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Research Report – Update

Investors should consider this report as only a single factor in making their investment decision.

KULR Technology Group, Inc.

Speculative Buy

John Nobile

November 17, 2022

KULR $1.95 — (NYSE)

	2020A	2021A	2022E	2023E
Revenues (million)	$0.6	$2.4	$3.7	$32.0
Earnings (loss) per share	$(0.03)	$(0.15)*	$(0.19)	$(0.10)

52-Week range	$3.69 – $1.02	Fiscal year ends:	December
Common shares out as of 11/11/22	112.7 million	Revenue per share (TTM)	$0.03
Approximate float	67.1 million	Price/Sales (TTM)	65.0X
Market capitalization	$219.8 million	Price/Sales (FY2023)E	7.2X
Tangible book value/share	$0.07	Price/Earnings (TTM)	NMF
Price/tangible book value	27.9X	Price/Earnings (FY2023)E	NMF

**Includes a $(0.03) per share preferred stock deemed dividend.*

KULR Technology Group, Inc., headquartered in Campbell, California, develops and commercializes high-performance thermal management technologies for batteries, electronics, and other components.

Key investment considerations:

We are maintaining coverage of KULR Technology Group, Inc. with a Speculative Buy rating and twelve-month price target of $4.00 per share.

KULR is on the cusp of a significant ramp in revenue due primarily to the company's investments in high growth areas such as energy storage, e-mobility, and the safe transportation of lithium-ion batteries.

The company has position itself for significant revenue growth in 2023 and beyond. These developments include the 4Q22 acquisition of VibeTech and subsequent launch the KULR VIBE offering, gaining open access to commercial partners and customers by securing UPS shipping certification, and a partnership with E-One Moli Energy Corporation to advance KULR's total battery safety and thermal management solutions strategy.

Although we believe that a large order from Volta will be accretive to KULR's revenue in 2022 and 2023, we are taking a more cautious outlook on Volta's contribution as we wait for better visibility regarding its potential.

For 2022, we project a 35.5% increase in revenue to nearly $3.7 million with a loss of $(0.19) per share. We previously projected revenue of $3.3 million and loss of $(0.19) per share. Our revised projections primarily reflect 3Q22 results.

For 2023, we project an almost 9-fold revenue increase to $32 million with a loss of $(0.10) per share. We previously projected revenue of $32 million and a loss of $(0.07) per share. Our revised loss per share projection reflect higher operating expenses and recognition of interest expense.

KULR reported (10-Q released 11/14/22) 3Q22 revenue increased 131.8% to nearly $1.4 million from $601,000 in 3Q21. KULR reported a loss of $(0.05) per share versus a loss of $(0.03) per share in 3Q21. We projected 3Q22 revenue of $1 million and a loss of $(0.05) per share.

****Please view our disclosures on pages 15 - 17.***

Recommendation and Valuation

We are maintaining coverage of KULR Technology Group, Inc. with a Speculative Buy rating and twelve-month price target of $4.00 per share.

KULR is on the cusp of a significant ramp in revenue due primarily to the company's investments in high growth areas such as energy storage, e-mobility, and the safe transportation of lithium-ion batteries.

The company has position itself for significant revenue growth in 2023 and beyond. These developments include the 4Q22 acquisition of VibeTech and subsequent launch the KULR VIBE offering, gaining open access to commercial partners and customers by securing UPS shipping certification, and a partnership with E-One Moli Energy Corporation to advance KULR's total battery safety and thermal management solutions strategy.

The UPS development allows for the shipment of batteries utilizing the KULR Safe Case products through UPS' vast shipping network. The permit allows the US Department of Transportation compliant Safe Case to be used as a safe and reusable shipping container for Li-Ion battery transportation up to 2.1KWh and provides KULR's major recycling partner a safe shipping container that can handle batteries above 300Wh.

The partnership with E-One Moli Energy Corporation (Molicel, a leading manufacturer of lithium-ion cells) announced in June 2022 was a significant milestone in executing KULR's strategy of providing more design and testing services to its customers. KULR secured an initial order for over 75 megawatt hours (MWh) of Li-ion battery cell capacity from Molicel to design and build battery applications with the highest safety ratings. As part of this strategic relationship, KULR would purchase over 700MWh of battery energy capacity to further accelerate its production and supply chain localization initiatives within North America. The company believes that its partnership with Molicel accelerates its ability to provide total solutions to high value customer applications with revenue potential that could exceed $350 million.

Although we believe that a large order from Volta will be accretive to KULR's revenue in 2022 and 2023, we are taking a more cautious outlook on Volta's revenue contribution as we wait for better visibility regarding its potential.

Shares of KULR have traded at trailing-twelve-month (ttm) P/S multiples ranging from 34X to 123X over the past year. These multiples were based off of relatively low revenue. As the company's revenue begins to show substantial growth, we believe the company's multiple will contract. We anticipate a multiple of 20X sales is reasonable given our 2023 revenue growth forecast. Applying a multiple of 20X (unchanged) to our 2023 sales per share projection of $0.27 ($0.29 previously), discounted for execution and dilution risks, we derive a twelve month price target of approximately $4.00 per share.

Recent Developments

- On November 14, 2022, KULR announced it entered into an agreement to provide its internal short circuit battery safety and testing device to the largest automotive manufacturer in the US.

- On November 1, 2022, the company announced it appointed Dr. William Walker, Ph.D. as Chief Technology Officer. Dr. Walker will envision, design, and direct the next wave of energy management solutions to transform the electrification industry and help the company expand into new markets. He previously was employed at NASA's Johnson Space Center where he co-invented their patented fractional thermal runaway calorimetry (FTRC) technology. While at NASA, he supported the design of lithium-ion batteries and their associated thermal management systems for human spaceflight applications. Dr. Walker hold a B.S. degree in Mechanical Engineering from West Texas A&M University and Ph.D. in Materials Science and Engineering from the University of Houston.

- KULR received its first order from a leading Fortune 500 commercial aviation company for its suite of safe battery products and services. The expectation is that follow on orders from this customer should occur, as

the implementation of KULR's products and services is likely to be fundamental in the testing and evaluation of this customer's battery-powered aircraft design.

