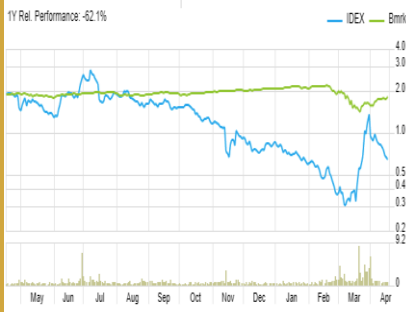
## VALUATION

<b>Current Price</b>	<b>\$0.64</b>
52 Week Range	\$0.28 – 2.84
Market Cap (\$-Mn)	104
Ent. Value (\$-Mn)	128
Shares Out. (Mn)	179
Short Int (% Flt)	5.1%
Daily Vol	1.2M
P/Book	2.9x
EV/ Sales	2.1x
EV/EBITDA	7.5x
P/E (LTM)	27x

## FUNDAMENTALS

Sales (CY19)	\$45M
Sales (CY20)	\$39Mn
Sales (Tgt ~CY24)	\$160Mn
Insider Owner	26%
Employees	60
EPS (CY20)	\$0.03
ROE	5%
Net Debt (\$-Mn)	\$45

## RELATIVE PERFORMANCE



## CONTACT

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# Ideanomics, Inc. (NASDAQ:IDEX)

## Initiation of Coverage

### Investment Thesis

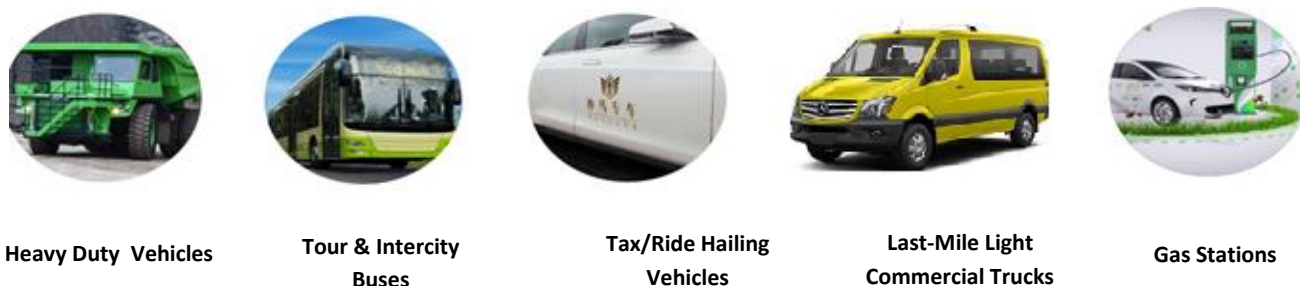
- **Think Amazon for books (20 years ago), Etsy for handmades, Airbnb for unique getaways, IDEX is the defacto service provider for commercial electronic vehicles.**
- **IDEX — Leader of the Commercial Electric Vehicle (EV) Financing Market.** IDEX is set to emerge as a leading global player in the commercial segment for the electric vehicle market, offering a broad range of services to fleet operators, including lease financing, group procurement and rebates administration. After facilitating adoption of commercial electric vehicles, IDEX intends to generate annuity revenue by offering energy management services for the vehicles. Its strong partnerships with fleet operators, vehicle manufacturers, lease financing companies, and energy operators provide it a solid platform to become a global leader in this market.
- **Investment Highlights: IDEX's moat comprises the following four elements:**
  - **Leadership position and strong order pipeline in a large addressable market.** China – IDEX's first target market – will be home to 143 million electric vehicles (~57% of global stock) by 2030. This is ~62x the present stock of electric vehicles (2.3 million units) in China, suggesting that the market is poised for huge growth. IDEX also plans to grow outside China, first in ASEAN nations (starting with Malaysia) and then globally. The company has a strong position in the market, reflected in its \$2 billion order pipeline in China, of which ~\$600 million is likely to be converted into revenue in CY20.
  - **End-to-end service offering and value chain presence:** IDEX is not only engaged in facilitating the procurement of commercial electric vehicles but also facilitates their financing, which is one of the hurdles for its target clients who lack financing options for EVs. IDEX also offers energy solutions to fleet operators by providing them pre-paid and fast charging solutions for EVs. This service not only boosts IDEX's topline but also creates a recurring revenue stream for the company.
  - **Strong industry partnerships:** IDEX has strategic partnership agreements with leading Chinese fleet operators such as iUnicorn, Yunnan Energy Investment Group, Golden Concord (GCL Group), Jiangsu Linghao Network Technology Co., Sichuan Shenwu Yunli Transportation Services Co., and Beijing Silk Road Rainbow Car Rental Group Co. These agreements provide IDEX a presence across key EV hubs in China and are the source of its ~\$2 billion order pipeline. The company has also partnered with leading EV manufacturers and financing solutions providers to enable smooth order fulfilment, and with PetroChina to provide energy solutions to fleet operators. These partnerships strengthen IDEX's execution capabilities and establish its presence across multiple segments, a key competitive advantage.
  - **Scale:** IDEX has started operations in select provinces in China including Chengdu, Yunnan, Guanxi etc. This still leaves it with significant room for expansion within China. The company has also established its presence in Malaysia and has plans to gradually expand to other ASEAN markets and countries around the globe to set up the first-of-its kind financing and sourcing platform for commercial EVs.
  - **Strong fundamentals and cheap valuation make a compelling investment case.** We expect IDEX's topline to climb from \$39 million in CY20 (back-half ended) to \$89 million in CY22. Gross margin will remain stable around ~95% while EBITDA margin is likely to expand from ~23% in CY20 to ~32% in CY22 as the company benefits from economies of scale. More importantly, IDEX will generate positive FCF starting this year and its RoE will reach 28% by CY22. We model CY22 EPS of \$0.12 and apply a conservative 15x PE multiple to arrive at an intrinsic value of \$1.82/share.

## Company Overview

### Ideanomics (IDEX) — Harnessing the Potential of the Global Electric Vehicle (EV) Market

- Ideanomics (NASDAQ:IDEX), incorporated in the State of Nevada on October 19, 2014, is a global company focused on facilitating the adoption of commercial electric vehicles and developing next generation financial services and Fintech products. Its electric vehicle division, Mobile Energy Global (MEG) provides group purchasing discounts on commercial electric vehicles, EV batteries and electricity as well as financing and charging solutions. Ideanomics Capital includes DBOT ATS and Intelligenta which provide innovative financial services solutions powered by AI and blockchain. MEG and Ideanomics Capital provide Ideanomics' global customers and partners with better efficiencies and technologies and greater access to global markets. IDEX's Mobile Energy Global Group (MEG) is engaged in providing an end-to-end solution for the purchase, financing, charging, and energy management for fleets of commercial EVs. With its principal focus on China, this business segment aims to target four distinct commercial EV types 1) heavy duty vehicles 2) last-mile delivery light commercial vehicles, 3) buses and coaches, and 4) taxis.

Chart 1: IDEX's MEG Segment is Focused on the Commercial EV Market



Source: Intro-act, Company

- IDEX's Ideanomics Capital business unit consists of the Delaware Board of Trade (DBOT), Intelligenta, and EKAR. DBOT, acquired in July 2019, besides being a broker dealer also operates an Alternative Trading System (ATS) focused on trading of traditional OTC securities. Intelligenta is a pre-revenue company focused on delivering AI driven solutions for the financial services industry. EKAR is an ETF listed on NYSE, tracking the Innovation Labs Next Generation Vehicles index.

Chart 2: IDEX Affiliates and Partners

#### Affiliates and Partners



*IDEX's business model requires it to partner with leading companies across the industry value chain. Its partnerships with leading EV manufacturers, financing firms, infrastructure players, and government agencies demonstrate its strength in forging partnerships and are a key part of its growth strategy.*

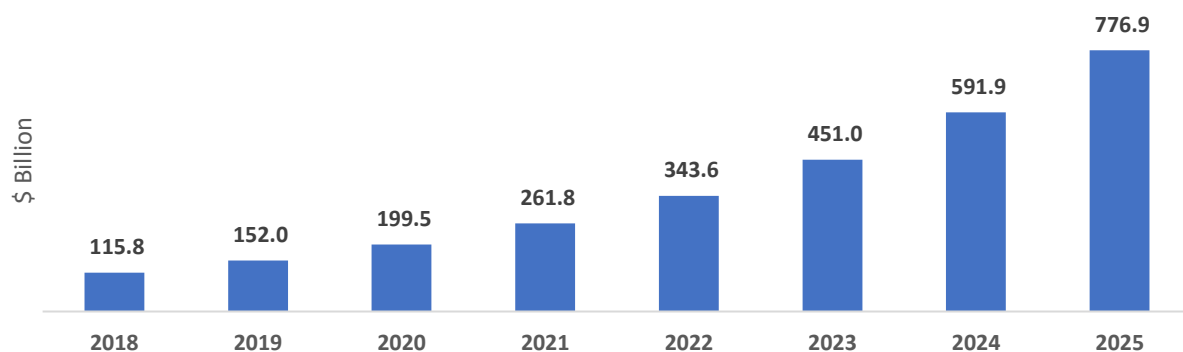
Source: Intro-act, Company Investor Presentation

## Industry Overview

### IDEX is Focused on the Largest EV Market in the World – China

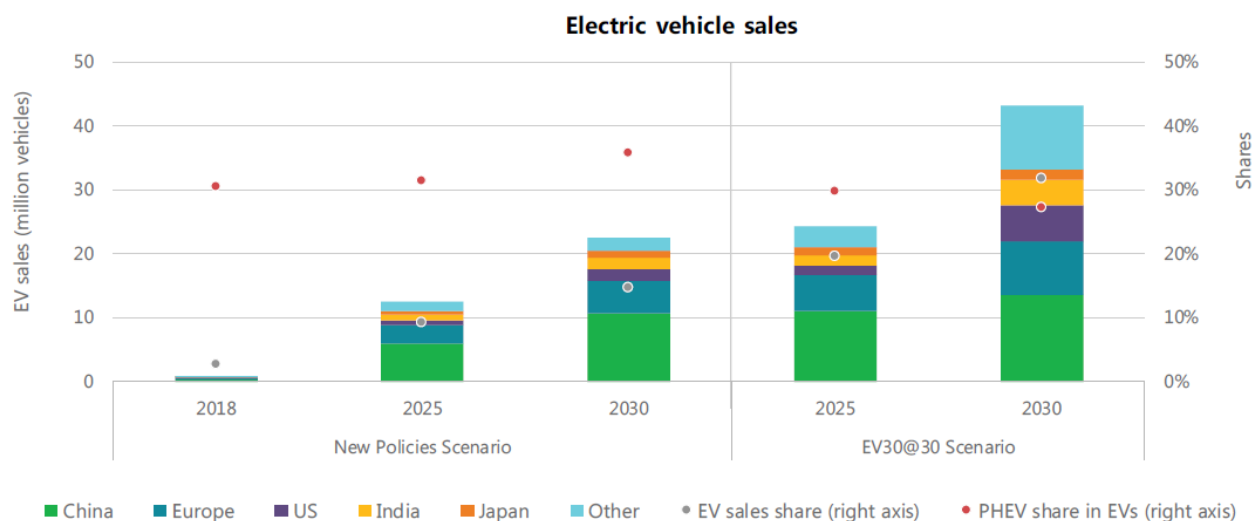
- IDEX aims to be leader in the sales, financing, and energy management of commercials EVs in China, the world's largest EV market, and plans to expand globally thereafter.** The global electric vehicle (EV) market is growing at a rapid pace and is expected to be worth \$776 billion by 2025, according to Brandessence Market Research. This growth is being led by China and followed by Europe and the U.S., as stakeholders worldwide make attempts to address the threat posed by global warming. According to the International Energy Agency (IEA), total number of electric cars in the world topped the 5 million mark in 2018 with new car sales of ~2 million units, representing a nearly 100% y/y growth. China remained the largest electric car market with new car sales exceeding 1.1 million units (>50% of the global total) and a total electric car stock of 2.3 million units. Europe was a distant second with new car sales of 385,000 units and 1.2 million electric cars on road, followed closely by the U.S. which sold 361,000 new electric cars and had 1.1 million electric cars in stock.

**Chart 3: The Global Electric Car Market is Expected to Grow at a 31% CAGR Through 2025**



Source: Intro-act, Brandessence Market Research

**Chart 4: Global EV Sales in 2030 Will Be Between 23M Units the New Policies Scenario (NPS) and 43M EV30@30 Scenario**

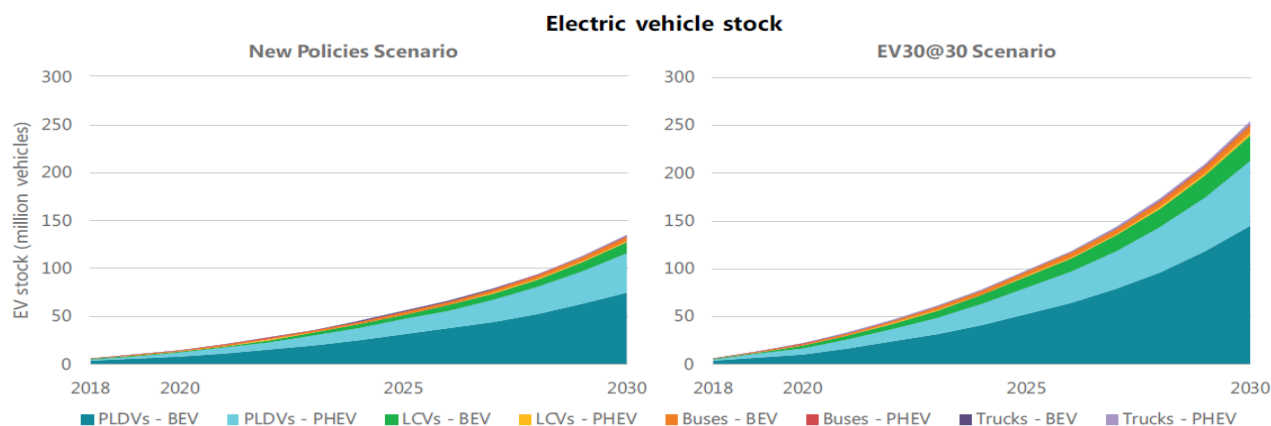


Source: Intro-act, International Energy Agency Global EV Outlook 2019

- Favorable policy environment means that China will be home to 57% of the global EV market by the end of this decade, implying that the growth runway for IDEX is very big and long.** Governments across the world have announced policies to promote the use of electric vehicles to curb the harmful environmental impact associated with use of internal combustion engines (ICE). If the policies currently in place (referred to as New Policies Scenario or NPS) achieve their desired objectives, then annual global electric car sales will reach 23 million units by 2030 with the electric car stock exceeding 130 million units. However, some nations, including China, have committed to achieving a 30% market share for EVs in all modes by 2030. This scenario is commonly referred as EV30@30, and if this goal is achieved then EV sales will hit the 43 million by 2030 with the stock of EVs surpassing 250 million unit. China will remain the global leader with a 57% market share in 2030 under the EV30@30 scenario.
- China is also the global leader in freight transport and other commercial EV segments, which happen to be the focus area for IDEX.** According to IEA, global stock of electric light-commercial vehicles (LCVs) increased to 250,000 in 2018 from 170,000 a year ago, and China accounted for 57% of it with 138,000 vehicles. Of the ~80,000 new LCVs sold worldwide in 2018, China accounted for 54,000, followed by Europe (25,000). The market for medium- and heavy-duty trucks remained small compared to other types of vehicles, with between 1,000 and 2,000 medium- and heavy-duty trucks sold in 2018. However, almost all of them were sold in China where the total stock exceeded 5,000 units. Even the electric bus market is completely dominated by China which accounted for 90,000+ of the total 92,000 electric buses sold across the world during the year.
  - IDEX will benefit from the continued growth of electric LCVs, buses, and trucks through 2030.** The global electric trucks fleet is expected to rise to 900,000 by 2030 under the New Policies Scenario, while electric bus fleet is estimated to expand to 4.8 million units. The electric truck segment will be dominated by medium trucks which have a strong use case in urban areas where mileage remains low due to speed limitations and traffic congestion. The growing use of electric trucks within urban limits will help truck operators respond to increasing restrictions being imposed on ICE trucks by governments worldwide. The adoption of electric buses will be led by urban areas where lower range requirements make the use of a clean mode of transport a viable option.

IDEX is targeting four distinct commercial vehicles type in the Chinese EV market which include 1) heavy duty vehicles 2) last-mile delivery light commercial, 3) buses and coaches, and 4) taxis. China, IDEX's core market, is the largest market for these EV segments and thus results in a huge addressable market for the company.

