Xiaomi, the world’s largest smart hardware company with a built-in IoT platform

--Initiating Coverage on Xiaomi
iResearch Investment Advisory
2018.08
Executive Summary

- We are initiating coverage on Xiaomi, an internet-based smartphone company and a leading IoT player. We believe Xiaomi has a strong position in smartphone and IoT markets, supported by its unique value proposition of providing products with attractive price-performance ratio. **We believe Xiaomi will continue to enjoy compelling growth across different business lines in the next two years, backed by overseas expansion, strengthening presence in offline channels and category expansion.** On the other hand, we think the foundation of Xiaomi’s business remains heavily dependent on its smartphone business, which is operated in a competitive and fast-changing market, thus creating investment uncertainty over the longer term.

- On Smartphone segment, we expect Xiaomi to gain market share both in the Chinese and overseas smartphone markets in the next two years, thanks to overseas and offline expansion, as well as consolidating market share of smaller players. 5G migration would lift smartphone’s ASP, a catalyst for the sector in 2019. We believe Xiaomi’s setback in 2016 is unlikely to happen again, as Xiaomi has a more mature offline distribution network and reliable supply chain than before.

- On IoT segment, we believe it will benefit from the trend of increasing adoption of IoT products as well as category expansion. By offering IoT/lifestyle products, Xiaomi is able to increase purchase frequency of its users and cross-sell existing smartphone users with IoT/lifestyle products, which are a much larger addressable market compared to smartphone market. As an early mover backed by over 90 ecosystem partners, we believe Xiaomi is favorably positioned in the IoT market given its asset-light approach.

- On Xiaomi’s Internet Services segment, we think it has a symbiotic relationship with its hardware businesses (smartphone and IoT) within the ecosystem, as it generates a lucrative profit margin and ensures that Xiaomi can continue to keep delivering quality products at competitive prices. We see an upside potential for advertising business as overseas users are still under-monetized. However, we don’t expect that earnings contributions from internet services will increase significantly, as the Company needs to continue to invest in its internet products to differentiate itself from other peers.
Smartphone, IoT/lifestyle and Internet Services are Xiaomi’s Three Key Segments

- Xiaomi generates revenue from three key business segments, including smartphones, IoT/lifestyle products and internet services.

- Smartphone segment generates most of Xiaomi’s revenue. Smartphone contributed 70% of Xiaomi’s total revenue in 2017, while IoT/lifestyle and internet service contributed 20% and 9%, respectively.

![Smartphones: Xiaomi 8, Redmi Note5, Redmi S2]

![IoT/lifestyle: Mi Smart TV, Mi AI Speaker, Mi Vacuum]

![Internet Service: Advertisement, Game]

Revenue generated by IoT and lifestyle products has been increasing

Source: Company filings
Xiaomi’s F2C Distribution Model Improves the Efficiency of its Supply Chain

Distribution process:
Xiaomi’s IoT products vs. Traditional manufacturers

Xiaomi is trying to remove traditional distribution layers by F2C model

Traditional online distribution sells via online intermediaries and adds additional cost

Traditional offline distribution has multi-layers and each layer adds inefficiency

iResearch Analysis

• Unlike traditional brands, Xiaomi is applying a F2C model (factory to customer). The products from its ecosystem partners could reach end customers directly via Xiaomi’s own sales channels.
  - Xiaomi’s ecosystem partners, who manufacture “Xiaomi branded” products, sell the products directly to Xiaomi.
  - Xiaomi sells the products of its ecosystem partners directly via its own online/offline platforms.
  - Xiaomi is able to keep a low markup (10~15%) between factory and customers because its F2C model removes unnecessary layers between manufacturers and end customers.

• The online distribution system of traditional brands has fewer layers vs. offline. In China, most brands are using third-party eCommerce platform to distribute products. The markup of third-party eCommerce platform is also trending up, causing the price to end customers to increase even in online channels.

• The offline distribution channel of traditional manufacturers has multi-layers.
  - Each distributor takes profits in each additional layer of the distribution system.
  - Each layer adds additional inefficiency.
### A Wide Spectrum of Product Offerings

Xiaomi provides diverse smartphone models with prices ranging from RMB799 to RMB3,000 and above. It divides smartphone offerings into five segments, targeting at different groups of customers.

