特斯拉 Tesla (TSLA US)

Robotaxi 发布前瞻：颠覆式设计引领智驾革命，全球 Robotaxi 商业化时代将至

Robotaxi Preview: Disruptive Design Leading the Smart Driving Revolution, Global Robotaxi Commercialization on the Horizon

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热点速评 Flash Analysis

(Please see APPENDIX 1 for English summary)

事件

特斯拉将在 2024 年 10 月 10 日于洛杉矶的华纳兄弟影业制片厂举行 "We, Robot"发布会，这场活动将揭开其全新无人驾驶出租车 Robotaxi 的面纱，并暗示着特斯拉可能带来其自动驾驶和机器人技术领域的新进展。特斯拉 CEO 埃隆·马斯克表示，此次发布会将载入史册，并认为这是特斯拉继 Model 3 之后最重要的时刻之一。

点评

Cybercab 或带来颠覆性设计，盈利模式有望转向软件服务。特斯拉的 Robotaxi（暂定名"Cybercab"）预计将完全依赖其全自动驾驶（FSD）技术。该车型可能不再配备方向盘和踏板，车内的座椅布局和交互设计也将迎来颠覆性创新，不仅展现车辆的高度自动化，还极大地提升了车内空间的利用效率。特斯拉计划在 Cybercab 上市时同步推出无监督版 FSD 软件，并逐步在北美、中国、欧洲等全球市场推广，届时车辆的自动驾驶能力将显著提升。Cybercab 预计将搭载新一代 AI5 平台，算力达 3000-5000 TOPS，是现有 HW4 的十倍。我们预计 Cybercab 将在 2025 年上半年实现量产，这不仅标志着特斯拉自动驾驶技术的商业化落地，也象征着其盈利模式正逐步从依赖汽车硬件转向以软件服务为主，从而带来更高的利润率。汽车产业链方面，我们预计公司现有产业链公司有望持续受益，建议关注：1）线控底盘：伯特利、拓普集团等；2）电池：宁德时代、比亚迪等；3）热管理：三花智控、拓普集团等；4）内饰件：新泉股份等；5）汽车安全：均胜电子等；6）清洗系统：恒帅股份等。

Cybercab 开启共享出行新时代，挑战 Uber 与 Lyft 垄断。Cybercab 的推出标志着特斯拉在共享出行行业的影响力将进一步加深。特斯拉的战略不仅限于运营自己的 Robotaxi 车队，还计划通过开放平台，允许车主将闲置的特斯拉车辆接入共享网络。这种类似于 Airbnb 的模式有望成为未来的主流运营方式，极大地扩展特斯拉的市场覆盖范围，同时为车主带来额外收入。Cybercab 的运营成本极具吸引力，每英里仅需 0.18 美元，远低于传统出租车（2-3 美元）和共享出行服务。凭借更低的运营成本和完全无人驾驶的技术优势，特斯拉有望打破北美由 Uber 和 Lyft 主导的共享出行寡头局面。随着 Robotaxi 模式的逐渐成熟，Uber 也可能通过与特斯拉合作，结合其技术，推出混合服务模式，即结合人类司机和自动驾驶车辆，以提升服务覆盖率和用户体验。我们认为未来合作方向或将包括资源共享和数据互通，Uber 可以利用其庞大的用户基础和成熟的调度系统支持特斯拉的 Robotaxi 服务，而特斯拉则提供其先进的自动驾驶技术。无论是合作还是竞争，特斯拉入局将推动共享出行行业迎来重大变革。

特斯拉将迎国内外多方挑战，2025 年或成全球 Robotaxi 商业化元年。虽然 Robotaxi 前景广阔，但特斯拉仍需克服技术、法规和市场接受度等多重挑战，尤其是面对 Waymo 和 Cruise 等竞争对手的技术压力。Waymo 近日宣布和现代起亚达成长期战略合作，初期将 Waymo 的第六代自动驾驶技术整合到 IONIQ 5 电动 SUV 中。IONIQ 5 将在乔治亚州的现代起亚新设施制造，并加入 Waymo One 车队，预计 25 年底开始测试。在国内厂商如萝卜快跑、小马智行、文远知行和 AutoX 等全力布局 Robotaxi 产业的大背景下，我们预计 2025 年有望成为全球 Robotaxi 商业化元年。

