



COMPANY UPDATE

Rating: **BUY**

Ticker: QUBT

Price: \$2.28
(intraday)

Target: \$10.00
(from \$11.50)

Quantum Computing Inc.

Q4 inline and 2022 outlook positive. We expect initial commercialization and strong growth over the next year to be positive for stock. Lowering P/T to \$10.

Q4 inline: Quantum recently (on March 15) reported its fiscal Q4 2021 (ending December) results. The company did not report any revenue. EPS was \$(0.54) (\$(0.16) on a pro forma basis), compared to our estimate of \$(0.16). There was no consensus estimates or company guidance.

Still very early stage: Quantum's recent financial performance is reflective of its developmental and early commercialization stage. We do not expect the company to begin revenue generation until mid-2022 (the company has guided to generate revenue in 2022). The company, having recently launched several of its initial products, is currently focusing on sales and marketing of its products. We believe investors should be focused on its commercialization of its software, which we believe within the next year, the company should begin to generate and grow revenue quickly.

Maintaining estimates: We are maintaining our 2022 estimates for revenue of \$1.5 million, and for EPS of \$(0.59).

Focused on quantum computing: Quantum's flagship software solution, Qatalyst, is a ready-to-run quantum and classical software for optimization computations for faster, better, and more diverse business decisions. By being early in this rapidly growing industry, we believe Quantum is well-positioned to capture and drive a meaningful market share and industry growth.

The need for quantum computing: The rapid and widespread adoption of technologies such as the Internet, artificial intelligence, virtual and augmented reality, 3D imaging, and the Internet of Things (IoT), have served to exponentially increase the generation of data. This has driven up the demand for high-performance computing to process all this data. According to Grand View Research, the High-Performance computing market was valued at \$35 billion in 2018 and is expected to reach a value of \$60 billion by 2025.

Investment in QPhoton: In February, the company announced a marketing agreement with QPhoton, Inc., a leading innovator in the quantum photonic technology space, to merge QCI's quantum software solution, Qatalyst, with QPhoton's advanced photonic quantum technologies for its application to QCI-specific solutions. As part of this agreement, Quantum will invest \$2.5 million in QPhoton.

Large market potential: As quantum computing hardware continues to advance, we expect a corresponding growth in demand for quantum software to run on these computers. The U.S. Government has committed \$1.3 billion to funding quantum information science programs.

Balance sheet: In Q4, the company raised \$8.5 million selling preferred stock. We believe the company has enough cash into 2023.

Positive high risks versus rewards: Overall, concerns outweighed by growth prospects and valuation. We believe the demand for its software and services will grow fueled by continued growth and advances in quantum computing. We believe the ~billion dollars market potentials presents high rewards for the risks.

Valuation attractive: We are maintaining our BUY rating, but lowering our 12-month price target to \$10.00 from \$11.50, based on a NPV analysis, representing significant upside from the current share price. We believe this valuation appropriately balances out the company's high risks with the company's high growth prospects and large upside opportunities.

Company Description

Based in Leesburg, VA, Quantum Computing is an early-stage software development company focused on classical and quantum software for complex optimization computations.

United States
Technology

March 16, 2022

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Stock Data

Exchange:	NasdaqCM
52-week Range:	1.93 – 10.43
Shares Outstanding (million):	29
Market cap (\$million):	\$66
EV (\$million):	\$49
Debt (\$million):	\$0
Cash (\$million):	\$17
Avg. Daily Trading Vol. (\$million):	\$1
Float (million shares):	23
Short Interest (million shares):	1
Dividend, annual (yield):	\$0 (NA%)

Revenues (US\$ million)

	<u>2022E</u> (Cur.)	<u>2022E</u> (Old)	<u>2023E</u> (Cur.)	<u>2023E</u> (Old)
Q1 Mar	0.0E		1.0E	
Q2 Jun	0.2E		1.5E	
Q3 Sep	0.4E		1.5E	
Q4 Dec	<u>0.9E</u>		<u>2.0E</u>	
Total	<u>1.5E</u>		<u>6.0E</u>	
EV/Revs	33x		8x	

Earnings per Share (pro forma)

	<u>2022E</u> (Cur.)	<u>2022E</u> (Old)	<u>2023E</u> (Cur.)	<u>2023E</u> (Old)
Q1 Mar	(0.16)E		(0.13)E	
Q2 Jun	(0.15)E		(0.13)E	
Q3 Sep	(0.15)E		(0.12)E	
Q4 Dec	<u>(0.14)E</u>		<u>(0.12)E</u>	
Total	<u>(0.59)E</u>		<u>(0.50)E</u>	
P/E	N/A		N/A	

Important Disclosures

Ascendant Capital Markets LLC seeks to do business with companies covered by its research team. Consequently, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making an investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report, beginning on page 12.

Exhibit 1: Quantum Computing Inc. Overview

Leading the Industry with Ready-to-Run Quantum Software



QCI
QUANTUM COMPUTING INC.
NASDAQ:QUBT

Accelerate classical optimization solutions with quantum techniques.

Submit the same problem to classical or quantum processors, no programming required.

SaaS-based solution empowers today's SMEs with better insights for better decisions.

