January 23, 2024

Zacks Small-Cap Research

Sponsored – Impartial - Comprehensive

Brian Lantier
312-265-9470
blantier@zacks.com

scr.zacks.com

10 S. Riverside Plaza, Chicago, IL 60606

Xiao-I Corporation-ADS (AIXI-NASDAQ)

AIXI: Initiating Coverage – The AI hype cycle subsides but opportunities and challenges lie ahead in 2024

A blend of technology and AI-related companies in China trade on average at 3.0x 2024 revenues. Applying a discount that multiple for Xiao-I's stage of development, we believe each ADS could be worth $2.40.

Current Price (01/22/24)	$1.58
Valuation	**$2.40**

OUTLOOK

We are initiating coverage of Xiao-I Corporation (AIXI) with a $2.40 valuation.

Xiao-I was an early player in the Chinese chatbot market with more than two decades of experience. The company is leveraging that experience and its core customer relationships to enter new markets for cognitive AI services.

The company is competing with some of the most successful companies in China for mindshare in AI markets. The company is likely to require substantial additional financing to reach profitability which investors will need to keep in mind.

SUMMARY DATA

52-Week High	**$10.04**
52-Week Low	**$1.46**
One-Year Return (%)	**N/A**
Beta	**N/A**
Average Daily Volume (sh)	**125,722**
Shares Outstanding* (mil)	**72**
Market Capitalization ($mil)	**$114**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**0**
Insider Ownership (%)	**14%**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**N/A**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2023 Estimate	**N/A**
P/E using 2024 Estimate	**N/A**
Zacks Rank	**N/A**

*Each ADS represents 1/3 of one share

Risk Level	**High,Speculative**
Type of Stock	**Growth**
Industry	**Artificial Intelligence**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2021					32.5 A
2022		12.9A		35.3A	48.2 A
2023		26.5A		30.1A	56.6E
2024		32.7E		37.4E	70.1E

*The company reports 6 month results

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2021					$0.05A
2022		$0.01A		-$0.10A	-$0.09A
2023		-$0.27A		-$0.09E	-$0.35E
2024		-$0.16E		-$0.12E	-$0.28E

Zacks Projected EPS Growth Rate - Next 5 Years % **N/A**

*EPS reported as net income/ADS

© Copyright 2024, Zacks Investment Research. All Rights Reserved.

Key Points....3
Business....4
History....7
Capabilities....7
Industry Outlook....8
China vs US AI....13
Competitive Landscape....14
Management Team....16
Recent Results....16
Recent News....17
2023 IPO and Preferred Shares....18
Risks....18
Insider Trading and Ownership....19
Valuation....21
Summary....22
Income Statement Forecasts....23
Balance Sheet....24
Historical Stock Price....25

KEY POINTS

➢ Xiao-I has operated on the edge of the artificial intelligence world through its legacy chatbot business for close to two decades and is leveraging that experience to expand into new product lines related to AI. The business has undergone a radical transformation over the past twelve months as a result of the company's IPO on the NASDAQ in 2023, its shift to a cloud-based model and the introduction of the company's first large language model (LLM) in 2023.

➢ Global demand for AI solutions is exploding but as with past bubbles the actual application of the technology remains a bit more elusive, especially in China where the government has sought to limit some early AI applications (though these restrictions were later eased).

➢ The company launched Hua Zang large language model (LLM) in October 2023 joining at least 100 other LLMs announced in China in 2023. We expect competition in the LLM market to continue to intensify before the leading technology companies establish their dominance. Xiao-I's success in providing industry specific solutions (like those for the financial services sector) gives it a leg up when competing head-to-head with China's tech giants.

➢ While the company has opened a US office and would like to expand globally, the limitations of models trained principally in languages other than English will mean that the Chinese market will likely remain the company's focus for the near future. The company has indicated that it has an LLM trained in English but we feel that given the geopolitical tensions around the AI market, Chinese companies will find it difficult to compete with Western LLMs.

➢The company has shifted to a cloud delivery model and we are predicting revenues of $56.6 million in 2023 growing to $70.1 million and $89.7 million in 2024 and 2025 respectively. As of June 30, 2023, the company has $4.7 million in cash and equivalents on the balance sheet and debt of $26.8 million. The company is likely to require substantial additional resources to meet its near-term obligations and compete in the AI space where other public companies have significantly greater financial resources and private companies are raising hundreds of millions of dollars. We anticipate that this funding will come from a combination of debt and equity depending on where the ADSs trade.

➢ The company has a long operating history and is attempting to reposition itself in the market as an AI solutions provider which has been met with some skepticism by the market. While the company has demonstrated some applications for its LLM that can be used in consumer products, we believe the current examples are just scratching the surface of the potential applications of these models going forward.

➢ The company granted its CEO 3.7 million preferred shares in mid-December and each preferred share is entitled to the voting power of 20 ordinary shares. As a result of this grant, the CEO now has control of more than 79% of the voting power of the company (up from just 13% prior to this grant). We believe ADS holders may be concerned about this shift in control of the company which occurred without any advance notice for the ADS holders.

➢ We are establishing a target of $2.40/share for AIXI based on valuations for Chinese Technology and AI companies. We think that it is likely that the company's ADS will trade at a discount to the market average because of its concentration of customers, focus on the Chinese market, concerns over the cost of competing in the generative AI market, and the substantial control granted to the CEO via the preferred share grant in December.

OVERVIEW

Business

Xiao-I Corporation operates an existing legacy business with extensive experience in the customer service market. In 2022, the company began a significant push to join the artificial intelligence (AI) boom and the company is in the midst of a transition to focus on cognitive AI solutions. The company uses a broader definition of Artificial Intelligence than most and includes customer service tools that may have been labeled “chatbots” in 2019 as part of its AI solutions. We think the market has a clear understanding of the company’s existing business but its new AI initiatives are not fully appreciated.

The foundation of Xiao-I began back in 2001 when it established Shanghai Yingsi Software which built and introduced the “Xiaoi robot brand”, one of the first chatbots to hit the market in China. In 2009, the company shifted to a B2B model and the founders launched Shanghai Xiao-I to acquire the Xiaoi robot brand. Like many Chinese companies listed on the US markets, the company has a complex ownership and corporate structure that we will detail below.

Xiao-I today offers several natural language processing tools to its customers primarily in the banking industry designed to enhance customer service. The company also has an architectural design business that has contributed meaningfully to revenue in the past (mainly due to a few large contracts). The principal solutions sold to customers today are the company’s conversational chatbot, natural language processing and voice processing but the recently introduced “Hua Zang Universal Large Language Model” will be a significant focus of the company going forward and could provide upside to our estimates in future years.

In 2023 the company significantly shifted its focus from software sales to cloud platform sales and we expect that this will be the company’s business model going forward. At its core, this is principally a shift in the sales model (from software licensing to a cloud model) and while gross margins are impacted positively by this shift of the sales model, we are focusing more on the company’s product lines and opportunities for growth in the long run.

Xiao-I is leveraging its existing expertise with clients in the banking, insurance, and construction fields to offer advanced automated customer service tools. Despite realizing what we expect will be double digit revenue growth in 2023, the company is investing very aggressively in developing new products which is likely to mean that profitability will be elusive until operations scale up significantly. We believe that globally, the AI market is likely to be dominated by much larger companies with significantly deeper pockets than Xiao-I but there could be room for the company in the Chinese market if they continue to offer a differentiated product that serves the needs of its core customers in industries like banking, insurance, and construction.

Xiao-I’s core competencies have been derived from its legacy customer service business.

- **Natural Language Processing** enables customers to process human language with a combination of computer-based models. Since most of the company’s solutions enable computer-to-human communication, this is a critical component of the company’s services.

- **Speech Processing** enables the company to apply the same degree of human-to-computer interaction by converting speech into digital signals that can be processed. When you call a customer service number and say something like “speak to an agent”, speech processing enables that call to be connected to the proper channels.

- **Computer Vision** broadly refers to optical character recognition and construction blueprint analysis at Xiao-I. One of the company's subsidiaries, Shanghai Xiao-I has a particular strength in analyzing and processing CAD drawings which has led to some large contracts in the past.

- **Machine learning** including traditional machine learning, deep learning, reinforcement learning, and other tools. These machine learning tools are applied alongside the company's NLP, speech processing and computer vision tools to offer a more complete solution in all of its target markets.

Xiao-I has leveraged its experience in these technologies to develop several products but the primary offerings are Conversational AI, Generative AI, and its latest offering, the Hua Zang universal large language model (LLM).

The company's conversational AI platform is effectively the legacy business that originated as an early chatbot serving the financial industry in China. Conversational AI is particularly popular as a customer service tool as it helps its customers lower costs and is generally thought to improve the customer experience (though anyone caught in a loop of a chatbot's circular logic might disagree). Increasingly, companies are looking to leverage AI tools like those offered by Xiao-I, to improve sales and marketing initiatives by utilizing "*Next Best Step*" prompts to improve salesforce efficiency. This would involve analyzing both historical and real-time chats in connection with customer data to automatically prompt things like bundled packages (for example something like, "Did you know you could save $x/month if you added your cell phone package?).

Historically, the company's construction support platform offering analytical tools for construction-related drawings and designs has been a meaningful contributor to sales but as the company's focus shifts to new initiatives, it is unclear how large of a contributor this line of products will be to the company's total revenue.

The company generates revenue from software sales, customized technical development services, maintenance/support agreements and cloud products (customer service/contact center, architectural design AI and services served to customers on the cloud).

The core of the company's business is still principally, AI-based tools to improve customer interactions primarily in the Chinese banking sector and professional architectural drawing review solutions utilizing computer vision and natural language processing.

