

May 16, 2019

## Terms of Service

By viewing this material you agree to the following Terms of Service. You agree that use of J Capital Research USA LLC's research is at your own risk. In no event will you hold J Capital Research USA LLC or any affiliated party liable for any direct or indirect trading losses caused by any information on this site. You further agree to do your own research and due diligence before making any investment decision with respect to securities covered herein. You represent to J Capital Research USA LLC that you have sufficient investment sophistication to critically assess the information, analysis and opinion on this site. You further agree that you will not communicate the contents of this report to any other person unless that person has agreed to be bound by these same terms of service. If you download or receive the contents of this report as an agent for any other person, you are binding your principal to these same Terms of Service. You should assume that as of the publication date of our reports and research, J Capital Research USA LLC may benefit from short positions a client has in all stocks (and/or options, swaps, and other derivatives related to the stock) and bonds covered herein, and therefore stands to realize significant gains in the event that the price of either declines. This is not an offer to sell or a solicitation of an offer to buy any security, nor shall J Capital Research offer, sell or buy any security to or from any person through this site or reports on this site. J Capital Research USA LLC is registered as an investment advisor with the SEC. If you are in the United Kingdom, you confirm that you are accessing research and materials as or on behalf of: (a) an investment professional falling within Article 19 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "FPO"); or (b) high net worth entity falling within Article 49 of the FPO. Our research and reports express our opinions, which we have based upon generally available information, field research, inferences and deductions through our due diligence and analytical process. To the best of our ability and belief, all information contained herein is accurate and reliable, and has been obtained from public sources we believe to be accurate and reliable, and who are not insiders or connected persons of the stock covered herein or who may otherwise owe any fiduciary duty or duty of confidentiality to the issuer. However, such information is presented "as is," without warranty of any kind, whether express or implied. J Capital Research USA LLC makes no representation, express or implied, as to the accuracy, timeliness, or completeness of any such information or with regard to the results to be obtained from its use. Further, any report on this site contains a very large measure of analysis and opinion. All expressions of opinion are subject to change without notice, and J Capital Research USA LLC does not undertake to update or supplement any reports or any of the information, analysis and opinion contained in them. You agree that the information on this website is copyrighted, and you therefore agree not to distribute this information (whether the downloaded file, copies / images / reproductions, or the link to these files) in any manner other than by providing the following link: <https://www.jcapitalresearch.com/>. If you have obtained the research of J Capital Research USA LLC in any manner other than by downloading from that link, you may not read such research without going to that link and agreeing to the Terms of Service. You further agree that any dispute arising from your use of this report and / or the J Capital Research USA LLC website or viewing the material hereon shall be governed by the laws of the State of New York, without regard to any conflict of law provisions. You knowingly and independently agree to submit to the personal and exclusive jurisdiction of the superior courts located within the State of New York and waive your right to any other jurisdiction or applicable law. The failure of J Capital Research USA LLC to exercise or enforce any right or provision of these Terms of Service shall not constitute a waiver of this right or provision. If any provision of these Terms of Service is found by a court of competent jurisdiction to be invalid, the parties nevertheless agree that the court should endeavor to give effect to the parties' intentions as reflected in the provision and rule that the other provisions of these Terms of Service remain in full force and effect, in particular as to this governing law and jurisdiction provision. You agree that regardless of any statute or law to the contrary, any claim or cause of action arising out of or related to use of this website or the material herein must be filed within one (1) year after such claim or cause of action arose or be forever barred.

May 16, 2019  
A.O. Smith Corporation (AOS)

**Anne Stevenson-Yang**  
anne@jcapitalresearch.com

+1 860 391-6094

## A.O. Smith Corporation (AOS)

<b>Price</b>	<b>\$ 47.92</b>
52-week high	\$ 65.57
52-week low	\$ 40.34
Market cap (mln)	\$ 8,012.10
Forward P/E	17.77
<b>J Cap Target Price</b>	<b>\$ 22.68</b>
<b>Downside</b>	<b>-53%</b>



Source: Bloomberg May 15, 2019

## A.O. Smith Corporation (AOS)

# Hot Water

**Pleading the fifth on China operations:** Despite never appearing in the financial filings or being mentioned on conference calls, Jiangsu UTP Supply Chain is involved in almost every aspect of A.O. Smith's China business. The relationship is public knowledge in China. UTP's involvement spans the acquisition of raw materials, the hiring of labor, potentially co-owning factories, marketing, and most notably "accepting" inventory and financing AOS distributors. We estimate that UTP may be responsible for as much as 75% of AOS China sales.

**The UTP relationship has obscured China business performance and financial statements:** The UTP partnership has allowed AOS to inflate gross margins and mask the actual China revenue slowdown through distributor-financed channel stuffing. We also believe that the irreconcilable capex, R&D and asset inventory accounts are being used as cookie jars to preserve the "integrity" of the financial statements while hiding UTP's involvement. Our detailed distributor channel checks indicate China revenue will fall by as much as 21% in 2019 vs management's claims of a 6-8% decline.

**Is the cash really there?** We believe that A.O. Smith does not actually have access to \$539 mln that reportedly sits in China—about 84% of the company's total cash at yearend 2018. We have conducted dozens of interviews in China and believe that AOS may have used its cash for distributor loans to prop up sales. That would mean the money is in escrow and cannot be touched until loans are repaid. What's more, distributor loans are at risk in a weakening market. Chinese distributors of AOS products—financially imperiled companies--are being financed at 18% to take AOS inventory, and many are holding six months of inventory. These companies are at risk of default—and AOS could be on the hook.

**China headwinds are everywhere:** In Q1, AOS reported a 66% drop in Rest of World earnings due to China declines but said

May 16, 2019

A.O. Smith Corporation (AOS)

**Anne Stevenson-Yang**  
anne@jcapitalresearch.com

+1 860 391-6094

the drop is temporary. We disagree. During China's boom years, AOS benefited from selling a premium product at a mid to high price point through direct channels in Tier 1 cities. To offset numerous steel and rental price increases, AOS has continuously increased the price of its heaters, until the appliances reached a price point unobtainable for some of the original purchase base. The higher-priced product has been a particularly poor fit for Tier 2-4 cities, the next leg of AOS's China growth strategy, and the price-sensitive online channel continues to take share from the direct channel. AOS has recently launched new products at their original price points, but these "startups" are just ramping up and will carry much lower margins for the foreseeable future. Distributors believe the new product releases are just a way to discount old stock and force new inventory into the channels. These product/channel challenges are presently being compounded by a weakening Chinese economy and the U.S.-China trade spat's impact on selling an American-branded product in China.

### **Limited U.S. organic growth, fundamental challenges on the horizon:**

Concurrent with a booming Chinese economy, AOS U.S. sales were boosted by a series of acquisitions in the water-purification space. We believe that AOS's North American organic growth rate has averaged less than 5% over the last three years. Furthermore, this growth was underpinned by strong housing starts in recent years and, more importantly, a strong replacement cycle related to home sales prior to the financial crisis. We expect North American organic growth to shift down a gear, as housing starts have begun to show weakness, and the replacement cycle weakens over an extended period as it laps the financial crisis.

### **Accounting anomalies, sham acquisition and poor governance:**

Beyond the UTP-contrived Chinese financial statements, we highlight financial irregularities in other regions as well. Most notably, a rare "unfavorable" mark was given to AOS's Indian operations by their local auditor. AOS is claiming in China a capital spend of twice the amount reported in the U.S., and a government official told us that AOS is investing in UTP's new factory. Our research has also uncovered the undisclosed fact that AOS

**May 16, 2019**

A.O. Smith Corporation (AOS)

was fleeced of \$50 mln as a result of a 2010 acquisition in China. In addition to the potential concerns raised by the recent timely exit of AOS's long time CFO, it's worth noting that AOS's ISS governance score is a 10, the worst possible score.

**Crisis in Management Confidence Poises Stock for Significant Downside:** We're challenged to understand how investors with an appreciation for the breadth of Chinese operational and financial obfuscation can get comfortable investing with a management team that was either this in the dark or complicit. We anticipate the multiple of the stock to re-rate materially in the near term as a result of a crisis in confidence and expect that 2019 revenues will eventually disappoint based on below-expectation results for China and U.S. water heaters. We are short AOS and value the company at \$22.68, a discount of 53% to the current share price, based on a 1.2x multiple of our estimated 2019 sales and an assessment that steady-state growth will be around 2%.

# Table of Contents

<b>The Incompetence of A.O. Smith</b>	<b>8</b>
<b>The UTP relationship</b>	<b>8</b>
<b>Chart 1. AO. Smith China Operations and Undisclosed Supply Chain Partner UTP</b>	<b>11</b>
<b>Table 1. Guidance vs Performance (mln USD)</b>	<b>12</b>
<b>Chart 2. UTP and AOS relationship</b>	<b>12</b>
UTP cooperative joint venture?	13
<b>Table 2. Reported China Capex (mln USD)</b>	<b>16</b>
<b>Table 3. Long-Lived Assets (mln USD)</b>	<b>16</b>
Employment	17
Distributor credit	17
<b>Table 4. AOS Water Heater Notes and Accounts Receivable</b>	<b>19</b>
<b>Table 5. UTP Financial Statements RMB</b>	<b>19</b>
<b>The hidden decline in China</b>	<b>21</b>
<b>Q1 2019</b>	<b>21</b>
<b>Chart 3. AOS Rest of World Revenue and Operating Income Q1, USD mln</b>	<b>22</b>
<b>Chart 4. China Revenue Q1 (adjusted for inventory build) USD mln</b>	<b>23</b>
2019 to be down 16-21% in China	24
<b>Table 6. AOS China Distributor Sales and Inventory Survey</b>	<b>24</b>
<b>Table 7. ERP Spending (mln USD)</b>	<b>27</b>
How UTP helped the optics in 2018	27
The UTP effect	28
<b>Paying up for the price premium</b>	<b>28</b>
<b>Table 8. A. O. Smith (China) Water Heater Co., Ltd. China</b>	<b>28</b>
<b>Compromised cash</b>	<b>28</b>
<b>Table 9. AOS (China) Water Heater</b>	<b>29</b>
<b>Margin decline</b>	<b>31</b>

# Table of Contents

Chart 5. AOS China Revenue 2009-2018	31
Chart 6. AOS Share Price	31
Table 10. AOS Profit Margins: U.S., International, and China	32
Table 11. Value Chain Margins for High-Volume Products	32
Table 12. Midea (000333) and Qingdao Haier (600690) vs AOS China 2017 (RMB ,000)	33
<b>Water treatment</b>	<b>33</b>
Table 13. Retail Outlets	34
<b>The new China plant</b>	<b>34</b>
Non-AOS branded products	35
Owned or leased?	36
<b>China capex</b>	<b>38</b>
Table 14. China Capex: Planned and Actual (mln USD)	38
<b>Retail: eating up excess inventory?</b>	<b>38</b>
Table 15. AOS China Retail Sales (RMB mln, unless stated)	40
Why all the retail outlets?	41
<b>Challenges in China</b>	<b>43</b>
Channel Mix / Product Strategy	43
Chart 7. Market Share of Leading Brands	43
Chart 8. Total Market Share Gain/Loss in 2018	44
Chart 9. Online Share Gain/Loss for Top Water Heater Brands	44
<b>The battle moves online</b>	<b>45</b>
Chart 10. AOS China Online Sales (mln USD)	45
Giving up on direct sales	46
The Chanitex brand and AOS China Environmental Products	48
Table 16. Chanitex Sales Prices and Margins	48
Table 17. Return on Production Assets	49
Table 18. Revenue for Water Treatment	49

# Table of Contents

Chart 11. Sales of New Residential Real Estate 2008-18 (mln sqm and YoY)	50
Chart 12. Water Heaters Produced (mln units and YoY)	51
Chart 13. Leading Brands of Water Heaters and Prices in RMB	51
<b>Trade War Implications</b>	<b>52</b>
<b>Fundamental US Challenges</b>	<b>52</b>
Table 19. AOS Organic Growth	52
Chart 14. Historical Housing Starts in the U.S. (,000)	53
Table 20. Starts vs. Market Expectations 2019	53
<b>Accounting and Governance Concerns</b>	<b>53</b>
Table 21. Cash and Repatriation	54
China Sham Acquisition	54
Table 22. Tianlong Acquisition Accounting (mln USD)	55
<b>Rest of World Issues</b>	<b>57</b>
Chart 15. Revenue Growth by Region	57
Table 23. Non-China Foreign Operations	58
India	59
Table 24. Total Capex reported by AOS of \$35 mln (Change in Fixed Assets)	60
Indian distribution	62
Table 25. Reported Revenue and Losses in the AOS India Business	62
<b>Governance Issues</b>	<b>62</b>
FASB and SEC Reporting Violations	62
ISS Governance Issues	63
<b>Valuation</b>	<b>66</b>
<b>Questions for management</b>	<b>66</b>

May 16, 2019

Investors should ask management why they have not disclosed their relationship with UTP despite its deep entanglement with all aspects of the business in China.

**The Incompetence of A.O. Smith**

It turns out that China is not the miracle market that AOS, a manufacturer of water heaters, boilers, and water-purification equipment, makes it out to be. Our extensive interviews in China show that AOS is hiding its slipping foothold in its biggest foreign market behind an undisclosed channel partner. That partner, called Jiangsu UTP Supply Chain, helps AOS post targeted sales volumes by using liberal credit for distributors and high levels of inventory. UTP finances AOS distributors and builds inventory, apparently to meet AOS sales targets and hide deteriorating AOS margins. Our interviewees told us that UTP even manages manufacturing processes at AOS, hires and pays AOS staff, procures raw materials, and cooperates in R&D. Local government officials in AOS China’s headquarters city of Nanjing told us that UTP and AOS are cooperating in building a new plant.

We believe that AOS underwrites UTP’s loans to distributors. Our interviews, credit reports on UTP and AOS China, and other evidence all suggest that the cash the company has in China is being held as security against bad loans to UTP clients. That would mean that a significant portion of AOS’s cash is stuck in China and at risk of being tapped to cover defaults. Yet AOS has disclosed nothing about the cash and never explained why a region accounting for 34% of company revenue needs to hold 84% of company cash.

**The UTP relationship**

The AOS relationship with UTP is widely known in the industry, and UTP talks about it openly.

From the UTP website: “Shanghai Hongjing Cold and Warm Equipment Company [a subsidiary of UTP] is master distributor for A.O. Smith in the Shanghai region.”





May 16, 2019

“Shenzhen Hongjing Cold and Warm Equipment Co. Ltd. [a UTP subsidiary] is master distributor for A.O. Smith in Shenzhen.”



Annotated screenshots from UTP’s website, utpscm.com

In an article posted in Today’s Headlines (Jinri Toutiao) on November 19, 2018, the founder of UTP, Bai Yuanlong, was quoted as saying that, at a difficult time in his life, he met a person “who gave me enlightenment and help with rich life experience and wisdom when I was in a dilemma. He is the senior vice president of A.O. Smith, the president of China, Ding Wei.” Ding Wei<sup>1</sup> responded in kind, heaping praise on Bai.<sup>2</sup>

A competitor confirmed the relationship and described UTP as a “tun-huoshang” (吞货商), which translates as “stockpiler.” We believe AOS has been using the UTP relationship since 2015 to achieve growth in an increasingly difficult market by pushing out more credit and incentive payments to distributors.

Our interviews with UTP staff and with 19 AOS distributors described deep financial entanglements between the company and AOS, which appears to be UTP’s largest client and whose relationship is described by UTP staff as “more intimate” than the relationship with other clients.

- ▶ UTP purchases AOS product at a discount of 10-15% and sells to AOS distributors, including some of its own subsidiaries. UTP does

<sup>1</sup> Note that J Capital uses the Chinese format for names, putting the surname first. Company disclosures identify Ding as “Wei Ding.”

<sup>2</sup> “A Jiangsu Private Company’s Innovation Story,” KKNews, November 19, 2018: <https://kknews.cc/finance/r3vr4zr.html>. This Chinese-language article also talks about Ding and Bai’s relationship: “Private Jiangsu Corporation’s Innovation Story: UTP’s Second Generations Supply-Chain Dream,” Nanjing Morning News and Jinri Toutiao, November 19, 2018: <http://www.yuanshihui.cn/detail/aaaf3d0e0cfdeae17234c823>.