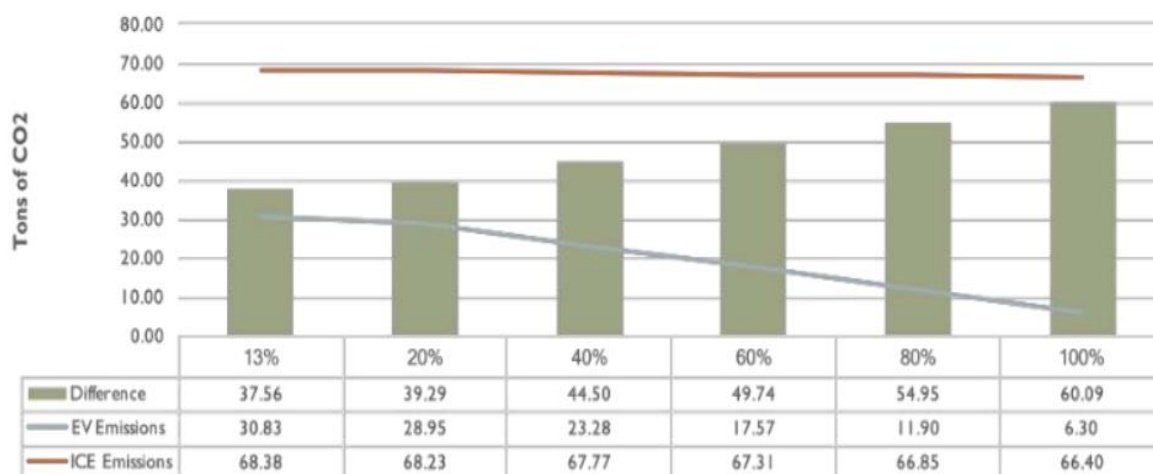
**Chart 5: Electric LCVs, Buses, and Trucks – IDEX's Target Segment – Will Continue to Grow Through 2030**



Source: Intro-act, International Energy Agency Global EV Outlook 2019

- Migration to EVs will lead to a significant reduction in GHG emission and is a key driver of the rise in electric mobility across the world and in China.** Globally, the transportation sector accounts for ~24% of total CO<sub>2</sub> emission from fuel combustion and road transportation accounts for 75% of the CO<sub>2</sub> emission from the transportation sector. As a result, major global economies – including China – are committed to reducing the carbon footprint of the transportation sector. And electrification of passenger and freight vehicles, which has zero-tailpipe emission, is one of the few feasible solutions.
  - While EVs are zero-tailpipe emission vehicles, GHG emissions are observed during the EV manufacturing process, during power generation, and in the recycling phase. However, a study by Ryan Cornell, Harvard University, suggests that an ICE vehicle's carbon emission over its life cycle – which includes the emission involved in manufacturing of the vehicle as well as the battery – is ~69 metric tons (mt), assuming a vehicle with a standardized life of 150,000 miles. On the other hand, an EV which is 100% run on coal-generated electricity, will have a carbon emission of 66 mt, implying that even in the worst-case scenario (100% coal-generated power), EVs are better placed to reduce carbon emission than their ICE peers.
  - The equation is even more favorable for EVs in China** as renewable energy accounts for 26.7% of the total energy produced in the country. As a result, carbon emission of an EV over its life cycle in China is ~28.9 mt vs. 67.8 mt for an ICE vehicle. In the best-case scenario – EVs powered 100% by renewable energy – electric vehicles in China will produce only 6.3 mt of carbon emission over their lifecycle (~10% of ICE vehicles operating on coal-generated electricity).

**Chart 6: Comparison of Carbon Emission by an EV vs. an ICE Depending on the Share of Renewable Energy in Total Power Generation and Consumption**



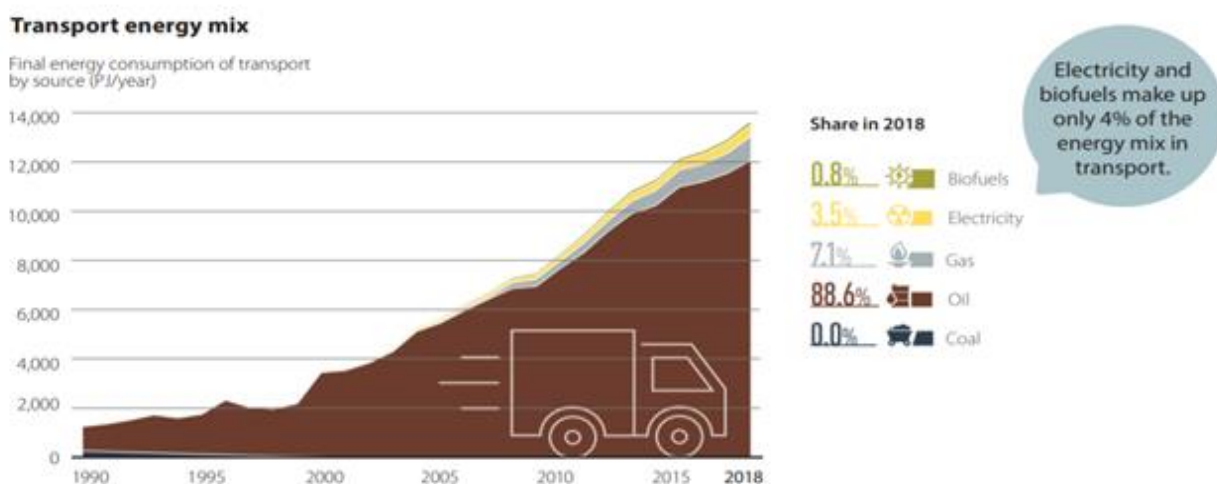
Source: Intro-act, The Driven, Ryan Cornell, Harvard University

- Given the high level of GHG emission in the country, migration to EVs is one of the biggest environmental policy goals in China, a positive for IDEX that is focused on the sales, financing, and energy management of commercials EVs in the country.** According to Columbia Center on Global Energy Policy, total CO<sub>2</sub> emission from China stands at 11 gigatonnes (Gt), accounting for 28% of the global total. For context, the U.S. and EU combined account for ~25% of the global CO<sub>2</sub> emission. China's per capita emission of 6.6 tons per person is the third highest in the world, behind only the U.S. (15.7 tons per capita) and Japan (9.0 tons per capita). Finally, carbon intensity (CO<sub>2</sub> emission per unit of GDP) in China stands at 0.37 kg – highest in the world and much higher than the U.S. (0.25 kg) and Japan (0.21 kg).
  - Transportation sector is currently a key source of pollution as vehicles produce roughly 8% of the heat-trapping gases emitted in China each year.** The number of registered vehicles in China has grown ~60x to 327 million in the last 30 years, making it the world's largest vehicle market. As a result, China's transport emission per capita

(0.66 tons) is on the rise and increased 20% between 2013 and 2018, as 88.6% of the energy consumed by the country's transport sector is sourced from oil. This increase is much higher than the ~5% average increase experienced by G20 nations in the same time frame.

- **To combat rising emission levels, China has set an ambitious target of getting 5 million electric cars on road by 2020.** According to the Intergovernmental Panel on Climate Change (IPCC), China is required to reduce its GHG emission level to 8.4 Gt of CO<sub>2</sub> equivalent (Gte) by 2030 and to below 5.4 Gte by 2050, to be within its fair share range compatible with 1.5°C IPCC scenario. To do so, China will have to increase the contribution of low-carbon fuels in its transport mix to about 60% by 2050. This can only be done by accelerating the rollout of electric vehicles. As a result, China has set an ambitious target of getting 5 million electric cars on road by 2020. In addition, since 2018, the government has set out a mandate which requires Chinese manufacturers to sell a minimum quota of zero-emission or electric vehicles.

**Chart 7: China's Transport Sector is Currently Heavily Reliant on Oil to Meet its Energy Requirements**

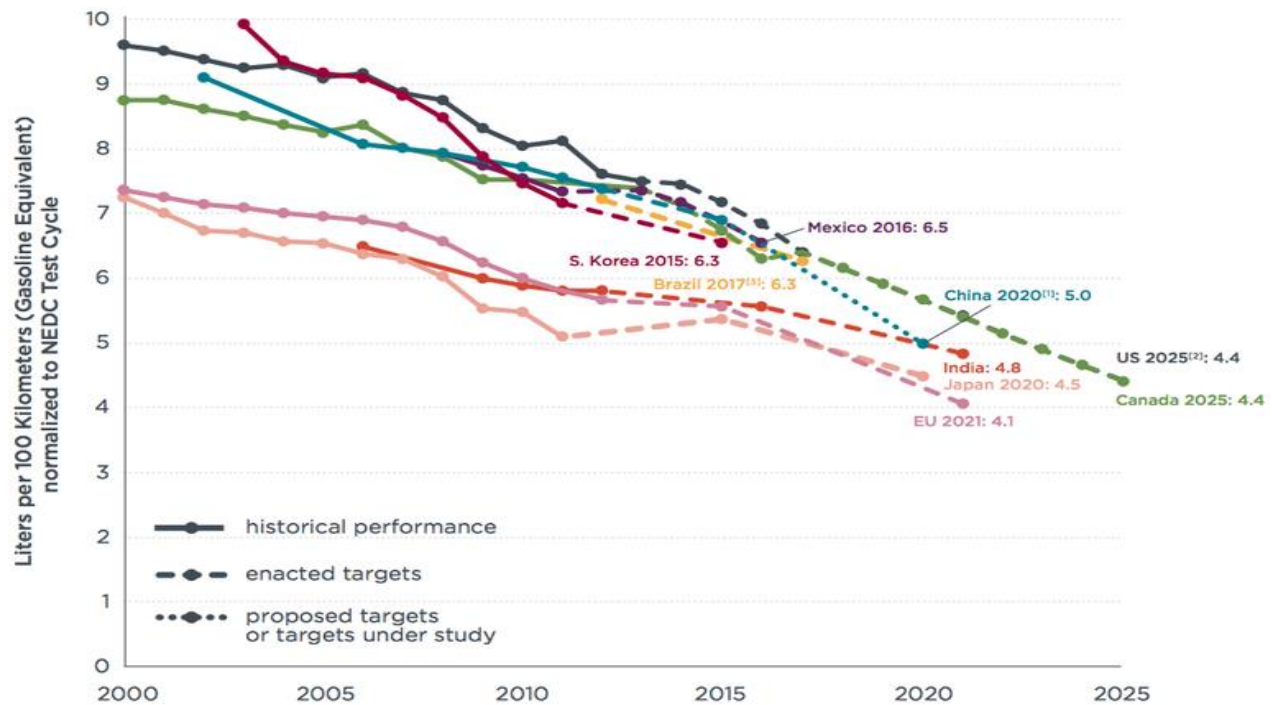


Source: Intro-act, Climate Transparency, Enerdata 2019

- **The goal of 5 million electric vehicles, commonly referred as New Energy Vehicles (NEV) in China, is backed by supportive policy measures taken by the Chinese administration.** The Chinese government proposed the first set of goals for NEV production in 2009 under the leadership of then President Hu. Later, President Xi emphasized that developing new energy vehicles was the only way to strengthen Chinese auto industry and thereby upgraded the government's strategic plan for the auto industry in 2012 and in 2015 – both of which specified the target of 5 million NEVs on road by 2020. The central policies of the Chinese government involve 1) regulatory incentives in vehicle efficiency standards, 2) NEV mandate, 3) central NEV subsidies, 4) central planning and requirement in vehicle infrastructure, and 5) central support for electric car-sharing pilots. As a result of these measures, China currently accounts for >50% of the global electric car sales.
- **NEV credits under Phase IV fuel consumption standards' implementation has helped promote sales of electric cars in China.** The current phase IV standards under implementation in China require light vehicles to meet an average target of 5 liters per 100 km, a 28% reduction from the 2015 level when fuel efficiency was 6.9 l/100km. The regulation also provides for compliance flexibilities and credits. This reduces the stringency of the program as manufacturers installing this technology with demonstrated fuel-saving are eligible for up to 0.5 l/100km credit towards their average fuel consumption standard compliance. The proposed China 2025 Phase V fuel consumption standard requires the fuel consumption of new cars to be further reduced to 4 l/100km by 2025 and will further boost adoption of electric cars in China.



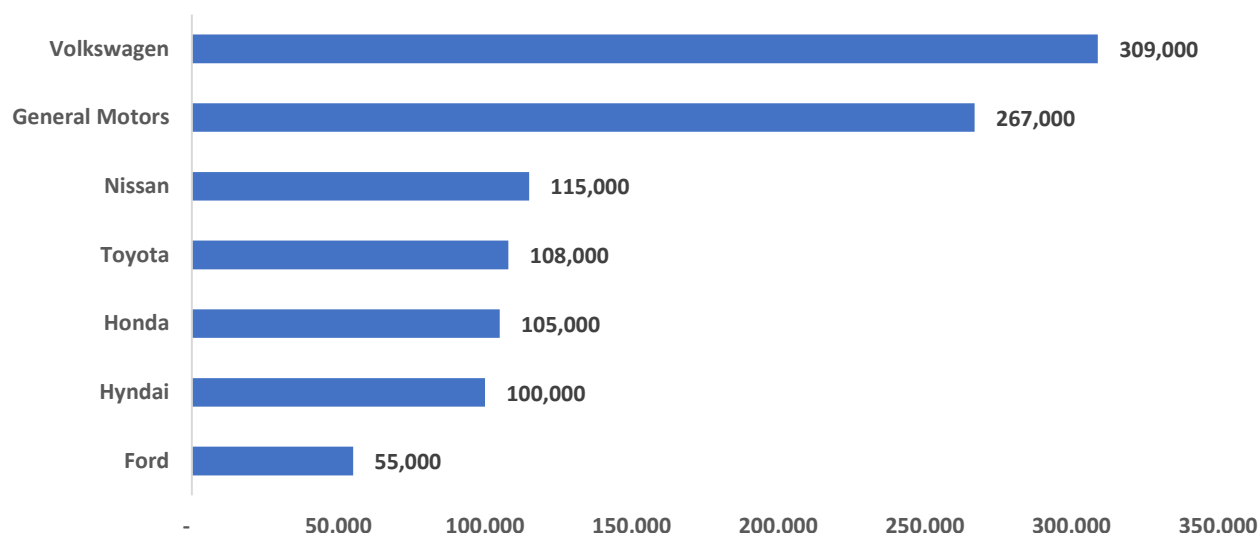
Chart 8: China's Fuel Efficiency Standard Under Phase IV is Third-Best in the World, Behind Only EU and Japan



Source: Intro-act, Green Car Congress

- China's NEV mandate requires that at least 3% to 4% of cars manufactured in China by each automaker should be NEVs.** Chinese NEV mandate, on the lines of California's Zero Emission Vehicle mandate, was passed in September 2017 and implemented in April 2018. This mandate sets a quota for the number of zero-emission vehicles that a manufacturer must sell with each such sales getting EV credits based upon certain criteria. The rule requires conventional/ICE passenger car manufacturers in China to meet 10% and 12% new energy vehicle credit targets in 2019 and 2020, respectively. This means that production of EVs should account for 3% to 4% of each automaker's total Chinese output in 2019 and 2020 with companies falling short of the target staring at huge financial penalties.
- On March 31, 2020, the Chinese government announced several important policies to stimulate economic growth following the COVID-19 nationwide shutdown in the first quarter of the year. The most relevant to IDEX are the extension of new energy vehicles subsidies for an additional two years, Central Government funds being allocated to compensate the replacement of diesel vehicles in key areas such as Beijing , Hebei and Tianjin, and the exemption of used car VAT tax from May 1 to end of 2023. The extension benefits MEG in various ways; it provides more time for fleet operators and manufacturers to secure financing and ramp up production, and centrally located near in the key areas, the Mobile Energy Group Center in Qingdao is positioned to facilitate fleet operators in key areas.