An Evolving Business "Model"

As companies begin to integrate LLMs into every aspect of their business, the cost of adopting and maintaining these models will quickly become excessive for all but the largest companies. To address, this growing challenge of the cost of incorporating AI, there is a new trend emerging that leverages the "software as a service" concept: Models as a Service (MaaS)

For many small and medium-sized enterprises or even large enterprises that are not fully committed to a large investment in AI resources, the MaaS option helps companies avoid the upfront investment in expensive hardware (models reside on the cloud) and brings the benefits of the LLMs to all organizations regardless of size.

Over time we anticipate that Xiao-I will deliver models that are customized by industry to enable all players (regardless of size) to benefit from the model training that today is effectively only available to companies with the most significant AI investments.

To address this trend as Xiao-I saw it emerging, it shifted many of its models to be served on a cloud platform and in 2023 the company began offering its model to clients for their own application development.

In the past, Xiao-I has developed natural language processing/image processing platforms for clients to build their own applications. The company is effectively doing the same thing now but by offering its Model as a Service. We believe that the natural language processing/image processing platforms were the most significant contributors to revenue in the first half of 2023. The company's platforms are utilized by a number of leading Chinese software firms to develop their own applications.

Xiao-I's cloud platform products are principally:

- Natural Language Processing/Image Processing Platforms
- Contact Center
- Architecture AI products (expected to launch in 2024)

The company has some financial and municipal clients that prefer not to host their applications on the cloud for security reasons and those customers will likely remain traditional software license sales.

For some robotic process automation (RPA) tools the company offers a combination of automation, computer vision and machine learning to automate repetitive high-volume tasks (like fabric defect detection) and the company Integrates these tools into its AI solutions sold for a flat fee (with additional maintenance and service agreements).

For services like the company's AI contact center services the company charges a per-minute fee for customer interactions so there will be some variability based on seasonal and other factors that drive customers to reach out to customer service.

For the company's advanced modeling tools, revenues are either billed by period (quarterly or annually) or by subscription fee which varies based on customer demand.

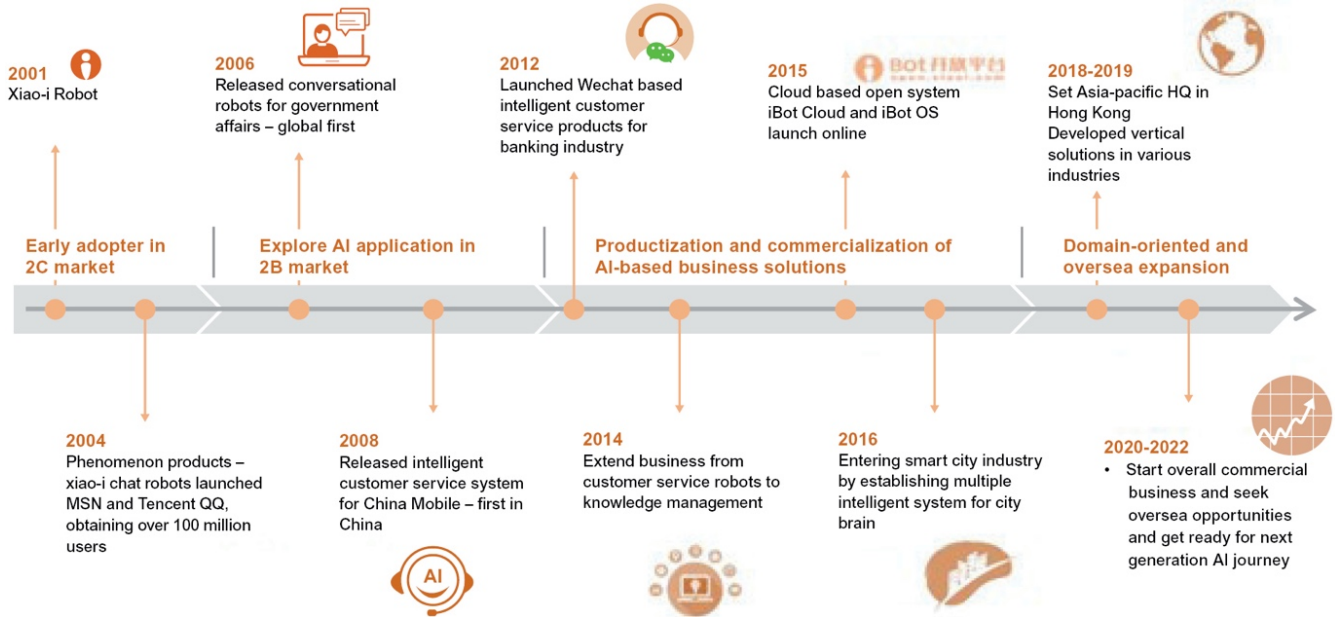
HISTORY

Xiao-I was incorporated in the Cayman Islands in 2018 and acts as a holding company.

Xiao-I is regarded as the primary beneficiary of the variable interest entity (VIE), Shanghai Xiao-I which operates in the People's Republic of China (PRC) and reports its Chinese operations as consolidated entities under GAAP. In this report, we will refer to Xiao-I (the holding company) and Shanghai Xiao-I (the VIE) as effectively the same entity though there are important differences that should be considered.

The origins of Xiao-I can be traced back to the founding of Shangai Yingsi Software Technology (also known as "Incesoft") in 2001. Through Incesoft the company established an early consumer chatbot under the Xiaoi robot brand which eventually reached 100 million users on MSN and Tencent platforms. Throughout the balance of that decade, the company worked to transition to a commercial platform for government and corporate clients. In 2008, the company launched an intelligent customer service system for China Mobile followed by a WeChat-based customer service product for the banking industry. These products laid the foundation for the AI customer service tools that Xiao-I now offers.

Figure 1: Xiao-I History



Source: Company prospectus

Xiao-I Capabilities:

The main drivers of demand for the company's toolkits are the increasing degree of automation in customer service and the marketing industries. The company's long operating history in the market as a leading provider of chatbot services in China has given it a strong foothold in its primary markets of banking and insurance. The company has long-standing relationships with nearly every major bank in China and currently, 8 of the top 10 banks in China are customers of Xiao-I as well as 6 of the top 10 insurance companies.

Within the market for Cloud-based AI solutions, the strong domain expertise that the company appears to have in the financial industry is a significant point of differentiation. The company's voice-recognition products also have a degree of specialization that enables it to recognize many of the industry-specific terms and customer inquiries that are challenging for more generalized voice-recognition tools. There are

a large number of companies offering customer contact services in China but the broad range of services offered by Xiao-I appears to be a differentiator with its customers.

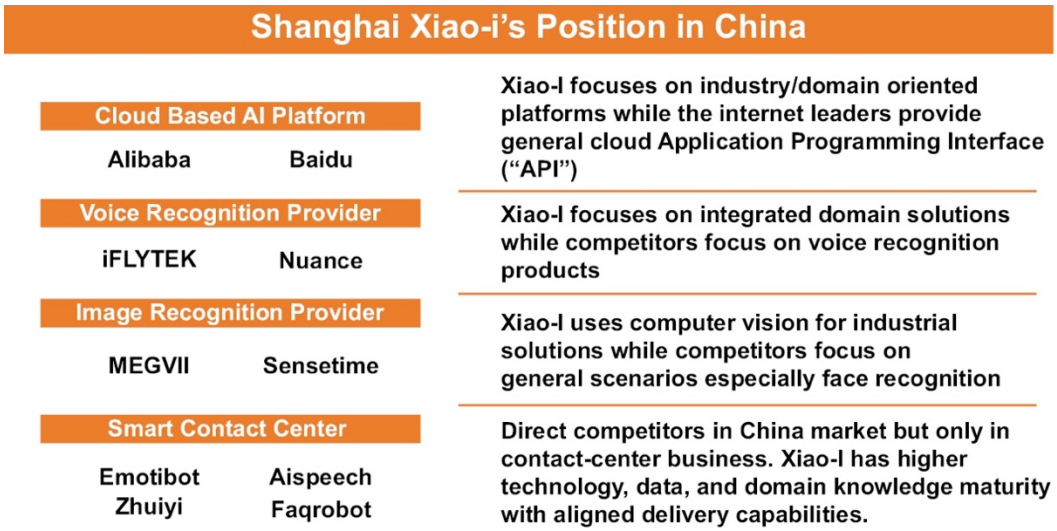
INDUSTRY OUTLOOK

The AI industry is evolving rapidly and we will have to consider both the new markets the company is targeting with its LLM and the legacy AI business.

The company's large language model (LLM), Hua Zang enters a very crowded market at a time when new models are being launched almost daily. Our view on the LLM market is that it is likely to be dominated by extremely large technology companies with a divide between companies based in the EU, North America and China. This means that while there are seemingly countless LLMs ultimately, we believe that the market leaders, OpenAI, Microsoft, Meta, and Google, along with potential private AI players like Anthropic or Stability AI, will control most of this market in the US. It is also possible that large technology firms like Apple, Amazon and Salesforce will use their significant financial capacity to catch up quickly via acquisition or through internal investments. Given the important geopolitical ramifications of AI advancements, we expect there will remain a fairly sharp divide between those companies with LLM models for the Western markets versus those companies serving the Chinese markets but the theme that large technology companies will dominate should remain intact. With companies like Baidu, Tencent, Alibaba, and ByteDance investing heavily in the space we expect leadership to consolidate at the top of the Chinese technology industry. Companies like IFlytek and SenseTime have also captured significant mindshare in China and several private companies have raised large sums of capital to compete in this market. We think Xiao-I's industry focus (serving principally banks and financial services) and natural language processing experience should be a good platform for establishing itself as an LLM provider but it will likely be as an industry-focused player rather than as a broad AI leader given the huge sums of money it will take to compete with the best of breed players.

