

JEP Holdings Ltd

Taking off under new management

SINGAPORE | TECHNOLOGY MANUFACTURING | INITIATION

- Secular growth in aerospace where commercial aircraft orders have a 10-year backlog.
- Turnaround to record profits under new management. Earnings in the past 12 months rose 9-fold.
- Initiate coverage with a BUY recommendation and target price of S\$0.20. Our valuation is based on 10x PE FY19e. This is a discount to global aerospace parts supply chain valuations. We believe the discount will narrow on the back of the future scale and consistent profitability.

Company Background

JEP was listed on the SGX as Alantac Technology in 2004. It initially specialised in semiconductor and hard disk drive parts. In 2007, Alantac made a major acquisition of JEP Precision Engineering (JEPS) to venture into precision parts for the aerospace and oil and gas industries. The combined entity was renamed JEP in 2010. In January 2018, SGX-listed UMS Holdings acquired a 29.5% stake in JEP. New management was installed after Mr Andy Luong was appointed as the Executive Chairman in February 2018. Eighteen months later, UMS Holdings launched a mandatory conditional cash offer at S\$0.15 per share. Its offer lapsed as the level of acceptances did not cross 50% of the voting shares.

Investment Merits

- 1. Secular growth of the aerospace industry.** Aerospace accounts for 54% of revenue. JEP has been building a track-record in precision machining parts for the aerospace industry. Global backlog for aircraft deliveries has risen to around 10 years. There is a global search for capacity.
- 2. Turnaround under new management.** After UMS took over management of the company in middle 2018, JEP has turned around and booked record earnings in the past 12 months. Initiatives taken include right-sizing its workforce, transferring labour intensive work to lower-cost Malaysia and contract price renegotiations. Earnings in the past 12 months rose 9-fold.
- 3. Attractive entry point.** We believe the valuations are attractive. Sector peers trade at an average of 20x forward PE. Our target price factored in a 50% discount for JEP's smaller scale of operations.

Outlook

JEP's growth is expected to stem from, firstly, resilient demand for commercial aircraft. Global passenger air travel is rising the fastest in decades. According to Airbus, aircraft demand is expected to sustain at a growth rate of 4.4% CAGR from 2018 to 2037. Low penetration of air travel in emerging economies and a booming middle-class are some of the triggers of growth. Commercial aircraft deliveries currently have a 10-year backlog of orders; Secondly, we expect further cost optimisation efforts from JEP's transfer of more projects to lower-cost Malaysia. Thirdly, we are expecting JEP to gain more traction with existing and new customers. JEP in improving its execution and track record which will elevate their supplier status. The current trade spat between the U.S. and China is another likely opportunity to move more aircraft components manufacturing into Southeast Asia.

Initiating coverage with a BUY rating and target price of S\$0.20.

We initiate coverage of JEP with a BUY rating and target price of S\$0.20. Our target price is based on 10x PE FY19e, a 50% discount to the industry's 20x in view of JEPs smaller size. We expect its discount to narrow with future scale and consistent profitability.

18 October 2019

BUY (Initiation)

CLOSING PRICE	SGD 0.152
FORECAST DIV	SGD 0.000
TARGET PRICE	SGD 0.200
TOTAL RETURN	31.6%

COMPANY DATA

Bloomberg CODE:	JEP SP
O/S SHARES (MN):	408
MARKET CAP (USD mn / SGD mn):	45 / 62
52 - WK HI/LO (SGD):	0.18 / 0.12
3M Average Daily T/O (mn):	0.30

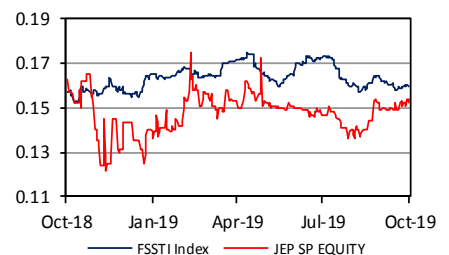
MAJOR SHAREHOLDERS (%)

UMS Holdings Ltd	39.6%
Zee Hoong Huay	15.1%

PRICE PERFORMANCE (%)

	1M TH	3M TH	1YR
COMPANY	3.4	4.8	(5.5)
STIRETURN	(1.8)	(5.7)	5.8

PRICE VS. STI



Source: Bloomberg, PSR

KEY FINANCIALS

Y/E Dec, SGDmn	FY 17	FY 18	FY 19e	FY 20e
Revenue	86,093	85,865	91,694	102,071
EBITDA	18,346	19,812	26,093	29,340
Net Profit	183	2,295	8,058	9,810
Dividend Yield	0.9%	0.0%	0.0%	0.0%
ROE (%)	0.4%	4.4%	13.4%	14.0%
ROA (%)	0.2%	2.0%	6.7%	7.8%

Source: Company, PSR

VALUATION METHOD

10x PE Multiple

Paul Chew (+65 6212 1851)

Head of Research

paulchewkl@phillip.com.sg

Alvin Chia (+65 6212 1852)

Research Analyst

alvinchiaw@phillip.com.sg

History

History of JEP dates back to 1994, under the name Atlantac Engineering Works. The focus of the company was precision machining parts for hard disk and semiconductor industry. Atlantac was listed in September 2004 on the SGX. In 2007, Alantac made a major acquisition of JEP Precision Engineering (JEPS) to venture into the manufacturing of precision parts in the aerospace and oil and gas industries. Management of JEPS effectively took control of Atlantac and the company renamed in 2010. In January 2018, UMS Holdings acquired a 29.5% stake in JEP. New management was installed after Mr Andy Luong was appointed as the Executive Chairman in February 2018. Almost 18 months later, UMS Holdings launched a mandatory conditional cash offer at S\$0.15 per share. The offer lapsed as the acceptances did not cross 50% of the voting shares.