AI 与机器人技术转型正当时，推动全球科技生态变革。此次 "We, Robot" 发布会不仅会推出 Robotaxi，特斯拉还可能更新多个重要产品线的研发进展，如 Optimus 人形机器人和 FSD Supervised。这些产品进一步凸显了特斯拉在 AI 和机器人技术领域的前瞻性愿景。特斯拉已多次申称未来 Optimus 价值会超过其他所有公司板块之和，而 FSD 的迭代速度将决定何时 Robotaxi 可以在北美乃至全球实现量产。我们认为特斯拉的目标已不再局限于造车，而是转向围绕 GAI/LLM 为本的通用技术领域，力求通过自动驾驶和 AI 技术推动全球出行模式和生活方式的变革。我们认为，特斯拉对其人形机器人产品的创新及其产生的示范效应，长期看也将利好国内部分上游供应链企业，建议关注：1）执行器集成：三花智控、拓普集团等，2）减速器：绿的谐波、双环传动、中大力德等，3）丝杠：贝斯特、恒立液压等，4）电机：伟创电气，鸣志电器等，5）六维力矩传感器：柯力传感、昊志机电等。

风险

FSD、Optimus 研发不及预期，法规政策相关风险，竞争加剧风险，宏观经济下行。

APPENDIX 1

Summary

Event

Tesla is set to host the “We, Robot” event on October 10, 2024, at Warner Bros. Studios in Los Angeles. This event will unveil its brand-new autonomous taxi, Robotaxi, potentially signaling significant advancements in Tesla’s autonomous driving and robotics technology. Tesla CEO Elon Musk stated that this event would be historic, viewing it as one of the Company’s most pivotal moments since the launch of the Model 3.

Comments

The Cybercab could introduce disruptive design changes, with the potential to shift Tesla’s profit model towards software services. Tesla’s Robotaxi (tentatively named “Cybercab”) is expected to rely entirely on its Full Self-Driving (FSD) technology. The vehicle may come without a steering wheel or pedals, and its seating and interaction design could bring revolutionary innovations, showcasing the high level of automation while greatly improving interior space efficiency. Tesla plans to launch an unsupervised version of its FSD software alongside Cybercab, aiming to gradually roll it out across global markets such as North America, China, and Europe, significantly boosting autonomous driving capabilities. The Cybercab is anticipated to feature Tesla’s next-generation AI5 platform, with a computing power of 3000-5000 TOPS, which is ten times more powerful than the current HW4 platform. We predict mass production of Cybercab will commence in 1H25, marking not only the commercialization of Tesla’s autonomous driving technology but also a shift in its profit model from hardware to software services, leading to higher profit margins. Regarding the automotive supply chain, we expect Tesla’s existing partners to continue benefiting. Key supply chain watchlist include: 1) Brake-by-wire: Bethel Automotive, Top Group; 2) Batteries: CATL, BYD; 3) Thermal management: Sanhua Intelligent Controls, Top Group; 4) Interior components: Xinquan; 5) Vehicle safety: Joyson Electronics; 6) Cleaning systems: Hengshuai.

Cybercab ushers in a new era of ride-sharing, challenging Uber and Lyft’s monopoly. The launch of the Cybercab marks Tesla’s deepening influence in the ride-sharing industry. Tesla’s strategy is not limited to operating its own Robotaxi fleet but also involves opening up its platform, allowing owners to connect their idle Tesla vehicles to the network. This Airbnb-like model could become a mainstream operational method in the future, significantly expanding Tesla’s market reach while offering vehicle owners additional income streams. The Cybercab’s operating cost is impressively low, at just US$0.18 per mile, far below traditional taxis (US$2-3 per mile) and ride-sharing services. With lower operational costs and a fully autonomous driving advantage, Tesla is poised to challenge the duopoly of Uber and Lyft in North America. As the Robotaxi model matures, Uber may even collaborate with Tesla, combining human drivers with autonomous vehicles to enhance service coverage and user experience. We foresee potential collaboration in areas such as resource sharing and data integration, with Uber leveraging its vast user base and dispatch system to support Tesla’s Robotaxi service, while Tesla provides its advanced autonomous driving technology. Whether through competition or collaboration, Tesla’s entry will drive significant transformations in the ride-sharing industry.

Tesla faces multiple challenges globally, with 2025 set as a key year for Robotaxi commercialization. While the outlook for Robotaxi is promising, Tesla still faces multiple hurdles, including technical challenges, regulatory barriers, and market acceptance, especially amid competition from companies like Waymo and Cruise. Recently, Waymo announced a long-term strategic partnership with Hyundai-Kia, integrating Waymo’s 6th-generation autonomous driving technology into the IONIQ 5 electric SUV. The IONIQ 5 will be manufactured at Hyundai-Kia’s new facility in Georgia and added to the Waymo One fleet, with testing expected to begin by the end of 2025. Against the backdrop of aggressive efforts by domestic players like Baidu’s Apollo Go, Pony.ai, WeRide, and AutoX to establish themselves in the Robotaxi market, we expect 2025 to emerge as the pivotal year for global Robotaxi commercialization.