Within the company's core existing businesses – smart contact, voice recognition, image recognition and cloud-based AI, the company's competitive positioning within the industry seems fairly strong in its core industries – finance and construction.

Figure 2: Shanghai Xiao-I's Competitive Positioning



Source: Company Prospectus

In general, we would agree with the company's assessment of its competitive position but it is clear that the market leaders have significant advantages (principally, financial capacity) over Xiao-I in every market except the smart contact center market.

The AI Landscape and Outlook:
2023 was the year of AI and perhaps equally the year that the use of AI as a buzzword in corporate marketing and financial documents has soared. In the second quarter of 2023, AI-related terms were used over 7,000 times by companies in the S&P 500 on their quarterly earnings calls up more than 400% from the number of mentions in the first quarter. [1]

Anyone who has been following the equity markets for the past decade can remember past frothy moments for 3-D printing, VR/AR, and of course, blockchain/crypto technology but the hype around AI seems to have surpassed all of those previous bubbles by a wide margin. In large part, this is likely due to the promise of AI and the potential that it has to impact so many areas of corporate operations. For all of the promise of improvements to be delivered by AI down the road, it's worth noting that corporate applications have been fairly limited to date. Customer service is one of the first areas where we anticipate broad AI adoption but the models released to date have not quite matched the hype that we've seen in the markets. We will discuss the ways we see the AI market shaping up over the balance of the decade below but first, we would like to take a step back and define what we mean when we say AI.

Generative AI
Most investors have probably at least logged into ChatGPT or DALL-E to create a travel itinerary or generate a fun picture and for most people that is their impression of AI today. However, the reality is that corporations are becoming very good at leveraging Generative AI tools to speed product development, enhance customer service and potentially improve employee productivity.

Generative AI systems can "generate" new documents or images based on patterns learned from source data even if the patterns weren't in the data that was input into the original model. While the use cases are many and growing every day, the most common applications are content creation, search and discovery, summarization and chatbot enhancements.

While the initial applications of generative AI tools were in more creative fields like design, increasingly they are seen as useful tools for customer service and sales optimization across many industries.

Cognitive AI
Cognitive AI is another emerging category of AI services that effectively attempts to replicate the human thought process. By combining existing technology like natural language processing and machine learning, these systems attempt to think and reason like a human. In this context we are not referring to the broader Artificial General Intelligence, but rather systems that can reason like a human in various applications.

Examples of cognitive AI deployed today include virtual personal assistants (think Siri, Alexa, etc.), chatbots (this is Xiao-I's principal offering today) and recommendation systems (like Amazon's suggested bundles or any streaming platform's recommended media). By analyzing user inputs these systems can make connections that may be overlooked by the user.

As you can see much of the AI that is in our lives every day sits in the background of various apps that we utilize every day and has enabled the broader adoption of the apps that they power.

Traditional AI
The foundations of the cognitive AI and the generative AI models that proliferate today originate in the traditional AI models that emerged over a decade ago. These traditional AI models were built to assess very specific data and focus on a specific goal or task. Early chatbots, like the ones first developed by Xiao-I, worked with predefined rules and parameters to make decisions. These traditional AI models were not very sophisticated but they were effective uses of the technology to demonstrate the power of AI.

The AI roadmap in 2024 and beyond

While we could fill a small novel with the prospects for AI to impact our society in ways good and bad, we'd like to focus investor attention on ways that we think will be some of the first enterprise applications. The clearest applications are where novel combinations can be tried in a model to achieve a desired result. For example, in the past, a pharmaceutical company might employ hundreds of researchers to identify compounds for combinations that may treat a particular disease. These drugs can now be designed using generative AI before entering trials which offers vast potential for new discoveries, reduced time to market and lower costs. In a similar fashion, areas that require significant testing and costs to develop new products like chip design or materials will likely see huge demand for AI toolsets.

Increasingly, we also expect governments to start taking a more proactive role in addressing the potential societal impacts of AI. In many developing economies, low-cost labor is a significant advantage and provides opportunities for people to provide for themselves and their families. While the impact of one company shifting all of their customer service operations to an AI tool wouldn't be significant, imagine the impact on countries like India or the Philippines if millions of customer service jobs are eliminated. These technological advances cannot be considered in a vacuum, without considering the impact on society at large.

In the Chinese market, we think the government will have to balance the needs of its people with the desire to remain competitive with the global technology leaders. We anticipate that the wave of job replacements coming across the globe will start at relatively low-end customer service positions but will rapidly move into more traditional white-collar jobs. In the back half of the decade, it is likely that there will a larger push to integrate advanced AI tools into robotics that will enable machines to perform many tasks that require both general intelligence and dexterity which could significantly impact manufacturing jobs and the economies that are driven by those jobs such as the China's.

We believe that the bleeding edge of the AI market will focus on steps toward Artificial General Intelligence (AGI) particularly when ChatGPT 5 is released and governments will have to address the prospect of rising unemployment, increased social support needs and growing corporate profits in a rapidly changing world.

Chatbots: The Gateway to AI

Chatbots have evolved a great deal over the past 40 years, but their value to businesses has been evident from the earliest iterations when pattern recognition software enabled the bots to carry on basic "conversations" with customers. As customer interactions increasingly shifted from phone calls to web and app-based queries, the ability to address these questions with a technological solution was very appealing to businesses.

The principal driver of early chatbot adoption was for customer service applications where companies sought to reduce costs, while providing real-time 24/7 support, offering a level of personalization (by accessing customer data to enhance responses) and generally improving the overall customer service experience. As the amount of data accessible to companies has grown, this has allowed the chatbots to evolve to a point where they can now generate e-commerce leads and even sales in industries like banking or travel.

As the sophistication of chatbots has grown, some companies are even deploying them as education/training assistants (think interactive tutors) or as healthcare assistants gathering information to improve access and the quality of care.

As the models training the chatbots continue to improve we anticipate that future chatbots will also evolve and improve the quality of their conversations to approximate human interaction. We also anticipate that chatbots will continue to specialize in the industries they serve as Xiao-I has already accomplished with the banking market.

There will remain some challenges in addressing the different model responses needed to handle local dialects, but again we expect that companies like Xiao-I will be able to focus on meeting the demands of users with who speak a regional dialect.

Xiao-I Solutions

With this backdrop of the overall Chatbot and general AI market we can begin to look at the solutions offered by Xiao-I which principally fall into two categories – legacy business (cognitive and traditional AI) and new business (generative AI).

Through the company's contact center business (probably more commonly called customer service) it offers traditional AI chatbots and voice-based tools to improve customer communication. Since most customer inquiries are relatively simple and common questions, the company's AI chatbot can answer a customer's question without human input and it can include "next best steps" options that boost sales opportunities within organizations. Given the high cost of training and retaining customer service representatives, the company's chatbot solutions have proven very popular, particularly in the banking and insurance fields in China. We have attempted to gauge how "natural" the communication from the Xiao-I contact center business is for clients, but frankly, when computer-generated responses are put through a computer-based translation service, they are going to sound less and less "natural" at each stage. The company's core solution does have the ability to quickly identify customer needs based on the submitted query and prompt customers to supply any additional needed information. The company's chatbots are considered no-code or low-code because they require very limited customization to be integrated into a client's site. With over 20 years of experience in the company's core industries (Banking/Insurance) the company has built up a deep base of knowledge that improves the accuracy of its chatbot solutions. The company's natural language processing and speech recognition tools enable Xiao-I's customers to address customer questions in near real-time.

Xiao-I also offers a live chat solution with integrated script assistance that can be brought up quickly by customer service agents and automatically fills in data like relevant customer information (profile, services requested, customer needs) which speeds response times and appears to improve customer satisfaction.

In a 2018 article with the company's former CEO, it was noted that 80% of China's 50 largest banks had adopted Xiao-I's customer service solutions for online banking or phone banking. Shanhai Pudong Development Bank indicated that after adopting Xiao-I's solutions "communication time for each customer's inquiry decreased from 127 seconds to 27 seconds" resulting in savings of nearly $1 million for every 20-second reduction in time to route a call to a human. [2]

The company has also developed a strong presence in the architecture industry where it offers professional architectural drawing review tools. The company utilizes natural language processing and computer vision tools for drawing reviews that have been trained on existing approved designs and prevailing safety codes. Additionally, the company now offers AI blueprint review to lower the cost of blueprint review, speed up the review process and offer review at any time on demand. While on the surface this business may seem completely unrelated, the application of natural language processing tools to this market has enabled the company to invest in new tools.

The company has a number of other solutions that we believe should be viewed as complimentary to the core operation such as smart agent assistant, smart coach, knowledge management, voice recognition, and outbound calling.

New products:

The company has recently announced a few consumer products that leverage its Hua Zang LLM which appear to be built more to demonstrate the potential of the system rather than attempt to truly enter the market for consumer products.

The company announced a collaboration with Ubebis to market a “smart baby crib” that utilized the company’s Hua Zang LLM and various sensors to monitor vital signs. The company’s release indicated that could assess the quality of the baby’s sleep and offer daily health reports. There have been a few applications of ChatGPT combined with text-to-audio tools to create a “smart monitoring” system but on the surface, this appears to be a formal product (though we will note that we couldn’t find the product for sale online). Since this is significantly outside of the company’s core competency, we don’t assign any value to this product currently but we’ll watch for other developments. It’s also worth noting that Ubebis was only recently launched and Xiao-I Robot is listed as a seed investor in the company (per crunchbase.com) so this may not be a truly arms-length transaction.