#### Xiaomi’s segmented offerings

<table>
<thead>
<tr>
<th>Segment</th>
<th>Series</th>
<th>Chip</th>
<th>Camera</th>
<th>Screen</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premium Flagship (RMB3,000 and above)</td>
<td>MIX Series</td>
<td>Qualcomm Flagship Processors</td>
<td>AI-powered Dual Camera</td>
<td>Full Screen 5.99” Display</td>
<td>Wireless Charging, Face Unlock</td>
</tr>
<tr>
<td>Flagship (RMB2,000 to RMB2,999)</td>
<td>Mi Series</td>
<td>Qualcomm Flagship Processors</td>
<td>Dual Camera</td>
<td>5.15”~5.5” Display</td>
<td></td>
</tr>
<tr>
<td>Upper Mid-range (RMB1,300 to RMB1,999)</td>
<td>Max Series</td>
<td>Qualcomm Upper-middle Processors</td>
<td>Dual Camera / Single Camera</td>
<td>Max2 6.44”; 5C 5.15” Display</td>
<td></td>
</tr>
<tr>
<td>Mid-range (RMB800 to RMB1,299)</td>
<td>Redmi Plus Series</td>
<td>Qualcomm Mid-Class Processors</td>
<td>Dual Camera / Single Camera</td>
<td>5.0”~5.99” Display</td>
<td></td>
</tr>
<tr>
<td>Entry Level (RMB799 and below)</td>
<td>Redmi Series</td>
<td>Qualcomm Entry Level Processors</td>
<td>Single Camera</td>
<td>5.0”~5.7” Display</td>
<td></td>
</tr>
</tbody>
</table>

#### Contribution of Smartphone Shipments

<table>
<thead>
<tr>
<th>Segment</th>
<th>Xiaomi</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>1.5%</td>
<td>20.6%</td>
</tr>
<tr>
<td>Mainland China</td>
<td>2.5%</td>
<td>12.6%</td>
</tr>
<tr>
<td>Emerging Markets</td>
<td>N/A</td>
<td>9.4%</td>
</tr>
</tbody>
</table>

Note: Xiaomi’s shipment estimated by iResearch; Industry data from IDC; Both as of 2017
Source: Xiaomi prospectus; IDC; iResearch
Xiaomi’s IoT/Lifestyle Business is Supported by 90+ Aspiring Ecosystem Partners

- Over the past few years, Xiaomi has rolled out hundreds of AI-enabled IoT/lifestyle products in 13 verticals through its Mi ecosystem label. Its proprietary AI assistant can control 118 IoT product models on its platform as of 1Q2018. Its AI assistant had been installed on more than 23 mln smart devices as 1Q2018.
- Xiaomi has invested over 90 companies which focus on the development of smart hardware and lifestyle products as of 1Q2018 (For a list of key ecosystem partners, please refer to appendix).

**IoT revenue breakdown**
57% of IoT revenue was contributed by products from ecosystem partners in 2017

- 2015: 44%
- 2016: 37%
- 2017: 43%

90+ Xiaomi ecosystem partners offer products in 6 major categories:
- Mobile phone accessories
- Smart wearables
- Smart home appliances
- Lifestyle gadgets and devices
- Lifestyle general merchandise
- Geeky goods

Source: Company filings

Xiaomi’s in-house products include smart TVs, laptops, smart routers and AI speakers.

Controlled through Mi Home mobile app.
Mi TV Benefits from Rapid Adoption of Smart TV and Consolidation of Internet TV Brands

- The high penetration rate of smart TV against traditional ones has helped Xiaomi, which only focuses on affordable smart TV in TV market, to take market share from traditional TV makers.

- In our view, Xiaomi’s TV business also benefits from the consolidation of Internet TV Brands. In particular, the downfall of LeEco in 2016-2017 enables companies including Xiaomi to expand market share in smart TV segment.

