Wall Street Tobacco Industry Update

NATO Education Seminar – February 11, 2019

Bonnie Herzog, Senior Analyst
Managing Director
Beverage, Household & Personal Care, Tobacco & C-Stores Research
Wells Fargo Securities, LLC
212-214-5051
bonnie.herzog@wellsfargo.com
Discussion Topics

➢ Overview of Current Tobacco Industry Trends
   o Combustible Cig Vol Deceleration Accelerates
   o JUUL Leads E-Cigs/Vapor Renaissance
   o FDA Cracks Down on E-Cig Youth Access While Advocating “Continuum of Risk” Approach & New Nicotine Strategy
     • Removes Certain E-Cig Flavors From C-Store Channel
     • Encourages Long-Term Shift in Adult Cig Consumption to RRPs
     • Premarket Tobacco Product Application (PMTA) Deadline for Marketing Newly Regulated Non-Combustible Products is **August 8, 2022**

➢ Notable Industry Developments
   o Altria Takes 35% Equity Stake in JUUL, Exits Own E-Cig Biz
   o **Total U.S. Nicotine Pool** Set To Grow as New Users, RRP Dual-Usage, & Per Caps Increase
   o Expect Consumption of RRPs to Exceed Combustibles in Next Decade
Combustible Cig Volume Deceleration Accelerates

- Combustible Cig Volumes Decelerate Below Historical Average Declines
- E-Vapor Resurgence & State Excise Tax Increases Impact Cig Industry Vol
- Net Price Realization, However, Remains Robust, Up ~5%

Source: Company Reports and Wells Fargo Securities, LLC estimates
JUUL Leads E-Cig Resurgence

Nielsen All Channel Scanner Data Thru 1/26/19

E-Cig $ Share Performance
Thru Nielsen 4-wk period ended 1/26

- JUUL has re-ignited U.S. e-vapor category growth, accounting for nearly all of the category’s growth to date
- JUUL represents >30% share of the overall e-vapor category, across open/closed systems and all trade classes
- U.S. e-vapor volume is expected to grow at a +15-20% CAGR thru 2023

Source for both graphs: Nielsen; Wells Fargo Securities, LLC
Gas Prices Remain Relatively Low & Consumer Confidence Is At Highest Level Since 2001

Supports Strong U.S. Adult Tobacco Consumer

Favorable Macro Trends Favor Premium Brands
Cig Vols Strongly Correlated to Gas Price Trends

Sources: U.S. Energy Information Administration (EIA) for gas prices; Nielsen
"Customer counts in general are decreasing as we are seeing in cigarettes as well fortunately overall sales are up--so average purchase has increased in Q4, we started to see cigarette units go negative."

"2018 proved to be a good year in Tobacco. Customers tend to purchase more traditional cigs than we saw in RYO, and foot traffic was up."

"With the warmer weather we experienced, traffic/customers were slightly up over the past 4-8 weeks."
But Traffic Pressure Continues…..

Retailers Expect Slightly More Cig Vol Pressure in 2019

~30% of Retailers Attribute Cig Vol Softness to E-Cig Conversions & Dual Use

- JUUL & Dual-Use Contributing to Pressure, but Cig Mfr Pricing, Strong Loyalty Programs & Promos Are Expected to Be Key Offsets

- “More alternatives to combustibles + higher cigarette prices = slower sales”

- “We are not sure that gas prices will stay low as projected, which could result in customers trading down”

- “Gen Z is not smoking, retails are too high (pricing power is dead), and people are moving to vape, just as the FDA moves to suppress vape”

Source for both graphs: 4Q18 & Ad Hoc “Tobacco Talk” Surveys published in Feb 2019 and Nov 2018, respectively; Wells Fargo Securities, LLC estimates

Bonnie Herzog - Wells Fargo Securities, LLC | Tobacco, Beverage & C-Store Sectors
Next Cig List Price Increase Expected Late March