In December, Xiao-I introduced the Hua Zang Smart Speaker which appears to be a bit like an Alexa/Siri chatbot combined with a 24/7 virtual therapist. The company said they hope to improve “users’ well-being and mental health” by conducting psychological assessments and giving users self-evaluation tools. We feel like that seeking to automate some aspects of mental health treatment that could improve access to services is a lofty but commendable goal. Privacy concerns would have to be addressed but we will watch to see this product demonstrated before making further judgments. Again, this is a consumer hardware product that is far from the company’s core focus so we are assigning no value to this business today.

While both of these products are limited in their scope and market opportunity, we think that the vertical LLMs that have been trained for the products (one for the infant health and one for psychological treatment/mental health support) could have broader application.

During the launch demonstration of the Hua Zang LLM, the company demonstrated how the model might generate industry research reports for banking clients based on various prompts. We do believe that this is the direction of the banking industry but we think that the limitations of the models today make this a more interesting concept for future deployment rather than a revenue generator in 2024.

The C-Eval LLM Leaderboard

In an effort to evaluate many of the different LLMs that are coming onto the market a dataset has been created with nearly 14,000 questions to evaluate Chinese Foundation models at www.cevalbenchmark.com

The C-Eval website includes a significant disclaimer which indicates that the leaderboards can be manipulated by someone using a strong model as the basis for their model or by adding the exact test data to the training set. Additionally, they note that there are models with open access (users can independently verify the performance) and those models with limited access (models that are not readily accessible by the public).

With this understanding that the leaderboards can be manipulated and those models with limited access cannot be evaluated independently we will still note the relatively strong apparent performance of the Hua Zang models.

Figure 3: C-Eval Benchmark Leaderboard – Models with Limited Access

#	Model	Creator	Access	Submission Date	Avg	Avg(Hard)
0	BlueLM	vivo	Private	12/26/23	91.7	79.8
1	MagicLM	荣耀	Private	12/7/23	90.1	80.7
2	Mind GPT	理想汽车	Private	12/4/23	89.7	73.9
3	云天天书	深圳云天励飞技术股份有限公司	Private	11/24/23	89.5	75.2
4	QuarkLLM	夸克	Private	11/14/23	89	73.3
5	**HZ60**	**小i机器人**	**Private**	**12/26/23**	**87**	**66.7**
6	FanttecLM	Fanttec Technology	Private	11/8/23	86.7	79.1
7	Qwen	Alibaba Cloud	Private	10/29/23	85.7	71.9
8	CW-MLM	CloudWalk	Private	10/20/23	83	58.6
9	星海	Hisense	Private	12/21/23	80.8	57.5
10	**HZ30**	**小i机器人**	**Private**	**11/27/23**	**80.1**	**55.3**
11	AndesGPT-7I	OPPO	Private	9/28/23	79.9	59.3
12	云天书	深圳云天算法技术有限公司	Private	8/31/23	77.1	55.2
13	Galaxy	Zuoyebang	Private	8/23/23	73.7	60.5
14	KwaiYii-66B	快手	Private	9/15/23	73.7	46
15	UniGPT2.0 (	Unisound（云知声）	Web	10/13/23	72.9	55.2
16	YaYi	中科闻歌	Web	9/4/23	71.8	60.3
17	AiLMe-100B	APUS	Web	9/4/23	71.6	57.9
18	Mengzi	澜舟科技	Private	8/25/23	71.5	48.8
19	DFM2.0	AISpeech & SJTU	Private	9/2/23	71.2	46.1
20	ChatGLM2	Tsinghua & Zhipu.AI	Private	6/25/23	71.1	50
21	星云通信大:	ZTE	Private	11/27/23	70.4	54.8
22	**HZ20**	**小i机器人**	**Private**	**10/11/23**	**70.4**	**54.3**
23	ChatDD-FM	水木分子	Web	9/16/23	69.1	49.4
24	360GPT-S2	360	Private	8/29/23	69	42
25	InternLM-12:	Shanghai AI Lab & SenseTime	Private	8/22/23	68.8	50
26	HITsz-Lychee	HITsz（哈工大深圳）	Private	9/11/23	67	50.4
27	CW-MLM-13	CloudWalk	Private	8/21/23	66.7	47
28	GS-LLM-Beta	共生矩阵科技（深圳）有限公司	Web	8/20/23	66.7	43.2
29	SageGPT-V0	4Paradigm	Private	7/25/23	66.6	61.1
30	SenseChat	SenseTime	Private	6/20/23	66.1	45.1

Source: https://cevalbenchmark.com/static/leaderboard.html

For Xiao-I to have 2 models ranking in the top 10 is incredibly impressive on the surface given the competitive nature of this market. However, we would note that many of the largest foundational model builders in China rank lower on this list and a number of the top performers are companies with limited public information available. Until Xiao-I is able to allow open access to their models for evaluation, we think the market may view these results skeptically.

The global AI arms race – Western Companies versus Chinese Companies

While the US kicked off the latest explosion of AI investment and product launches with the introduction of OpenAI's ChatGPT in late 2022, Chinese firms have been moving quickly to close the gap with many of the latest initiatives claiming to be superior to ChatGPT4. However, based on the significantly larger amount of information available for training models in English, it is likely that Western models will have an edge for some time.

Governance: In the United States, legislation continues to be considered at a glacial pace while advancements in AI continue to move forward at warp speed. This disconnect is likely going to lead to a self-regulated domestic AI industry that will rely on legislation down the road to counter perceived harmful

aspects of AI as they emerge. We believe that the 2024 election cycle (and the potentially harmful impact of AI-generated images and video) could be the catalyst for meaningful legislation.

China has taken a more formal approach to restricting the use of AI (at least on paper) with a series of generative AI restrictions announced in August of this year. However, shortly after these regulations were announced a number of the leading AI companies introduced generative AI systems that were approved by the Cyberspace Administration of China (CAC). Some have described these new rules as something akin to bumpers in a bowling alley or guardrails on a road designed to keep the industry headed in the right direction without impeding progress.

The EU has passed draft legislation to address and monitor what it considers high-risk AI and it follows the success the EU had with the General Data Protection Regulation (GDPR). It is unclear what impact this legislation could have on AI innovation in the EU market but it is likely that the EU will remain the most regulated AI market for the time being.

Privacy vs. Security: While facial recognition technology continues to creep into various aspects of our daily lives in the US, China is moving forward at breakneck speed on this front. The Chinese government has sought to find a balance between the stability it seeks and the privacy concerns of its citizens and the technology that they've encouraged appears to be threading that needle and is increasingly widespread around the globe.

We believe that the divide between the EU, Chinese and US approaches is so significant that there will likely be little crossover between the markets. A company seeking solutions from OpenAI is unlikely to consider Ernie from Baidu and vice versa. This should enable niche, regional players like Xiao-I to operate in the Chinese market without facing additional competitive pressures from the global AI market (though the Chinese market, particularly for LLMs may still be hypercompetitive).

INDUSTRY POSITION

Competitive Landscape

We won't spend much time detailing the very competitive US and Western AI markets. As we've noted, the largest technology companies in the world are investing heavily in all forms of AI (Traditional, Cognitive and Generative). In no particular order, some of the most significant US-based AI players include:

1) **Anthropic** – Having raised money from companies including Google and Amazon, Anthropic is one of the few private companies making waves in the market. The company's LLM – Claude – powers its chatbot.

2) **Google** – in addition to investing in a number of AI startups, Google has launched Gemini (its answer to OpenAI's ChatGPT-4) and Bard, an AI chatbot.

3) **Meta** – Launched its LLM - Llama – in 2023 and is taking a slightly different approach by using an open-source model.

4) **Microsoft** – in addition to a whole host of AI products from the company itself, Microsoft has reportedly invested $13 billion in the maker of ChatGPT, OpenAI.

5) **OpenAI** – The industry leader and creator of ChatGPT. While ChatGPT has only been on the market for a little over a year, the impact has been profound. The company is in early discussions for another funding round that could push its valuation above $100 billion.

This is far from an exhaustive list, as a simple search reveals almost a thousand AI chatbots and a growing list of competing LLMs which is ever evolving. Given the massive investments in computing

power needed to be competitive in this space, we do believe that the market is largely well-defined today with the leading companies already established in the global market. We do believe that there will be a secondary trend where models trained in local languages and serving specific industries can have success and that appears to be the target for Xiao-I.

The Chinese market now includes over 100 LLMs but like the US market, the early leaders are mostly divisions of the largest technology companies.

1) **Baidu** – In October 2023 Baidu introduced Ernie 4.0 its LLM and claimed that it was on par with OpenAI's ChatGPT. Recently, Baidu indicated it had surpassed 100 million users of Ernie and the company began charging $8/month for access to its latest models.

2) **Alibaba** – In September 2023, Alibaba introduced the latest version of its LLM, Tongyi Qianwen, trained on both English and Chinese data sets. Alibaba remains focused on partnering with businesses to encourage wider adoption.

3) **Tencent** – In September 2023, Tencent opened its Hunyuan LLM up for public use and its chatbot is used in the WeChat app.

In addition to these leading firms**, iFLYTEK, SenseTime**, and TikTok owner **ByteDance** have introduced competitive products, while Zhipu (backed by Xiaomi, Alibaba and Tencent) and Baichuan (backed by Alibaba and Tencent) have each raised over $300 million to target these markets.

The Chinese firms were a bit of a competitive disadvantage early on in the LLM race as the government sought to control the pace of development in the AI space with some early regulations (subsequently eased) and the US limitations on chip sales by Nvidia to Chinese firms limited access to computing power. However, the gap closed rapidly in the second half of 2023 and Nvidia continues to work to meet demand in China with specific chipsets for that market.

One of the challenges facing the Chinese models is the smaller dataset of Mandarin-based websites relative to English-based websites (52% vs 1.3%) that can be used for training LLMs. Currently, models are addressing the challenges of having fewer resources for training by digitizing written text, automating translations and transcribing spoken text. We believe the Chinese market has adequate resources to develop competitive products based on early feedback.