**Chart 9: Among ICE Vehicle Makers, Volkswagen and GM Have Highest EV Production Target in China for 2019-20**

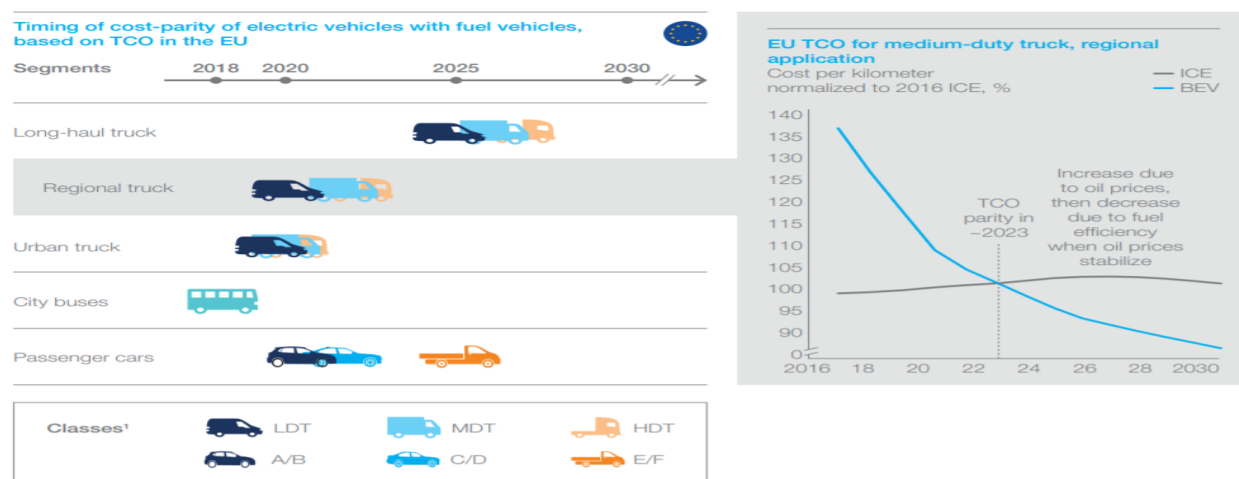


Source: Intro-act, The Wall Street Journal

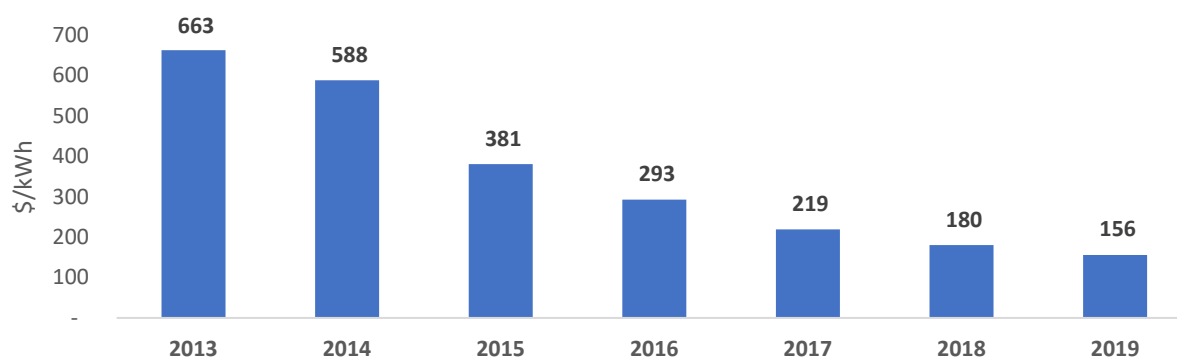
- The second key driver of EV adoption is the fall in battery prices and total cost of ownership (TCO) of EVs.** Electric vehicles across segments are expected to be priced lower over the next decade, with passenger EV cars reaching cost parity with their conventional fuel counterparts in early 2020s. A McKinsey research suggests that over the next 5-10 years, the TCO of electric vehicles across market segments will be lower than that of conventional ICE vehicles. While the research is focused at the European market it suggests that the timing of TCO parity in the US and China will be comparable to those in Europe, with China slightly earlier and the U.S. slightly later. Drop in battery costs will be the major driver of the TCO parity between an EV and an ICE in the coming years. Innovation in battery technology will also enable the electrification of the heavy-duty vehicle segment – IDEX's target segment – over the next 10 years.

  - Lower battery cost and their mass production will stimulate growth of the EV market this decade.** According to BloombergNEF, battery costs for electric vehicles have fallen ~87% over in the last 10 years from \$1,100 per kilowatt-hour (kWh) in 2010 to \$156 per kWh in 2019, which was 13% lower than \$180 per kWh in 2018. The cost reductions in 2019 were driven by increasing order size, growth in battery electric vehicle (BEV) sales, and continued penetration of high energy density cathodes. This cost is expected to further drop to ~\$100 kWh by 2023 and to ~\$61 per kWh by 2030, making EVs cost competitive when compared to their ICE counterparts and driving their adoption higher.



**Chart 10: Electric Vehicles Will Become Cost Effective Across Segments by 2030**

Source: Intro-act, McKinsey

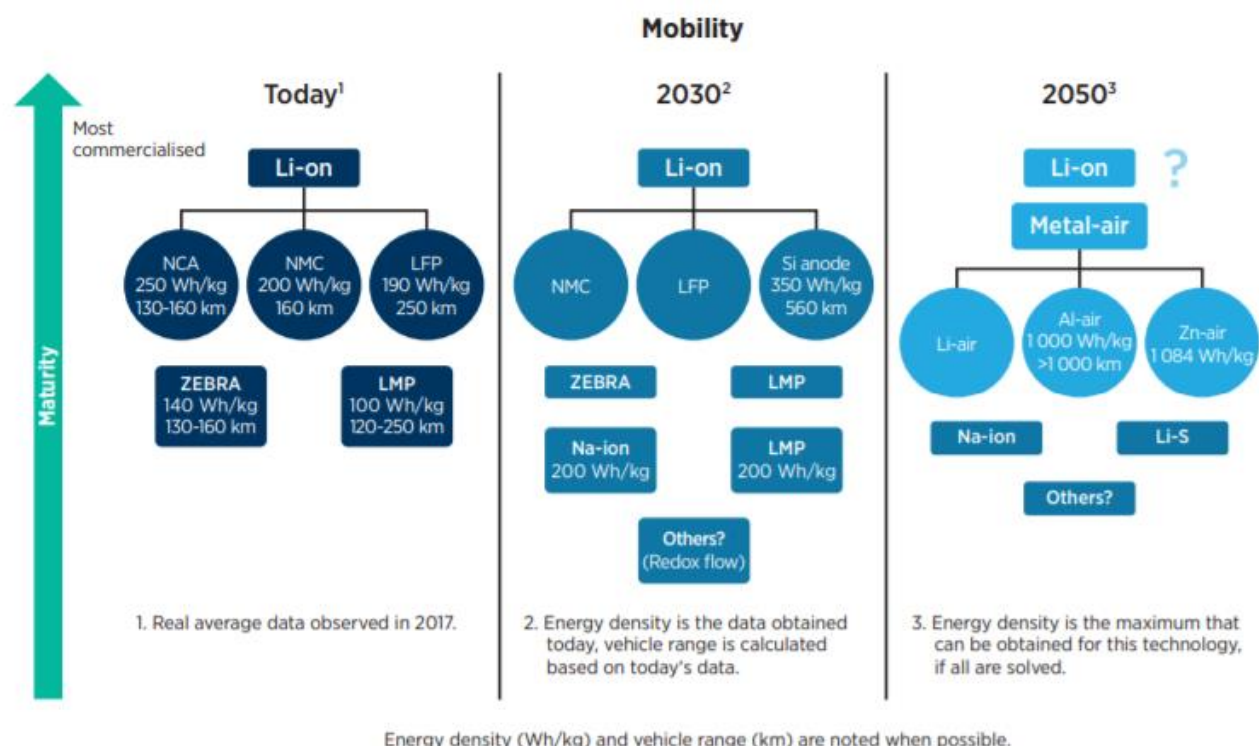
**Chart 11: Battery Prices Continue to Fall Making EVs Cheaper**

Source: Intro-act, CleanTechnica, BloombergNEF

- **China – IDEX's target market – is the biggest market for Lithium-Ion (Li-Ion) batteries, which will remain the dominant battery technology for EVs through 2030.** According to International Renewable Energy Agency (IRENA), demand for Li-Ion batteries will increase 10x by 2030, over 90% of which will be from the transportation sector where EVs are the key consumers. The growing use of Li-Ion batteries will be driven by their falling cost, which will continue to fall by at least 10% per year over the next decade.
  - **Apart from falling cost, Li-Ion technology holds an edge over other battery technologies, such as Nickel-Cadmium (Ni-Cd), in terms of energy density** which gives it the ability to store twice the energy stored in Ni-Cd batteries. A significant amount of R&D is aimed toward further improving the performance of Li-Ion batteries and includes investment focused towards the chemical composition of the anode, cathode, and electrolyte. The cathode and anode collectively account for ~80% of the cost of a battery and any development in these fields is bound to lower the cost of batteries and thus drive adoption of EVs higher. Another key area of research is the use of solid electrolytes in place of liquid or polymer-gel electrolyte. A solid electrolyte prevents electrodes from touching and allows manufacturers to eliminate the bulk separator, thus increasing energy density and reducing cost. This will also enable batteries to hold charge for a longer time, enable fast charging, and increase the driving range of EVs.

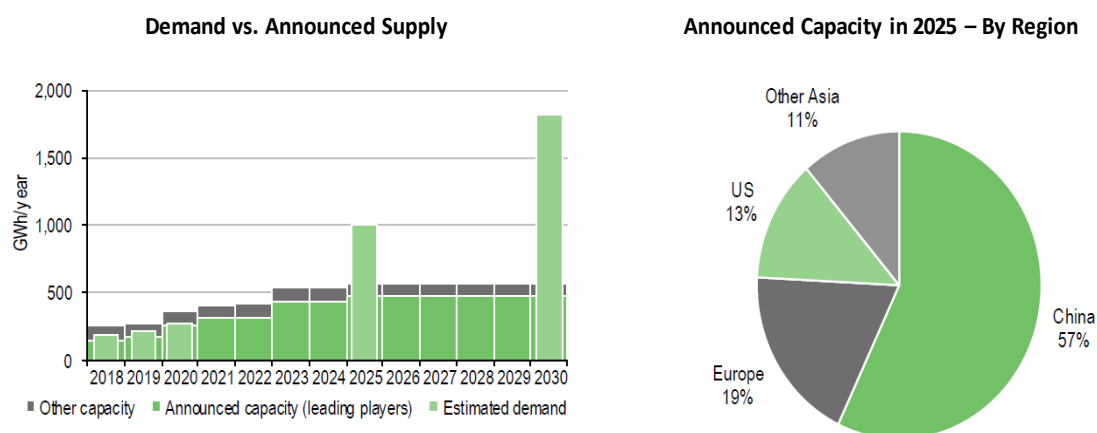
According to Edison Investment Research, China is expected to account for 57% of the Li-Ion battery capacity by 2025, putting the country at the forefront of EV adoption worldwide and benefitting players like IDEX that aim to service the growing demand for commercial EVs in the country.

Chart 12: Li-Ion Will Remain the Dominant Battery Technology in The Long-Term



Source: Intro-act, IRENA

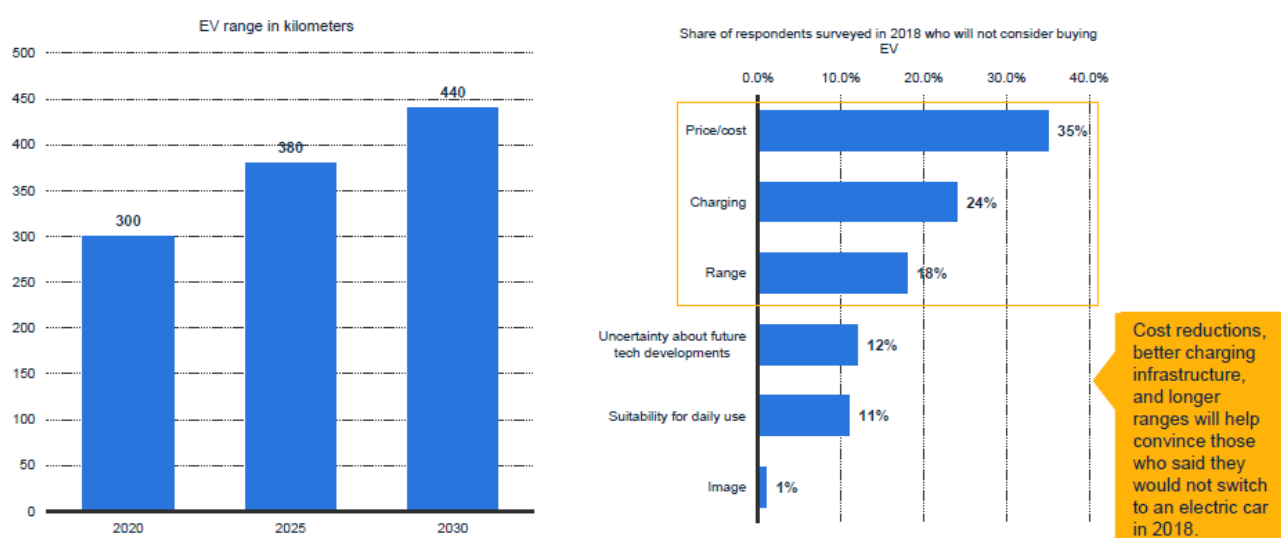
Chart 13: China – IDEX's Target Geography – Is Expected to Dominate the Li-ion Battery Market in Foreseeable Future



Source: Intro-act, Edison Investment Research, IEA

- **China has taken lead in addressing consumer concerns around driving range, fast charging, and charging infrastructure.** Apart from cost, driving range and fast charging are the biggest barrier to adoption of EVs worldwide (see chart below). Within charging, key concerns impacting buying decisions are EV battery capacity, charging speed/time, and charging point infrastructure.
  - **Chinese manufacturers have developed electric cars which can cover between 400 km and 600 km on one charge, thus addressing concerns of limited range.** Last year, BJEV, the electric unit of state-owned BAIC Group, unveiled the EX3 sedan which can travel up to 630 kms on one charge. BYD Auto, the biggest global electric car brand by sales volume, displayed three new pure-electric models, each with a driving range of > 400 kms on one charge.

**Chart 14: Price, Charging and Driving Range Are Topmost Concerns for the Consumers**

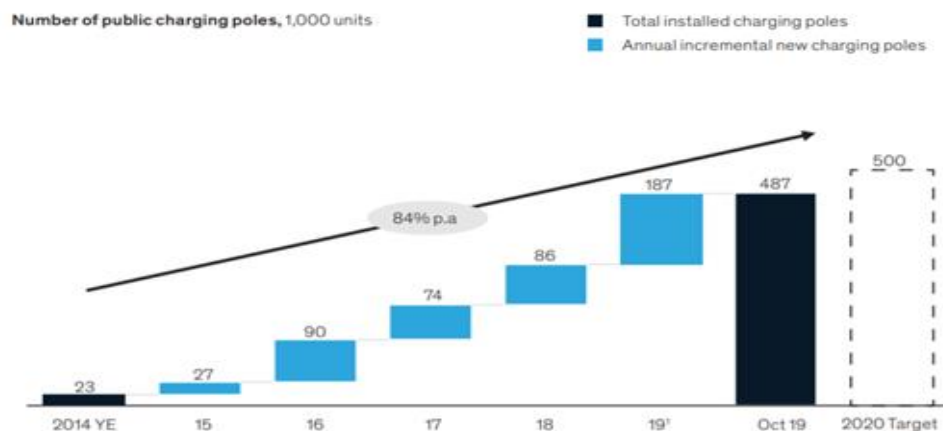


Source: Intro-act, Statista

- **China is also leading the installation of fast chargers worldwide.** Charging time is a key concern among EV buyers, especially for those on the move and requiring long-distance travel. Slow chargers, typically up to 22kW, take between 6 hours to 8 hours to recharge the batteries and are used in homes or for cars parked at offices. However, for commercial purposes, the preferred charging time is ~10 minutes as the benchmark is the time taken for refueling an ICE vehicle at a gasoline station (~2-3 minutes). Fast chargers (50kW and above) and ultra-fast chargers (150kW+) have the potential to significantly reduce the charging time to the desired level of ~10 minutes. There are ~300,000 fast chargers in the world and ~80% of them are installed in China.
- **More than 1,000 EV charging stations were installed in China every day in 2019.** According to Renewable Energy World, 365,000 charging facilities were installed in China in the first eleven months of 2019, up 29.5% y/y. This took the total number of charging facilities throughout the country to 1.174 million. Beijing, Shanghai, Tianjin, Jiangsu, Guangdong, Shandong, Zhejiang, Hebei, Anhui, and Hubei are the leading provinces in terms of public charging facilities with more than 75% of all chargers being public chargers. As of November 2019, there were eight Chinese companies that owned and operated at least 10,000 EV charging stations and accounted for ~90% of all charging stations in operation across the country.
- **China is working toward building its EV charging infrastructure with the State Grid Corporation of China, the world's largest utility, planning to build 120,000 public charging stations by 2020.** In July 2019, some of the

largest real estate developers in China partnered with the State Grid Corporation of China to drive smart charging service at their real estate properties. The utility provider has also partnered with China's largest retailer, JD.com, to help it optimize the distribution and use these charging stations.

