

## Tobacco

### Latest Consumer Anecdotes Still Consistent: IQOS and JUUL Stand Out

#### CONCLUSION

We have been struck by two reduced risk products that appear to stand out so far in terms of consumer traction: IQOS from PMI and JUUL vapor (BAT's glo is promising, too, but does not yet have a track record comparable to IQOS). While we are careful not to extrapolate too much from anecdotes, recent consumer input reminds us that IQOS travels well, and that it likely has more pockets of strength outside Japan than is often appreciated.

- **IQOS travels more than one may think: Discovering local users in NYC.** We recently encountered IQOS users on the streets of Midtown Manhattan. When asked about the device, the first 20-something user indicated she purchased it in China and had stocked up on HeatSticks to bring back home to New York. A companion indicated that her father (in Korea) was a 20 year smoker who recently switched to IQOS. The excitement of the group around the product was palpable. A third member of the group proudly volunteered that IQOS was popular in Italy, too, where she had discovered it.
- **China sales remind us that IQOS travels, likely via Japan.** While China is not (yet) an IQOS launch market, we believe sales there (and in Hong Kong we hear about, too) are likely diverted product from Japan. If so, it makes us less concerned about potential trade loading in Asia; we conservatively model 1Q18 volumes, but there could be upside to our estimates if demand is driven in part by diverted sales. While sell-through in Japan remains robust (and growth has yet to slow down), to the extent it may also be a conduit to other markets, we believe momentum in Japan is likely to remain strong.
- **Anecdote from Italy suggests pockets of strength.** Sales in Italy remain relatively small, with national market share just breaking 1% in 4Q17, but we believe a consumer description of IQOS as popular there is consistent with our view that shares in some areas are much higher (we estimate share in Milan is likely over 5%; chart inside). We believe the product is likely becoming increasingly visible and/or prominent in at least some social circles, given a consumer touting its popularity and its rapid market share acceleration, from 0.7% in 3Q17 to 1.2% in 4Q17 (a ~70% sequential volume increase).
- **IQOS and JUUL stand out on adoption rates, growth.** We believe current smokers looking to switch to less harmful products are interested in nicotine delivery and taste. We believe the two products with the clearest traction to date are PMI's IQOS and JUUL vapor, a privately held US company that has also faced capacity constraints over the past year and has had ~20% sequential monthly growth rates. Both appear to have compelling nicotine delivery for smokers looking to switch (JUUL's mission is to eradicate smoking, and PMI is 'designing a smoke-free future'), and both have high adoption rates accordingly. Interest (per Google trends, shown inside) has risen sharply for both, too.
- **US anecdote: JUUL fulfills a New Year's resolution; taste matters.** We recently heard from a longtime smoker who paired a New Year's quit-smoking effort with switching to JUUL. With some limited dual use, tapering off over time, the effort was successful, in part because cigarettes started tasting 'worse and worse.' Armed with just enough persistence to use JUUL regularly enough to get acclimated, taste preferences started to adjust and the harshness of cigarettes became less and less attractive. PMI has reported the same progression for typical IQOS users. (JUUL scanner data chart inside.)

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Related Companies:	Share Price:
BATS LN	44.40
PM	102.54

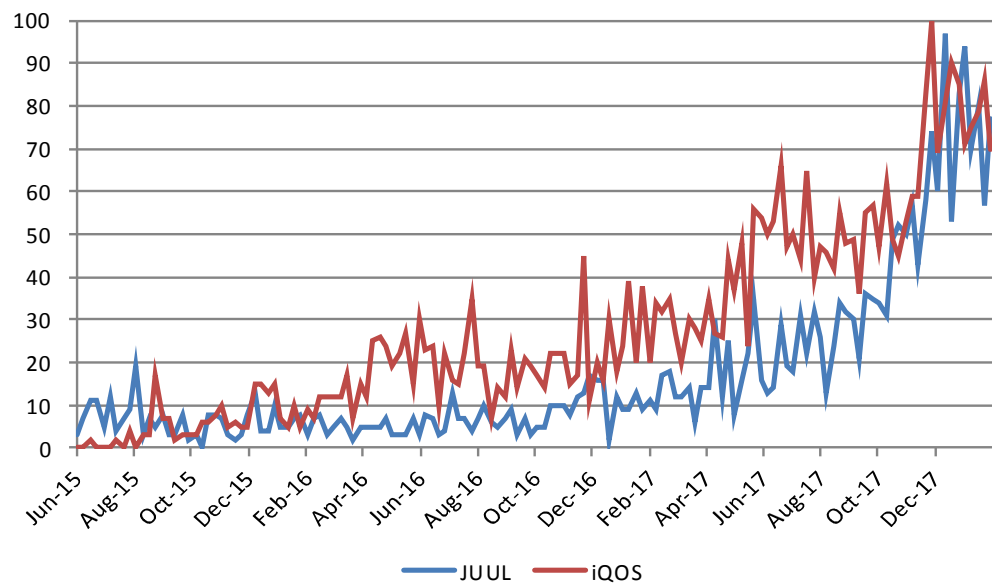
Prices as of the close February 14, 2018.