Key Takeaways



Breakthrough Technology

Quantum-enabled software that delivers business value today. Qatalyst can solve some of the most important and complex computing problems at record speed.

World Class Team

We have assembled a team of subject matter experts with decades of success in quantum computing, supercomputing, pharma, fintech, manufacturing and security.



Large Addressable Market

High-Growth Opportunity:
56% CAGR to \$65 billion by 2030.
Diverse applications across multiple industries: finance, national defense, industry, healthcare and more.

Performance Revenue Model

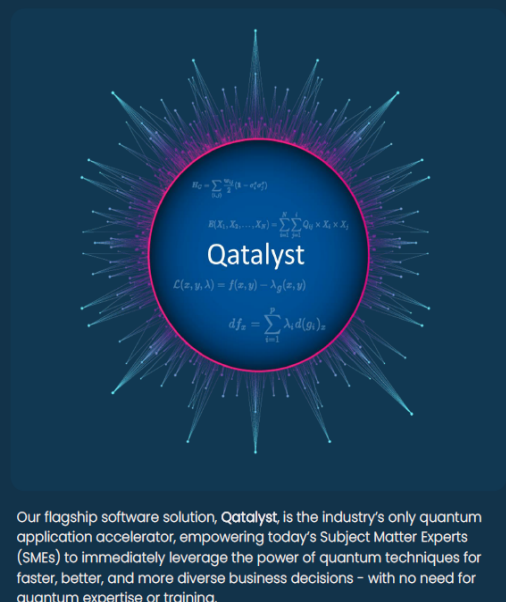
Opportunities for strategic partnerships with major enterprise, government agencies, and national labs to produce real-world performance advantages.

Source: Company reports.

Exhibit 2: Quantum Computing Investment Highlights

Who We Are

- **Only public pure-play quantum software company** in the high-growth, multi-billion-dollar quantum computing space.
- **Innovative delivery** of quantum-powered optimization solutions for the enterprise.
- **We apply quantum techniques** to classical computing today to better solve high-value enterprise computational problems, with a seamless bridge to quantum computing.
- **We deliver solutions with unmatched speed and quality of results** using quantum techniques — *and not someday, but today.*
- **Highly experienced and accomplished management team:** industry pioneers from Cray, Silicon Graphics, D-Wave, and other major IT firms.
- **Our flagship quantum software accelerator, Qatalyst™**, recently launched as a software-as-a-service (SaaS) on Amazon Web Services (AWS) and Amazon Braket.



Source: Company reports.

Exhibit 3: Quantum Computer Reality Check

The Quantum Reality Check

The Good

- Huge investments by major players are driving quantum momentum.
- Quantum has the potential to deliver faster, better solutions for many critical, real-world enterprise problems.
- QPUs are constantly improving and expanding
- Every day we're learning more about quantum programming, the challenges, and what we really need to think about.

The Bad, i.e., What Needs Work

Hardware

- Quantum processors are still in their infancy.
- Cannot scale to process the large volumes of data and variables created by today real-world problems
- No standard quantum computer architecture.
- Proprietary, unique low-level code required for each vendor

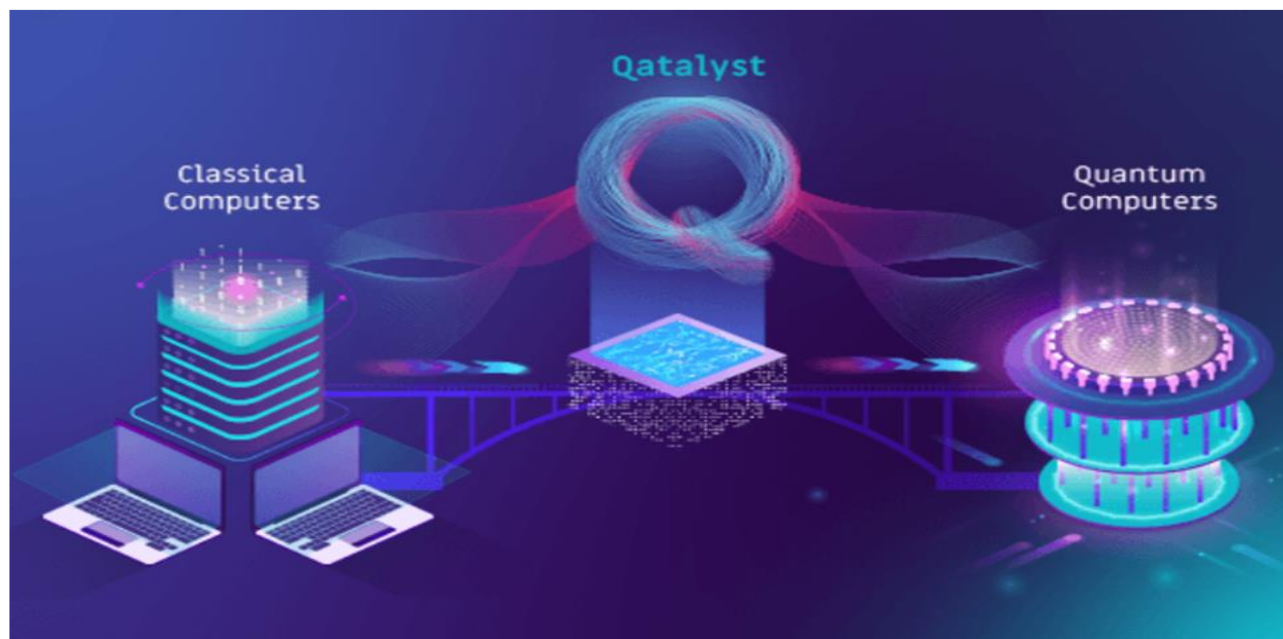
Software

- Requires complex programming with SDK (software development kits)
- SDKs require quantum expertise to understand and use
- Long lead time and costs required to train and develop the skills needed to create quantum programs



Source: Company reports.