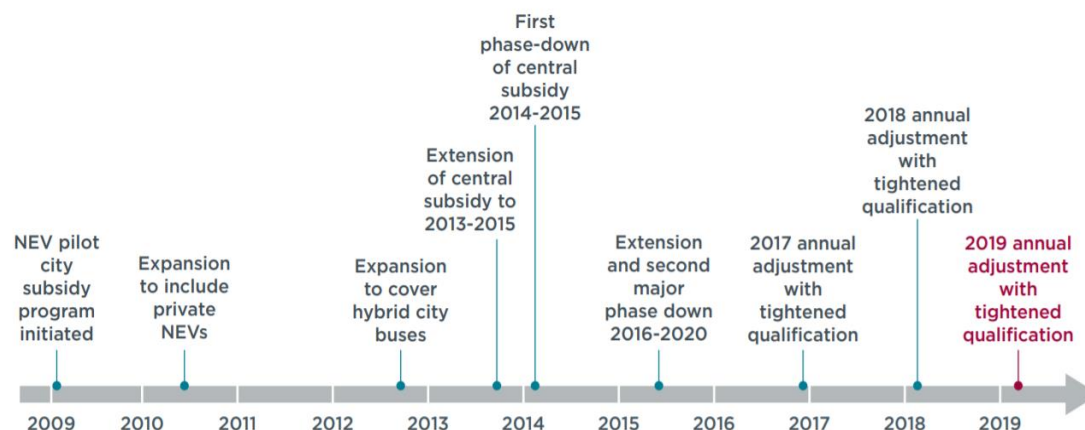
**Chart 15: China is Focused on Strengthening Its Public Charging Infrastructure**



Source: Intro-act, McKinsey

- IDEX's strong affiliate- and partner-base will emerge as a beneficiary of the industry consolidation due to changes to the EV subsidy regime in China last year.** Driven by a favorable policy environment, number of EV manufacturers in China grew substantially in the last decade and it was estimated that ~500 manufacturers were registered to produce EVs in May 2019. However, in its latest policy reassessment, the Chinese government in June 2019 reduced subsidies by 47% to 60% for higher-end long-range vehicles, and eliminated subsidies for vehicles under the range of 250 km. These subsidy cuts led to a 4.7% y/y fall in EV sales in July 2019. We believe this will lead to consolidation in the EV market and smaller players – focused solely on the sub 250 km segment – will be worst hit. On the other hand, larger players with deep pockets and focus on bigger/commercial vehicles – like IDEX's affiliates and partners which we discuss in the next section – will emerge as beneficiaries and garner higher market share, resulting in accelerated growth for IDEX.

**Chart 16: Changes to China's Subsidy Regime Are A Net Positive for IDEX's Affiliates and Partners, and thus IDEX**



Source: Intro-act, China International Council on Clean Transportation (ICCT)

- **China's \$3.4 trillion "New Infrastructure" investments will boost IDEX's MEG New Energy Vehicles and MEG 5G Energy Services.** While the U.S. has announced a ~\$2 trillion stimulus package to help its economy recover from the COVID-19 shock, various Chinese provinces and cities have launched several key new infrastructure construction projects totaling \$3.4 trillion to offset the economic impact of the coronavirus and boost sustainable growth. The specific areas benefitting from this financial stimulus measure include 5G networks, industrial internet, inter-city transit systems, vehicle charging stations and data centers. To benefit from this additional infrastructure investment IDEX has formed two new business entities MEG New Energy Vehicles and MEG 5G Energy Services, both of which will be MEG's New Energy Sales division.
  - MEG's New Energy Vehicles has already entered into strategic partnership with several leading partners, including CATL, Beiben Trucks Group Co., Ltd., Chery Automobile Group, CEMI Group, iUnicorn (Shenma Zhuanche), etc. to incorporate Internet-of-Vehicles (IoV) technology into their manufacturing. This entity will facilitate financing and leasing of supporting IoV infrastructure under a variety of scenarios including the Belt and Road Initiative, EVs in Qingdao, Shandong Port, urban electric engineering vehicles, new energy taxi exchanges, urban new energy buses and other operating scenarios.
  - MEG's 5G Energy Services will be aimed at accelerating the deployment, maintenance, and management of clean energy services in a variety of scenarios ranging from urban data centers, energy transformation (distributed energy), to urban charging ports. Revenue from this business will complement the core revenue of the company which will be derived from revenues from new energy sales from the increasing adoption of EVs. 5G Energy Services is an additional layer of revenue - powering the thousands of 5G towers used to support IoT/IoV services in commercial electric vehicles, and complements MEG's New Energy Sales platform which includes wholesale electricity sales and prepaid sales through UnionPay 4-in-1 cards.

## Growth Strategy Aimed at Generating a \$2 Billion Topline in 2020

- IDEX is focusing its energy toward tapping the potential opportunity provided by the electric vehicle market through its Mobile Energy Global (MEG) segment in the Chinese and ASEAN markets.** The company has identified growth areas across the electric vehicle value chain across the globe, with a special focus on the Chinese market, the largest electric vehicle market in the world. The company's MEG business segment has four business units each targeting a specific element of the value chain. The four business units include 1) Commercial EV and EV battery sales, 2) New Energy Sales (NES), 3) Energy Storage Systems (ESS) and Energy Management Systems (EMS), and 4) New Energy Metals Trading Platform. The combined mission for MEG's four business units is to use EV and EV battery sales and financing to attract commercial fleet operators that will generate large scale demand for energy, ESS, and EMS services. Additionally, MEG aims to become a key player in the supply chain of crucial metals required for EV batteries, which are the center piece of mobile energy. The company expects to generate gross revenues in the range of \$600 million<sup>1</sup> in 2020 from its MEG division earning a 650 bps spread for net revenues of \$39M. These revenues will be derived from the spread on group buying activities, as well as fees derived from lease financing and ABS refinancing activities.

**Chart 17: IDEX's \$2 Billion Topline Goal Is Centered on Opportunities Across the Value Chain in the Global EV Market**

### MEG Platform - Driving Mobile Energy Transformation and the Fintech Revolution

Ideanomics will use EV and EV battery sales and financing to acquire commercial fleet operators that will generate large scale demand for energy, ESS and EMS services. Additionally, Ideanomics aspires to become a key player in the supply chain of crucial metals required for EV batteries, which are the center piece of mobile energy.

#### 1. Commercial EV & EV Battery Sales

- Batteries
- Commercial EVs (Heavy Duty Trucks & Off-Road Machinery\*, Logistic Vans & Trucks, Buses, Taxis & Ride Sharing)
- Lease Financing: ABS & Supply Chain Financing

\* Target Sectors: Mines, Ports, Airports, Steel Mills

#### 2. New Energy Sales

- AI-based Electricity Supply Chain
- Group Sales to Battery and Vehicle Sales Clients
- Charging Network into Gas Stations
- Gas/LNG/Electricity via Union Pay 4-Cards-in-1 for Cloud-based Sales

#### 3. Energy Storage System/ Energy Management System (ESS/EMS)

- Energy Storage and Energy Savings Services for Airports, Large-scale Commercial Complexes, etc.

#### 4. New Energy Metals<sup>‡</sup> Trading Platform

- A new energy metals trading center that focuses on graphene and includes nickel, cobalt, lithium, manganese, etc.
- Raw Materials/Processed Materials/Applications/IP Trading
- Supply Chain Management/Supply Chain Finance

<sup>‡</sup> New energy metals are, in most cases, minerals that are scarce raw materials for batteries which are the center piece of mobile energy.

Source: Intro-act, Company

<sup>1</sup> Assumes revenues reported on a gross (principle) basis based on US GAAP



- IDEX's has adopted a partnership-driven growth strategy to accelerate its entry into the Chinese and ASEAN EV market.** The company formed multiple joint ventures (JVs) and strategic partnerships last year to lay the foundation for continued multi-year growth of its MEG business. These JVs and partnerships have already resulted in a strong order book and have also allowed the company to establish its presence in key Chinese provinces. In addition, they have positioned the company as a key player across the EV industry value chain. Finally, the infusion of funds through these JVs is providing growth capital to IDEX and fueling its expansion plans in China and ASEAN nations, starting with Malaysia. Overall, we believe this partnership-driven approach will not only accelerate IDEX's time to market but will also ensure that the company is able to run its operations in a capital light manner, a key competitive advantage in the capital-intensive EV market.

**Chart 18: IDEX Has Established MEG as a Growth Platform in 2019**



Source: Intro-act, Company

**Chart 19: IDEX – Best-In-Class Affiliates and Partners Across the Industry Value Chain**



Source: Intro-act, Company

## Joint Ventures and Order Wins Driving MEG Group's Revenue Growth

- **IDEX's first key joint venture is with iUnicorn, China's fourth-largest ride-hailing company, and provides it with a strong foothold in the Chinese electric taxi market.** On May 31, 2019, IDEX and iUnicorn formed a JV named as NEV Works (New Energy Vehicle Works) to cater to the electric taxi market in Chengdu. iUnicorn offers luxury branded electric vehicles from brands such as Tesla, BMW, Buick, Mercedes, Cadillac, and Chinese electric vehicle OEMs, and is one of the leading ride-hailing companies in China. IDEX owns a controlling stake (50.1%) in the JV.
  - **In August 2019, the JV won its first order worth \$130 million for delivery of 11,000 new energy taxis to the City of Chengdu.** The delivery of these 11,000 electric taxis, with an estimated sales value of \$130 million (RMB 926 million), is expected to be completed in 2020. It is worth noting that Chengdu is one of the prominent economic centers in Western China and houses more than half of Fortune 500 companies. The current order was issued by Guizhou Qianxi Green Environmentally Friendly Taxi Service which is contracted with Chengdu Taxi Association and Chengdu Transportation Committee (CTACTC). This committee has been designated by the Chengdu Municipal Corporation to promote new energy vehicles in Chengdu province. As such, this order provides IDEX with a significant inroad into sales of new energy vehicles in Chengdu.
  - **The above order builds on a \$2.9 million order executed by the JV in 3Q19.** The JV delivered an additional 4,714 electric taxis to Qianxi in 3Q19. This boosted its revenue by \$2.9 million – commission for facilitating the order – and helped strengthen IDEX's presence in the region.
  - **Overall, we believe that the JV holds immense revenue potential for IDEX.** NEV Works is the exclusive sales, marketing, operations, and financing partner for iUnicorn's business activities. The JV will generate revenues from fees from ABS, ranging from 0.7% to 1.5%, and from commissions on vehicle sales orders. IDEX's is responsible for advisory and sales in the JV, including arranging for ABS-based auto financing from its banking and financing partners. iUnicorn, on the other hand, is responsible for contributing signed sales order of 19,000 vehicles in Chengdu and 89,000 vehicles in Sichuan at a later stage. Given that the current order of 11,000 vehicles is worth \$130 million, the topline potential from 89,000 vehicles is huge. (See revenue model below.) Profitability is also very strong under this model as IDEX's entire EV unit turned a profit in 3Q19 with only 4,172 taxis delivered.

Chart 20: MEG's Revenue Model Implies Huge Upside from the JVs and Orders Being Secured by IDEX

### MEG's Comprehensive Revenue Model by Category

Vehicle / Energy Sales	
<b>1. Group sales spread through the Commercial Vehicle and Battery Manufacturers Alliance – 2% to 15%</b> <ul style="list-style-type: none"> <li>• Batteries – 5% to 8%</li> <li>• Heavy Trucks – 6% to 8%</li> <li>• Buses – 6% to 15%</li> <li>• Taxis* – 2% to 4%</li> <li>• Delivery Vehicles – 2% to 5%</li> </ul>	<b>2. Financing fees – 1% to 2%</b> <ul style="list-style-type: none"> <li>• Commercial lease financing</li> <li>• ABS refinancing</li> <li>• OEM financing</li> <li>• Battery financing</li> </ul> <b>3. Factoring Services – 0.5% to 1%</b> <b>4. Insurance Services – 10% to 20%</b>
After Market Revenues	
<b>5. Charging revenues/charging card sales spread – 100bps to 5%</b>	
<b>6. Fractionalized Ownership of Commercial EVs – 2% to 5%</b>	

Source: Intro-act, Company.

- **The second key deal driving the MEG Group's growth is with Yunnan Energy.** IDEX announced its second major electric vehicle deal on November 14, 2019, as it secured an order for delivering 35,000 electric taxis to Yunnan Energy Investment Group. This was a part of a broader cooperation agreement with Yunnan Energy, which is a designated entity for developing clean energy transportation solutions in the Yunnan province.
  - Within a fortnight of signing this deal, IDEX and Yunnan Energy signed an exclusive agreement to form a JV to promote electric vehicle enablement within Yunnan province and in South East Asia through the province's designation as China's 'belt and road' partner. The major objective of the JV is to promote the adoption of EV heavy trucks in the mining-centric province, as well that of buses, logistic vehicles, and taxis, as part of IDEX's MEG division's S2F2C (sales-to-financing-to-charging) program.
  - The JV, expected to be operational in early 2020, will also establish a development fund with resources from Yunnan province with two key objectives: 1) EV acquisition to include an operational company for the benefit of the leaser; and 2) investment into cleantech mobile energy related projects identified by the joint venture, including investment into the construction and management of power grid infrastructure in South Asia and South East Asia to deliver the fast-charging and energy storage solutions required to support the EV industry.
- **Another revenue driver for IDEX is the sales order for 500,000 LCVs it received through its partnership with Golden Concord Holdings Limited (GCL Group).** GCL, a diversified energy group based in Hong Kong, has committed to a sales order of 500,000 units of electric vehicles over a three-year period for a 49.9% stake in IDEX's MEG Group. GCL's commitment is based on its contract with the Chinese government to supply 500,000 light commercial vehicles to many states and public entities.
  - **The MEG group signed its first order from the GCL partnership for 1,200 logistical vehicle sales and financing.** The initial order signed during 4Q19 was for 500 vehicles with another 700 units added in 1Q20. The total order is valued at \$24 million (RMB 167 million) and is the first EV logistical vehicle order for IDEX involving city/urban delivery cargo vans intended to facilitate last-mile deliveries. The logistical vehicle market in China is estimated to be 14 million units and provides a huge growth opportunity for IDEX.
  - As a part of the agreement, signed in August 2019, GCL will also provide real-time vehicle data monitoring capabilities to help proactively manage enterprises' fleet of electric vehicle. IDEX and GCL will also contribute their resources in the areas of charging networks, fuel cell and batteries, and related partnerships, to round out a full-service sales-to-financing-to-charging offering. The agreement also provides for development and expansion of GCL's new investment fund of RMB 5 million to be increased up to RMB 10 million, with both parties co-managing the fund 50:50 as general partners and fund managers.
- **IDEX entered its third provincial market in China by securing an order of 2,300 electric taxis from the City of Guilin, in Guanxi province, through its partner QuianXi.** Following its success in securing orders from the provinces of Sichuan and Yunnan, IDEX's MEG group won another order for delivering 2,300 electric taxis to City of Guilin, with delivery expected to commence in 1H20. With this, total orders received by the MEG division for delivery of electric taxis within China increased to >130,000 units, which will significantly boost its FY20 revenues. This order, however, has been put on hold until 1Q20 due to municipal subsidies and new taxi license policies being put in place for 2020.
- **The company has carried forward the strong deal flow from 2019 into 2020, with order wins totaling >\$1 billion coming in for heavy trucks and buses.**
  - **The company signed multiple deals with Jiangsu Linghao Network Technology Co in March 2020.** The MEG division signed an agreement for multiple orders worth RMB 1.8 billion (~\$250 million) from Zhitong 3000's holding company Jiangsu Linghao Network Technology Co Ltd. The deal includes 3,000 units of heavy haulage transportation vehicles, 1,000 units of heavy dump trucks for use in transportation of slag and mined ore, and 800

passenger-class cars. MEG will procure these vehicles from multiple manufacturers within its partner alliance and is committed to a rolling delivery schedule in 2020.

- **IDEX also announced a deal from a leading construction site dump truck operator in Southwest Chinese provinces of Sichuan, Yunnan, and Guizhou.** On March 16, 2020, the company announced receipt of another major order from Sichuan Shenwu Yunli Transportation Services Co., Ltd. for the supply of 2,000 units of 8x4 meter heavy duty dump trucks, with each vehicle costing ~RMB 0.75 million (\$0.11 million) per unit, taking the order total to RMB 1.5 billion (\$215 million). The rolling delivery for this order is scheduled for 2020 and beyond, with trucks being procured from manufacturers within MEG's partner alliance.
- **The company also announced its first major order for supply of buses with an order value of \$575 million.** On March 16, 2020, the company announced a new order from Beijing Silk Road Rainbow Car Rental Group Co., the leading bus operator in Northern China, for supply of 5,000 full size electric buses for multiple locations in Northern China. The order is expected to be valued at RMB 4 billion (\$575 million) with an average vehicle cost of RMB 0.8 million (\$0.12 million) with a rolling delivery schedule throughout 2020 until 2022.
- **The company has recently (post COVID-19 disruption) bagged additional orders for 600 units of electric vehicles with a potential revenue contribution of \$8.1 million.** IDEX resumed its normal operation, after the coronavirus led disruption, from March 30, 2020, and announced three new vehicle orders from 1) 200 units of Roewe iE6 passenger cars from Hangzhou Dishu Auto Service Co., Ltd., 2) 100 units of Volkswagen Passat passenger cars from Hangzhou Lufei Automobile Service Co., Ltd., and 3) 300 units of Jiangling E2000 vans from Hangzhou Hanyao New Energy Vehicle Sales & Service Co., Ltd.