#### INDUSTRY RISKS

Unfavorable regulatory action, especially disruptive excise tax increases, growth in illicit trade, currency movements, and general macroeconomic erosion.

Exhibit 1

## iQOS and JUUL Google trends



Source: Google Trends, Piper Jaffray &amp; Co

### Similar consumer interest for iQOS and JUUL

Google Trends views worldwide interest in real time and indexes the interest of two products against each other. We paired “JUUL” against “iQOS” and found that both have accelerated in a similar pattern over the last couple years, with sharply growing interest in both products.

Exhibit 2

## Estimated breakdown of iQOS share trends in Italy

Italy	1Q16	2Q16	3Q16	4Q16	1Q17	2Q17	3Q17	4Q17
<b>National share</b>	<b>0.0%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.3%</b>	<b>0.5%</b>	<b>0.6%</b>	<b>0.7%</b>	<b>1.2%</b>
<b>Initial launch area share</b>	<b>0.2%</b>	<b>0.3%</b>	<b>0.5%</b>	<b>1.5%</b>	<b>2.5%</b>	<b>2.8%</b>	<b>3.0%</b>	<b>5.3%</b>
Percent coverage	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
First expansion area share						<b>0.1%</b>	<b>0.2%</b>	<b>0.3%</b>
Percent coverage						44.0%	44.0%	44.0%
Next expansion area share							<b>0.1%</b>	<b>0.2%</b>
Percent coverage							9.0%	9.0%
Total launch area share	<b>0.2%</b>	<b>0.3%</b>	<b>0.5%</b>	<b>1.5%</b>	<b>2.5%</b>	<b>0.9%</b>	<b>1.0%</b>	<b>1.6%</b>
Percent coverage	20.0%	20.0%	20.0%	20.0%	20.0%	64.0%	73.0%	73.0%

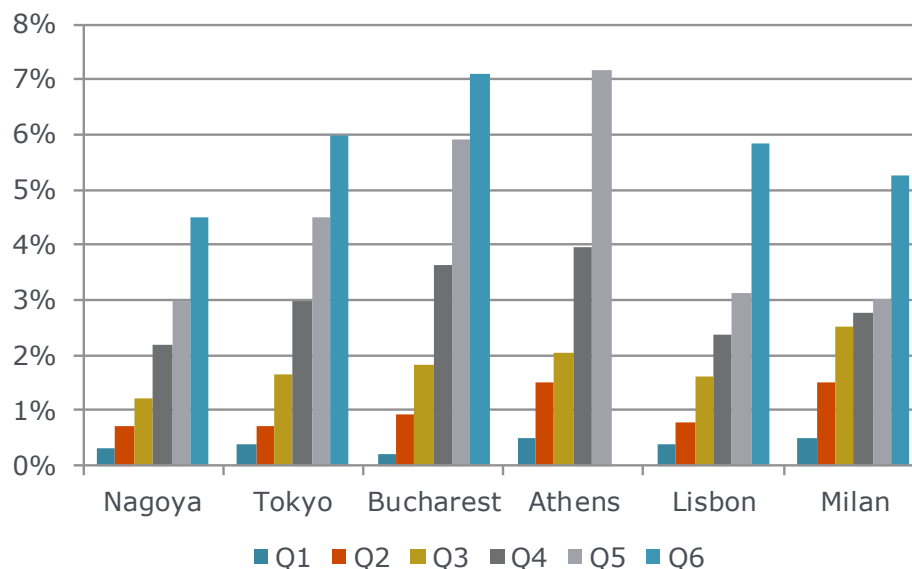
Note: We assume expansion area share trends mimic those of the initial launch area's history. Source: Piper Jaffray &amp; Co