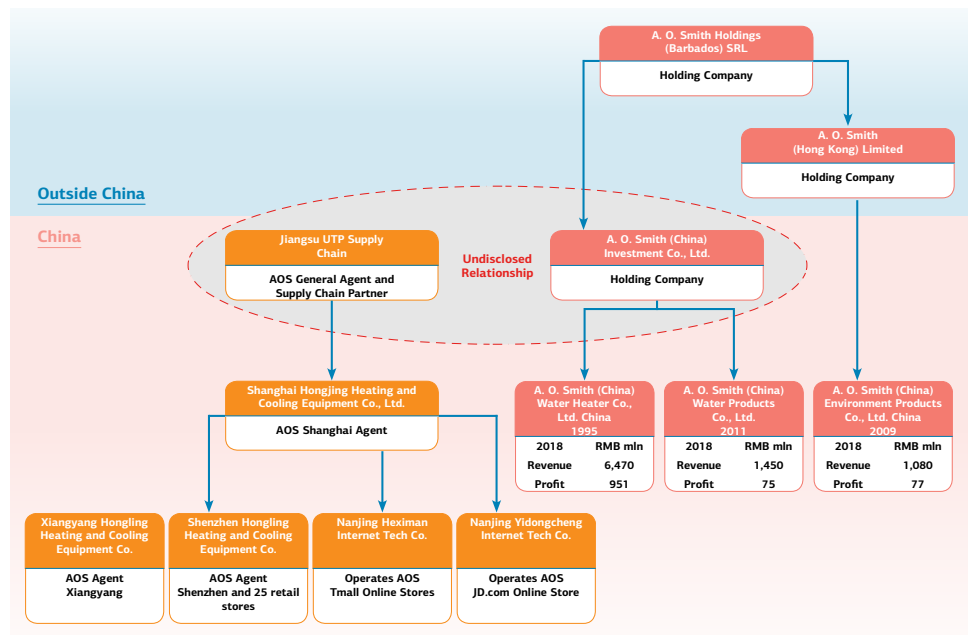
May 16, 2019

not pay up front but pays AOS after the Tier 2 distributors pay UTP. Although the distributors pay before taking inventory, UTP remits the payments to AOS in arrears once a quarter. This practice could obviate the need to report UTP as a material customer, since UTP could be construed as a service partner simply warehousing inventory for the distributors. We estimate that about 75% of AOS product in China goes through UTP.

- ▶ Distributors take about 10 days of inventory at a time and usually pay UTP rather than AOS. Since UTP settles with AOS once per quarter, UTP receives a significant float from AOS apart from the financing that we believe AOS provides.
- ▶ UTP is obliged to take any inventory requested by AOS and cannot return goods, according to interviews. If the company is unable to sell the products on to distributors, it holds the inventory for the following quarter.
- ▶ UTP executives and distributors told us that UTP extends working capital to AOS distributors at 18% annualized. The loans generally have six-month terms but are repaid as distributors sell inventory then re-extended when they take on more—usually on a cycle of between 10 days and six weeks.
- ▶ UTP is the exclusive distributor for Shanghai and Shenzhen, the two biggest markets for AOS, as well as for four cities in Hebei Province.
- ▶ We believe that AOS lends money to UTP at 2%, allowing UTP a 16-point spread on loans.
- ▶ UTP is building a large factory to make environmental products in Nanjing. Zone officials in Nanjing told us that this factory is being built in cooperation with AOS. There is indirect evidence from financial statements that AOS may have helped pay for this factory.
- ▶ We believe that UTP cooperates with AOS in water filtration R&D and manufacturing. UTP subsidiaries sell AOS water filtration equipment.
- ▶ UTP employs some of the AOS production workers to lower costs by paying lower benefits and decreasing fixed pay and increasing variable pay to improve efficiency.

- ▶ UTP manages warehousing for AOS.
- ▶ UTP and AOS operate on adjoining parcels of land in Nanjing.
- ▶ UTP procures raw materials, including steel, for AOS.
- ▶ Through joint ventures, UTP operates online stores for AOS on Tmall, JD.com, and Vipshop, the largest online channels.

**Chart 1. AO. Smith China Operations and Undisclosed Supply Chain Partner UTP**



Source: SAIC, Finance Bureau, Company Reports, UTP website, Tmall and JD.com

Our interviewees say that AOS embarked on the relationship with UTP in late 2014, and UTP became the AOS supply-chain partner in 2015, a historically poor year for China’s housing market. Qingdao Haier, which had an 18% share of the water heater market, reported an 8% sales decline in 2015 and a 19% drop in profit. But AOS reported 14% growth, with accelerating momentum. On the Q4 2014 call, CEO Ajita Rajendra said:

One final comment on China. The recent declines in the China stock market and value of the yuan are unprecedented. And we acknowledge the concerns of the investment community surrounding our China business. While it is not our practice to discuss monthly results, recent trends might add some perspective given that the latest macro events in China materialized in mid-December. In local currency, the average of our daily shipments in January increased over

May 16, 2019

15% year-over-year. (Q4 2014 call, Bloomberg transcript page 5)

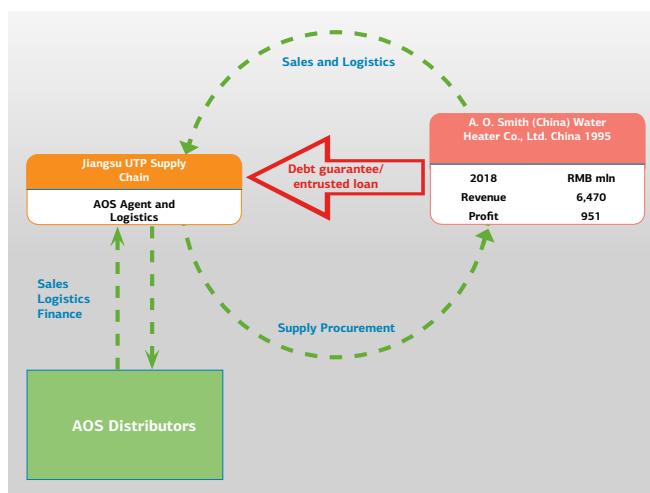
Since 2014, AOS guidance for China has become markedly less accurate.

**Table 1. Guidance vs Performance (mln USD)**

	2014		2015		2016		2017		2018	
	Guidance	Reality	Guidance	Reality	Guidance	Reality	Guidance	Reality	Guidance	Reality
<b>Revenue</b>										
China	\$ 665.80	\$ 691.80		\$ 787.10	\$ 905.17	\$ 887.10	\$ 1,040.94	\$ 1,034.90	\$ 1,169.44	\$ 1,071.20
India	\$ 20.00	\$ 15.10	20-25	\$ 15.90	\$ 20.00	\$ 18.20	\$ 23.66	\$ 26.20		\$ 32.75
<b>Total</b>	<b>\$ 2,500.00</b>	<b>\$ 2,356.00</b>	<b>\$ 2,638.72</b>	<b>\$ 2,536.50</b>	<b>\$ 2,615.00</b>	<b>\$ 2,537.00</b>	<b>\$ 2,995.00</b>	<b>\$ 2,996.70</b>	<b>\$ 3,206.00</b>	<b>\$ 3,187.90</b>
<b>Profit</b>										
<b>China</b>										
India	\$ (5.00)	\$ (7.50)			(-8-9)	\$ (10.00)	\$ (8.00)	\$ (7.50)	\$ (5.00)	
<b>Total</b>		\$ 207.80		\$ 282.90		\$ 326.50		\$ 296.50		\$ 444.20
<b>Capex</b>										
China	75-80	\$ 40.00	\$ 30.00	\$ 19.00	\$ 40.00	\$ 13.00	\$ 40.00	\$ 24.00	\$ 30.00	\$ 13.00
<b>India</b>										
<b>Total</b>		\$ 86.10		\$ 72.70	120-130	\$ 80.70	90-100	\$ 94.20		\$ 85.20

In 2015, the first year of working with UTP, the company gave no guidance on China revenue. In 2016-18, China revenue has under-performed guidance by an average of 4%. For the company's revenue overall, results have averaged 2.7% lower than guidance.

**Chart 2. AO. Smith China Operations and Undisclosed Supply Chain Partner UTP**



Source: J Capital interviews with distributors and UTP staff, UTP website

May 16, 2019



This photograph shows warehouse space owned by UTP and dedicated to AOS. Photo by J Capital March 2019.



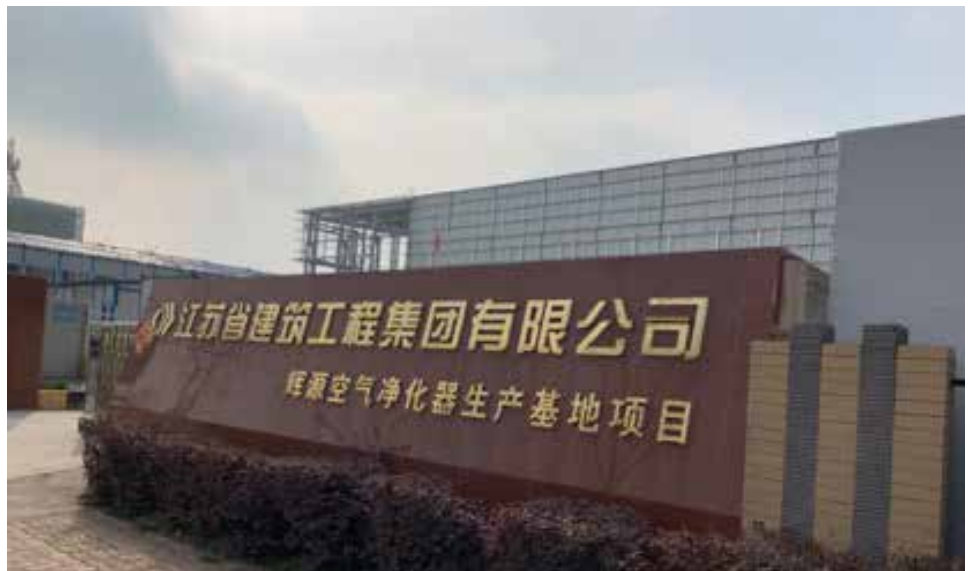
This photo shows the UTP warehouse in Nanjing's Lishui zone, near the new AOS factory, that UTP and AOS logistics staff said is the main warehousing facility for AOS product sales nationwide. Photo by J Capital March 2019.

### UTP cooperative joint venture?

In the same development zone where AOS has built its new environmental products factory, UTP's subsidiary Jiangsu Senyuan Electric Co. Limited is building a large factory to manufacture air-purification equipment for the consumer market. Senyuan was founded in November 2016 and has no staff or headquarters, according to our checks.

An official of the Nanjing High-Tech Development Zone, which has jurisdiction over both the AOS and UTP facilities, told us in a phone interview that AOS is "cooperating" on construction of the UTP facility. He said the new UTP factory would produce the AOS Chanitex brand and some AOS-branded air-purification products.

May 16, 2019





May 16, 2019



UTP environmental equipment base. Photos by J Capital March 2019.

On September 14, 2016, when the project was announced, China Energy Net reported that “The UTP air purifier production base project relies on the scientific research and industry strength of Jiangsu UTP and A.O. Smith to create an environmental protection industry technology research and development platform and achievements.”<sup>3</sup>

We note that UTP has no consumer products at all, and the company emphasizes that it has no own-branded products planned. Construction of such an enormous factory would be unlikely to be done to accommodate a new product line.

We believe that certain clues from AOS financial statements support the comments of the Nanjing government official. One is that, in 2017, financial records indicate that AOS China may have paid out a dividend worth ¥409 mln (\$60 mln), but AOS the parent shows no receipt of any such dividend.

In China, the company has publicly announced that it is investing \$150 mln in its new factory, while U.S. investors have been told that the cost is \$65 mln.<sup>4</sup> Meanwhile, the Chinese financial statements show increases in fixed assets well out of proportion to reported capital expenditures in

<sup>3</sup> <http://www.china-nengyuan.com/news/98708.html>

<sup>4</sup> See the AOS Chinese website: <http://www.aosmithcepc.cn/about/>

China. In fact, the value of long-lived assets in China—which specifically exclude cash--rose by \$106.8 mln from 2015-2017, while reported China "capacity expansion" capex for those years was cumulatively \$50 mln.

In 2018, the trend reversed, with capex of \$13 mln for China but just \$1.8 mln in growth of long-lived assets.

### Table 2. Reported China Capex (mln USD)

2018	\$ 13
2017	\$ 24
2016	\$ 13
2015	\$ 19
2014	\$ 40
2013	\$ 45

Source: Company disclosures

### Table 3. Long-Lived Assets (mln USD)

Long-lived Assets	2012	2013	2014	2015	2016	2017	2018
United States	219.1	238.6	285.4	297.8	292.4	303	327.3
China	99.6	134.9	144	157.3	184.3	250.8	252.6
Change		35.3	9.1	13.3	27	66.5	1.8
Canada	20.4	4.7	3.5	2.7	3.1	3.2	3.1
Other Foreign	35.9	46.4	58.3	55.2	48.4	47.1	42.9
<b>Total</b>	<b>375</b>	<b>424.6</b>	<b>491.2</b>	<b>513</b>	<b>528.2</b>	<b>604.1</b>	<b>625.9</b>
<b>Non-China Foreign Long Lived Assets</b>	<b>56.3</b>	<b>51.1</b>	<b>61.8</b>	<b>57.9</b>	<b>51.5</b>	<b>50.3</b>	<b>46</b>

Source: Company disclosures

The subsidiary that makes water and air filtration equipment, A.O. Smith (China) Environmental Products Co. Ltd., unlike the other three operating companies in China, is owned by a Hong Kong subsidiary. According to Hong Kong corporate records, the directors are former CFO John Kita, Senior Vice President Wilfridus Brouwer, Executive Vice President James Stern, and a Hong Kong resident named Michael Wong (黄恂武), whose name does not appear in A.O. Smith documents. If AOS is sharing rights to the environmental products business, we theorize it might be through this company.



May 16, 2019

**Employment**

UTP says that it employs workers on A.O. Smith’s behalf in order to better manage costs. Below is a job ad by UTP for AO Smith warehouse workers.

AO Smith jobs for warehouse managers and forklift drivers

UTP Supply Chain Management Co. Nanjing Site

Job Title	Salary Range	Location	Experience	Education	Date
AO史密斯搬运工	¥4500-5000	江苏-南京	不限经验	不限学历	2018-09-28
AO史密斯搬运工	¥5000-6000	江苏-南京	不限经验	不限学历	2018-11-16
高薪急招叉车工	¥4000-6000	江苏-南京	不限经验	不限学历	2018-11-16
铲车/叉车工	¥4000-6000	江苏-南京	不限经验	不限学历	2018-11-16

The Tianyuan human resources website: [http://nj.ah58.net/wap/c\\_company-a\\_show-id\\_13556.html](http://nj.ah58.net/wap/c_company-a_show-id_13556.html)

**Distributor credit**

UTP told us that it provides credit to AOS distributors at up to 18% annualized. In order to provide those loans, UTP, which is cash-poor, needs to borrow.

Via Chinese attorneys, we obtained financial statements that had been submitted to China’s tax bureau by UTP and AOS China. UTP has ¥1.43 bln in short-term debt. Chinese banks typically lend based on fixed-asset collateral, but UTP has just ¥147 mln in fixed assets, making up only 10% of the short-term debt. Current liabilities exceed current assets. A lender would be discouraged by UTP’s financials alone: UTP’s after-tax profit is insufficient to pay the interest on debt—even though that rate is artificially low. Based on our understanding of Chinese lending practices, we believe no bank would lend to UTP without extra guarantees or collateral.

So where does UTP get its loans? We think it’s from AOS. AOS may be providing an entrusted loan, meaning that AOS would extend the loan to UTP, or AOS may guarantee the loan by depositing cash in escrow. If AOS is providing distributor financing, AOS should make such a disclosure and report some of its China-located cash as restricted.

May 16, 2019

Here is the evidence:

- ▶ From a credit report we obtained from the People's Bank of China Credit Reference Center, we know that AOS, through A.O. (China) Water Heater, has provided a third-party guarantee in the value of ¥2.1 bln. A.O. Smith (China) Water Heater has net tangible fixed assets in the PRC of only ¥400 mln (\$59 mln), an amount insufficient for the size of the guarantee, and we estimate net tangible fixed assets for AOS operating subsidiaries in China to be only ¥1.2 bln (\$178 mln). A.O. Smith (China) Water Heater subsidiary does, however, have cash balances that would cover the guarantee. A bank would require AOS to deposit that cash to secure the guarantee.
- ▶ UTP and AOS use the same banks and branches in Nanjing—the Bank of China Nanjing Branch, Huaxia Bank, and Everbright Bank. Everbright and Huaxia are relatively small banks, and the overlap of all three banking relationships is unusual. These banking relationships would facilitate an entrusted loan.
- ▶ UTP financial statements show that the company is paying just 2% interest on its large loans. This is far below market rates, while, as we outlined above, a Chinese bank is unlikely to extend a loan to UTP at any rate.
- ▶ AOS earns well below market rates for its cash deposits, and UTP pays well below market rates for its loans. Those facts suggest that AOS is providing an entrusted loan to UTP at under 2% a year. To give an idea of this discount, China's average corporate lending rate in Q2 2018 was 5.97%. Private companies inevitably pay more—when they can get bank loans at all.

