CIMC Vehicles (Group) (1839 HK)

World's largest semi-trailer manufacturer

Summary: We initiate coverage on CIMC Vehicles with BUY rating and a TP of HK$6.9, based on 5x EV/EBITDA ratio. The current valuation of 3.5x 2019E EV/EBITDA should have reflected the low earnings growth expectation. With global presence and solid balance sheet after IPO, we see room for CIMC Vehicles to expand market share through capacity expansion and acquisitions.

- **Company background.** CIMC Vehicles primarily engages in the manufacture and sale of semi-trailers and truck bodies for specialty vehicles in China, North America, Europe and other regions covering >40 other countries. The Company has been the world's largest semi-trailer manufacturer for the 5th consecutive year in terms of total sales volume since 2013. According to Frost & Sullivan, by sales volume of semi-trailers, CIMC Vehicles ranked first in the semi-trailer industry in China, with a market share of 15.7% in 2017. In North America, the Company ranked among the top five semi-trailer manufacturers in 2017. CIMC Vehicles has been listed on the HKEx since Jul 2019.
- **Global presence after series of acquisitions.** Since 2002, CIMC Vehicles has strategically expanded its geographic coverage in China, North America and Europe through series of acquisitions. These acquisitions have helped CIMC Vehicles strengthen its global presence as well as maintaining a multi-brand strategy.
- **Growth strategy.** CIMC Vehicles plans to expand and upgrade its manufacturing and assembly capabilities in the developed regions. In the US, the Company plans to increase production capability for refrigerated trailers and chassis trailers. In Europe, CIMC Vehicles plans to increase assembly capability for curtain-side trailers, swap bodies and refrigerated trailers. In China, following the upgrade of two new manufacturing plants, the Company plans to upgrade two other plants for chassis, flatbed trailers and tank trailers in order to achieve production automation. We forecast all these will help raise capacity by 10%/6%/9% in 2019E/20E/21E.
- **Earnings projection.** We forecast CIMC Vehicles to deliver earnings growth of 23%/8%/3% to RMB1,411mn/1,519mn/1,566mn in 2019E/20E/21E. In terms of core profit, we calculated that the Company's core earnings in 2018 to be RMB1.06bn after deducting the one-off and non-operational items. In 2019E/20E/21E, we estimate the core profit to be RMB1,265mn/ 1,369mn/1,416mn after excluding RMB150mn of estimated gains from the potential disposal of land. The core earnings growth in 2019E/20E/21E will be 19%/9%/3%, based on our estimates.
- **Major risk factors:** (1) Slowdown of economic growth; (2) trade disputes; (3) capacity ramp-up risk.

Earnings Table

(YE 31 Dec)	FY17A	FY18A	FY19E	FY20E	FY21E
Revenue (RMB mn)	19,367	24,168	25,577	27,283	27,891
YoY growth (%)	33.1	24.8	5.8	6.7	2.2
Net income (RMB mn)	964	1,143	1,411	1,519	1,566
EPS (RMB)	0.64	0.76	0.85	0.84	0.87
YoY growth (%)	32.1	18.5	12.1	-1.5	3.1
EV/EBITDA (x)	5.0	4.1	3.5	3.3	3.3
P/E (x)	6.5	5.5	5.1	5.2	5.0
P/B (x)	1.0	0.8	0.8	0.7	0.7
Yield (%)	17.8	4.6	5.9	5.8	6.0
ROE (%)	14.4	16.2	16.4	14.8	13.8
Net gearing (%)	Net cash	Net cash	Net cash	Net cash	Net cash

Source: Company data, CMBIS estimates

BUY (Initiation)

Target Price	**HK$6.90**
(Previous TP	-)
Current Price	**HK$4.87**
Up/Downside	**+42%**

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Stock Data

Mkt Cap (HK$ mn)	8,596
Avg 3 mths t/o (HK$ mn)	n/a
52w High/Low (HK$)	6.34/4.00
Total Issued Shares (mn)	1,805

Source: Bloomberg

Shareholding Structure

CIMC Group	52.64%
Ping An Group	22.94%
Others	24.43%

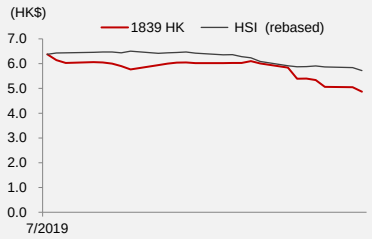
Source: HKEx

Share Performance

	Absolute	Relative
1-mth	-16.3%	-7.7%
3-mth	n/a	n/a
6-mth	n/a	n/a

Source: Bloomberg

12-mth Price Performance



Source: Bloomberg

Auditor: PricewaterhouseCoopers

Web-site: www.cimcvehiclesgroup.com

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Executive summary

CIMC Vehicles primarily engages in the manufacture and sale of (1) semi-trailers and (2) truck bodies for specialty vehicles. The Company sells an extensive range of semi-trailers and truck bodies in China, North America, Europe and other regions, covering over 40 other countries. CIMC Vehicles has been the world's largest semi-trailer manufacturer for the 5th consecutive year in terms of total sales volume since 2013. According to Frost & Sullivan, by sales volume of semi-trailers, CIMC Vehicles ranked first in the semi-trailer industry in China, with a market share of 15.7% in 2017. In North America, the Company ranked among the top five semi-trailer manufacturers in 2017.

CIMC Vehicles has a proven track record of acquisitions across the globe. Since 2002, CIMC Vehicles has strategically expanded product portfolio and established geographic coverage in China, North America and Europe through series of acquisitions. These acquisitions have successfully helped CIMC Vehicles strengthen its global presence as well as maintaining a multi-brand strategy supported by a comprehensive portfolio of semi-trailer and truck body products. CIMC Vehicles has established itself as a leading global semi-trailer manufacturer with well-recognized brands in the principal markets.

CIMC Vehicles adopts a strategy of "global operation, local knowledge". This enables the Company to expand its business in global markets and to create synergies among subsidiaries in different countries. In terms of global operation, the success is attributable to its strong capabilities in terms of cross-over design, inter-continental production and global supply chain. In terms of local knowledge, CIMC Vehicles leverages the knowledge and experience of localized management teams to better understand local customer preferences and regulatory requirements.

CIMC Vehicles plans to expand and upgrade its manufacturing and assembly capabilities, in particular in the developed regions. In the US, the Company plans to increase production capability for refrigerated trailers and chassis trailers. In Europe, CIMC Vehicles plans to increase assembly capability for curtain-side trailers, swap bodies and refrigerated trailers. Last but not the least, in China, following the upgrades of two new manufacturing plants in order to achieve production automation, the Company plans to upgrade two other plants for chassis, flatbed trailers and tank trailers for higher production precision and efficiency. We believe all these will help CIMC Vehicles enhance its production cost advantage and achieve market share gain.

We forecast CIMC Vehicles to deliver earnings growth of 23%/8%/3% to RMB1,411mn/1,519mn/1,566mn in 2019E/20E/21E. In terms of core profit, we calculated that the Company's core earnings in 2018 to be RMB1.06bn after deducting the one-off and non-operational items. In 2019E/20E/21E, we estimate the core profit to be RMB1,265mn/1,369mn/1,416mn after excluding RMB150mn of estimated gains from the potential disposal of land. The core earnings growth in 2019E/20E/21E will be 19%/9%/3%, based on our estimates.

We initiate coverage on CIMC Vehicles with BUY rating and a TP of HK$6.9, based on 5x EV/EBITDA ratio, representing a 10% discount to our target valuation (5.5x) for **Weichai (2338 HK, BUY, TP: HK$16.2)** and **Sinotruk (3808 HK, BUY, TP: HK$21.5)**. We benchmark the Company to the manufacturers of commercial vehicles and component. We apply a valuation discount due to the lower entry barrier and margin of trailer compared with that of the engine manufacturers.

Company background

The Company was first established as a Sino-foreign joint venture with limited liability in Shenzhen, China under the name of Shenzhen Tianda Heavy Industries Ltd. (深圳天达重型机械有限公司) and since then, **CIMC Group (2039 HK, 000039 CH, NR)** has been the controlling shareholder. In Oct, 2018, the Company was converted into a joint stock company with limited liability and was renamed as CIMC Vehicles (Group) Co., Ltd. (中集车辆(集团)股份有限公司). Immediately after that, the Company had a registered capital of RMB1.5bn, consisting of 1.5bn shares and CIMC owned ~63.33% of the shares.

Figure 1: CIMC Vehicles key business development milestones

Year	Event
1996	- Established under the name of Shenzhen Tianda with CIMC as the controlling shareholder
2002	- Began to develop the business of manufacture and sale of semi-trailers and truck bodies for specialty vehicles
2003	- Exported chassis trailers into the North American market and launched the global business operations
2004	- Acquired CIMC Tonghua and Huajun Vehicle and further expanded the business in China market
2014	- Launched the "Light Tower" plants and adopted automated manufacturing facilities
2015	- Shanghai Taifu, Nanshan Dacheng and Sumitomo Corporation became shareholders - Acquired a number of overseas companies, including US-based Vanguard National Trailer and Belgium-based LAG Trailers - Established a number of subsidiaries across the world, including South Africa, Vietnam and Malaysia
2016	- Further strengthened the presence in the Europe through the acquisition of Retlan Manufacturing Ltd., a company incorporated under the laws of the UK and the then holding company of SDC Trailers

Source: Company data, CMBIS

Business overview

CIMC Vehicles primarily engages in the manufacture and sale of (1) semi-trailers and (2) truck bodies for specialty vehicles. The Company has been the world's largest semi-trailer manufacturer for the 5th consecutive year in terms of total sales volume since 2013. There are mainly five product lines with regard to semi-trailers, including chassis and flatbed trailers, fence trailers, tank trailers, refrigerated trailers and van trailers. Truck body products include dump beds for dump tricks, mixers for mixer trucks and other truck bodies for specialty vehicles

CIMC Vehicles sells an extensive range of semi-trailers and truck bodies in China, North America, Europe and other regions, covering over 40 other countries. According to Frost & Sullivan, by sales volume of semi-trailers, CIMC Vehicles ranked first in the semi-trailer industry in China, with a market share of 15.7% in 2017. In North America, the Company ranked among the top five semi-trailer manufacturers in 2017.

The Company markets the products in China under the "CIMC (中集)", "CIMC Tonghua (中集通华)", "CIMC Huajun (中集华骏)", "Ruijiang Vehicles (瑞江汽车)", "Dongyue Vehicles (东岳汽车)" and "Lingyu Vehicles (凌宇汽车)" brands. Outside China, the Company sells the products under "CIMC", "Vanguard", "SDC" and "LAG" brands, which are among the well-recognized names in the global semi-trailer industry.

Figure 2: Major brands of CIMC Vehicles

Brand	Geographic Focus	Products	Brand Positioning
CIMC (中集)	China, North America, Europe, Australia, Malaysia, South Africa, Saudi Arabia and Thailand	Chassis and flatbed trailers, fence trailers, tank trailers, refrigerated trailers, van trailers, center-axle car carriers & mixers for mixer trucks	Mid-level to high-end market
CIMC Huajun (中集华骏)	China	Chassis and flatbed trailers, fence trailers, center-axle car	Mid-level to high-end market
CIMC Tonghua (中集通华)	China	Chassis and flatbed trailers, fence trailers, tank trailers,	Mid-level to high-end market
Ruijiang Vehicles (瑞江汽车)	China	Tank trailers	Mid-level market
Lingyu Vehicles (凌宇汽车)	China	Center-axle car carriers, mixers for mixer trucks	Mid-level market
Dongyue Vehicles (东岳车辆)	China	Chassis and flatbed trailers, fence trailers	Affordable market
Vanguard	North America	Dry van trailers & refrigerated trailer markets	Mid-level to high-end market
SDC	Europe	Curtain-side trailers and chassis & flatbed trailers	Mid-level to high-end market
LAG	Europe	Tank trailers	Mid-level to high-end market

Source: Company data, CMBIS

Key products of CIMC Vehicles

Semi-trailers

A typical semi-trailer CIMC Vehicles produces is mainly used to transport goods and materials, which is an unpowered trailer without a front axle and towed by a powered vehicle, known as a tractor unit. CIMC Vehicles does not manufacture tractor unit. A tractor unit is usually installed with a "fifth-wheel coupling" used to couple with a semi-trailer. CIMC Vehicles' semi-trailer products include:

- **Chassis and flatbed trailers**: (i) chassis trailers, (ii) flatbed trailers and (iii) terminal trailers;
- **Fence trailers**: (i) side-wall trailers and (ii) stake trailers;
- **Tank trailers**: (i) liquid tank trailers and (ii) dry bulk tank trailers;
- **Refrigerated trailers**;
- **Van trailers**: (i) dry van trailers and (ii) curtain-side trailers.

Centre-axle carriers

CIMC Vehicles began to manufacture and sell center-axle car carriers in 2017. A center-axle car carrier typically consists of two parts: (i) a front truck, which is configured with a truck body, equipped with a head rack over the driving compartment and installed on a truck chassis, and (ii) a center-axle trailer attached to the front truck.

Truck bodies for specialty vehicles

CIMC Vehicles produces and sells truck bodies for specialty vehicles in China. The major truck body products are dump beds for dump trucks and mixers for mixer trucks. CIMC Vehicles does not manufacture truck chassis, which provide motive power for a specialty vehicle and can be driven as a standalone vehicle. However, in line with the industry practice in China, the Company typically sells its dump beds and a small proportion of the mixers as a standalone product, and installs them onto the truck chassis provided by the customers, who are mostly truck manufactures or their dealers, at CIMC Vehicles' manufacturing plants. For a large proportion of the mixers, CIMC Vehicles purchases the truck chassis requested by the customer and installs the mixer it manufactures onto such truck chassis to form a completed mixer truck, which is sold in a completed set to the customers.

Components and parts

CIMC Vehicles also sells (1) certain parts and components purchased from third-party manufacturers, such as axles, tires, lights and braking systems, as well as (2) some parts and components manufactured in house, mainly shafts.

Figure 3: Major semi-trailer products (China)

Type	Picture	Product Description	Function
Chassis and Flatbed Trailers			
Chassis Trailer		A typical chassis trailer consists of two major parts, a skeleton frame with twist locking device to secure the containers, and a running gear system. The running gear system typically consists of three axles and a mechanical suspension system. The Company's chassis trailers are made of high-tensile steel for lightweight purpose without compromising on performance or durability.	Carry and transport containers with cargo
Flatbed Trailer		A typical flatbed trailer consists of a load floor and a bulkhead in the front to protect the tractor unit in the event of a load shift. The Company's flatbed trailers are made of high-tensile steel for lightweight purposes without compromising on performance or durability. The modularized design of the flatbed trailer shares a structural frame with the fence trailers, which adds extra flexibility and economic efficiency to the company's production.	Haul bulk cargo, large-sized structures or irregular shaped cargo
Terminal Trailer		The Company's terminal trailers have a similar structure with the chassis trailers without the twist locking device and are designed to enhance the efficiency of container placement.	Move containers within container terminals (not for operation on public roads)
Fence Trailers			
Side-wall Trailer		The Company's fence trailers, including side-wall trailers and stake trailers, are made of high-tensile steel for lightweight purpose without compromising on performance or durability. A stake trailer, with higher side guards, is a variant of the side-wall trailer.	Transport bulk cargo, steel, timber, coal and construction materials
Stake Trailer			
Tank Trailers			
Liquid Tank Trailer		The Company's tank trailers mainly consist of a tank body and a running gear system. The Company uses high-tensile metals to build the barrels of the tank body and uses specialized jigs and machines for welding the barrels and fitting the valves for high precision, durability and safety. The running gear system of the tank trailers normally incorporates three high-performance axles and an air suspension system.	Transport liquids, such as fuel, milk, chemicals and asphalt
Dry Bulk Tank Trailer			Transport powder materials, such as cement and grains

Source: Company data, CMBIS

Figure 4: Major semi-trailer products (China)