- In October 2022, the company received an initial deployment order totaling over $500,000 from a Department of Defense contractor. KULR's technology will be utilized by this American manufacturer of spacecraft components and instruments for national defense, civil space and commercial space applications to support its Air-to-Air Missile shipping program. This order has the potential for a multi-million-dollar deployment order to run through 2023.

- In 4Q22, the company acquired VibeTech and launched KULR VIBE, an AI driven vibration reduction solution. This offering addresses excessive energy robbing vibrations that are destructive to both the machinery and in many cases the operator. This technology suite utilizes proprietary sensor processes with advanced learning algorithms to achieve precision balancing and predict component failure based on its comprehensive database of vibration signatures. Its enhanced AI learning algorithms pinpoint areas where excess vibrations cause a loss of energy that can lead to system malfunctions, weakened performance, and maintenance issues.

- The company received a production prototype order for its KULR SafeCase, a reusable, safe, and high-energy battery transportation and storage solution, from a top-tier power tool manufacturer.

- In 4Q22, commenced Phase 2 development of its passive propagation resistant battery systems for Lockheed Martin Corporation.

- Announced a strategic partnership with Gamma Technologies, who is a global leader and innovator in multi-physics system simulation software. KULR intends to integrate Gamma Technologies' GT-SUITE multi-scale, multi-physics analysis platform into its suite of products and services. GT-SUITE's simulation capabilities enable engineering teams to create highly optimized, next generation battery designs, and in doing so, should enable KULR to ensure its customers have access to state-of-the-art solutions.

Business

Overview - KULR Technology Group, Inc., headquartered in Campbell, California, develops and commercializes high-performance thermal management technologies for batteries, electronics, and other components.

The company's main focus is a total solution to battery safety by which it aims to mitigate the effects of thermal runaway propagation (the release of cell energy and highly flammable gas which propagates to neighboring cells leading to fire and explosions). KULR targets and provides thermal solutions for electric vehicles, cloud computing, 5G communication technologies, and energy storage for commercial markets, as well as directed energy weapons and high-power missile programs for aerospace and defense.

The company's proprietary core technology is based on a carbon fiber material that provides superior thermal conductivity and heat dissipation for an ultra-lightweight and pliable material. KULR leverages its proprietary cooling solutions that have been developed through longstanding partnerships with NASA, the Jet Propulsion Lab, and others, to make commercial battery powered products safer and electronics systems cooler and lighter.

Products - Lithium Ion (L-ion) Battery Thermal Runaway Shield (TRS): KULR has developed a thermal insulation technology aimed at passive resistance to thermal runaway propagation in L-ion batteries in partnership with the National Aeronautics and Space Administration Johnson Space Center. HYDRA TRS acts as a heat sink during normal lithium-ion battery pack operation but also prevents thermal runaway propagation, which is a serious concern for aerospace and defense customers and electric vehicle manufacturers.

Battery Cell Screening and Testing Automation System – An automated battery cell testing platform to support the stringent requirements of NASA and the DoD. This platform has been designed to meet the entire specifications of NASA WI-037 battery testing requirements. The automated equipment is modular and the initial processing

capability is 500K cells annually. Based on current commitments for the equipment, KULR intends to have the system installed and validated in 3Q22.

CellCheck - A scalable battery management platform to provide a new level of safety, performance optimization and regulatory compliance capabilities. The architecture is modular to allow KULR to incorporate new capabilities and enhancements to the platform as battery evolution accelerates.

KULR-Tech Safe Case - This product was developed for the commercial transportation and storage of Li-ion batteries and is an extension of TRS Bags which safely store and transport Li-ion batteries to and in the International Space Station. The cases have been tested and granted special permits by the Department of Transportation for shipment of Li-ion batteries up to 2.5KWh batteries classified as DDR (damaged, defective or recall), recycling and prototype.

Fiber Thermal Interface Material (FTI): KULR thermal interface materials are selected to serve a wide range of applications, including hostile thermal and chemical environments, sliding interfaces, and interfaces with widely varying gaps. KULR'S FTI can be coated for electrical isolation, require low contact pressure, and provide high thermal conductivity. Their light weight and high compliance make the company's FTI products suited for aerospace, industrial, and high-performance commercial devices.

Phase Change Material (PCM) Heat Sink: KULR's PCM composite heat sinks offer passive thermal control for instruments that would otherwise overheat or under-cool during periodic operations. A typical application involves lasers that dissipate heat but need tight thermal control where active cooling is unavailable.

Internal Short Circuit (ISC) Device: In March 2018, the company reached an agreement with the National Renewable Energy Laboratory, a national laboratory of the US Department of Energy, to be the exclusive manufacturing and distribution partner for the patented ISC device. The ISC device causes predictable battery cell failures in L-ion batteries, making them easier to study and, therefore, safer. L-ion batteries are the industry and consumer standard for portable power. Billions of individual battery cells exist and billions more are planned for production. They provide power for everything from smart phones and laptops to electric cars and space crafts.

CRUX Cathode: The CRUX Cathode can be customized for different applications including the generation of microwaves, x-rays, and laser radiation. They can be fabricated in a wide variety of physical configurations, ranging from simple planar and cylindrical forms to more complex lobed shapes.

Battery Fires and Explosions

According to the Website batteryfires.com, numerous factors can increase the likelihood of battery failures which can cause fires or explosions. Some of these factors include battery manufacturing defects, product defects, product software issues, battery aging, battery degradation, overcharging, faulty charging, improper product use, battery puncture, and exposure to high temperatures.

Lithium-ion battery chemistry offers some of the highest energy densities available in today's batteries. However, high energy density comes at a potential price. When battery failure occurs, tremendous thermal energy is released (upwards of 1,000°C) along with toxic fluoride gas and smoke. Lithium-ion battery fires burn with prolonged intensity, oftentimes requiring special procedures and copious amounts of water to extinguish.

Lithium-ion batteries are everywhere, powering everything from consumer goods and electronics to electric vehicles. Battery production and demand are projected to increase rapidly, driven largely by automakers who aim to electrify their entire fleets over the next five to ten years. As a result, the frequency of catastrophic battery failures will also increase, and consumer-facing industries will undoubtedly look for safer battery technologies (like KULR offers) to power their products.