“Tobacco Talk” Survey – February 2019

**Expected Date**

_of Next Cig List Price Increase_  

<table>
<thead>
<tr>
<th>Week of</th>
<th>January</th>
<th>4-Feb</th>
<th>11-Feb</th>
<th>18-Feb</th>
<th>25-Feb</th>
<th>4-Mar</th>
<th>11-Mar</th>
<th>18-Mar</th>
<th>25-Mar</th>
<th>1-Apr</th>
<th>8-Apr</th>
<th>15-Apr</th>
<th>22-Apr</th>
<th>29-Apr</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>March Total:</td>
<td>64%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>25%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-Mar</td>
<td>17%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-Mar</td>
<td>17%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-Mar</td>
<td>8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-Apr</td>
<td>3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-Apr</td>
<td>2%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-Apr</td>
<td>5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22-Apr</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29-Apr</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Expected Amount (per pack)**

_of Next Manufacturer List Price Increase_  

<table>
<thead>
<tr>
<th>Expected Increase per Pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.04 - $0.06</td>
</tr>
<tr>
<td>5%</td>
</tr>
</tbody>
</table>

- **$0.09/Pk Cig List Price Increase (+2-3%)** Expected in Late March
  - To Be Led By PM USA (as usual)
  - Over 55% of Retailers/Wholesalers Predict $0.09-$0.10 Per Pack

- **Bottom line** – Reflects Industry’s Confidence/Ability To Price Through Vol Weakness

*Source* for both graphs: "Tobacco Talk" Survey; Wells Fargo Securities, LLC estimates

_Bonnie Herzog - Wells Fargo Securities, LLC | Tobacco, Beverage & C-Store Sectors_
History of Cig List Price Increases

Source: Company data; Wells Fargo Securities, LLC estimates

Bonnie Herzog - Wells Fargo Securities, LLC | Tobacco, Beverage & C-Store Sectors
Cig Price Gaps Relatively Steady

Absolute & Relative Price Gap Between Premium (Marlboro) & Deep Discount Cigarettes (Q/Q)

- Absolute Price Gap Widening to a record high $1.64/pk but....
- Relative Price Gap Relatively Stable at 31%
- Retailers See Vape As “Big Winner” Given Lower Price Points Relative to Cigs
- Altria Notes Continued Churn Within Deep Discount From Branded to Non-Branded

Source for graphs: Company reports; Wells Fargo Securities, LLC

Bonnie Herzog - Wells Fargo Securities, LLC | Tobacco, Beverage & C-Store Sectors
Key Brand Trends in Q4
“Marlboro volume started to stabilize and return.”

“As the category shrinks, the most price sensitive people in the economy are making up a larger share of the category.”

Source: 4Q18 “Tobacco Talk” survey
PM USA: Marlboro Share Pressure Receding

Marlboro U.S. Market Share Performance

Marlboro Showing Signs of Stabilization

The Marlboro Brand Franchise

- Among the Strongest & Most Recognizable Consumer Brands Worldwide, In Our View

- Strong Loyalty Program & Effective Promo Strategy Making Positive Impact

- We Expect Marlboro to Continue to Outperform the Overall Cig Industry

Source for both graphs: Company data and Wells Fargo Securities, LLC

Bonnie Herzog - Wells Fargo Securities, LLC | Tobacco, Beverage & C-Store Sectors
RJR & ITG Also Seeing Some Improvement in Nielsen Data

**Latest Nielsen 4-Wk Scanner Data:**

- Volume Pressure Easing Led By **Newport** at -2.6% for 4-wks ended 1/26 (vs -7.4% for 12-wks)
- **Camel** Vol Also Improving at -5.1% (vs -6.6% for 12-wks), Albeit Still Weak
- **Natural American Spirit** Growth Continues With Vol Increasing +2.7% (vs +1.0% for 12-wks)
- ITG Performance Remains Alarming With **Winston** Vol Down -15.3%, Albeit Better Than In Recent Periods

*Source for graphs: Nielsen; Wells Fargo Securities, LLC*
View on FDA’s Recent Decisions
FDA’s New “Continuum of Risk” Is Positive For U.S. Vapor

- Embraces “Continuum of Risk” (i.e., Relative Risk) vs Abstinence

- Encourages Innovation At the Lower, Less Harmful End of the Continuum

- Extends Deadline for Submission of Deeming Reg Applications for Newly Regulated Tobacco Products in Market as of 8/6/16
  - Deadline for Newly Regulated Combustible Products (Cigars, Pipe Tobacco & Hookah Tobacco): **August 8, 2021**
  - Deadline for Newly Regulated Non-Combustible Products (e-cigs or ENDS): **August 8, 2022**