If AOS has provided credit to UTP at the rate visible on UTP's books—2%-UTP could make a 16% spread on the lending. UTP executives say the company provides financing to AOS distributors to purchase inventory, and distributors confirm this. Of the 19 AOS distributors we interviewed, 65% purchased and borrowed from UTP. An executive of one of the AOS large distributors in northern China said his company can borrow tens of millions of Renminbi from UTP at one time.

We view these loans as extremely risky. Chinese distributors of consumer appliances tend to be small, thinly capitalized private companies with thin margins. When industries see downturns, as happened with steel trading in 2009-10, construction machinery in 2012-13, and many other industries,

May 16, 2019

the distributors frequently default. Defaults among steel traders nearly sank a number of banks and reached 40% in some regions. We think that defaults are a significant risk for AOS distributors.

AOS does not admit there is any problem with its cash. On the Q3 2015 call, CFO Kita said: “You know a lot of the independents and the distributors that we have we get our cash up front. So really there isn't a whole bunch of AR type risk that we run in China.”

But even if the cash on account were not compromised, that is demonstrably false. In 2016, AOS's Chinese subsidiaries, with revenue of ¥6.76 bln, had receivables of ¥2 bln, or 30% of gross revenue. In 2018, receivables were ¥1.84 bln on ¥7.55 bln in revenue, or 24%. Why such large amounts of notes receivable if the company advocates a policy of advance payments?

**Table 4. AOS Water Heater Notes and Accounts Receivable**

	2018	2017	2016
<b>Notes receivable</b>	¥ 1,058,398,679	¥ 995,295,793	¥ 788,314,698
<b>Accounts receivable</b>	¥ 338,561,809	¥ 338,217,258	¥ 218,993,240

Source: China Finance Bureau

**Table 5. UTP Financial Statements RMB**

	2017	2016
<b>Balance Sheet</b>		
Cash	¥ 155,875,849	¥ 112,879,731
Accounts receivable	¥ 431,511,334	¥ 178,614,181
Other receivables	¥ 819,846,101	¥ 651,738,384
Total Current assets	¥ 1,590,290,480	¥ 1,416,863,258
Total fixed assets (net)	¥ 147,648,243	¥ 110,967,321
Total non-current assets	¥ 147,648,243	¥ 110,967,321
Total Assets	¥ 1,841,370,228	¥ 1,730,855,005
Short-Term Debt	¥ 1,429,408,751	¥ 923,649,261
Total current liabilities	¥ 1,747,315,238	¥ 1,648,266,331
Long-term debt	¥ 61,000,000	¥ 81,000,000
Long-term liabilities total	¥ 64,320,833	¥ 84,520,833
Total Liabilities	¥ 1,841,370,228	¥ 1,730,855,005
Total owners equity	¥ 94,054,990	¥ 82,588,675

May 16, 2019

	2017	2016
Total liabilities and owners' equity	¥ 1,841,370,228	¥ 1,730,855,005
<b>Income Statement</b>		
Business income	¥ 298,260,741	¥ 182,192,926
Finance Costs (Income)	¥ 32,026,485	¥ 15,031,073
Total Profit	¥ 15,296,244	¥ 15,108,694
<i>Minus: Income Tax</i>	¥ 3,829,928	¥ 3,855,511
<b>Net Profit</b>	¥ 11,466,315	¥ 11,253,183
<b>Working Capital Ratio</b>		
	0.91	0.86
<b>Interest on loans</b>		
	2.1%	1.5%

Source: China Finance Bureau

Accounts for A.O. Smith (China) Water Heater show "notes" receivable of ¥1.06 (\$158 mln), representing extended credit to customers. These notes receivable are triple the value of accounts receivable, which is highly unusual - normally trade receivables are much greater than notes receivable. But AOS does not quantifiably separate out these two asset sub-classes in its U.S. GAAP.

The few times that analysts have asked management about the cash, management has seemed to dodge the question. Here is an exchange from the Q4 2015 call:

### Ryan Connors

I wanted to ask two different questions about China. One has to do with your cash position there, Ajita, and there has been some talk lately about, in light of all the issues, China reinstating some of the capital controls, in particular clamping down on corporate profits leaving the country. How does that impact your view of your cash position there? Are there enough investment opportunities in China, given the environment, or should we look at that as kind of stranded cash?

### Ajita Rajendra

Why don't I give a general comment and then let John talk specifically about the cash. I was in China last week, and as you know, I go there very often. It's interesting that all of the talk that we hear about China in terms of the stock market and all of the things hap-

May 16, 2019

pening -- the people on the street, that is not even a topic of conversation. They are looking at different drivers and different things.

I met with customers, I met with obviously a lot of people in our workforce. I had dinner with the ex-dean of the business school at Nanjing University. The focus and discussion are on very different topics. So things like this, they are not really -- it's not a topic of conversation within China. Specifically on stranded cash, obviously that topic wouldn't come up, but we don't have too many concerns about that. John, maybe you want to address it directly.

**John Kita**

Ryan, it's clearly one of the things they are talking about is capital controls. We have in the past -- we took out about \$100 million out of China in 2014. We certainly have uses of cash in China. As we talked about, we're going to be adding the water treatment and air purification plant. We're looking at opportunities, always, to expand our product lines, as we did with air purification and water treatment both four or five years ago. So we will obviously continue to monitor the situation.

**The hidden decline in China**

We believe that AOS is hiding declining sales in China via its undisclosed relationship with UTP. AOS statements about sales in U.S. dollar versus Renminbi terms are confusing, perhaps intentionally so, as the company continually downplays poor sales results while trying to stay this side of market regulations on disclosure. AOS claimed sales improvement in China in 2018 in U.S. dollar terms and 3% decline in RMB terms, while our interviews indicate that sales booked by the Chinese companies fell by at least 5% and sales to end-users by at least 7%. Distributors are now carrying double the normal level of inventory. We believe AOS is able to report sales growth only because of help from UTP.

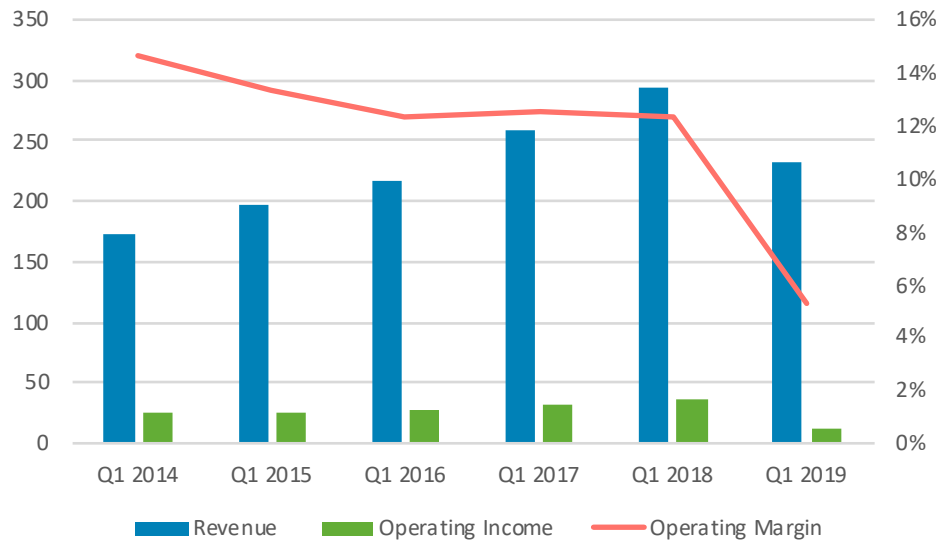
A.O. Smith (China) Water Heater, by far the largest and most profitable subsidiary in China, reported a gross sales decline of 8.62% in 2018 to Chinese authorities. From a different angle, given many inter-company transactions, we estimate that, on a consolidated basis, AOS income in China declined by 5% in 2018 even after packing channels with inventory.

**Q1 2019**

In 2019, the channel stuffing that has enabled AOS to report growth is no longer working. AOS reported a truly awful quarter in Q1 but once again

May 16, 2019

**Chart 3. AOS Rest of World Revenue and Operating Income Q1, USD mln**



Source: Company Reports

told investors not to worry, AOS is completely in control. The facts contradict their assurances.

AOS explained that the 18% fall in China sales in Q1 was due to a \$50 mln build-up of inventory in Q1 2018. In other words, the lower sales in Q1 reflected an exaggerated comparable. The company said inventory build in Q1 2019 amounted to \$25 million, and so Q2 2019 sales would fall by \$25 mln.

However, our distributor survey in Q1 2019 shows that the company is still carrying around two months of more inventory on average than normal. That translates to about \$140 mln in excess inventory still in the system. Meanwhile, news reports say that inventory is building in the water heater industry and sales are in decline.<sup>5</sup>

AOS has been very careful not to say that inventory is back to normal. They claim that they are not certain how much inventory is in the channel—disingenuously, as we know that distributors are required to report inventory levels to AOS.

Worse, AOS will launch more new products in China in 2019 than any

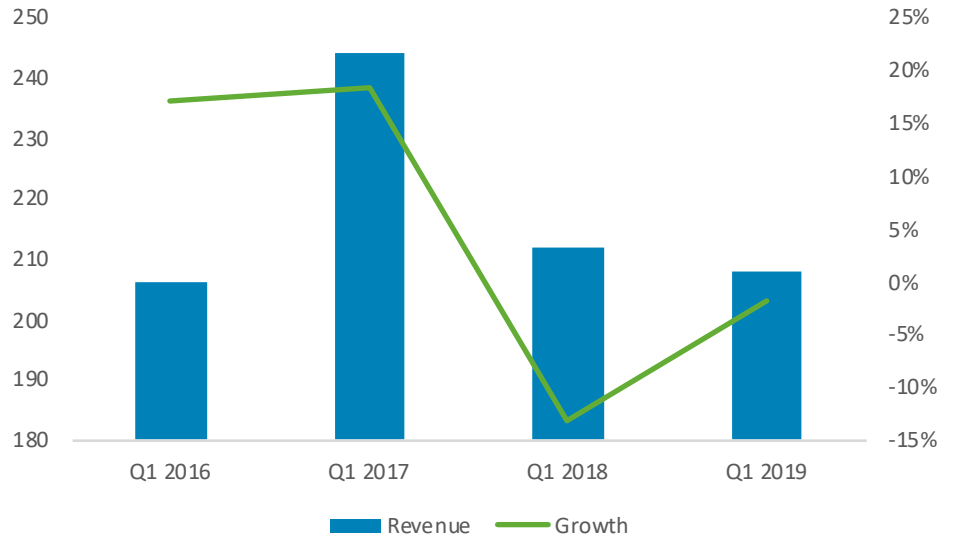
<sup>5</sup> “The Water Heater Industry Seeks New Ways to Grow,” Sohu, May 7, 2019: [https://www.sohu.com/a/312374689\\_118592?sec=wd](https://www.sohu.com/a/312374689_118592?sec=wd), “Analysis of China’s Water Heater Industry and Offline Market Share in 2019,” China Baogao, April 1, 2019: <http://market.chinabaogao.com/dianzi/04141033R019.html>

May 16, 2019

Sales levels in China are at the same level as 2016 now, and operating income has not been this low since 2012. Net margins have been compressed to 5% and will stay there or decline further.

other year. Distributors have pointed out to us that new products are used to force them to take on new inventory in order to stock the new models.

**Chart 4. China Revenue Q1 (adjusted for inventory build) USD mln**



Source: Company Reports

Sales levels are at the same level as 2016 now, and operating income from China has not been this low since 2012. Net margins have been compressed to 5%, down from 12% in recent years. The company claims high fixed costs, but we believe that the main reason is that sales growth is in lower-margin products. We are not expecting margins to return to 12%.

The company appears to be completely in denial. “We expect improved performance in China in the second quarter compared with the first quarter, but project lower China sales than in the same period in 2018 due to the second quarter 2018 inventory build,” Chuck Lauber, CFO-designate, said on the Q1 call.

“We see more of a positive sign with some of the government possible stimulus packages and some of the other things that could help consumer demand if the tariff issue gets resolved,” CEO Kevin Wheeler said.

“Our business model in China is solid for the long-term opportunity, and we continue to forecast low teen margins for the full year,” (Kevin Wheeler, Q1 2019 transcript).

May 16, 2019

Management claims the second half will be better. We think things are getting worse.

CFO John Kita<sup>6</sup> announced his retirement at age 63 in January, just two weeks before the company announced its preliminary results for 2018 and for Q4. When the audited results came out on February 16, his departure seemed fortuitous.

- ▶ The company projected China sales to decline by 7-10% in U.S. dollar terms in 2019.
- ▶ China saw declines in profitability, employees, and number of exclusive retail outlets.
- ▶ Long-lived China assets increased a mere \$1.8 mln despite \$13 mln in added capex, which, per the AOS definition excludes cash.
- ▶ The proportion of cash held in China rose from 72% to 84% of total company cash. This occurred even as AOS repatriated cash to repurchase stock and pay a dividend. Cash in the U.S. was left at \$1 mln, which suggests a need to borrow heavily between reports.

### 2019 to be down 16-21% in China

AOS is forecasting that sales in Renminbi will fall 6-8% in 2019—more than the 3-6% drop forecast in Q4 2018. Our estimates show much worse performance. We believe sales of water heaters—by far the biggest category—will fall by around 25%. AOS is losing market share in the growth markets of online and lower-tier cities. Our most conservative prediction for the overall sales decline is 16%, as the water purification products soften the fall. The sales decline could be as much as 21%, which would drag AOS top-line sales down 7% for the year.

**Table 6. AOS China Distributor Sales and Inventory Survey**

Distributor	Annual Sales mln RMB	2017 Growth	2018 growth (inc inventory build)	Inventory months	2018 Sales Growth RMB mln	Inventory build (RMB mln)	2018 Growth (inventory-adjusted)
South China	100	20%	6%	8	6	54	-48%
East China	150	20%	-30%	6	-45	56	-68%
East China	130	10%	10%	2.5	13	11	2%
South China	65	23%	3%	3	2	8	-10%

<sup>6</sup> See the company's news release issued January 14: <http://investor.aosmith.com/news-releases/news-release-details/o-smith-announces-retirement-john-j-kita-and-appointment-charles>



May 16, 2019

Distributor	Annual Sales mln RMB	2017 Growth	2018 growth (inc inventory build)	Inventory months	2018 Sales Growth RMB mln	Inventory build (RMB mln)	2018 Growth (inventory- adjusted)
East China	400	33%	6%	5.5	24	117	-23%
South China	230	32%	28%	0.5	64	-19	36%
North China	134	11%	5%	3	7	17	-8%
North China	200	15%	8%	4.5	16	50	-17%
Central China	84	20%	5%	5.5	4	28	-28%
Central China	37	30%	30%	7.5	11	20	-24%
West China	300	30%	20%	1.45	60	-1	20%
East China	230	30%	15%	1.5	35	0	15%
<b>Total</b>	<b>2,060</b>		<b>10%</b>		<b>196</b>	<b>340</b>	<b>-7%</b>

Source: J Capital

Removing excess inventory will reduce AOS water heater sales by around 17%. We believe the real estate market will turn down this year by around 7-8%, dragging down water heater sales. Therefore, we expect sales of water heaters to fall 25%.

AOS has around 30 top-tier distributors and many more sub-distributors. We interviewed 19 of them. We conducted an in-depth survey of 12 distributors, which account for approximately 30% of AOS China sales. Survey respondents indicated that growth halved from around 23% in 2017 to 10% in 2018. However, these sales figures include the inventory build at the distributors.

On average, distributors increased their inventory by two months, from 1.5 months to 3.5 months. The distributors say that 1.5 months is normal.

A.O. Smith has disclosed very little about normal levels of inventory in China, but on the Q2 2018 call, the company did disclose that “normal” inventories are as high as 85 days.<sup>7</sup>

Larry T. De Maria - William Blair & Co. LLC Okay. Thanks. Good morning, folks. Curious. I believe you guys said you want to reduce inventory by 30 days, I guess, by the end of the year, I think, is

<sup>7</sup> Seeking Alpha transcript, Q2 2018 page 28

May 16, 2019

what you said. Just curious, what is the normal level of inventory? Obviously, it's at least a month different than that. And would that be normalized? If you get it down 30 days, going into next year, if we have a similar rate of growth, call it, mid singles in local in China, would that be an adequate inventory reduction or would that require further inventory reduction next year?