As the Biden administration pushes for half of new car sales to be electric vehicles by 2030, automakers that are spending billions of dollars to produce EVs are already having problems. The issues range from recalls due to vehicle fires or loss of power to cars not starting. The problems can prove especially costly when they involve batteries, specifically reputation-damaging vehicle fires, recalls, sudden power loss and problems getting some of the cars started.

The lithium-ion batteries in electric cars are similar to those found in consumer electronics, which store large amounts of energy relative to their size. But to power an automobile, there needs to be more of them, and the demands are higher, creating a unique risk.

The National Highway Traffic Safety Administration (NHTSA) said the agency has launched multiple investigations into the potential safety issues related to fires involving electric-vehicle batteries based on data it collects. NHTSA funds targeted research on advanced-battery technology and participates in developing global technical regulations.

Applications

KULR believes that battery cell testing and screening has become a topic of focus within the commercial, aerospace and defense, and high-value application markets. The company plans to expand its capabilities to include full battery analysis and testing as outlined by NASA's Johnson Space Center.

It is expected that the aerospace and defense sectors will experience high growth in directed energy weapons (ranged weapons that damage their targets with highly focused energy), hypersonic weapons (weapons such as cruise missiles that travel five or more times the speed of sound), and space missions. Experts predict that directed energy weapons will greatly impact the future of warfare. KULR's CRUX cathode generates powerful electron pulses which has the potential to further advance the current technology.

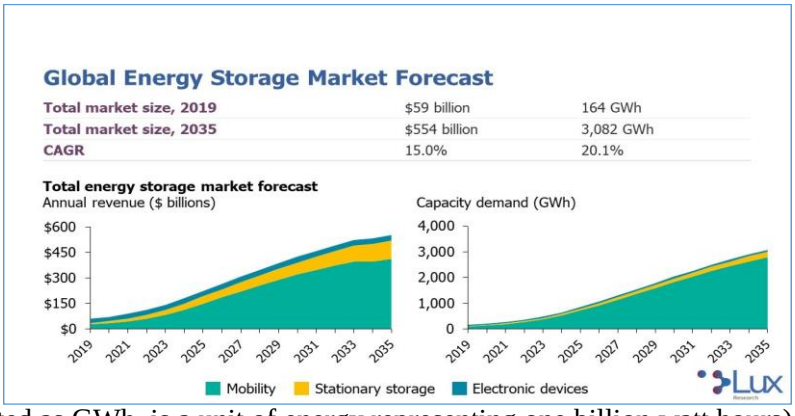
Thermal management is another critical component of both hypersonic weapons programs and space missions. KULR's carbon fiber solutions are used for thermal management in missile defense programs and are particularly effective because of their survivability at very high temperatures. They are very effective at transferring heat and mitigating the risk of overheating in such high-risk environments.

Opportunities for the company's products exists in industries such as electric motor vehicles that have become increasingly more reliant on Cloud computing, portability, and high-demand processing power. KULR's high performance thermal interface materials can be used to accelerate 5G communications development due to their high thermal conductivity, light weight, and low contact pressure. Cloud computing is also an application of interest since high power communications chips and optical communication modules require cooling.

Markets

KULR operates in the thermal management market which is driven by the energy storage market.

<u>*Energy Storage Market*</u> - The total energy storage market is expected to grow to $554 billion in annual revenue by 2035 from $59 billion in 2019 for a compound annual growth rate of 15% according to a report by Lux Research (see chart on the right).



Lux estimates that the three main drivers of energy storage – mobility applications, electronic devices, and stationary storage – will reach an annual combined deployment level of 3,082 GWh (Gigawatt hours, abbreviated as GWh, is a unit of energy representing one billion watt hours)

over the next 15 years, up from the current 164 GWh, with mobility applications the primary growth driver.

LUX anticipates the energy storage industry is poised for a massive increase in annual revenue and deployment capacity as key innovative technologies, such as solid-state batteries and flow batteries, reach commercialization. Expectations are for electric mobility applications, primarily light-duty passenger vehicles, to be the principal long-term driver of energy storage annual revenue and demand. Total market share is estimated at 74% as measured by annual revenue and 91% as measured by annual deployed GWh by 2035.

Thermal Management Market – The increasing demand for the reliability of microelectronics and lithium-ion batteries has driven the thermal management market. KULR targets the following markets and applications, passive propagation resistant (PPR) battery design (prevents cell to cell thermal runaway propagation and prevents the fire and explosion of single cell thermal runaway from exiting the battery enclosure), battery storage and transportation, electrical transportation, 5G mobile and cloud computing infrastructure, and aerospace and defense.

MarketsandMarkets estimates the global thermal management market was $8.8 billion in 2020 and projected to reach $12.8 billion by 2025 for annualized growth of 8.2%. Market growth should be driven by the rising demand for effective thermal management solutions and systems in consumer electronics, increasing demand for electric and hybrid vehicles, increasing use of electronic devices in different end-use industries, and ongoing radical miniaturization of electronic devices.

A MarketsandMarkets published report states that the strong actions taken, such as imposing country-wide lockdowns by governments globally to curb the spread of COVID-19, had a severe impact on the entire manufacturing industry, dragging down the demand of customers for thermal management solutions.

We anticipate the shift to electric vehicles and 5G technology will be significant growth drivers fueling demand for the company's products in the coming years.

Electrical Transportation Market – According to MarketsandMarkets, the electric vehicle market is projected to reach approximately 34.8 million units by 2030 from an estimated 4.1 million units in 2021 for a CAGR of 26.8%. Factors such as growing demand for low emission commuting and governments supporting long-range, zero emission vehicles through subsidies and tax rebates have and should continue to drive demand for electric vehicles.

5G Mobile Services Market – According to Grandview Research, the global 5G services market was estimated at $41.5 billion in 2020 and is expected to expand at an annualized rate of 43.9% from 2021 to 2027. 5G wireless mobile services are expected to enable a fully mobile and connected environment by delivering a wide range of use cases and business models to consumers. Grandview Research points out that faster data speeds and extremely low latency offered by 5G technology should enhance the user experience while using 5G services for Virtual Reality and Augmented Reality gaming, seamless video calling, and Ultra-high Definition videos. Growing demand for high-speed data connectivity for unified Internet of Things applications, such as smart home energy management, is estimated to propel the adoption of 5G services over the forecast period. As 5G infrastructure grows, the need for thermal management technologies such that KULR offers should grow.