Type	Picture	Product Description	Function
Van Trailers			
Dry Van Trailer		A van trailer normally has two major parts: a van body and a running gearing system. A dry van trailer consists of metal posts, as well as panels riveted to the posts to enclose the loading space. The Company's van trailers are made of high-tensile metals for lightweight purpose without compromising on performance or durability.	Transport e-commerce parcels and bulk cargos
Curtain-side Trailer		A curtain-side trailer consists of a frame body with movable side curtains for greater loading and unloading efficiency. The side curtains are made of high-strength tarpaulin with a waterproof coating. The Company leveraged the design expertise of SDC Trailers in producing curtainside trailers in China.	Transport bulk cargos and pallets
Center-axle Car Carriers			
Center-axle car carrier		A center-axle car carrier of the Company consists of two parts, 1) a front truck, configured with a truck body, equipped with a head rack over the driving compartment and installed on a truck chassis and 2) a center-axle trailer attached to the front truck. The company's center-axle carriers are typically configured with a double-decker design. They are made of high-tensile steel for lightweight without compromising the performance or durability. KTL and powder coating are utilized for high anti-corrosion performance to prevent the contamination of the passenger cars carried.	Transport passenger cars
Truck bodies			
Dump Bed	 *Note: the company does not manufacture the truck chassis in the picture above*	A typical dump bed is an open-box bed, which can be hinged at the rear and equipped with hydraulic cylinder to lift the front to unload the materials in the bed. The Company's dump bed is made of high-tensile steel and is usually equipped with a video monitoring system to monitor the unloading process.	Transport construction materials and wastes
Mixer	 *Note: the company does not manufacture the truck chassis in the picture above*	A typical mixer is a revolving drum with blades installed inside. The body and the blades of the mixers are made of high-tensile and wear-resistant steel. The mixers have a high discharge rate, reduced weight and an extended service period.	Mix concrete cement for construction

Source: Company data, CMBIS

Figure 5: Major semi-trailer products (North America)

Type	Picture	Product Description	Function
Chassis Trailer		The chassis trailers are designed to carry and transport marine containers, domestic containers and tank containers. The Company utilizes laser metal cutting, industrial robotic welding stations, as well as the KTL and powder coating lines in manufacturing container chassis to provide a high performance of corrosion resistance.	Carry and transport containers with cargo
Dry Van Trailer	 	The dry van trailer has a box-shaped van body and a running gear system with a hot-dipped galvanized frame and beam offering high corrosion resistance. Available in two types: (1) the Vanguard VIP series, which is lightweight and has aluminum side panels with wooden inner linings, and (2) the Vanguard VXP series, which offers composite side panels.	Transport e-commerce parcels and bulk cargos
Refrige-rated Trailers		The refrigerated trailers adopt sandwich injection molding technology for panel forming, which enables lower heat-leakage and higher strength.	Haul fresh and frozen foods

Source: Company data, CMBIS

Figure 6: Major semi-trailer products (Europe)

Type	Picture	Product Description	Function
Curtain-side Trailer		The curtain-side trailer is constructed with a sliding tarpaulin system. The running gear system consists of three high-performance axles and a series of air suspensions. Most of the curtain-side trailers are equipped with electronic braking systems, which reduce rollver risks.	Transport bulk cargos and pallets
Chassis Trailer		The chassis trailers use high-tensile steel for weight reduction to maximize payload capacity and durability. The Company manufactures chassis trailers with both fixed and extendable sliding designs.	Carry and transport containers with cargo
Flatbed Trailer		The flatbed trailers are built with durable, high-tensile steel chassis, and available with alloy side guards. The Company offers many variations, including extendable and crane trailers, and the flatbed trailers are also available with the option of forklift.	Haul bulk cargo, large-sized structures or irregular shaped cargo
Tank Trailer		The Company uses high-grade metals to build the barrels of the tank body. The running gear system of the tank consists of three high-performance axles and air suspensions. Most of the tank trailers are equipped with disc brakes and electronic braking systems.	Carry liquid loads and dry bulk cargo

Source: Company data, CMBIS

Production capability

CIMC Vehicles had 22 manufacturing plants and nine assembly plants to manufacture, assemble and test the finished products as well as parts and components across the world. Some of the manufacturing facilities are equipped with flexible production lines, which are capable of producing different types of products based on customer demand. This has not only allowed the Company to enjoy flexibility in production planning to quickly respond to changing market demand but has also reduced the capex and operating costs.

China

- **Existing capacity.** CIMC Vehicles has 18 manufacturing plants for semi-trailer and truck body productions. In 2014, the Company launched its "Light Tower" plants in China to upgrade and improve the manufacturing practices and processes, in order to transform traditional labor-intensive production into a more automated process focusing on modularized, standardized and environmental-friendly production. CIMC Vehicles has three automated manufacturing plants in Dongguan, Yangzhou and Zhumadian in China. These "Light Tower" plants, at their current stage, are equipped with automated equipment, such as laser cutter, computer-numerically controlled bending and folding machine, robotic welding stations as well as KTL and powder coating lines. CIMC Vehicles can therefore improve product quality and consistency and enhance productivity and cost efficiency by utilizing advanced manufacturing technologies. For example, the Company applies automated levelling and welding techniques for structural stability and rigidity of steel, and KTL and powder coating lines for corrosion resistance and environmental-friendly production.
- **Production lines under construction.** CIMC Vehicles plans to continue to develop the new manufacturing plants at Yangzhou for tank trailers and chassis trailers, and expand a production line for chassis, curtain-side and stake trailers at Zhumadian "Light Tower" plant. These two plants are under construction with a total annual capacity of 27,500 units. The Company also intends to upgrade the manufacturing plants at Liangshan plant for chassis and flatbed trailers and Wuhu plant for tank trailers.

North America

- CIMC Vehicles has two manufacturing plants and three assembly plants. Specifically, the Monon plant mainly produces two types of dry van trailers. Trenton plant also focuses on the production of 53-feet dry van trailers. In addition, the Company assembles and sells chassis trailers and refrigerated trailers produced in China.

Europe

- Following the acquisition of SDC Trailers and LAG Trailers, CIMC Vehicles has one manufacturing plant in the UK for curtain-side trailers and chassis and flatbed trailers, and another plant in Belgium for aluminum and stainless-steel tank trailers. CIMC Vehicles also operates an assembly plant in Poland.

Figure 7: Existing manufacturing plant

Plant Name	Location	Operation Commencement Date	Major Products	Designed Annual Production Capacity (Units)
China				
Dongguan plant ("Light Tower" plant)	Guangdong	July 2014	Chassis trailers and parts and components	20,000
Zhumadian plant ("Light Tower" plant)	Henan	August 2004	Chassis and flatbed trailers, fence trailers, center-axle car carriers and dump beds for dump trucks	20,000
Shenzhen plant	Guangdong	May 2004	Chassis, flatbed trailers and center-axle car carriers	15,000
Yangzhou plant ("Light Tower" plant)	Jiangsu	January 2004	Tank trailers, van trailers, chassis trailers and center-axle car carriers	14,500
Liangshan plant I	Shandong	October 2007	Chassis and flatbed trailers	12,000
Wuhu plant	Anhui	March 2007	Mixers for mixer trucks, dry bulk tank trailers and liquid tank trailers	8,000
Zhenjiang plant	Jiangsu	July 2018	Swap bodies	8,000
Liangshan plant II	Shandong	August 2011	Liquid tank trailers	8,000
Xi'an plant	Shaanxi	September 2006	Dump beds for dump trucks	5,000
Baiyin plant	Gansu	June 2006	Fence trailers and chassis trailers	5,000
Qingdao refrigerated trailer plant	Shandong	November 2007	Refrigerated trailer	5,000
Yingkou plant	Liaoning	December 2005	Chassis and flatbed trailers and fence trailers	5,000
Jinan plant	Shandong	March 2005	Refrigerated van trailers	4,000
Luoyang plant	Henan	March 2007	Mixers for mixer trucks, liquid tank trailers and dry bulk trailers	4,000
Qingdao plant	Shandong	November 2004	Chassis and flatbed trailers, and fence trailers	3,000
Jiangmen plant	Guangdong	December 2004	Mixers for mixer trucks, dry bulk tank trailers and liquid tank trailers	3,000
Qingdao sanitation truck plant	Shandong	June 2007	Sanitation truck	3,000
Zhenjiang refrigerated trailer plant	Jiangsu	July 2018	Refrigerated trailer	3,000
US				
Trenton plant	Georgia	November 2015	Dry van trailers	9,000
Monon plant	Indiana	November 2015		
Europe				
SDC (Toomebridge, Antrim, Star, Mansfield) plant	the UK	June 2016	Curtain-side trailers, and chassis and flatbed trailers	10,200
Bree plant	Belgium	November 2015	Tank trailers	2,500

Note: The designed production capacity is derived from the assumption that the company produces the main product of each plant for eight hours per day with total local working days per year. For example, the Company operates for 250 working days in China and 232 working days in the UK.

Source: Company data, CMBIS

Figure 8: Assembly plant

Plant Name	Location	Operation Commencement Date	Major Products
US			
South Gate plant	California	November 2015	Chassis trailers
Monon plant (CRTI)	Indiana	November 2015	Refrigerated trailers
Moreno Valley plant	California	November 2015	Refrigerated trailers
Europe			
Gdynia plant	Poland	December 2015	Chassis trailers, curtain-side trailers and swap bodies
Other regions			
Rayong plant	Thailand	December 2014	Chassis and flatbed trailers
Johannesburg plant	South Africa	June 2015	Refrigerated trailers and dump beds for dump trucks
Perth plant	Australia	December 2013	Dump beds for dump truck and chassis trailers
Melbourne plant I	Australia	December 2015	Curtain-side trailers, and chassis and flatbed trailers
Melbourne plant II	Australia	December 2015	Tank trailers

Source: Company data, CMBIS

Figure 9: Manufacturing plants and production capacity

Location	Number of Plants	Main Products	Designed Annual Production Capacity (Units)
China	18	Semi-trailers, truck bodies and central-axle car carriers	145,500
The US	2	Dry van trailers	9,000
The UK	1	Curtain-side trailers, and chassis and flatbed trailers	10,200
Belgium	1	Tank trailers	2,500
Total	**22**		**167,200**

Source: Company data, CMBIS

Sales and distribution

CIMC Vehicles distributes its products through both direct sales and distributors.

- **Direct sales:** Customers for semi-trailers mainly comprise logistics companies, trailer rental companies and truck dealers. For truck bodies, the customers mainly comprise truck manufacturers, truck dealers, construction companies and logistics companies. In 2016, 2017 and 2018, revenue from direct sales accounted for 78.6%, 77.4% and 75.2% of the Company's total revenue respectively.
- **Sales through distributors**: Distributor customers mainly comprise distributors for truck manufacturers, who are truck dealers that are generally specialized in selling tractor units, truck chassis and specialty vehicles. CIMC Vehicles also engages exclusive distributors for semi-trailers and truck bodies. Considering the highly specialized function and usage of semi-trailers, the considerable storage space required for parking, and the comparatively low sale price per unit of semi-trailers compared with that of tractor units, distributors of semi-trailers normally would only purchase the products upon receipt of orders from their customers. Sales to distributors are recognized as revenue, and the titles to the products and any legal risk are passed to the distributors when the products are delivered at the Company's warehouses or other designated locations.

Tripartite financing arrangements. In China market, CIMC Vehicles grants annual rebates to distributors with reference to sales volume, together with additional rebates based on distributors' performance relative to their respective sales targets set by the Company and also taking into account customer satisfaction levels on a case-by-case basis. The rebates are usually settled by deducting the aggregate purchase price payable by eligible distributors from subsequent purchase orders placed after such distributors fulfill requisite sales targets.

Payment and delivery. For most of the customers, the Company requires payment of a deposit and the remaining purchase price upon delivery. The Company generally requires the customers to pay in full before delivery of products. In some cases, the Company may offer the customers with a credit term up to 90 days after product delivery based on their financial strength and long-term relationship with the Company.

Procurement and suppliers

CIMC Vehicles' suppliers principally comprise steel and aluminum producers and manufacturers of parts and components, such as truck chassis, tires, rims, axles, suspensions, and braking systems.

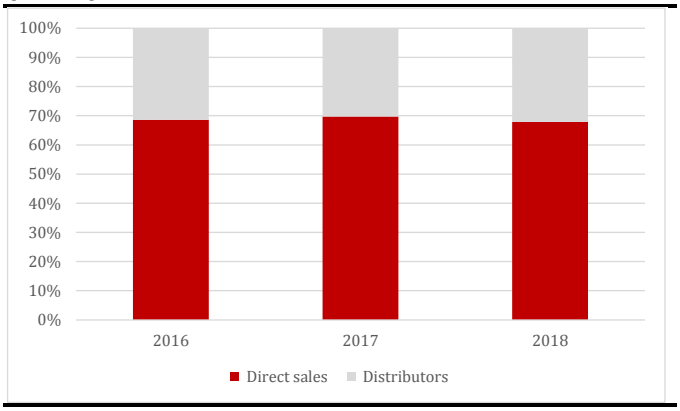
The Company currently sources most of the raw materials, parts and components from multiple suppliers located in China. The Company has also established long-term relationships with renowned trailer parts and components manufacturers around the world. The Company has sound business relationships with the key suppliers, such as BPW and China Baowu Steel Group, for over five years. Such long-term relationships with suppliers will help ensure a stable supply at reasonable prices. However, the Company generally purchases on an order-by-order basis instead of entering into long-term contract.

Figure 10: CIMC Vehicles' number of distributors

Number of distributors	2016	2017	2018
China			
Beginning of the period	278	418	392
Addition	192	89	65
Termination	(52)	(115)	(108)
End of the period	**418**	**392**	**349**
North America			
Beginning of the period	15	16	19
Addition	3	6	1
Termination	(2)	(3)	0
End of the period	**16**	**19**	**20**

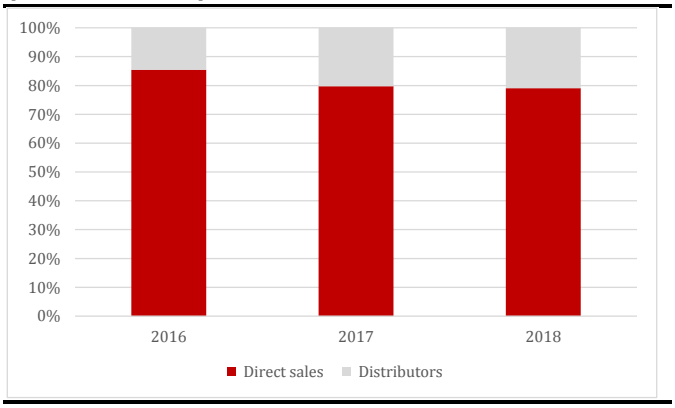
Source: Company data, CMBIS

Figure 11: Revenue breakdown by sales channel (China)



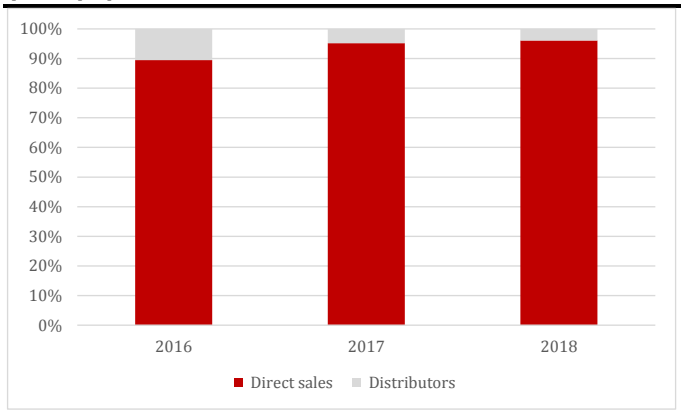
Source: Company data, CMBIS

Figure 12: Revenue breakdown by sales channel (North America)



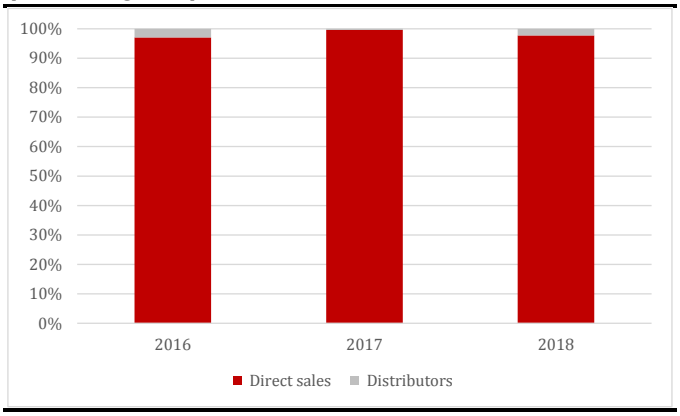
Source: Company data, CMBIS

Figure 13: Revenue breakdown by sales channel (Europe)



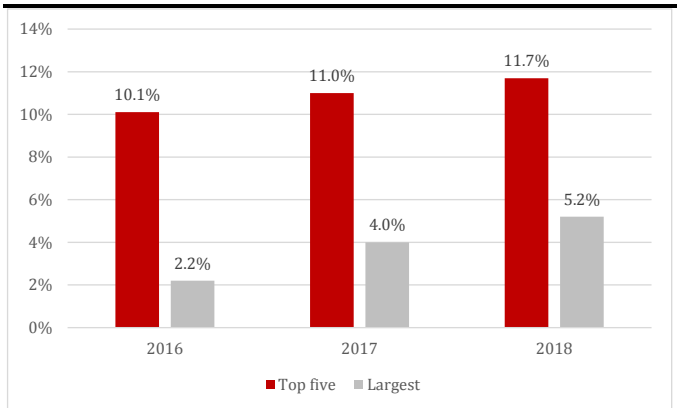
Source: Company data, CMBIS

Figure 14: Revenue breakdown by sales channel (Other regions)



