U.S. Equity Research

July 27, 2016

Energy Research Power, Utilities & Alternative Energy

Industry Commentary

How Far Might the Pendulum Swing?

Summary

The major utility-centric indices (Philadelphia UTY, Spider ETF XLU, and S&P Electrics) are up about 19.0% year to date. Meanwhile, the median stock in our universe is off 3.5% from its 52-week highs and is nearly 35.7% above its 52-week lows. Can it last? Perhaps, but likely not. This "Swinging Pendulum" note is an effort to preempt the natural question(s) regarding the potential downside when the sector falls out of favor and/or rates at the long of the curve begin to rise in earnest.

Key Points

We analyzed two-year rolling forward P/E multiples over 5-, 10-, and 15-year periods in an effort to translate potential downside from current levels by comparing the current P/E against the historical P/E over these three observation periods. Our conclusions:

1) We expect to see up to a 3.2x decline in the average P/E multiple which equates to a potential price drop of about 17%, or \$10 per share.

The Winners: EXC, OGE, and FE each would fall by less than 10% in this scenario. Not surprisingly, these companies have the lowest differential between average and historical P/Es;

The Challenged Ones: WR, NI, and AVA and could fall by more than 24%. That may be unrealistic given that WR is in a transaction, and NI has transformed itself considerably in recent years.

- 2) However, it is important to note that this analysis is based on an historical review and in a given situation, a particular Company's current risk and outlook profile may be materially different implying the price differential may no longer be as steep in a reversion towards the mean scenario. That said, investors should remain mindful that pendulums swing two ways.
- 3) Importantly, the empirical evidence indicates that the strong correlation between utility share prices and Treasuries began delinking in earnest in November 2007 when the 10-year Treasury note broke through the 4.0% yield threshold and when the Baa Corporate bond crossed below 6.0% in July 2010. Historical correlations have weakened since then.

Company	Symbo	Price I (7/27)	Prio	Rating r Curr	PT
8point3 Energy Partners LP	CAFD	\$16.77	_	Buy	\$18.00
American Electric Power Company, Inc.	AEP	\$68.86	-	Buy	\$67.00
Avista Corporation	AVA	\$43.26	_	Neutral	\$41.00
Consolidated Edison, Inc.	ED	\$79.43	-	Neutral	\$72.00
Duke Energy	DUK	\$84.83	-	Neutral	\$75.00
Edison International	EIX	\$76.02	_	Neutral	\$75.00
Entergy Corp	ETR	\$80.15	_	Neutral	\$67.50
Eversource Energy	ES	\$57.71	-	Neutral	\$59.00
First Solar, Inc.	FSLR	\$48.55	_	Neutral	\$67.00
NextEra Energy, Inc.	NEE S	\$127.17	_	Buy	\$138.00
NextEra Energy Partners LP	NEP	\$31.22	-	Buy	\$47.00
NorthWestern Corporation	NWE	\$60.48	-	Neutral	\$65.00
PG&E Corporation	PCG	\$63.95	_	Buy	\$67.00
Pinnacle West Capital Corporation	PNW	\$78.66	-	Neutral	\$70.00
SCANA Corporation	SCG	\$73.20	_	Buy	\$84.00
SunPower Corp	SPWR	\$15.48	_	Neutral	\$25.00
The Southern Company	SO	\$53.54	-	Neutral	\$52.00
WEC Energy Group	WEC	\$63.99	_	Buy	\$63.00
Westar Energy, Inc.	WR	\$55.50	-	Neutral	\$60.00

Source: Bloomberg and Mizuho Securities USA

James von Riesemann Managing Director, Americas Research 212-205-7857

james.vonriesemann@us.mizuho-sc.com

PLEASE REFER TO PAGE 13 OF THIS REPORT FOR IMPORTANT DISCLOSURE AND ANALYST CERTIFICATION INFORMATION. Mizuho Securities USA Inc. 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.

How Far Might the Pendulum Swing?

In Exhibits 1 and 2, we show 25 companies that we view to be representative of the Power & Utility Universe as a way to demonstrate the potential impact on share prices should the sector fall out of favor. Shaded areas represent Companies that have significant operations outside regulated utilities.

For purposes of this analysis, we have presumed that P/E is the appropriate way to value utility stocks, including those with some commodity exposure, and have analysed the potential share price changes on 5-, 10- and 15- year basis.

Our conclusions:

- As can be seen, the average utility might be expected to see potential price declines of almost 17%, essentially erasing the gains experienced thus far in 2016.
 - The analysis for 10- and 15-year averages produces potential price reductions of a greater amount.
- The expected winners include EXC, OGE, and FE, each of whose share price is expected to decline less than 10%.
 - Regulated companies such as PPL, ETR and SO would fall about 12% from current levels under this methodology.
- Of course, we have not included the benefit of the dividend, which would limit total return losses, but nonetheless, in all cases, principal would be reduced.
- Those with the great challenges include WR, NI, and AVA, recognizing that
 WR's current share price is affected by its pending merger with GXP and
 AVA, like other SMID companies, is benefiting from a merger bid.
 Meantime, NI has significantly changed its business risk and profile of late
 and therefore its potential performance might not be representative of what
 the simple math might otherwise suggest.

In Exhibits 3 and 4, we note the annual price performance sorted by current market cap and 2016 year to date performance, respectively.

• The average utility is up nearly 20% YTD, easily outpacing the S&P 500 which is up a mere 6%.



Exhibit 1: Pendulum Swing Price Performance, (sorted highest to lowest)