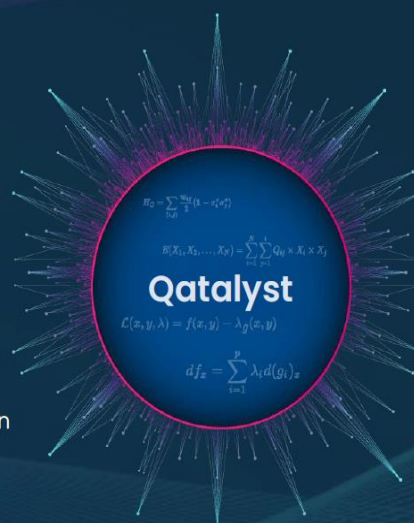
Exhibit 4: Quantum Computing's Qatalyst Software Solutions



What is Qatalyst?

QCI
QUANTUM COMPUTING INC.
NASDAQ:QUBT

- Quantum-ready constrained optimization software for classic & quantum computers
 - Quantum-ready techniques applied to classic computing enhances the quality and performance of classical computations
 - Returns a diversity of excellent results faster for better decisions
- SME driven, no quantum expertise required
 - SMEs, workflows and applications submit familiar programs
 - Qatalyst does the rest via six simple API calls
 - SMEs empowered right now vs being left behind
- No hardware lock-in; Use the best QPU for the problem
 - Immediately access the power of quantum across diverse QPU vendors, in the cloud.
 - No need for low-level coding, no on-premise requirements.
 - Submit the same program on CPUs or QPUs using the same Qatalyst APIs
 - Qatalyst controls and adjusts to the hardware; no need for low level programming or reprogramming when changing QPUs



Ready-for-Results Quantum Software

Source: Company reports.

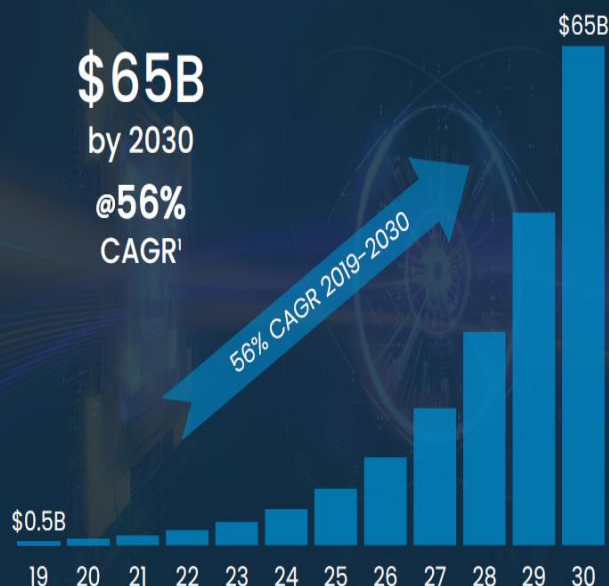
Exhibit 5: Quantum's Market Opportunity

Quantum Opportunity by the Numbers

- **Large, Fast-Growing Market:** 56% CAGR to \$65 billion by 2030¹
- **Major Benefits:** Quantum solutions to create competitive advantage for 25% of Fortune Global 500 by 2023.²
- **Growing Adoption:** 20% of organizations will budget for Quantum Computing projects by 2023, up from <1% today.²



Global Quantum Computing Market¹



Source: Company reports.

Exhibit 6: Catalyst Market Opportunities



QCI
QUANTUM COMPUTING INC.
NASDAQ:QUBT

Qatalyst Near-term Addressable Markets – Examples

Application	Markets	Addressable Market Size
Supply Chain & Logistics Optimization	<ul style="list-style-type: none"> • Retail • Aerospace • Chemical/Materials • Utilities • Manufacturing 	\$22 Billion+ ¹
Transportation Optimization	<ul style="list-style-type: none"> • Airlines • Delivery 	\$5 Billion+ ²
Community Detection	<ul style="list-style-type: none"> • Cyber Security • Biotech • Government 	\$156 Billion+ ³
Total		\$157 Billion+
Other potential revenue sources: <ul style="list-style-type: none"> • Government or Commercial R&D contracts • Consulting 		Typical Gross Margins of 60% – 70%

Source: Company reports.