Economic Outlook

In October 2022, the International Monetary Fund (IMF) revised its global economic growth estimates to an increase of 3.2% for 2022 and 2.7% for 2023, down from its July 2022 projection calling for 3.2% growth in 2022 and 2.9% growth in 2023. The forecast reflects worldwide inflation that triggered tighter financial conditions (i.e. higher interest rates), an economic slowdown in China, as well as negative effects from the war in Ukraine.

The IMF revised its economic growth estimate for the US to an increase of 1.6% for 2022 and 1% for 2023. In July 2022, the IMF projected US economic growth of 2.3% and 1% for 2022 and 2023, respectively.

The advanced estimate of US GDP growth (released on October 27, 2022) showed the US economy increased at an annual rate of 2.6% in 3Q22, up from the 0.6% decrease reported in 2Q22. The 3Q22 US GDP estimate reflects increases in exports, consumer spending, nonresidential fixed investment, federal government spending, and state and local government spending, partly offset by decreases in residential fixed investment and private inventory investment.

Projections

Although we are taking a more cautious outlook on Volta's revenue contribution for 2023 as we wait for better visibility regarding its potential, recent developments support an outlook for a significant revenue ramp. Three developments in particular have the potential to drive revenue into 2023 and beyond. These developments include KULR gaining open access to commercial partners and customers by securing UPS shipping certification, the partnership with E-One Moli Energy Corporation to advance KULR's total battery safety and thermal management solutions strategy, and the 4Q22 acquisition of VibeTech and associated launch KULR VIBE, an AI driven vibration reduction solution that addresses excessive energy robbing vibrations that are destructive to both the machinery and in many cases the operator.

The UPS development allows for the shipment of batteries utilizing the KULR Safe Case products through UPS' vast shipping network. The partnership with E-One Moli Energy Corporation (Molicel, a leading manufacturer of lithium-ion cells) announced in June 2022 was a significant milestone in executing KULR's strategy of providing more design and testing services to its customers. KULR secured an initial order for over 75 megawatt hours (MWh) of Li-ion battery cell capacity from Molicel to design and build battery applications with the highest safety ratings.

2022 Forecast - We project a 52.5% increase in revenue to nearly $3.7 million with a net loss of $20.3 million or $(0.19) per share. We previously projected revenue of $3.34 million with a net loss of $19.5 million or $(0.19) per share. Our revised projections primarily reflect 3Q22 results.

We project gross margins of 33.3% compared to 54.3% in 2021 to account for a sales mix shift. SG&A expenses should increase to $16.6 million from $11.2 million in 2021 to reflect a full year of managerial hiring that occurred in 2021 and expanded marketing and advertising expenses. We project R&D expenses increasing to $3.9 million from $1.7 million as the company continues to invest in new project developments. We project operating losses increasing to $19.2 million from $11.5 million in 2021.

In 2022, we project $16.6 million cash used in operations from a cash loss of $14.8 million and a $1.7 million increase in working capital. We project $6.5 million cash used in investing activities primarily due to capital expenditures and the acquisition of VibeTech. Cash provided by financing of $13.7 million should come primarily from proceeds from the sale of common stock and the exercise of warrants. We project a $9.3 million decrease in cash to $5.6 million at the end of 2022.

2023 Forecast - We project an almost 9-fold revenue increase to $32 million with a net loss of $11.6 million or $(0.10) per share. The dramatic increase in revenue and earnings is primarily due to a large order from Volta Energy Products and continued organic growth through ongoing internal programs and the VibeTech solution acquired in 4Q22. We previously projected revenue of $32 million and a net loss of $7.2 million or $(0.07) per share. Our revised projections reflect higher operating and non-operating expenses than previously projected.

We project gross margins of 40%, up from an estimated 33.3% in 2022 due to a stabilization in material price costs and a positive shift in the sales mix to higher margin solutions. SG&A expenses should increase to $18 million from an estimated $16.6 million in 2022 to support revenue growth. R&D expenses are projected to increase to $4.9 million from an estimated $3.9 million in 2022 as the company continues to expand its product offerings. We project an operating loss of $10.1 million from an estimated $19.2 million loss in 2022.

In 2023, we project $1.6 million cash used by operations from a cash loss of $6.1 million and a $4.4 million decrease in working capital. We project a $2.6 million decrease in cash to $2.9 million at the end of 2023.

3Q22 and 9M22 Financial Results

3Q22 - Revenue increased 131.8% to nearly $1.4 million from $601,000 in 3Q21. KULR reported a net loss of $5.6 million or $(0.05) per share versus a loss of $3.1 million or $(0.03) per share in 3Q21. We projected 3Q22 revenue of $1 million and a net loss of $5.2million or $(0.05) per share.

The increase in revenue was primarily due to higher sales of the company's carbon fiber velvet thermal management solution, internal short circuit battery cells and devices, patented TRS technology, and thermal fiber thermal interface materials, as well as contract services revenue of $23,000 compared to zero in 3Q21. Gross margins decreased to 33.1% from 74.2% due primarily to a large concentration of new product shipments to customers, an increase in headcount for production, new costs related to material for its new Safe Case product and customized RPS50 kits, as well as shipping costs from foreign manufacturers. R&D expenses increased to $1.1 million from $482,000 due primarily to increased headcount, investments in automation, and new product developments.

SG&A expenses increased to $4.3 million from $3.1 million due primarily to increased headcount and marketing and advertising expenses.

Total other expense was $628,000 in 3Q22 and consisted primarily of the amortization of debt discount and interest expense. Total other income in 3Q21 was $44,000.

9M22 - Revenue increased 32.4% to $2.2 million from $1.6 million in 9M21. The net loss was $15 million or $(0.14) per share versus a loss of $10.5 million or $(0.11) per share in 9M21. The 2021 results included a $2.6 million or $(0.03) per share deemed dividend to Series D preferred stock holders.

