# J.P.Morgan

**Asia Pacific Equity Research** 

# Sunway Bhd (SWB MK)

FY18 slightly ahead on non-operating items

Results were slightly ahead, with FY18 core net profit up 8%Y/Y to come in at 10%/3% above JPM/consensus, but driven by non-operating items that more than offset weaker operating performance from deferred earnings and reclassifications. For its Prop Development business, management has set its FY19E pre-sales target at M\$1.3B (down 31%Y/Y), similar to peers (ex-SPSB) starting the year conservatively with flat-to-negative guidance. For FY18, management declared cash dividends of 5.5sen in-line with our forecast, which together with an additional 1:100 distribution of 48.5MM treasury shares, translates to a yield of 4.4%. We are Neutral on SWB, and at current valuations see better value in its peers. Our top picks are ECW (OW) and SPSB (OW), and we are also OW on UEMS.

- **4Q18 core net profit up 18% Y/Y (up 26% Q/Q),** leaving full-year results 10%/3% ahead of JPM/consensus. Overall, FY18 results (up 8%Y/Y) was driven by non-operating items including lower interest expense, taxes and share of minorities paid, and higher interest income, which together more than offset weaker operating performance (down 18%) on deferred earnings under MFRS15 and reclassification of two subsidiaries under the JV line.
- Segment operating performance updates:
  - Prop Development. Full-year segment results remained weak (down 41%Y/Y) on lower domestic billings after a four year period (2015-18) of low launches, and a shift to completion recognition under MFRS15 for certain international projects, which resulted in deferred earnings of M\$104MM for the year. Group pre-sales (up 62% to M\$1.88B) was 11%/10% ahead of JPM/management's target for M\$1.7B supported by a pick-up in Singapore and China launches, with domestic projects (up 7% to M\$753MM) making 40% of the total. Group unbilled sales of M\$2.12B (M\$1.08B domestic) translates to 3.4x FY18 revenue (1.7x domestic), with inventories down 16%Y/Y to M\$185MM.
  - Prop Investment. 4Q18 segment results down 33%Y/Y and 32%Q/Q on a reclassification of the Velocity Mall and Velocity Hotel contribution to the JV line, with overall FY18 segment results still up 3%Y/Y on additional contribution from newly-opened assets including Sunway Geo (0.24MM sqft office).
  - Construction. 4Q18 operating profit down 9%Y/Y (FY18: up 9%) on lower billings in the quarter, but operating margins remained stable at 9.9% (FY18: 9.8%). Outstanding orderbook of M\$5.22B translates to 2.8x FY18 revenue, with M\$1.55B secured over the year, mainly from internal jobs (73% of total).
- Updates on Education assets sale. The proposed disposal of Education assets for M\$550MM to associate SREIT is expected to be complete in 2Q19, with pricing working out to M\$280psf, vs the M\$250psf that Paramount Corp (PAR MK, NC) received for the disposal of its Education assets in Oct-18. On our estimates, the disposal translates to an asset yield of 6.3% and will result in a FY19E/20E net earnings impact of +5%/-2%, based on a net gain on disposal of M\$43MM, while net gearing would fall 5.3ppts/4.6ppts to 39%/38%. SWB intends to use the proceeds from the transaction to repay borrowings and fund capex to expand its healthcare portfolio, with new hospitals under construction expected to be complete in mid-2019 and 2020.
- Recent publications. (1) Our 29 Jan-19 Malaysia Developers note titled "National Housing Policy 2.0 What's the impact?" here; (2) Our 9 Jan-19 Malaysia Developers note titled "2019 outlook: Real value now in Developers (stay with quality); M-REITs have outperformed (stay with growth)" here. (3) Our Dec-18

01 March 2019

**Neutral** Price: M\$1.62 28 Feb 2019 Price Target: M\$1.50 PT End Date: 30 Jun 2019 Malaysia Developers/REITs slides titled "2019 outlook: Developers – At trough valuations but stay with quality here amid lack of strong catalysts; M-REITs – Not cheap but offers stability for now" here.

### Table 1: SWB 4Q18 results summary

M\$ mn; year-end Dec	4Q18	4Q17*	Y/Y	3Q18	Q/Q	FY18	FY17*	Y/Y
Revenue	1,370	1,627	-16%	1,445	-5%	5,410	5,239	3%
Core Operating profit	104	222	-53%	160	-35%	560	687	-18%
Operating margin	7.6%	13.7%		11.1%		10.3%	13.1%	
Net finance costs	85	51	66%	-3	-2585%	62	20	215%
Associates & JVs	64	11	469%	38	70%	229	200	15%
Core PBT	224	247	-9%	194	15%	762	800	-5%
Net income	192	173	11%	145	32%	659	621	6%
Core net income	184	156	18%	145	26%	591	547	8%
Core margin	13.4%	9.6%		10.1%		10.9%	10.4%	
Core EPS (sen)	3.79	3.18	19%	2.99	27%	12.14	22.14	-45%

Source: Company. \* Restated.