AI and robotics transformation is in full swing, driving global technological ecosystem shifts. At the “We, Robot” event, Tesla is likely to not only launch the Robotaxi but also provide updates on the development of other key product lines such as the Optimus humanoid robot and the FSD Supervised software. These products further highlight Tesla’s visionary ambitions in AI and robotics. Tesla has repeatedly emphasized that Optimus’ future value could surpass all other business units combined, while the pace of FSD iterations will determine when Robotaxi can achieve mass production in North America and globally. We believe Tesla’s focus has shifted from being just an OEM to a leader in GAI and large language model (LLM)-based technology, aiming to revolutionize global mobility and lifestyles through autonomous driving and AI technologies. In the long term, Tesla’s innovations in humanoid robots and their demonstration effects will also benefit certain upstream suppliers in China. Company watchlist: 1) actuator integration: Sanhua Intelligent Controls, Top Group; 2) reducers: Leader Harmonic, Shuanghuan Transmission, Zhongda Leader; 3) ball screws: Best, Hengli Hydraulic; 4) motors: Welling, Moons’ Electric; 5) six-axis force sensors: Keli Sensing, Haozhi Electromechanical.

Risks

Potential risks include underperformance in the development of FSD and Optimus, regulatory and policy challenges, increased competition, and macroeconomic downturns.

附录 APPENDIX

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分析师股票评级

优于大市，未来 12-18 个月内预期相对基准指数涨幅在 10%以上，基准定义如下

中性，未来 12-18 个月内预期相对基准指数变化不大，基准定义如下。根据 FINRA/NYSE 的评级分布规则，我们会将中性评级划入持有这一类别。

弱于大市，未来 12-18 个月内预期相对基准指数跌幅在 10%以上，基准定义如下

各地股票基准指数：日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100, 美国 – SP500; 其他所有中国概念股 – MSCI China.

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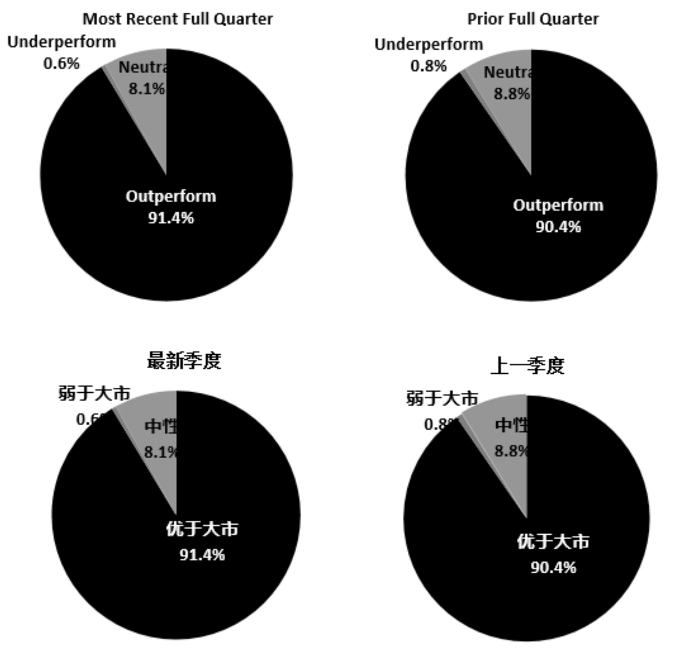
Analyst Stock Ratings

Outperform: The stock's total return over the next 12-18 months is expected to exceed the return of its relevant broad market benchmark, as

评级分布 Rating Distribution



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Neutral: The stock's total return over the next 12-18 months is expected to be in line with the return of its relevant broad market benchmark, as indicated below. For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category.

Underperform: The stock's total return over the next 12-18 months is expected to be below the return of its relevant broad market benchmark, as indicated below.

Benchmarks for each stock's listed region are as follows: Japan – TOPIX, Korea – KOSPI, Taiwan – TAIEX, India – Nifty100, US – SP500; for all other China-concept stocks – MSCI China.