Expected Price Change										
	Price	2017E	<u>.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	<u>ultiple</u> 5 Year	Expected Change in					
Ticker	26-Jul	EPS	Current	Average		\$ per share				
WR	\$55.64	\$2.52	22.0x	15.3x	(6.7x)	(\$16.91)	-30.4%			
NI	\$25.51	\$1.14	22.5x	17.0x	(5.5x)	(\$6.29)	-24.7%			
AVA	\$43.84	\$2.15	20.5x	15.6x	(4.9x)	(\$10.56)	-24.1%			
CMS	\$45.15	\$2.18	20.7x	16.0x	(4.7x)	(\$10.34)	-22.9%			
AEP	\$69.56	\$3.82	18.2x	14.4x	(3.8x)	(\$14.67)	-21.1%			
NEE	\$128.80	\$6.56	19.6x	15.6x	(4.0x)	(\$26.25)	-20.4%			
PNW	\$79.65	\$4.20	18.9x	15.1x	(3.8x)	(\$16.08)	-20.2%			
WEC	\$64.90	\$3.11	20.8x	16.6x	(4.2x)	(\$12.92)	-19.9%			
XEL	\$43.87	\$2.32	18.9x	15.2x	(3.7x)	(\$8.67)	-19.8%			
ED	\$80.54	\$4.14	19.4x	15.6x	(3.8x)	(\$15.84)	-19.7%			
SCG	\$74.03	\$4.15	17.8x	14.3x	(3.4x)	(\$14.22)	-19.2%			
PCG	\$64.34	\$3.68	17.4x	14.2x	(3.2x)	(\$11.78)	-18.3%			
SRE	\$112.46	\$5.18	21.7x	18.0x	(3.7x)	(\$19.12)	-17.0%			
AEE	\$52.27	\$2.78	18.8x	15.7x	(3.1x)	(\$8.60)	-16.5%			
AES	\$12.58	\$1.12	11.2x	9.4x	(1.8x)	(\$2.01)	-16.0%			
NWE	\$61.12	\$3.41	17.9x	15.3x	(2.6x)	(\$8.91)	-14.6%			
PNM	\$34.27	\$2.06	18.4x	16.0x	(2.4x)	(\$4.84)	-14.1%			
so	\$54.46	\$2.97	18.2x	15.7x	(2.5x)	(\$7.42)	-13.6%			
ETR	\$81.01	\$5.24	15.4x	13.4x	(2.0x)	(\$10.46)	-12.9%			
CNP	\$24.37	\$1.22	20.0x	17.5x	(2.5x)	(\$3.05)	-12.5%			
PEG	\$45.86	\$2.89	15.9x	13.9x	(2.0x)	(\$5.68)	-12.4%			
PPL	\$37.31	\$2.43	15.4x	13.6x	(1.8x)	(\$4.30)	-11.5%			
FE	\$36.05	\$2.52	14.2x	12.9x	(1.4x)	(\$3.42)	-9.5%			
OGE	\$32.01	\$1.90	16.8x	15.8x	(1.1x)	(\$2.04)	-6.4%			
EXC	\$37.24	\$2.58	14.1x	13.3x	(0.7x)	(\$1.85)	-5.0%			
					,,,,,	/45				
Median			18.6x	15.4x	(3.1x)	(\$9.63)	-16.7%			
Average			18.3x	15.1x	(3.2x)	(\$9.94)	-16.9%			
Hi			22.5x	18.0x	(0.7x)	(\$1.85)	-5.0%			
Lo			11.2x	9.4x	(6.7x)	(\$26.25)	-30.4%			

Source: FactSet, Mizuho Securities USA Inc.



Exhibit 2: Expected Price Performance – Pendulum Swing

Expected Price Change									
	Price	2017E		5 Year	Expected Change in				
Ticker	26-Jul	EPS	Current	Average	P/E Multiple	\$ per share	% change		
AEE	\$52.27	\$2.78	18.8x	15.7x	(3.1x)	(\$8.60)	-16.5%		
AEP	69.56	3.82	18.2x	14.4x	(3.8x)	(\$14.67)	-21.1%		
AES	12.58	1.12	11.2x	9.4x	(1.8x)	(\$2.01)	-16.0%		
AVA	43.84	2.15	20.5x	15.6x	(4.9x)	(\$10.56)	-24.1%		
CMS	45.15	2.18	20.7x	16.0x	(4.7x)	(\$10.34)	-22.9%		
CNP	24.37	1.22	20.0x	17.5x	(2.5x)	(\$3.05)	-12.5%		
ED	80.54	4.14	19.4x	15.6x	(3.8x)	(\$15.84)	-19.7%		
ETR	81.01	5.24	15.4x	13.4x	(2.0x)	(\$10.46)	-12.9%		
EXC	37.24	2.58	14.1x	13.3x	(0.7x)	(\$1.85)	-5.0%		
FE	36.05	2.52	14.2x	12.9x	(1.4x)	(\$3.42)	-9.5%		
NEE	128.80	6.56	19.6x	15.6x	(4.0x)	(\$26.25)	-20.4%		
NI	25.51	1.14	22.5x	17.0x	(5.5x)	(\$6.29)	-24.7%		
NWE	61.12	3.41	17.9x	15.3x	(2.6x)	(\$8.91)	-14.6%		
OGE	32.01	1.90	16.8x	15.8x	(1.1x)	(\$2.04)	-6.4%		
PCG	64.34	3.68	17.4x	14.2x	(3.2x)	(\$11.78)	-18.3%		
PEG	45.86	2.89	15.9x	13.9x	(2.0x)	(\$5.68)	-12.4%		
PNM	34.27	2.06	18.4x	16.0x	(2.4x)	(\$4.84)	-14.1%		
PNW	79.65	4.20	18.9x	15.1x	(3.8x)	(\$16.08)	-20.2%		
PPL	37.31	2.43	15.4x	13.6x	(1.8x)	(\$4.30)	-11.5%		
SCG	74.03	4.15	17.8x	14.3x	(3.4x)	(\$14.22)	-19.2%		
so	54.46	2.97	18.2x	15.7x	(2.5x)	(\$7.42)	-13.6%		
SRE	112.46	5.18	21.7x	18.0x	(3.7x)	(\$19.12)	-17.0%		
WEC	64.90	3.11	20.8x	16.6x	(4.2x)	(\$12.92)	-19.9%		
WR	55.64	2.52	22.0x	15.3x	(6.7x)	(\$16.91)	-30.4%		
XEL	43.87	2.32	18.9x	15.2x	(3.7x)	(\$8.67)	-19.8%		
Median			18.6x	15.4x	(3.1x)	(\$9.63)	-16.7%		
Average			18.3x	15.1x	(3.2x)	(\$9.94)	-16.9%		
Hi			22.5x	18.0x	(0.7x)	(\$1.85)	-5.0%		
Lo			11.2x	9.4x	(6.7x)	(\$26.25)	-30.4%		

Source: FactSet, Mizuho Securities USA Inc.