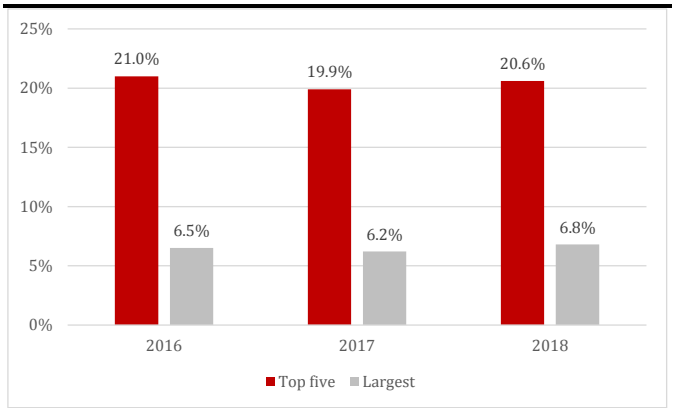
Source: Company data, CMBIS

Figure 15: Top five and largest customers as % of revenue



Source: Company data, CMBIS

Figure 16: Top five and largest suppliers as % of revenue



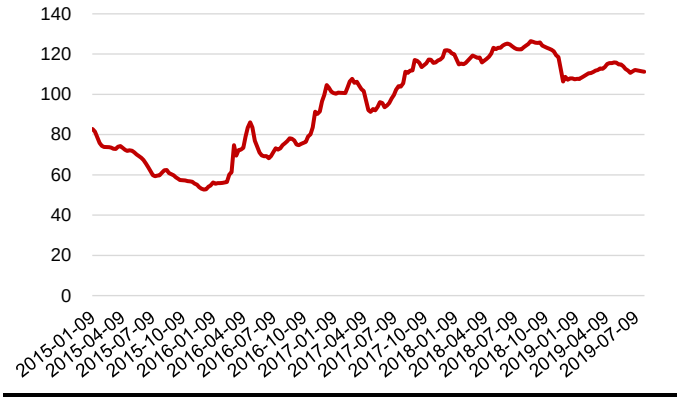
Source: Company data, CMBIS

Raw materials and component cost

Raw materials and consumables are major cost components which accounted for ~90% of the cost of sales over the past few years. The major raw materials include steel, rubber and other synthetic material.

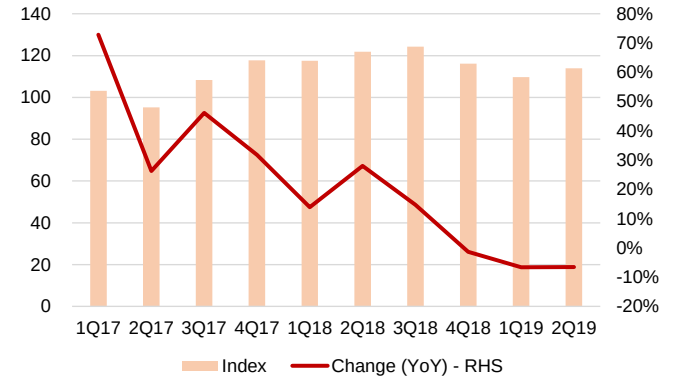
China's steel price was on an uptrend between 2016 and 3Q18. Starting from 4Q18, however, we have witnessed a decline in steel price. In early-Jul 2019, the steel price index retreated ~11% from the peak level in Aug 2018.

Figure 17: China medium-thick steel plate weekly price index



Source: Wind, CMBIS

Figure 18: China medium-thick steel plate quarterly price index

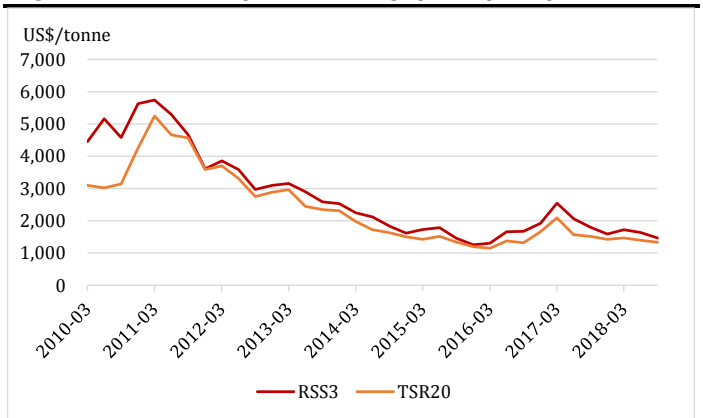


Source: Wind, CMBIS

Rubber is another key material. Southeast Asia is the most important production area of natural rubber around the world, which accounts for almost 90% of global total production. Except that during the second half of 2016 and 2017, the price of natural rubber significantly increased as a result of a series of natural disasters in Thailand, the price of natural rubber decreased due primarily to the continuous increase of natural rubber production.

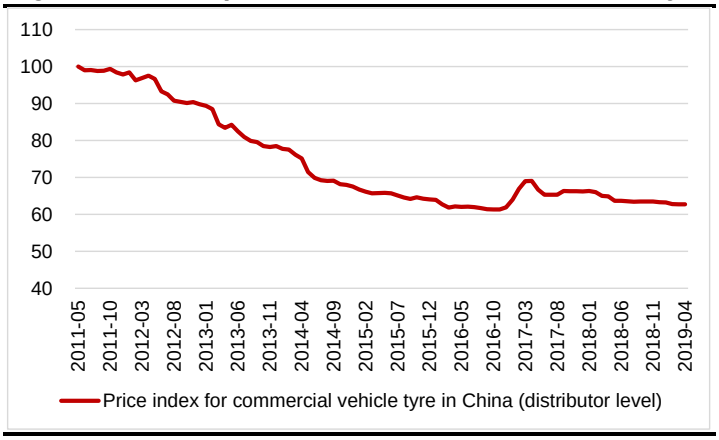
The price of commercial vehicles tire in China showed a similar trend with the rubber price over the past few years.

Figure 19: Rubber price in Singapore (SGX)



Source: Wind, CMBIS

Figure 20: China price index of commercial vehicle tyre



Source: Wind, CMBIS

Competitive edge

Highly integrated and synergistic global operation and local knowledge

The implementation of "global operation, local knowledge" enables the Company to expand its business in global markets and to create synergies among subsidiaries in different countries.

Global operation: The success of the Company's global operation is attributable to its strong capabilities in terms of cross-over design, inter-continental production and global supply chain:

- **Cross-over design:** CIMC Vehicles enjoys significant synergies from the acquisitions and integration of several well-known brands in China, North America and Europe. The synergistic benefits include sharing design and production knowledge among product portfolios as well as cost-effective raw material procurement and strong production capability in China.
- **Inter-continental production:** The main manufacturing and assembly plants of CIMC Vehicles are located across eight countries. The Company typically manufactures certain products cost effectively in China, such as chassis trailers, while conducting final assembly locally in the overseas markets. The Company also manufactures certain other products in the overseas plants, such as dry van trailers and curtain-side trailers in the US and the UK. The inter-continental production is largely enabled by the Company's tailored product design and packaging solution to better utilize the container space for packing more components, which minimizes the logistics and transportation costs.
- **Global supply chain:** The Company enjoys strong bargaining power and extensive supplier options globally based on the economies of scale. These contribute to the enhanced procurement efficiency, including access to large-scale steel supplies with competitive pricing in China and a wide selection of advanced or customized parts and components. The Company also secures the supply of key raw materials, parts and components through long-term strategic relationships and deepened cooperation with certain key suppliers through joint research and development.

Local knowledge: CIMC Vehicles leverages the knowledge and experience of localized management teams to better understand local customer preferences and regulatory requirements. As of end 2018, the overseas staff accounted for ~15% of the total number of employees.

To better support global operations, the Company has adopted a number of measures, including:

- Engaging local management team for daily operation;
- Adopting profit-sharing incentive programs;
- Granting appropriate level of authority to local chief executive officers;
- Establishing effective corporate governance.

Figure 21: Location of existing production plants

Source: Company data, CMBIS

Outstanding manufacturing and R&D capabilities

CIMC Vehicles has established 31 manufacturing and assembly plants located in China, the US, the UK, Belgium, Poland, Australia, Thailand, South Africa and other regions. As at end-2018, the global manufacturing plants have a combined production capacity of >160,000 units per year.

CIMC Vehicles has been upgrading and improving the manufacturing practices and processes, focusing on modularized designs and automated production. In 2014, the Company launched "Light Tower" plants in China in order to transform its traditional labor-intensive production into an automated process. These "Light Tower" plants are manufacturing plants with highly automated equipment, such as digital laser cutters, robotic welding stations and KTL and powder coating lines, to help the Company improve product quality and consistency, enhance productivity and cost efficiency. In addition, CIMC Vehicles has adopted environmentally friendly technology, such as KTL to reduce waste discharge. CIMC Vehicles had three automated "Light Tower" plants in Dongguan, Yangzhou and Zhumadian as of the Latest Practicable Date.

CIMC Vehicles has also focused its R&D efforts on upgrading technical features, enhancing product performance and increasing the standardization of key components. As of end-2018, the Company had over 600 research and development personnel, comprising electrical engineers, mechanical engineers, industrial design engineers, software and computer system engineers based in both China and overseas. CIMC Vehicles introduced the first generation of center-axle car carriers, and the first generation of curtain-side trailers in China. The Company also actively participated in the development of 14 national and industrial standards in China and held over 700 patents on products and technologies globally.

Experience in worldwide acquisitions and investments

Since 2002, CIMC Vehicles has strategically expanded product portfolio and established geographic coverage in China, North America and Europe through a series of acquisitions:

- In China, the acquisition of CIMC Yangzhou and Huajun Vehicle in 2004 enabled the Company to expand business in the China semi-trailer and truck body markets. The Company has also expanded the product portfolio by investing in CIMC Luoyang, CIMC Wuhu and CIMC Dongyue in 2007. These acquisitions also diversified product portfolio and increased market share in different regions in China.
- In North America, CIMC Vehicles acquired Vanguard National Trailer in 2015, its first US business specializing in dry van trailers, which was established by CIMC in 2003. The business expansion in the US refrigerated trailer and chassis trailer markets mainly resulted from the establishment of CIMC Reefer Trailer Inc. and the acquisition of CIE.
- In Europe, CIMC Vehicles acquired LAG Trailers, a Belgium-based manufacturer specializing in tank trailers, which was previously acquired by CIMC in 2007. Upon the acquisition of LAG Trailers in 2015, CIMC Vehicles carried out a series of restructuring measures to turn around its operations from continuous losses to a net profit of RMB38mn in 2017, which was the most profitable year in the history of LAG Trailers. Besides, CIMC Vehicles acquired SDC Trailers in 2016, a UK-based manufacturer specializing in curtain-side trailers and chassis trailers. This acquisition has further expanded the product portfolio, and strengthened the CIMC Vehicles' presence in the European market.

Comprehensive brand portfolio

CIMC Vehicles maintains a multi-brand strategy supported by a comprehensive portfolio of semi-trailer and truck body products. The Company has established itself as a leading global semi-trailer manufacturer with well-recognized brands in the principal markets. The Company markets the products under nine major brands, each with distinct brand positioning.

Figure 22: Brand portfolio

Brand	Geographic Focus	Brand Positioning
CIMC (中集)	China, North America, Europe, Australia, Malaysia, South Africa, Saudi Arabia and Thailand	Mid-level to high-end market segments of a wide range of semi-trailers and truck bodies
CIMC Huajun (中集华骏)	China	Mid-level to high-end market segments of a wide range of semi-trailers and truck bodies
CIMC Tonghua (中集通华)	China	Mid-level to high-end market segments of a wide range of semi-trailers and truck bodies
Ruijiang Vehicles (瑞江汽车)	China	Mid-level market segments of a wide range of semi-trailers and truck bodies
Dongyue Vehicles (东岳车辆)	China	Affordable market segments of a wide range of semi-trailers and truck bodies
Lingyu Vehicles (凌宇汽车)	China	Mid-level market segments of a wide range of semi-trailers and truck bodies
Vanguard	North America	Mid-level to high-end market segments of dry van trailers and refrigerated trailers
SDC	Europe	Mid-level to high-end market segments of curtain-side trailers, and chassis and flatbed chassis
LAG	Europe	Mid-level to high-end market segments of tank trailers

Source: Company data, CMBIS

Experienced management team

CIMC Vehicles has an experienced and visionary global management team and the core members of senior management team have an average of over 24 years of professional experience in related industries, and an average of over 14 years of experience with the Company. The proven capability, leadership, vision, loyalty and consistent efforts of the management team and their extensive experience in the trailer industry are key which will continue to drive future growth.

Figure 23: Management team profile

Name	Age	Position	Profile
Mr. Li Guiping (李貴平)	53	Executive Director, chief executive officer and president	Mr. Li obtained a bachelor's degree in engineering from the college of management of Shanghai Jiao Tong University (上海交通大学) in July 1986 and a master's degree in science from Southern Connecticut State University in May 1993.
			1987-2009: Held various positions in CIMC, including a director of various operation and production departments, an assistant manager of airport equipment department and the deputy general manager of container operation department
			2003-2010: Joined the Group in 2003 and served as the deputy general manager
			2010-2018: Served as the general manager
			2018-present: Served as the chief executive officer, the president and Director
Mr. Mai Boliang (麥伯良)	59	Chairman of the Board and non-executive Director	Mr. Mai obtained a bachelor's degree in engineering from the department of mechanical engineering of South China University of Technology (华南理工大学) in July 1982. He is currently the chairman of China Container Industry Association (中国集装箱行业协会).
			1982-1995: Served in various positions, including the president of CIMC and the chief executive officer and an executive director of CIMC
			1996-present: Joined the Company as Director and currently serves as the chairman of our Board and our non-executive Director
Mr. Sun Chunan (孫春安)	49	Executive vice-president and chief operation officer (Inland)	Mr. Sun obtained a bachelor's degree in bioengineering from Jiangnan University (江南大学) in 1991.
			1996-2001: Served as the director of Guangzhou office of Yangzhou Tonghua Special Vehicles Co., Ltd. (扬州通华专用车有限公司)
			2002-2004: Served as the deputy manager of sales department of southern China
			2005-2010: Served as the deputy general manager of Shenzhen CIMC Special Vehicle Co., Ltd. (深圳中集专用车有限公司)
			2010-present: Served as the general manager of the sales center for southeast China area
Mr. Ye Jianfeng (葉劍峰)	45	Executive vice-president and chief operation officer (Overseas)	Mr. Ye graduated from Shenzhen University in the PRC, majoring in English, in June 1993 and obtained a master's degree in business administration from University of Ballarat in Australia in August 2004.
			2004:Served as the quality control supervisor of CIMC South Container Manufacturing Co., Ltd. (南方中集集装箱制造有限公司)
			2004-present: Served as the assistant manager of sales management department, the manager of new business development department, the assistant to general manager of our Company and the director of global business development
Mr. Ji Haifeng	50	Executive vice-president and chief financial officer	Mr. Ji obtained a bachelor's degree in radio engineering from University of Science andTechnology of China (中国科学技术大学) in July 1990. He obtained a master's degree in computer engineering from the University of Missouri in December 1997 and a master's degree in business administration from the Graduate School of Business of the University of Chicago in December 2003. Mr. Ji was accredited as a Chartered Financial Analyst by the CFA Institute in September 2006.
			1998-2006: Worked in Motorola.
			2007-2015: Worked in HP.
			2015-2017: Joined the international business department of Midea Group Co., Ltd. (美的集团).
			2017-2018: Served as the chief financial officer at Toshiba Lifestyle Products and Services Corporation.
			2018-Feb 2019: Re-joined worked as the Midea Group Co as finance director at the international business department.
			Feb 2019: Joined CIMC Vehicles.

Source: Company data, CMBIS

Growth strategies

Strengthen global operations

CIMC Vehicles targets to enhance its presence in selected markets by expanding and upgrading manufacturing and assembly capabilities, in particular in the developed regions.