### Table 2: SWB 4Q18 core operating profit breakdown (excluding JVs/associates)

M\$ mn; year-end Dec	4Q18	4Q17*	Y/Y	3Q18	Q/Q	FY18	FY17*	Y/Y
Prop development	22	105	-79%	34	-34%	118	199	-41%
Prop investment	41	61	-33%	60	-32%	214	208	3%
Construction	48	53	-9%	48	1%	181	166	9%
Trading & Manufacturing	13	14	-9%	18	-26%	61	58	5%
Quarry	2	(1)	-471%	2	2%	11	7	41%
Others	(23)	(9)	143%	(2)	1102%	(25)	47	-153%
Core operating profit	104	222	-53%	160	-35%	560	687	-18%

Source: Company. \* Restated.

# Table 3: SWB 4Q18 core operating margins

	4Q18	4Q17*	Y/Y	3Q18	Q/Q	FY18	FY17*	Y/Y
Prop development	11.0%	25.4%	-14.4 ppts	17.4%	-6.4 ppts	19.0%	20.1%	-1.1 ppts
Prop investment	29.1%	24.7%	4.4 ppts	25.3%	3.7 ppts	26.3%	24.1%	2.2 ppts
Construction	9.9%	9.0%	0.8 ppts	10.2%	-0.4 ppts	9.8%	10.2%	-0.4 ppts
Trading & Manufacturing	5.4%	6.1%	-0.8 ppts	5.9%	-0.5 ppts	5.5%	5.8%	-0.3 ppts
Quarry	4.1%	-1.2%	5.3 ppts	4.2%	-0.1 ppts	4.7%	3.7%	1.0 ppts
Others	-9.7%	-4.8%	-4.9 ppts	-1.0%	-8.7 ppts	-3.1%	6.8%	-9.9 ppts
Core operating margin	7.6%	12.9%	-5.3 ppts	11.1%	-3.5 ppts	10.3%	12.8%	-2.4 ppts

Source: Company. \* Restated.

### Table 4: Developer domestic pre-sales

M\$mn; year-end Dec	4QCY18	4QCY17	Y/Y	3QCY18	Q/Q	CY18	CY17	Y/Y
Mah Sing Group	286	547	-48%	275	4%	1,503	1,802	-17%
SP Setia	1,355	890	52%	913	48%	3,673	2,551	44%
Sunway	199	472	-58%	380	-48%	753	702	7%
UEM Sunrise	522	572	-9%	231	126%	1,233	1,078	14%
TOTAL DEVELOPERS	2,362	2,481	-5%	1,799	31%	7,162	6,133	17%

Source: Companies.

### Table 5: Developer peer comparison

As at: 28 Feb-19	FYE	Mkt cap	Price	Rating	Target	Р	/E	EPS g	growth	Net di	v yield	P/B	ROE	RNAV	Prem/disc
		(US\$mn)	(M\$)		(M\$)	CY19E	CY20E	CY19E	CY20E	FY19E	FY20E	FY19E	FY19E	(M\$)	to RNAV
Eco World Develop	Oct	688	0.95	OW	1.60	9.7	7.8	63.3%	24.4%	2.2%	3.8%	0.6	6.8	2.80	-66%
Mah Sing Group	Dec	597	1.00	Ν	1.10	11.2	10.3	8.2%	8.7%	4.5%	4.9%	0.7	6.6	2.00	-50%
SP Setia	Dec	2,230	2.29	OW	3.60	17.1	10.4	50.9%	64.1%	4.4%	7.2%	0.8	4.5	6.30	-64%
Sunway	Dec	1,932	1.62	Ν	1.50	12.8	11.1	12.0%	15.2%	4.0%	4.6%	1.0	7.4	2.40	-33%
UEM Sunrise	Dec	915	0.82	OW	1.00	12.9	16.2	37.7%	-20.9%	1.9%	1.5%	0.5	3.9	2.90	-72%
Weighted average		6,362				13.8	11.2	31.5%	32.9%	3.7%	5.0%	0.8	5.7		-54%

Source: Bloomberg, J.P. Morgan estimates.

### **Investment Thesis**

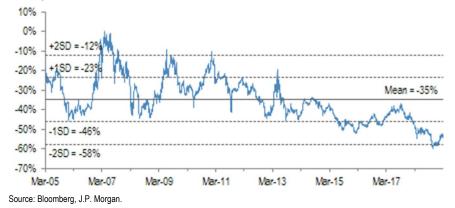
We continue to like Sunway for its integrated businesses (with about 60% of earnings from the Prop investment and Construction segments), strong branding, and good assets (landbank and commercial assets, including through its 40% stake in Sunway REIT). We also like its asset-light model, with the next round of asset recycling and potential value-unlocking likely coming from maturing large properties (i.e. Pinnacle office tower or Velocity Mall).