Milestones

Date	Event
Jun-07	Acquire 85% stake in JEP Precision Engineering for S\$23.8mn.
Apr-10	Rights issue to raise S\$11.7mn.
May-10	Alantac Technology Ltd changed name to JEP Holdings Ltd.
Jan-12	Acquired 100% of Dolphin Engineering Pte Ltd for S\$8mn cash and 62.5mn shares at \$0.04 per share. Provides large format precision engineering and equipment fabrication services.
Aug-15	Acquired 100% of JEP Industrades Pte Ltd, involved in the trading of cutting tools used in manufacturing activities for various industries such as aerospace, mould and die, and oil and gas.
Nov-16	New S\$25mn Seletar manufacturing facility completed.
Dec-16	Rights cum warrants issue – one rights share for every 2 existing shares @S\$0.02 per share plus one free detachable warrant for every 2 rights subscribed. Each warrant exercisable at S\$0.02 during the 3-year period.
Sep-17	Moved into a new facility located in Seletar Aerospace Park.
Jan-18	UMS Group acquired a 29.5% shareholding interest in the Company. Mr Andy Luong, who is the Chairman and CEO of UMS, became the Executive Chairman.
Dec-18	Acquired the remaining 15% stake in JEPS and made it a wholly-owned subsidiary.
May-19	UMS acquired 43.84mn shares (10.9% stake) of JEP at S\$0.15 from Ellipsiz or total value of S\$6.57mn. This raised UMS shareholding to 38.8%, triggering a mandatory conditional cash offer of S\$0.15 of the remaining shares. Outstanding warrants were offered at a price of S\$0.074.
Jun-19	Close of conditional cash offer @ S\$0.15 per share. Acceptance of only 8.8% and did not cross the 50% mark. The offer is considered lapsed, except for the warrants offer.

Source: Company, PSR

Figure 1: Engine casing components


Source: Company, PSR

Figure 2: Engine motor components


Source: Company, PSR

Figure 3: Aircraft landing gear component


Source: Company, PSR

Figure 4: Semiconductor parts


Source: Company, PSR

Revenue Revenue for JEP has doubled over the last five years. The major driver to earnings has been aerospace, from 60% to 70% of sales (excluding trading). Trading as a contributor to revenues surged post-acquisition of JEP Industrade. The weakest division has been oil and gas with revenue collapsing almost 90%.

In terms of products for aerospace, the main components are engine casing (CFM), landing gear, air and management system. We are forecasting mid-single-digit revenue growth as we expect management focus to be on growing margins.

Some of JEP customers include:

- a. **Aerospace:** *Safran (landing gear), Collins Aerospace (air management) and Singapore Aerospace Manufacturing (engine casing).*
- b. **Oil and gas:** *Aker*
- c. **Large format printing:** *HP*
- d. **Semiconductor:** *Kulicke & Soffa (wire bonders), VAT Semiconductor*

Margins JEP was hardly profitable in the past 4 years (2014 -2017). Gross margins of 11% or S\$8mn to \$10mn per annum could not cover the huge annual operating cost of S\$10 to S\$11mn.

We saw the turnaround in 2H18 when gross margins surged to around 19%. The highest on record. Operating expenses also registered a S\$2mn decline. There were S\$1.5mn exceptional administrative expenses in FY17 from the relocation cost plus rental expenses on the old unoccupied factory premise.

There are several reasons for the higher margins:

- a. Rightsizing of the workforce. Headcount at JEP has declined from 374 in 2017 to less than 298 currently. Employee cost is around 21% of sales.
- b. Move labour intensive work to lower-cost operations in Penang, Malaysia.
- c. Renegotiate pricing of low margin products.
- d. Moving from being a Tier 2 to Tier 1 supplier.
- e. Discard loss-making contracts.

Cash-flow Operating cash-flow has been positive the past five years totalling around S\$13mn. The bulk of the improvement in cash-flows was 2018 positive operating cash-flows of S\$10mn.

The bulk of the cash-flow has been spent on capital expenditure in particular in 2016/17. Past five years, capex was a cumulative outflow of S\$37mn. The capex has been funded 2/3 by loans and 1/3 from new issuance of shares.

Balance Sheet **Assets:** Total assets grew over the past five years by around S\$40mn. The jump was from a rise in fixed assets (S\$24mn) and trade debtors (\$11mn). Fixed assets expanded significantly in 2016 following the acquisition of the new plant. A rise in trade debtors is in-line with the improvement of revenue, especially with the acquisition of the trading business

Liabilities: Bulk of the liabilities are in loans (60%) and trade payables (20%). Loans more than doubled in 2016 to S\$36mn in order to fund the expansion into the new factory.