Competitive advantages:
So how does a company like Xiao-I not only compete but thrive when its competition includes the Chinese equivalents of Google, Amazon and Meta? Normally, we would hope for some type of technological advantage or significant new market opportunity but the reality is that it is highly unlikely that Xiao-I can secure the resources necessary to compete with the leading LLMs in China right now. We think the company will seek out new product platforms to highlight the power of incorporating AI into our daily lives (see the new products – the smart crib and smart speaker mentioned above) and those use cases could be a point of differentiation for users who are uncertain of ways to utilize AI.

Ultimately, the company's greatest competitive advantage lies in its customer relationships. In the company's core contact center business, the company has customer relationships with 8 of the top 10 banks in China, China Mobile, the largest mobile phone carrier in China with nearly a billion users and Huawei which counts roughly 3 billion people as users of its handsets.

Frankly, the inertia associated with being a long-standing vendor with many leading companies is likely the company's greatest competitive advantage. Xiao-I will have to continue to invest to defend its position with its customers because the largest AI companies will probably try to poach some marquee customers.

Apple Lawsuit
The company sued a subsidiary of Apple, Inc, in 2012 for patent infringement which resulted in an administrative judgment from a Chinese court confirming the validity of Shanghai Xiao-I's patent in June 2020, but there was no ruling as to whether or not Apple had infringed on Xiao-I's patent. In August 2020, Shanghai Xiao-I filed another lawsuit against Apple demanding Apple stop infringing on its patent and seeking damages in excess of $1.0 billion. The company has not provided any further update and we think it's unlikely that this lawsuit will result in a meaningful settlement for Xiao-I but it is worth noting because of the size of the lawsuit.

MANAGEMENT

Mr. Hui Yuan – CEO and Chairman of the Board – founded the predecessor company Incesoft in 2001 before moving to the role of CEO of Shanghai Xiao-I and subsequently into his current role as CEO of Xiao-I. Given his experience in developing early chatbots and applications for artificial intelligence, Mr. Yuan has served as the vice chairman of the Artificial Intelligence Industry Innovation Alliance (CAIIIA) along with several other leadership positions in the IT and AI fields. Mr. Yuan has spoken internationally on the role technology (namely smart machine and AI tools) can play in driving the overall growth of the Chinese economy. Mr. Yuan is a key factor in the company's success and is likely to be important to the company's recruiting efforts in the market.

Ms. Wei Weng – CFO – Ms. Weng has served as the company's CFO since 2019 and has been the CFO of Shanghai Xiao-I since 2015. Prior to joining the firm, Ms. Weng worked for an international accounting firm for seven years.

The company's management team is relatively small for an emerging public company looking to compete with global companies like Tencent, Alibaba and Baidu. We anticipate that the company will look to round out the management team in 2024.

RECENT RESULTS

Xiao-I derives revenue principally from cloud services, developing technology services, software sales and ongoing maintenance and support. Cloud platform sales jumped sharply in 2022 (up 364%) to $25.7 million as a result of the promotion of the company's AI super automation platform.

Interestingly, cloud platform sales growth appear to have slowed significantly in the first half of 2023 up just 3% sequentially and total sales in the first half of the year were actually down 25% sequentially versus the second half of 2022 as a result of sharply lower technology development revenues. The company noted three major contracts in 2022 – one for an upgrade of the drawing review platform and two for developing and delivering intelligent education products – were fulfilled that year. We believe that when the company transitions to a cloud model for Architectural AI service in 2024 this revenue line should smooth out a bit more.

The company has significantly increased its investment in research and development. **R&D spending has jumped from 16% of sales in 2021, to 58% of sales in the second half of 2022 to over 110% of sales in the first half of 2023**. As of March 2023, roughly 60% of the company's employees (214 employees in total) were listed as working in research and development. We believe that the majority of these employees are working on new initiatives related to the Hua Zang LLM. It will likely require significant investments to compete in this market with major technology companies like Tencent, Alibaba and Baidu investing heavily in their own generative AI models.

RECENT NEWS

In April, Xiao-I announced a partnership with Guizhou Chinadatapay Network Technology to focus on training models in industry-specific data. The agreement looks to leverage Xiao-I's cognitive AI tools when applied to Chinadatapay's deep data. Xiao-I noted that Chinadatapay has over 300 deployments in more than 50 industries. However, as with many China-based firms we have had difficulty verifying this data. The Chinadatapay website does not seem to be functioning (at least for US-based IP addresses) and there appear to be few references to the company outside of this press release. Investors skepticism around recent foreign IPOs is only amplified by releases like this that are difficult to independently verify.

In July, Xiao-I announced an intelligent contact center (i.e., customer service) agreement with a "leading Chinese aviation group" that was unnamed in the release. This appears to be a good example of the sort of automation that Xiao-I can bring to corporations with high customer contact rates like those in the travel industry. Core services like Interactive Voice Response (think of an automated menu that responds to your prompts) are augmented with tools like an AI assistant.

This broadens the company's industry focus outside of financial services and should help the company reduce its dependency on a few core customers.

As previously discussed, the company held an event in October to introduce the capabilities of its large language model, Hua Zang Universal, like many of the other leading LLM companies have hosted. The company highlighted some of the advantages of incorporating its voice recognition tools into the LLM. The commercial applications for this technology seem fairly limited on the surface but we do believe that voice technology will be a key component of some applications and given the company's customer base in financial services it could prove valuable.

The company has offered up some potential applications of their technology including the smart baby crib or the smart speaker we've noted. In general, this was a positive presentation but investor reception was lukewarm as the use cases did not seem terribly unique in a rapidly evolving field.

The company did note that it has "partnerships" with over 100 businesses using the Hua Zang model but without a definition of what those partnerships entailed it is unclear what the financial impact on Xiao-I could be.

Perhaps to address just the issue of creating unique applications, the company hired as its chief scientist Fangzhen Lin a Computer Science professor at the Hong Kong University of Science and Technology. With over 70 papers published Dr. Lin has been a leading voice in logic programming, program verification and the precursors to AI for the past 30 years. Dr. Lin received a PhD in computer science from Stanford in 1991. The professor appears to be working on Natural language Processing and Natural Language Understanding based on current research posted. Also, it is a relatively minor point but the company said Dr. Lin received his Ph.D. in AI from Stanford, while Dr. Lin's biography on his website indicates that his Ph.D. was awarded in Computer Science.

In 2022 Xiao-I was assigned a property by the Chinese government for the purpose of building an AI industrial park. The company invested $2.9 million in Zhizhen Guorui (Shanghai) Information Technology Development for roughly 51% and subsequently provided a credit line of up to $13.8 million to Zhizhen Guorui. As of 6/30/23 roughly $11 million of the credit line had been advanced to Zhizhen Guorui for the construction and operation of the AI industrial park. This is a fairly significant allocation of resources for Xiao-I so we will look forward to updates on this relationship in 2024.

2023 IPO and PREFERRED SHARE GRANT

The company closed its initial public offering of 5.7 million ADSs at $6.80/ADS in March 2023. Each ADS represents just 1/3 of a common share (total outstanding shares are roughly 24 million) so the IPO effectively represented 8% of the post-IPO share count and gave the company an implied market capitalization of nearly $500 million.

Figure 4: ADSs as a percentage of outstanding shares

ADSs issued	ADS to Common Shares	Common Shares Represented by IPO	Total Outstanding shares	ADSs as a Percentage of Total outstanding shares
5,700,000	0.33	1,900,000	24,015,592	8%

Source: Company filings and Zacks Small Cap Research

In December 2023 the company granted 3.7 million preferred shares to the company's CEO Mr. Yuan. The rationale offered by the company was that given the turmoil at some other AI firms (namely OpenAI) the board wanted to solidify Mr. Yuan's commitment to Xiao-I. The preferred shares offer voting rights at a ratio of 20 to 1, so the preferred shares effectively boosted Mr. Yuan's voting power by an additional 74 million votes and increased his total voting percentage to 79%.

Figure 5: Voting power

ADSs issued	ADS to Common Shares	Common Shares Represented by IPO	Total Outstanding shares	Preferred Shares Granted	Voting Right ratio	Total Votes Represented by Preferred Shares	Total Votes (Common Shares + Preferred Votes)	CEO's Beneficial Voting Power	ADS Holders' Voting Power
5,700,000	0.33	1,900,000	24,015,592	3,700,000	20 to 1	74,000,000	98,015,592	79%	2%

Source: Company filings and Zacks Small Cap Research

While we recognize the importance of retaining key staff, the preferred share issuance effectively cedes control of the company to the CEO with no compensation for the ADS holders who now have just 2% of the voting rights in the company. We believe that this could impact the company's ability to secure additional equity financing as investors may be spooked by the change of voting structure without any prior warning.

In early January 2024, the company further granted the CEO, Mr. Hui Yuan, the right and the option to purchase 1.45 million ADSs at $2.07/share. While this is a relatively small stake in the company (representing less than 2% of total outstanding shares) it does represent a substantial portion of the total ADSs outstanding (roughly 25% of the current total). Following the very large preferred stock grant in December, this ADS option will likely raise further dilution concerns for ADS holders.

RISKS

- Customer concentration – In 2022, 58% of revenues were derived from the company's top 5 customers. A loss of any of these customers would have a material impact on the company.
- Supplier concentration – In 2022, roughly 67% of purchases were from the company's top three suppliers.