**Chart 21: MEG's Recently Announced Sales Agreements**

Jiangsu Linghao Network Technology	Sichuan Shenwu Yunli Transportation
<ul style="list-style-type: none"> <li>• Total order is approximately RMB 1.8B or USD 250M</li> <li>• 4,800 vehicles: 3,000 heavy haulage transportation vehicles, 1,000 heavy dump trucks, 800 passenger-class cars</li> <li>• Vehicles procured from MEG's manufacturers alliance</li> <li>• Rolling delivery schedule throughout 2020</li> </ul>	<ul style="list-style-type: none"> <li>• Total order is approximately RMB 1.5B or USD 215M</li> <li>• 2,000 8x4 meter heavy trucks for construction project use</li> <li>• Multi-year order is subject to lease financing via MEG</li> <li>• Order fulfilment runs through 2022 / 2023</li> </ul>

Source: Intro-act, Company

## Partnerships Across the Supply Chain to Boost Market Share

- **IDEX has entered into partnerships with various agencies to provide lease financing solutions to Chinese EV consumers and grow its market share.**
  - On April 6, Qingdao City Construction Investment Group Limited (QCCIG) has entered into framework strategic cooperation agreement with Sun Seven Stars Investment Group Limited (SSSIG)<sup>2</sup> to raise up to RMB 50 Billion (USD 7 Billion) fund to finance investment projects in Qingdao and Shandong Province. Approximately 20% of the new fund will be earmarked to finance the purchase of electric vehicles (EVs) to replace existing gas-powered fleets in Shandong province. The fund will sign an agreement with Ideanomics' MEG Group once it is fully formed and the funds are in place to provide MEG financing for EVs. Over the course of the year, SSSIG's goal is to sign between three and six similar deals with 20% to 30% of the funds being allocated to MEG for fleet financing.
  - **On November 25, 2019, IDEX announced an agreement with Dasheng Licheng (Beijing) Financial Leasing Co., Ltd.** to provide an innovative lease financing program for AAA+ rated state-owned entities (SOEs) and other enterprise fleet operators. Through this arrangement, IDEX was successful in bringing several high-profile insurance companies to provide large-scale funds to support EV lease financing programs. The insurance company partners include China Life, China Property Insurance, Pacific Insurance, Taiping Insurance, Ping An Insurance, and Urtrust Insurance, who have collectively committed up to RMB 100 billion for the Inner Mongolia heavy-duty trucks replacement project. The agreement is planned to go live in 2020.
- **The company has also partnered with leading EV manufacturers and EV battery makers in China to strengthen its supply chain, and boost market share and revenue.**
  - **IDEX partnered with Anhui Jianghuai Automobile Group Co., Ltd. (JAC Motors) last June to sell and promote JAC's EV product line up.** The MoU focuses on several key areas of activity, including EV taxi fleet rental and leasing in China, EV buses, heavy commercial truck sales and financing, municipal EV trucks such as fire trucks, and other municipal vehicles and light commercial vehicles in China and ASEAN countries, and police and law enforcement passenger vehicles and light trucks, including any customization thereof for regionalization or fit for purpose needs. The company will receive a commission of up to 15% for sales order and any price differential.
  - **IDEX entered into a two-year RMB 10 billion (\$1.5 billion) deal with Beijing Foton Motor Company to provide ABS lease financing of electric vehicles to be fulfilled by Foton.** The completer order of 60,000 EV buses will be sold to state-owned large-scale tourism groups, local governments or local bus transportation systems, and domestic tourism associations and/or their members.
  - **In July 2019, IDEX forged a partnership with Anhui Ankai Automobile Co. for a minimum order of 10,000 buses.** These buses will be provided to tour bus operators with benefits ranging from factory/group purchasing power, through to streamlined ABS financing services by IDEX's MEG division. The company will receive a 10% commission on bus orders it introduces subject to the make, model, and specifications of the bus ordered.
- **IDEX has also partnered with leading energy distribution companies in China to build its presence in the EV charging infrastructure market.** On September 13, 2019, IDEX announced its strategic partnership with China National Petroleum Corporation Nanjing. IDEX and PetroChina have agreed to form a JV to construct new energy fuel stations in Nanjing, capital of China's eastern Jiangsu province, and also to convert the existing gas stations into hybrid stations. This partnership will help IDEX leapfrog into the electric vehicle charging infrastructure market since PetroChina, the world's third-largest oil company, has a strong network of fossil fuel gas stations across China. The new energy fuel stations will promote low

<sup>2</sup> Sun Seven Stars Investment Group (SSSIG) is the largest shareholder in Ideanomics and is controlled by Dr. Bruno Wu and his wife.



emissions and clean energy production for EVs through fuels such as mixed hydrogen and compressed natural gas (CNG), power generation, hydrogen power generation, mixed methanol and hydrogen power generation, as well as fast-charging networks, and other related technologies provided by MEG.

- In July 2019, the company announced a partnership with Three Gorges Power Energy Management Co., Tianda Energy (Shenzhen) Co., and Shenshang Technology (Shenzhen) Co., to develop and deploy fast EV charging networks aimed at cutting the current fast charge time to  $\sim 1/3^{\text{rd}}$ . Three Gorges Energy is the world's largest hydro-electric company, and its financing wing will provide the capital to support IDEX's new energy commercial vehicles orders. IDEX will provide client acquisition, strategic sales and marketing services, as well as other advisory services as part of the partnerships.
- On April 7, 2020, IDEX deployed a pilot program in Nanjing to monetize electric vehicle energy sales. This pilot program which is focused at three critical components in EV energy consumption: payment systems, charging stations and energy supply chains, will help MEG generate revenues from "prepaid energy sales to commercial EV fleet operators as well as revenues from point-of-sale energy consumption" at charging stations. This pilot program will also showcase the supercharging stations provided by Contemporary Amperex Technology Co. Ltd. (CATL) into PetroChina gas stations in Nanjing.



## Fund Raising to Provide Growth Capital and Fuel Expansion

- **Qingdao Mobile New Energy Vehicle Sales Co. Ltd., a subsidiary of IDEX's MEG division, has received growth funding to the tune of \$7.2 million.** On January 24, 2020, IDEX entered into an agreement with Qingdao Xinyang City Investment under which Qingdao agreed to invest an aggregate of potentially RMB 200 million as registered capital with an initial investment of RMB 50 million (~\$7.2 million) in Qingdao Mobile New Energy Vehicle Sales Co. Ltd., a subsidiary of IDEX's MEG division. The funding would help IDEX promote its sales and leasing business of electric vehicles across China and ramp up its business.
  - Pursuant to the agreement, Qingdao agreed that within 10 days after the completion of the establishment of Mobile Qingdao would invest RMB 50 million as the first installment. Subsequent tranches of investment are subject to the condition that MEG's subsidiary would generate sales. For every RMB 10 billion of sales registered by MEG's subsidiary, Qingdao would infuse capital of RMB 50 million and as the sales would reach RMB 30 billion, it would pump in the full registered capital of RMB 200 million. In return, Qingdao would get a 10% stake in MEG's subsidiary, thus valuing the subsidiary at RMB 2 billion (~\$288 million).
  - The sales targets for the full investment will require MEG to sell around 100,000 units in total EV sales across its four segments of logistical vehicles, taxis, city and tour buses, and heavy trucks. IDEX is confident that with an addressable market of 14 million units for logistical vehicles in China, it will very easily be able to achieve its sales target set under this agreement.
  - As part of the agreement, IDEX would headquarter its MEG subsidiary in Qingdao, to build out a large electric vehicle hub in China. The 100,000 square meter (1 million square feet) facility will host a state-of-the-art sales and service center for new and used passenger and commercial EVs, and on-site financing, insurance, and vehicle registration services. The 1 million square foot site has since been renovated as a permanent EV expo center and Qingdao-MEG Sales Center, branded as Mobile Energy Group Center, is scheduled to start sales operations by May 1.

**Chart 22: IDEX Has Announced Development of a 1 Million Square Feet EV Hub in the City of Qingdao**



Source: Intro-act, Company

## Treeletrik Acquisition Kick Starts IDEX's Global Expansion Plans

- **IDEX's acquisition of Malaysia-based Treeletrik gives its global expansion plan a kickstart.** In December 2019, the company acquired a 51% stake in Malaysia's Tree Technologies Sdn. Bhd., the exclusive sales and distribution arm of Treeletrik, establishing it as a major player in Malaysia which has an estimated EV market of between \$6 billion to \$7 billion. Treeletrik is the only domestic licensed EV manufacturer in Malaysia, with extensive relationships in both the public and private sector, including exclusive supplier agreements with the Malaysian government, Malaysian Police, and regional operators for up to 60,000 EV buses.
  - **IDEX acquired the 51% stake in an all-cash deal for with a combination of cash and stock for up to \$51 million.** Treeletrik shareholders received 9.5 million common shares of IDEX valued at \$2 per piece, \$0.9M in cash and an earnout component of up to \$32M to be paid in cash or stock. Additionally, IDEX also acquired an 11.22% stake in the Treeletrik manufacturing entity, Tree Manufacturing Sdn. Bhd., for a consideration of \$25 million in a cash and stock deal. IDEX paid \$0.62 million in cash and 12.19 million common shares of IDEX valued at \$2 per piece for this 11.2% stake in the parent entity.
  - **The deal establishes IDEX as a leading player in the Malaysian EV market and also provides it with the rights to develop one square kilometer of land in Malaysia China Kuantan Industrial Park (MCKIP).** Tree Technologies holds a title to the land parcel for 99-years lease agreement at the time of the deal. The 250-acre site is presently valued at ~\$25 million and will be developed by Treeletrik into manufacturing hub with the support of China-based manufacturing partners to support the EV business of Treeletrik.
  - **In March 2020, IDEX has announced its intention to take Treeletrik public via an IPO in Singapore or Hong Kong later this year.** This will help IDEX raise additional capital to fuel its growth plan in the Malaysian market.

Chart 23: Treeletrik Has Started Delivering on Government Vehicle Orders, Starting with Police Motorcycles



Source: Intro-act, Company, Facebook

## Ideanomics Capital – Driving Innovation-Led Growth for IDEX

- **DBOT, acquired in July 2019, besides being a broker dealer also operates an Alternative Trading Systems (ATS) focused on trading of traditional OTC securities and is key part of IDEX's Ideanomics Capital business.** DBOT operates an ATS in a highly competitive market, dominated by OTC Market Groups, for trading of over the counter (OTC) securities. The Delaware Board of Trade Holdings Inc. operates three companies 1) DBOT ATS LLC, their SEC recognized Alternative Trading System, 2) DBOT Issuer Services LLC, focused on setting and maintaining issuer standards, as well as the provision of issuer services to DBOT designated issuers, and 3) DBOT Technology Services LLC, focused on the provision of market data and marketplace connectivity.

**Chart 24: DBOT is a FINRA Member Broker Dealer Providing Alternative Trading Systems**



Source: Intro-act, Company

**Chart 25: Intelligenta is IDEX's AI-driven SaaS and PaaS Solution Business for the Financial Services Industry**

INTELLIGENTA

- **Intelligenta is a pre-revenue company focused on delivering AI-driven solutions to the financial services industry.** IDEX's artificial intelligence (AI) service and solutions offering was rebranded in April 2019 as Intelligenta. The company was initially formed as a joint venture between IDEX and Seasail, an affiliate of Big Business Data (BBD), between December 2017 and April 2018, in which IDEX held a 60% stake and Seasail remaining 40%.

**EKAR - Key Information (as of 03/17/2020)**

Primary Exchange	NYSE	Shares Outstanding	100,000
Ticker	EKAR	Number of Holdings	60
CUSIP	301505756	Fund Inception Date	02/13/2018
Net Assets	\$1.58 million	Expense Ratio	65bps
NAV	\$15.76	Closing Market Price	\$15.97

Source: Intro-act, Company

- Tesla (TSLA), Nvidia (NVDA), Intel (INTC), Alphabet (GOOGL), and Toyota (7203:JP) are its top five holdings accounting for 27.6% of the ETF's total AUM.
- **Divestiture of non-core assets.** The company has identified Grapevine, a marketing and ecommerce platform focused on influencer marketing, and FinTech, a 58-acre development site in West Hartford, Connecticut, US as non-core assets and is evaluating strategies for divesting these assets.

## Experienced and Focused Management Team to Drive IDEX's Growth

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- **IDEX restructured its executive team in early 2019 to reflect a change in its business priorities.** We believe that the current management team, which has members with significant experience in the financial services sector and fintech space, are well placed to steer the company on its growth journey and help it become a leading player in the EV sales and lease financing business, as well as the fintech business. The members of IDEX's management team are:
  - **Dr. Bruno Wu, Chairman.** Dr. Bruno Wu is the Chairman of IDEX, and Chairman and CEO of Sun Seven Stars Investment Group. Dr. Wu is an experienced investor, technology and media entrepreneur, and philanthropist. He is leading the company's fintech initiatives in artificial Intelligence, blockchain technology, and digital asset production and distribution. As Chairman and CEO of Seven Stars Investment Group, he leads capital operations, including investment banking advisory, financial investment, and fund management businesses. Dr. Wu received his PhD from the School of International Relations and Public Affairs at Fudan University, his MA in International Relations, Washington University, and his BA in Business Management from Culver-Stockton College of Missouri.
  - **Alfred Poor, President and CEO.** Alf Poor is the President and Chief Executive Officer of IDEX since February 2019. He was earlier President and Chief Operating Officer of the company and President of the Connecticut Fintech Village. Prior to joining IDEX, he was the Chief Operating Officer at Global Data Sentinel, a cybersecurity company that specializes in identity management, file access control, protected sharing, reporting and tracking, AI and thread response, and backup and recovery. He has also served as the President and Chief Operating Officer of Agendize, a company whose integrated suite of apps that help businesses generate higher quality leads, improve business efficiency and customer engagement. Alf is a client-focused and profitability-driven management executive with a track record of success at both rapidly growing technology companies and large, multi-national organizations.
  - **Conor McCarthy, Chief Financial Officer.** McCarthy joined as Chief Financial Officer of IDEX in September 2019. He brings over 30 years of experience to the CFO role in areas such as corporate strategy and corporate finance including capital raising and M&A. Having started his career as an auditor with KPMG in Ireland, McCarthy moved into financial services, working as CFO, Treasurer, and other executive finance roles, with trading and brokerage firms, as well as high growth FinTech partners supporting the financial services industry. Most recently, he was CFO of OS33, a private equity backed FinTech SaaS platform for compliance and productivity enablement for the wealth management industry with 200 employees. His previous positions include CFO roles with Intent, Convergenx Group, and 9 years as CFO of the Americas for GFI Group, Inc. a NYSE-listed FinTech wholesale money broker with revenues of almost \$1 billion (now part of BGC Partners). McCarthy holds a Diploma in professional accounting from University College, Dublin and a Bachelor of Business Studies from Trinity College, Dublin.
  - **Tony Sklar, Vice President of Communications.** Tony is a New York-based digital strategist, content analyst, communications specialist, and technology evangelist with over 15 years of business and digital leadership experience. He has expertise in sourcing strategic deal flow, partnerships and distribution and drives engagement that fuels revenue and global market growth. His experience of technology ecosystem includes IoT, AR/VR, FinTech, Blockchain, AI and connected cars. He has worked in various business ecosystems and has also been an investment advisor, an equities and options trader. He brought a corundum/sapphire mine to commercial production and is a seasoned presenter, a great product ambassador, and a strategic innovator.
  - **Kate Lam, Managing Director, Head of Digital Capital Markets.** Kate Lam joined IDEX in September 2018 and brings more than 20 years of financial markets experience in marketing multiple asset classes. She successfully obtained the SEC broker dealer license for Propellr Securities and integrated regulatory best practices into the



platform. As CEO of the broker dealer, she worked closely with engineers and product managers to design specs for investor vetting, as well as perform due diligences on financing deals. Prior to Propellr, Lam held senior management positions at Deutsche Bank, Bear Stearns, and Standard Chartered Bank with a client base spanning central banks, global and regional banks, asset managers, global insurance companies and hedge funds. Throughout her career in the U.S. and Asia, she ran high-performing cross border sales teams within emerging debt capital markets, foreign exchange, and US fixed income products. Her client base spanned the largest and fastest growing Asian markets, including China, Hong Kong, Taiwan, Singapore, Japan, and South Korea.