![Penetration rate of smart TV in China in 2017](image1)

TV enjoys a higher smart device adoption rate vs. other appliances

![Penetration rate of smart appliances in key categories in China in 2017](image2)

- Xiaomi’s major competitor in internet brand, LeEco, has suffered from supply chain and capital issues since late 2016, which has caused its online share to shrink from 19% in 2016 to just 4% in March 2018.

![Sales volume growth of Mi TV Y/Y](image3)

The success of Mi 4A series is also a key driver of Mi TV’s growth.
Xiaomi has launched a number of connected small appliance products including air purifier, robot vacuum cleaner and rice cooker. In lifestyle, through Xiaomi’s platform, it offers more than 15 categories in electronics and general merchandise including consumer electronics, entertainment and apparel.

The strategy of Xiaomi in small appliances and lifestyle is to focus on products that can become “killer products”. It usually targets at fragmented small sub-sector of consumer goods and quickly gains market share through offering high-quality products at affordable prices.

Xiaomi’s “killer product” strategy is quite successful in small appliance and lifestyle

<table>
<thead>
<tr>
<th>Xiaomi’s IoT product</th>
<th>Ranking (by shipment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water purifier</td>
<td>No.1 Globally</td>
</tr>
<tr>
<td>Power bank</td>
<td>No.1 Globally</td>
</tr>
<tr>
<td>Electric scooter</td>
<td>No.1 Globally</td>
</tr>
<tr>
<td>Air purifier</td>
<td>No.1 Globally</td>
</tr>
<tr>
<td>AI speaker</td>
<td>No.1 Globally</td>
</tr>
<tr>
<td>Smart wearable</td>
<td>No.1 Globally</td>
</tr>
</tbody>
</table>

Estimated market size of some of the sectors entered by Xiaomi in IoT (RMB bln)

- Robotic Vacuum Cleaner: ~6 bln
- Headset: ~9 bln
- Power strip: ~15 bln
- Air purifier: 17 bln
- Power bank: ~20 bln

Source: Company filings, iResearch estimates, GFK, ASKCI

90fun, one of the companies under Xiaomi’s Mi Ecosystem, sells backpacks, running shoes, jackets and suitcases. Its sales reached No.1 in Nov 11 sales in both JD and Tmall in corresponding category.

Source: Company releases, media reports
Xiaomi Offers Internet Services Mainly Through its Hardware Products

- Xiaomi offers internet services mainly through MIUI, the proprietary operating system on Xiaomi’s hardware products including smartphone and TV. Xiaomi’s internet services primarily include online advertising and gaming.

- In March 2018, Xiaomi had approximately 190 million MAUs on MIUI, with 4.5 hours per day of users average spending time on smartphones. Over 20% of the total time spent on smartphones was on apps the Company developed.

- In addition to MIUI, Xiaomi provides internet services to users on other operating systems to expand its user bases and enrich the entire ecosystem. These services include Youpin, Mi Home and Mi Fit.

### Internet Service Revenue Breakdown

<table>
<thead>
<tr>
<th></th>
<th>CY2015</th>
<th>CY2016</th>
<th>CY2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware</td>
<td>3.2</td>
<td>6.5</td>
<td>9.9</td>
</tr>
<tr>
<td>Financial Services</td>
<td>64.2%</td>
<td>64.4%</td>
<td>60.2%</td>
</tr>
<tr>
<td>Content</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entertainment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIUI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productivity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tools</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Xiaomi prospectus

### Revenues from Internet Services Business

<table>
<thead>
<tr>
<th></th>
<th>CY2015</th>
<th>CY2016</th>
<th>CY2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Margin</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Xiaomi prospectus
Breakdown of Internet Services Revenue by Different Dimensions

- **Internet service revenue in 2017**
  - Advertisement: 3.64
    - Performance-based ad: 1.74
    - Display-based ad: 0.67
    - Other ads: 1.31
  - Xiaomi’s APP: 2.55
    - Online gaming: 0.67
      - Xiaomi Qiangzhan: 0.37
      - Xiaomi Racing: 0.30
      - Xiaomi Chaoshen: 0.00
    - Other value-added: 1.74
      - Duokan Reading: 0.64
      - Xiaomi Finance: 0.31
      - Mi Live: 0.30
      - Mi Purse: 0.40
  - Monetization: 3.64
    - CPC, CPD: 0.67
    - CPM, CPT: 1.31
    - Revenue sharing with game operators: 0.67
    - Subscription fees, financial service: 1.31