Kevin J. Wheeler - A. O. Smith Corp. I would tell you that that is going to be a move in the right direction. If we're close to where we want to be, we'd probably like to drive it down just a little bit more over time. But, again, moving to 30 days would get us right into the level that we think is appropriate going forward.

Larry T. De Maria - William Blair & Co. LLC Okay. And you're moving it down to 30 days or you're moving it down by 30 days? I'm just trying to understand what's the normal level of inventory in the market?

Kevin J. Wheeler - A. O. Smith Corp. I'm sorry. Moving it down by 30 days.

Larry T. De Maria - William Blair & Co. LLC Down by 30. And what would that be then? That's like you end up with a quarter's worth of inventory? How big is the inventory normally?

John J. Kita - A. O. Smith Corp. That would be a little bit less than a quarter.

Kevin J. Wheeler - A. O. Smith Corp. Yeah, bit little less than a quarter.

Larry T. De Maria - William Blair & Co. LLC Little less than a quarter. That's great. Thank you.

John J. Kita - A. O. Smith Corp. And that's kind of what we run. Days kind of in the 70, 80, 85 range. (Bloomberg transcript Q2 2018, page 15)

We believe the discrepancy is due to the UTP relationship. UTP takes inventory on a quarterly basis and sells it to distributors (including its own subsidiaries). AOS may count UTP inventory as its "channel inventory."

AOS claims it does not know precisely how much inventory is in the chan-

nel. We are curious, then, where more than \$100 mln has gone that was spent on the company’s ERP. From conference calls, here is reported spending on the ERP, including incremental spending on a Chinese ERP. On the Q4 2013 call, CEO Rajendra said there would be about \$10 mln in incremental ERP capex for China (Seeking Alpha transcript page 8). But Kita had said that an acquired China ERP, called QAD, would be sufficient for some time: “But right now, China, when we sold EPC in 2011, we put QAD, a very good system, into China. And it can handle their growth for quite some time.” (Q4 2016 Bloomberg call transcript, page 6)

**Table 7. ERP Spending (mln USD)**

2013	2014	2015	2016	2017	2018
\$ 19.0	\$ 30.0	\$ 16.5	\$ 25.0	\$ 18.0	not reported

Source: Company Q4 conference calls

**How UTP helped the optics in 2018**

Excluding the inventory build, sales actually fell by 7% in 2018. AOS reported China sales growing at 4%. The Chinese filings of AOS operations show sales falling by at least 5% in 2018. Using that number and factoring in the inventory build at the distributors, it is possible that actual sales fell more than the 7% indicated in our survey.

A large Tier 1 city distributor, one of the top five distributors, said that sales fell sharply last year. The company said AOS adopted a sales strategy that would make AOS sales look like they were rising but would be bad for distributors. AOS stuffed channels, pushing UTP and, in turn, distributors, to take on more inventory than they needed, to hide the sales decline. Interviews indicate that this was achieved by providing higher rebates on sales volumes. UTP also reduced the interest rates it charges distributors for working-capital loans, and we believe that may have occurred at AOS’s direction, given that UTP is not able to return unsold inventory. Our interviews indicated that UTP does not undertake to pay for inventory it cannot sell but, in the case of unsold inventory, would plan to hold it for future sale.

We sent an investigator to attend a distributor conference in Nanjing. The meeting was open to those who professed interest in becoming AOS distributors. At that meeting, distributors complained about the sales targets and product cycle. The company gave them some relief by increasing the length of time during which the distributors meet their minimum purchases and by calculating sales rebates quarterly instead of monthly. Distribu-

May 16, 2019

tors found these measures to be weak and continue to complain about high sales targets.

**The UTP effect**

By extending credit to distributors and inducing UTP to take on extra inventory, AOS was able to report sales growth in 2018. We believe that the cost to AOS for this visible boost to sales is a wobbly balance sheet and compromised cash.

**Paying up for the price premium**

One anomaly in the Chinese accounts is the line called “other income.” This mysterious line is holding up the net profit of A.O. Smith (China) Water Products. Other income in 2018 was \$39.7 mln.

**Table 8. A. O. Smith (China) Water Heater Co., Ltd. China**

	2018	2017	2016
<b>Other income</b>	¥ 266,397,347	¥ 49,853,011	¥ 24,915,458
<b>Net Profit</b>	¥ 830,459,313	¥932,278,179	¥663,554,810
<b>Other income in USD</b>	\$ 38,165,809	\$ 7,235,560	\$ 3,589,038
<b>Net Profit in USD</b>	\$ 118,976,979	\$ 135,308,879	\$ 95,584,162
<b>Other income as a % of net profit</b>	32%	5%	4%
<b>Exchange rate</b>	6.98	6.89	6.9421

Source: Finance Bureau, People’s Bank of China Credit Reference Center

**Compromised cash**

For many years, AOS accounts have contained a striking anomaly: a huge proportion of the company’s cash balances are kept in China, the only country in which AOS operates that has a non-convertible currency and a closed capital account. We believe the UTP relationship is key to this mystery.

Cash balances in China exceed the proportion of Chinese revenue and profit in the company overall and have been rising even as Chinese sales growth has flattened. In 2013, when AOS reported 26% sales growth in China, the company had 49% of its cash and 27% of company sales in China. By 2018, when reported sales growth was 4%, the cash had risen to 84% of the total but sales to just 34%. This is true even as AOS dividdened a chunk of cash out of China in 2018.

The cash balance is puzzling. Even if AOS were financing all of its sales, the typical six-week repayment cycle suggests that, for \$1 bln in sales, AOS

**Table 9. AOS (China) Water Heater**

	2018	2017	2016
<b>Cash</b>	¥ 3,489,415,860	¥ 3,679,646,929	¥ 3,682,805,986
<b>Interest Receivable</b>	24,696,209	29,806,353	28,327,609
<b>Finance cost/ (Income)</b>	(23,206,885)	(19,110,435)	(18,069,942)
<b>Interest on Cash</b>	0.7%	0.8%	0.8%
<b>Guarantee</b>	2,110,000,000	2,110,000,000	2,110,000,000
<b>Cash net of Guarantee</b>	¥ 1,379,415,860	¥ 1,569,646,929	¥ 1,572,805,986
<b>Interest on Cash net of Guarantee</b>	1.8%	1.9%	1.8%

Source: Finance Bureau

If AOS really has \$539 mln in unencumbered cash balances in China, then its financial managers are some of the dumbest on the planet.

would need to have just \$125 mln on hand. We estimate that UTP handles very roughly 75% of AOS water heater sales, or ¥4.8 bln (\$714 mln) as of 2018. Distributors tell us they finance about half the inventory they take on. That math makes \$539 mln look excessive. We think AOS may be hiding some of the losses by over-reporting capex. We think the company has overstated capex by around \$10 mln.

If AOS really has \$539 mln in unencumbered cash balances in China, then its financial managers are some of the dumbest on the planet. A.O. Smith (China) Water Heater, the main operating entity for AOS China, shows estimated net interest earned on cash of 0.7%. AOS's group of four Chinese operating companies is posting negative inflation-adjusted returns on its cash. Yet Chinese banks routinely hand out 4% in annual interest for 12-month deposits in wealth management products (WMPs).

When AOS reports that its China cash is largely in "marketable securities," we believe the company must mean WMPs. Chinese accounts show no marketable securities, contradicting the AOS 10K filings. This may confirm that marketable securities are in fact WMPs. But in 2018, bank WMPs of 92-day duration were yielding up to 7.72% annualized, with the average 12-month rate 4.74%, according to Finance Street on February 11, 2019.<sup>8</sup> In 2016, when A.O. Smith (China) Water Heater earned 0.8% on its cash, banks were paying an average of 3.8% on the safer type of bank-issued WMPs, according to a report by the Bank Wealth Management Product Registration Management

<sup>8</sup> Chinese-language article can be found here: <http://bank.jrj.com.cn/2019/02/19160327062704.shtml>

---

May 16, 2019

Center.<sup>9</sup> If the reason for the low interest rates is offsetting charges, then what do these charges relate to, and are they financial instruments that have been separately disclosed by AOS in its U.S. filings?

Before 2018, AOS had some excuse to keep money in China: the exchange rate was mostly appreciating, which boosted the potential value of Renminbi balances, and U.S. tax law made it advantageous to keep money offshore.

But other companies had already gotten around prior tax penalties through income stripping—paying excessive amounts of (tax-free) interest on inter-company loans--or entrusted loans. It is unusual that AOS did not use these routes and instead preferred to borrow money at a cost in the U.S. And most CFOs would have pushed the cash to a safer offshore tax haven, something that would have been easy given the ownership of the Chinese operating entities by Hong Kong and Barbados holding companies. At any rate, those excuses disappeared in 2018 after implementation of the “Tax Cuts & Jobs Act,” which made keeping balances offshore irrelevant.

Yet, by the end of 2018, AOS still had “substantially all” of its cash in China. Why? Expected capital expenditures in China do not come close to matching the scale of cash held in the PRC.

---

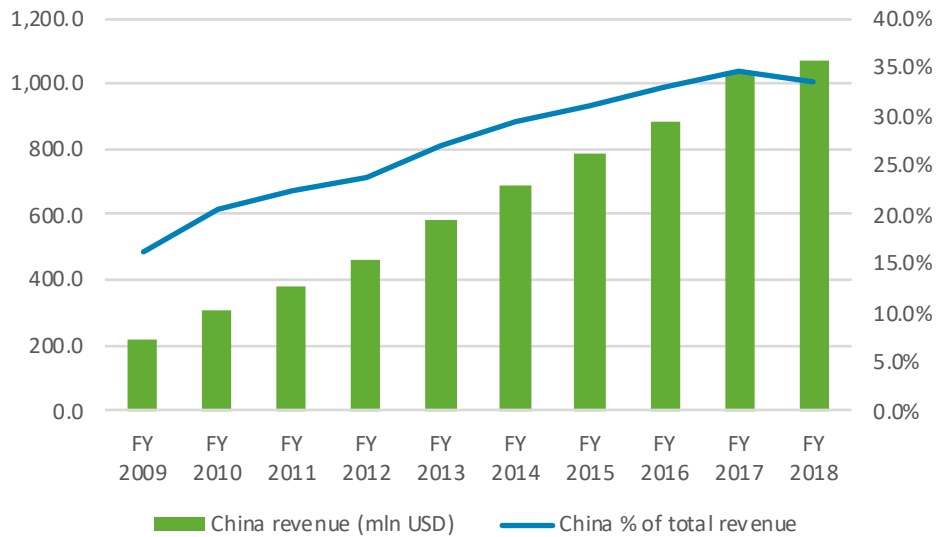
<sup>9</sup> *China Banking WMP Market Report, H1 2016, by the Bank WMP Registration Management Center, June 30, 2016: <https://www.chinawealth.com.cn/resource/830/846/863/51198/52005/765281/1474165039030484283952.pdf>*

May 16, 2019

**Margin decline**

For years, high margins and high growth in China have driven AOS share price. Shares really began to take off from 2010-2017, when China revenue grew from 15% of the company total to 34%.

**Chart 5. AOS China Revenue 2009-2018**



Source: Company reports

Until 2018, growth in China exceeded any other region by a factor.

**Chart 6. AOS Share Price**



Source: Bloomberg

A key driver of enthusiasm for AOS shares has been the superior gross margin in China. The idea is that higher gross margins will lead to higher profitability, as the operation scales up. The truth, however, has been that both gross and pre-tax net margins have compressed, even as the business has grown. Net margins are below those realized in the United States. We believe the falling net returns are a result of higher incentives provided to distributors to make sales volumes.

In the financial statements for A.O. Smith's four operating companies in China that we obtained from Chinese attorneys for the years 2016-18, applying principles of consolidation, we see a 320 basis point deterioration in gross margin between 2017 and 2018, from 47.2% to 44%, and a decline in net margin from 16.6% to 12.8%.

While reported gross margins in China are higher than in the U.S., net margins are considerably lower in the Chinese financial statements. Excluding mysterious "Other Income" and "Fair Value" changes in the Chinese statements, which we believe are not related to the operating business, the 2018 and 2017 pre-tax profit margin for consolidated Chinese accounts falls to a range of around 9% to 12%. The gap between higher gross and lower net margins signals to us that AOS is burying COGS below the line.

**Table 10. AOS Profit Margins: U.S., International, and China**

	2016	2017	2018
<b>10K Group Gross Profit Margin</b>	41.5%	41.1%	41.0%
<b>Consolidated China Gross Profit Margin</b>	47.7%	47.2%	44.0%
<b>US Pre-tax Profit Margin</b>	19.2%	19.4%	20.7%
<b>International Pre-Tax Profit Margin</b>	14.5%	14.7%	13.3%
<b>China Consolidated Pre-Tax Profit Margin</b>	12.9%	16.6%	12.8%

Source: Company U.S. filings and China Finance Bureau

We believe that AOS gross margins are overstated by omitting distribution costs.

**Table 11. Value Chain Margins for High-Volume Products**

Retail Price	¥4,000
Distributor Cost	¥3,000
Distributor Margin	25%
UTP Cost	¥2,550
UTP Margin	15%
AOS Cost	¥2,000

Source: Chinese Finance Bureau, J Capital interviews



AOS is paying four times as much as key competitors for distribution services. As the company’s price advantage in China erodes—as is now occurring—that inefficiency will cost dearly.

AOS enjoys an average 50% premium in water heater ASP over its competitors. But it also spends 30% of gross revenue on sales costs, compared with 18% for Qingdao Haier and 11% for Midea. With a price around 50% higher, AOS is still outspending the competition by a factor of two to maintain that price point.

**Table 12. Midea (000333) and Qingdao Haier (600690) vs AOS China 2017 (RMB ,000)**

RMB ,000	Midea	Qingdao Haier	AOS (China) Water Heater
<b>Revenue</b>	¥241,918,896	¥159,254,467	¥7,081,089
<b>Total Profit</b>	¥21,854,774	¥ 10,544,456	¥932,278
<b>Sales Cost</b>	¥26,738,673	¥28,276,014	¥2,139,404
<b>Cost of Sales %</b>	11%	18%	30%
<b>Gross Margin</b>	25.4%	31.0%	47.2%
<b>Net Margin</b>	9.0%	6.6%	14.8%

Source: Company filings <sup>9</sup>

These Chinese companies have a much more sophisticated distribution, logistics, and after-sales service system than does AOS, with clearly lower costs. Cost of sales for Midea and Qingdao Haier includes Integrated Channel Services, meaning end customer delivery services to customers but not warehousing.

UTP has helped AOS mask margin erosion in two ways: first, we think AOS lends to UTP at well below market rate. Second, our interviews indicate that AOS sells to UTP gross of rebates, which are likely booked as sales costs. AOS sales costs are unusually high. Consequently, AOS China shows unusually high gross but low net margins.

**Water treatment**

AOS is resting high hopes for future growth on expansion of its water-treatment business, especially in China. But in this area, the company faces intense competition and does not enjoy a brand advantage. The growth in consumer-facing water treatment has dropped sharply, as reflected in the

<sup>10</sup> We use Chinese filings and compare the Shenzhen- and Shanghai-listed competitors, because they are more purely consumer appliances and therefore more comparable to AOS.

decline in the growth of water treatment sales outlets from 14% in 2017 to 1% in 2018.

**Table 13. Retail Outlets**

	2014	2015	2016	2017	2018
<b>Water Heater-China Retail Outlets</b>	7,000	8,000	9,000	8,000	9,000
<b>YoY growth</b>		14%	13%	-11%	13%
<b>Exclusive water heater sellers</b>	1,600	2,000	2,500	2,900	2,800
<b>YoY growth</b>		25%	25%	16%	-3%
<b>Water Treatment-China Retail Outlets</b>	4,500	5,500	6,500	7,400	7,500
<b>YoY growth</b>		22%	18%	14%	1%
<b>Air Purification-China Retail Outlets</b>	--	1,200	2,500	3,500	3,500
<b>YoY growth</b>			108%	40%	0%

Source: Company disclosures

The company has provided relatively little information about its water- and air-treatment businesses in China and has been vague about what products its new plant will produce and whether one of the old plants will be closed. We speculate that the reason for this vagueness is that AOS China in reality is in an undisclosed cooperative venture with its silent partner, UTP.