Exhibit 3: Annual Price Performance, sorted by current market cap

			Stock Price Performance						in			
Company	TKR	Price 27-Jul-16	Mkt Cap	<u>YTD</u> 2016	2015	2014	2013	2012	2011	2010	<u>52 W</u> High	<u>еек</u> Low
Utilities (Regulated an	d Integrated	d)	·									
NextEra Energy, Inc.	NEE	\$127.17	\$58,682	22.4%	-2.3%	24.1%	23.7%	13.6%	17.1%	-1.6%	-3.6%	35.7%
Duke Energy	DUK	84.83	58,430	18.8%	-14.5%	21.1%	8.2%	-3.3%	23.5%	3.5%	-2.8%	29.5%
Southern Company	SO	53.54	50,250	14.4%	-4.7%	19.5%	-4.0%	-7.5%	21.1%	14.7%	-2.0%	28.0%
Dominion Resources	D	76.52	47,153	13.1%	-12.0%	18.9%	24.9%	-2.4%	24.3%	9.8%	-3.1%	18.6%
American Electric Power	AEP	68.86	33,832	18.2%	-4.0%	29.9%	9.5%	3.3%	14.8%	3.4%	-3.4%	31.7%
Exelon	EXC	36.59	33,725	31.8%	-25.1%	35.4%	-7.9%	-31.4%	4.2%	-14.8%	-2.6%	45.8%
PG&E Corp	PCG	63.95	31,722	20.2%	-0.1%	32.2%	0.2%	-2.5%	-13.8%	7.1%	-2.2%	35.1%
Sempra Energy	SRE	110.90	27,669	18.0%	-15.6%	24.1%	26.5%	29.0%	4.8%	-6.3%	-3.3%	27.9%
PPL Corp	PPL	37.02	25,061	8.5%	1.2%	20.7%	5.1%	-2.7%	11.8%	-18.5%	-7.2%	26.9%
Edison International	EIX	76.02	24,768	28.4%	-9.6%	41.4%	2.5%	9.2%	7.3%	11.0%	-3.4%	34.1%
Consolidated Edison	ED	79.43	24,159	23.6%	-2.6%	19.4%	-0.5%	-10.5%	25.1%	9.1%	-3.0%	31.7%
Pub Svc Ent Group	PEG	45.15	22,843	16.7%	-6.6%	29.2%	4.7%	-7.3%	3.8%	-4.3%	-4.8%	22.7%
Xcel Energy	XEL	43.50	22,096	21.1%	0.0%	28.6%	4.6%	-3.4%	17.4%	11.0%	-4.2%	34.1%
WEC Energy Group	WEC	63.99	20,198	24.7%	-2.7%	27.6%	12.2%	5.4%	18.8%	18.1%	-3.2%	38.4%
Eversource Energy	ES	57.71	18,306	13.0%	-4.6%	26.3%	8.5%	8.3%	13.1%	23.6%	-4.5%	27.8%
DTE Energy	DTE	97.23	17,447	21.2%	-7.2%	30.1%	10.6%	10.3%	20.1%	4.0%	-3.2%	30.4%
First Energy	FE	35.20	14,950	10.9%	-18.6%	18.2%	-21.0%	-5.7%	19.7%	-20.3%	-3.8%	21.8%
Entergy	ETR	80.15	14,326	17.2%	-21.9%	38.3%	-0.8%	-12.7%	3.1%	-13.5%	-2.4%	30.8%
AvanGrid	AGR	44.51	13,758	15.9%		-		-		-	-4.7%	37.2%
Ameren	AEE	51.77	12,561	19.8%	-6.3%	27.6%	17.7%	-7.3%	17.5%	0.9%	-4.3%	35.7%
CMS Energy	CMS	44.68	12,509	23.8%	3.8%	29.8%	9.8%	10.4%	18.7%	18.8%	-3.4%	40.2%
Scana	SCG	73.20	10,462	21.0%	0.1%	28.7%	2.8%	1.3%	11.0%	7.7%	-4.2%	45.9%
Centerpoint	CNP	23.90	10,292	30.2%	-21.6%	1.1%	20.4%	-4.2%	27.8%	8.3%	-3.3%	48.9%
Alliant	LNT	39.45	8,960	26.3%	-6.0%	28.7%	17.5%	-0.5%	20.0%	21.5%	-3.8%	45.4%
Pinnacle West	PNW	78.66	8,742	22.0%	-5.6%	29.1%	3.8%	5.8%	16.2%	13.3%	-5.0%	37.2%
NiSource	NI	25.46	8,187	30.5%	17.0%	29.0%	32.1%	4.5%	35.1%	14.6%	-5.5%	58.7%
Westar Energy	WR	55.50	7,863	30.9%	2.8%	28.2%	12.4%	-0.6%	14.4%	15.8%	-3.0%	59.0%
ITC Holdings	ITC	45.82	7,006	16.7%	-2.9%	26.6%	24.6%	1.4%	22.4%	19.0%	-3.5%	51.0%
OGE Corp	OGE	31.58	6,307	20.1%	-25.9%	4.7%	20.4%	-0.7%	24.5%	23.4%	-4.2%	35.1%
Great Plains	GXP	29.70	4,595	8.8%	-3.9%	17.2%	19.4%	-6.7%	12.3%	0.0%	-9.3%	23.3%
Vectren	VVC	50.95	4,219	20.1%	-8.2%	30.2%	20.7%	-2.7%	19.1%	2.8%	-4.4%	36.7%
IdaCorp	IDA	79.84	4,025	17.4%	2.7%	27.7%	19.6%	2.2%	14.7%	15.7%	-4.3%	39.5%
Portland General Electric	POR	43.73	3,888	20.2%	-3.9%	25.3%	10.4%	8.2%	16.5%	6.3%	-3.3%	31.0%
Haw aiian Electric	HE	30.78	3,321	6.3%	-13.5%	28.5%	3.7%	-5.1%	16.2%	9.0%	-12.0%	13.9%
Black Hills	BKH	62.53	3,226	34.7%	-12.5%	1.0%	44.5%	8.2%	11.9%	12.7%	-3.2%	69.8%
Allete	ALE	63.09	3,108	24.1%	-7.8%	10.5%	21.7%	-2.4%	12.7%	14.0%	-3.5%	37.6%
Northw estern	NWE	60.48	2,922	11.5%	-4.1%	30.6%	24.7%	-3.0%	24.1%	10.8%	-5.1%	24.2%
Avista Corp	AVA	43.26	2,734	22.3%	0.1%	25.4%	16.9%	-6.4%	14.3%	4.3%	-4.1%	45.3%
PNM Resources	PNM	33.88	2,699	10.8%	3.2%	22.8%	17.6%	12.5%	40.0%	2.9%	-6.2%	37.4%
Madison Gas & Electric	MGEE	55.86	1,937	20.4%	1.7%	18.2%	13.6%	8.9%	9.4%	19.6%	-2.6%	52.0%
El Paso Electric	EE	47.19	1,910	22.6%	-3.9%	14.1%	10.0%	-7.9%	25.8%	35.7%	-2.4%	39.2%
Empire District Electric	EDE	33.65	1,473	19.9%	-5.6%	31.1%	11.3%	-3.4%	-5.0%	18.5%	-1.1%	62.5%
Otter Tail Pow er	OTTR	34.60	1,319	29.9%	-14.0%	5.8%	17.1%	13.5%	-2.3%	-9.1%	-2.1%	39.0%
Average				20.2%	-6.3%	24.0%	12.4%	0.4%	15.6%	7.7%	-4.0%	37.1%
Median				20.2%	-4.7%	27.1%	11.8%	-1.5%	16.4%	9.1%	-3.5%	35.7%
US Treas 10 yr. Yield	USGG10YF	1.51		-33.6%	4.5%	-28.3%	72.3%	-6.3%	-43.0%	-14.2%	-36.5%	14.4%
Philadelphia UTY	UTY	654.86		19.7%	-9.8%	24.2%	6.5%	-4.7%	14.1%	0.9%	-2.6%	27.1%
Sector Spider ETF	XLU	51.61		19.2%	-8.3%	24.4%	8.6%	-2.9%	14.8%	1.1%	-2.7%	26.5%
S&P Electrics	S5ELUT	294.77		19.2%	-9.1%	26.2%	3.3%	-5.0%	15.4%	-1.5%	-2.5%	28.9%
S&P 500	SPX	2,166.73		6.0%	-0.7%	11.4%	29.6%	13.4%	0.0%	12.8%	-0.4%	19.7%

Source: Company reports, Mizuho Securities USA Inc.