- The company identified two material weaknesses in its internal controls over financial reporting (lack of sufficient accounting personnel and lack of appropriate US GAAP knowledge). The company is working to address these issues but has not announced any new hires publicly at this point.
- Investors in Xiao-I's ADSs are purchasing an equity interest in Xiao-I, the Cayman Islands holding company, not the operating entity in China. While this is fairly standard for Chinese companies, it remains a risk for investors in the ADSs.
- Competition is intensifying in the AI industry and the majority of the company's competitors have substantially greater access to financial resources.

INSIDER TRADING AND OWNERSHIP

Xiao-I's public shares are American Depository Shares (ADS) where 1 ADS = 1/3 of an ordinary common share. There are currently 24 million common shares (the ADSs represent 1.9 million of these shares) and 3.7 million preferred shares (which carry 20 to 1 voting rights as noted above). The percentages below only refer to the ownership stake of the common shares (the preferred shares are excluded for these calculations).

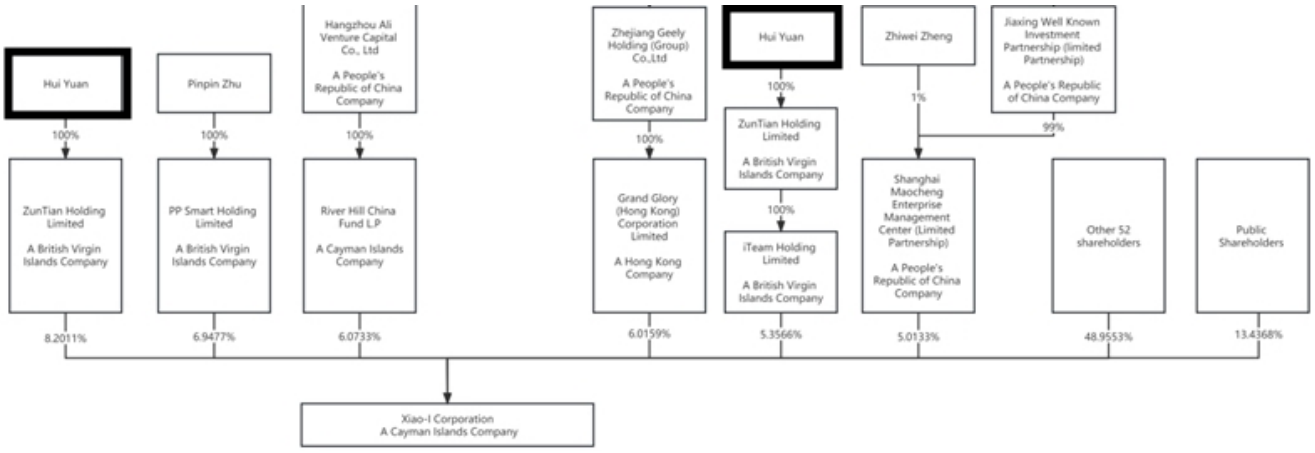
Major Shareholders:

The Chairman/CEO Mr. Hui Yuan – 13.6%
PP Smart Holding – 6.9%
River Hill China Fund – 6.1%
Grand Glory (Hong Kong) Corporation – 6.0%
Shanghai Maocheng Enterprise Management Center – 5.0%
Shanghai Tongjun Enterprise Management Consulting – 4.8%

Of note, Grand Glory (Hong Kong) is related to Li Shufu (the founder of Chinese auto firm Geely).

We would also note that PP Smart Holding appears to be the holding company for shares owned by the former CEO, Dr. Pinpin Zhu. The company has not disclosed the circumstances of his departure from the company but Dr. Pinpin was the face of the company up until 2019 and was responsible for many of the company's patents filed. While we do not believe that Dr. Pinpin had a non-compete agreement, we believe that his patents remain the property of Xiao-I and if he elected to join a competitor his work would likely have to avoid the Xiao-I patents.

Figure 6: Voting power

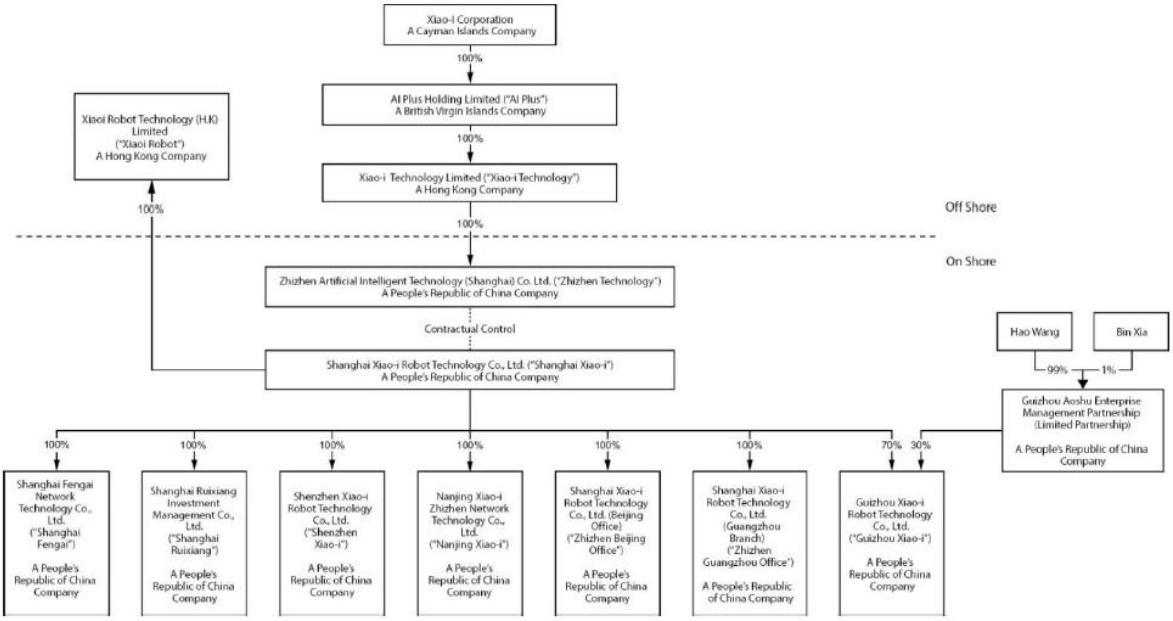


Source: Company prospectus

The preferred shares granted to Mr. Yuan offer voting rights at a ratio of 20 to 1 so the 3.7 million preferred shares effectively give Mr. Yuan an additional 74 million votes (versus 24 million common shares) and his total voting percentage now equals more than 79%.

As with many Chinese companies that operate in sensitive industries that restrict or limit foreign ownership, Xiao-I has a complex ownership structure from the Cayman holding company down to the actual operating entities in China. Since all but one of the operating subsidiaries (Guizhou Xiao-I Robot Technology) is 100% owned by the VIE we feel that the corporate structure is relatively clean. However, we would note that given the sensitive nature of the AI industry and growing tensions that seem to be emerging between the US and Chinese AI industries, this structure remains a significant risk for investors in the ADSs.

Figure 7: Corporate Structure



Source: Company Prospectus

VALUATION

Valuing Xiao-I is a difficult task at the moment because the booming market for anything related to AI is meeting a reality of slowing Chinese economy. Since the company's IPO, it has only had one earnings release to date (the six month results for 6/30/23) so gaining a proper understanding of where the business stands today is challenging. Additionally, many of the company's competitors are global tech giants or privately held AI startups so finding truly comparable companies is a challenge. We believe we have been fairly conservative with our revenue model forecasting roughly $70 million in revenues for 2024 and $89.7 million for 2025. Valuations for Chinese tech companies have fallen sharply over the last five months with many companies in the space trading at or near 52 week lows despite the AI frenzy that has occurred in the US markets. Eventually, we expect some reversion to the mean in both markets but until that time we will use a more conservative valuation assumption for Xiao-I.

Applying a 3x revenue multiple to our 2025 revenue estimate of roughly $90 million gives us a valuation for the company of approximately $270 million. Given the early stage of development of Xiao-I's new AI business lines, the size of its business, risks associated with operating in China, and the board's actions which have diluted ADS holders we believe the stock will trade at a substantial 30% discount to this valuation. Discounting this valuation back 1 year to the end of 2024 we arrive at a valuation for the business of around $177 million. With roughly 24 million shares outstanding the per share value of Xiao-I is a little over $7.30/share, however each ADS trading on the NASDAQ only represents one third of one share so our valuation target per ADS is - $7.30 divided by 3 or approximately $2.40 per ADS at the end of 2024.

If the company successfully expands its offerings and sees demand for new services scale faster than we have modeled, we believe our forecasts may prove conservative. Additionally, if the Chinese economy manages to avoid a severe contraction, valuations could improve dramatically for many AI-related companies including Xiao-I.

One additional wild card is the potential for consolidation in the AI space. With Xiao-I trading at less than 2x 2024 revenues, the company's valuation could be attractive to another company looking to buy growth at a reasonable price.

Figure 8: Comparable Valuations

Peers Comps Relative Valuation
1/22/24

Company	Ticker	Price*	Market Cap* $ mil	Sales 2023E Consensus	Sales 2024E Consensus	Mkt Cap/Sales 2023E	Mkt Cap/Sales 2024E
Alibaba	BABA	68.63	$ 177,639	$ 133,800	$ 146,430	1.33	1.21
Baidu	BIDU	99.72	$ 35,849	$ 18,940	$ 20,560	1.89	1.74
iFlytek	002230.sz	5.38	$ 12,195	$ 2,959	$ 3,740	4.12	3.26
SenseTime	0020.hk	0.11	$ 3,557	$ 672	$ 865	5.29	4.11
Tencent	0700.hk	34.12	$ 323,150	$ 88,534	$ 98,157	3.65	3.29
Cloudwalk	688327.ss	1.82	$ 1,887	$ 150	$ 219	12.55	8.60
Fourth Paradigm	6682.hk	5.87	$ 2,923	$ 790	$ 985	3.70	2.97
					Average	4.65	3.60
					Average Excluding high/low	3.73	3.08

		2024 Revenues		2025 Revenues
Zacks forecast Xiao-I		$ 70,072,813		$ 89,724,244
Potential valuation		$ 215,495,186		$ 275,929,307
Discount	30%	$ 150,846,630	30%	$ 193,150,515
			8%	$ 177,698,474
	Share Target			$ 7.30
	ADS Target			$ 2.43

Source: Zacks Small Cap Research and Yahoo Finance

SUMMARY

1) Despite the company's long operating history, Xiao-I can be viewed as an emerging AI player, migrating from a traditional software provider to one that can provide companies with specific tools to enhance their customer service or internal productivity. The company's shift to a cloud-based service provider has significantly improved gross margins but spending on R&D is likely to remain elevated for years.