Figure 5: Oil and gas components



Source: Company, PSR

Industry The basic supply chain of aerospace industry can be divided into:

Aircraft manufacturers: Boeing, Airbus, Bombardier, Embraer, Textron

Engine makers: Engines are the typical razor and razorblade business model where higher margins are in the engine spares and services. Manufacturers can sell engines even at a loss. Some leakages occur when non-OEM parts are used.

- (i) **General Electric:** Under GE Aviation, it is a major aircraft engine supplier. It formed a JV with Safran to create CFM International focused on mid-sized engines. CFM has produced successful series of engines such as the CFM56 and recently the CFM LEAP engine. GE Aviation is also producing the GENx engine for widebody planes.
- (ii) **Safran:** A french company, formerly known as Snecma, Safran is the JV partner of GE in CFM International. Safran other businesses include aerospace propulsion (civil, military, helicopter, space) and aircraft equipment (landing gear, brakes, nacelles, control systems).
- (iii) **Rolls-Royce:** Key engine in civil aviation is the Trent series. A key product is the Trent XWB for the widebody Airbus A350 (Figure 6). Trent 1000 for Boeing 787 has been facing delays (till 2Q20) due to issues with the turbine blades.
- (iv) **United Technologies:** Owns Pratt and Whitney (PW), the OEM engine market. PW has been more focused on engines for the narrow-body planes. The latest generation of engines is the Geared Turbofan (GTF) series. The PW1100G is powering the A320/A321.
- (v) **MTU Aero Engines:** Is a german aircraft engine manufacturer. PW and MTU partnered to deliver the general turbofan (GTF) engine. GTF is used in A220 and A320. It is also a leading independent maintenance, repair, overhaul and spares provider.

As per Figure 7, the highest volume engine for narrowbody aircraft will be CFM Leap. CFM is a joint venture between GE Aviation and Safran.

Figure 6: The major engine types

Manufacturers	Engine Model
CFM (GE/Safran JV)	CFM56, LEAP
General Electric	CF6 / GENX
Pratt & Whitney	GTF
Rolls-Royce	Trent
International Aero Engine*	V2500

Source: Media, PSR, *JV of Pratt & Whitney, MTU Aero Engines, Japanese Aero Engine Corp,

Component makers
United States:

- (i) **TransDigm:** Large part of earnings is from the aftermarket. Products include actuation systems, audio systems, gear pumps, ignition systems, connectors and latches, latching and locking devices, cockpit security devices, etc.
- (ii) **Honeywell:** aerospace is approximately 40% of sales. It includes avionics, auxiliary power unit, airframe assemblies, navigation and flight management
- (iii) **Parker-Hannifin:** aerospace is around 20% of sales and products include fuel systems, flight and vibration controls, sensors, actuation, fuel systems, wheels and brakes
- (iv) **Spirit AeroSystems:** a spin-off from Boeing. The company manufactures fuselages (50% of sales), propulsion systems and aeroplane wings.
- (v) **Hexcel:** provides advanced composite materials for the commercial aerospace industry.

Europe:

- (i) **Meggitt (UK):** aircraft thermal systems, sensors, engine valves, brakes.
- (ii) **Senior (UK):** aircraft component manufacturer and assembler – engine parts (casing, gas turbine, latches, brackets, etc), landing gear, aircraft frames and fluid conveyance. Other parts of the business include automobile and oil and gas components.
- (iii) **Thales (France):** In-flight entertainment and connectivity.
- (iv) **Cobham (UK):** oxygen systems, refuelling equipment, communication systems and safety and survival mission systems

Taiwan:

- (i) **Aerospace Industrial Development Corp (AIDC):** Taiwan's largest aerospace contract manufacturer. Product into military and commercial aircraft and engine components.
- (ii) **Magnate Technology:** manufacture aircraft parts such as engine casing, landing gear, heat exchange, actuator, etc. A subcontractor for AIDC.
- (iii) **Aero Win Technology:** Manufacture engine component for customers including Safran, Pratt & Whitney, MTU Aero.

Japan 3 Heavies:

- (i) **Mitsubishi Heavy Industries:** aircraft components for Boeing and Bombardier (main wings, fuselage, entry doors)
- (ii) **Fuji Heavy Industries (Subaru Corp):** centre wing box, integrate the wings with the landing gear for Boeing
- (iii) **Kawasaki Heavy Industries:** forward/midsection of fuselage, main landing gear well, wing trailing edge.

Korea:

Hanwha Aerospace: Aircraft and military engine; land-based weapon vehicles, security cameras and surveillance equipment and air/gas compressors.

There has been a spate of consolidation in the aerospace industry such as Safran acquiring Zodiac and United Tech purchasing Rockwell Collins.