截至 2024 年 6 月 30 日海通国际股票研究评级分布

	优于大市	中性 (持有)	弱于大市
海通国际股票研究覆盖率	91.4%	8.1%	0.6%
投资银行客户*	3.1%	4.8%	0.0%

*在每个评级类别里投资银行客户所占的百分比。

上述分布中的买入，中性和卖出分别对应我们当前优于大市，中性和落后大市评级。

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此前的评级系统定义（直至 2020 年 6 月 30 日）：

买入，未来 12-18 个月内预期相对基准指数涨幅在 10%以上，基准定义如下

中性，未来 12-18 个月内预期相对基准指数变化不大，基准定义如下。根据 FINRA/NYSE 的评级分布规则，我们会将中性评级划入持有这一类别。

卖出，未来 12-18 个月内预期相对基准指数跌幅在 10%以上，基准定义如下

各地股票基准指数：日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100; 其他所有中国概念股 – MSCI China.

Haitong International Equity Research Ratings Distribution, as of June 30, 2024

	Outperform	Neutral (hold)	Underperform
HTI Equity Research Coverage	91.4%	8.1%	0.6%
IB clients*	3.1%	4.8%	0.0%

*Percentage of investment banking clients in each rating category.

BUY, Neutral, and SELL in the above distribution correspond to our current ratings of Outperform, Neutral, and Underperform.

For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category. Please note that stocks with an NR designation are not included in the table above.

Previous rating system definitions (until 30 Jun 2020):

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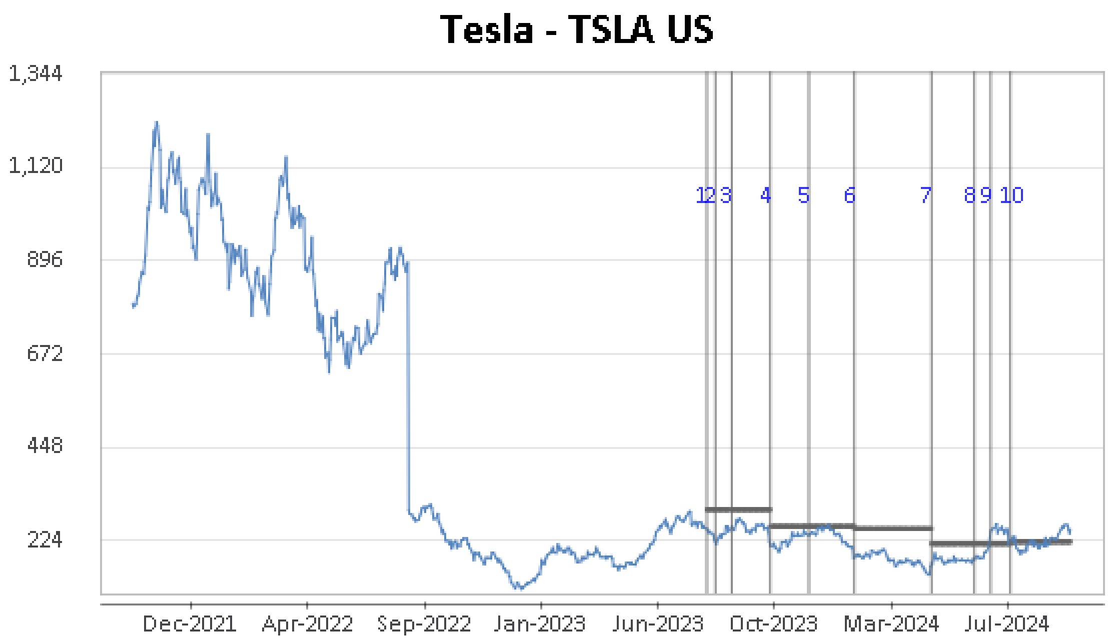

1. 7 Aug 2023 OUTPERFORM at 253.86 target 297.84.
2. 17 Aug 2023 OUTPERFORM at 219.22 target 297.84.
3. 5 Sep 2023 OUTPERFORM at 245.01 target 297.84.
4. 20 Oct 2023 OUTPERFORM at 220.11 target 257.60.
5. 4 Dec 2023 OUTPERFORM at 238.83 target 257.60.
6. 26 Jan 2024 OUTPERFORM at 182.63 target 252.00.
7. 25 Apr 2024 OUTPERFORM at 162.13 target 216.60.
8. 14 Jun 2024 OUTPERFORM at 182.47 target 216.60.
9. 3 Jul 2024 OUTPERFORM at 231.26 target 216.60.
10. 26 Jul 2024 OUTPERFORM at 215.99 target 221.00.