- **North America:** The Company intends to increase production and/or assembly capability for refrigerated trailers and chassis trailers in the US. In particular, it plans to develop:
  - (i) A new automated production line for chassis trailers with a designed annual production capacity of 8,000 units on single shift so that CIMC Vehicles can manufacture chassis trailers locally in the US to mitigate the adverse effect from increase in the US import tariffs on semi-trailers and components from China, and to maintain closer business relationships with existing North American customers.
  - (ii) A new automated production line for refrigerated trailers in the US to further enhance the refrigerated trailer production capacity and increase market share in North America.
  - (iii) Over the next five years, a new assembly plant in the US to support manufacturing capacity in China. This assembly plant will be mainly used for the development of a new brand of high-end refrigerated trailers. CIMC Vehicles aims to further enhance brand name and increase market share for refrigerated trailers in North America.
- **Europe:** CIMC Vehicles intends to increase assembly capability for curtain-side trailers, swap bodies and refrigerated trailers. In particular, the Company plans to develop:
  - (i) A new assembly line for curtain-side trailers in the UK to support its main manufacturing facility in Belfast, the UK and to increase the market share for curtain-side trailers in Europe,
  - (ii) A new assembly line for swap bodies in the Netherlands to further promote swap body products and to increase production and delivery capacity for swap bodies in Europe to capture local demand
  - (iii) A new assembly plant in the UK or Poland to support manufacturing capacity in China for a new brand for high-end refrigerated trailers.
- **China:** CIMC Vehicles will continue to develop the new manufacturing plants at Yangzhou “Light Tower” plant and expand an existing production line for chassis, curtain-side and stake trailers at the Zhumadian “Light Tower” plant. These two plants are under construction. In addition, the Company intends to upgrade Liangshan plant for chassis and flatbed trailers, and at Wuhu plant for tank trailers for higher production precision and efficiency.
- **Other regions:** The Company also intends to expand production and marketing efforts in Djibouti to enhance operations in Africa.

Figure 24: Production capacity of CIMC Vehicles

	2016	2017	2018	2019E	2020E	2021E
Production capacity (units)						
China						
Zhumadian (Light Tower plant)	20,000	20,000	20,000	26,000	26,000	26,000
Dongguan	0	20,000	20,000	20,000	20,000	20,000
Shenzhen	15,000	15,000	15,000	15,000	15,000	15,000
Yangzhou (Light Tower plant)	14,500	14,500	14,500	25,250	36,000	36,000
Liangshan I	12,000	12,000	12,000	12,000	12,000	12,000
Wuhu	8,000	8,000	8,000	8,000	8,000	8,000
Liangshan II	8,000	8,000	8,000	8,000	8,000	8,000
Xi'an	5,000	5,000	5,000	5,000	5,000	5,000
Baiyin	5,000	5,000	5,000	5,000	5,000	5,000
Qingdao refrigerated trailer plant	5,000	5,000	5,000	5,000	5,000	5,000
Yingkou	5,000	5,000	5,000	5,000	5,000	5,000
Jinan	4,000	4,000	4,000	4,000	4,000	4,000
Luoyang	4,000	4,000	4,000	4,000	4,000	4,000
Qingdao	3,000	3,000	3,000	3,000	3,000	3,000
Jiangmen	3,000	3,000	3,000	3,000	3,000	3,000
Qingdao sanitation truck plant	3,000	3,000	3,000	3,000	3,000	3,000
Zhenjiang	0	0	8,000	8,000	8,000	8,000
Zhenjiang refrigerated trailer plant	0	0	3,000	3,000	3,000	3,000
Total (China)	**114,500**	**134,500**	**145,500**	**162,250**	**173,000**	**173,000**
Growth (YoY)			-	*11.5%*	*6.6%*	-
US						
Trenton (Georgia) & Monon (Indiana)	9,000	9,000	9,000	9,000	9,000	9,000
Others	0	0	0	0	0	10,500
Total (US)	**9,000**	**9,000**	**9,000**	**9,000**	**9,000**	**19,500**
Growth (YoY)			-	-	-	*116.7%*
Europe						
SDC (Toomebridge, Antrim, Star, Mansfield) plant (the UK)	10,200	10,200	10,200	10,200	10,200	10,200
Others	2,500	2,500	2,500	2,500	2,500	9,500
Total (Europe)	**12,700**	**12,700**	**12,700**	**12,700**	**12,700**	**19,700**
Growth (YoY)			-	-	-	*55.1%*
Total	**136,200**	**156,200**	**167,200**	**183,950**	**194,700**	**212,200**
Growth (YoY)	*8.1%*	*14.7%*	*7.0%*	*10.0%*	*5.8%*	*9.0%*

Source: Company data, CMBIS estimates

Figure 25: Capacity utilization rate of CIMC Vehicles

	2016	2017	2018
Utilization rate			
China			
Zhumadian (Light Tower plant)	*91.7%*	*117.0%*	*114.1%*
Dongguan	-	*2.9%*	*200.9%*
Shenzhen	*207.1%*	*248.5%*	*105.9%*
Yangzhou (Light Tower plant)	*124.5%*	*181.2%*	*188.5%*
Liangshan I	*51.1%*	*53.7%*	*38.3%*
Wuhu	*94.0%*	*108.7%*	*159.0%*
Liangshan II	*21.0%*	*20.8%*	*22.8%*
Xi'an	*63.8%*	*182.9%*	*281.2%*
Baiyin	*26.3%*	*52.6%*	*39.5%*
Qingdao refrigerated trailer plant	*59.5%*	*68.3%*	*95.6%*
Yingkou	*38.6%*	*53.4%*	*40.0%*
Jinan	*79.3%*	*83.0%*	*92.6%*
Luoyang	*96.8%*	*173.2%*	*224.3%*
Qingdao	*159.5%*	*163.4%*	*178.8%*
Jiangmen	*31.6%*	*131.5%*	*165.3%*
Qingdao sanitation truck plant	*16.8%*	*18.6%*	*16.3%*
Zhenjiang	-	-	-
Zhenjiang refrigerated trailer plant	-	-	-
Average (China)	*92.1%*	*105.4%*	*118.0%*
US			
Trenton and Monon	*117.6%*	*105.2%*	*130.2%*
Others	-	-	-
Average (US)	*117.6%*	*105.2%*	*130.2%*
Europe			
SDC (Toomebridge, Antrim, Star, Mansfield) plant	*39.0%*	*77.1%*	*76.2%*
Bree plant	*67.1%*	*77.5%*	*73.5%*
Average (Europe)	*44.5%*	*77.2%*	*75.7%*
Average	***89.4%***	***103.1%***	***115.4%***

Note: The average utilization rate is calculated by the total production volume / total capacity.
Source: Company data, CMBIS

Further digitalization of production process

With the successful implementation of the “Light Tower” plants to automate the manufacturing facilities, CIMC Vehicles believes the production quality, efficiency and flexibility can be further enhanced by digitalizing the production process. The planned digitalized manufacturing facilities represent an upgrade from an automated manufacturing facility to a fully connected and flexible facility, which is capable of utilizing data from connected operations and production systems for resource control and optimization, and which can adapt the existing automated manufacturing process to accommodate new products.

In the digitalized manufacturing facilities, CIMC Vehicles will introduce a Product Lifecycle Management system (PLM) and a Manufacturing Executive System (MES) for smart manufacturing planning and management. By digitalizing the automated production lines, the Company can utilize data analysis to plan production design, cost and resources before a product is produced. Therefore, the Company can leverage the current facilities further to accommodate a broad spectrum of product offerings to cater to different requirements across regions.

New product development and improvement

With the development of Product Lifecycle Management system and automated manufacturing process, CIMC Vehicles plans to develop new products by adopting digital design modelling and digital manufacturing simulation. Such development platform is intended to enhance flexibility and to allow the Company to allocate the manufacturing capacity more efficiently to meet fast changing market trends.

In particular, CIMC Vehicles plans to develop smart trailers, which will provide customers with highly efficient fleet operation, reliable trailer and cargo management and flexible customization. These smart trailers will be equipped with sensors for real-time operation and cargo space monitoring, a smart trailer terminal to transmit data and a battery pack or solar panel to power the related digital device. In 2017, CIMC Vehicles established Shenzhen SF-Trailernet Technology Co., Ltd. (深圳市星火车联有限公司) together with a Shenzhen-based technology company to develop smart trailer terminals, and in Jun 2018, CIMC Vehicles started commercial trials of smart trailer terminals in the US.

In addition, CIMC Vehicles will also develop a new brand for high-end refrigerated trailers to further enhance brand name and increase global market share of refrigerated trailers. Last but not the least, the Company intends to invest in the research and development of product standardization, weight reduction and modularization in US and European manufacturing facilities, as well as the development of other trailer products for China, and the North American and European markets.

Agile organization

Along with the digitalization of the “Light Tower” plants, CIMC plans to promote an agile organization with flexible decision-making processes by utilizing advanced information systems for resource control and optimization. For example, in the Shenzhen plant and digitalized Tonghua plant the Company will share one back-office for product design and raw material procurement and reorganize production and operation functions by product type. Through such arrangements, the Company can efficiently adapt its production lines

and respond more quickly to evolving market demand. The digitalized manufacturing plants will also replace physical quality control with real-time inspection through data collection and analysis. In addition, CIMC Vehicles aims to carry out such strategy by further enhancing management model innovation and cultivating talent specifically for its digitalized manufacturing facilities.

Capturing emerging business opportunities

CIMC Vehicles will continue to enhance the performance and market presence by exploring business opportunities in specific regions or niche product segments with sustainable growth potential. In the past, the Company successfully captured the business opportunities through the introduction of bespoke oil tank trailers in the Middle East in 2013 and the introduction of center-axle car carriers in China in 2017. Besides, CIMC Vehicles launched the swap bodies in Europe in response to the increasing demand from European logistics companies driven by the fast growing European e-commerce industry. The Company will continue to utilize its digitalized production capability to adapt to the fast-evolving and differentiated market demand more flexibly and with lower costs, and achieve sustainable growth in profitability in the long run.

Revenue and margin

China market

Vehicles sales volume (58% of total vehicle sales in 2018)
China has long been CIMC Vehicles' key market. Sales volume of vehicles in China (including semi-trailer, truck body and center-axle car carrier) grew 33.6%/37.2%/11% YoY to 72.2k/99.1k/110.7k units in 2016/2017/2018. The sales volume growth in 2016 was driven more by semi-trailers while that in 2017 and 2018 was largely driven by truck bodies. Besides, CIMC Vehicles launched its center-axle car carrier model in 2017 with a sales volume of 98 units. In 2018, the sales volume of center-axle car carriers surged to 12k units.

Revenue (57.5% of total revenue in 2018)
The well diversified product portfolio enabled CIMC Vehicles to smooth the volatility of the revenue of different products.

- In 2018, semi-trailers revenue dropped 15% YoY to RMB4.65bn as result of the weak demand in fence trailers and tank trailers, due to the replacement by railway transportation (for coal, steel, and other bulk goods) and a normalization of demand respectively.
- However, the strong demand infrastructure boosted the revenue of truck bodies by 53% YoY to RMB4.1bn in 2018. This also helped revenue of tractor units and truck chassis surging 59% YoY to RMB3.1bn in 2018.
- Besides, the significant increase in center-axle car carriers contributed RMB1.2bn in 2018, up significantly from RMB9.2mn in 2017.
- Sales of parts and components moderately increased by 6% YoY to RMB672mn in 2018.
- Revenue from other business increased 27% YoY to RMB239mn.
- All these contributed to a 28% YoY increase in revenue to RMB14bn.

Gross profit (54% of total gross profit in 2018)
Gross margin in China was relatively stable at 13-14% in 2016-2017, before it dropped to 12.3% in 2018. The reasons for the reduction include (1) rising sales of truck chassis (lower margin) and (2) inability to fully transfer the increased raw materials costs to the customers.

North American market

Vehicles sales volume (32% of total vehicle sales in 2018)
North America market has been the second largest market for CIMC Vehicles. The vehicle sale volume grew 12.7% YoY to 41.4k units in 2017, and surged 50% YoY to 62.3k units in 2018.

Revenue (27.5% of total revenue in 2018)
The revenue in North America grew 4.7% YoY to ~RMB4.7bn 2017. In 2018, the revenue reached RMB6.6bn, up significantly by 41% YoY, due to a 73.6% YoY increase in chassis trailers.

Gross profit (31% of total gross profit in 2018)
Gross margin in North America was 18.3% in 2016 and remained stable at 19% in 2017. The higher margin was helped by the depreciation of RMB against US$ and reduction of raw material prices. In 2018, however, the gross profit increased 10% YoY but gross margin narrowed to 14.8% from 19% in 2017, dragged by the appreciation of RMB, the increased market price of steel and aluminum procured in the US, and the imposition of a 10% tariff on US$200bn worth of certain Chinese imports to the US, including semi-trailers.

European market

Vehicles sales volume (5.6% of total vehicle sales in 2018)
In Europe, the vehicle sales volume grew significantly from 6,107 units in 2016 to 11,055 units in 2017, driven by acquisitions. The sales volume was 10,830 units in 2018, slightly down 2% YoY.

Revenue (10% of total revenue in 2018)
The revenue contribution in Europe is much higher compared with that of the sales volume due to the much higher ASP. In 2017, the revenue surged 58% YoY to Rmb2.22bn as a result of strong demand for all major products. In 2018, the revenue moderately increased by 9% YoY to RMB2.43bn. The slowdown was due to the reduced demand in the UK as a result of the uncertainty associated with Brexit, as well as a decrease in liquid tank trailers sales due to capacity constraints at Yangzhou plant in China.

Gross profit (10% of total gross profit in 2018)
Gross margin has been on a downtrend since 2016. It was mainly a result of increased sales of curtain-side trailers, chassis and flatbed trailers which carried lower gross margin after the acquisition of SDC Trailers in 2H16. In 2018, the gross margin declined to 12.4% from 12.9% in 2017 due to cost pressure.

Other regions

Vehicles sales volume (4.4% of total vehicle sales in 2018)
Other regions include over 40 countries covering Algeria, Australia, Indonesia, Japan, Malaysia, Saudi Arabia, South Africa, Thailand and Vietnam. The sales volume grew 40% YoY to 10,293 units in 2017 due to a one-off order of dry bulk tank trailers in Algeria, before dropping to 8,379 units in 2018.

Revenue (4.9% of total revenue in 2018)
In 2018, the revenue dropped 23% YoY to RMB1,191bn as a result of the lack of one-off large order. The revenue contribution from other regions decreased from ~8% in 2016 to 4.9% in 2018.

Gross profit (5% of total gross profit in 2018)
In 2018, the gross profit decline of 10% YoY was mainly due to the sales volume decline. However, the gross margin improved from 12% in 2017 to 13.9% in 2018.