Gross margins decreased to 32.2% from 47.2% due primarily to an increase in headcount, costs related to material for the company's new Safe Case product, and shipping costs from foreign manufacturers. R&D expenses increased to $2.8 million from $958,000 due primarily to increased headcount and new product developments.

SG&A expenses increased to $12.2 million from $7.3 million due primarily to increased headcount, stock-based compensation, and marketing and advertising expenses.

Total other expense was $679,000 in 9M22 and consisted primarily of the amortization of debt discount and interest expense compared to $337,000 in 9M21.

	9 Months Ended (in thousands $)	
	9/22A	9/21A
Revenue	2,181	1,647
Cost of revenue	1,479	870
Gross profit	702	777
Research and development	2,791	958
Selling, general and administrative	12,210	7,321
Operating income (loss)	(14,299)	(7,501)
Interest expense	(677)	(2)
Debt costs and PPP forgiveness	150	(140)
Amortization of debt discount	(276)	(128)
Change in fair value of accrued equity	123	(67)
Net Income / (Loss)	(14,978)	(7,838)
Preferred stock deemed dividend	-	(2,624)
Net Income / (Loss) to common	(14,978)	(10,462)
EPS	(0.14)	(0.11)
Shares Outstanding	104,223	93,816
Margin Analysis		
Gross margin	32.2%	47.2%
R&D	127.9%	58.1%
SG&A	559.8%	444.5%
Operating margin	(655.5)%	(455.4)%
Year / Year Growth		
Total Revenues	32.4%	
Source: Company filings		

Liquidity – As of September 30, 2022, KULR had $16.2 million cash, $14.7 million of prepaid advance liability and shareholder's equity of $7.9 million.

In 9M22, the company's cash loss of $10.9 million and a $2.5 million increase in working capital resulted in $13.4 million cash used in operations. Cash used in operations and investing was more than offset by $17.4 million cash provided by financing primarily from increased debt and the exercise of warrants. Cash increased by $1.3 million to $16.2 million as of September 30, 2022.

In May 2022, KULR entered into a note purchase agreement with YA II PN, Ltd. (Yorkville) of which the company issued a 10% promissory note with an initial principal amount of $5 million. As of September 30, 2022, the note was repaid from proceeds of the company's initial advance from its prepaid advance liability.

In May 2022, KULR entered into a Standby Equity Purchase Agreement (SEPA) with Yorkville where the company shall have the right, but not the obligation, to sell to Yorkville up to $50 million of its shares of common stock at KULR's request any time during the commitment period. The commitment period commences on May 13, 2022 and terminates on the earlier of the first day of the month following the 24-month anniversary of the SEPA and the date on which Yorkville shall have made payment of any advances requested pursuant to the SEPA for shares of KULR's common stock equal to the commitment amount of $50 million. Each sale the company requests under the SEPA may be for a number of shares of common stock with an aggregate value of up to $5 million at 98% of the market price. As of September 30, 2022, the company issued advance notices to receive $350,000 in exchange for 255,240 shares of common stock.

In October 2022, KULR issued nearly 5.2 million shares of common stock, at purchase prices per share ranging from $0.99 to $1.84, pursuant to investor notices submitted by Yorkville for aggregate proceeds of nearly $5.9 million. The proceeds were applied against the principal and interest due for the initial prepaid advance liability. As of November 14, 2022, the remaining balance on the company's initial prepaid advance liability was $9 million.

Risks

In our view, these are the principal risks underlying the stock.

Limited operating history - KULR was formed in 2015 and KTC was formed in 2013. The company has a limited operating history and has not yet demonstrated sales of products at a level capable of covering its fixed expenses. There can be no assurance that KULR will ever produce a profit.

Global supply chain issues – KULR could experience significant disruptions as a result of global supply chain issues and, in the event of a disruption, cannot make any assurances that it would be able to locate alternative suppliers of materials of comparable quality at an acceptable price.

Reliance on a small number of customers – In 2021, KULR had three customers who accounted for 84% of total revenues. There is the risk of significant loss of future revenues if one or more of these customers were to stop ordering the company's materials.

Technological obsolescence – The company operates in a market that is subject to rapid technological change. If KULR is not able to adapt to new advances in materials sciences, the company's revenues and business prospects would likely be adversely affected.

Competition – The company operates in a market that is expected to have significant competition in the future. Global research is being conducted by substantially larger companies who have greater financial, personnel, technical, and marketing resources. There can be no assurance that KULR will be able to compete with other companies.

Economic conditions - Downturns in general economic conditions can reduce demand for the company's products, product prices, volumes and gross margins. A decline in the demand for KULR's products or a shift to lower-margin products due to deteriorating economic conditions could adversely affect sales of the company's products and profitability.

High level of unpredictability in sales growth – KULR's customers and prospective customers are large organizations with multiple levels of management, controls/procedures, and contract evaluation/authorization. The business activity cycle between initial customer interest to shipping, acceptance and billing can be lengthy, unpredictable and lumpy, which can influence the timing, consistency and reporting of sales growth.

High concentration of insider ownership – As of the October 7, 2022, proxy statement, KULR's officers, directors and affiliates owned approximately 36.4% of KULR outstanding common stock. With such concentrated control of the company, other shareholders may have no effective voice in the company's management.

Pandemic concerns - Given the uncertainty around the extent and timing of the potential future spread or mitigation of COVID-19, it is difficult to reasonably estimate the impact this pandemic will have on KULR's future results of operations, cash flows, or financial condition.

Material weakness in disclosure controls and procedures - As of September 30, 2022, KULR did not maintain effective controls to ensure that there is an independent review and approval of electronic payments (wires, EFT's, ACH's and credit card payments). The company is in the process of developing a detailed plan for remediation of the material weakness, including developing and maintaining preventative controls around the electronic payment process to ensure proper segregation of duties.

Liquidity risk - Shares of KULR have risks common to those of the microcap segment of the market. Often these risks cause microcap stocks to trade at discounts to their peers. The most common of these risks is liquidity risk, which is typically caused by small trading floats and very low trading volume and can lead to large spreads and high volatility in stock price. There are 67.1 million shares in the float and the average daily volume is approximately 515,000 shares.