- **Bottom Line** - We Think The FDA’s New Approach Will Encourage Consumers To Shift More Rapidly to Vapor/RRPs
FDA Announces E-Cig Action Plan

- On 11/15, the FDA Announced a 5-Pt Action Plan To Address the E-Cig Youth “Epidemic”
  
  1. **C-store restrictions** – Require certain e-cig flavors to be sold in age-restricted locations in c-stores
  
  2. **Online sale restrictions** – Required heightened age verification process for e-cigs sold online
  
  3. **Flavored cigar ban** – FDA intends to propose a product standard to ban flavors in all cigars
  
  4. **Remove e-cigs that explicitly appeal to kids** – e.g., candy flavors, cartoon labels
  
  5. **Menthol ban in cigs/cigars** – Accelerate the proposed rulemaking process to ban menthol in all combustible tobacco products
  
- **Bottom Line** – The FDA Must Carefully Navigate How to Reduce Youth Uptake While Accelerating Adult Smoker Conversion to Non-Combustible Alternative Products Like E-Cigs/Vapor/Heat-Not-Burn (HNB)
Retailers Broadly Disagree W/FDA’s E-Cig Action

FDA’s Action to Restrict Certain E-Cig Flavors Viewed As “Too Extreme”

- Disagree/Unfair/Too Extreme: 77%
- Driven by Big Tobacco: 9%
- No Opinion: 5%
- Agree: 9%

“Tobacco Talk” Survey Takeaways:

- “The FDA is not going to reduce the consumption of underage smoking, teenagers will get the product one way or another”
- “Moving the legal age and focusing on removing 'youth targeted' marketing would have a similar, effective, impact”
- “Consumers will go elsewhere to purchase and will likely buy other products while they are there, reducing traffic and total sales”

While E-Cigs Are Still A Tiny Contributor to Overall C-Store Sales, Retailers Anticipate Neg Impact As Consumers Go Elsewhere

- Negative: 63%
- Negligible: 25%
- Positive: 12%

Source for graphs: Tobacco Talk Survey, Nov 2018 Wells Fargo Securities, LLC
Retailers Seeing Some Negative Impact on E-Cig Volumes

- Initially sales fell way off but as people realized that whatever the FDA did would take months, if not years, than things normalized somewhat.

- The real answer is not yet...legislation won't necessarily slow down the category - just cause a shift of balance to vape and age-restricted outlets and away from c-stores.

Source: 4Q18 “Tobacco Talk” Survey
FDA Announces Comprehensive Nicotine Strategy

- **On 7/28, the FDA Announced a Comprehensive Regulatory Plan To Lower Cigarette Nicotine Levels & Reduce Addiction to Combustible Cigs**
  - Places Nicotine At the Center of the FDA’s Regulatory Approach
  - Seeks to Lower Combustible Cig Nicotine Levels to “Render Cigs Minimally or Non-Addictive”
  - Embraces (Finally!) “Continuum of Risk” Approach (vs Abstinence)
  - Encourages Industry Innovation Especially In E-cigs/Vapor/RRPs
  - Extends the Premarket Tobacco Product Application (PMTA) Deadlines For Marketing Newly Regulated Non-Combustible Products to **August 8, 2022**
  - Allows Marketing to Continue After the New PMTA Submission Deadline As Long As The Application Remains Under Review (vs 1 year limit previously)

- **Bottom Line – We See This As A Positive Step Forward For the Industry & Public Health, & Expect It To Encourage A Faster Shift In Consumption to RRPs**
Retailers View of FDA’s Lower Nicotine Strategy

FDA Nicotine Strategy Broadly Expected to Be Negative For Combustible Cig Sales

<table>
<thead>
<tr>
<th>Impact</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favorable Impact</td>
<td>10.1%</td>
</tr>
<tr>
<td>Unfavorable Impact</td>
<td>50.7%</td>
</tr>
<tr>
<td>No Impact</td>
<td>26.1%</td>
</tr>
<tr>
<td>Unsure</td>
<td>13.0%</td>
</tr>
</tbody>
</table>