- **Drew Colvin, Vice President of Corporate Development.** Drew Colvin is the Vice President of Corporate Development at IDEX. Drew is a CFA charter holder and corporate development/M&A executive experienced in executing acquisitions, venture capital investments, and joint ventures to drive strategy and unlock value. Hi end-to-end M&A experience includes origination, due diligence, business case development, deal shaping, and post-merger integration with a strong background in corporate finance.
- **Matt Fogel, Senior Product Advisor.** Matt has over two decades of experience as a product management leader, startup founder and advisor. Over the span of his career, he led companies through the full lifecycle from launch to exit or closure and advises and mentors other startups though accelerators Techstars and FounderFuel. At Ideanomics, Matt bridges the gap between corporate's goals and founders' ambitions which are oftentimes communicated on different planes. He also assesses startups to determines if their products are scalable, resources required to integrate and grow them, and how to harmonize founders with Ideanomics management.
- **Zhu Jun, MEG Chief Operating Officer.** On September 24, 2019, Zhu was appointed as MEG COO to oversee group operations. Mr. Zhu is an experienced executive, having previously held management positions for the past 10 years in the automotive industry. Most recently, Mr. Zhu was General Manager for the Clean Energy Division of Zhejiang Kangsheng Co., Ltd. (also known as KASUN Group) and previously served as Executive Vice President of Chengdu-based Zhongzhi New Energy Vehicle Co., Ltd.
- **Li Hao, Head of MEG's Smart Energy Division.** On September 24, 2019, Li Hao was appointed Head of MEG's Smart Energy Division, overseeing its energy marketplace and charging network revenue segment. Mr. Li joins MEG having previously been the President of Shenshang Energy.
- **IDEX's Board of Director comprises of nine members, five of whom are independent.** The members of IDEX's Board of Directors are:
  - **Dr. Bruno Wu.** Dr. Wu is a leading media investor and entrepreneur with experience in helping Chinese media companies achieve business transformation, operational and financial performance improvement and sustainable business growth. Dr. Wu's extensive executive, industry and management experience led IDEX to the conclusion that he should serve as a director of the company.
  - **Alfred Poor.** Mr. Poor is a client-focused and profitability-driven management executive with a track record of success at both rapidly growing technology companies and large, multi-national, organizations. Mr. Poor's extensive executive experience and his educational background made him a suitable candidate to serve as a director of the company.
  - **Steven Fadem (Independent).** Mr. Fadem was appointed as director of the company effective as of August 14, 2019. He is an innovative executive and thought leader with substantial experience building media, entertainment, technology, information services, big data and cybersecurity companies with experience in the digital transformation of traditional businesses. Mr. Fadem has successfully launched start-ups; turned around

and revitalized complex corporate businesses and created long-term-value for professional services organizations. Mr. Fadem was the Chairman of Global Data Sentinel, a cybersecurity firm he cofounded in 2014. In his capacity as Chairman, he has led the company's strategic development and client acquisition efforts.

- **Harry Edelson (Independent).** Mr. Edelson was appointed as director of the Company effective as of September 15, 2019, CFA, CCP, CDP, is the Founder of Edelson Technology Partners, and President since 1980 of Edelson Technology, Inc., a company involved in consulting, fundraising, M&A, and investments. From 1984 until 2005 Mr. Edelson was an advisor and consultant for 10 multinational corporations (AT&T, Viacom, 3M, Ford Motor, Cincinnati Bell, Colgate-Palmolive, Reed Elsevier, Imation, Asea Brown Boveri and UPS). During this time, he managed four technology-oriented strategic venture capital funds for the aforementioned 10 companies using corporate rather than pension money. He has served on over 150 boards of directors, 12 as chairman. At some time in the past five years, Harry Edelson served as a director of four private companies, Airwire, PogoTec, eChinaCash, Pathway Genomics, and one public company, China Gerui.
- **Shane McMahon (Independent).** Mr. Shane McMahon is a member and Vice Chairman of the Board of Directors. Shane is an American businessman and professional wrestler who is a part of the owner family of WWE and the vice-chairman of Seven Stars Cloud Group, Inc, formerly Wecast Holdings Inc. He is currently the on-screen commissioner of WWE's weekly television show SmackDown Live. Mr. McMahon was appointed Vice Chairman as of January 12, 2016 and was previously IDEX's Chairman from July 2010 to January 2016. Prior to joining IDEX, he has also served in various executive level positions with World Wrestling Entertainment, Inc. (NYSE: WWE). Mr. McMahon also sits on the Boards of Directors of International Sports Management (USA) Inc., a Delaware corporation, and Global Power of Literacy, a New York not-for-profit corporation.
- **James S. Cassano (Independent).** Mr. Cassano was appointed as director of the Company effective as of January 11, 2008. Mr. Cassano is currently a Partner & Chief Financial Officer of CoActive Health Solutions, LLC, a worldwide contract research organization, supporting the pharmaceutical and biotechnology industries. Mr. Cassano has served as executive vice president, chief financial officer, secretary and director of Jaguar Acquisition Corporation a Delaware corporation (OTCBB: JGAC), a blank check company, since its formation in June 2005. Mr. Cassano has served as a managing director of Katalyst LLC, a company which provides certain administrative services to Jaguar Acquisition Corporation, since January 2005. Mr. Cassano has substantial experience as a senior executive in management consulting, corporate development, mergers and acquisitions and start up enterprises across industries. Mr. Cassano's extensive executive experience and his educational background led to his appointment as a director of the company.
- **John Wallace.** Mr. Wallace is a seasoned executive with experience across a range of industries was appointed a director on July 5, 2019. For the majority of his career, John was a senior executive & officer of the Philadelphia Stock Exchange ("PHLX"). John started at the PHLX in 1964 and became a member of the PHLX in 1971. John served as a member of the PHLX Board of Governors from 1984 until August 2008. During his tenure at the PHLX John held several senior positions including Chairman, Vice Chairman and Chief Executive Officer. He traded on all floors of the exchange in the capacity of a specialist/market maker on the options and equity floors, and as a floor broker for equities, options, and currencies.
- **Jerry Fan (Independent).** Mr. Fan was appointed as director of the Company on January 12, 2016. Mr. Fan has served as Managing Director and Country Manager for the Greater China region at Analog Devices, Inc. (NASDAQ: ADI), a global semiconductor company since November 2012. Prior to ADI, Mr. Fan worked for Cisco Systems, Inc.



(NASDAQ: CSCO) for 15 years between 1997 and 2012 in a number of senior management roles, including Sales Managing Director for Cisco China, Sale Director for Cisco Australia and Senior Manager for Operations and Strategy for the Cisco Service Provider business based in Hong Kong.

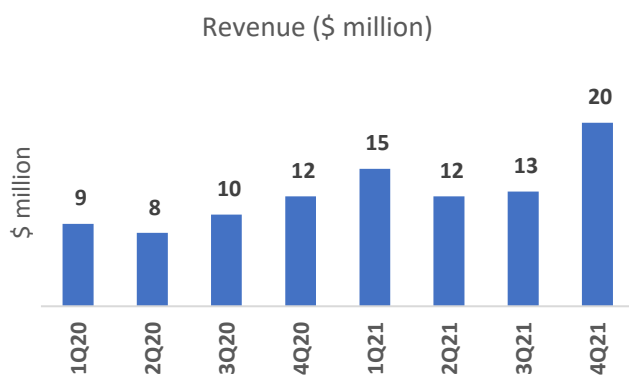
- **Chao Yang (Independent).** Mr. Yang was appointed as a director of the Company on August 7, 2018. Mr. Yang has been an Independent Non-Executive Director of Fosun International Limited since December 2014. Mr. Yang was the chairman of China Life Insurance Company Limited (listed on the Hong Kong Stock Exchange with stock code: 02628) from July 2005 to June 2011, the president and secretary of party committee of China Life Insurance (Group) Company from May 2005 to May 2011 and an independent non-executive director of SRE Group Limited (listed on the Hong Kong Stock Exchange with stock code: 01207) from November 2013 to December 2015.

## Fundamental & Valuation Analysis

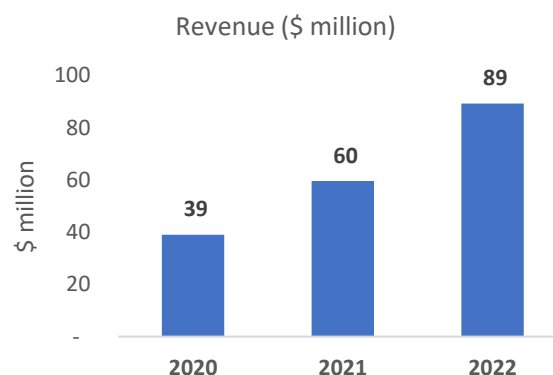
### Leadership Position, Long Growth Runway, Cheap Valuation Make IDEX An Attractive Bet

- **IDEX has secured a very robust order pipeline, driven by large contracts announced over the past six-to-eight months, and is conservatively on track to fulfil orders worth \$600 million in 2020, though execution is likely to be back-half loaded (2H20).** Our model assumes the following:
  - **Order conversion of ~\$600 million in 2020; likely to top \$1 billion next year.** IDEX's order pipeline exceeds \$2 billion for supply of electric taxis, trucks, and buses across various Chinese provinces through its MEG segment. We estimate that, under a conservative scenario, ~30% of the existing pipeline will convert into actual orders leading to an orderbook of \$600 million this year. The company has already executed some notable deals in 1Q20; however, given the slowdown in economic activity due to the coronavirus, most orders are likely to be executed in 2H20. Beyond this we also expect the company to experience a >50% y/y jump in orderbook in 2021 to \$1 billion+, as Chinese incentives stimulate deal conversion and IDEX expands into adjacent ASEAN markets.
  - **Sales will hit ~\$39 million in 2020 and climb to \$89 million in next two years.** IDEX's order pipeline is skewed toward delivery of electric vehicles to different agencies, mainly fleet operators, which will enable it to earn revenue in form of spread between the buy and sell price. The sales spread ranges between 2% to 4% for taxis and between 6% to 15% for commercial trucks and buses. On an average, we estimate that the mean spread realized by the company on these transactions will be ~5.5% leading to a sales of ~\$33 million in 2020. The company also provides financing facilities which is expected to generate an incremental revenue of ~\$6 million, taking the total topline to \$39 million in 2020. Driven by the company leadership position in the market, we expect revenue growth to remain robust and expect topline to jump to \$89 million by 2022. IDEX is aggressively working toward monetizing energy sales for electric vehicles and this will further aid revenue growth in the coming years, apart from the contribution from the Ideanomics Capital segment which will become operational and start contributing to group revenue over the next couple of years.

**Chart 26: 4Q Will Be The Seasonally Best Quarter in Both 2020 and 2021**



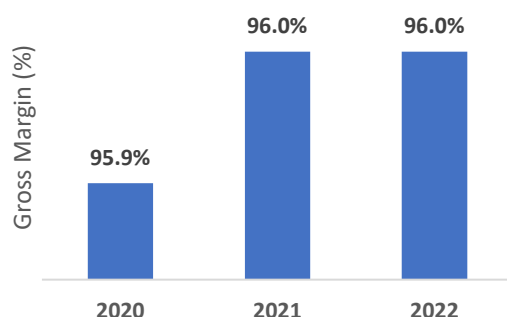
**Chart 27: Revenue to Grow >100% Between 2020 and 2022**



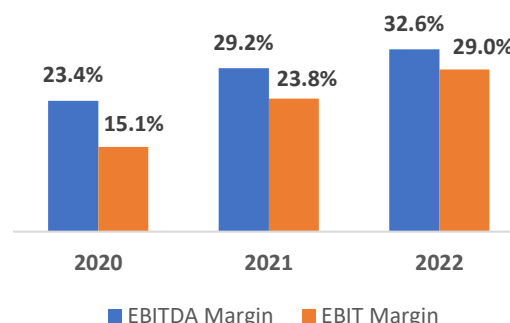
Source: Intro-act, Company

- **Gross margin to remain steady around ~95%, reflecting IDEX's strong business model.** The major direct cost component for the company will be that associated with the sales team involved in closing the deals. With an estimated 10-member sales team, IDEX is likely to incur a direct cost of \$2 million (~5% of revenue). This will result in a healthy gross margin of ~95% or \$37 million. One of the other cost components will be the cost associated with invoicing, which is expensive in China as every ~\$150K of goods requires a separate invoice under the prevailing Chinese law.

**Chart 28: Gross Margin Will Remain Stable and High Through 2022**



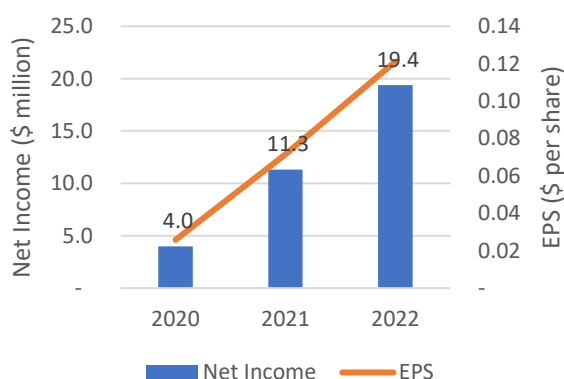
**Chart 29: EBIT and EBITDA Margins Will Rise Y/Y Through 2022**



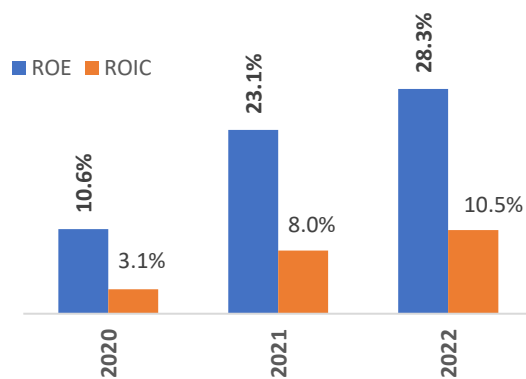
Source: Intro-act, Company

- EBIT and EBITDA margins will expand through 2022 as IDEX enjoys economies of scale.** The SG&A of the company will be ~\$23 million in 2020, which includes a D&A expense of \$2 million. IDEX will also incur an additional operating expenditure of \$8 million, leaving the company with an EBIT of \$6 million and an EBITDA of \$23 million in 2020. With a total operating expense of \$31 million, the company is likely to report an EBIT margin of 15% and an EBITDA margin of ~21%, which are very healthy by any benchmark. As IDEX scales its business, SG&A expenses will decline from ~60% of sales in 2020 to 55% in 2021 and 54% in 2022, thereby boosting its operating profit margin. The EBIT and EBITDA margins will also benefit from falling other operating expenses which will account for 17% and 13% of group sales in 2021 and 2022, respectively, compared to 21% in 2020.
- Net profit margin will top 10% in 2020 and expand to 22% by 2022. We expect IDEX to generate an EPS of \$0.03 in 2020.** We expect IDEX to generate ~\$4 million in net income in 2020 as it is unlikely to incur a tax expense which will aid the bottom-line, allowing the company to report a net profit margin of 10.3%. This will continue to increase over subsequent years as the company's revenue continues to grow at a CAGR of >50% through 2022, despite an incremental tax burden which will be ~5% of sales in 2021 and increase to ~7% in 2022. We expect the company's net income to increase ~4x from \$4 million in 2020 to \$19.4 million in 2022. Strong sales, coupled with improving profitability, will result in improving return ratios with RoE expected to top the 20% mark next year and ROIC hitting double digits in 2022. **We expect IDEX to be free-cash flow (FCF) positive in 2020, a reflection of its strong business model, and expect FCF to more than treble from \$6 million in 2020 to \$20 million in 2022.**

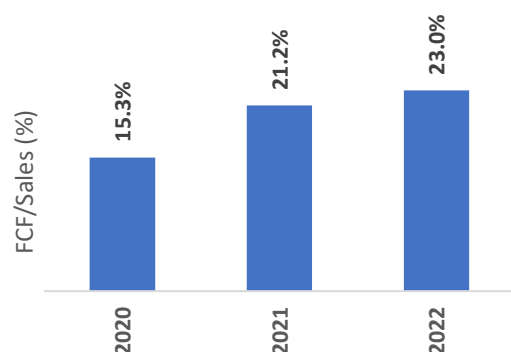
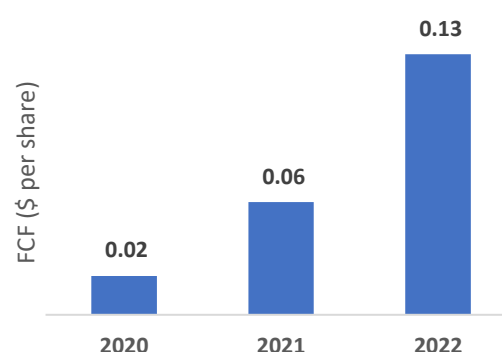
**Chart 30: Net Income and EPS to Grow Between 2020 and 2022**



**Chart 31: ROE and ROIC Will Continue to Climb Higher Through 2022**



Source: Intro-act, Company

**Chart 32: FCF-to-Sales Will Continue Rising Through 2022**

**Chart 33: FCF per share to Grow >5x by 2022**


Source: Intro-act, Company

- **Revenue and profit contribution of other businesses and ASEAN operations provide an upside potential to fundamentals.** IDEX offers complementary services to the EV market in China through its MEG division, including EV charging services and long-term energy credit/contracts. Energy sales will contribute to IDEX's revenue from 2021, giving it a 300 basis points (bps) margin on both prepaid energy at a discount, as well as 300 bps on charging station network volume. The company also operates its Ideanomics Capital division, which includes the DBOT, Intelligenta and EKAR businesses. Apart from this, IDEX is also present in Malaysia, where it acquired Treeletrik, the only licensed EV manufacturer in Malaysia. Our revenue (and profit) projections do not include the contribution of these businesses (due to COVID-19), which will provide a further boost to IDEX's topline and bottom-line in the coming years.
- **We believe that IDEX is currently underpriced given its leadership position, strong order pipeline, and a long growth runway. Our DCF analysis indicates that IDEX has an intrinsic value of ~\$295 million.**
  - **We expect IDEX to generate an EPS of \$0.12 in FY22 and assign a conservative 15x P/E multiple to arrive at an intrinsic value of \$1.82 per share or \$295 million.** IDEX enjoys a leadership position in a niche market which benefits from regulatory tailwinds. IDEX is focused on the niche electric commercial vehicles market which will see a surge in demand as regulations make it mandatory for fleet operators to replace their existing ICE vehicles with clean fuel vehicles. The company has a leadership position in this market in China and also has the first-mover advantage in the Malaysian market. IDEX's order book and thus its revenue is likely to grow at more than 50% year-to-year through 2022 and it will be able to generate an EPS of \$0.12 by 2022. A 15x P/E multiple, which we believe is very conservative given the fact the company will be FCF positive starting 2020, implies that IDEX has an intrinsic value of \$1.82 per share or \$295 million, representing an 122% upside from current market price of \$0.82 per share.
  - **Overall, given the large addressable market, IDEX's strong competitive position, robust and growing order book, strong management team, and the impending inflection in its financial profile starting 2020, we believe that the Street is undervaluing the stock and expect it to re-rate as business goals are achieved.** Contribution from New Energy sales and the Ideanomics Capital business segments have currently not been factored in the financial model and leave scope for an upward revision in the intrinsic value of the company as these segment start contributing.