Figure 26: Sales volume breakdown

	2016	2017	2018	2019E	2020E	2021E
Sales volume (units)						
China						
Sales of vehicles						
(1) Semi-trailers	**51,386**	**60,196**	**47,529**	**47,406**	**48,058**	**48,801**
Chassis and flatbed trailers	24,525	27,973	22,471	21,347	20,707	20,500
Fence trailers	13,891	17,808	10,830	10,289	9,980	9,880
Tank trailers	11,531	13,047	12,931	14,473	16,074	17,124
- Liquid tank trailers	8,493	7,197	5,871	5,577	5,577	5,577
- Dry bulk tank trailers	3,038	5,850	7,060	8,896	10,497	11,546
Van trailers	1,439	1,368	1,297	1,297	1,297	1,297
Others (low flatbed trailers & car carrier semi-trailers)	2,560	5,250	3,719	3,719	3,719	3,719
(2) Center-axle car carriers	**0**	**98**	**12,061**	**6,031**	**6,091**	**6,091**
(3) Truck bodies	**18,276**	**33,527**	**47,345**	**63,425**	**70,577**	**72,631**
Dump beds for dump trucks	10,174	19,824	25,519	34,451	38,240	39,387
Mixers for mixer trucks	4,000	9,302	16,846	23,247	26,037	26,818
Others (truck bodies for sanitation trucks & refrigerated vans)	4,102	4,401	4,980	5,727	6,300	6,426
Total (China)	**72,222**	**99,071**	**110,654**	**120,581**	**128,445**	**131,242**
North America						
Sales of vehicles						
Chassis trailers	23,332	29,330	47,246	40,159	40,561	42,589
Dry van trailers	10,582	9,466	11,722	13,480	15,098	15,551
Refrigerated trailers	2,816	2,606	3,308	3,804	4,299	4,643
Total (North America)	**36,730**	**41,402**	**62,276**	**57,444**	**59,957**	**62,782**
Europe						
Sales of vehicles						
Chassis and flatbed trailers	2,211	4,268	4,593	4,915	5,259	5,311
Curtain-side trailers	1,667	3,522	3,074	3,135	3,198	3,230
Tank trailers	638	595	597	685	743	772
- Liquid tank trailers	481	414	303	303	303	306
- Dry bulk trailers	157	181	294	382	440	466
Others (bulk containers and swap bodies)	1,591	2,670	2,566	2,694	2,829	2,970
Total (Europe)	**6,107**	**11,055**	**10,830**	**11,429**	**12,028**	**12,284**
Other regions						
Sales of vehicles						
Total (other regions)	**7,368**	**10,293**	**8,379**	**8,882**	**9,237**	**9,514**
Total sales volume	**122,427**	**161,821**	**192,139**	**198,335**	**209,668**	**215,822**

Sales volume growth (YoY)	2016	2017	2018	2019E	2020E	2021E
China						
Sales of vehicles						
(1) Semi-trailers	***35%***	***17%***	***-21%***	***0%***	***1%***	***2%***
Chassis and flatbed trailers	*34%*	*14%*	*-20%*	*-5%*	*-3%*	*-1%*
Fence trailers	*23%*	*28%*	*-39%*	*-5%*	*-3%*	*-1%*
Tank trailers	*67%*	*13%*	*-1%*	*12%*	*11%*	*7%*
- Liquid tank trailers	*89%*	*-15%*	*-18%*	*-5%*	*0%*	*0%*
- Dry bulk tank trailers	*26%*	*93%*	*21%*	*26%*	*18%*	*10%*
Van trailers	*-7%*	*-5%*	*-5%*	*0%*	*0%*	*0%*
Others (low flatbed trailers & car carrier semi-trailers)	*13%*	*105%*	*-29%*	*0%*	*0%*	*0%*
(2) Center-axle car carriers	***n/a***	***n/a***	***12207%***	***-50%***	***1%***	***0%***
(3) Truck bodies	***33%***	***83%***	***41%***	***34%***	***11%***	***3%***
Dump beds for dump trucks	*37%*	*95%*	*29%*	*35%*	*11%*	*3%*
Mixers for mixer trucks	*26%*	*133%*	*81%*	*38%*	*12%*	*3%*
Others (truck bodies for sanitation trucks & refrigerated vans)	*31%*	*7%*	*13%*	*15%*	*10%*	*2%*
Total (China)	***34%***	***37%***	***12%***	***9%***	***7%***	***2%***
North America						
Sales of vehicles						
Chassis trailers	*-21%*	*26%*	*61%*	*-15%*	*1%*	*5%*
Dry van trailers	*-2%*	*-11%*	*24%*	*15%*	*12%*	*3%*
Refrigerated trailers	*7%*	*-7%*	*27%*	*15%*	*13%*	*8%*
Total (North America)	***-14%***	***13%***	***50%***	***-8%***	***4%***	***5%***
Europe						
Sales of vehicles						
Chassis and flatbed trailers	*390%*	*93%*	*8%*	*7%*	*7%*	*1%*
Curtain-side trailers	*1732%*	*111%*	*-13%*	*2%*	*2%*	*1%*
Tank trailers	*14%*	*-7%*	*0%*	*15%*	*8%*	*4%*
- Liquid tank trailers	*37%*	*-14%*	*-27%*	*0%*	*0%*	*1%*
- Dry bulk trailers	*-25%*	*15%*	*62%*	*30%*	*15%*	*6%*
Others (bulk containers and swap bodies)	*134%*	*68%*	*-4%*	*5%*	*5%*	*5%*
Total (Europe)	***242%***	***81%***	***-2%***	***6%***	***5%***	***2%***
Other regions						
Sales of vehicles						
Total (other regions)	***-51%***	***40%***	***-19%***	***6%***	***4%***	***3%***
Total sales volume growth	***8%***	***32%***	***19%***	***3%***	***6%***	***3%***

Source: Company data, CMBIS estimates

Figure 27: ASP for key products

	2016	2017	2018	2019E	2020E	2021E
ASP (RMB 000/unit)						
China						
Sales of vehicles						
(1) Semi-trailers						
Chassis and flatbed trailers	60	65	69	67	67	67
Fence trailers	63	73	79	77	77	77
Tank trailers	141	135	135	131	129	128
- Liquid tank trailers	154	160	164	164	164	164
- Dry bulk tank trailers	103	105	110	110	110	110
Van trailers	75	98	109	109	109	109
Others (low flatbed trailers & car carrier semi-trailers)	108	89	97	97	97	97
(2) Center-axle car carriers	n/a	94	99	95	95	95
(3) Truck bodies	69	80	86	89	89	88
Dump beds for dump trucks	53	62	70	73	73	72
Mixers for mixer trucks	99	102	107	109	109	108
Others (truck bodies for sanitation trucks & refrigerated vans)	80	110	99	99	99	99
Average (China)	**78**	**82**	**90**	**90**	**90**	**90**
North America						
Sales of vehicles						
Chassis trailers	69	67	72	73	73	72
Dry van trailers	162	164	159	161	161	155
Refrigerated trailers	262	281	266	268	268	265
Average (North America)	**110**	**102**	**98**	**107**	**109**	**107**
Europe						
Sales of vehicles						
Chassis and flatbed trailers	144	136	145	140	140	140
Curtain-side trailers	179	172	185	182	182	182
Tank trailers	493	489	537	517	513	512
- Liquid tank trailers	513	516	602	590	590	590
- Dry bulk trailers	432	425	470	460	460	460
Others (bulk containers and swap bodies)	152	124	173	160	160	160
Average (Europe)	**192**	**163**	**184**	**179**	**179**	**179**

Source: Company data, CMBIS estimates

Figure 28: Revenue breakdown for key products

	2016	2017	2018	2019E	2020E	2021E
(RMB mn)						
Revenue breakdown by product						
China						
Sales of vehicles (1+2+3+4)	**6,910**	**10,076**	**12,996**	**14,185**	**15,174**	**15,455**
(1) Semi-trailers	**4,341**	**5,470**	**4,654**	**4,618**	**4,727**	**4,821**
Chassis and flatbed trailers	1,463	1,809	1,556	1,430	1,387	1,373
Fence trailers	870	1,297	853	792	768	761
Tank trailers	1,623	1,765	1,742	1,893	2,069	2,185
- Liquid tank trailers	1,310	1,150	963	915	915	915
- Dry bulk tank trailers	313	615	779	979	1,155	1,270
Van trailers	108	134	141	141	141	141
Others (low flatbed trailers & car carrier semi-trailers)	277	466	362	361	361	361
(2) Center-axle car carriers	**0**	**9**	**1,198**	**573**	**579**	**579**
(3) Truck bodies	**1,259**	**2,669**	**4,073**	**5,616**	**6,253**	**6,368**
Dump beds for dump trucks	537	1,235	1,777	2,515	2,792	2,836
Mixers for mixer trucks	394	948	1,805	2,534	2,838	2,896
Others (truck bodies for sanitation trucks & refrigerated vans)	328	485	491	567	624	636
(4) Tractor units and truck chassis	**1,311**	**1,927**	**3,071**	**3,378**	**3,615**	**3,687**
Sales of parts and components	**383**	**636**	**672**	**705**	**740**	**763**
Others	**193**	**196**	**239**	**286**	**344**	**361**
Total (China)	**7,486**	**10,907**	**13,906**	**15,177**	**16,258**	**16,579**
North America						
Sales of vehicles	**4,049**	**4,234**	**6,134**	**6,121**	**6,544**	**6,707**
Chassis trailers	1,601	1,953	3,389	2,932	2,961	3,066
Dry van trailers	1,709	1,551	1,866	2,170	2,431	2,410
Refrigerated trailers	739	731	879	1,020	1,152	1,230
Sales of parts and components	**435**	**459**	**502**	**542**	**569**	**586**
Total (North America)	**4,484**	**4,693**	**6,636**	**6,663**	**7,113**	**7,293**
Europe						
Sales of vehicles	**1,173**	**1,807**	**1,998**	**2,045**	**2,152**	**2,202**
Chassis and flatbed trailers	318	580	665	688	736	744
Curtain-side trailers	298	604	569	571	583	588
Tank trailers	315	291	321	355	381	395
- Liquid tank trailers	247	214	183	179	179	181
- Dry bulk trailers	68	77	138	176	202	214
Others	242	332	443	431	453	475
Sales of parts and components	**137**	**270**	**301**	**331**	**348**	**365**
Others	**100**	**149**	**136**	**138**	**139**	**141**
Total (Europe)	**1,410**	**2,225**	**2,435**	**2,514**	**2,640**	**2,708**
Other regions						
Sales of vehicles	**1,141**	**1,512**	**1,168**	**1,199**	**1,247**	**1,284**
Sales of parts and components	**16**	**17**	**14**	**14**	**15**	**15**
Others	**19**	**12**	**10**	**10**	**11**	**11**
Total (other regions)	**1,176**	**1,541**	**1,191**	**1,224**	**1,273**	**1,311**
Total revenue	**14,555**	**19,367**	**24,168**	**25,577**	**27,283**	**27,891**

Source: Company data, CMBIS estimates

Figure 29: Revenue growth for key products

Revenue growth (YoY)	2016	2017	2018	2019E	2020E	2021E
China						
Sales of vehicles (1+2+3+4)	-	**46%**	**29%**	**9%**	**7%**	**2%**
(1) Semi-trailers	-	***26%***	***-15%***	***-1%***	***2%***	***2%***
Chassis and flatbed trailers	-	*24%*	*-14%*	*-8%*	*-3%*	*-1%*
Fence trailers	-	*49%*	*-34%*	*-7%*	*-3%*	*-1%*
Tank trailers	-	*9%*	*-1%*	*9%*	*9%*	*6%*
- Liquid tank trailers	-	*-12%*	*-16%*	*-5%*	*0%*	*0%*
- Dry bulk tank trailers	-	*97%*	*27%*	*26%*	*18%*	*10%*
Van trailers	-	*25%*	*5%*	*0%*	*0%*	*0%*
Others (low flatbed trailers & car carrier semi-trailers)	-	*68%*	*-22%*	*0%*	*0%*	*0%*
(2) Center-axle car carriers	-	*n/a*	*12918%*	*-52%*	*1%*	*0%*
(3) Truck bodies	-	***112%***	***53%***	***38%***	***11%***	***2%***
Dump beds for dump trucks	-	*130%*	*44%*	*42%*	*11%*	*2%*
Mixers for mixer trucks	-	*140%*	*90%*	*40%*	*12%*	*2%*
Others (truck bodies for sanitation trucks & refrigerated vans)	-	*48%*	*1%*	*15%*	*10%*	*2%*
(4) Tractor units and truck chassis	-	***47%***	***59%***	***10%***	***7%***	***2%***
Sales of parts and components	-	**66%**	**6%**	**5%**	**5%**	**3%**
Others	-	**2%**	**22%**	**20%**	**20%**	**5%**
Average (China)	-	***46%***	***27%***	***9%***	***7%***	***2%***
North America						
Sales of vehicles	-	**5%**	**45%**	**0%**	**7%**	**2%**
Chassis trailers	-	*22%*	*74%*	*-14%*	*1%*	*4%*
Dry van trailers	-	*-9%*	*20%*	*16%*	*12%*	*-1%*
Refrigerated trailers	-	*-1%*	*20%*	*16%*	*13%*	*7%*
Sales of parts and components	-	**6%**	**9%**	**8%**	**5%**	**3%**
Average (North America)	-	***5%***	***41%***	***0%***	***7%***	***3%***
Europe						
Sales of vehicles	-	**54%**	**11%**	**2%**	**5%**	**2%**
Chassis and flatbed trailers	-	*83%*	*15%*	*3%*	*7%*	*1%*
Curtain-side trailers	-	*103%*	*-6%*	*0%*	*2%*	*1%*
Tank trailers	-	*-8%*	*10%*	*11%*	*7%*	*4%*
- Liquid tank trailers	-	*-13%*	*-15%*	*-2%*	*0%*	*1%*
- Dry bulk trailers	-	*13%*	*80%*	*27%*	*15%*	*6%*
Others (road transportation-related products)	-	*37%*	*33%*	*-3%*	*5%*	*5%*
Sales of parts and components	-	**97%**	**12%**	**10%**	**5%**	**5%**
Others	-	**48%**	**-9%**	**1%**	**1%**	**1%**
Average (Europe)	-	***58%***	***9%***	***3%***	***5%***	***3%***
Other regions						
Sales of vehicles	-	**33%**	**-23%**	**3%**	**4%**	**3%**
Sales of parts and components	-	*8%*	*-20%*	*5%*	*5%*	*3%*
Others	-	*-40%*	*-15%*	*5%*	*5%*	*3%*
Average (other regions)	-	***31%***	***-23%***	***3%***	***4%***	***3%***
Total revenue growth	-	***33%***	***25%***	***6%***	***7%***	***2%***

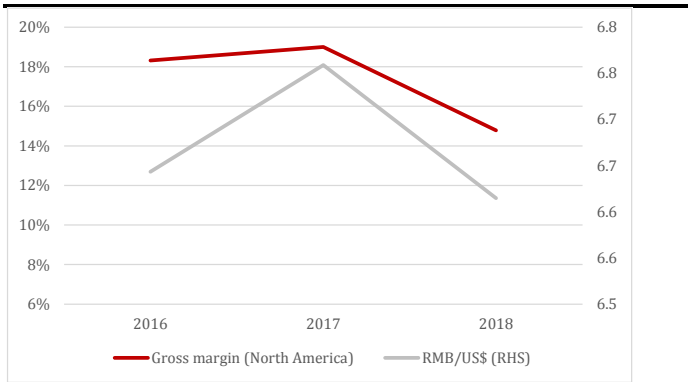
Source: Company data, CMBIS estimates

Figure 30: Gross margin for key products

Gross margin	2016	2017	2018	2019E	2020E	2021E
China						
Sales of vehicles (1+2+3+4)	11.6%	12.0%	10.3%	11.2%	11.3%	11.2%
(1) Semi-trailers	13.7%	12.8%	9.8%	9.8%	9.9%	9.6%
Chassis and flatbed trailers	16.5%	13.9%	9.5%	9.4%	9.3%	9.0%
Fence trailers	12.8%	13.4%	12.5%	12.4%	12.3%	12.2%
Tank trailers	12.0%	11.6%	9.3%	9.5%	9.8%	9.6%
- Liquid tank trailers	12.0%	11.3%	9.0%	9.0%	9.0%	9.0%
- Dry bulk tank trailers	11.9%	12.2%	9.8%	10.0%	10.5%	10.0%
Van trailers	15.1%	18.8%	13.3%	13.5%	13.5%	13.5%
Others (low flatbed trailers & car carrier semi-trailers)	11.6%	10.0%	5.9%	5.5%	5.5%	5.5%
(2) Center-axle car carriers	n/a	13.0%	16.6%	15.0%	15.0%	15.0%
(3) Truck bodies	15.9%	18.2%	16.7%	18.6%	18.6%	18.3%
Dump beds for dump trucks	7.6%	14.4%	15.3%	18.0%	18.0%	18.0%
Mixers for mixer trucks	25.9%	22.6%	17.6%	19.0%	19.0%	18.5%
Others (truck bodies for sanitation trucks & refrigerated vans)	17.4%	19.0%	18.1%	19.0%	19.0%	19.0%
(4) Tractor units and truck chassis	0.2%	1.2%	0.2%	0.2%	0.2%	0.2%
Sales of parts and components	29.6%	27.8%	29.8%	30.0%	30.0%	30.0%
Others	68.1%	49.6%	70.2%	70.0%	70.0%	70.0%
Average (China)	13.9%	13.6%	12.3%	13.2%	13.4%	13.3%
North America						
Sales of vehicles	19.3%	20.2%	15.3%	14.6%	13.9%	14.1%
Chassis trailers	24.2%	28.2%	19.6%	18.5%	17.8%	17.8%
Dry van trailers	16.0%	11.0%	7.2%	8.0%	7.8%	7.8%
Refrigerated trailers	16.2%	18.0%	15.6%	17.5%	17.0%	17.0%
Sales of parts and components	9.3%	8.3%	8.8%	10.0%	10.0%	10.0%
Average (North America)	18.3%	19.0%	14.8%	14.2%	13.6%	13.7%
Europe						
Sales of vehicles	11.7%	8.8%	10.1%	10.7%	10.7%	10.6%
Chassis and flatbed trailers	10.2%	8.7%	10.8%	11.3%	11.3%	11.3%
Curtain-side trailers	10.5%	7.8%	6.4%	8.0%	8.0%	7.8%
Tank trailers	13.0%	9.8%	10.2%	9.9%	9.9%	9.8%
- Liquid tank trailers	12.8%	10.1%	12.3%	12.3%	12.3%	12.3%
- Dry bulk trailers	13.8%	8.8%	7.4%	7.5%	7.8%	7.7%
Others	13.2%	10.1%	13.8%	13.8%	13.8%	13.8%
Sales of parts and components	30.9%	34.1%	23.8%	23.8%	23.8%	23.5%
Others	25.6%	24.3%	21.8%	21.8%	21.8%	21.8%
Average (Europe)	14.5%	12.9%	12.4%	13.0%	13.0%	13.0%
Other regions						
Sales of vehicles	11.7%	11.8%	13.4%	14.5%	14.5%	14.3%
Sales of parts and components	19.0%	17.1%	20.0%	21.0%	21.0%	21.0%
Others	-1.6%	26.7%	58.0%	30.0%	30.0%	28.0%
Total (other regions)	11.6%	12.0%	13.9%	14.7%	14.7%	14.5%
Blended gross profit	15.2%	14.7%	13.1%	13.5%	13.5%	13.4%

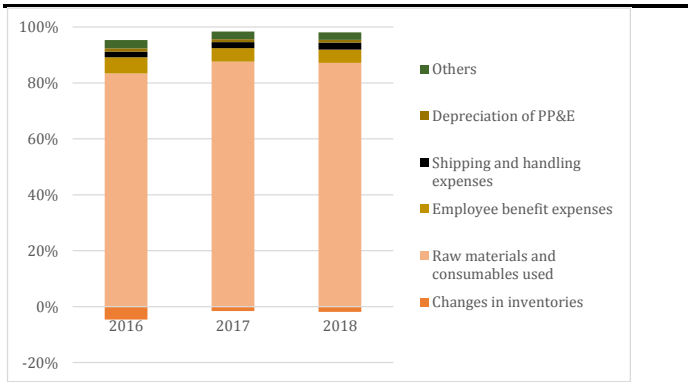
Source: Company data, CMBIS estimates

Figure 31: Gross margin in North America versus RMB FX rate



Source: Company data, CMBIS estimates

Figure 32: Breakdown of cost of sales



Source: Company data, CMBIS

Earnings projection

Revenue and gross profit projection in 2019E-2021E

In China, we expect revenue to grow moderately at 9%/7%/2% in 2019E/20E. We expect the growth in 2019E will continue to be driven by truck bodies, on the back of potential recovery of infrastructure spending, which should offset the weakness of flatbed and fence trailers. We expect the gross margin to remain relatively stable at 13.2% / 13.4% in 2019E / 2020E.

In the North America, we forecast a stable revenue in 2019E before seeing growth in 2020E, driven mainly by sales growth of dry van trailers and refrigerated trailers. We expect some pressure on the gross margin going forward, due to the imposition of higher tariff by the US.

In Europe, we expect the revenue growth to be 3%/5%/3% in 2019E/20E/21E. We expect the gross margin to remain largely stable at 13% in 2019E-21E.

Other income

Other income includes income from sales of scraps, government grants and value-added services:

- Income from sales of scraps includes surplus steel, aluminum and stainless steel materials left over from product manufacturing and consumption.
- Government grants mainly comprise government subsidies received for the contribution to the local economies and research and development projects.
- CIMC Vehicles provides value-added services, such as procuring certifications for the customers.
- Besides, the Company also generates other income from provision of other services, such as property management services in its vehicle parks.

Other income in 2016-2017 accounted for 0.7-0.8% of the revenue. We expect the ratio to remain stable going forward.

Administrative expense ratio under control

The administrative expense ratio (as a percentage of revenue) dropped from 5.9% in 2016 to 5.1% in 2018. We believe it was due to CIMC Vehicles' good cost control as well as the operating leverage helped by rising utilization rate. We expect the administrative expense ratio to stay low in 2019E-21E, on the back of high utilization rate and improving efficiency helped by the "Light Tower" plants.

Earnings forecast for 2019E-21E

We forecast CIMC Vehicles to deliver earnings growth of 23%/8%/3% to RMB1,411mn/1,519mn/1,566mn in 2019E/20E/21E. In terms of core profit, we calculated that the Company's core earnings in 2018 to be RMB1.06bn after deducting the one-off and non-operational items (figure 32). In 2019E/20E/21E, we estimate the core profit to be RMB1,265mn/1,369mn/1,416mn after excluding RMB150mn of estimated gains from the potential disposal of land. The core earnings growth in 2019E/20E/21E will be 19%/9%/3%, based on our estimates.

Figure 33: Calculation of core profit

(RMB mn)	2016	2017	2018	2019E	2020E	2021E
Reported net profit (A)	**730**	**964**	**1,143**	**1,411**	**1,519**	**1,566**
Exceptional items (B):						
Fair value gain on investment properties	79	0	44	0	0	0
Net FX gains/(losses)	21	(68)	7	0	0	0
Net gains on disposal of subsidiary	1	0	50	0	0	0
Gains/(losses) on disposal of PP&E	(7)	(14)	(3)	0	0	0
Write-off of payables	9	12	6	0	0	0
Gains/(losses) on disposal of financial assets/liabilities at fair value through P&L and derivative financial instruments	(11)	7	(16)	0	0	0
Others*	9	3	(6)	150	150	150
Core net profit (A-B)	**630**	**1,024**	**1,060**	**1,261**	**1,369**	**1,416**

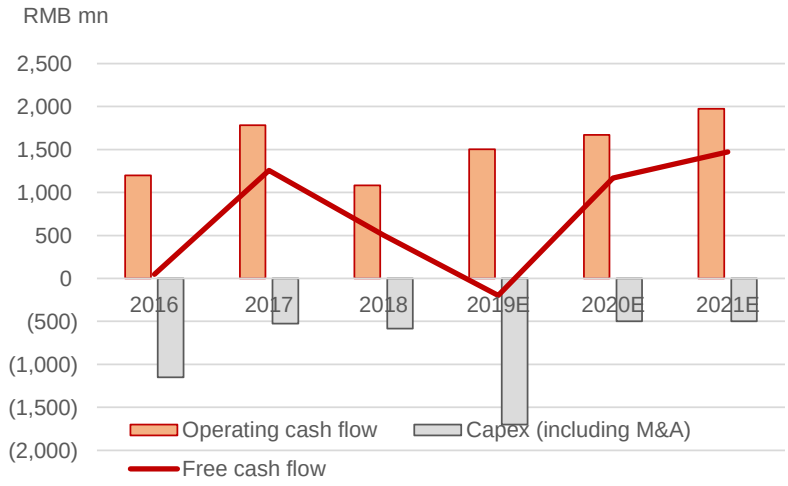
Note*: "Others" in the table is the difference between the Company's "other gains/(losses)" and the remaining items shown in the table.
Source: Company data, CMBIS estimates

Resilient cash flow and solid balance sheet for upcoming expansion

CIMC Vehicles' net debt to equity ratio was 4.2% by end-2016. The Company turned the balance sheet into net cash position by end-2017. This will offer flexibility for the Company to gear up the balance sheet for upcoming expansion.

CIMC Vehicles generated positive free cash flow between 2016 and 2018, helped by good working capital management and disciplined capex plan. CIMC Vehicles has budgeted Rmb1.7bn in 2019E for the capacity expansion and upgrade. We expect it will not exert pressure on CIMC Vehicles' financial position. Besides, we expect CIMC Vehicles will be able to maintain net cash position in 2019E-21E on the back of strong cash flow and the availability of external funding.

Figure 34: Free cash flow of CIMC Vehicles



Source: Company data, CMBIS estimates

Financial summary

Income statement

YE 31 Dec (RMB mn)	FY17A	FY18A	FY19E	FY20E	FY21E
Total revenue	**19,367**	**24,168**	**25,577**	**27,283**	**27,891**
Cost of sales	(16,519)	(21,009)	(22,123)	(23,601)	(24,142)
Gross profit	**2,848**	**3,159**	**3,454**	**3,683**	**3,750**
Other income	133	158	179	191	195
Other gains and losses	(59)	82	150	150	150
S&D expenses	(597)	(574)	(614)	(655)	(669)
Administrative expenses	(1,022)	(1,221)	(1,304)	(1,391)	(1,422)
Net gain / (impairment)*	12	16	0	0	0
EBIT	**1,315**	**1,621**	**1,865**	**1,978**	**2,003**
Net finance income/(expense)	(41)	(74)	(26)	(2)	34
Finance income	74	86	77	78	86
Finance expenses	(114)	(160)	(103)	(80)	(51)
Profit of JV and associates	(3)	6	6	6	5
Pretax profit	**1,272**	**1,553**	**1,845**	**1,982**	**2,043**
Income tax	(260)	(321)	(369)	(396)	(409)
After tax profit	1,012	1,232	1,476	1,586	1,634
MI	(47)	(89)	(65)	(67)	(69)
Net profit	**964**	**1,143**	**1,411**	**1,519**	**1,566**
Core net profit (CMBI est.)	**1,024**	**1,060**	**1,261**	**1,369**	**1,416**
D&A	273	303	368	385	403
EBITDA	**1,588**	**1,924**	**2,232**	**2,363**	**2,406**

Cash flow summary

YE 31 Dec (RMB mn)	FY17A	FY18A	FY19E	FY20E	FY21E
Pretax profit	1,272	1,553	1,845	1,982	2,043
Finance cost	80	141	93	70	51
Profit or loss of associates	3	(6)	(6)	(6)	(5)
Impairment of receivables	(12)	(16)	0	0	0
Write down of inventories	65	39	0	0	0
Depreciation and amortisation	273	303	368	385	403
Income tax paid	(318)	(292)	(369)	(396)	(409)
Change in working capital	389	(605)	(433)	(344)	(194)
Others	13	(84)	0	0	0
Cash flow from operation	**1,782**	**1,083**	**1,497**	**1,690**	**1,889**
Net capex on PP&E	(363)	(747)	(1,700)	(500)	(500)
Investment in JV/associates	(11)	(14)	0	0	0
Investment in subsidiaries	(151)	179	0	0	0
Loans to related parties (net)	467	140	0	0	0
Dividend received	4	2	1	1	1
Interest received fr related parties	25	10	10	10	0
Others	(408)	420	0	0	0
Cash flow from investing	**(438)**	**(10)**	**(1,689)**	**(489)**	**(499)**
Proceeds from equity financing	0	0	1,496	0	0
Net bank borrowings	299	(320)	(450)	(450)	(500)
Dividend paid	(449)	(612)	(289)	(423)	(456)
Interest paid	(117)	(189)	(103)	(80)	(51)
Others	(11)	(189)	(400)	0	0
Cash flow from financing	**(279)**	**(1,310)**	**254**	**(953)**	**(1,007)**
Change in cash	1,065	(237)	62	248	382
Cash at beginning of the year	1,780	2,811	2,617	2,679	2,927
Exchange gains/(losses) and	(35)	43	0	(0)	0
Cash at the end of the year	2,811	2,617	2,679	2,927	3,309

Balance sheet

YE 31 Dec (RMB mn)	FY17A	FY18A	FY19E	FY20E	FY21E
Non-current assets	**5,255**	**5,422**	**6,760**	**6,881**	**6,983**
PP&E	2,995	3,446	4,828	4,993	5,141
Land use rights	565	598	585	572	559
Investment in JV/associates	186	231	237	242	247
Investment properties	695	392	392	392	392
Intangible assets	610	547	510	473	436
Others	28	43	43	43	43
Deferred tax assets	176	165	165	165	165
Current assets	**10,996**	**11,139**	**11,546**	**12,704**	**12,973**
Inventories	3,560	3,582	4,055	4,222	4,377
Tax recoverable	99	125	125	125	125
Trade and bills receivables	2,817	3,567	3,440	4,184	3,916
Prepayments, deposits and	632	707	707	707	707
Loans to related parties	253	175	175	175	175
Financial assets at fair value	408	0	0	0	0
Others	244	214	214	214	214
Restricted cash	172	140	140	140	140
Cash	2,811	2,617	2,679	2,927	3,309
Current liabilities	**8,569**	**8,146**	**7,558**	**7,625**	**6,817**
Trade and bills payables	2,608	3,067	2,752	3,196	2,889
Other payables and accruals	2,671	1,876	1,876	1,876	1,876
Contract liabilities	801	587	813	936	936
Bank borrowings	2,266	1,981	1,481	981	481
Income tax liabilities	92	103	103	103	103
Others	131	532	532	532	532
Non-current liabilities	**673**	**467**	**517**	**567**	**567**
Bank borrowings	184	311	361	411	411
Deferred tax liabilities	149	134	134	134	134
Deferred income	339	23	23	23	23
Others	1	0	0	0	0
Equity	**7,009**	**7,948**	**10,231**	**11,393**	**12,572**
Shareholders' equity	6,606	7,488	9,706	10,801	11,912
MI	404	460	525	592	660

Key ratios

YE 31 Dec	FY17A	FY18A	FY19E	FY20E	FY21E
Sales mix (%)					
China	56.3	57.5	59.3	59.6	59.4
North America	24.2	27.5	26.1	26.1	26.1
Europe	11.5	10.1	9.8	9.7	9.7
Other regions	8.0	4.9	4.8	4.7	4.7
Total	100.0	100.0	100.0	100.0	100.0
Profit & loss ratio (%)					
Gross margin	14.7	13.1	13.5	13.5	13.4
EBIT margin	6.8	6.7	7.3	7.2	7.2
Net profit margin	5.2	5.1	5.8	5.8	5.9
Growth (%)					
Revenue	33	25	6	7	2
Gross profit	29	11	9	7	2
EBIT	26	23	15	6	1
Net profit	32	19	23	8	3
Core net profit	62	4	19	9	3
Balance sheet ratio					
Current ratio (x)	1.9	2.0	2.4	2.6	2.9
Receivable turnover days	53	48	50	51	53
Inventory turnover days	76	62	63	64	65
Payable turnover days	57	49	48	46	46
Net debt / total equity (%)	Net cash	Net cash	Net cash	Net cash	Net cash
Return (%)					
ROAA	6.2	7.0	8.1	8.0	7.9
ROAE	14.4	16.2	16.4	14.8	13.8
Core ROE	15.3	15.0	14.7	13.4	12.5
Per share data					
EPS (RMB)	0.64	0.76	0.85	0.84	0.87
BVPS (RMB)	4.40	4.99	5.38	5.99	6.60
DPS (RMB)	0.75	0.19	0.26	0.25	0.26

* Net gain / (impairment) on financial assets & financial guarantee contracts
Source: Company data, CMBIS estimates

Valuation

We initiate coverage on CIMC Vehicles with BUY rating and a TP of HK$6.9, based on 5x EV/EBITDA ratio, representing a 10% discount to our target valuation (5.5x) for **Weichai (2338 HK, BUY, TP: HK$16.2)** and **Sinotruk (3808 HK, BUY, TP: HK$21.5)**. We benchmark the Company to the manufacturers of commercial vehicles and component. We apply a valuation discount due to the lower entry barrier and margin of trailer compared with that of the engine manufacturers.

Figure 35: Peers valuation table

Ticker	Company	Rating	Price (local currency)	TP (local currency)	Upside/ (downside)	Market cap (US$ m)	PE (x)		PB (x)		EV/EBITDA (x)		Dividend yield (%)	
							FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E
Hong Kong listed														
1839 HK Equity	**CIMC VEHICLES -H**	**BUY**	**4.87**	**6.90**	**42%**	**1,097**	**5.1**	**5.2**	**0.8**	**0.7**	**3.5**	**3.3**	**5.9**	**5.8**
1157 HK Equity	ZOOMLION HEAVY-H	BUY	4.60	6.95	51%	5,743	7.9	6.9	0.8	0.8	6.2	5.7	11.4	13.0
2338 HK Equity	WEICHAI POWER-H	BUY	11.00	16.20	47%	12,108	7.7	7.3	1.7	1.5	4.1	4.0	7.2	7.6
3808 HK Equity	SINOTRUK HK LTD	BUY	11.60	21.50	85%	4,087	5.7	5.5	1.0	0.9	2.4	2.3	6.1	6.4
	Average						**6.6**	**6.2**	**1.1**	**1.0**	**4.1**	**3.8**	**7.7**	**8.2**
US listed														
PCAR US Equity	PACCAR INC	-	64.78	-	-	22,438	9.5	11.3	2.4	2.1	5.7	6.6	5.2	4.2
WNC US Equity	WABASH NATIONAL	-	14.98	-	-	816	9.0	9.9	1.6	1.4	6.2	6.6	n/a	n/a
CMI US Equity	CUMMINS INC	-	148.16	-	-	23,378	9.4	10.4	2.9	2.8	6.4	7.1	3.2	3.4
ALSN US Equity	ALLISON TRANSMIS	-	42.06	-	-	5,069	8.3	8.6	6.4	4.8	7.0	7.6	1.4	1.5
NAV US Equity	NAVISTAR INTL	-	24.50	-	-	2,429	6.7	7.4	(0.7)	(0.7)	4.9	5.4	0.0	0.0
	Average						**8.6**	**9.5**	**2.5**	**2.1**	**6.1**	**6.7**	**2.5**	**2.3**
Europe listed														
DAI GR Equity	DAIMLER AG	-	41.93	-	-	51,304	7.6	6.0	0.7	0.6	2.4	2.1	6.2	6.8
VOLVB SS Equity	VOLVO AB-B	-	129.95	-	-	30,615	7.7	9.4	1.9	1.8	5.7	6.7	6.1	5.3
WLT PW Equity	WIELTON	-	7.85	-	-	542	n/a	n/a	n/a	n/a	7.3	7.3	n/a	n/a
	Average						**7.6**	**7.7**	**1.3**	**1.2**	**5.1**	**5.3**	**6.1**	**6.0**
	Average for all						**7.9**	**8.3**	**1.9**	**1.6**	**5.3**	**5.6**	**5.2**	**5.4**

Note: Data extracted after Hong Kong market closed on 13th Aug, 2019.

Source: Bloomberg consensus, CMBIS

Industry Overview

Semi-trailer market

A trailer is a type of motor-less special-purpose vehicle, which needs to be connected with a motor vehicle that provides motive power to transport goods and cargo. Depending on the position of the axles installed on the trailers, trailers can be classified into three categories, namely semi-trailers, center-axle trailers and draw-bar trailers.

Figure 36: Type of semi-trailer

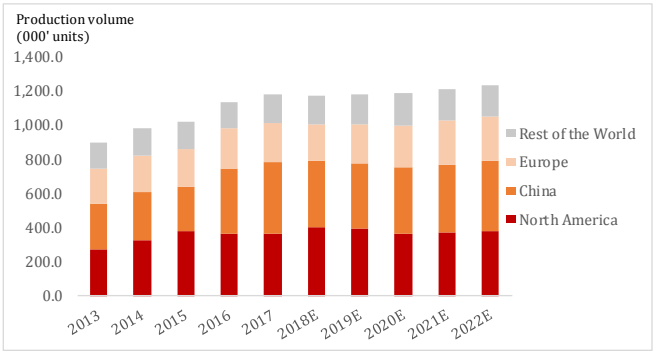
Trailer Type	Description
Semi-trailers	A semi-trailer's axle is located behind the center of gravity and, therefore, a semi-trailer can only stand independently when equipped with a landing gear or connected with a motor vehicle. The motor vehicle, normally a tractor unit, provides motive power and support a proportion of the weight of the semi-trailer.
Center-axle Trailers	A center-axle trailer's axle is located near the center of gravity. Compared to that of a semi-trailer, the motor vehicle connected with a center-axle trailer supports only a small proportion of the weight of the center-axle trailer.
Draw-bar Trailers	A Draw-bar trailer has at least two axles installed at the front and the rear end, so a draw-bar trailer can stand by itself without a landing gear or being connected with a motor vehicle. The motor vehicle only provides motive power but normally does not support any weight of the draw-bar trailer.

Source: Company data, CMBIS

Global market

Benefiting from the growth of the global economy, particularly the active construction activities in China and India, the global sales volume of semi-trailers increased from 901.7k units to 1.2mn units from 2013 to 2017, representing a CAGR of 7%. The upcoming global sales volume is expected to gradually increase from a weak 2018, driven by both China and Europe, according to Frost & Sullivan.

Figure 37: Global production volume of semi-trailers



CAGR	2013-2017	2017-2022E
North America	7.3%	0.6%
China	12.0%	-0.3%
Europe	3.4%	2.6%
Rest of the World	1.1%	2.0%
Global	**7.0%**	**1.0%**

Source: Company data, Frost & Sullivan, CMBIS

China

- Overloading was a serious issue in China truck industry. In order to improve the management of highways, life and property safety, the Chinese government has begun much stricter enforcement regulation GB1589 starting from Sep 2016. The regulation specifies the limits of the external dimensions, axle load and mass of different vehicles, which is much stricter compared with the previous version in 2004.

Figure 38: Change in loading standard (tonne) after the implement of GB1589-2016

No. of Axels	Vehicle Type	Vehicle	Old Loading Standard	New Loading Standard
2	Rigid		20	18
3	Artic		30	27
	Rigid		30	25
	Rigid			
4	Artic		40	36
	Rigid		40	31
5	Artic		50	43
			50	43
			50	42
6	Artic		55	49
			55	46
			55	46

Source: Standardization Administration of China, CMBIS

- The sales volume of semi-trailers dropped 9% YoY to ~254k units in 2015 due to the slowdown of the general economy, according to Frost & Sullivan. However, the implementation of GB1589-2016 in 2016 speeded up the replacement process for semi-trailers that did not meet the new size, axle load and technical requirements. Accordingly, the sales volume of semi-trailers in China increased in 2016-2017. After such front-loaded replacement, the sales volume reduced in 2018 and is expected to drop to 378k units in 2019. That said, Frost & Sullivan forecasts the sales volume of semi-trailers to increase starting 2020 and reach 412k units in 2022 driven by a general economic growth.

North America

- The sales volume of semi-trailers in North America grew from 275k units in 2013 to 365k units in 2017 with a CAGR of 7.3%, mainly driven by the US demand. The sales volume of semi-trailers in North America is expected to reach ~376k units in 2022, representing a CAGR of 0.6% in 2017-2022.

Europe

- Supported by the stable economic growth since 2013 and the increasing replacement demand, the sales volume of semi-trailers increased from ~205k units to ~234k units at a CAGR of 3.4% in 2013-2017. Benefiting from the expected economic growth and the stable demand for construction and transportation in Europe, Frost & Sullivan forecasts the sales volume of semi-trailers to reach 266k units in 2022, a CAGR of 2.6% in 2017-2022.

Drivers of the semi-trailer Industry

Stable growth momentum for global economy and downstream markets

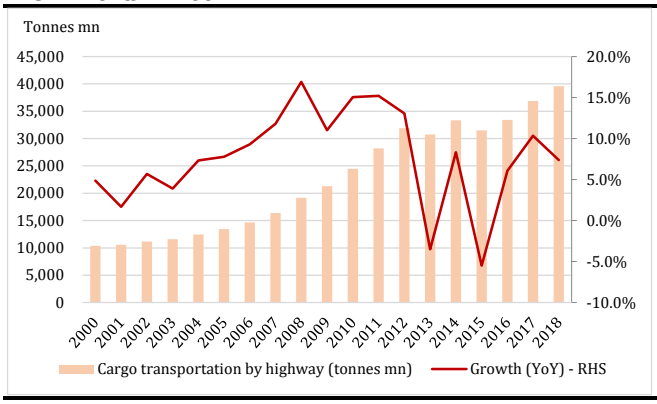
The global economy has continued its growth momentum over the past few years, underlying the expansion of the semi-trailer industry and its downstream markets. The downstream markets of the semi-trailer industry are broad and diverse, including cement, oil and gas, poultry, cold-chain logistics, e-commerce, construction and others. Generally, fence trailers, tank trailers, chassis and flatbed trailers, van trailers, and refrigerated trailers are the most common types of vehicles and they all witnessed significant increase from 2013 to 2017. This was mainly attributable to growing volume of freight driven by the surge of e-commerce sales, infrastructure and increasing demand from other industries.

Improving traffic and road infrastructure

Many countries have been investing in traffic and road infrastructure to improve transportation and logistics capacity. Road transport has become more flexible, efficient, and cost-effective as numerous new routes are built to reach more destinations, which offer more transport capacity among localities where rail, air, and water transports are absent, and provide door-to-door transportation with a wide variety of goods. Thus, the demand for road transport with improved traffic and road infrastructure has arisen, benefiting the semi-trailer industry.

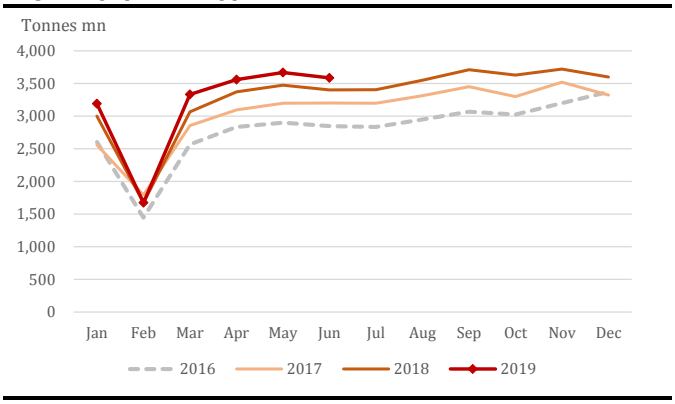
In China, the annual fixed asset investment (FAI) on road transportation increased from RMB693bn in 2007 to >RMB4,300bn in 2018, up >5x, according to National Bureau of Statistics. This paved the way for the continuous increase in cargo transportation by highway, which increased from 16.4bn tonnes in 2007 to 39.6bn tonnes in 2018, representing 77% of total cargo transportation in China.

Figure 39: China cargo transportation volume by highway (yearly)



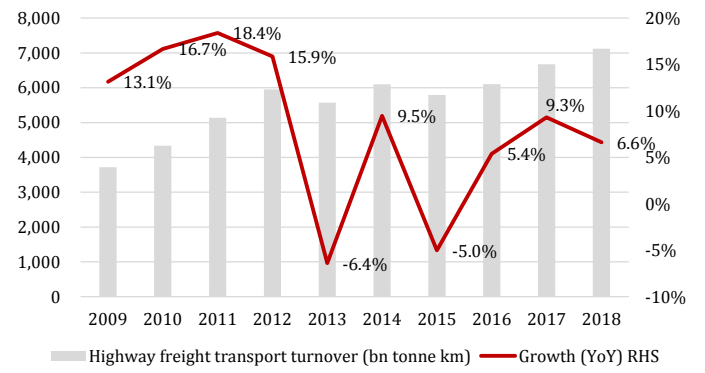
Source: Wind, NBS, CMBIS

Figure 40: China cargo transportation volume by highway (monthly)



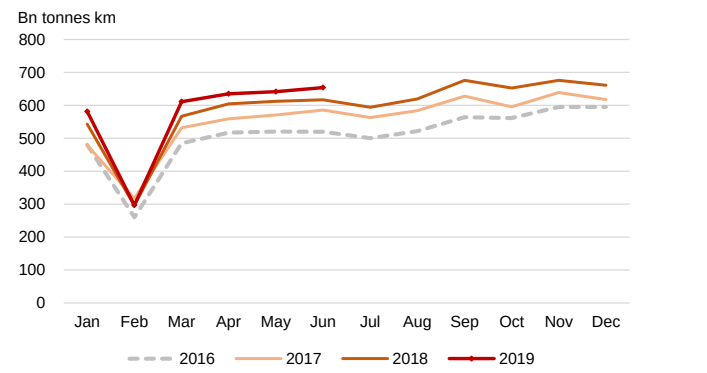
Source: Wind, NBS, CMBIS

Figure 41: China freight transport turnover by highway (yearly)



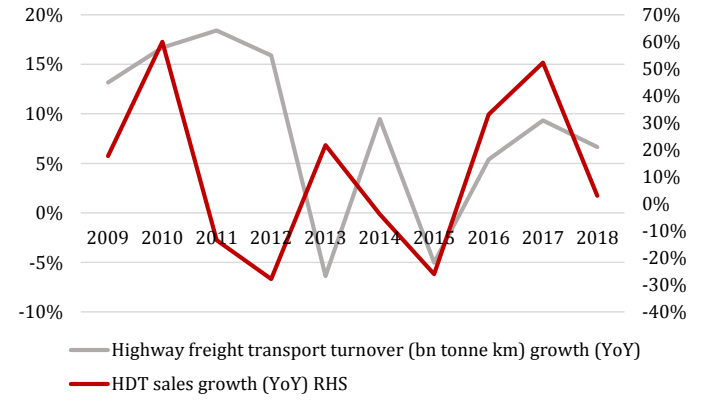
Note: Freight transport turnover = "cargo transported in tonne" x "the distance transported in km")
Source: Wind, NBS, CMBIS

Figure 42: China freight transport turnover by highway by highway (monthly)



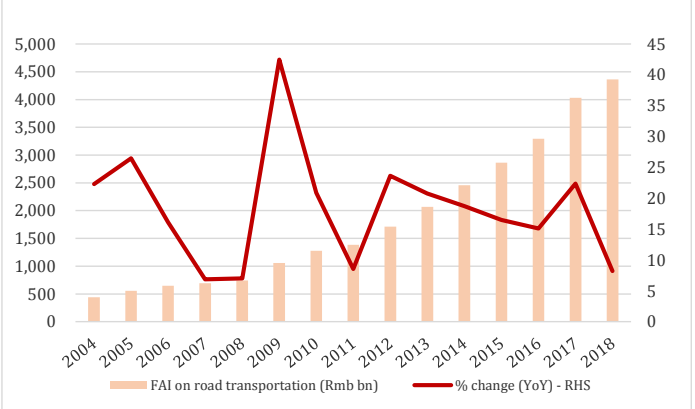
Source: Wind, NBS, CMBIS

Figure 43: China highway freight transport turnover versus sales of heavy duty truck



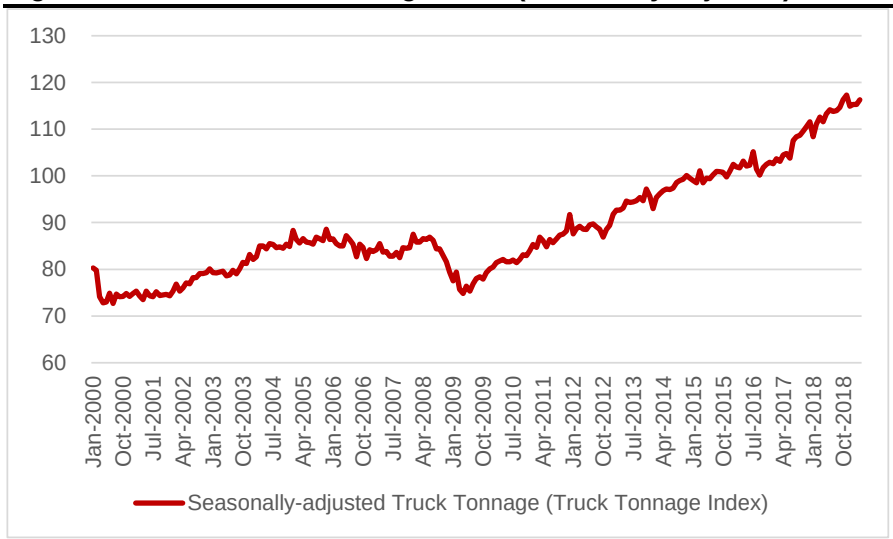
Source: Wind, NBS, CMBIS

Figure 44: China annual FAI on road transportation has grown substantially



Source: Wind, NBS, CMBIS

Figure 45: The US Truck Tonnage Index (Seasonally-adjusted)



Source: Bureau of Transportation Statistics of the US, CMBIS

Upgrade in utility and capability of semi-trailers

Due to evolving customer needs and changing technological and political environment, semi-trailers are continuously upgraded to be more functionable and capable, especially in developing countries such as China. The acceleration of the replacement process has increased the demand for more up-to-date semi-trailers and benefited China semi-trailer industry in recent years. It is expected that there will be increasing demand for semi-trailers in many other developing countries, which will lead to growing sales volume of semi-trailers globally.

Competitive Landscape

In 2017, the sales volume of the top five players in the global market reached 343.3k units in total, accounting for a combined market share of 29.1%.

China: The sales volume of the top five players in the market reached 116.8k units in total, accounting for a combined market share of 28.0%. In 2017, CIMC Vehicles ranked the first in terms of sales volume of semi-trailers in China, which reached 65,446 units and accounted for 15.7% of the market in terms of the total sales volume of semi-trailers in China in 2017.

North America: The sales volume of the top five players in the market reached ~245k units in 2017, accounting for a combined market share of 67.2%. In 2017, CIMC Vehicles ranked the fifth in North America with the sales volume reaching 41,402 units, accounting for 11.4% of the market in terms of the total sales volume of semi-trailers in North America in 2017.

Europe: The sales volume of the top five players in the market reached ~147k units in 2017, accounting for a combined market share of 62.9%. The sales volume of semi-trailers of CIMC Vehicles in Europe was 8,385 units in 2017.

Figure 46: Global semi-trailer market share in 2017

Company	Country	Sales volume (000' units)	Market share	Main products
CIMC Vehicles	**China**	**122**	**10.3%**	**Chassis and flatbed trailers, fence trailers, van trailers, refrigerated trailers and tank trailers**
Schmitz Cargobull	Germany	61	5.2%	Van trailers, refrigerated trailers, and chassis and flatbed trailers
Translead	US	60	5.1%	Van trailers, refrigerated trailers, and chassis and flatbed trailers
Wabash National	US	54	4.6%	Van trailers, refrigerated trailers and tank trailers
Great Dane	US	46	3.9%	Van trailers, refrigerated trailers, and chassis and flatbed trailers
Others	-	837	70.9%	-
Total		**1,180**	**100.0%**	

Source: Company data, Frost & Sullivan, CMBIS

Growth opportunities

Adoption of intelligent applications and autonomous driving technologies

Intelligent applications have been improved in various aspects of the semi-trailer industry, including intelligent manufacturing, route planning, and vehicle monitoring and control. Semi-trailer manufacturers have been investing extensively in research and development to enhance their competitiveness in product design and manufacturing. Automated equipment and modularized designs are being adopted to produce semi-trailers. Also, digitalization creates innovative communication between vehicles and drivers. Smart route planning as well as intelligent vehicle monitoring and control solutions are expected to be achieved in the short or medium term. In addition, autonomous driving technologies have been progressing towards real-life applications and self-driving vehicles is expected to realize commercialization within a decade.

Offering of custom built semi-trailers to satisfy diverse demand

In the past, a large number of semi-trailers were used improperly to transport goods. For instance, cargo trailers were used to transport liquid and gaseous commodities which should be carried by liquid tank trailers. Van trailers were used to transport frozen foods which should be carried by refrigerated trailers. Due to evolving industry requirements and specification standards, semi-trailer manufacturers produce more specialized semi-trailers that are designed to serve specific purposes. This trend is expected to continue with changing industrial and political environment. In China, for instance, driven by the growth in e-commerce and faster-paced construction, demand for fence trailers, refrigerated trailers, and tank trailers and others is stronger as compared to other countries.

Promising growth in semi-trailer fleet rentals and leasing

To meet the fluctuating demand and reduce upfront expenses, customers such as logistics companies have increasingly adopted semi-trailer rentals and leasing to manage their fleet. They are benefited from more flexibility in terms of when to increase or decrease their number of semi-trailers, how to finance the fleet, and having access to semi-trailers with up-to-date technologies. In addition, the penetration rate of semi-trailer fleet rentals and leasing is relatively low in developing counties, which have large potential for the development of rentals and leasings.

Truck Body Market

Truck bodies, such as dump beds and mixers, are installed on truck chassis to form specialty vehicles for cargo transportation. A specialty vehicle is a vehicle designed to serve certain commercial purposes.

Figure 47: Type of tuck body

Truck Body Type	Description
Tankers for tanker trucks	A tanker is a cylinder container used to transport liquid and gas, which is installed on tanker trucks. Major types of tanker trucks include mixer trucks, fuel tankers and liquefied gas tankers. Tanker trucks are commonly used in the chemical and construction industries.
Dump beds for dump trucks	A dump bed, installed on a dump truck, is normally an open box that holds cargo and wastes and has a hydraulic lifting system, which is used to unload goods by inclining the carriage. Dump trucks are mainly used in the construction and environmental sanitation industries. Major types of dump trucks include swept-body dump trucks, van-body dump trucks, and garbage dump trucks.
Vans for van trucks	A van is a closed carriage installed on a van truck. Van trucks are widely used in the logistics industry. Major types of van trucks include refrigerated van trucks, explosives van trucks, and corrosive material van trucks.

Source: Company data, CMBIS

Drivers of the truck body market

The truck body sector has benefited from the steady growth of China economy. In particular, the real estate boom and solid property investment contributed to an increase in demand for mixer trucks and dump trucks. The expanding coverage of air, sea and rail logistics networks has also led to the increased sales volume of truck bodies as demand for road transport largely grows in proportion to development of other transportation modes.

Competitive Landscape

China truck body market is fragmented and there are ~1,000 manufacturers. As the requirements for manufacturing different truck bodies vary significantly, there are more concentrated sub-markets in terms of certain truck body types such as mixer for mixer trucks and dump beds for dump trucks. None of the manufacturers is considered to have a leading position in the overall market. In the mixer for mixer truck market, major players include **Zoomlion Heavy Industry Science and Technology (1157 HK, 000157 CH, BUY)**, **Tangshan Yate Special Vehicles (唐山亚特专用汽车有限公司)** and **Hubei Chusheng Special Purpose Vehicle (湖北楚胜专用汽车有限公司)** and others. In the dump bed for dump truck market, major enterprises include **Sunhunk Heavy Industries Group (新宏昌重工集团), Chitian Automobile (驰田汽车有限公司), Junton Specialty Vehicle Co., Ltd. (河南骏通车辆有限公司)** and others.

Growth opportunities

Electrified and intelligent technologies

The electrification of vehicles in China is a clear trend driven by the development of electrified technology and favorable policies and regulations. With strong support from the Chinese government, many domestic manufacturers actively promote electrification of commercial vehicles, including a wide range of specialty vehicles.

Operating leasing and sharing

The operating leasing of specialty vehicles is expected to further develop, as it provides a flexible option for lessee to rent for a shorter term. Operating leasing will gradually become a more widely accepted option for customers.

After-sales services

With the growing competition in the truck body market, truck body manufacturers will improve the quality of their after-sales services, including spare parts delivery, training, modification, inspection, and repair and maintenance, in order to expand customer base and enhance the loyalty of existing customers.

Key Entry Barriers

Transformation to technology-driven manufacturers

With the advancement of technology, semi-trailer manufacturers will transform from traditional manufacturers to modern technology-driven manufacturers. To maintain competitive strength, semi-trailer manufacturers face the challenge to build research and development centers on intelligence technology and to cooperate with intelligence solution suppliers. In addition, environmental protection is an important issue in manufacturing industry. Semi-trailer manufacturers need to consider environmental protection requirements as essential elements when they make decisions on technological issues.

For truck body sector, intelligence and light-weight are two major directions for development due to the increasing demand for safety, efficiency, low cost and environmental protection. While there are many players in the truck body industry, more demanding technology requirements will be a major challenge for most existing players to develop sustainably and also an entry barrier for potential new entrants.

Capital intensive

At the initial stage of development, truck body manufacturers are required to invest a large amount of capital to purchase property, plant, and equipment and invest in research and development. Only the truck body manufacturers who are able to reach economies of scale can maintain the business sustainability.

Increasing labor cost

To retain experienced technicians, semi-trailer manufacturers may need to pay a higher salary. The increasing labor cost is a challenge for semi-trailer manufacturers to maintain sustainable development.

Ability to follow regulations

Regulatory requirements and industry standards around the globe will affect market entry for semi-trailer manufacturers. For example, Market Access Regulations for Specialty Vehicles and Trailers (专用汽车和挂车生产企业及产品准入管理规则) in China imposes standards of the products and rules to enter the market. New entrants are required to follow the regulations and to be listed on Announcement on Enterprises and Products of Road Vehicles (道路机动车辆生产企业及产品公告) to get qualification for production. New semi-trailer products should also be listed on such announcement to get qualification for sale. In addition, semi-trailer manufacturers are required to comply with environmental protection regulations.

Truck body manufacturers should comply with the Market Access Regulations for Specialty Vehicles and Trailers (专用汽车和挂车生产企业及产品准入管理规则) to get production permit and qualification. Apart from qualification for enterprises, qualification for products is also required for manufacturing a truck body. To get the qualification, applicants should submit a series of application materials to prove their abilities to design, to provide after-sales services, among others. Certain existing plants who fail to obtain the qualifications may be forced to leave the industry, which promote the safety of products and standardization of the market.

Risk factors

Slowdown of economic growth

A substantial part of the Company's revenue was derived from China, North America and Europe. Global demand for semi-trailers and truck bodies is influenced by various factors, such as the region's economic growth, urbanization progress, infrastructure construction, consumer spending and government policies. Slowdown of infrastructure construction could dampen market demand for specialty vehicles, particularly dump trucks and mixer trucks. Demand for chassis trailers may also be adversely impacted if the growth of global trade and exports slows down. In addition, changes in industry standards, particularly road transportation regulations and emission standards could affect the expectation of future demand. Furthermore, if changes occur to traffic patterns of goods transportation and thus reduce transportation volumes on road, the Company's business could be adversely affected.

Trade disputes

If significant tariffs or other restrictions are placed on Chinese imports or any related countermeasures are taken by China, the Company's revenue and results of operations may be materially affected. In May 2019, the US administration raised the tariffs from 10% to 25% on US$200bn worth of Chinese imports, which was effective immediately, with a limited extension for certain goods that were exported from China before May 10 and enter into the US before June 15, 2019. Under this circumstance, if the Company is unable to increase the local production capacity in the US or raise prices without affecting sales volume, profitability in North America may be affected.

Risks related to production capacity expansion and upgrade

The Company's ability to expand production capacity and upgrade production efficiency is subject to certain risks and uncertainties, including the ability to raise capital at reasonable cost, the reaction period needed to adapt to local markets and to obtain the required permits, licenses and approvals from relevant government authorities. Besides, the digitalization of "Light Tower" plants requires adjustments of management and organization, in terms of both production process and technologies. Given the Company's limited experience in managing upgraded plants, it may need to conduct trainings or incur related expenses. Furthermore, system upgrades at manufacturing facilities that impact ordering, production scheduling and other related processes are complex, and could impact or delay production targets.

New market expansion and acquisition

The Company sells products in over 50 countries and regions. In the European markets, the Company experienced solid growth following the acquisitions of LAG Trailers and SDC Trailers. The Company may be exposed to various risks and restrictions, including high-entry barriers in certain developed foreign markets, trade restrictions, technology barriers, protectionism and economic sanctions, when expanding overseas markets. The Company may face difficulty integrating acquired operations, culture, personnel, technology and products. Potential unforeseen or hidden liabilities associated with an acquired company and undisclosed risks may exert adverse effects on existing business relationships with current customers and suppliers. In addition, any acquisitions could involve the incurrence of additional indebtedness or dilution of equity interests.

Intense competition

The Company may face significant competition in the manufacture and sale of semi-trailers and truck bodies for specialty vehicle from foreign and domestic competitors. Competitors including large regional trailer manufacturing corporations might have greater financial, sales and marketing, manufacturing, research and development or technological resources, and may be able to manufacture products on a larger scale or with greater cost-efficiencies. Some of the specialized competitors may also have more flexibility to develop alternative technologies. Besides, changes in the industry entry barriers and regulations may expose the Company to more intense competition from new entrants. In addition, industry consolidation with competitors entering into strategic alliances may also result in a decline in the Company's relative market position.

Supply risk of raw materials

The Company is subject to risks associated with failure or shortage in the supply of certain key materials, parts, components and utilities required for the manufacturing of products. Volatility of commodity price, change in relationship with suppliers, changes in suppliers' manufacturing capacity, availability of substitute materials, interruptions in production may affect the supply of key materials and the Company's profitability. Furthermore, due to differences in timing between the purchases from suppliers and sales to customers, there is often a lead-lag effect that can negatively impact margins in the short term in the event of rising prices of materials, parts and components and utilities. If the Company fails to effectively control the cost or pass the increased cost to distributors and end-user customers, the business could be materially and adversely affected.

Increase in labor costs

The Chinese government has continued to introduce various new labor-related regulations after the promulgation of the PRC Labor Contract Law. As a result of the implementation of these rules and regulations, the Company's total labor costs have increased significantly. Furthermore, as the interpretation and implementation of these new laws and regulations are still evolving, there can be no assurance that the Company's employment practice will at all times be deemed fully in compliance. This may cause the Company to face labor disputes or governmental investigation. Besides, there have been instances of shortages in the labor supply in industries and the Company may have difficulties recruiting or retaining labor for production.

Exposure to foreign exchange and interest rate

The Company's foreign currency exposure mainly arises from the exposure of RMB against the US dollar, British Pound and the Euro. The Company uses forward foreign currency contracts to manage the potential impact of fluctuations in foreign currency exchange rates. The Company enters into interest rate swaps to mitigate floating interest rate exposure from long-term borrowings. Besides, the Company is also subject to translation risks as the consolidated financial statements are denominated in RMB while the financial statements of subsidiaries are presented in local currencies.

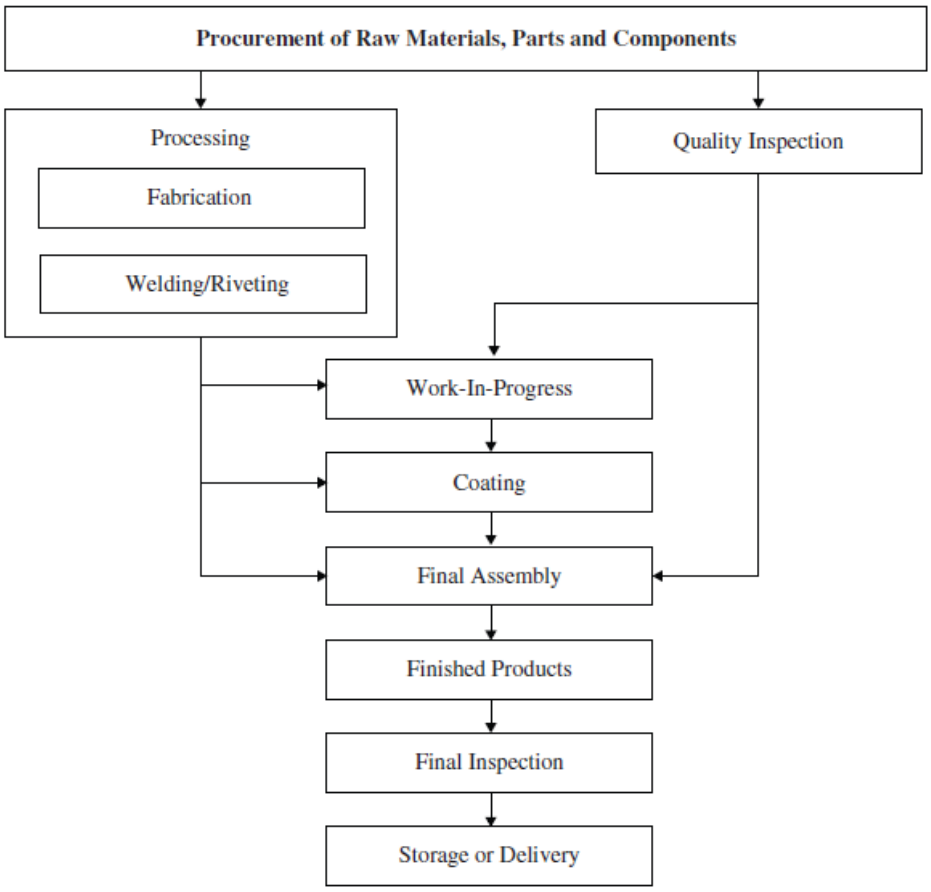
Appendix:

Manufacturing process

CIMC Vehicles' manufacturing process involves several stages, which may vary among the different semi-trailer and truck body categories. The Company strives to adopt the efficient methods and procedures at each stage of the manufacturing process in order to continually reduce waste and manufacturing costs, shorten production cycles, modularize and optimize the use of its resources, and improve the efficiency.

Manufacturing lead time for products vary. It usually takes about ten days to three months, including domestic and overseas delivery time, to produce and deliver one semi-trailer or truck body, subject to the product types and the destinations designated by the customers.

Figure 48: Principal steps in the overall manufacturing process



Source: Company data, CMBIS

Figure 49: Major steps of the manufacturing process

Steps	Description	Time needed
Procurement	- Raw materials, parts and components include truck chassis, steel, aluminum, tires, rims, axles, suspensions, breaking systems and other accessories. - The Company may also outsource the manufacturing of certain auxiliary parts and components, such as mudguards and tool boxes, to selected third parties to whom we normally specify our designs and technical specifications.	1-3 weeks
Quality inspection	- Certain parts and components, such as axles, suspensions and braking systems, may be passed down to the quality inspection and control line for assembly purposes without going through additional processing and handling procedures.	From one day to one week
Processing	- The processing of raw materials comprises fabrication and welding/riveting. The fabrication includes leveling, cutting, punching, drilling and bending. The Company adopts welding, riveting or other bounding process to pre-assemble the parts and components into a work-in-progress product, typically the main body, such as the skeleton frame of a chassis trailer. - The Company conducts the in-process inspection during various stages of the manufacturing process.	From 5 days to 2 weeks
Coating	- Coating involves two steps (i) pre-treatment, such as shot blasting and degreasing, and (ii) coating, which is to apply paint or other materials in waterbased, KTL or powder forms, to metal surfaces.	1-3 days
Final assembly	- Main bodies, tires, axles, suspensions, braking systems, and auxiliary parts and components are assembled as the final products.	1-5 days
Final inspection	- In addition to the in-process tests which the Company conducts, a final inspection is carried out by the Company's quality control personnel. The final inspection typically involves spray and waterproofing tests as well as inspections on braking and electrical appliances.	1-3 days
Storage and delivery	- The finished products are stored at the Company's storage yards for customers to collect or delivered to destinations designated by the customers.	Subject to the product types, distances to delegated destinations, and customer requirements.

Source: Company data, CMBIS

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