FDA Nicotine Strategy Signals Favorable Shift in Agency’s Stance Twd RRPs

<table>
<thead>
<tr>
<th>Impact</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No change</td>
<td>26.5%</td>
</tr>
<tr>
<td>Unsure</td>
<td>5.9%</td>
</tr>
<tr>
<td>Yes, more favorable</td>
<td>67.7%</td>
</tr>
</tbody>
</table>

“Tobacco Talk” Survey Takeaways:

- >50% of Retailers Expect the FDA’s New Strategy Could Adversely Impact Combustible Cig Consumption
  - “A De-Facto Ban On Cigarettes”
  - “It Will Create A Black Market”

- However, >67% of Retailers See A Favorable Shift In FDA’s Stance In Favor of RRPs

- Our View: New FDA Approach Is L.T. Industry Positive As With RRPs:
  - (1) Consumers Presumably Live Longer; (2) Lower Risk Profile Encourages More RRP Usage; (3) RRPs Could Merit More Favorable Tax Treatment; (4) Smoking Restrictions Potentially Relaxed for RRPs

Source for graphs: Tobacco Talk Survey 8/17/17 - Wells Fargo Securities, LLC
How Big Of A Risk Would A Potential Menthol Ban Be?

To Date, Menthol Banned or Restricted in At Least 5 Jurisdictions:
- San Francisco, Chicago, Berkeley, NYC, & Minneapolis

“Tobacco Talk” Survey Takeaways:
- A Ban in More Cities Would Be Negative for the Category
  - “That will just be horrible... People will freak out. I mean...Newport!”
  - “It would impact the market and sites greatly, especially in urban markets.”
- However, Retailers Also Recognize Consumers Would Also Seek Other Means
  - “It will drive some shoppers to go to another city to buy products and hurt retailers in the city where the ban occurs. There will be some that will finally quit.”
  - “It would send consumers to other markets.”
  - “Initially it will be impactful but as time goes on I feel the consumer will adapt.”

Our View:
- More Headline Risk Than Real Impact, In Our View
- Absent a Comprehensive Ban at the Federal Level, We Expect Some Smoker Attrition & Volume Pressure, But Ultimately a Manageable Risk

Note: Comments taken from our 2Q17 “Tobacco Talk” Retailer Survey.
Sizing Vapor & The Total Nicotine Pool
Vapor In Context – Still “Early Days”

U.S. Is Largest Market & Most Lucrative Opportunity
- 50% of U.S. adult smokers have tried or expressed interest in Vapor
- Continued innovation is critical in our view (taste, quality, convenience & harm reduction)

We Estimate E-Cigs Are <10% of the Total U.S. Nicotine Pool Today, Going to ~30% By 2025

We Estimate the Total U.S. Nicotine Pool is ~$100B in Retail Sales Today, Going to ~$115B by ‘25
2019E U.S. Vapor Market Size – $9.0B in Retail Sales

Vapor & RRP retail sales in the U.S. will likely eclipse $10B by 2020

Year End 2019E
Total E-Cig/Vapor Market Size – $9.0B

E-Cigarettes $6.4B
- C-Store, Food, Drug and Mass Retail Channels $4.4B
  - Online $1.2B
  - Other $800M*
- Online and Other Retail Channels $2.0B

Vapors/Tanks/Mods & Personal Vaporizers $2.6B
- Online and Other Retail Channels
  - Online $550M
  - Other $350M
- Vape Shops $1.7B
  - C-Store, Food, Drug and Mass Retail Channels

Source: Nielsen C-Store Database, Wells Fargo Securities, LLC estimates. *Other Retail channels include tobacco-only outlets and other e-cig retail locations.
We See the Nicotine Volume/Profit Pool Growing

Nielsen All Channel Scanner Data Thru 1/26

E-Cig $ Share Performance
Thru Nielsen 4-wk period ended 1/26

- As E-Cig/Vapor Product Quality Rises & Competition Improves, Category Volume Growth Should Accelerate
- FDA’s New “Continuum of Risk” Strategy Should Support Further Growth
- JUUL Remains Market Leader By Wide Margin But There’s Ample Room For Multiple Winners, In Our View
- Bottom Line – The FDA’s Harm Reduction Approach to Tobacco Should Drive Stronger RRP Innovation To Support Long-Term, Sustainable Growth

Source for both graphs: Nielsen; Wells Fargo Securities, LLC
"There are many new users, and I believe JUUL has pulled share from all the categories listed above."