Source: iResearch analysis

Almost all internet services revenue is from domestic market
- Domestic > 95%
- International < 5%

Source: Industry expert interviews
We Expect Xiaomi Smartphone Shipments Will Enjoy 3 Year CAGR of 25%, Reaching 213 Million in 2022

- Although the growth of global smartphone shipments will stay below 4% per IDC report, we are positive that Xiaomi could enjoy a CAGR of 25% in the next three years.

- Thanks to solid competencies, we believe Xiaomi will benefit more than its domestic competitors (namely OPPO and VIVO) from market consolidation. Additionally, India market expansion, offline channel development, and 5G migration will accelerate Xiaomi smartphone’s shipment growth.

![No. of Xiaomi smartphone shipments by price range (mln)](chart1)

Source: iResearch estimates

![Around 60% of Xiaomi’s smartphone shipments will come from overseas market in 2022](chart2)

Source: iResearch estimates
Xiaomi’s Offline Stores Serve as An Important Customer Acquisition and Experiencing Channel for Xiaomi

Percentage of Xiaomi users who have visited vs. who have never visited Mi Home stores

- Have never visited: 14%
- Have visited: 86%

Reasons for Xiaomi users to visit Mi Home stores

- Trying products to support purchase decision: 53%
- After-sales service: 48%
- Picking up order (purchased online): 34%
- Passing by: 13%

iResearch Analysis

- Our survey results show that the majority of Xiaomi users have been to Mi Home stores.

- About 86% of our surveyed Xiaomi users have visited Mi HomeStores. Only about 14% of our surveyed Xiaomi users never visited any Mi Home Stores.

- Our survey results show that customers visit Mi Home stores primarily for experiencing products and after-sale service.

- Over 53% of our surveyed Xiaomi users who have visited Mi Home stores pick “trying products to support purchase decision” as reasons to visit Mi Home Stores. About 48% come to Mi Home stores for after sales service.

Source: iResearch, User Survey conducted in July 2018, N=1135
Customers Favor Xiaomi’s Official Website and Mi Home Store Over Other Online and Offline Distribution Channels

**Xiaomi smartphone purchase channel breakdown**

Over half of customers bought Xiaomi smartphone online in the past one year

- **Online**: 59%
- **Offline**: 41%

**Online purchase channel breakdown**

- **Xiaomi official website**: 66.7%
- **Third-party online shop**: 20.5%
- **Telecom operator website**: 12.8%

**Offline purchase channel breakdown**

- **Mi Home store**: 75.4%
- **Appliance Mall**: 16.1%
- **Telecom operator store**: 8.2%

Source: iResearch, User Survey conducted in July 2018, N=972
Major Components and Materials of Xiaomi Smartphone

In our calculation, the costs of such six major components account for over 50% of a Xiaomi smartphone’s selling price.