Exhibit 4: Annual Price Performance, sorted year to date 2016

							5 /					0.6
		Price		YTD	Stock Price Performance				in % <u>52 Week</u>			
Company	TKR	27-Jul-16	Mkt Can	2016	2015	2014	2013	2012	2011	2010	High	Low
			шке оар	2010	2010	2014	2010	2012	2011	2010	1911	LOW
Utilities (Regulated and			00.000	0.4.70/	10.50/	4.007	44.50/	0.00/	44.00/	40.70/	0.00/	00.00/
Black Hills	BKH	\$62.53	\$3,226	34.7%	-12.5%	1.0%	44.5%	8.2%	11.9%	12.7%	-3.2%	69.8%
Exelon	EXC	36.59	33,725	31.8%	-25.1%	35.4%	-7.9%	-31.4%	4.2%	-14.8%	-2.6%	45.8%
Westar Energy	WR	55.50	7,863	30.9%	2.8%	28.2%	12.4%	-0.6%	14.4%	15.8%	-3.0%	59.0%
NiSource	NI	25.46	8,187	30.5%	17.0%	29.0%	32.1%	4.5%	35.1%	14.6%	-5.5%	58.7%
Centerpoint	CNP	23.90	10,292	30.2%	-21.6%	1.1%	20.4%	-4.2%	27.8%	8.3%	-3.3%	48.9%
Otter Tail Pow er	OTTR	34.60	1,319	29.9%	-14.0%	5.8%	17.1%	13.5%	-2.3%	-9.1%	-2.1%	39.0%
Edison International	EIX	76.02	24,768	28.4%	-9.6%	41.4%	2.5% 17.5%	9.2%	7.3%	11.0%	-3.4%	34.1%
Alliant	LNT WEC	39.45 63.99	8,960	26.3%	-6.0%	28.7%	17.5%	-0.5%	20.0%	21.5%	-3.8%	45.4% 38.4%
WEC Energy Group			20,198	24.7%	-2.7%	27.6%		5.4%	18.8%	18.1%	-3.2%	
Allete CMS Energy	ALE CMS	63.09 44.68	3,108 12,509	24.1% 23.8%	-7.8% 3.8%	10.5% 29.8%	21.7% 9.8%	-2.4% 10.4%	12.7% 18.7%	14.0%	-3.5% -3.4%	37.6% 40.2%
Consolidated Edison	ED	79.43	24,159	23.6%	-2.6%	19.4%	-0.5%	-10.5%	25.1%	18.8% 9.1%	-3.4%	31.7%
El Paso Electric	EE	47.19	1,910	22.6%	-3.9%	14.1%	10.0%	-7.9%	25.1%	35.7%	-3.0%	39.2%
NextEra Energy, Inc.	NEE	127.17	58,682	22.6%	-3.9% -2.3%	24.1%	23.7%	13.6%	17.1%	-1.6%	-2.4%	35.7%
	AVA	43.26	2,734		-2.3% 0.1%	24.1% 25.4%		-6.4%	14.3%		-3.6% -4.1%	
Avista Corp Pinnacle West	PNW	78.66	2,734 8,742	22.3% 22.0%	-5.6%	29.1%	16.9% 3.8%	-6.4% 5.8%	16.2%	4.3% 13.3%	-4.1% -5.0%	45.3% 37.2%
DTE Energy	DTE	97.23	17,447	21.2%	-7.2%	30.1%	10.6%	10.3%	20.1%	4.0%	-3.0%	30.4%
0,	XEL	43.50	22,096	21.2%	0.0%	28.6%	4.6%	-3.4%	17.4%	11.0%	-3.2% -4.2%	34.1%
Xcel Energy Scana	SCG	73.20	10,462	21.1%	0.0%	28.7%	2.8%	1.3%	11.0%	7.7%	-4.2%	45.9%
Madison Gas & Electric	MGEE	55.86	1,937	20.4%	1.7%	18.2%	13.6%	8.9%	9.4%	19.6%	-4.2%	52.0%
Portland General Electric		43.73	3,888	20.4%	-3.9%	25.3%	10.4%	8.2%	16.5%	6.3%	-3.3%	31.0%
PG&E Corp	PCG	63.95	31,722	20.2%	-0.1%	32.2%	0.2%	-2.5%	-13.8%	7.1%	-2.2%	35.1%
OGE Corp	OGE	31.58	6,307	20.2 %	-25.9%	4.7%	20.4%	-0.7%	24.5%	23.4%	-2.2 <i>%</i>	35.1%
Vectren	VVC	50.95	4,219	20.1%	-8.2%	30.2%	20.4%	-2.7%	19.1%	23.4%	-4.4%	36.7%
Empire District Electric	EDE	33.65	1,473	19.9%	-5.6%	31.1%	11.3%	-3.4%	-5.0%	18.5%	-1.1%	62.5%
Ameren	AEE	51.77	12,561	19.8%	-6.3%	27.6%	17.7%	-7.3%	17.5%	0.9%	-4.3%	35.7%
Duke Energy	DUK	84.83	58,430	18.8%	-14.5%	21.1%	8.2%	-3.3%	23.5%	3.5%	-2.8%	29.5%
American Electric Power		68.86	33,832	18.2%	-4.0%	29.9%	9.5%	3.3%	14.8%	3.4%	-3.4%	31.7%
Sempra Energy	SRE	110.90	27,669	18.0%	-15.6%	24.1%	26.5%	29.0%	4.8%	-6.3%	-3.3%	27.9%
IdaCorp	IDA	79.84	4,025	17.4%	2.7%	27.7%	19.6%	2.2%	14.7%	15.7%	-4.3%	39.5%
Entergy	ETR	80.15	14,326	17.2%	-21.9%	38.3%	-0.8%	-12.7%	3.1%	-13.5%	-2.4%	30.8%
ITC Holdings	ПС	45.82	7,006	16.7%	-2.9%	26.6%	24.6%	1.4%	22.4%	19.0%	-3.5%	51.0%
Pub Svc Ent Group	PEG	45.15	22,843	16.7%	-6.6%	29.2%	4.7%	-7.3%	3.8%	-4.3%	-4.8%	22.7%
AvanGrid	AGR	44.51	13,758	15.9%	-	-	-		-	-	-4.7%	37.2%
Southern Company	SO	53.54	50,250	14.4%	-4.7%	19.5%	-4.0%	-7.5%	21.1%	14.7%	-2.0%	28.0%
Dominion Resources	D	76.52	47,153	13.1%	-12.0%	18.9%	24.9%	-2.4%	24.3%	9.8%	-3.1%	18.6%
Eversource Energy	ES	57.71	18,306	13.0%	-4.6%	26.3%	8.5%	8.3%	13.1%	23.6%	-4.5%	27.8%
Northw estern	NWE	60.48	2,922	11.5%	-4.1%	30.6%	24.7%	-3.0%	24.1%	10.8%	-5.1%	24.2%
First Energy	FE	35.20	14,950	10.9%	-18.6%	18.2%	-21.0%	-5.7%	19.7%	-20.3%	-3.8%	21.8%
PNM Resources	PNM	33.88	2,699	10.8%	3.2%	22.8%	17.6%	12.5%	40.0%	2.9%	-6.2%	37.4%
Great Plains	GXP	29.70	4,595	8.8%	-3.9%	17.2%	19.4%	-6.7%	12.3%	0.0%	-9.3%	23.3%
PPL Corp	PPL	37.02	25,061	8.5%	1.2%	20.7%	5.1%	-2.7%	11.8%	-18.5%	-7.2%	26.9%
Haw aiian Electric	HE	30.78	3,321	6.3%	-13.5%	28.5%	3.7%	-5.1%	16.2%	9.0%	-12.0%	13.9%
Average				20.2%	-6.3%	24.0%	12.4%	0.4%	15.6%	7.7%	-4.0%	37.1%
Median				20.2%	-4.7%	27.1%	11.8%	-1.5%	16.4%	9.1%	-3.5%	35.7%
US Treas 10 yr. Yield	USGG10YF	1.51	•	-33.6%	4.5%	-28.3%	72.3%	-6.3%	-43.0%	-14.2%	-36.5%	14.4%
Philadelphia UTY	UTY	654.86		19.7%	-9.8%	24.2%	6.5%	-4.7%	14.1%	0.9%	-2.6%	27.1%
Sector Spider ETF	XLU	51.61		19.2%	-8.3%	24.4%					-2.7%	26.5%
S&P Electrics	S5ELUT	294.77		19.2%	-9.1%	26.2%	3.3%	-5.0%	15.4%	-1.5%	-2.5%	28.9%
S&P 500	SPX	2,166.60		6.0%	-0.7%	11.4%	29.6%	13.4%	0.0%	12.8%	-0.4%	19.7%