Source: 4Q18 "Tobacco Talk" survey
Retailers View Altria’s Decision to Acquire a Stake in JUUL Favorably

➤ “Altria has a better relationship with the FDA.”

➤ “I think it is a positive move for Altria, if the FDA behaves but I think they paid too much for it.”

➤ “I believe this was a smart move as Mark-Ten did not sell very well so now they have a 35% stake in the #1 vapor company.”

Source: 4Q18 “Tobacco Talk” survey

Bonnie Herzog - Wells Fargo Securities, LLC | Tobacco, Beverage & C-Store Sectors
We See JUUL & iQOS* As the Strongest Likely Beneficiaries

We Believe JUUL & iQOS Could Represent >30% of the U.S. E-Vapor Mkt by 2025

- JUUL Has Single-Handily Reaccelerated the U.S. E-Vapor Category
- JUUL’s Volume Increased +600% in 2018 to Over $450M Refill Kit Pods, Contributing to Over $1B in Net Revenues
- While Not Yet Approved For Sale in the U.S., the Success of iQOS in Several Int’l Markets Bodes Well for its Potential in the U.S.
- iQOS Could be Approved for Commercialization in the U.S. Any Day Now
- We Estimate that iQOS Could Accelerate MO’s Revenue and Profit Growth and Drive Significant Incremental Value

As the Mkt Expands/Matures, Their Mkt Shares May Moderate, But Topline Momentum Should Continue

Note(*): Assumes FDA approval of iQOS for commercialization. Source for both images: Nielsen; Wells Fargo Securities, LLC estimates

Bonnie Herzog - Wells Fargo Securities, LLC | Tobacco, Beverage & C-Store Sectors
iQOS’ Strong Int’l Track Record Bodes Well For Its Future in the U.S.

- iQOS’s Share of the Cig/HNB Nicotine Pool is Growing in Every Int’l Market Where it Competes
- iQOS Conversion Rates Remain Incredibly High at ~70% - The Highest of Any HNB or E-Cig Product Out There
- PM & MO Remain Enthusiastic & Committed to Commercializing iQOS in the U.S. When Approved

“HNB” – stands for Heat Not Burn technology. Source for both images: PMI 2016 Investor Day presentation and Wells Fargo Securities, LLC
“I think iQOS is a different proposition that needs to be conveyed through social media as the closest thing traditional smokes without the negative connotations. If they can create the same buzz JUUL did it will be hot.”

Source: 4Q18 “Tobacco Talk” survey
**U.S. Opportunity – FDA Review & Decision Timeline Guides**

**FDA Review Timeline For iQOS Review**

| Important Dates Related to the FDA’s Review of PM’s PMTA & MRTP Applications for iQOS |
|-------------------------------|---------------------------------|
| **PMTA***                      | **MRTP***                      |
| 3/31/17 PMTA filed             | 12/5/16 MRTP filed              |
| 9/27/17 PMTA review "clock" ends | 5/24/17 MRTP review begins     |
| 12/12/17 MRTP Comment Period ends | 5/19/18 MRTP review "clock" ends |

**Notes:**
- **PMTA** stands for Premarket Tobacco Application, which would grants the right to commercialize iQOS in the U.S.; **MRTP** stands for Modified Risk Tobacco Product application, which would grant the right to market iQOS with a reduced risk health claim.
- **Source for chart:** FDA; Wells Fargo Securities, LLC

**In a Nutshell:**
- PMTA approval would allow iQOS to be commercialized in the U.S. without a health claim.
- MRTP approval would allow iQOS to be marketed in the U.S. with a modified-risk health claim.