Exhibit 7: Qatalyst Applications Examples

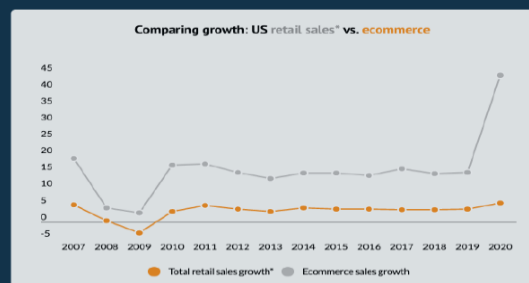
Example QC Application Retail Supply Chain Optimization



Ecommerce shift complicates everything.

Covid accelerated that shift.

- **Shopping baskets.** From single basket with lots of items to many baskets with few items.
- **Supply Chain availability.** Shifting demand and Covid lockdowns/delays mean raw materials and product availability is a dynamic and ever-changing target.
- **Consumer expectations.** Customers expect unlimited product selection and availability at the lowest price. The emerging differentiator is becoming delivery time.
 - As many as 96% of customers consider faster delivery synonymous with same-day delivery.
 - In a study by McKinsey & Company, the primary aspect of customer service mentioned by customers? **Delivery time.**

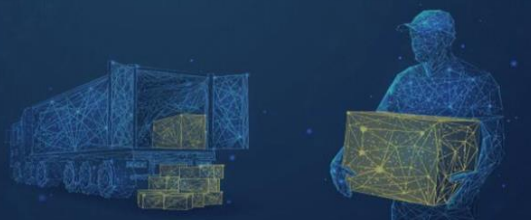


Qatalyst Solves These Highly Complex Computations to Fuel Retail Markets

Example QC Application Transportation Optimization



- **Increases in delivery demands** drive more complex computations to optimize logistics.
- **Uncertainty of availability** of critical supply chain elements mean production is ever-changing. How to optimize delivery under these circumstances.
 - For example, how to deliver automobiles globally with confirmed schedules for production and delivery.
- **Scale of transportation** as Covid lockdowns are removed offer opportunity for better optimization as we reboot airlines, trains and infrastructure.



Example of Qatalyst Quantum-Ready Application Community Detection Application



- Community detection is a broadly useful technique across domains for identifying similarities/commonalities across diverse groups or profiles.(not just humans)
- Ready-to-run community detection is part of Qatalyst optimization.
- SMEs simply submit their graph problem, QGraph converts, Qatalyst Core solves and QGraph returns results in requested format.



Sales & Marketing

Social Network Analysis for accurate market segmentation and targeting.



Biotechnology

Improved epidemiology models for epidemics.
Cohort segmentation and analysis for improved clinical trial design.

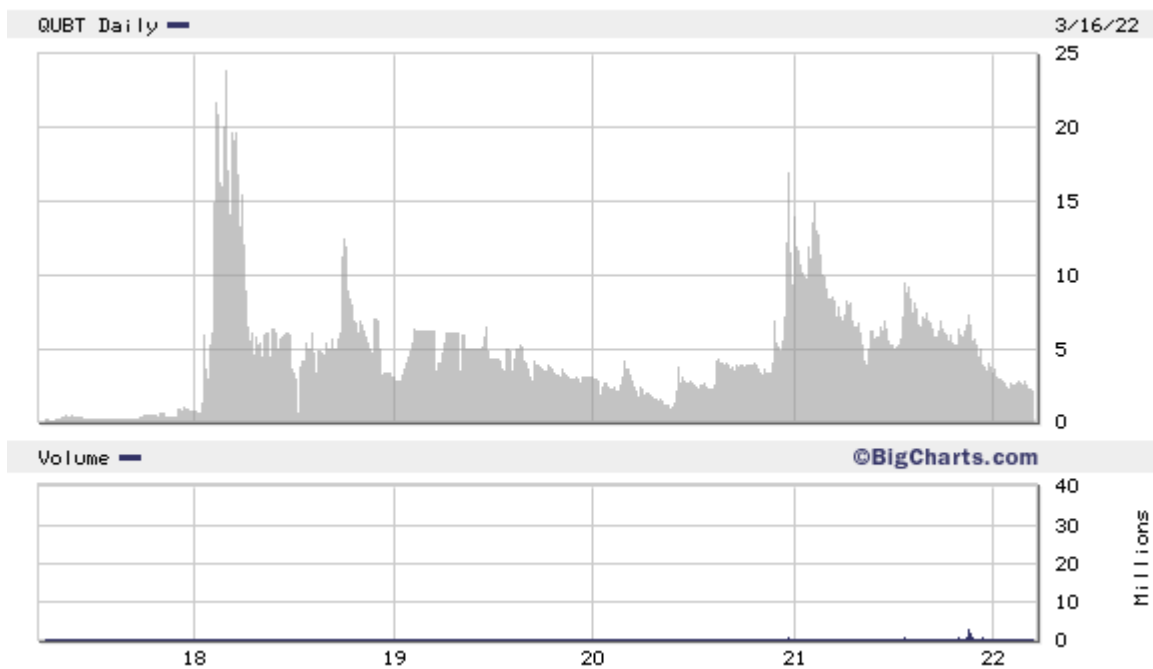


Government/Security

Improved anomaly detection for earlier detection of criminal activity, fraud and cyber bots.

Source: Company reports.

Exhibit 8: Quantum Computing Inc. Stock Price (5-Years)



Source: <https://bigcharts.marketwatch.com/>

FINANCIAL MODEL

Quantum Computing Inc.