### Italy likely has initial launch area share above 5%

Italy's national share rose from 0.5% in 1Q17 to 1.2% in 4Q17, but its footprint grew from 20% of the country to 73% in 3Q17, which means that it added lots of territory with very little initial share. (We assume a similar 73% launch area coverage in 4Q17, though PMI has not disclosed an updated figure.) We estimate its initial launch area share (essentially Milan) grew from 2.5% in 1Q17 to 5.3% in 4Q17, reflecting more strong momentum locally than its national share suggests. On the following page, we compare this progression to other launch areas, including in Japan, and find that the share trajectory momentum following an initial launch area share of ~0.5% is similar across many launch areas worldwide.

Exhibit 3

**iQOS share trend comparisons, Japan cities vs. initial launch areas in European markets**



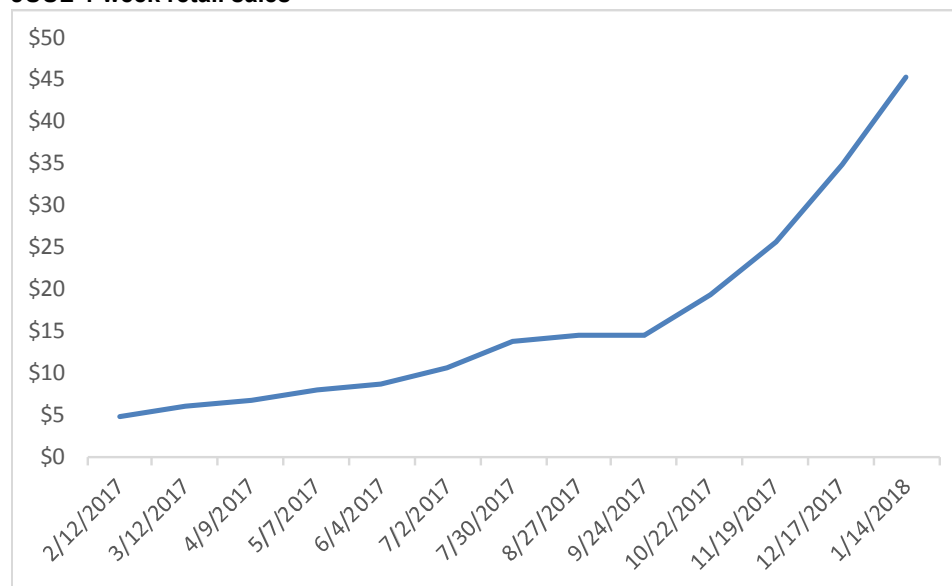
Note: Key cities are used to identify initial launch areas which can include other cities. Source: Piper Jaffray & Co

**Launch area trends point to promising potential**

Launch area share trajectories closely mirror – or exceed – Japan’s trends, if using the first quarter with a ~0.5% market share as a starting point for comparison. We consider this starting point to be relevant as it reflects sufficient local awareness. Using that quarter as ‘quarter one’ and then each following quarter as ‘quarter two’, etc., we see faster relative momentum in Athens, Bucharest and Lisbon than we saw in Nagoya and Tokyo. Athens reached 0.5% in its launch quarter and only has five periods since of history since launching.

Exhibit 4

**JUUL 4-week retail sales**



Source: IRI, Piper Jaffray & Co

**JUUL retail sales soar in 2017**

JUUL’s 4-week sales growth grew over 800% in 2017, with under \$5M in sales during the 4 weeks ending mid-February 2017 and over \$46M in the 4 weeks ended mid-January 2018.

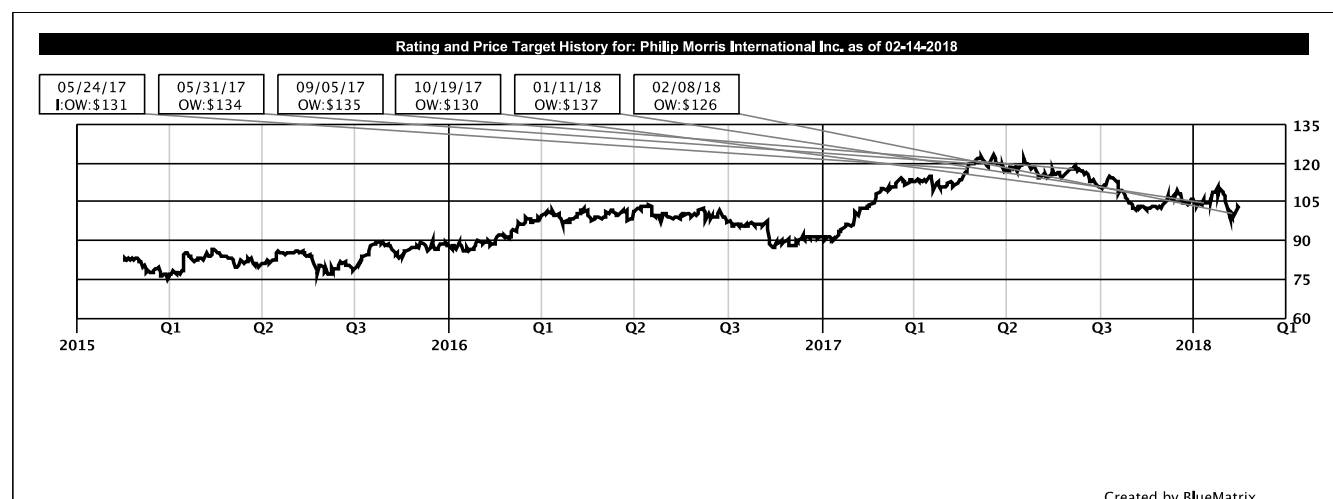
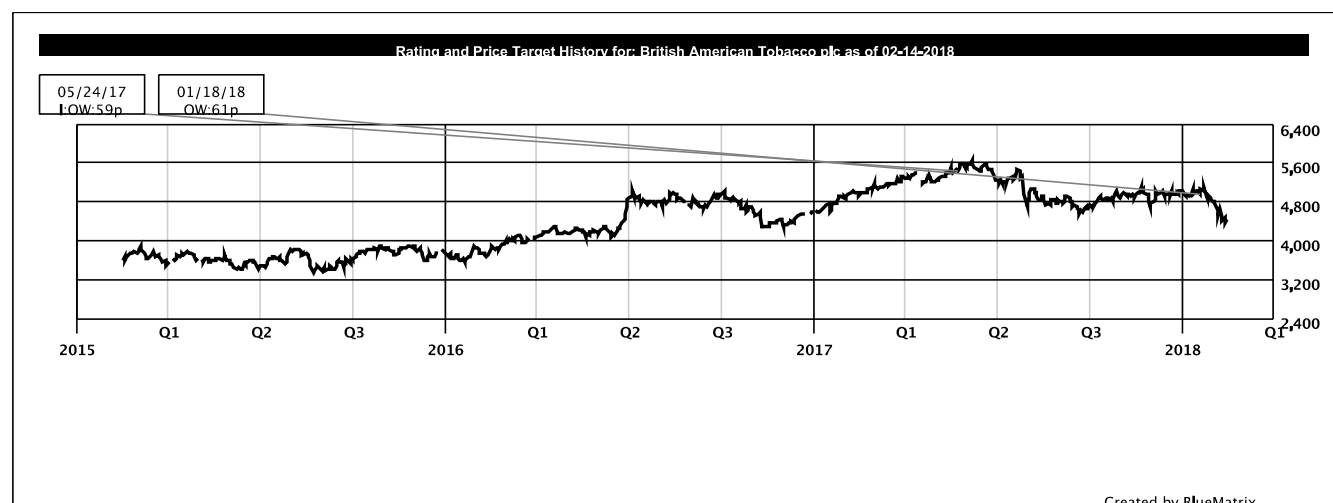
**British American  
Tobacco (BATS-  
LON)**

We rate BATS LN Overweight. Our target price of £61 applies a ~17.5x multiple to our 2019E EPS of £3.50. We expect BATS to deliver 8-9% three-year average organic sales growth and 12-13% average EPS growth. Risks: Disruptive excise taxes, macro pressure, and currency moves may pose risks to profits.

**Philip Morris  
International (PMI)**

We rate PM Overweight. Our target price of \$126 applies a ~22x multiple to our 2019E EPS of \$5.75. We expect PMI to deliver 8-9% three-year average organic sales growth and 11-12% average EPS growth. Risks: Unfavorable regulatory action, especially disruptive excise tax increases, a stronger US dollar and the growth of counterfeit products could pose a risk to upside to the shares.

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