Miscellaneous risk - The company's financial results and equity values are subject to other risks and uncertainties including competition, operations, financial markets, regulatory risk, and/or other events. These risks may cause actual results to differ from expected results.

Consolidated Balance Sheets
(in thousands $)

	2019A	2020A	2021A	9/22A	2022E	2023E
Cash	109	8,880	14,863	16,169	5,553	2,910
Accounts receivable	30	56	136	1,345	1,227	2,667
Inventory	27	55	191	342	614	2,743
Prepaid expenses and other	43	150	571	2,062	1,786	2,000
Total current assets	209	9,141	15,761	19,918	9,180	10,320
Property and equipment	28	58	374	829	1,207	1,810
Vendor deposits	-	-	2,154	4,466	4,466	5,000
Security deposits	-	9	59	59	59	59
Intangible assets	-	-	217	208	205	200
Deferred financing costs	-	-	-	71	71	71
Right of use asset	-	-	666	378	378	378
Total assets	**237**	**9,208**	**19,231**	**25,928**	**15,566**	**17,838**
Accounts payable	349	66	455	958	1,023	5,600
Accrued expenses and other	659	398	1,163	1,823	2,024	6,400
Accrued expenses and other-related party	10	-	-	-	-	-
Accrued issuable equity	-	128	291	138	138	149
Notes payable	-	2,322	-	-	-	-
Loans payable	-	13	155	-	-	-
Lease liability	-	-	262	219	219	219
Prepaid advance liability, net	-	-	-	14,682	9,000	-
Deferred revenue	15	20	132	20	20	20
Total current liabilities	1,033	2,947	2,458	17,840	12,424	12,388
Lease liability	-	-	408	156	213	213
Loans payable	-	142	-	-	99	99
Total liabilities	**1,033**	**3,089**	**2,866**	**17,996**	**12,736**	**12,700**
Total stockholders' equity (deficit)	**(796)**	**6,119**	**16,365**	**7,932**	**2,830**	**5,138**
Total liabilities & stockholders' equity	**237**	**9,208**	**19,231**	**25,928**	**15,566**	**17,838**

Source: Company filings and Taglich Brothers' estimates

Income Statements for the Fiscal Years Ended
(in thousands $)

	2019A	2020A	2021A	**2022E**	**2023E**
Revenue	830	624	2,413	**3,681**	**32,000**
Cost of revenue	226	169	1,102	**2,454**	**19,200**
Gross profit	604	455	1,311	**1,227**	**12,800**
Research and development	502	290	1,662	**3,865**	**4,900**
Selling, general and administrative	2,081	2,506	11,162	**16,611**	**17,975**
Operating income (loss)	(1,979)	(2,341)	(11,513)	**(19,249)**	**(10,075)**
Interest expense	(2)	(5)	(3)	**(902)**	**(900)**
Other income (expense)	1	-	(140)	**150**	**-**
Amortization of debt discount	-	(502)	(128)	**(446)**	**(630)**
Loss on foreign currency transactions	-	-	(1)	**-**	**-**
Change in fair value of accrued equity	-	(2)	(126)	**123**	**-**
Net Income / (Loss)	(1,980)	(2,850)	(11,911)	**(20,323)**	**(11,605)**
Preferred stock deemed dividend	-	-	(2,624)	**-**	**-**
Net Income / (Loss) to common	(1,980)	(2,850)	(14,535)	**(20,323)**	**(11,605)**
EPS	(0.02)	(0.03)	(0.15)	**(0.19)**	**(0.10)**
Shares Outstanding	80,123	82,032	97,708	**106,170**	**116,725**
Margin Analysis					
Gross margin	72.8%	72.9%	54.3%	**33.3%**	**40.0%**
R&D	60.5%	46.5%	68.9%	**105.0%**	**15.3%**
SG&A	250.7%	401.6%	462.6%	**451.3%**	**56.2%**
Operating margin	(238.4)%	(375.2)%	(477.1)%	**(523.0)%**	**(31.5)%**
Year / Year Growth					
Total Revenues	(34.9)%	(24.8)%	286.7%	**52.5%**	**769.4%**

Source: Company filings and Taglich Brothers' estimates

Quarterly Income Statements 2021A - 2023E
(in thousands $)