However, on valuations we are Neutral on SWB at current levels, and see better value in its peers. Within the sector, we prefer ECW (OW) and SPSB (OW).

# Valuation

Our Jun-19 PT of M\$1.50 is based on a 40% discount to RNAV, or between -1SD and the historical sector mean.

### **Developer RNAV band**



# Sunway RNAV

	%		Undeveloped	Remaining	Years to	Revaluation	
Projects	stake	Description	land (acres)	GDV (M\$ M)	develop	surplus (M\$ M)	Comments
Klang Valley							
Sunway Damansara	60%	Mixed township	15	1,691	5	141	Discounted at WACC of 10%
Sunway South Quay	100%	Mixed development	40	3,087	7	425	Discounted at WACC of 10%
Sunway Monterez	60%	Residential	4	38	2	3	Discounted at WACC of 10%
Sunway Semenyih	70%	Residential	398	729	10	51	Discounted at WACC of 10%
Sunway Cheras	100%	Residential	6	17	2	2	Discounted at WACC of 10%
Sunway Duta	60%	Residential	3	120	3	9	Discounted at WACC of 10%
Sunway Montana	100%	Residential	2	56	3	8	Discounted at WACC of 10%
Sunway Resort City	100%	Commercial	15	660	6	89	Discounted at WACC of 10%
Sunway Velocity	85%	Mixed development	10	1,984	6	243	Discounted at WACC of 10%
Sunway Tower KL 1	100%	Office	1	240	3	33	Discounted at WACC of 10%
Sunway Velocity Two	50%	Mixed development	8	2,000	10	142	Discounted at WACC of 10%
Melawati	100%	Residential	2	43	2	6	Discounted at WACC of 10%
Sg Long	80%	Residential	111	277	4	27	
							Discounted at WACC of 10%
Mont Putra, Rawang	100%	Residential	163	156	6	19	Discounted at WACC of 10%
Sunway Serene Kelana Jaya	100%	Mixed development	18	1,450	5	219	Discounted at WACC of 10%
Sunway Industrial Park Subang	80%	Industrial	õ	109	3	12	Discounted at WACC of 10%
Jalan Belfield-Kampung Attap-Istana	100%	Residential	5	1,100	6	158	Discounted at WACC of 10%
₋ot One Kajang	100%	Residential	5	460	5	72	Discounted at WACC of 10%
JSJ1 Subang Jaya	100%	Mixed development	15	1,400	5	235	Discounted at WACC of 10%
Sunway Wangsa Maju	55%	Residential	4	500	5	42	Discounted at WACC of 10%
			826	16,116		1,953	_
lorthern							
Sunway City Ipoh	65%	Residential	441	1,048	10	84	Discounted at WACC of 10%
Sunway Paya Terubong	100%	Residential	24	1,500	6	181	Discounted at WACC of 10%
Sunway Hills	100%	Residential	81	849	8	107	Discounted at WACC of 10%
Sunway Wellesley Bukit Mertajam	100%	Residential	51	710	5	91	Discounted at WACC of 10%
Sunway Tunas Balik Pulau	100%	Residential	9	60	2	7	Discounted at WACC of 10%
Sunway Betong Balik Pulau	100%	Residential	20	110	2	13	Discounted at WACC of 10%
Sannay Botong Baint Falad	10070		626	4,278	-	484	
lohor				-,			
Bukit Lenang	80%	Residential	65	698	3	65	Discounted at WACC of 10%
Medini	60%	Mixed township	643	10,833	15	692	Discounted at WACC of 10%
Pendas	60%	Mixed township	1,079	18,000	20	815	Discounted at WACC of 10%
		·····	1,787	29,531		1,571	
Singapore							
Rivercove Residences Sengkang	30%	Residential	5	1,967	4	24	Discounted at WACC of 10%
Brookvale Park Clementi	30%	Residential	9	3,000	4	36	Discounted at WACC of 10%
Canberra Link Sembawang	30%	Residential	4	1,500	4	16	Discounted at WACC of 10%
-			18	6,467		77	-
China					•		
Sunway Guanghao		Mixed development	4	67	2	4	Discounted at WACC of 10%
Fianjin Eco City <b>ndia</b>	60%	Mixed development	6	575	6	36	Discounted at WACC of 10%
Sunway OPUS Grand India	50%	Condominiums	24	702	5	33	Discounted at WACC of 10%
Sunway MAK Signature Residence	60%	Residential	14	181	5	8	Discounted at WACC of 10%
JV with M.A.K Builders)	00 /0		14	101	J	U	Discounted at WACC of 10%
Australia Nonderland Business Park Sydney	45%	Industrial	12	44	3	2	Discounted at WACC of 10%
Monuchanu Dusiness Faik Syulley	40%	แนนอแเลเ	<u>13</u> 61	1,569	3	82	
				-			

Source: Company data, J.P. Morgan estimates.