Chart 34: IDEX — Financial Model

Ideanomics		IDEX								Price		0.82		TARGET VALUE				1.82		122%			
Wright																		(15x CY22 EPS of \$0.12)					
	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20E	2Q20E	3Q20E	4Q20E	1Q21E	2Q21E	3Q21E	4Q21E	CY18	CY19	CY20E	CY21E	CY22E		
	Mar-18	Jun-18	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19	Mar-20	Jun-20	Sep-20	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21	Dec-18	Dec-19	Dec-20	Dec-21	E Power		
CONSOLIDATED INCOME STATEMENT																							
REVENUE	186	133	44	15	27	14	3	0	9	8	10	12	15	12	13	20	378	45	39	60	89		
COGS	186	131	43	15	1	1	1	1	0	0	0	0	1	0	1	1	375	4	2	2	4		
Gross Profit	0	2	1	0	26	13	2	(1)	9	8	10	12	14	12	12	19	3	41	37	57	86		
SG&A	4	9	6	7	6	8	9	8	6	5	6	7	8	7	7	10	27	31	23	33	48		
Other Op. Exp.	(0)	0	0	0	(0)	0	0	(0)	2	2	2	2	3	3	3	3	0	0	8	10	12		
EBIT	(4)	(9)	(6)	(7)	21	6	(7)	(9)	1	1	2	3	4	2	2	6	(26)	10	6	14	26		
Interest & Other (Expense)/Income									0	0	0	0	0	0	0	0	0	0	0	0	0		
Extraordinary Item (Expense)/Income	(0)	0	1	2	1	1	5	99	0	0	0	0	0	0	0	0	2	107	0	0	0		
Pretax Income	(4)	(9)	(7)	(9)	20	5	(12)	(109)	1	1	2	3	4	2	2	6	(28)	(96)	6	14	26		
Taxes	(0)	(0)	(0)	(0)	(0)	(0)	1	0	(0)	0	0	0	1	0	0	1	(1)	1	(0)	3	6		
Net Income	(4)	(8)	(7)	(8)	20	5	(14)	(109)	(1)	1	2	3	3	2	2	5	(27)	(98)	4	11	19		
EPS (GAAP)	(\$0.05)	(\$0.12)	(\$0.10)	(\$0.08)	\$0.17	\$0.05	(\$0.11)	(\$0.74)	(\$0.01)	\$0.00	\$0.01	\$0.02	\$0.02	\$0.01	\$0.01	\$0.03	(\$0.35)	(\$0.62)	\$0.03	\$0.07	\$0.12		
Diluted average shares	69	72	74	101	116	112	128	150	152	153	154	155	156	157	158	159	101	150	155	159	160		
GROWTH																							
Annual																					CAGR		
Revenue	461%	207%	45%	-60%	-86%	-89%	-93%	-100%	-67%	-45%	222%	18,830%	67%	50%	25%	67%	162%	-88%	-12%	53%	50%		
Gross Profit	-89%	-25,617%	-70%	-74%	6,806%	780%	259%	-389%	-67%	-43%	367%	-1,269%	68%	50%	25%	67%	-59%	1,352%	-9%	53%	25.0%		
Net Income	-268%	119%	137%	41%	-635%	-164%	91%	1,232%	-104%	-87%	-112%	-102%	-451%	138%	13%	101%	163%	256%	-104%	183%	35.7%		
EPS	-235%	86%	99%	-13%	-417%	-141%	11%	806%	-103%	-91%	-110%	-102%	-442%	132%	10%	96%	113%	79%	-104%	178%	34.6%		
Sequential																							
Revenue	394%	-28%	-67%	-65%	78%	-46%	-79%	-98%	14,097%	-11%	25%	20%	25%	-20%	4%	60%							
Gross Profit	-71%	297%	-62%	-40%	7,643%	-49%	-85%	-148%	-972%	-11%	25%	20%	25%	-20%	4%	60%							
Net Income	-36%	124%	-14%	14%	-343%	-73%	-359%	696%	-99%	-183%	137%	60%	11%	-44%	12%	186%							
EPS	-42%	114%	-16%	-16%	-311%	-72%	-327%	585%	-99%	-183%	136%	59%	10%	-44%	12%	184%							
MARGINS/RETURNS																							
Gross Margin	0%	1%	1%	2%	98%	92%	66%	-1,554%	96%	96%	96%	96%	96%	96%	96%	96%	1%	92%	96%	96%	96%		
EBITDA Margin	-2%	-6%	-14%	-46%	78%	42%	-203%	-13,420%	21%	18%	24%	28%	29%	23%	24%	36%	-7%	28%	23%	29%	33%		
EBIT Margin	-2%	-6%	-15%	-46%	78%	40%	-229%	-14,694%	12%	8%	16%	21%	24%	17%	18%	32%	-7%	23%	15%	24%	29%		
Net Margin	-2%	-6%	-16%	-54%	74%	37%	-442%	####	-9%	8%	16%	21%	19%	13%	14%	26%	-7%	-219%	10%	19%	22%		
ROA	-11%	-22%	-17%	-35%	55%	14%	-33%	-344%	-3%	2%	5%	7%	8%	4%	5%	13%	-29%	-77%	3%	7%	9%		
ROE	-53%	-91%	-65%	-74%	108%	24%	-47%	-1,302%	-10%	8%	18%	27%	28%	15%	16%	42%	-62%	-291%	11%	23%	28%		
ROIC	-11%	-22%	-19%	-36%	55%	14%	-34%	-351%	-2%	2%	5%	8%	7%	5%	5%	14%	-30%	-79%	3%	8%	11%		
CASH FLOW																							
Net Income	(4)	(8)	(7)	(8)	20	5	(14)	(109)	(1)	1	2	3	3	2	2	5	(27)	(98)	4	11	19		
+ D&A	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	0	2	3	3	3		
+ Chg. Working Cap.	0	(3)	1	4	0	3	1	11	(8)	14	(9)	(0)	(26)	30	(2)	(6)	2	15	(3)	(4)	(0)		
- CAPEX	0	0	0	2	1	1	0	0	0	0	0	0	0	1	1	1	7	2	2	2	2		
Available FCF	(3)	(11)	(6)	(11)	20	8	(13)	(97)	(8)	15	(7)	3	(22)	32	(0)	(1)	(18)	(79)	6	13	20		
less Acquisitions/Other	0	3	(0)	2	(25)	(10)	9	92															
Free Cash Flow	(3)	(8)	(6)	(9)	(5)	(2)	(3)	(5)	-8	15	(7)	3	(22)	32	(0)	(1)	(27)	(16)	3	9	20		
FCF per Share	(0.05)	(0.11)	(0.09)	(0.09)	(0.05)	(0.02)	(0.03)	(0.03)	(0.05)	0.10	(0.05)	0.02	(0.14)	0.20	(0.00)	(0.00)	-0.34	-0.12	0.02	0.06	0.13		
EBITDA	(4)	(9)	(6)	(7)	21	6	(6)	(9)	2	1	2	3	4	3	3	7	(26)	12	9	17	29		
EBITDA Margin	-2.2%	-6.4%	-13.9%	-46.1%	78.5%	42.1%	-202.9%	####	21.1%	18.5%	23.9%	27.9%	28.9%	23.3%	24.3%	36.0%	-6.8%	27.9%	23.4%	29.2%	32.6%		
BALANCE SHEET																							
Cash & Investments	4	2	16	3	2	1	2	3	-5	10	3	6	-16	16	16	15	3	3	6	15	35		
A/R-net	108	113	106	19	19	19	3	2	10	9	11	13	17	13	14	22	19	2	13	22	29		
PP&E, Net	0	0	0	15	22	23	21	20	20	19	19	19	18	18	18	17	15	20	19	17	16		
Other Assets	28	38	46	52	102	106	139	102	100	89	98	98	122	98	102	102	52	102	98	102	138		
Total Assets	140	154	168	94	146	149	165	127	125	128	131	136	141	145	149	157	94	127	136	157	219		
Debt	3	3	14	15	23	24	27	22	23	23	23	23	23	23	23	23	15	22	23	23	23		
Other Liabilities	109	114	110	35	49	37	22	71	69	71	73	76	78	80	83	85	35	71	76	85	128		
Shareholder equity	28	36	44	44	74	89	116	34	33	33	35	38	40	42	44	49	44	34	38	49	68		
Ratio/Book Analysis																							
DSO's	52	76	217	115	65	121	85	3,414	100	100	100	100	100	100	100	100	19	20	125	136	120		
Book Value	\$0.41	\$0.51	\$0.60	\$0.44	\$0.63	\$0.79	\$0.91	\$0.22	\$0.22	\$0.22	\$0.23	\$0.24	\$0.26	\$0.27	\$0.28	\$0.31	\$0.44	\$0.22	\$0.24	\$0.31	\$0.43		
Cash as a % of Book	14%	6%	36%	7%	3%	1%	1%	8%	-15%	31%	9%	16%	-40%	38%	36%	31%	7%	8%	16%	31%	52%		
VALUATION																							
Price	2.13	1.88	3.79	1.20	1.94	2.46	1.51	0.86	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$0.82	\$1.20	\$0.86	\$0.82	\$0.82	\$1.82		
Market Cap	147	135	281	121	226	277	192	128	125	125	126	127	128	129	130	130	121	128	127	130	291		
Net Debt	(11)	1	(2)	12	21	23	25	19	28	13	20	17	32	7	7	8	12	19	17	8	(12)		
EV	146	136	278	133	247	299	218	147	153	138	146	144	167	136	137	138	133	147	144	138	278		
EV/Sales	0.2 x	0.3 x	1.6 x	2.2 x	2.3 x	5.2 x	17.5 x	581.5 x	4.2 x	4.3 x	3.7 x	3.0 x	2.8 x	2.8 x	2.7 x	1.7 x	0.4 x	3.3 x	3.7 x	2.3 x	3.1 x		
EV/EBITDA	-8.9 x	-4.0 x	-11.5 x	-4.8 x	2.9 x	12.3 x	-8.6 x	-4.3 x	20.0 x	23.4 x	15.2 x	10.7 x	9.6 x	12.2 x	11.3 x	4.8 x	-5.2 x	11.9 x	15.8 x	8.0 x	9.6 x		
P/Sales	0.2 x	0.3 x	1.6 x	2.0 x	2.1 x	4.8 x	15.5 x	505.2 x	3.5 x	3.9 x	3.2 x	2.6 x	2.1 x	2.7 x	2.6 x	1.6 x	0.3 x	2.9 x	3.3 x	2.2 x	3.3 x		
P/E	-9.8 x	-4.1 x	-9.8 x	-3.7 x	2.8 x	13.1 x	-3.5 x	-0.3 x	-38.7 x	46.9 x	19.9 x	12.5 x	11.3 x	20.2 x	18.1 x	6.4 x	-4.4 x	-1.3 x	31.8 x	11.5 x	15.0 x		
P/Book	5.2 x	3.7 x	6.4 x	2.7 x	3.1 x	1.7 x	3.8 x	3.8 x	3.8 x	3.8 x	3.6 x	3.4 x	3.2 x	3.1 x	3.0 x	2.7 x	2.7 x	3.8 x	3.4 x	2.7 x	4.2 x		
FCF Yield	-2.3%	-6.0%	-2.3%	-7.5%	-2.4%	-0.7%	-1.7%	-4.0%	-6.4%	12.1%	-5.6%	2.3%	-17.5%	25.0%	-0.1%	-0.5%	-28.2%	-14.3%	2.3%	6.8%	7.0%		

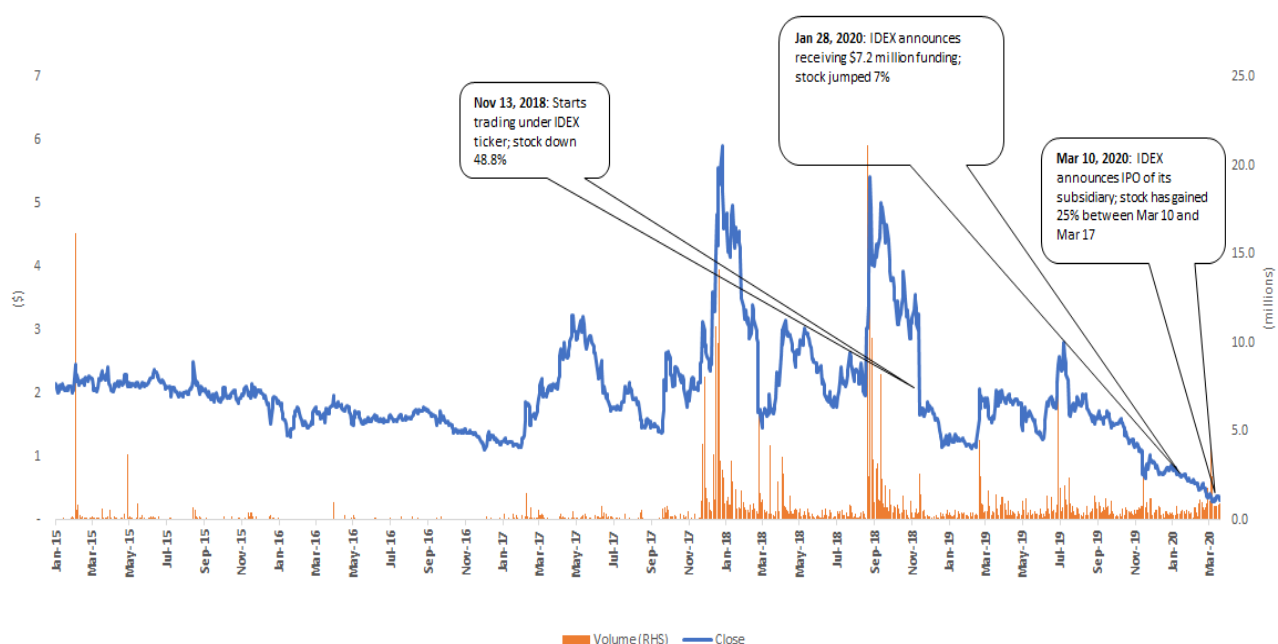
Source: Intro-act, Company

## Sentiment/Technical Analysis

### Impending Inflection Suggests Timing is Good to Build Long Positions in IDEX

- Technical analysis suggests that IDEX is at an inflection point and is likely to reverse its trend as it starts its upward journey. The money flow index (MFI) of the company has bounced back from the oversold level and is looking to make a bullish crossover, indicating gains for the stock in the near- and medium- term. The stock's relative strength index (RSI) also displays a similar trend, confirming the potential upside. Price rate of change (ROC), another major technical indicator, has also reversed trend and is likely to become positive over the next few days. The stock is attractively priced with the 20-day moving average (DMA) well below the 50DMA and 100DMA, thus presenting a good entry point which will boost returns in the medium to long term.