Income Statement (\$ mils)	2018	Mar-19	Jun-19	Sep-19	Dec-19	2019	Mar-20	Jun-20	Sep-20	Dec-20	2020	Mar-21	Jun-21	Sep-21	Dec-21	2021	Mar-22	Jun-22	Sep-22	Dec-22	2022	Mar-23	Jun-23	Sep-23	Dec-23	2023
Fiscal Year End: December 31	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1E	Q2E	Q3E	Q4E	FY-E	Q1E	Q2E	Q3E	Q4E	FY-E
Total Revenue	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.40	0.90	1.50	1.00	1.50	1.50	2.00	6.00
Cost of Revenues	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.20	0.45	0.75	0.50	0.75	0.75	1.00	3.00
Gross Profit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.20	0.45	0.75	0.50	0.75	0.75	1.00	3.00
Salaries	0.52	0.12	0.12	0.12	0.14	0.50	0.16	0.13	0.12	0.22	0.64	0.25	0.51	0.66	1.08	2.49	0.60	0.60	0.55	0.55	2.30	0.60	0.60	0.55	0.55	2.30
Consulting	0.32	0.08	0.09	0.08	0.12	0.36	0.08	0.06	0.28	1.26	1.68	0.30	0.23	0.30	0.24	1.08	0.30	0.30	0.30	0.30	1.20	0.30	0.30	0.30	0.30	1.20
Research & Development	0.25	0.15	0.15	0.26	0.34	0.89	0.34	0.34	0.29	0.57	1.54	0.63	0.57	0.61	0.78	2.59	0.60	0.60	0.65	0.65	2.50	0.60	0.60	0.65	0.65	2.50
Stock Based Compensation	4.18	0.07	1.49	(1.34)	0.00	0.21	1.01	0.23	6.56	3.38	11.18	1.98	2.55	2.58	2.29	9.40	2.50	2.50	2.50	2.50	10.00	2.50	2.50	2.50	2.50	10.00
Related Party Marketing						0.00			0.10	0.04	0.14					0.00					0.00					0.00
Selling General & Administrative	0.52	0.17	0.15	0.10	0.17	0.59	0.14	0.16	1.32	0.54	2.16	0.24	0.48	0.63	0.23	1.58	0.63	0.63	0.63	0.63	2.52	0.63	0.63	0.63	0.63	2.52
Restructuring and other						0.00					0.00					0.00					0.00					0.00
Total operating expenses	5.80	0.58	1.98	(0.78)	0.77	2.55	1.74	0.92	8.68	6.01	17.34	3.39	4.33	4.78	4.63	17.13	4.63	4.63	4.63	4.63	18.52	4.63	4.63	4.63	4.63	18.52
Operating income (loss)	(5.80)	(0.58)	(1.98)	0.78	(0.77)	(2.55)	(1.74)	(0.92)	(8.68)	(6.01)	(17.34)	(3.39)	(4.33)	(4.78)	(4.63)	(17.13)	(4.63)	(4.53)	(4.43)	(4.18)	(17.77)	(4.13)	(3.88)	(3.88)	(3.63)	(15.52)
Interest income (expense)	(4.08)	(0.05)	(0.05)	(0.01)	(5.72)	(5.83)	(0.13)	(1.62)	(2.98)	(3.11)	(7.83)	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other income (expense)	(0.63)					0.00	1.17	0.75		(1.48)	0.44	0.22		(10.99)	(10.78)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Income before income taxes	(10.51)	(0.64)	(2.03)	0.77	(6.48)	(8.38)	(0.70)	(1.78)	(11.66)	(10.60)	(24.73)	(3.39)	(4.11)	(4.78)	(15.62)	(27.90)	(4.63)	(4.53)	(4.43)	(4.18)	(17.77)	(4.13)	(3.88)	(3.88)	(3.63)	(15.52)
Income taxes						0.00					0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net income (loss)	(10.51)	(0.64)	(2.03)	0.77	(6.48)	(8.38)	(0.70)	(1.78)	(11.66)	(10.60)	(24.73)	(3.39)	(4.11)	(4.78)	(15.62)	(27.90)	(4.63)	(4.53)	(4.43)	(4.18)	(17.77)	(4.13)	(3.88)	(3.88)	(3.63)	(15.52)