# Sunway RNAV

	Value (M\$mn)	Comments
Revaluation surplus	4,167	
Book value as at Dec-18E	7,810	
Revaluation gain from investment properties	249	Valuing 40%-owned Sunway REIT at PT of M\$1.80
Revaluation gain from construction division	278	Valuing 54%-owned Sunway Construction Group at market price of M\$1.78/share
Outstanding cash obligation for land	(697)	
Total RNAV	11,807	
Number of shares (M)	4,874	
RNAV per share (M\$)	2.42	
PT (M\$) – rounded off	1.50	40% discount to RNAV

Source: Company data, J.P. Morgan estimates.

# **Risks to Rating and Price Target**

Key upside risks include:

- 1. Reasonably-priced and accretive landbank acquisitions, especially in the more resilient Klang Valley, where pre-sales have held up better amid the slower consumer environment;
- 2. Asset recycling into 40%-owned Sunway REIT, resulting in value-unlocking for shareholders;
- 3. Stronger than expected property pre-sales or construction new orderbook

Key downside risks include: Slower than expected property pre-sales, and keen competition in the Iskandar region in Johor.

# 2019 II All-Asia Research Poll Voting under way Click here to request an II ballot

# Real Estate

Simone Yeoh <sup>AC</sup> (60-3) 2718-0710 simone.x.yeoh@jpmorgan.com Bloomberg JPMA YEOH <GO> JPMorgan Securities (Malaysia) Sdn. Bhd. (18146-X)

### Sin Wong

(60-3) 2718-0711 sin.f.wong@jpmorgan.com JPMorgan Securities (Malaysia) Sdn. Bhd. (18146-X)

# Cusson Leung, CFA

(852) 2800-8526 cusson.leung@jpmorgan.com J.P. Morgan Securities (Asia Pacific) Limited

www.jpmorganmarkets.com

**Other Companies Discussed in This Report** (all prices in this report as of market close on 28 February 2019) Eco World Development (ECOW.KL/M\$0.95/Overweight), SP Setia (SETI.KL/M\$2.29/Overweight), UEM Sunrise Bhd (UMSB.KL/M\$0.82/Overweight)

**Analyst Certification:** All authors named within this report are research analysts unless otherwise specified. The research analyst(s) denoted by an "AC" on the cover of this report certifies (or, where multiple research analysts are primarily responsible for this report, the research analyst denoted by an "AC" on the cover or within the document individually certifies, with respect to each security or issuer that the research analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect his or her personal views about any and all of the subject securities or issuers; and (2) no part of any of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report. For all Korea-based research analysts listed on the front cover, they also certify, as per KOFIA requirements, that their analysis was made in good faith and that the views reflect their own opinion, without undue influence or intervention.

J.P. Morgan does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

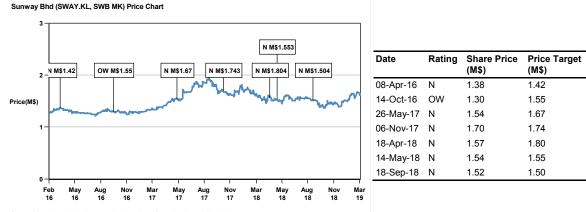
### **Important Disclosures**

• Market Maker/ Liquidity Provider: J.P. Morgan and/or an affiliate is a market maker and/or liquidity provider in the financial instruments of/related to Sunway Bhd, UEM Sunrise Bhd, SP Setia, Eco World Development.

• Client: J.P. Morgan currently has, or had within the past 12 months, the following entity(ies) as clients: UEM Sunrise Bhd.

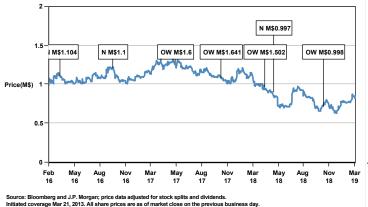
• **Debt Position:** J.P. Morgan may hold a position in the debt securities of Sunway Bhd, UEM Sunrise Bhd, SP Setia, Eco World Development, if any.