<table>
<thead>
<tr>
<th>Component</th>
<th>Units</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snapdragon 845</td>
<td>Unit</td>
<td>RMB326</td>
</tr>
<tr>
<td>Snapdragon 835</td>
<td>Unit</td>
<td>RMB326</td>
</tr>
<tr>
<td>Snapdragon 660</td>
<td>Unit</td>
<td>RMB326</td>
</tr>
<tr>
<td>Surge S1</td>
<td>Unit</td>
<td>RMB326</td>
</tr>
<tr>
<td>Screen</td>
<td>Unit</td>
<td>RMB80</td>
</tr>
<tr>
<td>CPU</td>
<td>Unit</td>
<td>RMB80</td>
</tr>
<tr>
<td>Single Camera Module</td>
<td>Unit</td>
<td>RMB25</td>
</tr>
<tr>
<td>Dual Camera Module</td>
<td>Unit</td>
<td>RMB86</td>
</tr>
<tr>
<td>DRAM &amp; NAND</td>
<td>GB</td>
<td>RMB43.7</td>
</tr>
<tr>
<td>Mobile DRAM</td>
<td>GB</td>
<td>RMB83.3</td>
</tr>
<tr>
<td>Mobile NAND</td>
<td>GB</td>
<td>RMB83.3</td>
</tr>
<tr>
<td>HD(LCD)</td>
<td>Unit</td>
<td>RMB80</td>
</tr>
<tr>
<td>QHD(LCD)</td>
<td>Unit</td>
<td>RMB80</td>
</tr>
<tr>
<td>HD(OLED)</td>
<td>Unit</td>
<td>RMB80</td>
</tr>
<tr>
<td>QHD(OLED)</td>
<td>Unit</td>
<td>RMB80</td>
</tr>
<tr>
<td>SURFONDA</td>
<td>Unit</td>
<td>RMB80</td>
</tr>
<tr>
<td>Mobile Phone Battery</td>
<td>Unit</td>
<td>RMB1642</td>
</tr>
<tr>
<td>Fingerprint Module</td>
<td>Unit</td>
<td>RMB25.2</td>
</tr>
<tr>
<td>Lithium-ion Battery</td>
<td>Unit</td>
<td>RMB3.3</td>
</tr>
<tr>
<td>Mobile DRAM</td>
<td>GB</td>
<td>RMB43.7</td>
</tr>
<tr>
<td>Mobile NAND</td>
<td>GB</td>
<td>RMB83.3</td>
</tr>
</tbody>
</table>

Sources: IHS, Xiaomi Official Website, Xiaomi Prospectus, Q tech Annual Report, O-film Annual Report
# Xiaomi’s Key Ecosystem Partners in IoT/Lifestyle

<table>
<thead>
<tr>
<th>Ecosystem partner</th>
<th>Huami (HMI)</th>
<th>Zhimi</th>
<th>Qingmi (839032.OC)</th>
<th>Roborock</th>
<th>Segway-Ninebot</th>
<th>90fun</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product category</strong></td>
<td>Smart Wearable</td>
<td>Air Purifier</td>
<td>Power Strip</td>
<td>Robotic Vacuum Cleaner</td>
<td>Electric Scooter</td>
<td>Suitcase/lifestyle</td>
</tr>
<tr>
<td><strong>Key Xiaomi Product</strong></td>
<td>Mi Band Series</td>
<td>Smart Mi Series</td>
<td>Mi Power Strip</td>
<td>Mi Robotic Vacuum Cleaner</td>
<td>Mi Electric Scooter</td>
<td>90 suitcase</td>
</tr>
</tbody>
</table>
| **Key Metrics** | • Xiaomi wearable sales reached $306 mln in 2017.  
• No.1 smart wearable company in China by shipment in 2017. | • No.1 air purifier globally by shipment | • Total sales was 263.6 mln in 2017, up 88%  
• Over 70% of sales came from Xiaomi | • First product launched in September 2016.  
• Secured 10% market share in robotic Vacuum in 2017 | • Shipped the most scooters globally in 2017 | • Total sales reached RMB507, up 120% in 2017 |
Deep Dive Reports:
• How Does Online Education Shape the Future of K12? -- Initiation Coverage on TAL and EDU
• Bright Future of New Retail in China --Initiation Coverage on BABA, JD and VIPS
• Xiaomi, the World’s Largest Smart Hardware Company with A Built-in IoT Platform
• Deep Dive on Meituan

Data Tracking:
• BABA; JD; VIPS; PDD: GMV tracking
• TAL; EDU: Enrollment tracking
• BIDU; WB; IQ; 0700.HK: Web search queries, online ads tracking and online video tracking
• 1810.HK: Online sales tracking and offline stores tracking

Survey and interviews:
• BIDU; WB; 0700.HK: Advertising agency interviews
• 0700.HK; BABA (Ant Financial): Merchant service provider interviews
• BABA; JD; PDD: Merchant interviews
• 0700.HK; NTES: Gamer surveys
• TAL; EDU: Parent and student survey
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