Figure 7: Highest volume will come from CFM Leap engines

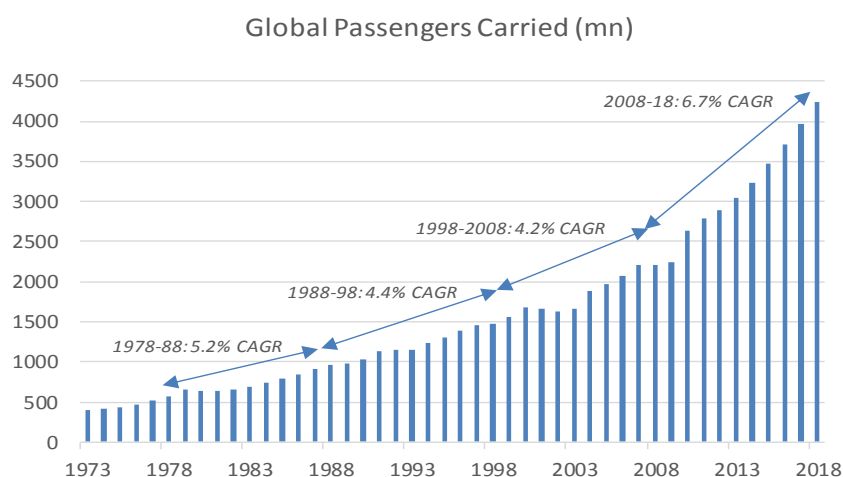
Model	Type	Backlog (units)	Engine
Airbus			
A-320	Narrowbody	3,274	CFM LEAP 1-A, PW1100G
A-321	Narrowbody	2,554	CFM LEAP 1-A, PW1100G
A-220	Narrowbody	473	PW1500G
A-319	Narrowbody	43	CFM LEAP 1-A, PW1100G
A-350	Widebody	605	Rolls-Royce Trent XWB
A-330	Widebody	275	Rolls-Royce Trent 7000
A-380	Widebody	52	GP7200, Trent 900
Boeing			
B-737 Max	Narrowbody	4,601	CFM LEAP-1B
B-787	Widebody	582	Genx-1B, Trent 1000
B-777	Widebody	431	GE9X
B-767	Widebody	99	PW4000, GE CF6-80C2
B-747	Widebody	20	Genx-2B

Source: Media, Bloomberg, PSR

Outlook

We are positive on the outlook for JEP. From the macro perspective, global air travel is expanding the fastest in decades. Some of the factors contributing to air travel are the growth of low-cost airlines and rising middle class and low penetration of air travel, especially in emerging markets. As per Figure 8, 2008-18 has been the fastest growth for air travel in decades.

Figure 9: Fastest growth in decades



Source: CEIC, World Bank, PSR

Specific to JEP, earnings growth will come from improvement in vendor tier, shifting of production to Malaysia and securing new customers.

Figure 8: Low penetration of air travel

	Trips per capita
US	1.9
Germany	1.4
China	0.4
India	0.1

Source: Airbus 2018, PSR

Investment Merits

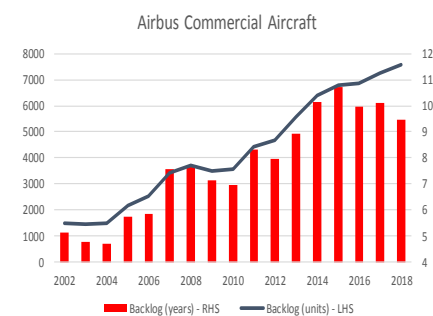
- 1. Secular growth of the aerospace industry.** Aerospace accounts for 54% of revenue. JEP has been building a track-record in precision machining parts for the aerospace industry. Global backlog for aircraft deliveries has risen to around 10 years (Figure 10 and 11). There is a global search for capacity.
- 2. Turnaround under new management.** After UMS took over management of the company in mid-2018, JEP has turned around and booked record earnings in the past 12 months. Initiatives taken include right-sizing its workforce, transferring labour intensive work to lower-cost Malaysia and contract price renegotiations. Earnings in the past 12 months rose 9-fold*.
- 3. Attractive entry point.** We believe the valuations are attractive. Sector peers trade at around 20x PE. Our target price factors in a discount for its smaller scale of operations.

*Based 12 mth rolling profit, Jun 18 against Jun 19.

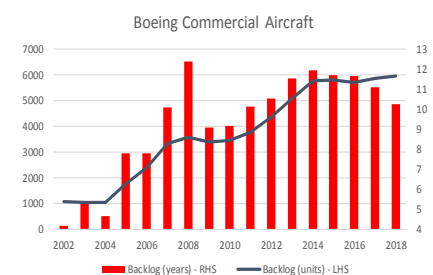
Valuation

We initiate coverage with a BUY recommendation and target price of S\$0.20. Our target price is based on 10x PE, a 50% discount to the industry's 20x in view of JEP's smaller operations. We expect its discount to narrow with future scale and consistent profitability.

*Our target price exclude 12.8mn (3.1% of total shares) outstanding warrant dilution, warrants will expire 22 Dec 19.

Figure 10: Airbus backlog is 9.5 years


Source: Bloomberg, PSR. Our backlog years computed based on FY18 annual deliveries.

Figure 11: Boeing backlog is 10 years


Source: Bloomberg, PSR. Our backlog years computed based on FY18 annual deliveries.

Figure 12: Component makers trade between 12x to 27x PE.

Company	1 Mth	3 Mth	YTD	Share Px	Mkt. Cap.	PE		
	Perf.	Perf.	Perf.	Local Crcy	(US\$ m)	Yr 0	Yr + 1	Yr + 2
Airplane manufacturer								
Boeing	2.7%	2.8%	16.0%	374	210,510	20.1	72.1	16.0
Airbus	-6.1%	-5.6%	40.2%	118	101,024	30.0	19.4	15.9
Bombardier	-10.1%	-30.1%	-21.1%	1.2	2,825	12.2	-24.1	10.8
Embraer	-5.4%	-17.6%	-25.0%	17	3,071	-18.9	-41.7	16.3
	-0.3%	-0.4%	23.0%		317,430	22.8	40.0	15.9
Engine makers								
United Technologies	0.4%	0.5%	22.8%	131	112,861	21.4	16.4	14.9
General Electric	0.4%	-21.1%	13.8%	8	72,260	-3.2	15.2	12.0
Safran	5.4%	8.1%	32.2%	139	71,085	50.2	24.6	21.2
Rolls-Royce	-5.8%	-13.6%	-12.5%	726	17,630	-5.8	38.0	22.3
MTU Aero Engine	-2.5%	15.6%	52.8%	242	13,887	28.2	24.1	21.7
	1.0%	-3.4%	13.2%		287,724	-12.3	33.1	26.7
Component makers								
<u>US</u>								
TransDigm	-5.5%	5.1%	49.6%	509	27,150	28.4	27.6	22.4
Spirit AeroSystems	1.2%	0.3%	13.2%	82	8,445	13.7	11.9	10.9
<u>Europe</u>								
Meggitt	1.5%	19.9%	33.4%	628	6,135	27.3	17.7	15.9
Senior	-12.6%	-18.1%	-6.7%	177	932	14.8	11.9	10.5
<u>S Korea</u>								
Hanwha Aero	8.7%	27.2%	30.2%	42300	1,842	67.5	21.2	17.4
<u>Taiwan</u>								
Aerospace	1.7%	-5.3%	4.2%	32	985	14.4	13.9	12.0
Magnate Technology	-4.2%	-12.7%	-0.8%	26	59	15.1	21.6	10.9
Aero Win Tech	-2.8%	-9.8%	13.6%	19	42	27.0	n.a.	n.a.
	-2.7%	6.4%	37.6%		45,590	23.2	20.0	17.2

Source: Bloomberg, PSR

Financials

Income Statement

Y/E Dec, SGD '000	FY16	FY17	FY18	FY19e	FY20e
Revenue	71,934	86,093	85,865	91,694	102,071
Gross profit	7,735	9,933	12,591	17,422	20,057
EBITDA	14,179	18,346	19,812	26,093	29,340
Depreciation & amortisation	3,700	5,518	5,933	5,562	5,862
EBIT	9,506	12,067	13,756	20,173	23,119
Net Finance Inc/(Exp)	(984)	(1,427)	(1,531)	(1,390)	(1,160)
Profit before tax	(1,157)	(254)	3,181	10,072	12,263
Taxation	972	437	(886)	(2,014)	(2,453)
Net profit, reported	(185)	183	2,295	8,058	9,810

Per share data (SGD Cents)

Y/E Dec	FY16	FY17	FY18	FY19e	FY20e
EPS, Reported	0.0	0.2	0.6	2.0	2.4
DPS	0.0	0.1	0.0	0.0	0.0
BVPS	13.5	13.4	13.2	15.0	17.5

Cash Flow

Y/E Dec, SGD '000	FY16	FY17	FY18	FY19e	FY20e
CFQ					
Profit before tax	(1,157)	(254)	3,181	10,072	12,263
Adjustments	5,776	6,753	9,332	7,308	7,376
WC changes	(3,798)	(343)	(1,624)	891	(2,285)
Cash generated from ops	821	6,156	10,889	18,271	17,354
Tax paid	(303)	(31)	-	(2,014)	(2,453)
Cashflow from ops	(226)	4,917	9,360	14,869	13,746
CFI					
CAPEX, net	(18,957)	(9,946)	(2,706)	(6,000)	(6,000)
Others	216	(1,633)	(3,723)	-	-
Cashflow from investments	(18,741)	(11,579)	(6,429)	(6,000)	(6,000)
CFE					
Share issuance, net	7,473	32	2,593	-	-
Loans, net of repayments	20,578	6,453	(5,251)	(5,025)	(6,528)
Dividends	-	(436)	-	-	-
Others	(4,233)	(1,181)	(1,966)	-	-
Cashflow from financing	23,818	4,868	(4,624)	(5,025)	(6,528)
Net change in cash	4,851	(1,794)	(1,693)	3,844	1,218
CCE, end	8,028	6,234	4,541	8,385	9,603

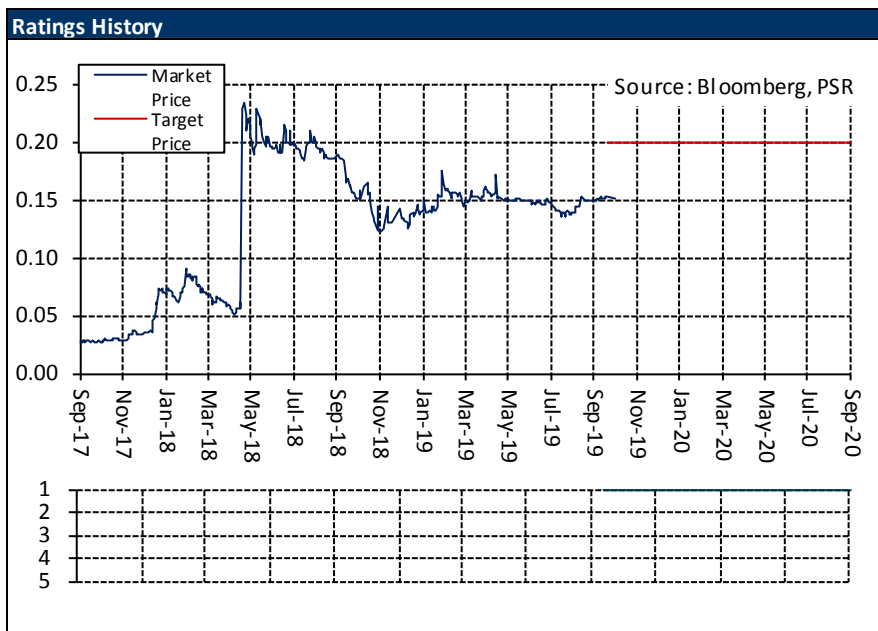
Source: Company, Phillip Securities Research (Singapore) Estimates

Balance Sheet

Y/E Dec, SGD '000	FY16	FY17	FY18	FY19e	FY20e
ASSETS					
Accounts receivables	21,160	24,252	22,713	25,118	28,435
Cash	8,028	6,234	4,541	8,385	9,603
Inventories	14,037	13,775	15,741	17,593	18,636
Total current assets	43,225	44,261	42,995	51,095	56,674
PPE & IA	69,610	72,048	69,054	69,133	68,913
Others	357	857	91	91	91
Total non-current assets	69,967	72,905	69,145	69,224	69,004
Total Assets	113,192	117,166	112,140	120,319	125,678
LIABILITIES					
Accounts payable	21,099	16,466	15,487	20,634	22,710
Short term loans	11,996	14,323	11,105	12,869	16,216
Finance leases	803	1,850	2,003	2,003	2,003
Others	2,328	2,000	-	-	-
Total current liabilities	36,226	34,639	28,595	35,506	40,929
Long term loans	23,849	27,498	25,551	18,761	8,887
Deferred tax liabilities	1,112	478	1,295	1,295	1,295
Others	2,939	5,706	4,572	4,572	4,572
Total non-current liabilities	27,900	33,682	31,418	24,628	14,754
Total Liabilities	64,126	68,321	60,013	60,135	55,683
Equity					
Non-controlling interests	2,242	1,600	-	-	-
Shareholder Equity	49,066	48,845	52,127	60,185	69,995

Valuation Ratios

Y/E Dec	FY16	FY17	FY18	FY19e	FY20e
P/E (X)	356.4	67.0	27.5	7.6	6.2
P/B (X)	1.1	1.1	1.2	1.0	0.9
EV/EBITDA (X)	6.3	5.3	4.7	3.2	2.6
Dividend Yield (%)	0.0%	0.9%	0.0%	0.0%	0.0%
Growth & Margins					
Growth					
Revenue	-	19.7%	-0.3%	6.8%	11.3%
EBITDA	-	29.4%	8.0%	31.7%	12.4%
EBIT	-	26.9%	14.0%	46.6%	14.6%
Net profit, adj.	-	N.M.	1154.1%	251.1%	21.7%
Margins					
Gross margin	10.8%	11.5%	14.7%	19.0%	19.7%
EBITDA margin	19.7%	21.3%	23.1%	28.5%	28.7%
EBIT margin	13.2%	14.0%	16.0%	22.0%	22.7%
Net profit margin	-0.3%	0.2%	2.7%	8.8%	9.6%
Key Ratios					
ROE (%)	-0.4%	0.4%	4.4%	13.4%	14.0%
ROA (%)	-0.2%	0.2%	2.0%	6.7%	7.8%
Net Gearing (%)	56.7%	72.9%	61.6%	38.6%	22.1%
Net Debt/EBITDA (X)	2.0	1.9	1.6	0.9	0.5



PSR Rating System

Total Returns	Recommendation	Rating
> +20%	Buy	1
+5% to +20%	Accumulate	2
-5% to +5%	Neutral	3
-5% to -20%	Reduce	4
< -20%	Sell	5

Remarks

We do not base our recommendations entirely on the above quantitative return bands. We consider qualitative factors like (but not limited to) a stock's risk reward profile, market sentiment, recent rate of share price appreciation, presence or absence of stock price catalysts, and speculative undertones surrounding the stock, before making our final recommendation

Contact Information (Singapore Research Team)
Head of Research

 Paul Chew – paulchewkl@phillip.com.sg
Siti Syazwina
syazwina@phillip.com.sg
Banking & Finance | Healthcare

 Tin Min Ying – tinmy@phillip.com.sg
Oil & Gas | Energy

 Chen Guangzhi - chengz@phillip.com.sg
Telco | Technology

 Alvin Chia - alvinchiawy@phillip.com.sg
Property | REITs

 Tara Wong - tarawongsj@phillip.com.sg
REITs

 Natalie Ong - natalieongpf@phillip.com.sg
China/HK Equity

 Zheng Jieyuan – zhengjy@phillip.com.sg
US Equity

 Edmund Xue – edmundxuejj@phillip.com.sg
Contact Information (Regional Member Companies)
SINGAPORE
Phillip Securities Pte Ltd

 Raffles City Tower
 250, North Bridge Road #06-00
 Singapore 179101
 Tel +65 6533 6001
 Fax +65 6535 6631
 Website: www.poems.com.sg
MALAYSIA
Phillip Capital Management Sdn Bhd

 B-3-6 Block B Level 3 Megan Avenue II,
 No. 12, Jalan Yap Kwan Seng, 50450
 Kuala Lumpur
 Tel +603 2162 8841
 Fax +603 2166 5099
 Website: www.poems.com.my
HONG KONG
Phillip Securities (HK) Ltd

 11/F United Centre 95 Queensway
 Hong Kong
 Tel +852 2277 6600
 Fax +852 2868 5307
 Websites: www.phillip.com.hk
JAPAN
Phillip Securities Japan, Ltd.

 4-2 Nihonbashi Kabuto-cho Chuo-ku,
 Tokyo 103-0026
 Tel +81-3 3666 2101
 Fax +81-3 3666 6090
 Website: www.phillip.co.jp
INDONESIA
PT Phillip Securities Indonesia

 ANZ Tower Level 23B,
 Jl Jend Sudirman Kav 33A
 Jakarta 10220 – Indonesia
 Tel +62-21 5790 0800
 Fax +62-21 5790 0809
 Website: www.phillip.co.id
CHINA
Phillip Financial Advisory (Shanghai) Co Ltd

 No 550 Yan An East Road,
 Ocean Tower Unit 2318,
 Postal code 200001
 Tel +86-21 5169 9200
 Fax +86-21 6351 2940
 Website: www.phillip.com.cn
THAILAND
Phillip Securities (Thailand) Public Co. Ltd

 15th Floor, Vorawat Building,
 849 Silom Road, Silom, Bangrak,
 Bangkok 10500 Thailand
 Tel +66-2 6351700 / 22680999
 Fax +66-2 22680921
 Website www.phillip.co.th
FRANCE
King & Shaxson Capital Limited

 3rd Floor, 35 Rue de la Bienfaisance 75008
 Paris France
 Tel +33-1 45633100
 Fax +33-1 45636017
 Website: www.kingandshaxson.com
UNITED KINGDOM
King & Shaxson Capital Limited

 6th Floor, Candlewick House,
 120 Cannon Street,
 London, EC4N 6AS
 Tel +44-20 7426 5950
 Fax +44-20 7626 1757
 Website: www.kingandshaxson.com
UNITED STATES
Phillip Capital Inc

 141 W Jackson Blvd Ste 3050
 The Chicago Board of Trade Building
 Chicago, IL 60604 USA
 Tel +1-312 356 9000
 Fax +1-312 356 9005
 Website: www.phillipusa.com
AUSTRALIA
Phillip Capital Limited

 Level 10, 330 Collins Street
 Melbourne, Victoria 3000, Australia
 Tel +61-03 8633 9803
 Fax +61-03 8633 9899
 Website: www.phillipcapital.com.au
SRI LANKA
Asha Phillip Securities Limited

 No. 60, 5th Lane,
 Colombo 3, Sri Lanka
 Tel: (94) 11 2429 100
 Fax: (94) 11 2429 199
 Website: www.ashaphillip.net
INDIA
PhillipCapital (India) Private Limited

 No.1, 18th Floor, Urmi Estate
 95, Ganpatrao Kadam Marg
 Lower Parel West, Mumbai 400-013
 Maharashtra, India
 Tel: +91-22-2300 2999 / Fax: +91-22-2300 2969
 Website: www.phillipcapital.in
TURKEY
PhillipCapital Menkul Degerler

 Dr. Cemil Bengü Cad. Hak Is Merkezi
 No. 2 Kat. 6A Caglayan
 34403 Istanbul, Turkey
 Tel: 0212 296 84 84
 Fax: 0212 233 69 29
 Website: www.phillipcapital.com.tr
DUBAI
Phillip Futures DMCC

 Member of the Dubai Gold and
 Commodities Exchange (DGEX)
 Unit No 601, Plot No 58, White Crown Bldg,
 Sheikh Zayed Road, P.O.Box 212291
 Dubai-UAE
 Tel: +971-4-3325052 / Fax: + 971-4-3328895

CAMBODIA
Phillip Bank Plc

 Ground Floor of B-Office Centre, #61-64,
 Norodom Blvd Corner Street 306, Sangkat
 Boeung Keng Kang 1, Khan Chamkamorn,
 Phnom Penh, Cambodia
 Tel: 855 (0) 7796 6151/855 (0) 1620 0769
 Website: www.phillipbank.com.kh

Important Information

This report is prepared and/or distributed by Phillip Securities Research Pte Ltd ("Phillip Securities Research"), which is a holder of a financial adviser's licence under the Financial Advisers Act, Chapter 110 in Singapore.