**Company-Specific Disclosures:** Important disclosures, including price charts and credit opinion history tables, are available for compendium reports and all J.P. Morgan–covered companies by visiting <a href="https://www.jpmm.com/research/disclosures">https://www.jpmm.com/research/disclosures</a>, calling 1-800-477-0406, or e-mailing <a href="research.disclosure.inquiries@jpmorgan.com">research.disclosure.inquiries@jpmorgan.com</a> with your request. J.P. Morgan's Strategy, Technical, and Quantitative Research teams may screen companies not covered by J.P. Morgan. For important disclosures for these companies, please call 1-800-477-0406 or e-mail <a href="research.disclosure.inquiries@jpmorgan.com">research.disclosure.inquiries@jpmorgan.com</a> with your request. J.P. Morgan's Strategy, Technical, and Quantitative Research teams may screen companies not covered by J.P. Morgan. For important disclosures for these companies, please call 1-800-477-0406 or e-mail <a href="research.disclosure.inquiries@jpmorgan.com">research.disclosure.inquiries@jpmorgan.com</a> with your request. J.P.

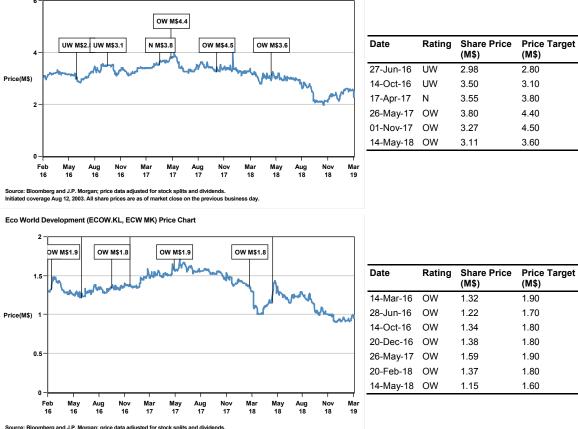


Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends. Initiated coverage Jul 26, 2013. All share prices are as of market close on the previous business of

UEM Sunrise Bhd (UMSB.KL, UEMS MK) Price Chart



Rating	Share Price (M\$)	Price Target (M\$)
Ν	1.11	1.10
Ν	1.21	1.10
OW	1.28	1.60
OW	1.09	1.64
OW	0.97	1.50
Ν	0.90	1.00
OW	0.73	1.00
	N N OW OW N	(M\$)   N 1.11   N 1.21   OW 1.28   OW 1.09   OW 0.97   N 0.90



Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends. Initiated coverage Sep 16, 2014. All share prices are as of market close on the previous business day

The chart(s) show J.P. Morgan's continuing coverage of the stocks; the current analysts may or may not have covered it over the entire period.

J.P. Morgan ratings or designations: OW = Overweight, N= Neutral, UW = Underweight, NR = Not Rated

### Explanation of Equity Research Ratings, Designations and Analyst(s) Coverage Universe:

J.P. Morgan uses the following rating system: Overweight [Over the next six to twelve months, we expect this stock will outperform the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Neutral [Over the next six to twelve months, we expect this stock will perform in line with the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Underweight [Over the next six to twelve months, we expect this stock will underperform the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Underweight [Over the next six to twelve months, we expect this stock will underperform the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Not Rated (NR): J.P. Morgan has removed the rating and, if applicable, the price target, for this stock because of either a lack of a sufficient fundamental basis or for legal, regulatory or policy reasons. The previous rating and, if applicable, the price target, no longer should be relied upon. An NR designation is not a recommendation or a rating. In our Asia (ex-Australia and ex-India) and U.K. small- and mid-cap equity research, each stock's expected total return is compared to the expected total return of a benchmark country market index, not to those analysts' coverage universe. If it does not appear in the Important Disclosures section of this report, the certifying analyst's coverage universe can be found on J.P. Morgan's research website, www.jpmorganmarkets.com.

**Coverage Universe: Yeoh, Simone Xenia**: Astra Agro Lestari (AALI.JK), Capitaland Malaysia Mall Trust (CAMA.KL), Eco World Development (ECOW.KL), First Resources Limited (FRLD.SI), Genting Plantations (GENP.KL), Golden Agri-Resources Ltd (GAGR.SI), IGB REIT (IGRE.KL), IHH Healthcare Bhd (IHHH.KL), IOI Corp. (IOIB.KL), KLCCP Stapled Group (KLCC.KL), KPJ Healthcare Berhad (KPJH.KL), Kuala Lumpur Kepong (KLKK.KL), Mah Sing Group Berhad (MAHS.KL), SP Setia (SETI.KL), Salim Ivomas Pratama (SIMP.JK), Sime Darby Plantation (SIPL.KL), Sunway Bhd (SWAY.KL), Sunway REIT (SUNW.KL), UEM Sunrise Bhd (UMSB.KL), Wilmar International Limited (WLIL.SI)

### J.P. Morgan Equity Research Ratings Distribution, as of January 02, 2019

	Overweig	ght Neutral	Underweight
	(buy)	(hold)	(sell)
J.P. Morgan Global Equity Research Coverage	46%	40%	14%
IB clients*	53%	47%	37%
JPMS Equity Research Coverage	44%	41%	15%
IB clients*	75%	65%	56%

\*Percentage of subject companies within each of the "buy," "hold" and "sell" categories for which J.P. Morgan has provided investment banking services within the previous 12 months.