Source: Bloomberg, Mizuho Securities USA Inc.

Price Target Calculation and Key Risks

8point3 Energy Partners LP

Our 12 month price target is \$18 per unit, reflecting a two-stage DDM model whereby the current 12 month DPU of \$0.98 per unit grows at 13.5%, the midpoint of management guidance of 12-15% for four years followed by 1% growth thereafter.

Key risks to the CAFD story include: access to capital markets; corporate governance and management rotation; limited operational experience; the tax status for renewables could change under Congressional directive; virtually all of the ROFO portfolio is not yet in commercial operation; 75% of the expected 2016 cash available for distribution (cafd) comes from three projects: Quinto (42%), Solar Gen (21%) and NorthStar (12%).

American Electric Power Company, Inc.

We value AEP using several methodologies, including P/E, DDM and price to book value. We avoid using Sum of the Parts given the high likelihood (>70%) that the company sells its merchant generation fleet. DCF valuations are difficult given the capital intensive nature of the Power & Utility sector, especially regulated companies, and the lack of free cash flow generation, net of dividends. For triangulation purposes, we look at dividend discount models to see where the imputed price lies based on underlying dividend growth assumptions. We look principally towards a relative P/E approach. Our \$67 per share 12-month target assumes a 16.0x P/E multiple on our 2018 EPS estimate of \$4.18 per share.

General economic conditions, changes in state and/or Federal regulation, environmental compliance, execution risk with new construction, weather, ongoing business operational risk, broader macroeconomic conditions, and interest rate movements are among the key risks to our rating and expected stock performance.

Avista Corporation

Our \$41 per share, 12 month price target for AVA is based on a group average P/E multiple on 2018 earnings estimates. We do not attribute any merger speculation, and/or premium, in our valuation assessments unless there is company confirmation or credible news agencies reporting otherwise. We also utilize EV/EBITDA, DDM, and Price to Book methodologies to help triangulate valuation.

Key risks include general economic conditions as it affects underlying customer growth and capital investment, usage and sales volumes. Although AVA is decoupled from a weather-related perspective, its hydrology volumes are not and the underlying cost of power production could change materially based on snowpack. Changes in state and/or Federal regulation, environmental compliance and execution risk related to ongoing business operations are other key risks.

Consolidated Edison, Inc.

We value Consolidated Edison primarily utilizing relative P/E multiples and employ DDM valuation methodologies for triangulation purposes. We utilize a large-cap, regulated P/E multiple on our 2018E instead of a premium valuation as ED heads into a major regulatory proceeding. Our DDM methodology includes single stage and two stage approaches with the single stage under a baseline DPS growth rate. The two-stage uses various three year DPS growth expectations followed by a static long-term

growth DPS growth rate. DCF methodologies are difficult given the limited free cash flow generation characteristics found in regulated companies. All underlying figures use constant betas, equity risk premiums, and risk-free rates.

General economic conditions, changes in state and/or Federal regulation, environmental compliance, execution risk with new plant builds, weather, ongoing business operational risk, broader macroeconomic conditions, and interest rate movements are among the key risks to our rating and expected stock performance.

Duke Energy

We value DUK on a P/E methodology based on its core EPS of \$4.74 (ex. LatAm operations). We also triangulate our valuation using a sum of the parts methodology, P/Book, Single Stage DDM, and Yield support methodologies to arrive at our \$75 target. The relative P/E basis method is consistent with the valuation methodologies of its large-cap (>\$10.0 billion) peers. Premium valuations are ascribed for regulatory and better transparency when predicting earnings, while discounted valuations include heightened regulatory, construction, and operational/execution risks. Typically, businesses outside the core, in this case DUK's International unit, will tend to weigh more on the shares when trouble arises. This is known as the "dog wagging the tail' issue and DUK's International businesses consume a disproportionate amount of investor interest. We look at Yield support and Price to Book as indicators of future stock potential. DDM methodologies are highly dependent on underlying risk premiums, and DPS growth projections, which can swing valuations considerably and as shown below.

The key risks for DUK include regulatory risk in six states, from rate regulation to operation of coal and nuclear units. Environmental regulation remains omnipresent and DUK's February 2014 coal ash spill at the Dan River facility has heightened regulatory risk around the company. DUK is active in building a renewables business and has done a good job doing so – nearly 2,000MW of owned and/or equity interest in both wind and solar. building regulatory General economic conditions, changes in state and/or Federal regulation, environmental compliance, execution risk with new plant builds, weather, ongoing business operational risk, broader macroeconomic conditions, and interest rate movements are among the key risks to our rating and expected stock performance.

Edison International

Our 12-month \$75 per share price target for EIX is primarily based on a relative P/E basis and we adjust our multiples accordingly based on the inherent growth and risk profile. We look at single-stage and two-stage dividend discount models for valuation triangulation purposes. A two-stage model may be a tough argument given the call by TURN. A sum of the parts analysis is problematic given the integrated model and lack of desire to spin out the FERC-regulated transmission business.

General economic conditions, changes in state and/or Federal regulation, environmental compliance, execution risk with new plant builds, weather, ongoing business operational risk, broader macroeconomic conditions, and interest rate movements are among the key risks to our rating and expected stock performance.

Entergy Corp

We value ETR using four valuation methodologies but rely primarily on P/E, and dividend discount models. We use sum of the parts, but the complicated tax structures

and allocation among units makes its difficult to use with any sense of comfort. For triangulation purposes, we also look at price to book value. Our target is the arithmetic average of these methodologies.

General economic conditions, changes in state and/or Federal regulation, environmental compliance, execution risk with new plant builds, weather, ongoing business operational risk, broader macroeconomic conditions, and interest rate movements are among the key risks to our rating and expected stock performance.

Eversource Energy

We value Eversource on a P/E multiple based on a t+2 forward year analysis, consistent with valuation methodologies for regulated names. For triangulation purposes, we turn to dividend discount models (single- and two-stage) as well as price/book methodologies. Our \$59 per share, 12 month price target represents a group average multiple to the regulated group average P/E of 17.3x on our 2018E. There isn't enough upside from current levels to warrant the Buy recommendation, hence our Neutral rating on the shares.

General economic conditions, changes in state and/or Federal regulation, environmental compliance, execution risk with new transmission and pipeline builds, ongoing business operational risk, broader macroeconomic conditions, and interest rate movements are among the key risks to our rating and expected stock performance.

First Solar, Inc.

Our \$67 per share, 12-month price target for Neutral rated FSLR is derived as the arithmetic mean of six valuation methodologies, EV/Sales, EV/Book, P/E Multiple, Sum of the Parts, and DCF (FCF growth and EBITDA multiple methodologies.

Key Risks The key risks include uncertainty regarding incentive mechanisms in the key markets; macroeconomic conditions driving power demand growth; access to capital markets; changes in environmental regulation; changes in state and/or Federal regulation; customer concentration; technology associated with competing PV products; legal, regulatory, and supply side risks with using Cadmium (a highly toxic compound); falling poly prices or PV modules pricing, among other things.

NextEra Energy, Inc.

We value NEE utilizing five valuation methodologies but rely primarily on Sum of the Parts given its various businesses, all of which have scale. Our \$138 target price is the arithmetic average of the P/E, Sum of the Parts, and DDM valuation methodologies. We utilize group average multiples as the baseline and adjust up or down based on the specific business unit. This is key is P/E analysis. For example, the regulated business operates in one of the better jurisdictions, thus it receives a premium valuation, the highly contracted cash flows also receive a modest premium. We also assign small valuations on a \$/KW basis for the development pipeline. The Sum of the Parts methodology also captures pipeline development and the benefits of the company's considerable tax attributes. All valuation metrics are on 2018, with the exception of P/E, which is based on 2019.

The key risks for NEE include potential changes at the state and/or Federal level related to environmental policy; potential changes in state regulation or assigning more punitive allowed returns than previously authorized; tax policy, especially at

the Federal level as it relates to renewables; operational risk; M&A; and, weather, especially since weather influences renewable generation. Broader macro concerns regarding economic outlook, changes in underlying Treasury securities or expectations of the same are other key concerns and can influence the investment appeal of utilities in general, and NEE, in particular.

NextEra Energy Partners LP

Our price target is \$47 per unit reflects a 3% targeted yield, which is the 2015 current yield applied to our year-end 2016 DPU level. **Key risks to the NEP story include**: significant investor concentration and limited daily trading volumes; the tax status for renewables could change under Congressional directive; capital markets need to remain friendly in order to fund transactions at a low cost of capital. NEPs Genesis project produces 40-45% of the EBITDA from the initial portfolio.

NorthWestern Corporation

We value NWE utilizing five valuation methodologies – P/E, EV/EBITDA multiple, DDM, DCF and Price to Book – but rely primarily on P/E given that its EPS stream is derived entirely from regulated activities. The shares are currently trading at a P/E of 16.8x our 2018E, versus a peer median of 17.2x, suggesting the shares are appropriately valued. The P/E methodology utilizes group average multiples as a Base Case and adjusts the multiples from there. The DDM utilizes current 10 Year Treasury as the risk free rate and an 8% equity risk premium and incorporates historical growth for its dividend expectations in the perpetual case.

Risks include lower earnings growth driven by declining customer growth, uncontrollable costs, or regulatory outcomes that negatively affect the company's cost of capital and impinge on its ability to raise capital at competitive rates. General economic conditions, changes in state and/or Federal regulation, environmental compliance, execution risk with new plant builds, weather, ongoing business operational risk, broader macroeconomic conditions, and interest rate movements are among the key risks to our rating and expected stock performance.

PG&E Corporation

We examine PCG on a relative P/E basis and adjust our multiples accordingly based on the inherent growth and risk profile. A sum of the parts analysis is tough given the integrated operational profile of its core utility and gas transmission. We look at single-stage and two-stage dividend discount models for triangulation purposes only, and see where value could go in the event the Board moves to reinstate dividend growth We've looked at P/Book over the prior five years and derived a reasonable range of multiples. A DCF is problematic given the negative free cash flow throughout the forecast period. Combined, our 12-month per share price target for PCG is \$67, equating to a 17.2x multiple on our 2018E, representing a modest, 3% premium to the large cap regulated peer universe.

General economic conditions, changes in state and/or Federal regulation, environmental compliance, execution risk with new plant builds, weather, ongoing business operational risk, broader macroeconomic conditions, and interest rate movements are among the key risks to our rating and expected stock performance.

Pinnacle West Capital Corporation

Our 12-month, \$70 price target is based on four valuation methodologies – P/E, DDM, DCF and Price to Book – but rely primarily on P/E given that its EPS stream is derived entirely from regulated activities. Our Neutral recommendation is premised on two factors: outstanding considerations with rate design and underlying customer growth, while still up, is not materializing in the manner PNW anticipates. The P/E methodology utilizes group average multiples as a Base Case and adjusts the multiples +/- 7% from the base. The DDM utilizes current 10 Year Treasury as the risk free rate and a 10% equity risk premium and utilizes either PNWs near-term dividend growth objectives (5%, in the single-stage approach) or a combination of N/T growth and long-term industry average DPS outlook for the two-stage approach. The DCF valuations are highly sensitive to underlying cost of capital expectations and presumed growth rates. The Price to Book methodology uses historical P/Book as a reasonable range of expectations.

General economic conditions, changes in state and/or Federal regulation, environmental compliance, execution risk with ongoing business operations, construction risk (both transmission build and generation plant upgrades), nuclear plant operations, weather, ongoing business operational risk, broader macroeconomic conditions, and interest rate movements are among the key risks to our rating and expected stock performance outlook.

SCANA Corporation

Our 12-month \$84 per share price target is based on a 16.8x P/E multiple on 2018. We also use sum of the parts, single- and two-stage DDM, and price-to-book to help triangulate valuation. Key risks include execution risk with the nuclear project; the cost of building the two new nuclear units is roughly 75% of SCGs market cap today and once complete, will represent nearly one-half the earnings power and two-thirds of the cash flow. General risks include economic conditions, a changing regulatory environment, and changes in interest rates.

SunPower Corp

Our price target for Neutral-rated SPWR is \$25 per share and is based on a DCF terminal value multiple valuation methodology discounted at 9% and using an 18.0x terminal value multiple.

Key risks include uncertainty regarding incentive mechanisms in the key targeted markets; macroeconomic conditions driving power demand growth; access to capital markets; changes in environmental regulations; changes in customer concentration, geographic concentration; technology associated with competing PV products; legal, regulatory and supply chain risks; falling poly prices on PV module pricing; among other things.

The Southern Company

Our \$52 price target is calculated using the group average multiple on our 2018E. We utilize group multiples for the various components when we triangulate valuation using sum of the parts, DDM, DCF analysis. Execution risk with the development of two large generating facilities is a key risk, as are potential changes in environmental



compliance and regulation both the Federal and state levels. The moves in underlying Treasury securities is statistically significant with movement in utility share prices.

WEC Energy Group

We value WEC using the arithmetic average of P/E, Yield Support, Dividend Discount (both single- and two-stage) and price to book but look primarily at relative P/E and DDM as the basis for our valuation methodologies. WEC shares are currently trading at 17.5x our 2018 EPS estimates and are priced to yield 3.47% (current quarterly dividends, annualized) compared with group averages of 15.5x and 3.6%, respectively. The "max" P/E WEC has traded to its peers is a 123% relative, implying that at its current 113% relative, it still has room to run. Our target of \$63 equates to a 123% relative or a 19.4x P/E on our 2018E. The absolute P/E is in line with performance within the last year.

General economic conditions, changes in state and/or Federal regulation, environmental compliance, execution risk with merger integration, weather, ongoing business operational risk, broader macroeconomic conditions, and interest rate movements are among the key risks to our rating and expected stock performance.

Westar Energy, Inc.

We value WR on a takeout basis and assign a \$60.00 per share 12-month target price. Our target price is based on the merger consideration of \$60 per share consisting of \$51 per share in cash and \$9 per share in stock. The collar mechanism offers a +/- 7.5% protection range using precedent transaction multiples to arrive at our price target.

On a stand alone basis, we would value WR primarily on a P/E basis giving it a group average valuation on a two-year forward basis. We also utilize DDM and DCF valuation methodologies to help triangulate valuation.

The key risks for Westar, besides not consummating a transaction, include potential changes at the state and/or Federal level related to environmental policy; potential changes in state regulation or assigning more punitive allowed returns than previously authorized; changes in tax policy, especially at the Federal level as it relates to renewables and/or capital investment; operational risk; and, weather, especially since weather influences renewable generation. Broader macro concerns regarding the economic outlook, changes in underlying Treasury security prices or expectations of the same are some of the key concerns that can influence the investment appeal of the utility sector in general, and WR in particular.



IMPORTANT DISCLOSURES

The disclosures for the subject companies of this report as well as the disclosures for Mizuho Securities USA Inc. entire coverage universe can be found at https://msusa.bluematrix.com/sellside/Disclosures.action or obtained by contacting EQSupervisoryAnalystUS@us.mizuho-sc.com or via postal mail at Equity Research Editorial Department, Mizuho Securities USA Inc., 320 Park Avenue, 12th Floor, New York NY, 10022.

Ownership Disclosures and Material Conflicts of Interest or Position as Officer or Director

None

Receipt of Compensation

Mizuho Securities USA Inc. is providing financing to Great Plains Energy Inc. in connection to their acquisition of Westar Energy Inc. which announced May 31, 2016.

Mizuho Securities USA Inc. and or its affiliates makes a market in the following securities: 8point3 Energy Partners LP, American Electric Power Company, Inc., Consolidated Edison, Inc., Duke Energy, Edison International, Entergy Corp, NextEra Energy, Inc., NextEra Energy Partners LP, PG&E Corporation, Pinnacle West Capital Corporation, SCANA Corporation, SunPower Corp, The Southern Company and WEC Energy Group

Mizuho Securities USA Inc. and or its affiliates has received compensation for investment banking services for Consolidated Edison, Inc., Duke Energy, Edison International, Entergy Corp, Eversource Energy, NextEra Energy, Inc., NextEra Energy Partners LP, Pinnacle West Capital Corporation, SunPower Corp and The Southern Company in the past 12 months.

Mizuho Securities USA Inc. and or its affiliates expects to receive or intends to seek compensation for investment banking services for Consolidated Edison, Inc., Entergy Corp, Eversource Energy and The Southern Company in the next 3 months.

Mizuho Securities USA Inc. and or its affiliates has managed or co-managed a public offering of securities for Consolidated Edison, Inc., Duke Energy, Edison International, Entergy Corp, Eversource Energy, NextEra Energy, Inc., NextEra Energy Partners LP, Pinnacle West Capital Corporation, SunPower Corp and The Southern Company in the past 12 months.

The compensation of the research analyst writing this report, in whole or part, is based on MSUSA's annual revenue and earnings and is not directly related to any specific investment banking compensation. MSUSA's internal policies and procedures prohibit research analysts from receiving compensation from companies covered in the research reports.

Regulation Analyst Certification (AC)

I, James von Riesemann, hereby certify that the views expressed in this research report accurately reflect my personal views about any and all the subject companies. No part of my compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this research report.

Rating Definitions

Mizuho Securities USA investment ratings are based on the following definitions. Anticipated share price change is based on a 6- to 12-month time frame. Return expectation excludes dividends.

Buy: Stocks for which the anticipated share price appreciation exceeds 10%.

Neutral: Stocks for which the anticipated share price appreciation is within 10% of the share price.

Underperform: Stocks for which the anticipated share price falls by 10% or more.

RS: Rating Suspended - rating and price objective temporarily suspended.

NR: No Rating - not covered, and therefore not assigned a rating.

Rating Distribution

(As of 7/27)	% of coverage	IB service past 12 mo
Buy (Buy)	45.41%	37.23%
Hold (Neutral)	52.17%	25.00%
Sell (Underperform)	2.42%	40.00%

For disclosure purposes only (NYSE and FINRA ratings distribution requirements), our Buy, Neutral and Underperform ratings are displayed as Buy, Hold and Sell, respectively.

For additional information: Please log on to http://www.mizuhosecurities.com/us or write to Mizuho Securities USA, 320 Park Ave, 12th FL, New York, NY 10020.

Disclaimers

This report has been prepared by Mizuho Securities USA Inc. ("MSUSA"), a subsidiary of Mizuho Americas LLC, solely for the purpose of supplying information to the clients of MSUSA and/or its affiliates to whom it is distributed. This report is not, and should not be construed as, a solicitation or offer to buy or sell any securities or related financial products.



This report has been prepared by MSUSA solely from publicly available information. The information contained herein is believed to be reliable but has not been independently verified. MSUSA makes no guarantee, representation or warranty, and MSUSA, MHSC and/or their affiliates, directors, employees or agents accept no responsibility or liability whatsoever as to the accuracy, completeness or appropriateness of such information or for any loss or damage arising from the use or further communication of this report or any part of it. Information contained herein may not be current due to, among other things, changes in the financial markets or economic environment. Opinions reflected in this report are subject to change without notice.

This report does not constitute, and should not be used as a substitute for, tax, legal or investment advice. The report has been prepared without regard to the individual financial circumstances, needs or objectives of persons who receive it. The securities and investments related to the securities discussed in this report may not be suitable for all investors, and the report is intended for distribution to Institutional Investors. Readers should independently evaluate particular investments and strategies, and seek the advice of a financial adviser before making any investment or entering into any transaction in relation to the securities mentioned in this report.

MSUSA has no legal responsibility to any investor who directly or indirectly receives this material. Investment decisions are to be made by and remain as the sole responsibility of the investor. Investment involves risks. The price of securities may go down as well as up, and under certain circumstances investors may sustain total loss of investment. Past performance should not be taken as an indication or guarantee of future performance. Unless otherwise attributed, forecasts of future performance represent analysts' estimates based on factors they consider relevant. Actual performance may vary. Consequently, no express or implied warranty can be made regarding future performance.

Any references in this report to Mizuho Financial Group, Inc. ("MHFG"), MHSC and/or its affiliates are based only on publicly available information. The authors of this report are prohibited from using or even obtaining any insider information. As a direct subsidiary of Mizuho Americas LLC and indirect subsidiary of MHFG, MSUSA does not, as a matter of corporate policy, cover MHFG or MHSC for investment recommendation purposes.

MSUSA or other companies affiliated with MHFG, Mizuho Americas LLC or MHSC, together with their respective directors and officers, may have or take positions in the securities mentioned in this report, or derivatives of such securities or other securities issued by companies mentioned in this report, for their own account or the accounts of others, or enter into transactions contrary to any recommendations contained herein, and also may perform or seek to perform broking and other investment or securities related services for the companies mentioned in this report as well as other parties generally.

Restrictions on Distribution

This report is not directed to, or intended for distribution to or use by, any person who is a citizen or resident of, or entity located in, any locality, territory, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to or restricted by law or regulation. Persons or entities into whose possession this report comes should inform themselves about and observe such restrictions.

United States: Mizuho Securities USA Inc., a subsidiary of Mizuho Americas LLC, 320 Park Avenue, 12th Floor, New York, NY 10022, USA, contact number +1-212-209-9300, distributes or approves the distribution of this report in the United States and takes responsibility for it. Any transaction by a US investor resulting from the information contained in this report may be effected only through MSUSA. Interested US investors should contact their MSUSA sales representative.

United Kingdom/European Economic Area: This report is distributed or has been approved for issue and distribution in the UK by Mizuho International plc ("MHI"), Mizuho House, 30 Old Bailey, London EC4M 7AU, a member of the MHSC Group. MHI is authorized and regulated by the Financial Services Authority and is a member of the London Stock Exchange. For the avoidance of doubt this report is not intended for retail clients. This report may be distributed in other member states of the European Union.

Japan: This report is distributed in Japan by Mizuho Securities Co., Ltd. ("MHSC"), Otemachi First Square Otemachi 1-chome, Chiyoda-ku, Tokyo 100-0004, Japan. Registered Financial Instruments Firm, No. 94 (Kinsho), issued by the Director, Kanto Local Finance Bureau. MHSC is a member of the Japan Securities Dealers Association, the Japan Securities Investment Advisers Association and the Financial Futures Association of Japan, and the Type II Financial Instruments Firms Association.

Singapore: This report is distributed or has been approved for distribution in Singapore by Mizuho Securities (Singapore) Pte. Ltd. ("MHSS"), a member of the MHSC Group, which is regulated by the Monetary Authority of Singapore. Any research report produced by a foreign Mizuho entity, analyst or affiliate is distributed in Singapore only to "Institutional Investors," "Expert Investors" or "Accredited Investors" as defined in the Securities and Futures Act, Chap. 289 of Singapore. Any matters arising from, or in connection with this material, should be brought to the attention of MHSS.

Hong Kong: This report is being distributed in Hong Kong by Mizuho Securities Asia Limited ("MHSA"), a member of the MHSC Group, which is licensed and regulated by the Hong Kong Securities and Futures Commission.

Australia: This report is being distributed in Australia by MHSA, which is exempted from the requirement to hold an Australian financial services license under the Corporation Act 2001 ("CA") in respect of the financial services provided to the recipients. MHSA is regulated by the Securities and Futures Commission under the laws of Hong Kong, which differ from Australian laws. Distribution of this report is intended only for recipients who are "wholesale clients" within the meaning of the CA.



If you do not wish to receive our reports in the future, please contact your sales person and request to be removed from receiving this distribution.

© Mizuho Securities USA Inc. All Rights Reserved 2016. This document may not be altered, reproduced or redistributed, or passed on to any other party, in whole or in part, without the prior written consent of Mizuho Securities USA Inc.