Nonrecurring/noncash adjustments						0.00					0.00					0.00					0.00					0.00
Net income (pro forma)	(10.51)	(0.64)	(2.03)	0.77	(6.48)	(8.38)	(0.70)	(1.78)	(11.66)	(10.60)	(24.73)	(3.39)	(4.11)	(4.78)	(15.62)	(27.90)	(4.63)	(4.53)	(4.43)	(4.18)	(17.77)	(4.13)	(3.88)	(3.88)	(3.63)	(15.52)
EBITDA	(1.77)	(0.51)	(0.50)	(0.56)	(0.76)	(2.33)	(0.72)	(2.02)	(0.79)	(2.63)	(6.16)	(1.16)	(1.86)	(1.79)	(2.10)	(6.92)	(2.10)	(2.00)	(1.90)	(1.65)	(7.65)	(1.60)	(1.35)	(1.35)	(1.10)	(5.40)
Shares, Basic	4.7	4.7	5.3	7.4	7.4	7.4	7.8	8.6	17.2	28.0	28.0	28.7	29.1	29.2	29.2	29.2	29.5	29.8	30.1	30.4	29.9	30.7	31.0	31.3	31.6	31.1
Shares, Diluted	4.7	4.7	5.3	7.4	7.4	7.4	7.8	8.6	17.2	28.0	28.0	28.7	29.1	29.2	29.2	29.2	29.5	29.8	30.1	30.4	29.9	30.7	31.0	31.3	31.6	31.1
EPS Basic (pro forma)	(\$2.22)	(\$0.13)	(\$0.38)	\$0.10	(\$0.88)	(\$1.14)	(\$0.09)	(\$0.21)	(\$0.68)	(\$0.38)	(\$0.88)	(\$0.12)	(\$0.14)	(\$0.16)	(\$0.54)	(\$0.96)	(\$0.16)	(\$0.15)	(\$0.15)	(\$0.14)	(\$0.59)	(\$0.13)	(\$0.13)	(\$0.12)	(\$0.12)	(\$0.50)
EPS Diluted (pro forma)	(\$2.22)	(\$0.13)	(\$0.38)	\$0.10	(\$0.88)	(\$1.14)	(\$0.09)	(\$0.21)	(\$0.68)	(\$0.38)	(\$0.88)	(\$0.12)	(\$0.14)	(\$0.16)	(\$0.54)	(\$0.96)	(\$0.16)	(\$0.15)	(\$0.15)	(\$0.14)	(\$0.59)	(\$0.13)	(\$0.13)	(\$0.12)	(\$0.12)	(\$0.50)
Margins																										
Gross margin																		50%	50%	50%	50%	50%	50%	50%	50%	50%
Salaries																										
Consulting																										
Research and development																										
General and administrative																										
Operating margin																										
Tax rate, GAAP																										
Net margin																										
Y/Y % change																										
Total Revenue																										
Gross margin																										
Salaries							-5%	43%	15%	1%	55%	30%	49%	279%	444%	383%	287%	144%	18%	-16%	-49%	-8%	0%	0%	0%	0%
Consulting							12%	-1%	-26%	251%	985%	366%	298%	257%	6%	-81%	-36%	-1%	31%	-1%	23%	11%	0%	0%	0%	0%
Research and development							256%	128%	131%	12%	69%	73%	81%	69%	114%	37%	68%	-4%	6%	6%	-17%	-3%	0%	0%	0%	0%
General and administrative							12%	-16%	8%	1197%	219%	269%	72%	201%	-53%	-57%	-27%	161%	32%	1%	171%	60%	0%	0%	0%	0%
Operating income (loss)							-56%	198%	-54%	-1206%	685%	581%	95%	372%	-45%	-23%	-1%	36%	5%	-7%	-10%	4%	-11%	-14%	-12%	-13%
Net income (loss)							-20%	10%	-13%	-1613%	64%	195%	386%	131%	-59%	47%	13%	37%	10%	-7%	-73%	-36%	-11%	-14%	-12%	-13%
EPS Diluted (pro forma)							-49%	-33%	-46%	-748%	-57%	-22%	31%	-32%	-76%	42%	8%	33%	8%	-10%	-74%	-38%	-14%	-18%	-16%	-16%