**The new China plant**

In 2016, AOS reported that the China company had started construction of a new water-treatment and air purification facility in Nanjing, the city of its China headquarters. That facility was completed in May 2018. Total costs were estimated to be \$65 mln when announced on the Q1 2016 call. The factory opened on May 18, 2018 and produces home and business water- and air-purification equipment with an annual production capacity of 3 mln units.<sup>11</sup>

A.O. Smith has acquired a large piece of land next to the new factory and, according to announcements by the Nanjing government, has committed to build a phase 2 facility. Chinese news reports claim that ¥960 mln (\$143 mln) has been committed to the facility—double the amount that AOS has reported. In fact, the AOS China website claims that \$150 mln has been invested in the new factory since 2016.<sup>12</sup>

<sup>11</sup> See a Sina video of the plant opening here: <http://jiangsu.sina.com.cn/news/general/2018-05-25/detail-ihaysviy5821169.shtml>

<sup>12</sup> See AOS Chinese-language website: <http://www.aoswtc.com/news/detail.aspx?id=414>

May 16, 2019



图：A.O.史密斯新建环境电器超级生产基地  
A.O.史密斯公司新建的环境电器超级生产基地总投资1.5亿美元，位于南京溧水经济开发区，总规划占地面积390亩，计划分两至三期建设。其十一期总建筑面积约65万平方米，新基地一期计划产能280万台，包括200万台净水器、50万台空气净化器和30万台软水机，2018年初投产。得益于“一带一路”A.O.史密斯可在亚太地区和全球进行节能环保创新，节能环保领先地位，使A.O.史密斯在健康家电领域更为广阔。

The paragraph above reads "AO Smith's new environmental electrical super research base has a total investment of \$150 million US dollars. It is located in Nanjing's Lishui Economic Development Zone on a total planned area of 350 mu. It will be completed in two to three phases. The total construction scale of the first phase is about 65,000 square meters. The first phase will have a production capacity of 2.8 million units, including 2 million water purifiers, 500,000 air purifiers, and 300,000 water softeners, and will be put into operation in early 2018."

Source: Chanitex (a division of AOS) website: <http://www.aoswtc.com/news/detail.aspx?id=414>



This plot of land, on the west side of AOS's new factory in Nanjing, is designated for phase 2 construction of the water and air purification production facilities. | Photo by J Capital, March 15, 2019.

### Non-AOS branded products

We think it possible that the new UTP plant may be intended to produce AOS products that are locally branded. AOS does design and sell products for the local market that are not AOS-branded and sells them through alternate channels. AOS stopped reporting separate sales for AOS-branded and non-branded products as of the start of 2014.<sup>15</sup> On the Q3 2017 call, former CEO Akita Rajendra commented that the company has designed products and channels specifically for the China market:

<sup>15</sup> See Q4 2013 Seeking Alpha call transcript, page 7

May 16, 2019

**Ajita Rajendra**

So we literally designed some products which were very conducive for the Chinese market and fit the market needs in China and we are actually selling those products two different ways in China. We are selling them Lochinvar manufactured products, branded Lochinvar in China through one set of distribution and then we are also manufacturing those products in China and selling them under the A. O. Smith brand name. So, we are -- and both those are being very successful. So if there is a change, it's that we recognized that there was a market for the non-condensing products, designed some products for the Chinese market and we brought them out there in the last 12, 15 months, and they have been very successful. So we are very happy about that. (Source: Q3 2017 Bloomberg conference call transcript, page 15)

**Owned or leased?**

Curiously, although the AOS plant became operational in May 2018, company filings simply stated that AOS continued to have six non-US manufacturing facilities, the same as 2015, 2016, and 2017. The main difference is that, prior to 2018, the company explains three of these non-U.S. facilities were directly owned and three were leased, whereas in 2018, this changed to four directly owned and two leased facilities. One interpretation may be that the newly commissioned plant replaces a leased plant, but AOS has not disclosed the closing down of a leased facility in China.

Moreover, if the company owns at least some plants in China instead of leasing them all, it should also own the related land-use rights, which are typically classified as an intangible asset, not PPE. AOS US GAAP filings do not disclose land-use rights as an intangible asset.

Land-use rights in China have a similar structure to long-term leases but are not the same. The company owns the right to use the land.

Filings show the company classifies intangible assets outside goodwill as "other intangible assets." There is no sign of rights to land use.

May 16, 2019

## 8. Goodwill and Other Intangible Assets

Changes in the carrying amount of goodwill during the years ended December 31, 2018 and 2017 consisted of the following:

(dollars in millions)	North America	Rest of World	Total
Balance at December 31, 2016	\$ 432.2	\$ 59.3	\$491.5
Acquisitions	22.2	—	22.2
Currency translation adjustment	2.8	0.2	3.0
Balance at December 31, 2017	457.2	59.5	516.7
Currency translation adjustment	(3.3)	(0.4)	(3.7)
Balance at December 31, 2018	\$ 453.9	\$ 59.1	\$513.0

The carrying amount of other intangible assets consisted of the following:

December 31 (dollars in millions)	2018			2017		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
<b>Amortizable intangible assets:</b>						
Patents	\$ 3.7	\$ (3.3)	\$ 0.4	\$ 3.7	\$ (2.7)	\$ 1.0
Customer lists	236.8	(108.2)	128.6	235.8	(93.3)	142.5
Total amortizable intangible assets	240.5	(111.5)	129.0	239.5	(96.0)	143.5
<b>Indefinite-lived intangible assets:</b>						
Trade names	164.1	—	164.1	165.2	—	165.2
Total intangible assets	\$ 404.6	\$ (111.5)	\$293.1	\$ 404.7	\$ (96.0)	\$308.7

In any event, even if these land-use rights were included in PPE, AOS PPE for land at cost before depreciation and amortization has barely changed for at least the last five years:

## 7. Property, Plant and Equipment

December 31 (dollars in millions)	2014	2013
Land	\$ 11.2	\$ 11.3
Buildings	230.6	212.5
Equipment	504.5	497.8
Software	69.6	37.2
	815.9	758.8
Less accumulated depreciation and amortization	388.2	367.5
	\$427.7	\$391.3

## 7. Property, Plant and Equipment

December 31 (dollars in millions)	2018	2017
Land	\$ 11.2	\$ 11.2
Buildings	323.3	329.9
Equipment	643.8	608.4
Software	118.5	110.6
	1,096.8	1,060.1
Less accumulated depreciation and amortization	556.8	531.2
	\$ 540.0	\$ 528.9

Source: AOS 2018 10-K

May 16, 2019

### China capex

AOS consistently overestimates the amount of capex its China operation will use. We speculate that China may overstate its capital needs in order to provide an excuse to hold onto its notional cash balances. In 2018, for example, AOS projected \$30 mln in capital spending for China but, at year-end, reported \$13 mln in capital spending. That is typical. Total capex forecasting for China in 2015-2018 was \$140 mln while actual spending was \$69 mln, a variance of 51%. This variance is not likely explained by incorporating both maintenance and growth expenditures; we estimate AOS China' consolidated annual fixed asset depreciation--a typical proxy for maintenance capex - to be considerably less than this variance.

**Table 14. China Capex: Planned and Actual (mln USD)**

China Capex	Expected	Actual	Variance	Source
2018	\$30	\$13	-57%	
2017	\$40	\$24	-40%	
2016	\$20	\$13	-68%	Q1 2016 call: Our 2016 capital spending plans include approximately \$20 million.
2015	\$30	\$19	-37%	
2014	\$75-85	\$40		Q4 2014 call
2013		\$45		Q4 2013 and Q4 2014 calls
2012	\$80-90			Q4 2012: Our capital expenditures are expected to be between \$80 million to \$90 million in 2013
2011	\$70-80			
2010	\$75-85	\$53.5		Q4 2009 call: Capital spending is expected to be between \$75 million and \$85 million in 2010.

Source: Company transcripts

### Retail: eating up excess inventory?

AOS company reports indicate \$70-80 mln of store display assets in China. We believe that the number is vastly inflated. All the retail outlets selling AOS products in China are owned and operated by distributors, who are particularly emphatic that they buy the display inventory and AOS does not own it. What's more, a lot of these store display assets are dummy shell displays rather than the more expensive fully working inventory.





Display assets at an AO Smith store inside a building materials market in Beijing. | Photo by J Capital January 25, 2019, 2 pm.

Furthermore, we suspect that AOS maintains the number of retail outlets for the purpose of hiding fake assets. In our interviews, we learned that AOS China subsidizes the rent for many of the stores and pays the salaries of up to three salespeople. Those subsidies make it just barely worthwhile to operate a store. But distributors particularly dislike standalone AOS stores and claim they are good only for sales to friends and family. For bigger-ticket consumer appliances, as China's retail environment continues to modernize logistics and retail outlet efficiencies, a small stores approach under traditional "old ways" local sales channels is becoming less attractive.

AOS reports that it expenses about \$40 mln a year on China store displays as part of advertising costs, specifically through "amortizing" them between 12 and 36 months. But that makes little sense.

- ▶ The term "amortization" is typically used for intangible assets, while depreciation is used for tangible assets. No explanation is provided as to why physical store displays could be "intangible" assets. AOS US GAAP filings show only patents and customer lists as amortizable intangible assets.
- ▶ As an advertising cost, these expenses are not categorized as inventory cost of sales.

May 16, 2019

- ▶ There is no disclosure on whether these store displays were sold and therefore contributed to revenue.
- ▶ If these store displays are part of fixed assets, we do not think they form an impressive part of AOS China capex expenditures, since the associated amortized expense must in scale cumulatively equate to their cost. If these store displays started out as inventory work in progress and later transferred to fixed assets, where is the disclosure referring to this non-cash flow inventory capitalization?
- ▶ If these assets were sold or given to distributors, we believe related cost should be fully expensed in the same year, not spread out over up to three years. If a car or a washing machine is sold to a consumer, the seller's expense is booked in the year of sale, not over the subsequent life cycle of the sold item.

Assuming an average of two years' shelf life for these store displays implies a value of of around \$70–80 mln. In the 2018 10-K, the company changed its amortization schedule to 12-36 months:

**Table 15. AOS China Retail Sales (USD mln, unless stated)**

	2012	2013	2014	2015	2016	2017	2018
<b>China Sales</b>	461.2	581	691.8	787.1	887.1	1,034.90	1,071.20
<b>China Online/eCommerce Sales</b>	4.61	17.43	50	140	200	250	299.9
<b>Non-online China Sales</b>	456.6	563.6	641.8	647.1	687.1	784.9	771.3
<b>China Retail Outlets Selling AOS Products</b>	N/A	5,900	7,000	8,000	9,000	8,000	9,000
<b>China Retail Outlets Exclusively Selling AOS Products</b>	N/A	1,200	1,600	2,000	2,500	2,900	2,800
<b>China Retail Outlets Selling Water Treatment Products</b>	N/A	2,900	4,500	5,500	6,500	7,400	7,500
<b>China Retail Outlets Selling Air Purification Products</b>	N/A	N/A	N/A	1,200	2,500	3,500	3,500
<b>AOS Global Advertising Expense</b>	69.2	78	94	102.2	113.9	126.9	132.1
<b>OF WHICH: China Store Displays</b>	15.8	17.9	22.6	27.4	37	43	38.7
<b>China Store Displays - Estimated Total Values</b>	31.6	35.8	45.2	54.8	74	86	77.4
<b>China Sales/China Retail Store (RMB)</b>		95,520	91,686	80,888	76,344	98,113	85,696
<b>Item sold (@US\$700 Av each) per year/China Retail Store</b>		136	131	116	109	140	122

Source: Company Reports, J Capital



May 16, 2019

Old: “Included in total advertising costs are expenses associated with store displays for water heater, water treatment and air purification products in China that are amortized over 12 to 24 months which totalled \$43.0 million, \$37.0 million and \$27.4 million during 2017, 2016 and 2015, respectively.” (2017 10-K page 33 )<sup>14</sup>

New: “Included in total advertising costs are expenses associated with store displays for water heater, water treatment and air purification products in China that are amortized over 12 to 36 months which totalled \$38.7 million, \$43.0 million and \$37.0 million during 2018, 2017 and 2016, respectively.” (2018 10-K page 33)

We cannot find sufficient assets on the balance sheet of AOS entities in China to reasonably account for these store displays, as tangible, intangible assets, or other assets, for the remaining unamortized store display assets. We know AOS supports the stores with subsidies, but those are likely included in sales costs. Furthermore, distributors are adamant that they purchase the displays themselves.

Excluding construction-in-progress, we estimate 2018 AOS China had net consolidated tangible fixed assets of some \$180 mln and barely significant intangible assets of around \$14 mln, which should primarily consist of manufacturing facilities and land-use rights, respectively.

The risk is that AOS has invented these assets as a journal entry to smooth away inflated sales, or profit margins or at the very least inappropriately mischaracterized China store displays. This could also be a pocket in which to hide the write-down of unsold inventory.

### Why all the retail outlets?

Retail outlets are very inefficient and unlikely to be profitable. Based on the 9,000 outlets in China we estimate average sales per year of ¥860,000 (\$128,250) or about 122 units. This could not possibly be profitable to operate. Store closures to prevent losses appear inevitable, but this will clearly impact marginal sales in what was supposed to be a high growth area for AOS and may further exacerbate overstocking at distributors.

We visited 15 retail outlets in Beijing, Tianjin and Chongqing. Only two had customers when we visited, at different times of the day. Our visits and interviews of retailers supports the very low levels of sales made at retail

<sup>14</sup> <http://investor.aosmith.com/sec-filings/sec-filing/10-k/0001193125-18-048314>

May 16, 2019



Clockwise from top left: AOS retail outlet, shut down, Chongqing March 1, 2019. Right (top and bottom): A.O. Smith store in Red Star Macalline complex in Tianjin January 28, 2019 10 am. Bottom right: AOS retail outlet in a building materials wholesale market in the Haidian District of Beijing January 24, 2019 10:30 am. Bottom left: AOS Retail outlet in home decoration center, Chongqing, March 1, 2019 | All photos by J Capital

May 16, 2019

outlets indicated in the reported results.

The company claims that retail outlets provide it with staff available for after-sales installation and service. But the distributors who own the stores complain bitterly about being asked to carry these stores and say that they are inefficient.

**Challenges in China**

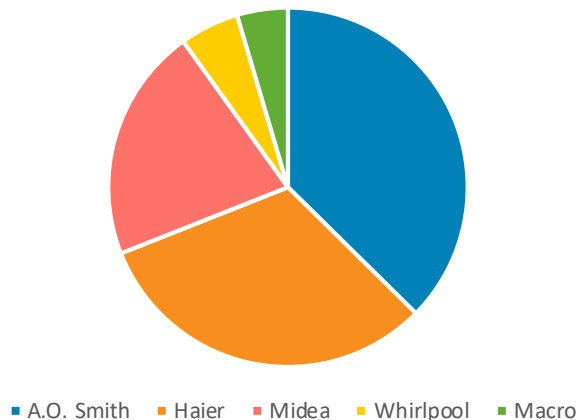
The water heater industry in China has seen its best days and now is in decline. We do not expect that to reverse.

AOS has referenced something called “ABC data” on the industry. We are not familiar with this data source. Competitors in China generally cite Euromonitor. Qingdao Haier (600690 SH) reported in its 2018 AR: “The water heater industry recorded a decrease of 3.2% in retail volume and a growth of 0.5% in retail value in 2018.” The respected tech industry publication Zhongguancun Online, originally a subsidiary of CNET, reported that Chinese water heater sales declined by 2.7% through October 2018.<sup>15</sup>

**Channel Mix / Product Strategy**

The markets that continue to see growth in China are low-tier cities and online channels, both much more price-sensitive than the well-to-do families that are AOS’s traditional market, in Tier 1. A distributor told us in an interview that AOS performs badly in Tier 3 cities, where competitors, with lower-priced products, have better logistics and the same quality.