2) The company has established itself as a leading provider of customer service tools in the banking sector in China but the competition is likely to intensify from leading technology companies who may also target this market.

3) As a result of the company's long operating history and frequent strategic shifts, we feel like the valuation is more reasonable today than it was at its IPO while the opportunities provided by the Hua Zang LLM offer reasonable upside.

4) Finally, the company faces a hypercompetitive landscape today where most of its peers have significantly greater financial, technological, and human resources. Investors are likely to wait for the company reveal its future funding plans and wait to see the business model for the Hua Zang LLM before committing to the ADSs. The effective change in voting control of the company as a result of the preferred share issuance in December will also likely limit near-term gains.

[1] https://markets.businessinsider.com/news/etf/ai-s-growing-influence-over-7-000-mentions-in-q2-earnings-calls-boost-stocks-1032606816

[2] https://www.digfingroup.com/xiaoi/

PROJECTED INCOME STATEMENT

Xiao-I Corporation
Income Statement

	2020	2021	6 months 6/30/22	6 months 12/31/22	2022	6 months 6/30/23	6 months 12/31/23	2023	6 months 6/30/24	6 months 12/31/24	2024	6 months 6/30/25	6 months 12/31/25	2025
Sale of software products	$ 5,098,730	$ 14,878,256	1,397,996	$ 2,149,117	$ 3,547,113	$ 535,004	$ 481,504	$ 1,016,508	433,353	390,018	$ 823,371	351,016	315,915	$ 666,931
Sale of hardware products	415,723	75,011	18,431	27,864	46,295	30,175	28,666	58,841	27,233	25,871	53,104	24,578	23,349	$ 47,927
Technology development service	6,404,394	9,246,992	6,296,844	10,123,045	16,419,889	1,763,797	1,234,658	2,998,455	1,419,857	993,900	2,413,756	1,142,985	800,089	$ 1,943,074
M&S service	1,937,887	2,772,795	1,497,871	931,655	2,429,526	1,426,784	1,070,088	2,496,872	802,566	601,925	1,404,491	451,443	338,583	$ 790,026
Sale of cloud platform products	-	5,550,959	3,648,339	22,093,796	25,742,135	22,719,659	27,263,591	49,983,250	29,989,950	35,388,141	65,378,091	40,696,362	45,579,925	$ 86,276,287
Net revenues (including sales to related parties of $2,449,560, $286,875 and nil for the years ended December 31, 2020, 2021 and 2022, respectively)	**$ 13,856,734**	**$ 32,524,013**	**$ 12,859,481**	**$ 35,325,477**	**$ 48,184,958**	**$ 26,475,419**	**$ 30,078,507**	**$ 56,553,926**	**$ 32,672,959**	**$ 37,399,854**	**$ 70,072,813**	**$ 42,666,384**	**$ 47,057,860**	**$ 89,724,244**
Cost of sale of software products	2,148,758	771,293	170,377	717,843	888,220	368,021	337,053	705,074	303,347	273,013	576,360	245,711	221,140	466,851
Cost of sale of hardware products	276,261	29,970	12,545	12,596	25,141	26,118	24,940	51,058	23,693	22,508	46,201	21,383	20,313	41,696
Cost of technology development service	3,604,014	4,390,825	2,661,707	9,532,337	12,194,044	1,286,290	938,340	2,224,630	1,036,495	755,364	1,791,859	834,379	608,068	1,442,447
Cost of M&S service	1,199,013	1,862,483	339,213	916,760	1,255,973	805,948	695,557	1,501,505	521,668	391,251	912,919	293,438	220,079	513,517
Cost of Sale of cloud platform products	-	3,831,160	536,863	2,478,903	3,015,766	3,519,521	5,452,718	8,972,239	6,897,688	8,847,035	15,744,724	10,174,090	11,394,981	21,569,072
-														
Cost of revenues	**$ 7,228,046**	**$ 10,885,731**	**$ 3,720,705**	**$ 13,658,439**	**$ 17,379,144**	**$ 6,005,898**	**$ 7,448,608**	**13,454,506**	**$ 8,782,892**	**$ 10,289,170**	**19,072,062**	**$ 11,569,001**	**$ 12,464,581**	**24,033,583**
Gross profit	**$ 6,628,688**	**$ 21,638,282**	**$ 9,138,776**	**$ 21,667,038**	**$ 30,805,814**	**$ 20,469,521**	**$ 22,629,899**	**$ 43,099,420**	**$ 23,890,067**	**$ 27,110,684**	**$ 51,000,751**	**$ 31,097,382**	**$ 34,593,279**	**$ 65,690,662**
Operating expenses:														
Selling expenses	4,566,760	4,620,113	2,094,124	1,817,694	3,911,818	2,377,409	2,734,020	5,111,429	5,418,115	5,689,021	11,107,136	6,030,362	6,331,880	12,362,242
General and administrative expenses	5,694,785	6,657,251	1,725,928	4,302,709	6,028,637	2,070,052	2,132,154	4,202,206	4,412,316	4,632,932	9,045,247	4,864,578	5,107,807	9,972,385
Research and development expenses	4,236,723	5,363,909	3,669,196	20,331,942	24,001,138	29,649,703	22,237,277	51,886,980	22,904,396	23,591,527	46,495,923	24,299,273	25,028,251	49,327,525
Total operating expenses	**$ 14,498,268**	**$ 16,641,273**	**$ 7,489,248**	**$ 26,452,345**	**$ 33,941,593**	**$ 34,097,164**	**27,103,451**	**61,200,615**	**32,734,827**	**33,913,480**	**66,648,306**	**35,194,214**	**36,467,939**	**71,662,152**
(Loss)/Income from operations	($7,869,580)	$4,997,009	$ 1,649,528	($4,785,307)	($3,135,779)	($13,627,643)	($4,473,552)	($18,101,195)	($8,844,759)	($6,802,796)	($15,647,556)	($4,096,831)	($1,874,660)	($5,971,491)
Other income/(loss):														
Investment losses	($207,497)	($156,630)	($121,618)	($21,563)	($143,181)	($225,351)	($157,746)	($383,097)	($110,422)	($99,380)	($209,802)	($69,566)	($62,609)	($132,175)
Interest expense	(1,026,636)	(1,866,831)	(1,202,391)	(1,238,424)	(2,440,815)	(1,570,847)	(1,602,264)	($3,173,111)	(1,522,151)	(1,552,594)	($3,074,745)	(1,474,964)	(1,504,463)	($2,979,427)
Foreign currency exchange gain/(loss)	41,592	11,252	0	(68,902)	(68,902)	0	0	0	0	0	0	0	0	0
Other income, net	1,770,225	932,557	44,160	399,858	444,018	525,431	341,530	$866,961	367,145	403,859	$771,004	434,149	477,564	$911,713
Total other income/(loss)	**$ 577,684**	**($1,079,652)**	**($1,279,849)**	**($929,031)**	**($2,208,880)**	**($1,270,767)**	($1,418,479)	($2,689,246)	($1,265,428)	($1,248,114)	($2,513,542)	($1,110,381)	($1,089,509)	($2,199,890)
(Loss)/Income before income tax expense	**($7,291,896)**	**$3,917,357**	**$369,679**	**($5,714,338)**	**($5,344,659)**	**($14,898,410)**	($5,892,032)	($20,790,442)	($10,110,187)	($8,050,910)	($18,161,098)	($5,207,212)	($2,964,169)	($8,171,381)
Income tax benefit/(expense)	235,854	(552,355)	220,820	(881,475)	(660,655)	(3,871,118)	(667,262)	($4,538,380)	(1,516,528)	(1,207,637)	(2,724,165)	(781,082)	(444,625)	(1,225,707)
Net (loss)/income	($7,056,042)	$3,365,002	$590,499	($6,595,813)	($6,005,314)	($18,769,528)	($6,559,293)	($25,328,821)	($11,626,715)	($9,258,547)	($20,885,262)	($5,988,294)	($3,408,794)	($9,397,088)
Net loss attributable to non-controlling interests	(247,677)	(312,811)	(2,674)	(104,105)	(106,779)	(173,782)	(118,067)	($291,849)	(209,281)	(166,654)	($375,935)	(107,789)	(61,358)	($169,148)
Net (loss)/income attributable to XIAO-I CORPORATION shareholders	($6,808,365)	3,677,813	$593,173	($6,491,708)	($5,898,535)	($18,595,746)	($6,441,226)	($25,036,972)	($11,417,435)	($9,091,893)	($20,509,328)	($5,880,505)	($3,347,436)	($9,227,940)
Foreign currency translation change, net of nil income taxes	(357,695)	(117,291)	145,129	258,687	403,816	507,422	0	0	0	0	$0	0	0	0
Total comprehensive (loss)/income	($7,413,737)	3,247,711	$735,628	($6,337,126)	($5,601,498)	($18,262,106)	($6,441,226)	($25,036,972)	($11,417,435)	($9,091,893)	($20,509,328)	($5,880,505)	($3,347,436)	($9,227,940)
(Loss)/Earnings per ordinary share attributable to XIAO-I CORPORATION shareholders														
Basic	($0.31)	$0.17	$0.03	($0.29)	($0.27)	($0.80)	($0.27)	($1.04)	($0.47)	($0.37)	($0.83)	($0.23)	($0.13)	($0.36)
Diluted	($0.31)	$0.16	$0.03	($0.29)	($0.27)	($0.80)	($0.27)	($1.04)	($0.47)	($0.37)	($0.83)	($0.23)	($0.13)	($0.36)
Weighted average number of ordinary shares outstanding														
Basic	22,115,592	22,115,592	22,115,592	22,115,592	22,115,592	23,308,370	24,015,592	24,015,592	24,495,904	24,740,863	24,740,863	25,235,680	25,488,037	25,488,037
Diluted	22,115,592	22,362,552	22,362,552	22,115,592	22,115,592	23,308,370								
							($0.09)	($0.35)	($0.16)	($0.12)	($0.28)	($0.08)	($0.04)	($0.12)
Equivalent ADS 3 to 1 ordinary shares						69,925,110	72,046,776	72,046,776	73,487,712	74,222,589	74,222,589	75,707,040	76,464,111	76,464,111

© Copyright 2024, Zacks Investment Research. All Rights Reserved.