For purposes only of FINRA ratings distribution rules, our Overweight rating falls into a buy rating category; our Neutral rating falls into a hold rating category; and our Underweight rating falls into a sell rating category. Please note that stocks with an NR designation are not included in the table above.

This information is current as of the end of the most recent calendar quarter.

Equity Valuation and Risks: For valuation methodology and risks associated with covered companies or price targets for covered companies, please see the most recent company-specific research report at <a href="http://www.jpmorganmarkets.com">http://www.jpmorganmarkets.com</a>, contact the primary analyst or your J.P. Morgan representative, or email <a href="research.disclosure.inquiries@jpmorgan.com">research.disclosure.inquiries@jpmorgan.com</a>. For material information about the proprietary models used, please see the Summary of Financials in company-specific research reports and the Company Tearsheets, which are available to download on the company pages of our client website, <a href="http://www.jpmorganmarkets.com">http://www.jpmorganmarkets.com</a>. This report also sets out within it the material underlying assumptions used.

Analysts' Compensation: The research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

**Registration of non-US Analysts:** Unless otherwise noted, the non-US analysts listed on the front of this report are employees of non-US affiliates of J.P. Morgan Securities LLC, may not be registered as research analysts under FINRA rules, may not be associated persons of J.P. Morgan Securities LLC, and may not be subject to FINRA Rule 2241 or 2242 restrictions on communications with covered companies, public appearances, and trading securities held by a research analyst account.

### **Other Disclosures**

J.P. Morgan is a marketing name for investment banking businesses of JPMorgan Chase & Co. and its subsidiaries and affiliates worldwide.

All research reports made available to clients are simultaneously available on our client website, J.P. Morgan Markets. Not all research content is redistributed, e-mailed or made available to third-party aggregators. For all research reports available on a particular stock, please contact your sales representative.

Any data discrepancies in this report could be the result of different calculations and/or adjustments.

**Options and Futures related research:** If the information contained herein regards options or futures related research, such information is available only to persons who have received the proper options or futures risk disclosure documents. Please contact your J.P. Morgan Representative or visit <a href="https://www.theocc.com/components/docs/riskstoc.pdf">https://www.theocc.com/components/docs/riskstoc.pdf</a> for a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options or <a href="http://www.finra.org/sites/default/files/Security Futures Risk Disclosure Statement 2018.pdf">https://www.finra.org/sites/default/files/Security Futures Risk Disclosure Statement 2018.pdf</a> for a copy of the Security Futures Risk Disclosure Statement.

**Private Bank Clients:** Where you are receiving research as a client of the private banking businesses offered by JPMorgan Chase & Co. and its subsidiaries ("J.P. Morgan Private Bank"), research is provided to you by J.P. Morgan Private Bank and not by any other division of J.P. Morgan, including but not limited to the J.P. Morgan corporate and investment bank and its research division.