	3/21A	6/21A	9/21A	12/21A	2021A	3/22A	6/22A	9/22A	12/22E	**2022E**	3/23E	6/23E	9/23E	12/23E	**2023E**
Revenue	418	628	601	766	2,413	200	588	1,393	1,500	**3,681**	3,500	6,500	9,500	12,500	**32,000**
Cost of revenue	275	439	155	233	1,102	123	424	932	975	**2,454**	2,100	3,900	5,700	7,500	**19,200**
Gross profit	143	189	446	533	1,311	77	164	461	525	**1,227**	1,400	2,600	3,800	5,000	**12,800**
Research and development	123	353	482	704	1,662	721	999	1,070	1,075	**3,865**	1,150	1,200	1,250	1,300	**4,900**
Selling, general and administrative	1,493	2,723	3,104	3,842	11,162	3,535	4,326	4,349	4,400	**16,611**	4,450	4,475	4,500	4,550	**17,975**
Operating income (loss)	(1,473)	(2,887)	(3,140)	(4,013)	(11,513)	(4,179)	(5,162)	(4,958)	(4,950)	**(19,249)**	(4,200)	(3,075)	(1,950)	(850)	**(10,075)**
Interest expense	(1)	(1)	(1)	-	(3)	(1)	(42)	(633)	(225)	**(902)**	(225)	(225)	(225)	(225)	**(900)**
Other income (expense)	-	(140)	-	-	(140)	-	-	150	-	**150**	-	-	-	-	**-**
Amortization of debt discount	(108)	(20)	-	-	(128)	-	(103)	(172)	(170)	**(446)**	(165)	(160)	(155)	(150)	**(630)**
Loss on foreign currency transactions	-	-	-	(1)	(1)	-	-	-	-	**-**	-	-	-	-	**-**
Change in fair value of accrued equity	(133)	21	45	(59)	(126)	43	53	27	-	**123**	-	-	-	-	**-**
Net Income / (Loss)	(1,715)	(3,027)	(3,096)	(4,073)	(11,911)	(4,137)	(5,255)	(5,587)	(5,345)	**(20,323)**	(4,590)	(3,460)	(2,330)	(1,225)	**(11,605)**
Preferred stock deemed dividend	-	(2,624)	-	-	(2,624)	-	-	-	-	**-**	-	-	-	-	**-**
Net Income / (Loss) to common	(1,715)	(5,651)	(3,096)	(4,073)	(14,535)	(4,137)	(5,255)	(5,587)	(5,345)	**(20,323)**	(4,590)	(3,460)	(2,330)	(1,225)	**(11,605)**
EPS	(0.02)	(0.06)	(0.03)	(0.04)	(0.15)	(0.04)	(0.05)	(0.05)	(0.05)	**(0.19)**	(0.04)	(0.03)	(0.02)	(0.01)	**(0.10)**
Shares Outstanding	90,079	92,513	99,019	97,708	97,708	102,561	104,546	105,573	112,000	**106,170**	112,900	113,000	120,000	121,000	**116,725**
Margin Analysis															
Gross margin	34.2%	30.1%	74.2%	69.6%	54.3%	38.5%	27.9%	33.1%	35.0%	**33.3%**	40.0%	40.0%	40.0%	40.0%	**40.0%**
R&D	29.4%	56.2%	80.2%	91.9%	68.9%	360.5%	170.1%	76.8%	71.7%	**105.0%**	32.9%	18.5%	13.2%	10.4%	**15.3%**
SG&A	357.2%	433.6%	516.5%	501.6%	462.6%	1767.5%	736.4%	312.2%	293.3%	**451.3%**	127.1%	68.8%	47.4%	36.4%	**56.2%**
Operating margin	(352.4)%	(459.7)%	(522.5)%	(523.9)%	(477.1)%	NMF	(878.6)%	(355.9)%	(330.0)%	**(523.0)%**	(120.0)%	(47.3)%	(20.5)%	(6.8)%	**(31.5)%**
Year / Year Growth															
Total Revenues	435.9%	212.4%	338.7%	268.3%	286.7%	(52.2)%	(6.4)%	131.8%	95.8%	**52.5%**	1650.0%	1006.4%	581.9%	733.3%	**769.4%**

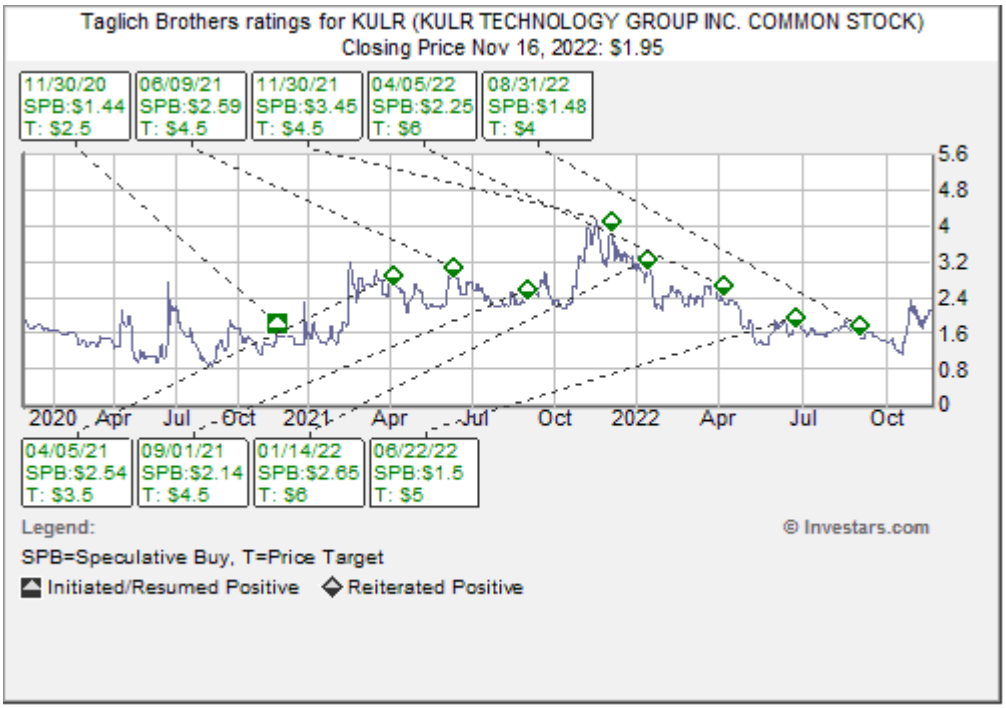
Source: Company filings and Taglich Brothers' estimates

Statement of Cash Flows for the Periods Ended
(in thousands $)