BALANCE SHEET

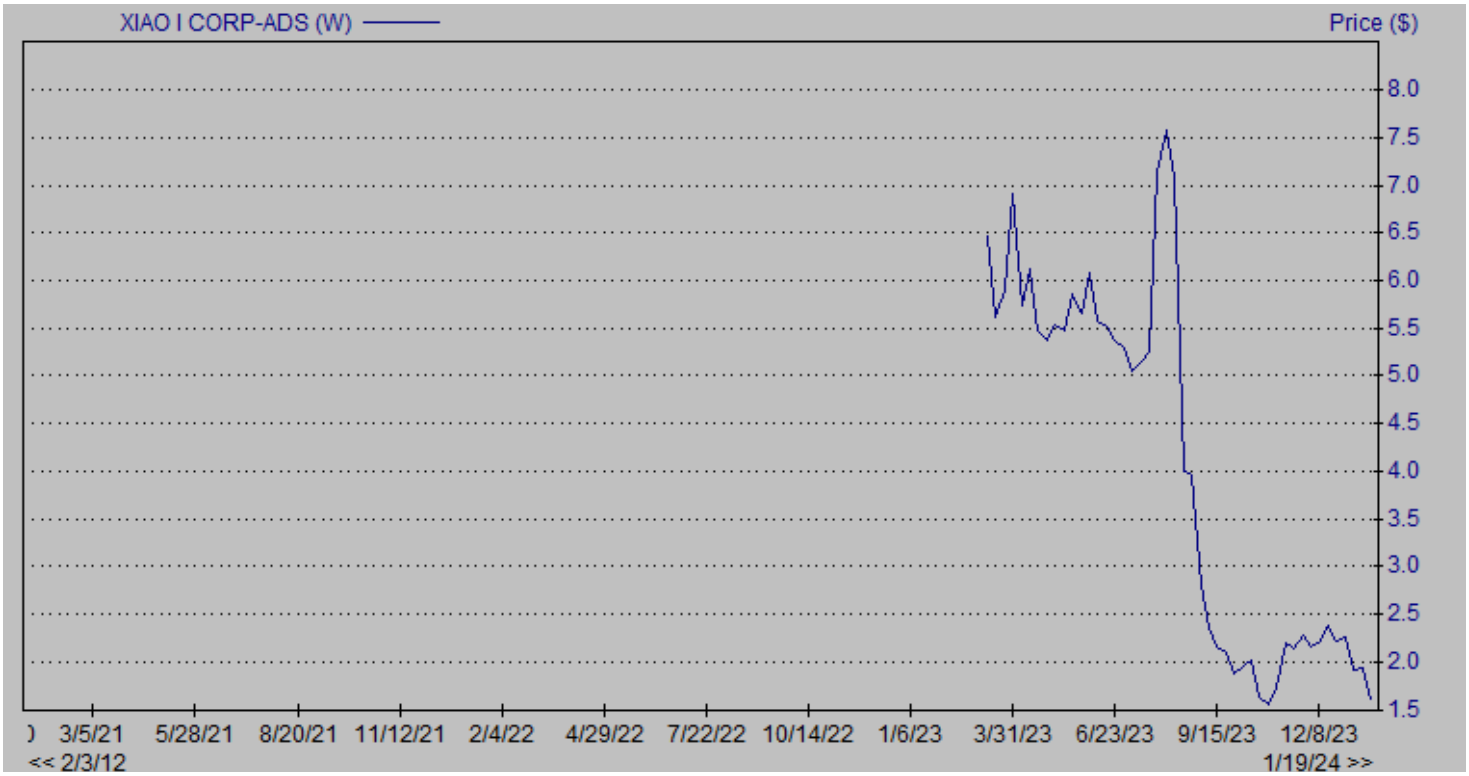
Xiao-I Corporation
Balance Sheet in USD
6/30/23

Assets	
Current Assets	
Cash and cash equivalents	4,747
Accounts Receivable (net)	16,026
Inventory	701
Contract costs	1,936
Advance to suppliers	1,587
Prepaid expenses and other current assets	6,657
Total current assets	31,653
Non-Current Assets	
Property & Equipment (net)	314
Intangible Assets, net	558
Long-term investment	3,187
Right of use assets	969
Prepaid expenses	3,616
Amount due from related parties	11,019
Total non-current assets	19,664
Total Assets	**51,317**
Liabilities	
Current Liabilities	
Short-term borrowings	16,549
Accounts payable	7,222
Due to related parties - current	743
Deferred revenue	3,445
Accrued Expenses and other current liabilities	9,215
Lease liabilities, current	458
Total current liabilities	37,631
Non-Current Liabilities	
Amount due to related parties, non current	7,573
Accured liabilities, non-current	5,195
Lease liabilities, non-current	392
Total Liabilities	**50,792**
Shareholder's Equity	
Oridnary shares	1
Additional Paid-in Capital	108,763
Statutory reserve	237
Accumulated deficit	(102,449)
Accumulated other comprehensive loss	(2,853)
Non-contolling interests	(3,175)
Shareholder's Equity (Deficiency)	**525**
Total Liabilities & Shareholder's Equity	**51,317**

Source: Company filing

© Copyright 2024, Zacks Investment Research. All Rights Reserved.

HISTORICAL STOCK PRICE



DISCLOSURES

The following disclosures relate to relationships between Zacks Small-Cap Research ("Zacks SCR"), a division of Zacks Investment Research ("ZIR"), and the issuers covered by the Zacks SCR Analysts in the Small-Cap Universe.

ANALYST DISCLOSURES

I, Brian Lantier, hereby certify that the view expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the recommendations or views expressed in this research report. I believe the information used for the creation of this report has been obtained from sources I considered to be reliable, but I can neither guarantee nor represent the completeness or accuracy of the information herewith. Such information and the opinions expressed are subject to change without notice.

INVESTMENT BANKING AND FEES FOR SERVICES

Zacks SCR does not provide investment banking services nor has it received compensation for investment banking services from the issuers of the securities covered in this report or article.
Zacks SCR has received compensation from the issuer directly, from an investment manager, or from an investor relations consulting firm engaged by the issuer for providing non-investment banking services to this issuer and expects to receive additional compensation for such non-investment banking services provided to this issuer. The non-investment banking services provided to the issuer includes the preparation of this report, investor relations services, investment software, financial database analysis, organization of non-deal road shows, and attendance fees for conferences sponsored or co-sponsored by Zacks SCR. The fees for these services vary on a per-client basis and are subject to the number and types of services contracted. Fees typically range between ten thousand and fifty thousand dollars per annum. Details of fees paid by this issuer are available upon request.

POLICY DISCLOSURES

This report provides an objective valuation of the issuer today and expected valuations of the issuer at various future dates based on applying standard investment valuation methodologies to the revenue and EPS forecasts made by the SCR Analyst of the issuer's business.
SCR Analysts are restricted from holding or trading securities in the issuers that they cover. ZIR and Zacks SCR do not make a market in any security followed by SCR nor do they act as dealers in these securities. Each Zacks SCR Analyst has full discretion over the valuation of the issuer included in this report based on his or her own due diligence. SCR Analysts are paid based on the number of companies they cover. SCR Analyst compensation is not, was not, nor will be, directly or indirectly, related to the specific valuations or views expressed in any report or article.

ADDITIONAL INFORMATION

Additional information is available upon request. Zacks SCR reports and articles are based on data obtained from sources that it believes to be reliable, but are not guaranteed to be accurate nor do they purport to be complete. Because of individual financial or investment objectives and/or financial circumstances, this report or article should not be construed as advice designed to meet the particular investment needs of any investor. Investing involves risk. Any opinions expressed by Zacks SCR Analysts are subject to change without notice. Reports or articles or tweets are not to be construed as an offer or solicitation of an offer to buy or sell the securities herein mentioned.

CANADIAN COVERAGE

This research report is a product of Zacks SCR and prepared by a research analyst who is employed by or is a consultant to Zacks SCR. The research analyst preparing the research report is resident outside of Canada, and is not an associated person of any Canadian registered adviser and/or dealer. Therefore, the analyst is not subject to supervision by a Canadian registered adviser and/or dealer, and is not required to satisfy the regulatory licensing requirements of any Canadian provincial securities regulators, the Investment Industry Regulatory Organization of Canada and is not required to otherwise comply with Canadian rules or regulations.