**Chart 7. Market Share of Leading Brands**

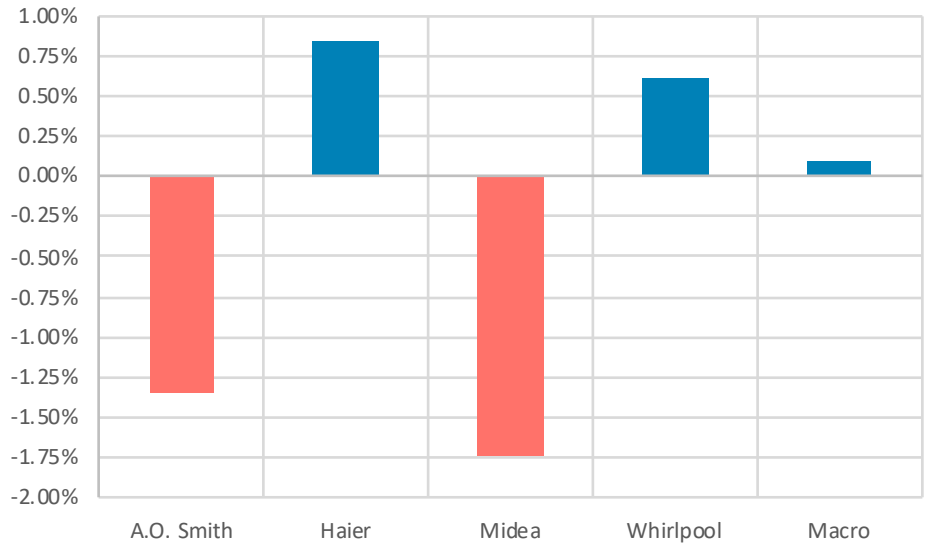


Source: Prospective Industry Research Institute

<sup>15</sup> “2018 Review and Explanation of the Current Status of the Water Heater Industry,” December 29, 2018, <http://jd.zol.com.cn/706/7061299.html>

May 16, 2019

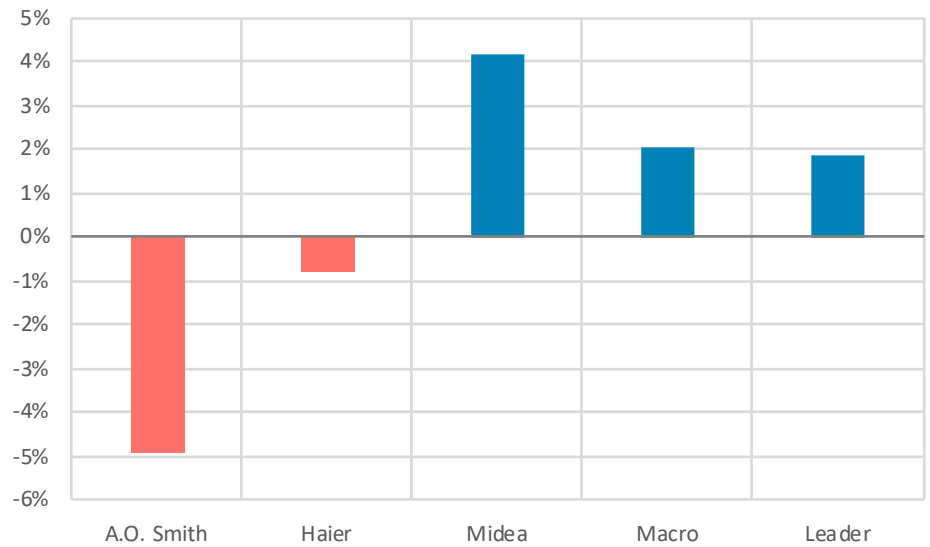
**Chart 8. Total Share Gain/Loss for Top Water Heater Brands**



Source: Prospective Industry Research Institute

News sources reported share loss for AOS China on- and offline in 2017. According to the TOP5 ranking, as reported by QQ News<sup>16</sup>, AOS lost 1% offline market share in 2017 and 5% online. This data tracks with other reports we have found on the industry.

**Chart 9. Online Share Gain/Loss for Top Water Heater Brands**



Source: Top5/Tencent, January 31, 2018<sup>16</sup>

<sup>16</sup> "Analysis of the Electric Water Heater Market in 2017: Low-Speed Growth," Tencent News, January 31, 2018: <https://new.qq.com/omn/20180131/20180131A0LXQX.html>

<sup>17</sup> Ibid.

May 16, 2019

The chart clearly shows that the cheaper brands gained share and more expensive brands lost share. Midea, with a much lower average price than AOS, was the 2017 leader in online sales and in growth.

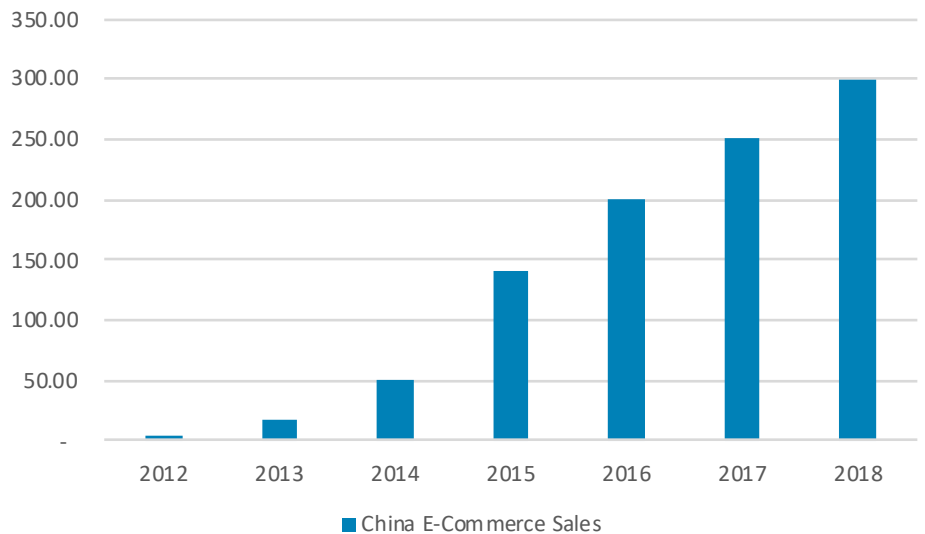
AOS said in its Q2 2018 call that the company is coming out with a new water heater product in China specifically for online sales, suggesting that it will be cheaper. On the Q3 2017 call, then-CEO Akita Rajendra said that the company has designed products specifically for China that go through a discrete distribution channel and are not sold under the A.O. Smith brand name.

In 2018, according to industry monitor TideJD.com, the much larger of-line market for hot water heaters declined by 0.9% while online sales grew 25%.<sup>18</sup>

**The battle moves online**

Water heater sales are growing in lower-tier cities,<sup>19</sup> but AOS is losing market share there to cheaper domestic competitors. In the company’s presentations executives give share only in Tier 1, offline markets and say that

**Chart 10. AOS China Online Sales (mln USD)**



Source: Company reports

<sup>18</sup> “Annual Summary of Gas Water Heaters in 2018,” February 19, 2019 <http://www.tidejd.com/html/news-31461.html>

<sup>19</sup> See “Home Appliance Industry Information,” January 2019 <http://15322620.s21d-15.faiusrd.com/61/ABUIABA9GAAgn6zM4QUovu51AE.pdf> “Annual Summary of 2018 Gas Water Heaters” by TideJD.com, <http://www.yhsnbbs.com/html/news-31461.html>



share is growing.<sup>20</sup>

AOS stopped disclosing its online sales in China in 2018, but a March 1, 2019 analyst presentation provided an estimate.<sup>21</sup> Online sales are now 28% of AOS China sales.

In fact, in 2018, as reported by AOS, total China sales increased by \$36 mln, but online sales in China increased by \$50 mln, based on the March 1 presentation. Whatever the reason for the anomaly, it is clear that the growth for AOS now comes from online sales.

### Giving up on direct sales

In 2017, without mentioning any change to investors, AOS handed its online sales business to a new joint venture called Nanjing Hesiman Network Technology Co. Ltd that was formed by AOS's top eight distributors. According to five interviews with Heisman staff, AOS online is Hesiman's only business. UTP owns 10% of the company through a subsidiary and is the second-largest shareholder after the AOS distributor Nanhua Group. Online sales are of lower-end, cheap products with lower margins. Ding Wei, head of China, said during the November 5, 2018 investor day conference that products sell online for about 30% less than for the category as a whole. "The e-commerce on average is selling 30% lower the category-wise. Not us, just category average price. E-commerce is 30% lower than offline."<sup>22</sup>

Because AOS does not disclose details, we must rely on Chinese news, the listed shop owners on sites like TMall and JD.com, and Chinese corporate registration records. "In 2017, A.O. Smith made a bold new gesture," said a January 18, 2018 article in the industry publication Tianxia<sup>23</sup> "to promote the formation of a joint venture by core agents. The core e-commerce business was all handed to agents. In other words, the online operation, sales, and the entire after-sales service were all handled by the agent." The article adds that AOS moved two-thirds of the staff of its online sales department into this venture and out of AOS.

<sup>20</sup> See November 5, 2018 Investor Day presentation slide 87: <http://investor.aosmith.com/static-files/a8bc1814-d51c-4c9e-b028-2b7c4005d0d2>

<sup>21</sup> See page 21: <http://investor.aosmith.com/static-files/2557cecc-4f17-433c-960b-c7a3288e5d63>

<sup>22</sup> Conference recording can be found here: <http://investor.aosmith.com/events/event-details/aosmith-analyst-day>, or see page 41 of the Bloomberg transcript.

<sup>23</sup> Chinese-language article here: <http://m.iwshang.com/article/34567>

May 16, 2019

AOS celebrated the partnership on its website recently.

Hesiman General Manager Mr. He Xiaodong accepted the prize (from Tmall, for best service).

2019年3月21日, 手机网购第一品牌天猫行业峰会上, A.O.史密斯荣获最佳服务体验奖, 电站核心单品E1TD获得最佳创新奖, 高端新品零冷水燃气热水器V5X被授予2019年天猫热水器十大明星产品的称号, 并与天猫签订年度冲刺10,000台的销售合作, 此次奖项由电子商务部副经理周立先生、[合肥满尚网络科技有限公司](#)总经理何德秀先生代为领奖, 并与热水器行业负责人长谈合影留念。

A.O. Smith's Chinese website celebrates the AOS-Hesiman partnership in online sales. Here are pictured the general manager of Hesiman and the deputy director of the AOS online sales department. The website does not indicate which person is which.

Source: <http://www.aosmithcepc.cn/about/detail25.htm>

Below is a screenshot of an AOS water heater that was recently sold on Vipshop. The text at the bottom says, "This product is being sold from the warehouse of Vipshop third-party merchant Nanjing Hesiman Network Technology Co. Ltd." The product was sold out.

16升

新一代低压燃烧  
防一氧化碳中毒

A. O. Smith/史密斯 16升TN 燃气热水器家用低压燃烧防煤气中毒AO

【保价30天, 买贵退差】整机3年质保, 赠送上门安装+1-6年保修卡。

¥5458 15% OFF

请选择省市

SORRY 抱歉!  
您查看的商品已经下架了, 下次早点来哦!

先去商品首页逛逛 >

商品标题: J9022-TN

100%正品 上市公司 无忧退换

本品由入驻商品商家第三方商家南京满尚网络科技有限公司直接销售, 售后服务由商家负责, 商品如不支持退换货或付款和商品不支付, 此类商品属于特殊商品, 如有质量问题, 不予支持7天无理由退换货

Source: <https://detail.vip.com/detail-2679425-539304668.html>. Screenshot taken May 11, 2019.

Ding Wei specifically omitted this distributor in his presentation on China e-commerce at the November 5, 2018 Investor Day.<sup>24</sup>

The screenshot below is from the Hesiman flagship store on Lagou.com.

<sup>24</sup> See Slide 79: <http://investor.aosmith.com/static-files/a8bc1814-d51c-4c9e-b028-2b7c4005d0d2>



公司介绍

AO史密斯官方唯一指定线上代理运营公司，史密斯电商事业部原班人马入驻，2018年销售目标超10亿!

Hesiman's flagship store on the e-commerce website Lagou. The text reads: "The only online operator officially designated by A.O. Smith, which has taken on the former online business department of A.O. Smith. Our target is to exceed ¥1 billion in sales in 2018!"

Source: <https://www.lagou.com/gongsi/381593.html>. Screenshot taken May 11, 2019.

The Chanitex brand and AOS China Environmental Products

Perhaps the only enduring asset AOS acquired in its 2009 acquisition of Tianlong Holding Co. Ltd. is a brand of water-purification products under the name Chanitex.

Chanitex, sold through dedicated franchise outlets, does about ¥120 mln (\$17.9 mln) in sales. AOS-branded water purification equipment, on the other hand, does more than \$350 mln in sales, according to our interviews and company reports. Chanitex has 180 distributors and 400 stores nationwide. Chanitex sales grew at 37% in 2017, but growth fell to 10-15% in 2018.

Table 16. Chanitex Sales Prices and Margins

Product	C600	#1	#2	
Distributor Price		2350	1270	1580
Low Actual Price		4280	1880	2580
High Actual Price		4680	2080	2880
Consumer Discount Low		-25%	-35%	-34%
Consumer Discount High		-18%	-28%	-26%
Retail Price		5680	2880	3880
Margin Low		45%	32%	39%
Margin High		50%	39%	45%

Source: Distributor interviews

May 16, 2019

We find the reported water treatment sales puzzling. Chinese domestic financial reports do not support the claim of \$400 mln in 2018 revenue; the environmental products company reported \$158 mln in gross sales in 2018. In any case, the water- and air-purification products are far less profitable than the water heaters—they are just wasting capital.

**Table 17 A. O. Smith (China) Water Products Co., Ltd. China**

	2016	2017	2018
<b>Return on Equity</b>	13.70%	9.30%	9.10%
<b>Net Return on Production Assets</b>	13.70%	9.70%	10.80%
<b>Pre-tax &amp; Pre Other Income Profit Return on Production Assets</b>	16.20%	13.30%	14.30%

**A.O. Smith (China) Environmental Products Co. Ltd.**

	2016	2017	2018
<b>Return on Equity</b>	72.20%	32.70%	36.10%
<b>Net Return on Production Assets</b>	37.00%	17.60%	11.00%
<b>Pre-tax &amp; Pre Other Income Profit Return on Production Assets</b>	37.20%	17.00%	11.90%

**A. O. Smith (China) Water Heater Co., Ltd. China**

	2016	2017	2018
<b>Return on Equity</b>	20.10%	24.40%	22.40%
<b>Net Profit Return on Production Assets</b>	87.70%	119.80%	113.00%
<b>Pre-tax &amp; Pre Other Income Profit Return on Production Assets</b>	102.40%	134.60%	93.80%

Source: China Finance Bureau, J Capital analysis

AOS began disclosing sales for the water treatment business worldwide only in 2016, when the company acquired Aquasana. In previous years, there have been revenue disclosures for China only.

**Table 18. Revenue for Water Treatment (mln USD)**

Water Treatment	2012	2013	2014	2015	2016	2017	2018
<b>China</b>	\$ 20.0	\$ 65.0	\$ 90.0	\$ 110.0	\$ 166.0		
<b>Total</b>					\$ 194.0	\$ 300.0	\$ 400.0

Source: 2012 10-K and Q4 call transcripts

May 16, 2019

**Weakening End Market**

We identify two phases of China’s water heater market and, consequently, AOS China growth: 2007-2014 and 2015-present. AOS was able to take advantage of the exploding sales of new real estate in the post-2009 stimulus and to garner a premium price for its products in this breakneck market that had little regard for cost. But the real estate market cratered in 2015, as the government tried to restrain credit growth.

China went through a high-growth period in sales of water heaters 2007-2012, in tandem with the real estate boom. But by the second sales boom, in 2016-17, water heater sales had petered out, and China’s became a replacement market.