**Our Expectation:**
- Commercialization in the U.S. this year.
- Health claim approval in the U.S. this year, and possibly in conjunction with PMTA approval.
### British American Tobacco’s Next-Gen Platform

**MORE CHOICE, MORE INNOVATION, POTENTIALLY LESS HARM**

<table>
<thead>
<tr>
<th>PLATFORM</th>
<th>TOBACCO HEATING PRODUCTS</th>
<th>HYBRID</th>
<th>CLOSED VAPOUR SYSTEMS</th>
<th>OPEN VAPOUR SYSTEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTAINING</td>
<td>Tobacco</td>
<td>Tobacco &amp; eLiquid</td>
<td>eLiquid</td>
<td>eLiquid</td>
</tr>
<tr>
<td>CONSUMER NEEDS</td>
<td>Tobacco affinity</td>
<td>Tobacco sensorials</td>
<td>Simplicity</td>
<td>Flavour exploration</td>
</tr>
<tr>
<td></td>
<td>Tobacco sensorials</td>
<td>Tobacco sensorials</td>
<td>Simplicity</td>
<td>Flavour exploration</td>
</tr>
<tr>
<td>BAT PORTFOLIO</td>
<td>glo™ / Neostiks</td>
<td>iFuse™ / Neopods</td>
<td>ePen II</td>
<td>Pebble</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Myblu</td>
<td>Vype</td>
</tr>
</tbody>
</table>

Japanese Tobacco’s Tobacco Vapor Product

- **Launching Ploom TECH+ & Ploom S in 2019**

**Imperial Brands Is Prioritizing myblu**

- IMB to Invest an Incremental GBP100M in 1H19

- **myblu**
- **blu ACE**
- **myblu optimise Intense**
- **myblu scale**

**Source for images:** British American Tobacco PLC, Japan Tobacco Inc, Reynolds American, Inc., Wells Fargo Securities, LLC

**Bonnie Herzog - Wells Fargo Securities, LLC | Tobacco, Beverage & C-Store Sectors**
What’s Ahead: Global Industry Consolidation?
Key Themes in 2019

➢ Heightened Degree of “Unknowns”
  o FDA E-Cig Flavor Crackdown
  o Impact of JUUL on Cig Volume Cannibalization (esp for Altria)
  o Timing of FDA PMTA/MRTP Approvals & Commercialization of iQOS

➢ Need For Scale/Innovation
  o Need For Scale/Innovation May Spur Industry Consolidation and/or Equity/Strategic Partnerships
  o RRPs Remain a Key Catalyst
  o Profit Opportunity Maintains Attractiveness of the U.S. Market

➢ Continued Deceleration of Combustible Cig Volumes

➢ Industry Pivots Towards Reduced-Risk Product Development
PM/MO Combo – We View iQOS/JUUL As Catalyst For Reunification

- We Believe FDA’s New Nicotine Strategy Supports Rationale for Deal
- iQOS Is Win-Win for Both Philip Morris & Altria Group, In Our View
- iQOS Worth More to PM By Owning MO
  - PM Captures Full Margin of iQOS
  - Accelerates Growth in U.S. Given Full Control Over Sales/Distribution
  - Access to MO’s Strong FCF to Catapult Growth of iQOS Globally, In Our View
- U.S. Market Is Attractive “Call Option,” In Our View
  - Diversification Benefits
  - U.S. Is The 2nd Most Lucrative Cig Market in the World
- JUUL Needs An International Partner with Infrastructure & Distribution Capabilities + Know How, In Our View
- At Minimum - Global Consolidation May Force PM’s Hand

Note: PM/MO combo, as speculated in a recent Bloomberg article without comment from either management team
Additional Information Available Upon Request

I certify that:
1) All views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers discussed; and
2) No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by me in this research report.

- Wells Fargo Securities, LLC and/or its affiliates, have beneficial ownership of 0.5% or more of any class of the common stock of Altria Group, Inc., Philip Morris International Inc.
- Altria Group, Inc. currently is, or during the 12 month period preceding the date of distribution of the research report was, a client of Wells Fargo Securities, LLC. Wells Fargo Securities, LLC provided investment banking services to Altria Group, Inc.
- Wells Fargo Securities, LLC or its affiliates received compensation for investment banking services from Altria Group, Inc. in the past 12 months.
- Wells Fargo Securities, LLC, or any of its affiliates, intends to seek or expects to receive compensation for investment banking services from Altria Group, Inc. in the next three months.
- Wells Fargo Securities, LLC maintains a market in the common stock of Altria Group, Inc., Philip Morris International Inc.
- Wells Fargo Securities, LLC received compensation for products or services other than investment banking services from Altria Group, Inc. in the past 12 months.
- Altria Group, Inc. currently is, or during the 12-month period preceding the date of distribution of the research report was, a client of Wells Fargo Securities, LLC. Wells Fargo Securities, LLC provided non-investment banking securities-related services to Altria Group, Inc.
- A member of Research Management currently has a long position in the securities of Philip Morris International Inc.
- Wells Fargo Securities, LLC or its affiliates has a significant financial interest in Altria Group, Inc., Philip Morris International Inc.