#### Legal Entities Disclosures

U.S.: JPMS is a member of NYSE, FINRA, SIPC and the NFA. JPMorgan Chase Bank, N.A. is a member of FDIC. Canada: J.P. Morgan Securities Canada Inc. is a registered investment dealer, regulated by the Investment Industry Regulatory Organization of Canada and the Ontario Securities Commission and is the participating member on Canadian exchanges. U.K.: JPMorgan Chase N.A., London Branch, is authorised by the Prudential Regulation Authority and is subject to regulation by the Financial Conduct Authority and to limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from J.P. Morgan on request. J.P. Morgan Securities plc (JPMS plc) is a member of the London Stock Exchange and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. Registered in England & Wales No. 2711006. Registered Office 25 Bank Street, London, E14 5JP. Germany: This material is distributed in Germany by J.P. Morgan Securities plc, Frankfurt Branch which is regulated by the Bundesanstalt für Finanzdienstleistungsaufsich and also by J.P. Morgan AG (JPM AG) which is a member of the Frankfurt stock exchange and is regulated by the Federal Financial Supervisory Authority (BaFin), JPM AG is a company incorporated in the Federal Republic of Germany with registered office at Taunustor 1, 60310 Frankfurt am Main, the Federal Republic of Germany. South Africa: J.P. Morgan Equities South Africa Proprietary Limited is a member of the Johannesburg Securities Exchange and is regulated by the Financial Services Board. Hong Kong: J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong and/or J.P. Morgan Broking (Hong Kong) Limited (CE number AAB027) is regulated by the Securities and Futures Commission in Hong Kong. Korea: This material is issued and distributed in Korea by or through J.P. Morgan Securities (Far East) Limited, Seoul Branch, which is a member of the Korea Exchange(KRX) and is regulated by the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS). Australia: J.P. Morgan Securities Australia Limited (JPMSAL) (ABN 61 003 245 234/AFS Licence No: 238066) is regulated by ASIC and is a Market, Clearing and Settlement Participant of ASX Limited and CHI-X. Taiwan: J.P. Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. India: J.P. Morgan India Private Limited (Corporate Identity Number - U67120MH1992FTC068724), having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz - East, Mumbai - 400098, is registered with Securities and Exchange Board of India (SEBI) as a 'Research Analyst' having registration number INH000001873. J.P. Morgan India Private Limited is also registered with SEBI as a member of the National Stock Exchange of India Limited (SEBI Registration Number - INB 230675231/INF 230675231/INE 230675231), the Bombay Stock Exchange Limited (SEBI Registration Number - INB 010675237/INF 010675237) and as a Merchant Banker (SEBI Registration Number -MB/INM000002970). Telephone: 91-22-6157 3000, Facsimile: 91-22-6157 3990 and Website: www.jpmipl.com. For non local research reports, this material is not distributed in India by J.P. Morgan India Private Limited. Thailand: This material is issued and distributed in Thailand by JPMorgan Securities (Thailand) Ltd., which is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission and its registered address is 3rd Floor, 20 North Sathorn Road, Silom, Bangrak, Bangkok 10500. Indonesia: PT J.P. Morgan Sekuritas Indonesia is a member of the Indonesia Stock Exchange and is regulated by the OJK a.k.a. BAPEPAM LK. Philippines: J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities Investor Protection Fund. It is regulated by the Securities and Exchange Commission. Brazil: Banco J.P. Morgan S.A. is regulated by the Comissao de Valores Mobiliarios (CVM) and by the Central Bank of Brazil. Mexico: J.P. Morgan Casa de Bolsa, S.A. de C.V., J.P. Morgan Grupo Financiero is a member of the Mexican Stock Exchange and authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. Singapore: This material is issued and distributed in Singapore by or through J.P. Morgan Securities Singapore Private Limited (JPMSS) [MCI (P) 099/04/2018 and Co. Reg. No.: 199405335R], which is a member of the Singapore Exchange Securities Trading Limited and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore) [MCI (P) 046/09/2018], both of which are regulated by the Monetary Authority of Singapore. This material is issued and distributed in Singapore only to accredited investors, expert investors and institutional investors, as defined in Section 4A of the Securities and Futures Act, Cap. 289 (SFA). This material is not intended to be issued or distributed to any retail investors or any other investors that do not fall into the classes of "accredited investors," "expert investors" or "institutional investors," as defined under Section 4A of the SFA. Recipients of this document are to contact JPMSS or JPMCB Singapore in respect of any matters arising from, or in connection with, the document. Japan: JPMorgan

Securities Japan Co., Ltd. and JPMorgan Chase Bank, N.A., Tokyo Branch are regulated by the Financial Services Agency in Japan. **Malaysia**: This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X) which is a Participating Organization of Bursa Malaysia Berhad and a holder of Capital Markets Services License issued by the Securities Commission in Malaysia. **Pakistan**: J. P. Morgan Pakistan Broking (Pvt.) Ltd is a member of the Karachi Stock Exchange and regulated by the Securities and Exchange Commission of Pakistan. **Saudi Arabia**: J.P. Morgan Saudi Arabia Ltd. is authorized by the Capital Market Authority of the Kingdom of Saudi Arabia (CMA) to carry out dealing as an agent, arranging, advising and custody, with respect to securities business under licence number 35-07079 and its registered address is at 8th Floor, Al-Faisaliyah Tower, King Fahad Road, P.O. Box 51907, Riyadh 11553, Kingdom of Saudi Arabia. **Dubai**: JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - Building 3, Level 7, PO Box 506551, Dubai, UAE. **Russia:** CB J.P. Morgan Bank International LLC is regulated by the Central Bank of Russia. **Argentina**: JPMorgan Chase Bank Sucursal Buenos Aires is regulated by Banco Central de la República Argentina ("BCRA"- Central Bank of Argentina) and Comisión Nacional de Valores ("CNV"- Argentinian Securities Commission")