**Chart 11. Sales of New Residential Real Estate 2008-18 (mln sqm and YoY)**



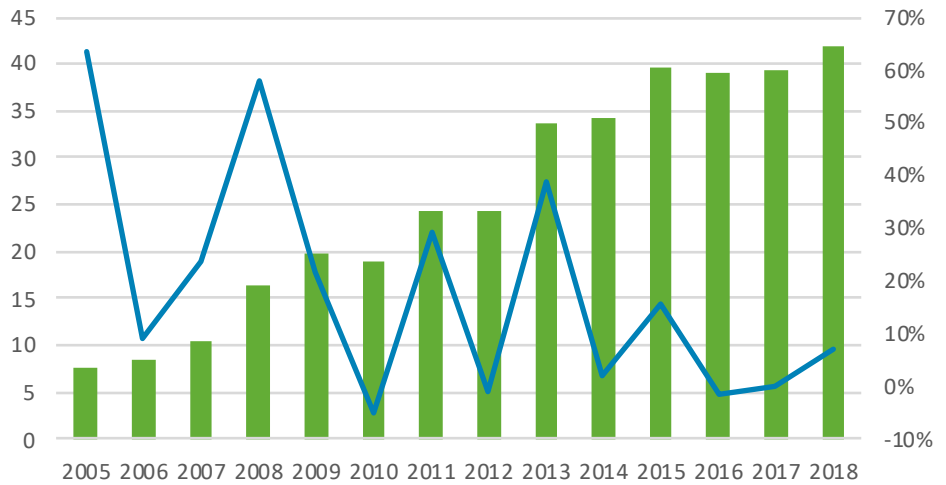
Source: NBS

AOS has roughly a 37% share of China’s electric water heater market, according to China Market Monitor. It has a 28% market share of water heaters overall in terms of revenue and 18% in terms of volume, reflecting the company’s price premium.<sup>25</sup> Chinese statistics differ in reporting market share of the top 10 brands of water heaters, depending on whether they report by number of units sold or revenue and whether they include all water heaters or just electric heaters—which represent about 57% of the total water heater market and in which AOS is dominant. Different statistics organizations report that AOS

<sup>25</sup> See China Market Monitor report November 2017: <http://www.monitor.com.cn/%E4%B8%AD%E6%80%A1%E5%BA%B7%EF%BC%9A%E2%80%9C11%C2%B711%E2%80%9D%E5%8E%A8%E5%8D%AB%E7%94%B5%E5%99%A8%E7%BA%BF%E4%B8%8B%E5%BF%AB%E6%8A%A54020171114-09102519808.pdf>

May 16, 2019

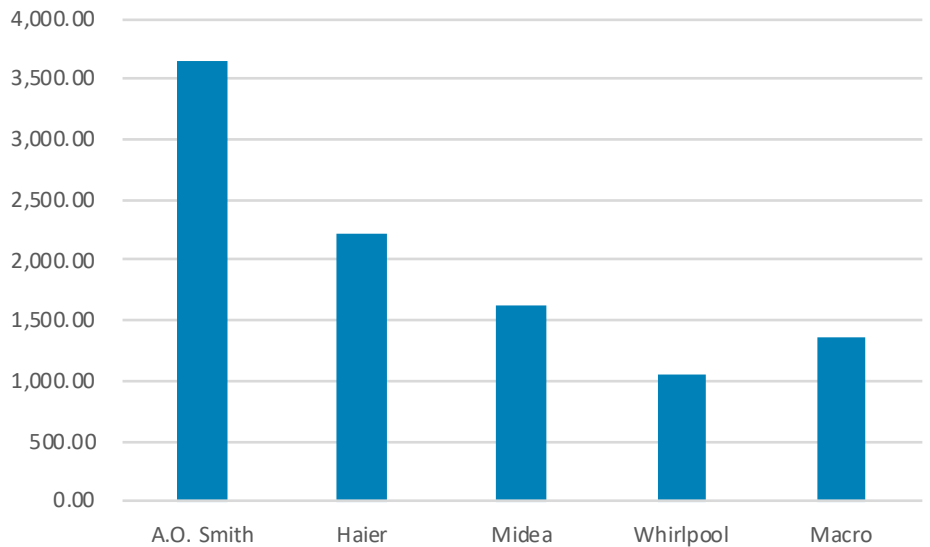
**Chart 12. Water Heaters Produced (mln units and YoY)**



Source: China Investment Consulting Center and Prospective Industry Consulting Center

has from a 23%<sup>26</sup> to a 32%<sup>27</sup> share of water heaters overall. The one thing they agree on is that AOS is losing market share in lower-tier cities and online. The chief competitors are good brands selling at lower price points: Haier, Midea, Gree, Whirlpool, and Macro. It appears that China’s market is less willing now to pay a premium for an American brand than it was a few years ago.

**Chart 13. Leading Brands of Water Heaters and Prices in RMB**



Source: Prospective Industry Research Institute

<sup>26</sup> See this Chinese-language analysis by Monga.com, a private equity network: <https://www.mongba.com/a/20180824205149/>

<sup>27</sup> See analysis by the Prospective Industry Consulting Center <https://bg.qianzhan.com/report/detail/459/190313-215bd571.html>

May 16, 2019

Despite robust housing starts, if you strip away the water-purification acquisitions, AOS North America has been growing at under 5% average for three years. We think that will worsen.

## Trade War Implications

AOS provides very little information on inter-segment sales. We know from conference calls that the company exports some boilers from China to the U.S. The A.O. Smith (China) Water Products Co. Ltd. subsidiary is very likely dedicated to inter-segment sales (the company records no sales costs), but a significant portion probably go to the water heater company, which has a higher income tax base than Water Products. If we believe that half of the company's ¥1.5 bln (\$220 mln) in 2018 sales were for export to the United States, tariffs of 25% would make those sales uncompetitive, and AOS would like turn the company to serving the China market exclusively. AOS does not import significant components to China. It imports some from India.

A more qualitative but probably more significant impact of the trade war will be damage to the AOS brand in China. AOS products are clearly branded as American, using the English letters A.O. in the logo, and this has been an advantage for many years. That tide is turning.

## Fundamental US Challenges

AOS acquisitions in water purification have temporarily improved the growth profile, but in this area, AOS is wading into a brutally competitive field in which margins are declining.

For water heaters, AOS has enjoyed a robust U.S. market for new home construction that brought organic growth to 7% in 2017 and 6% in 2018, by our calculation.

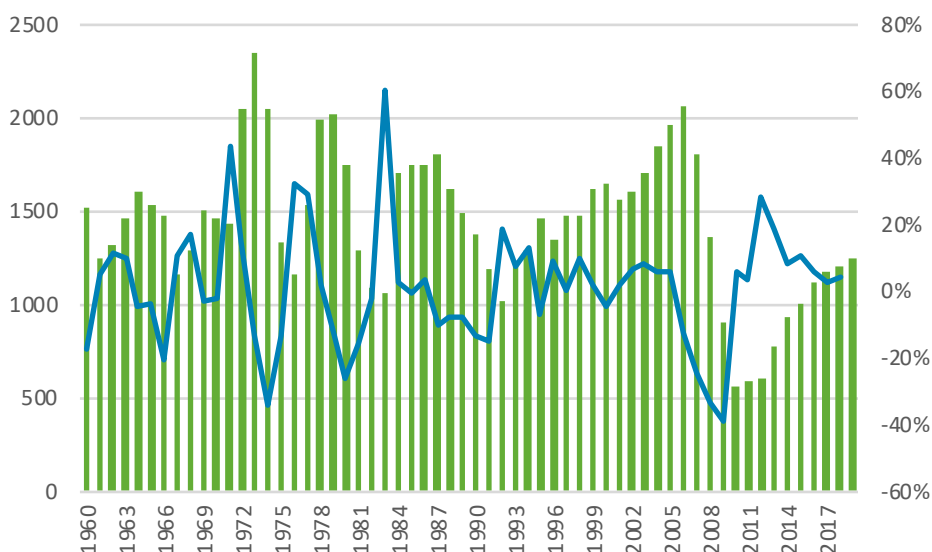
**Table 19. AOS Organic Growth**

Fiscal Year	2015	2016	2017	2018
<b>North America</b>	\$1,703.0	\$1,743.2	\$1,904.8	\$2,044.7
<b>Less: Aquasana</b>	--	(\$18.4)	(\$49.5)	--
<b>Less: Hague</b>	--	--	(\$9.0)	--
<b>Less: Hague and Aquasana</b>	--	--	--	(\$87.3)
<b>Organic North America</b>	\$1,703.0	\$1,724.8	\$1,846.3	\$1,957.4
<b>% growth organic</b>		1.3%	7.0%	6.0%
<b>% reported</b>		2.4%	9.3%	7.3%

Source: Company reports

A.O. Smith sales correlate with nothing as closely as new housing starts, and the company has enjoyed two bumper years for starts in the United States. That run now appears to be ending.

**Chart 14. Historical Housing Starts in the U.S. (,000)**



Source: Bloomberg

Now, market expectations are consistently outstripping performance of housing construction.

**Table 20. Starts vs. Market Expectations 2019**

Calendar	Actual (,000)	Previous (,000)	Consensus (,000)	Beat/Miss Against Consensus
2/26/19	1.078	1.214	1.25	-14%
3/8/19	1.23	1.037	1.197	3%
3/26/19	1.162	1.273	1.213	-4%
4/19/19	1.139	1.142	1.23	-7%

U.S. Census Bureau/Trading Economics

The company faces another headwind: the sales declines of the financial crisis will translate into a slower replacement cycle now that a decade has passed. Water heaters are generally replaced every 10 years or so. The crisis years of 2009-10 make for difficult base sales to lap.

**Accounting and Governance Concerns**

In order to repurchase stock and pay a dividend, AOS repatriated \$312 mln in cash in 2018. Based on information from the 10-K and AOS China filings, out of the \$312 mln in foreign repatriated cash in 2018, some \$134 mln came from China and \$178 mln came from non-China foreign subsidiaries.

But looking at China’s domestic filings with the local Finance Bureau,

May 16, 2019

there is a \$55 mln discrepancy based off changes in China-reported retained profits and the calculations based off cash amounts.

**Table 21. Cash and Repatriation (USD mln)**

	2013	2014	2015	2016	2017	2018
<b>Cash and cash equivalents</b>	380.7	319.4	323.6	330.4	346.6	259.7
<b>Marketable securities</b>	105.3	222.5	321.6	424.2	473.4	385.3
<b>Total</b>	<b>486</b>	<b>541.9</b>	<b>645.2</b>	<b>754.6</b>	<b>820</b>	<b>645</b>
<b>OF WHICH:</b>						
<i>Cash &amp; Equivalents In Foreign Subsidiaries</i>	486	541.9	645	752	815	644
<i>Increase/(Decrease)</i>		55.9	103.1	107	63	-171
<b>Reported Foreign Cash Repatriated to USA</b>	N/A	N/A	N/A	N/A	N/A	312
<b>Estd SAIC AOS China Repatriated</b>	N/A	N/A	N/A	N/A	0	134
<b>Resulting non-China Foreign Repatriated Cash</b>						178
<b>Non-China Foreign Cash &amp; Equivalents</b>	246	186.9	187	194	228	105
<b>Implied Repatriated Non-China Foreign Cash &amp; Equivalents</b>						123
<b>Discrepancy Resulting Vs Implied non-China Repatriated Cash</b>						55
<b>International (Foreign) Earnings Before Income Taxes</b>	84.5	136.1	146.8	161.6	190.9	181.8
<b>Cash &amp; Equivalents In China</b>	240	355	458	558	587	539
<b>Proportion of cash in China</b>	49%	66%	71%	74%	72%	84%

Source: Company disclosures

The U.S. 10K shows some \$72 mln of marketable securities were net redeemed in 2018, however Chinese filings show only \$17 mln of cash was net redeemed.

### China Sham Acquisition

AOS appears to have been fleeced of \$50 mln in China in 2010 by a couple who persuaded them to buy rights to transact with nine loosely affiliated companies, falsified financial statements, over charged egregiously, persuaded AOS to wire the cash to a newly established account in Hong Kong, then ran away with the money. The scandal involved a Chinese admiral named Wang Chaoliang, who was alleged<sup>28</sup> to have taken ¥15 mln in bribes to help the couple steal A.O. Smith's money. The couple has been sued mul-

<sup>28</sup> See Chinese-language report in Baidu, <https://baobao.baidu.com/article/03c9acd2e1d0d62b471015c7989021cc.html>



multiple times in China and Hong Kong, and the wife, named Lu Xueyan, was arrested in Shanghai. But AOS never took an impairment on the \$82.7 mln that it paid for the nine-company confederation that was called Tianlong.

Zhang and Lu appear to be genuine criminals. The judgement<sup>29</sup> in A.O. Smith’s lawsuit against Zhang, heard in Hong Kong in 2012, shows that Zhang operated under three pseudonyms and flaunted a court injunction in order to transfer assets to his daughter. A court case in Anhui<sup>30</sup> in 2014 revealed that Lu had paid to have a false ID created.

A former AOS executive involved with the acquisition told us that Tianlong had misrepresented its sales to AOS and actually had less than half the sales claimed.

The only hint of trouble given in the company filings was a statement saying a \$5.7 million fixed future payment for the acquisition was not paid due to breaches of representations and warranties - far less than the amount that was bilked from AOS. In another classic case of accounting window-dressing, company filings state this unpaid amount was recognized as a gain as part of a settlement with the former owner.

AOS had announced its acquisition of 80% of Tianlong in the autumn of 2009. In 2010, the company acquired the 20% balance and recorded a bargain purchase (negative goodwill). Rather than write down the 80% value of the company to reflect the lower price paid for the remaining 20%, there was effectively an uplift in the value for the 20% based on the price paid for the 80% the year before. That is a technically legal accounting fudge.

**Table 22. Tianlong Acquisition Accounting (mln USD)**

	Adjustments made during 2010					2010 10K	2018 10K
	2009	Q1	Q2	Q3	Q4		
<b>Cost of 80%</b>	76.7	-5.7					
<b>Non-controlling interests</b>	19.2						
<b>Gross Consolidated Book Value</b>	95.9	-5.7	-3.3				

<sup>29</sup> The lawsuit can be viewed here: <https://www.hongkongcaselaw.com/category/a-o-smith-holdings-barbados-srl/>

<sup>30</sup> <http://wenshu.court.gov.cn/content/content?DocID=e554a506-3ed6-4e6f-a578-1c0f385e969e&Keyword=%E9%99%86%E9%9B%AA%E8%89%B3%7C%E4%BC%AA%E9%80%A0>

May 16, 2019

	Adjustments made during 2010					2010 10K	2018 10K
	2009	Q1	Q2	Q3	Q4		
<b>80% of 95.9</b>	76.7						
<b>Excess to Fair Value</b>	90.6						
<b>NET Fair Value of Remaining Assets</b>	5.3			-1.1			
<b>Goodwill</b>	55.4	-5.7		1.1	50.8		
<b>Intangibles</b>	42.2		-3.3				
<b>Finite Intangibles</b>	34.0				37.3		
<b>Infinite Intangibles</b>	8.2		-3.3		4.9		
<b>Goodwill + Finite Intangibles</b>	63.6				55.7	56.4	59.5
<b>Deferred Tax Liability</b>	-7.0						

Source: Company disclosures

The accounting fudge machine soon kicks into action again, because subsequent goodwill evaluations are based on the whole reporting unit that the acquisition was incorporated into and not just the acquisition itself. Consequently, as long as the goodwill evaluation for the water business as a whole still adds up to recorded value, there is no goodwill write-down.

When it was consolidated at the time of the 80% purchase, there were no meaningful additions to gross PPE at cost to reflect any tangible assets (See page 27 of the 2009 10k). On a best-case scenario, AOS paid up for a manufacturing license, some business contacts, and not much else. AOS established a company in Shanghai, Shanghai Water Treatment or SWT, to hold the Tianlong assets.

The 10k statement for the Tianlong acquisition appears odd:

*"The company acquired an 80 percent interest in SWT the business at a total cost of \$76.7 million..... As required under ASC 805 the company recorded 100% of the fair value of the assets and liabilities as of the date of acquisition, with the 20 percent noncontrolling interest recorded in the equity section of the company's balance sheet. The acquisition value exceeded the fair value of the assets acquired by \$90.6 million, of which \$55.4*

May 16, 2019

*million was recorded as goodwill and \$42.2 million was recorded as intangible assets in the Water Products segment."*

The above statements are from the same paragraph on page 37 of the 2009 10K.

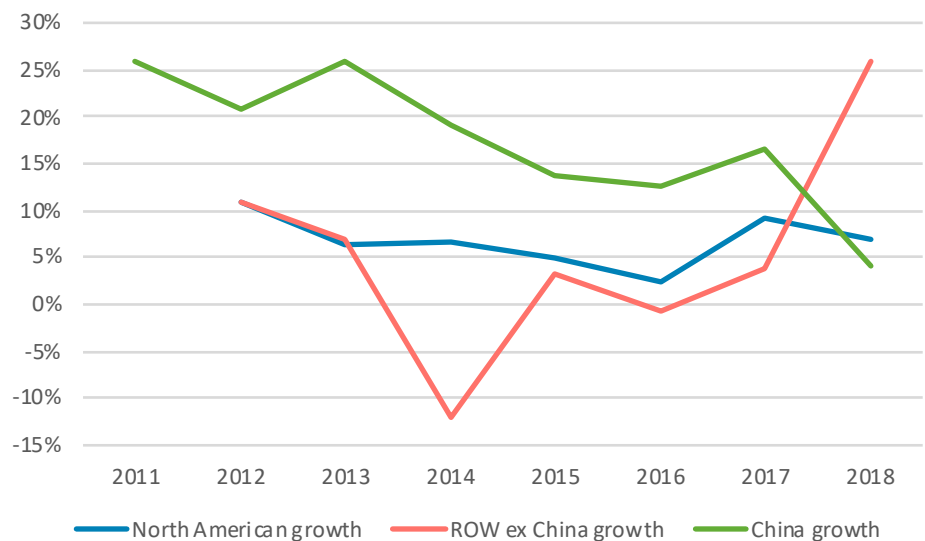
Note the statement above refers to "acquisition" value and not "consolidated" fair value. If the acquisition value exceeded the fair value of acquired assets by \$90.6 mln, this must be all goodwill, and not \$55.4 mln goodwill plus \$42.2 mln in intangible assets; Where is the tangible PPE? And Does \$90.6 mln in excess of fair/book value on a price paid of \$70.6 mln mean that Tianlong had negative net fair/book value? The company's poor phrasing is misleading and provides little confidence in its representations.