Wells Fargo Securities, LLC does not compensate its research analysts based on specific investment banking transactions. Wells Fargo Securities, LLC’s research analysts receive compensation that is based upon and impacted by the overall profitability and revenue of the firm, which includes, but is not limited to investment banking revenue.
Disclosures

STOCK RATING
1=Outperform: The stock appears attractively valued, and we believe the stock's total return will exceed that of the market over the next 12 months. BUY
2=Market Perform: The stock appears appropriately valued, and we believe the stock's total return will be in line with the market over the next 12 months. HOLD
3=Underperform: The stock appears overvalued, and we believe the stock's total return will be below the market over the next 12 months. SELL

SECTOR RATING
O=Overweight: Industry expected to outperform the relevant broad market benchmark over the next 12 months.
M=Market Weight: Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.
U=Underweight: Industry expected to underperform the relevant broad market benchmark over the next 12 months.

VOLATILITY RATING
V=A stock is defined as volatile if the stock price has fluctuated by +/-20% or greater in at least 8 of the past 24 months or if the analyst expects significant volatility. All IPO stocks are automatically rated volatile within the first 24 months of trading.

As of: February 8, 2019

48% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Outperform.

50% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Market Perform.

20% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Underperform.

Wells Fargo Securities, LLC has provided investment banking services for 38% of its Equity Research Outperform-rated companies.

Wells Fargo Securities, LLC has provided investment banking services for 27% of its Equity Research Market Perform-rated companies.

Wells Fargo Securities, LLC has provided investment banking services for 12% of its Equity Research Underperform-rated companies.

Important Disclosure for U.S. Clients

This report was prepared by Wells Fargo Securities Global Research Department ("WFS Research") personnel associated with Wells Fargo Securities and Structured Asset Investors, LLC ("SAI"), a subsidiary of Wells Fargo & Co. and an investment adviser registered with the SEC. If research payments are made separately from commission payments, this report is being provided by SAI. For all other recipients in the U.S. this report is being provided by Wells Fargo Securities.

Important Disclosure for International Clients

EEA - The securities and related financial instruments described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. For recipients in the EEA, this report is distributed by Wells Fargo Securities International Limited ("WFSIL"), a U.K. incorporated investment firm authorized and regulated by the Financial Conduct Authority. For the purposes of Section 21 of the UK Financial Services and Markets Act 2000 ("the Act"), the content of this report has been approved by WFSIL, an authorized person under the Act. WFSIL does not deal with retail clients as defined in the Directive 2014/65/EU ("MiFID2"). The FCA rules made under the Financial Services and Markets Act 2000 for the protection of retail clients will therefore not apply, nor will the Financial Services Compensation Scheme be available. This report is not intended for, and should not be relied upon by, retail clients.

Australia - Wells Fargo Securities, LLC is exempt from the requirements to hold an Australian financial services license in respect of the financial services it provides to wholesale clients in Australia. Wells Fargo Securities, LLC is regulated under U.S. laws which differ from Australian laws. Any offer or documentation provided to Australian recipients by Wells Fargo Securities, LLC in the course of providing the financial services will be prepared in accordance with the laws of the United States and not Australian laws.

Canada - This report is distributed in Canada by Wells Fargo Securities Canada, Ltd., a registered investment dealer in Canada and member of the Investment Industry Regulatory Organization of Canada (IIROC) and Canadian Investor Protection Fund (CIPF). Wells Fargo Securities, LLC's research analysts may participate in company events such as site visits but are generally prohibited from accepting payment or reimbursement by the subject companies for associated expenses unless pre-authorized by members of Research Management.
Disclosures

Hong Kong - This report is issued and distributed in Hong Kong by Wells Fargo Securities Asia Limited ("WFSAL"), a Hong Kong incorporated investment firm licensed and regulated by the Securities and Futures Commission of Hong Kong ("SFC") to carry on types 1, 4, 5 and 6 regulated activities (as defined in the Securities and Futures Ordinance (Cap. S71 of The Laws of Hong Kong), "the SFO"). This report is not intended for, and should not be relied on by, any person other than professional investors (as defined in the SFO). Any securities and related financial instruments described herein are not intended for sale, nor will be sold, to any person other than professional investors (as defined in the SFO). The author or authors of this report may or may not be licensed by the SFC. Professional investors who receive this report should direct any queries regarding its contents to Mark Jones at WFSAL (email: wfsalsearch@wellsfargo.com).