By receiving or reading this report, you agree to be bound by the terms and limitations set out below. Any failure to comply with these terms and limitations may constitute a violation of law. This report has been provided to you for personal use only and shall not be reproduced, distributed or published by you in whole or in part, for any purpose. If you have received this report by mistake, please delete or destroy it, and notify the sender immediately.

The information and any analysis, forecasts, projections, expectations and opinions (collectively, the "Research") contained in this report has been obtained from public sources which Phillip Securities Research believes to be reliable. However, Phillip Securities Research does not make any representation or warranty, express or implied that such information or Research is accurate, complete or appropriate or should be relied upon as such. Any such information or Research contained in this report is subject to change, and Phillip Securities Research shall not have any responsibility to maintain or update the information or Research made available or to supply any corrections, updates or releases in connection therewith.

Any opinions, forecasts, assumptions, estimates, valuations and prices contained in this report are as of the date indicated and are subject to change at any time without prior notice. Past performance of any product referred to in this report is not indicative of future results.

This report does not constitute, and should not be used as a substitute for, tax, legal or investment advice. This report should not be relied upon exclusively or as authoritative, without further being subject to the recipient's own independent verification and exercise of judgment. The fact that this report has been made available constitutes neither a recommendation to enter into a particular transaction, nor a representation that any product described in this report is suitable or appropriate for the recipient. Recipients should be aware that many of the products, which may be described in this report involve significant risks and may not be suitable for all investors, and that any decision to enter into transactions involving such products should not be made, unless all such risks are understood and an independent determination has been made that such transactions would be appropriate. Any discussion of the risks contained herein with respect to any product should not be considered to be a disclosure of all risks or a complete discussion of such risks.

Nothing in this report shall be construed to be an offer or solicitation for the purchase or sale of any product. Any decision to purchase any product mentioned in this report should take into account existing public information, including any registered prospectus in respect of such product.

Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, may provide an array of financial services to a large number of corporations in Singapore and worldwide, including but not limited to commercial / investment banking activities (including sponsorship, financial advisory or underwriting activities), brokerage or securities trading activities. Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, may have participated in or invested in transactions with the issuer(s) of the securities mentioned in this report, and may have performed services for or solicited business from such issuers. Additionally, Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, may have provided advice or investment services to such companies and investments or related investments, as may be mentioned in this report.

Phillip Securities Research or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report may, from time to time maintain a long or short position in securities referred to herein, or in related futures or options, purchase or sell, make a market in, or engage in any other transaction involving such securities, and earn brokerage or other compensation in respect of the foregoing. Investments will be denominated in various currencies including US dollars and Euro and thus will be subject to any fluctuation in exchange rates between US dollars and Euro or foreign currencies and the currency of your own jurisdiction. Such fluctuations may have an adverse effect on the value, price or income return of the investment.

To the extent permitted by law, Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, may at any time engage in any of the above activities as set out above or otherwise hold an interest, whether material or not, in respect of companies and investments or related investments, which may be mentioned in this report. Accordingly, information may be available to Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, which is not reflected in this report, and Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, may, to the extent permitted by law, have acted upon or used the information prior to or immediately following its publication. Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited its officers, directors, employees or persons involved in the issuance of this report, may have issued other material that is inconsistent with, or reach different conclusions from, the contents of this report.

The information, tools and material presented herein are not directed, intended for distribution to or use by, any person or entity in any jurisdiction or country where such distribution, publication, availability or use would be contrary to the applicable law or regulation or which would subject Phillip Securities Research to any registration or licensing or other requirement, or penalty for contravention of such requirements within such jurisdiction.

This report is intended for general circulation only and does not take into account the specific investment objectives, financial situation or particular needs of any particular person. The products mentioned in this report may not be suitable for all investors and a person receiving or reading this report should seek advice from a professional and financial adviser regarding the legal, business, financial, tax and other aspects including the suitability of such products, taking into account the specific investment objectives, financial situation or particular needs of that person, before making a commitment to invest in any of such products.

This report is not intended for distribution, publication to or use by any person in any jurisdiction outside of Singapore or any other jurisdiction as Phillip Securities Research may determine in its absolute discretion.

IMPORTANT DISCLOSURES FOR INCLUDED RESEARCH ANALYSES OR REPORTS OF FOREIGN RESEARCH HOUSES

Where the report contains research analyses or reports from a foreign research house, please note:

- (i) recipients of the analyses or reports are to contact Phillip Securities Research (and not the relevant foreign research house) in Singapore at 250 North Bridge Road, #06-00 Raffles City Tower, Singapore 179101, telephone number +65 6533 6001, in respect of any matters arising from, or in connection with, the analyses or reports; and
- (ii) to the extent that the analyses or reports are delivered to and intended to be received by any person in Singapore who is not an accredited investor, expert investor or institutional investor, Phillip Securities Research accepts legal responsibility for the contents of the analyses or reports.