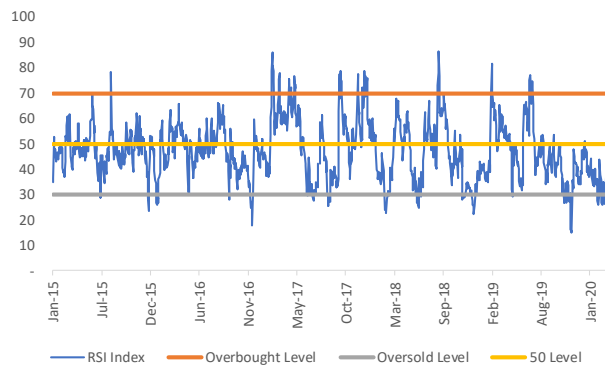
Chart 35: IDEX — Annotated Price and Volume Chart



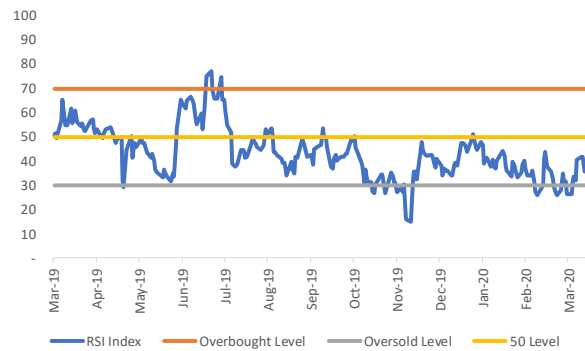
Source: Intro-act



**Chart 36: Relative Strength Index—14 Day (Since 2015)**

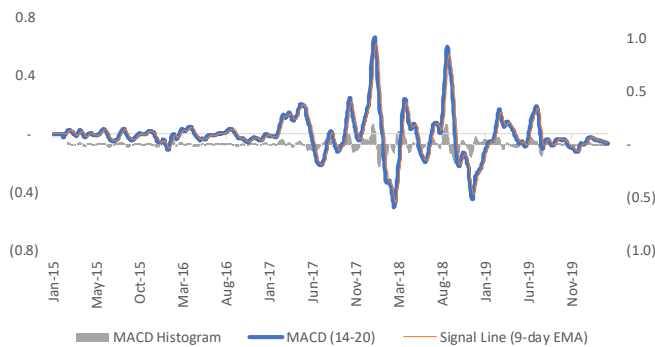


**Chart 37: Relative Strength Index—14 Day (1-Year)**

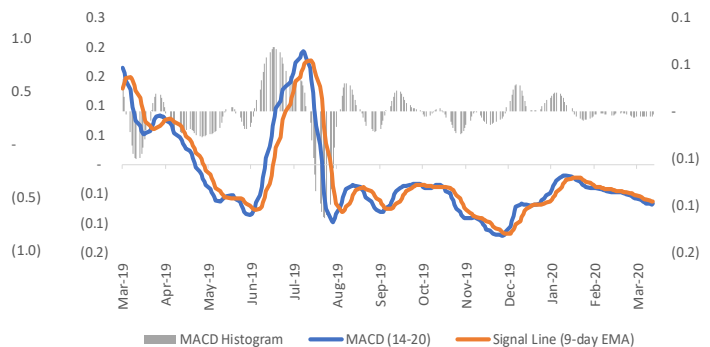


Source: Intro-act

**Chart 38: MACD (Since 2015)**

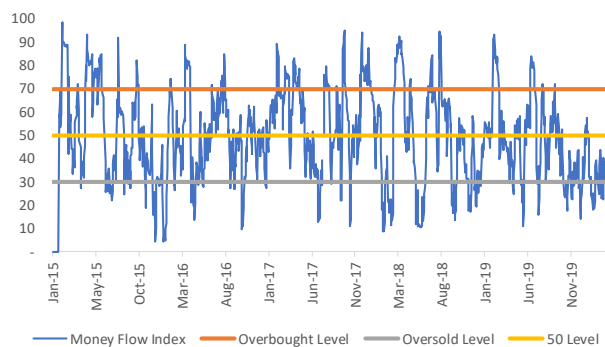


**Chart 39: MACD (1-Year)**

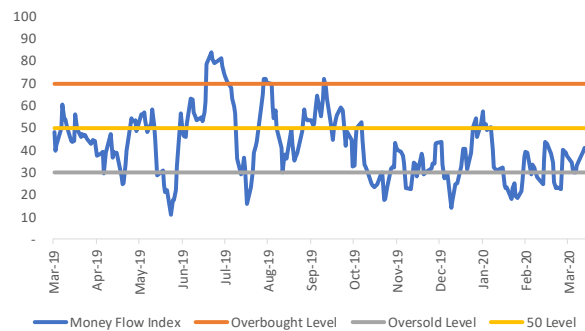


Source: Intro-act

**Chart 40: Money Flow Index (Since 2015)**

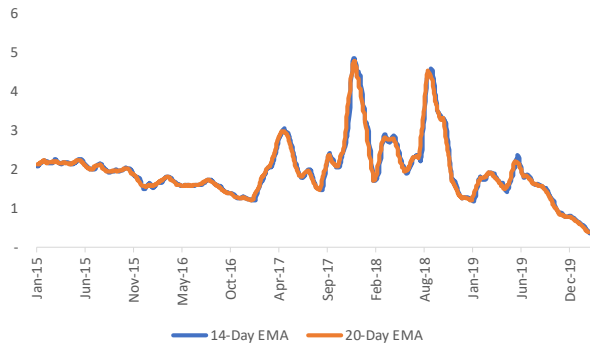


**Chart 41: Money Flow Index (1 Year)**

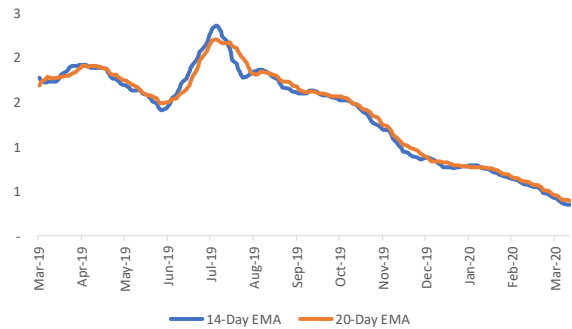


Source: Intro-act

**Chart 42: Exponential Moving Averages (Since 2015)**

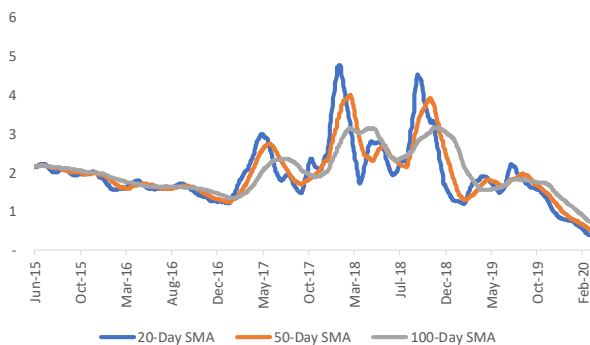


**Chart 43: Exponential Moving Averages (1 Year)**

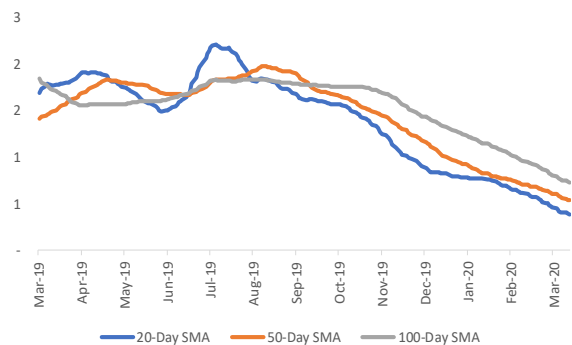


Source: Intro-act

**Chart 44: Simple Moving Averages (Since 2015)**

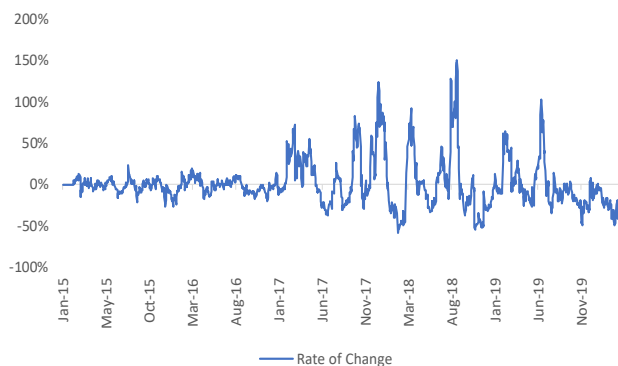


**Chart 45: Simple Moving Averages (1 Year)**

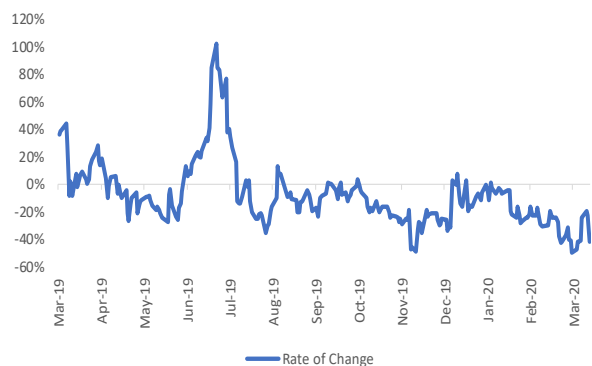


Source: Intro-act

**Chart 46: Price Rate of Change (%)—20 Day (Since 2015)**



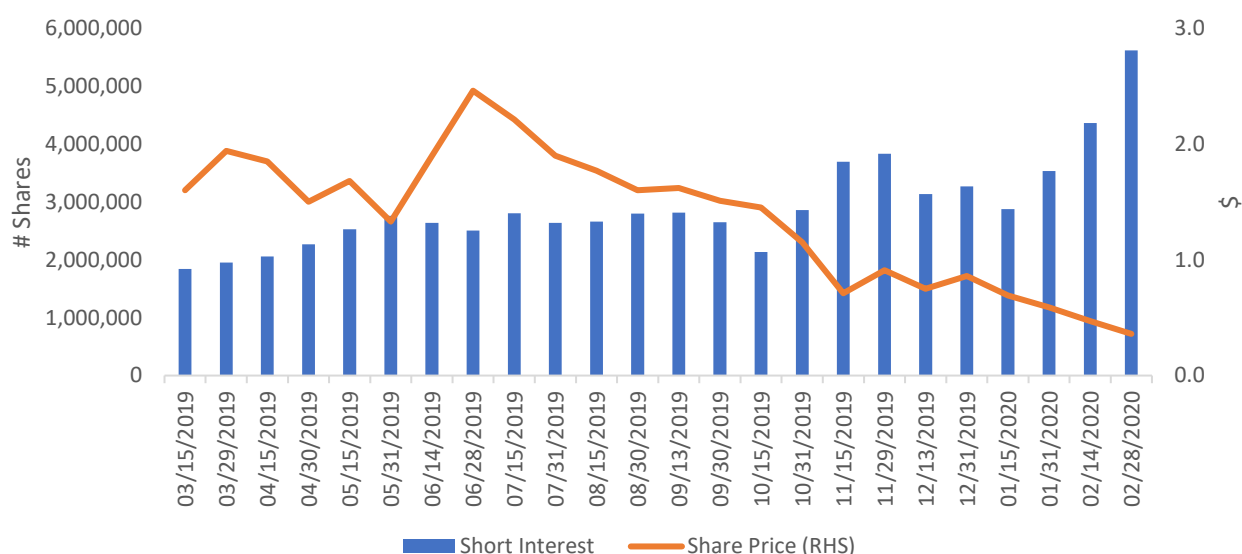
**Chart 47: Price Rate of Change (%)—20 Day (1 Year)**



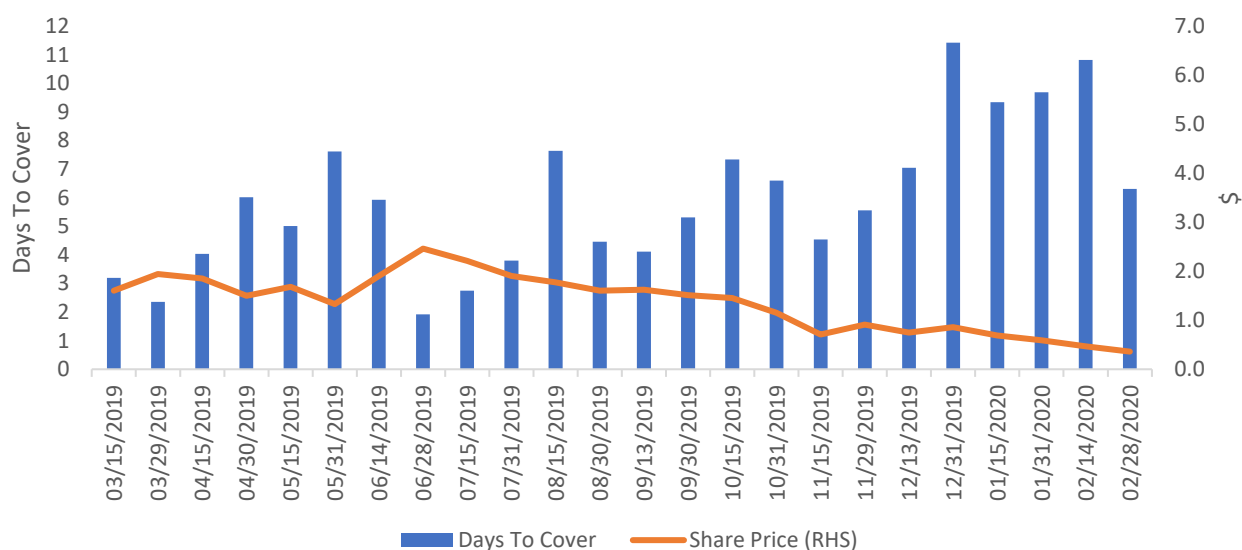
Source: Intro-act

- Short Interest Analysis.** Our analysis of short interest data indicates that short covering is unlikely to help boost the stock price of IDEX due to low short position which is ~3.5% of the 162.0 million shares outstanding. Short interest must be >8.1 million shares (>5% of shares outstanding) or days to cover must be >7 to support buying for short squeeze. IDEX's days to cover presently stands at ~6.3 days, slightly above its 12-month average of 5.9 days. However, the short interest of 5.6 million shares at the end of February is ~3 times the short interest a year ago. If short interest continues to rise, it may lead to a significant short build up which can provide an opportunity for sharp price appreciation when covering takes place.

**Chart 48: Short Interest and Price**



**Chart 49: Days to Cover and Price**



Source: Intro-act, NASDAQ

## Investment Risks

### Competition, Regulations, and Geopolitical Developments Are Key Risks to Monitor

- **Financial risk related to interest rate, foreign currency exchange rate, and credit availability.** IDEX is focused on the EV financing business in China and plans to expand its presence to other ASEAN countries. The company intends to generate revenue in the form of margin between buying and selling price of EVs, income from leasing finance of EVs and energy management solutions for the EV market. As such, it will be involved in buying and holding the stock of electric vehicles for which it intends to raise funds at nominal interest. It will be exposed to risk of rising interest rate and availability of capital which may hamper its profit margins. Since it intends to expand outside China it will also be exposed to exchange rate risk. The leasing finance business will be dependent on the company's ability to regularly collect its dues from the customers, exposing the company to default risk associated with its customers.
- **Government regulations.** The growth of the EV market in China has been propelled by favorable policies, including subsidies provided for the purchase of electric cars. The Chinese government has already abolished the subsidies provided for vehicles with a sub-250 km of driving range in 2019, which led to a slowdown in sales of smaller electric cars. The vehicles with range of more than 250 kms continue to receive subsidy, though only after meeting high standards. However, any change in government policy which might aim to cut down existing subsidies will adversely impact the EV market in China and IDEX's capability to sell or offer electric vehicles through the lease financing option.
- **Supply disruption risks for both electric vehicles and batteries.** IDEX is dependent on EV manufacturers for sourcing of electric vehicles which it either sells or leases out. Hence, it is dependent on the uninterrupted supply of electric vehicles from manufacturers. Manufacturers may in turn be exposed to supply constraints, specifically in term of batteries (Li-Ion cells) which may disrupt their manufacturing process, ultimately impacting IDEX's business. Also, an increase in the input cost for manufacturers could lead to margin contraction for the company. Any delay from the manufacturers' end in the launch of new models will also adversely impact IDEX's business operations. The company is also exposed from risk of some of the manufacturers, from which it sources electric vehicles, going bankrupt.
- **Slowdown in consumer adoption of EVs.** The growth of the company is highly dependent upon the consumers adoption of alternative fuel vehicles and electric vehicles. As such, the demand for electric vehicles is dependent upon consumer perception about the features, safety, quality, performance, cost, access to charging facilities, future viability etc. Change in consumer perception about the electric vehicles may adversely impact the company's business.
- **Macroeconomic and geopolitical risks.** Slowing pace of economic growth worldwide, including China, will adversely impact the growth of the EV market. Trade war concerns and the damaging effect of coronavirus will slowdown China's economic growth over a couple of quarters. The manufacturing shutdown in China in early 2020, as the nation engaged in controlling the spread of coronavirus, will lead to a supply disruption in the Chinese market and can hamper IDEX's ability to meet customer's demand in the short-term.
- **Coronavirus driven disruption in the automotive industry and plunging oil prices pose a risk to EV demand.** The automotive industry in China, and worldwide, has been hit hard by the pandemic coronavirus outbreak with EV sales plummeting ~78% year-to-year (y/y) to 11,000 units in February, according to data released by Chinese Passenger Car Association (CPCA), whereas the overall auto sale also declined 78% y/y to 252,000 units. Chinese EV manufacturers are struggling to resume full production due to supply chain disruptions. Additionally, low oil prices make EVs less attractive further dampening their sales. This poses a risk to IDEX's business and its growth forecasts for 2020.
- **Strong competition in China:** There a large number of players manufacturing electric vehicles in China and if these players enter into the field of direct sales and/or lease financing of electric vehicles, then revenue and profit margins of players such as IDEX will be hit.

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