Source: Company reports and Ascendant Capital Markets estimates.

Quantum Computing Inc.

Balance Sheet (\$ mils)	Dec-18 Q4A	Mar-19 Q1A	Jun-19 Q2A	Sep-19 Q3A	Dec-19 Q4A	Mar-20 Q1A	Jun-20 Q2A	Sep-20 Q3A	Dec-20 Q4A	Mar-21 Q1A	Jun-21 Q2A	Sep-21 Q3A	Dec-21 Q4A	Mar-22 Q1E	Jun-22 Q2E	Sep-22 Q3E	Dec-22 Q4E	Mar-23 Q1E	Jun-23 Q2E	Sep-23 Q3E	Dec-23 Q4E
Fiscal Year End: December 31																					
Assets																					
Cash and cash equivalents	1.77	1.33	0.81	0.31	0.10	0.20	0.50	3.98	15.20	13.77	12.63	10.43	16.74	12.13	10.12	8.20	6.54	4.93	3.54	2.17	1.03
Short term investments														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accounts receivable, net														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Inventory														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deferred income taxes														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prepaid expenses and other	0.02	0.02	0.01	0.01	0.02	0.01	0.01	0.01	0.04	0.29	0.24	0.61	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Total current assets	1.79	1.35	0.82	0.32	0.12	0.21	0.51	3.98	15.24	14.06	12.87	11.05	17.24	12.63	10.62	8.71	7.05	5.43	4.04	2.68	1.53
Property and equipment, net	0.01	0.01	0.01	0.02	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.04	0.05	0.06	0.07	0.08	0.08	0.13	0.13	0.18
Intangibles, net														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deferred income tax														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other														2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Total assets	1.80	1.35	0.82	0.33	0.15	0.24	0.53	4.01	15.27	14.09	12.90	11.08	17.28	15.18	13.18	11.28	9.62	8.02	6.67	5.31	4.21
Liabilities and stockholders' equity																					
Accounts payable	0.05	0.11	0.10	0.16	0.22	0.21	0.29	0.17	0.37	0.25	0.59	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Accrued expenses	0.09	0.16	0.21	0.10	0.15	0.21	0.29	0.26	0.11	0.13	0.19	0.30	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Deferred revenue														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deferred income tax														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warrant liabilities														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other		0.00			0.98	0.48	0.92	1.15			0.03	0.02	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Short term debt	3.17	3.17	3.12	1.11	1.61	1.55	2.03	1.81	0.22	0.22				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total current liabilities	3.31	3.44	3.43	1.37	2.96	2.45	3.52	3.39	0.69	0.60	0.80	0.78	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Deferred income taxes														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warrant liabilities														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other long term liabilities														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deferred revenue														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Long term debt														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total other liabilities	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Preferred stock																					
Common stock	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.53	5.06	7.58	10.11	12.64	15.16	17.69	20.22
Additional paid-in capital	18.86	18.93	20.44	21.24	25.95	27.25	28.24	43.51	68.07	70.37	73.09	76.07	97.59	97.59	97.59	97.59	97.59	97.59	97.59	97.59	97.59
Retained earnings	(20.38)	(21.02)	(23.05)	(22.28)	(28.76)	(29.46)	(31.24)	(42.90)	(53.50)	(56.89)	(61.00)	(65.77)	(81.39)	(86.02)	(90.55)	(94.98)	(99.16)	(103.29)	(107.17)	(111.05)	(114.68)
Accumulated other comprehensive income														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total stockholders' equity	(1.52)	(2.08)	(2.61)	(1.04)	(2.81)	(2.20)	(2.99)	0.62	14.57	13.49	12.10	10.30	16.20	14.10	12.10	10.19	8.54	6.94	5.58	4.23	3.13
Total stockholders' equity and liabil	1.80	1.35	0.82	0.33	0.15	0.24	0.53	4.01	15.27	14.09	12.90	11.08	17.28	15.18	13.18	11.27	9.62	8.02	6.67	5.31	4.21

Balance Sheet Drivers

	Dec-18 Q4A	Mar-19 Q1A	Jun-19 Q2A	Sep-19 Q3A	Dec-19 Q4A	Mar-20 Q1A	Jun-20 Q2A	Sep-20 Q3A	Dec-20 Q4A	Mar-21 Q1A	Jun-21 Q2A	Sep-21 Q3A	Dec-21 Q4A	Mar-22 Q1E	Jun-22 Q2E	Sep-22 Q3E	Dec-22 Q4E	Mar-23 Q1E	Jun-23 Q2E	Sep-23 Q3E	Dec-23 Q4E
Prepaid as % of total rev																					
Accounts payable as % of total rev																					
Accrued expenses as % of total rev																					
Activity Ratios																					
A/R Days Sales Outstanding																					
Book & Cash Value (per share)																					
Book Value per Share (diluted)	-\$0.32	-\$0.44	-\$0.49	-\$0.14	-\$0.38	-\$0.28	-\$0.35	\$0.04	\$0.52	\$0.47	\$0.42	\$0.35	\$0.56	\$0.48	\$0.41	\$0.34	\$0.28	\$0.23	\$0.18	\$0.14	\$0.10
Cash per Share (diluted)	\$0.37	\$0.28	\$0.15	\$0.04	\$0.01	\$0.03	\$0.06	\$0.23	\$0.54	\$0.48	\$0.43	\$0.36	\$0.57	\$0.41	\$0.34	\$0.27	\$0.22	\$0.16	\$0.11	\$0.07	\$0.03
Net cash per Share (diluted)	-\$0.30	-\$0.39	-\$0.44	-\$0.11	-\$0.20	-\$0.17	-\$0.18	\$0.13	\$0.53	\$0.47	\$0.43	\$0.36	\$0.57	\$0.41	\$0.34	\$0.27	\$0.22	\$0.16	\$0.11	\$0.07	\$0.03

Source: Company reports and Ascendant Capital Markets estimates

Quantum Computing Inc.