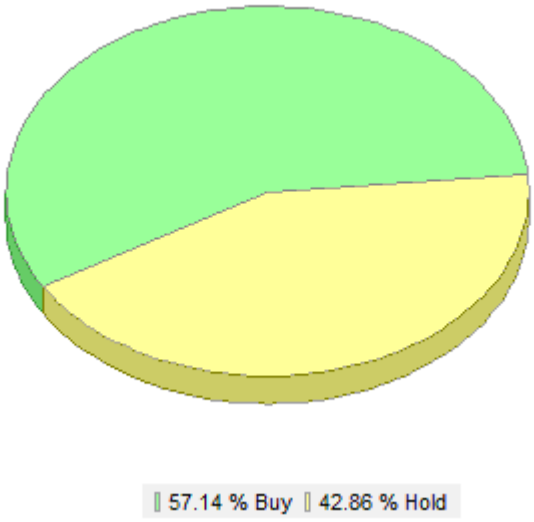
	2019A	2020A	2021A	9M22A	**2022E**	**2023E**
Net income (loss)	(1,980)	(2,850)	(11,911)	(14,978)	**(20,323)**	**(11,605)**
Amortization of debt discount	-	502	128	276	**445**	**445**
Non-cash lease expense	-	-	149	144	**190**	**200**
Depreciation expense	17	16	68	141	**267**	**397**
Bad debt expense and forgivness of PPP loan	-	1	-	(159)	**(159)**	**-**
Change in fair value of accrued issuable equity	-	2	126	(123)	**(123)**	**-**
Non-cash interest expense	-	-	-	577	**577**	**-**
Loss on extinguishment of note payable	-	-	-	9	**9**	**-**
Share-based compensation	221	344	4,200	3,209	**4,300**	**4,500**
Cash earnings (loss)	(1,742)	(1,985)	(7,240)	(10,905)	**(14,817)**	**(6,063)**
Changes in assets and liabilities						
Accounts receivable	82	(26)	(81)	(1,209)	**(1,091)**	**(1,440)**
Inventory	(17)	(29)	(136)	(872)	**(423)**	**(2,129)**
Prepaid expenses and other	11	(116)	(420)	(742)	**(1,215)**	**(214)**
Security deposits	-	(296)	(50)	-	**-**	**-**
Accounts payable	231	(271)	385	378	**568**	**4,577**
Accrued expenses and other	232	(12)	768	248	**861**	**4,376**
Lease liability	-	-	(144)	(152)	**(325)**	**(750)**
Deferred revenue	15	5	112	(112)	**(112)**	**-**
(Increase) decrease in working capital	554	(745)	434	(2,461)	**(1,737)**	**4,420**
Net cash provided by (used in) operations	(1,188)	(2,730)	(6,806)	(13,366)	**(16,554)**	**(1,643)**
Deposits for equipment purchases	-	-	(2,154)	(2,199)	**(2,199)**	**-**
Purchase of intangible asset	-	-	(200)	-	**(3,500)**	**-**
Purchase of property and equipment	-	(46)	(383)	(574)	**(765)**	**(1,000)**
Net cash used in investing	-	(46)	(2,737)	(2,773)	**(6,464)**	**(1,000)**
Proceeds from note payable	-	3,710	-	4,752	**4,752**	**-**
Repayments of note payable	-	(759)	(2,450)	(1,000)	**(4,836)**	**-**
Payment of debt issuance costs	-	(340)	-	(17)	**(17)**	**-**
Proceeds from the exercise of warrants	-	-	11,719	3,021	**3,021**	**-**
Proceeds from Paycheck Protection Program loan	-	155	-	-	**-**	**-**
Proceeds from the SEPA	-	-	-	248	**6,098**	**9,000**
Proceeds from prepaid advance liability, net	-	-	-	10,573	**10,573**	**-**
Payment on prepaid advance liability	-	-	-	-	**(5,750)**	**(9,000)**
Proceeds from sale of Series C conv. pref. stock	184	-	-	-	**-**	**-**
Proceeds from sale of Series D conv. pref. stock	-	-	6,500	-	**-**	**-**
Proceeds from sale of common stock	898	9,501	-	-	**-**	**-**
Proceeds from exercise of options	-	-	122	25	**25**	**-**
Payment of financing costs	(15)	(720)	(365)	(158)	**(158)**	**-**
Net cash provided by (used in) financing	1,067	11,547	15,526	17,444	**13,708**	**-**
Net Change in Cash	(121)	8,771	5,983	1,306	**(9,310)**	**(2,643)**
Cash - Beginning of Period	351	230	8,880	14,863	**14,863**	**5,553**
Cash - End of Period	230	8,880	14,863	16,169	**5,553**	**2,910**

Source: Company filings and Taglich Brothers' estimates

Price Chart



Taglich Brothers' Current Ratings Distribution



Investment Banking Services for Companies Covered in the Past 12 Months		
Rating	#	%
Buy	**5**	**26**
Hold		
Sell		
Not Rated		

Important Disclosures

As of November 16, 2022, we, our affiliates, any officer, director or stockholder, or any member of their families do not have a position in the stock of the company mentioned in this report. Taglich Brothers, Inc. does not currently have an Investment Banking relationship with the company mentioned in this report and was not a manager or co-manager of any offering for the company within the last three years.

All research issued by Taglich Brothers, Inc. is based on public information. The company paid a monetary fee of $6,000 (USD) in October 2020 for the creation and dissemination of research reports for the first three months. After the first three months from initial publication, the company pays a monthly monetary fee of $2,000 (USD) to Taglich Brothers, Inc., for a minimum of twelve months for the creation and dissemination of research reports.

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Analyst Certification

I, John Nobile, the research analyst of this report, hereby certify that the views expressed in this report accurately reflect my personal views about the subject securities and issuers; and that no part of my compensation was, is, or will be, directly, or indirectly, related to the specific recommendations or views contained in this report.

Public companies mentioned in this report:

Honeywell (NYSE: HON)
Lydall (NYSE: LDL)
3M (NYSE: MMM)

Meaning of Ratings

Buy – The growth prospects, degree of investment risk, and valuation make the stock attractive relative to the general market or comparable stocks.

Speculative Buy – Long term prospects of the company are promising but investment risk is significantly higher than it is in our BUY-rated stocks. Risk-reward considerations justify purchase mainly by high risk-tolerant accounts. In the short run, the stock may be subject to high volatility and could continue to trade at a discount to its market.

Neutral – Based on our outlook the stock is adequately valued. If investment risks are within acceptable parameters, this equity could remain a holding if already owned.

Sell – Based on our outlook the stock is significantly overvalued. A weak company or sector outlook and a high degree of investment risk make it likely that the stock will underperform relative to the general market.

Discontinued – Research coverage discontinued due to the acquisition of the company, termination of research services (includes non-payment for such services), diminished investor interest, or departure of the analyst.

Some notable Risks within the Microcap Market

Stocks in the Microcap segment of the market have many risks that are not as prevalent in Large-cap, Blue Chips or even Small-cap stocks. Often it is these risks that cause Microcap stocks to trade at discounts to their peers. The most common of these risks is liquidity risk, which is typically caused by small trading floats and very low trading volume which can lead to large spreads and high volatility in stock price. In addition, Microcaps tend to have significant company specific risks that contribute to lower valuations. Investors need to be aware of the higher probability of financial default and higher degree of financial distress inherent in the microcap segment of the market.

From time to time our analysts may choose to withhold or suspend a rating on a company. We continue to publish informational reports on such companies; however, they have no ratings or price targets. In general, we will not rate any company that has too much business or financial uncertainty for our analysts to form an investment conclusion, or that is currently in the process of being acquired.