Japan - This report is distributed in Japan by Wells Fargo Securities (Japan) Co., Ltd, registered with the Kanto Local Finance Bureau to conduct broking and dealing of type 1 and type 2 financial instruments and agency or intermediary service for entry into investment advisory or discretionary investment contracts. This report is intended for distribution only to professional investors ("Tozai Tohihika") and is not intended for, and should not be relied upon by, ordinary customers ("Tocho Tohika").

The ratings stated on the document are not provided by rating agencies registered with the Financial Services Agency of Japan (JFSA) but by group companies of JFSA-registered rating agencies. These group companies may include Moody’s Investors Services Inc., Standard & Poor’s Rating Services and/or Fitch Ratings. Any decisions to invest in securities or transactions should be made after reviewing policies and methodologies used for assigning credit ratings and assumptions, significance and limitations of the credit ratings stated on the respective rating agencies’ websites.

About Wells Fargo Securities

Wells Fargo Securities is the trade name for the capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including but not limited to Wells Fargo Securities, LLC, a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission and a member of NYSE, FINRA, NFA and SIPC; Wells Fargo Prime Services, LLC, a member of FINRA, NFA and SIPC; Wells Fargo Securities Canada, Ltd., a member of IIROC and CIPF; Wells Fargo Bank, N.A. and Wells Fargo Securities International Limited, authorized and regulated by the Financial Conduct Authority.

This report is for your information only and is not an offer to sell, or a solicitation of an offer to buy, the securities or instruments named or described in this report. Interests in partnerships, limited partnerships or other partnerships (collectively, "Partnership Interests") may be allocated to partners at their option, or the entity that provided this report to them, if they desire further information or they wish to effect transactions in the securities discussed in this report. The information in this report has been obtained or derived from sources believed by Wells Fargo Securities Global Research Department ("WFS Research"), to be reliable, but WFS Research does not represent that this information is accurate or complete. Any opinions or estimates contained in this report represent the judgment of WFS Research, at this time, and are subject to change without notice. Certain text, images, graphics, screenshots and audio or video clips included in this report are protected by copyright law and owned by third parties (collectively, "Third Party Content"). Third Party Content is made available to clients by Wells Fargo under license or otherwise in accordance with applicable law. Any use or publication of Third Party Content included in this report for purposes other than fair use requires permission from the copyright owner. Any external website links included in this publication are not maintained, controlled or operated by Wells Fargo Securities. Wells Fargo Securities does not provide the products and services on these websites and the views expressed on these websites do not necessarily represent those of Wells Fargo Securities. Please review the applicable privacy and security policies and terms and conditions for the websites you are visiting. All Wells Fargo Securities and SAI research reports published by WFS Research are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Additional distribution may be done by sales personnel via email, fax or regular mail. Clients may also receive our research via third party vendors. Not all research content is redistributed to our clients or available to third-party aggregators, nor is WFS Research responsible for the redistribution of our research by third party aggregators. Equity Strategists focus on investment themes across the equity markets and sectors. Any discussion within an Equity Strategy report of specific securities is not intended to provide a fundamental analysis of any individual company described therein. The information provided in Equity Strategy reports is subject to change without notice, and investors should not expect continuing information or additional reports relating to any security described therein. For research or other data available on a particular security, please contact your sales representative or go to http://www.wellsfargoresearch.com. For the purposes of the U.K. Financial Conduct Authority’s rules, this report constitutes impartial investment research. Each of Wells Fargo Securities, LLC and Wells Fargo Securities International Limited is a separate legal entity and distinct from affiliated banks.

Copyright © 2019 Wells Fargo Securities, LLC

SECURITIES: NOT FDIC-INSURED/NOT BANK-GUARANTEED/MAY loose VALUE