Cash Flow Statement (\$ mils)	2018	Mar-19	Jun-19	Sep-19	Dec-19	2019	Mar-20	Jun-20	Sep-20	Dec-20	2020	Mar-21	Jun-21	Sep-21	Dec-21	2021	Mar-22	Jun-22	Sep-22	Dec-22	2022	Mar-23	Jun-23	Sep-23	Dec-23	2023
Fiscal Year End: December 31	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1E	Q2E	Q3E	Q4E	FY-E	Q1E	Q2E	Q3E	Q4E	FY-E
Cash flow from operating activities																										
Net income	(10.51)	(0.64)	(2.03)	0.77	(6.48)	(8.38)	(0.70)	(1.78)	(11.66)	(10.60)	(24.73)	(3.39)	(4.11)	(4.78)	(15.62)	(27.90)	(4.63)	(4.53)	(4.43)	(4.18)	(17.77)	(4.13)	(3.88)	(3.88)	(3.63)	(15.52)
Depreciation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01
Amortization						0.00					0.00					0.00					0.00					0.00
Debt related amortization expense						0.00					0.00					0.00					0.00					0.00
Stock comp	4.03	0.07	1.49	(1.34)		0.21	1.01	(1.10)	7.89	3.38	11.18	2.23	2.46	2.99	2.53	10.20	2.53	2.53	2.53	2.53	10.11	2.53	2.53	2.53	2.53	10.11
Deferred income taxes						0.00					0.00					0.00					0.00					0.00
Change in fair value of warrant	4.00				5.69	5.69	(0.64)	0.58	0.87	1.12	1.93				10.72	10.72					0.00					0.00
Writedowns and impairments						0.00					0.00					0.00					0.00					0.00
Other gains/losses						0.00					0.00					0.00					0.00					0.00
Other						0.00					0.00				0.02	0.02					0.00					0.00
Changes in operating assets and liabilities:																										
Accounts receivable						0.00					0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Inventory						0.00					0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prepaid expenses & other current assets	(0.02)	0.01	0.01	0.00	(0.01)	0.00	0.01	0.01	0.00	(0.04)	(0.02)	(0.25)	0.08	(0.38)	0.11	(0.44)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Income tax						0.00					0.00					0.00					0.00					0.00
Other assets						0.00					0.00					0.00					0.00					0.00
Accounts payable	0.05	0.05	(0.01)	0.06	0.06	0.16	(0.01)	0.08	(0.12)	0.20	0.15	(0.12)	0.34	(0.13)	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Accrued expenses	0.09	0.07	0.05	(0.10)	0.05	0.06	0.06	0.07	(0.03)	(0.15)	(0.04)	0.03	0.05	0.11	0.30	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deferred revenue						0.00					0.00					0.00					0.00					0.00
Other liabilities						0.00					0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net cash (used in) provided by	(2.36)	(0.43)	(0.50)	(0.61)	(0.70)	(2.24)	(0.27)	(2.14)	(3.04)	(6.09)	(11.54)	(1.51)	(1.17)	(2.19)	(1.94)	(6.80)	(2.10)	(2.00)	(1.90)	(1.65)	(7.65)	(1.60)	(1.35)	(1.35)	(1.10)	(5.40)
Cash flow from investing activities																										
Purchases of property and equipment	(0.01)			(0.01)	(0.01)	(0.02)	(0.00)			(0.01)	(0.01)	(0.00)		(0.00)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.04)	(0.01)	(0.04)	(0.01)	(0.04)	(0.11)
Purchases of short-term investments						0.00					0.00					0.00					0.00					0.00
Acquisitions						0.00					0.00					0.00					(2.50)					0.00
Other						0.00					0.00		(0.00)		(0.02)	0.00					0.00					0.00
Net cash used in investing activities	(0.01)	0.00	0.00	(0.01)	(0.01)	(0.02)	(0.00)	0.00	0.00	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.03)	(0.04)	(2.51)	(0.01)	(0.01)	(0.01)	(2.54)	(0.01)	(0.04)	(0.01)	(0.04)	(0.11)
Cash flow from financing activities																										
Issuance of debt	3.07					0.00		0.16	0.04	0.02	0.22					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Repayment of debt			(0.03)	(2.04)	0.50	(1.56)	(0.06)	0.32	(0.26)	(1.61)	(1.61)		(0.22)		0.00	(0.22)					0.00					0.00
Issuance of stock	1.06			2.16		2.16	0.43	1.95	6.74	18.91	28.04	0.08	0.25	(0.00)	8.28	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proceeds from stock option exercises						0.00					0.00					0.00					0.00					0.00
Other						0.00					0.00					0.00					0.00					0.00
Cash provided by (used in) financing activities	4.13	0.00	(0.03)	0.13	0.50	0.60	0.37	2.44	6.52	17.32	26.65	0.08	0.03	(0.00)	8.28	8.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Effect of exchange rate on cash						0.00					0.00					0.00					0.00					0.00
Net increase (decrease) in cash	1.77	(0.43)	(0.53)	(0.50)	(0.21)	(1.67)	0.10	0.30	3.48	11.22	15.10	(1.43)	(1.14)	(2.19)	6.31	1.54	(4.61)	(2.01)	(1.91)	(1.66)	(10.20)	(1.61)	(1.39)	(1.36)	(1.14)	(5.51)
Beginning cash and equivalents	0.00	1.77	1.33	0.81	0.31	1.77	0.10	0.20	0.50	3.98	0.10	15.20	13.77	12.63	10.43	15.20	16.74	12.13	10.12	8.20	16.74	6.54	4.93	3.54	2.17	6.54
Ending cash and equivalents	1.77	1.33	0.81	0.31	0.10	0.10	0.20	0.50	3.98	15.20	15.20	13.77	12.63	10.43	16.74	16.74	12.13	10.12	8.20	6.54	6.54	4.93	3.54	2.17	1.03	1.03

Source: Company reports and Ascendant Capital Markets estimates

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Quantum Computing Inc.

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Total return is defined as price appreciation plus dividend yield.

Ascendant Capital Markets, LLC Rating System

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Total return is defined as price appreciation plus dividend yield.

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Rating	Count	Percent	Investment Banking Services Past 12 months	
			Count	Percent
Buy	40	98%	16	40%
Hold	0	0%	0	0%
Sell	1	2%	0	0%
Total	41	100%	16	39%

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