A more sensible interpretation is that the \$90.6 mln excess to fair value refers to the full 100% of consolidated net assets, not the acquired 80% interest, and that the excess to fair value is represented by goodwill only of \$55.4 mln, not \$90.6 mln. Using the more sensible interpretation suggests the remaining net fair value of assets excluding goodwill and Intangibles was only \$5.3 mln - not much considering this was meant to be the acquisition of a manufacturing operation.

**Rest of World Issues**

AOS sales growth in Rest of World ex-China is puzzling, and the company has been silent on the issue.

**Chart 15. Revenue Growth by Region**



Source: Company filings

May 16, 2019

The chart does not account for inter-company sales. Consolidation brings growth in ROW ex-China in 2018 down from 26% to 21%.

In 2011, the company changed its reporting segments to North America and Rest of World. But outside the United States, only Canada has significant volumes of business. Since Canada is now included in “North America,” we question where growth in Rest of World ex China might come from—it’s not Europe, India, Mexico, Vietnam, or Turkey.

There is reason to question AOS cash balances, not just in China but in other foreign operations. Cash held in non-China foreign subsidiaries is far in excess of the scale of these non-China foreign operations, relative to sales, long-lived assets, and almost certainly earnings. It is hard to see how this foreign group could generate such cash or justify having it.

**Table 23. Non-China Foreign Operations (USD mln)**

Net Sales							
	2012	2013	2014	2015	2016	2017	2018
<b>United States</b>	1,241.0	1,335.4	1,447.9	1,531.4	1,570.7	1,698.1	1,820.8
<b>China</b>	461.2	581.0	691.8	787.1	887.1	1,034.9	1,071.2
<b>vs Consolidated China Sales</b>					1,009.9	1,185.0	1,127.2
<b>Canada</b>	150.1	142.5	128.8	129.9	138.7	163.7	175.0
<b>Other Foreign</b>	87.0	94.9	87.5	88.1	89.4	100.0	120.9
<b>Total</b>	<b>1,939.3</b>	<b>2,153.8</b>	<b>2,356.0</b>	<b>2,536.5</b>	<b>2,685.9</b>	<b>2,996.7</b>	<b>3,187.9</b>
<b>North America</b>	1,391.1	1,477.9	1,576.7	1,661.3	1,709.4	1,861.8	1,995.8
<b>Rest of World</b>	548.2	675.9	779.3	875.2	976.5	1,134.9	1,192.1
<b>Non-China Foreign Sales (inc. Canada)</b>	237.1	237.4	216.3	218.0	228.1	263.7	295.9

Source: Company filings

China makes up the great majority of foreign operations ex-China, foreign operations sales amount to just 9% of the AOS total. “Other foreign” sales appear to have come mostly from Mexico, as India sales were about \$34 mln in 2018, (2018 10-K, page 18). Europe, the Mideast, Hong Kong, Turkey, and Vietnam combined were less than \$18 mln (“less than 6% of Rest of World Sales,” 2018 10-K page 4). If Mexico accounted for the balance, sales there would have been \$68.9 mln.

AOS does not break out profit by region, but we know that most non-China foreign operations are loss-making or not making much money. Yet cash held by non-China foreign subsidiaries exceeded revenue there in 2013 and

May 16, 2019

was still 86% of revenue in 2017, before the company repatriated a portion of the cash. That means the non-China foreign operations cannot be generating enough cash flow to create this stock of money. AOS could be moving money to offshore tax havens, likely to Hong Kong to secure loans to China. We also think it possible that some of the cash balances are either partly fiction and/or used as undisclosed collateral for third party financing.

**India**

One of the mysteries of the AOS business is why the company has such a fabulous China business in water heaters and can't get any traction in India, when the markets are arguably very similar. India sales have averaged only 2% of the Rest of World Segment since 2014 and topped out at 4% of ROW in 2011-12. The explosion in Chinese housing construction accounts for the difference in volume of sales but not really for the difference in margins; the India business consistently loses money.

We believe that losses are worse than reported and that AOS has overstated its India capex to bury those losses.

Auditors said AOS's fixed-asset accounting was inadequate.

Auditor's qualification(s), reservation(s) or adverse remark(s) in auditors' report [Axis]	Auditor's favourable remark [Member]	Auditor's unfavourable remark [Member]
	01/04/2017 to 31/03/2018	01/04/2017 to 31/03/2018
Disclosure of auditor's qualification(s), reservation(s) or adverse remark(s) in auditors' report [Abstract]		
Disclosure of auditor's qualification(s), reservation(s) or adverse remark(s) in auditors' report [LineItems]		
Disclosure in auditors report relating to fixed assets		The Company has not maintained proper records showing full particulars, including quantitative details and situation of fixed assets.

Remark in AOS Indian audit report for 4/1/2017-3/31-2018

Disclosures on capital plant roughly line up with the company's reports to its Indian auditors. But they do not line up with our investigations. We have reason to doubt that disclosure. So do the Indian auditors. In the most recent filing, AOS' India auditors recorded an "unfavorable" remark on the fixed assets.

AOS has reported about \$35 mln in net capex spend to its Indian auditors. We believe that AOS has overstated its capital expenditures in India by between \$7-10 mln.

May 16, 2019

**Table 24. Total Capex reported by AOS of \$35 mln (Change in Fixed Assets)**

	Fixed Assets	Change in FA	Change in FA (USD)	Rate USDINR
<b>2007</b>	0.14			39.35
<b>2008</b>	0.13	-0.01	-0.0001	48.61
<b>2009</b>	137.42	137.28	2.9581	46.41
<b>2010</b>	142.76	5.34	0.1198	44.61
<b>2011</b>	679.18	536.42	10.1087	53.07
<b>2012</b>	951.72	272.54	4.9666	54.88
<b>2013</b>	1,533.35	581.63	9.4077	61.83
<b>2014</b>	2,236.25	702.90	11.1192	63.22
<b>2016</b>	2,182.90	-53.35	-0.8057	66.22
<b>2017</b>	2,122.99	-59.91	-0.8822	67.92
<b>2018</b>	2,037.86	-85.13	-1.3338	63.83
	<b>Total Capex</b>	<b>2,037.72</b>	<b>35.66</b>	

Source: India Companies House

We estimate that AOS spent a total of just about \$8 mln on its plant near Bangalore.

- ▶ Press releases indicate that the company acquired around 20 acres (871,000 square feet) of land in Harohalli. In the first phase, the plant built covered 76,000 square feet, and in the second phase, 150,000 square feet were added.<sup>31</sup>
- ▶ Our interviews with real estate agents and industrial zone officials in India indicate that the land cost would be about INR 14 mln per acre translating into an investment of INR 280 mln (\$4 mln) for 20 acres of land. It appears that the company paid less. Indian financial statements for FY18 indicate that AOS paid INR 132 mln (\$1.9 mln) for the land in 2009.
- ▶ The normal cost of construction currently is around INR1,000 (\$14.45) per square foot. Assuming higher-end construction for 50% more, we estimate the cost of constructing the factory INR339 mln (\$4.9 mln). The cost of construction five years earlier would have

<sup>31</sup> See company disclosure here: <https://www.aosmithindia.com/sites/default/files/pressrelease/Link4.pdf>

May 16, 2019

been substantially less.

- ▶ The company’s Indian financial statements for 2017 give a 2016 value for the machinery of INR10.8 mln (\$156,000). Assuming it was purchased seven years previously, walking back depreciation, which is over 10 years in the Indian statements, we estimate that the equipment cost INR100 mln, or \$1.5 mln.

In total: \$1.9 mln for land, \$4.9 mln for plant construction, and \$1.5 mln for equipment, totaling \$8.3 mln.

We met with a retired Indian auditor, who told us that the unfavourable comment on the AOS financials was highly unusual. It was also the first time this unfavorable remark was reported.

The 2017 audit report also shows undisclosed on-going tax disputes and many inter-company transactions, especially between India and China.

**Indian distribution**

AOS established a sales office in India in 2008 and began manufacturing water heaters there in 2010 and water treatment products in 2015. The company has consistently expressed hope for growth and profitability but reported losses.

India seems consistently to miss its revenue targets. The business was promised to be a revenue driver for the parent. The India business clocked \$20 mln in revenue in 2012 but was at just \$26 mln in 2017.

**Table 25. Reported Revenue and Losses in the AOS India Business**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>India Losses</b>				-\$7.5	-\$8-9	-\$8-9	-\$7.5	-\$5.0	-\$2-3	Profitable
<b>India sales</b>	\$18.1	\$20	\$20.3	\$15.1	\$15.9	\$26.0	\$26.2	\$44.2		
<b>Sales growth</b>		10%	2%	-26%	5%	14%	44%	30%		

Source: Company 10-Ks and earnings calls

**Governance Issues**

We believe AOS reporting problems are violations of SEC rules.

**FASB and SEC Reporting Violations**

1. *Failure to separately disclose land use rights and/or correctly categorize them as intangible assets*



May 16, 2019

AOS does not separately disclose its China land use rights or show them in its intangible assets. This is clearly required by FASB Accounting Standards Codification 805 (ASC 805) and ASC 350.

*2. Failure to distinguish between different types of receivables in either the balance sheet or cash flow statement*

Regulation S-X Rule 5-02, Balance Sheets says receivables must be separately stated for:

- (1) customers (trade);
- (2) related parties (see § 210.4-05(k));
- (3) underwriters, promoters, and employees (other than related parties) which arose in other than the ordinary course of business; and
- (4) others.

And goes on to say:

“(b) If the aggregate amount of notes receivable exceeds 10 percent of the aggregate amount of receivables, the above information shall be set forth separately, in the balance sheet or in a note thereto, for accounts receivable and notes receivable.”

AOS China, with notes receivable in excess of 24% of total receivables, is clearly in violation of this rule.

*3. Failure to disclose restrictions on foreign cash balances (FASB SEC Regulation S-X Rule 5-02)*

**ISS**

Institutional Shareholder Services give AOS the worst possible score for corporate governance.

“A. O. Smith Corporation’s ISS Governance QualityScore as of April 1, 2019 is 10. The pillar scores are Audit: 1; Board: 10; Shareholder Rights: 10; Compensation: 8.

Corporate governance scores courtesy of Institutional Shareholder Services (ISS). Scores indicate decile rank relative to index or region. A decile score

May 16, 2019

of 1 indicates lower governance risk, while a 10 indicates higher governance risk.<sup>32</sup>

We concur. Company accounts are replete with incomplete and inconsistent disclosures. Just a few examples:

- ▶ Operating cash flow numbers show that the U.S. had to borrow cash to help finance its dividend, buybacks, capex, and acquisitions, despite apparent strong operating cash generation from the U.S. business.
- ▶ There were large divergences between foreign earnings before tax and foreign operating cash flow in 2017 and 2014.
- ▶ There is a \$55 mln discrepancy between non-China foreign cash repatriated and retained profits in the Chinese subsidiaries.
- ▶ It is very odd to have virtually zero cash in the substantially large and apparently profitable U.S. business consistently at the end of every year.
- ▶ Cash held in non-China foreign subsidiaries is far in excess of the scale of these non-China foreign operation.
- ▶ The U.S. 10-K shows some \$72 mln of marketable securities were net redeemed in 2018, however China filings show only \$17 mln cash was net redeemed.
- ▶ There is a clear discrepancy between notes receivable in the consolidated China Chinese filings and the AOS 10K filings.
- ▶ For reconciliations between the balance sheet changes and cash flow statement expenditures, there is very little consistency in capital expenditure/acquisitions.
- ▶ The \$27 mln increase in China long-lived assets in 2016 makes no sense if only \$13 mln was spent on China capex in that year. Likewise, in 2017 China long-lived assets rose by \$66.5 mln, yet China capex was reported in 2017 at \$24 mln.
- ▶ The MD&A statements for capex are not consistent at all compared with actual capex numbers shown in financial statements.

<sup>32</sup> See Yahoo! Finance: <https://finance.yahoo.com/quote/AOS/profile?p=AOS>

May 16, 2019

- ▶ The intangibles section of the 10-K contains no land use rights. Does the company own China land-use rights or not?

We could go on. Suffice it to say that the AOS accounts are riddled with contradictions and omissions.

One aspect of AOS's poor governance is the randomness with which the company compensates its China president. In 2018, modified Ding Wei's compensation by adding a fourth component of "China Margin." They don't provide the specific targets, but claim he hit 76.2% of the combined China goals. It seems outlandish that this can be the case, in light of the China sales growth they projected for 2018 to investors of 13% vs. 2% actual.

So sales growth came in at about 15% of plan (revenue shortfall ~\$100 mln) but Ding got paid on 76% of the target.

#### 2017 Proxy

For Mr. Ding, we used three components to calculate his annual incentive: Return on Equity of 21.53% and two business unit performance objectives. Forty percent (40%) of Mr. Ding's incentive opportunity is based on China's performance with respect to earnings before interest and taxes (EBIT), thirty percent (30%) on China sales and thirty percent (30%) on Return on Equity as described above.

#### 2018 Proxy

For Mr. Ding, we used four components to calculate his annual incentive: Return on Equity of 24.58% and three business unit performance objectives. Mr. Ding's incentive opportunity is based twenty percent (20%) on China earnings before interest and taxes (EBIT), twenty percent (20%) on China margin, thirty percent (30%) on China sales and thirty percent (30%) on Return on Equity as described above.

We reported record earnings in 2018 and achieved 110.5% of the corporate Return on Equity incentive bonus target and 76.2% of the combined China EBIT, China sales, China margin and corporate Return on Equity targets. Accordingly, the named executive officers were awarded incentive compensation bonuses set forth in the table below. In addition, the PCC may award discretionary bonuses it deems appropriate. The PCC approved a discretionary bonus of \$100,000 to Mr. Kita in recognition of his individual efforts in implementing a corporate restructuring

May 16, 2019

## From the Initial 2018 Guidance:

“We believe China will grow about 13% for the full year. If you adjust for the \$20 million pull-in in quarter four, this is a 17% year-over-year growth rate.”

<Q - Mike P. Halloran> : So, just an easy quick one. The 13% China growth, is that a constant currency number?

<A - John J. Kita>: We said that's U.S. dollars and we expect the currency to be flat or maybe RMB, maybe a little bit stronger year-over-year

## Actual China Results:

“Sales in China grew four percent in 2018. Excluding the impact of the appreciation of the U.S. dollar against the Chinese currency, our sales in China increased almost two percent in 2018.”

## Valuation

AOS's acquisitions have been made at around 2x sales. These businesses, when acquired, were growing much faster than the overall business. They are about 10% of total sales. But 90% of the business is NOT growing anywhere near as fast. We estimate that, as a whole, AOS revenues might grow 2% in the long run. AOS's current company multiple is 2.5x--much too high.

Overall, we believe that AOS management is weak and fails to plan for emerging challenges or opportunities, instead choosing to sweep problems under the rug. We therefore estimate that, based on a 1.2x multiple of 2019 estimated sales of \$3.12 bln, the company's shares are worth \$22.68, a discount to current price of 53%. We choose the lower end of the multiples because we believe shareholders will discount based on dismal disclosure standards and what is either dishonesty or incompetence.

## Questions for management

We encourage investors to make management explain some of the yawning discrepancies between reported results and realities on the ground. Here are a few questions we have:

- ▶ Why has AOS not disclosed its relationship with UTP?
- ▶ Why does AOS keep so much money in China? Do you have plans to repatriate that cash? Why or why not?

Has AOS invested  
in a project with  
UTP without  
informing  
investors?

May 16, 2019

- ▶ What is the “other income” of \$39 million?
- ▶ Has AOS invested in UTP in any way?
- ▶ Did AOS pay out a \$60 mln dividend from its China companies in 2017?
- ▶ Why does AOS have so much cash in non-China foreign subsidiaries, when those appear to be generating very little cash flow?

Selling water heaters and water filters should be a simple business. If you have nothing to hide.

## Disclaimer

This is a publication of J Capital Research USA LLC (“J Capital”), a registered investment advisor with the U.S. SEC (CRD #290086). This publication is distributed solely to authorized recipients and clients of J Capital for their general use in accordance with the terms and conditions of a Services Agreement and the J Capital Authorized User Content Agreement available [here](#). Unauthorized copying or distribution is prohibited. If you are reading this publication without having entered into a Services Agreement with J Capital, or having received written authorization to do so, you hereby agree to be bound by the J Capital Non-Authorized User Content Agreement that can be viewed [here](#). J Capital does not do business with companies covered in its publications, and nothing in this publication should be construed as a solicitation to buy or sell any security or product. In preparing this document, J Capital did not take into account the investment objectives, financial situation and particular needs of the reader. This publication is intended by J Capital only to be used by investment professionals. Before making an investment decision, the reader needs to consider, with or without the assistance of an adviser, whether the contents are appropriate in light of their particular investment needs, objectives and financial circumstances. J Capital accepts no liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this publication and/or further communication in relation to this document.