### **Country and Region Specific Disclosures**

U.K. and European Economic Area (EEA): Unless specified to the contrary, issued and approved for distribution in the U.K. and the EEA by JPMS plc. Investment research issued by JPMS plc has been prepared in accordance with JPMS plc's policies for managing conflicts of interest arising as a result of publication and distribution of investment research. Many European regulators require a firm to establish, implement and maintain such a policy. Further information about J.P. Morgan's conflict of interest policy and a description of the effective internal organisations and administrative arrangements set up for the prevention and avoidance of conflicts of interest is set out at the following link https://www.jpmorgan.com/jpmpdf/1320742677360.pdf. This report has been issued in the U.K. only to persons of a kind described in Article 19 (5), 38, 47 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (all such persons being referred to as "relevant persons"). This document must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is only available to relevant persons and will be engaged in only with relevant persons. In other EEA countries, the report has been issued to persons regarded as professional investors (or equivalent) in their home jurisdiction. Australia: This material is issued and distributed by JPMSAL in Australia to "wholesale clients" only. This material does not take into account the specific investment objectives, financial situation or particular needs of the recipient. The recipient of this material must not distribute it to any third party or outside Australia without the prior written consent of JPMSAL. For the purposes of this paragraph the term "wholesale client" has the meaning given in section 761G of the Corporations Act 2001. J.P. Morgan's research coverage universe spans listed securities across the ASX All Ordinaries index, securities listed on offshore markets, unlisted issuers and investment products which Research management deem to be relevant to the investor base from time to time. J.P. Morgan seeks to cover companies of relevance to the domestic and international investor base across all GIC sectors, as well as across a range of market capitalisation sizes. Germany: This material is distributed in Germany by J.P. Morgan Securities plc, Frankfurt Branch which is regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht. Hong Kong: The 1% ownership disclosure as of the previous month end satisfies the requirements under Paragraph 16.5(a) of the Hong Kong Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission. (For research published within the first ten days of the month, the disclosure may be based on the month end data from two months prior.) J.P. Morgan Broking (Hong Kong) Limited is the liquidity provider/market maker for derivative warrants, callable bull bear contracts and stock options listed on the Stock Exchange of Hong Kong Limited. An updated list can be found on HKEx website: http://www.hkex.com.hk. Korea: This report may have been edited or contributed to from time to time by affiliates of J.P. Morgan Securities (Far East) Limited, Seoul Branch. Singapore: As at the date of this report, JPMSS is a designated market maker for certain structured warrants listed on the Singapore Exchange where the underlying securities may be the securities discussed in this report. Arising from its role as designated market maker for such structured warrants, JPMSS may conduct hedging activities in respect of such underlying securities and hold or have an interest in such underlying securities as a result. The updated list of structured warrants for which JPMSS acts as designated market maker may be found on the website of the Singapore Exchange Limited: http://www.sgx.com. In addition, JPMSS and/or its affiliates may also have an interest or holding in any of the securities discussed in this report - please see the Important Disclosures section above. For securities where the holding is 1% or greater, the holding may be found in the Important Disclosures section above. For all other securities mentioned in this report, JPMSS and/or its affiliates may have a holding of less than 1% in such securities and may trade them in ways different from those discussed in this report. Employees of JPMSS and/or its affiliates not involved in the preparation of this report may have investments in the securities (or derivatives of such securities) mentioned in this report and may trade them in ways different from those discussed in this report. Taiwan: Research relating to equity securities is issued and distributed in Taiwan by J.P. Morgan Securities (Taiwan) Limited, subject to the license scope and the applicable laws and the regulations in Taiwan. According to Paragraph 2, Article 7-1 of Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers (as amended or supplemented) and/or other applicable laws or regulations, please note that the recipient of this material is not permitted to engage in any activities in connection with the material which may give rise to conflicts of interests, unless otherwise disclosed in the "Important Disclosures" in this material. India: For private circulation only, not for sale. Pakistan: For private circulation only, not for sale. New Zealand: This material is issued and distributed by JPMSAL in New Zealand only to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money. JPMSAL does not issue or distribute this material to members of "the public" as determined in accordance with section 3 of the Securities Act 1978. The recipient of this material must not distribute it to any third party or outside New Zealand without the prior written consent of JPMSAL. Canada: This report is distributed in Canada by or on behalf of J.P.Morgan Securities Canada Inc. The information contained herein is not, and under no circumstances is to be construed as an offer to sell securities described herein, or solicitation of an offer to buy securities described herein, in Canada or any province or territory thereof. The information contained herein is under no circumstances to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient.

**General:** Additional information is available upon request. Information has been obtained from sources believed to be reliable but JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) do not warrant its completeness or accuracy except with respect to any disclosures relative to JPMS and/or its affiliates and the analyst's involvement with the issuer that is the subject of the research. All pricing is indicative as of the close of market for the securities discussed, unless otherwise stated. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. The recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein. JPMS distributes in the U.S. research published by non-U.S. affiliates and accepts responsibility for its contents. Periodic updates may be provided on companies/industries based on company specific developments or announcements, market conditions or any other publicly available information. Clients should contact analysts and execute transactions through a J.P. Morgan subsidiary or affiliate in their home jurisdiction unless governing law permits otherwise.

### "Other Disclosures" last revised January 19, 2019.

Copyright 2019 JPMorgan Chase & Co. All rights reserved. This report or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan.