

# **Quantum Computing Finance Market Forecasts to 2034 – Global Analysis By Component (Hardware, Software, and Services), Deployment Model (On-Premises, and Cloud-Based Quantum Computing (QCaaS)), Application, End User, Organization Size, and By Geography**

<https://marketpublishers.com/r/Q667F18AC6FBEN.html>

Date: February 2026

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: Q667F18AC6FBEN

## **Abstracts**

According to Statistics MRC, the Global Quantum Computing Finance Market is accounted for \$0.49 billion in 2026 and is expected to reach \$3.68 billion by 2034 growing at a CAGR of 28.5% during the forecast period. Quantum computing finance encompasses quantum hardware, software, and services specifically designed to tackle complex computational problems in the financial sector. It enables advanced applications such as portfolio optimization, high-frequency trading algorithms, risk analysis, fraud detection, and cryptographic security. Growth is propelled by the escalating need for superior computational power to manage big data, the rising complexity of financial models, increasing cybersecurity threats, and significant investments from major financial institutions and technology conglomerates into quantum research and development.

### **Market Dynamics:**

Driver:

Rising demand for advanced computational power in complex financial modeling

The financial industry's growing reliance on intricate algorithms for real-time trading, risk simulation, and asset management is straining the limits of classical computing.

Quantum computing offers exponential speedups for specific problem types, such as Monte Carlo simulations and optimization puzzles, which are foundational to modern finance. This potential to solve previously intractable problems is driving substantial R&D investment from banks, hedge funds, and fintech firms. The pursuit of a competitive edge through faster, more accurate predictions and robust portfolio management is a primary catalyst for market growth, pushing the boundaries of quantitative finance.

#### Restraint:

##### High costs and technical immaturity of quantum systems

The development and maintenance of quantum computing infrastructure involve extraordinarily high costs, including cryogenic cooling systems and specialized materials, placing them out of reach for most organizations. Furthermore, current quantum hardware faces significant challenges with qubit stability, error rates, and coherence times, limiting practical, large-scale commercial deployment. This technical immaturity and the scarcity of skilled quantum algorithm developers create substantial barriers to entry. Consequently, the market remains largely experimental, with widespread adoption hindered by both economic and foundational technological constraints that require years of further innovation to overcome.

#### Opportunity:

##### Proliferation of Quantum Computing as a Service (QCaaS) models

The emergence of cloud-based QCaaS platforms offered by major tech players is democratizing access to quantum processing power. This model allows financial institutions, including SMEs and startups, to experiment with quantum algorithms without the prohibitive capital expenditure of building in-house systems. It accelerates innovation in quantum applications for finance, such as credit scoring and option pricing, by providing a scalable, pay-per-use environment. This cloud-centric approach significantly lowers the entry barrier, fostering a broader ecosystem of developers and driving early-stage adoption and niche solution development across the financial services landscape.

#### Threat:

##### Evolving cybersecurity landscape and quantum decryption threats

The prospective power of quantum computing poses a paradoxical threat to the financial sector's existing cryptographic frameworks. Algorithms that secure transactions and data today, such as RSA, could be broken by sufficiently advanced quantum computers, risking systemic vulnerability. This 'harvest now, decrypt later' concern is pushing the industry toward quantum-resistant cryptography, necessitating costly and complex infrastructure overhauls. This transition period creates uncertainty and potential security gaps, demanding significant investment in new standards and technologies to protect sensitive financial data against future quantum attacks.

### **Covid-19 Impact:**

The COVID-19 pandemic accelerated the digital transformation of the financial sector, highlighting the need for robust, remote-compatible technologies. While initially causing disruption, it underscored the value of advanced analytics for modeling economic shock scenarios and market volatility. This environment heightened interest in disruptive technologies like quantum computing for superior forecasting and risk assessment. Although direct quantum deployments were largely unaffected due to their long-term R&D nature, the pandemic solidified the strategic imperative for financial institutions to invest in next-generation computational capabilities to build future resilience.

The services segment is expected to be the largest during the forecast period

The services segment, encompassing consulting, deployment, integration, and support, is anticipated to hold the largest market share. This dominance is due to the highly specialized and nascent nature of quantum technology, which requires expert guidance for implementation within complex financial workflows. Financial institutions lack in-house quantum expertise, creating strong demand for consulting to develop strategy and integration services to bridge quantum solutions with existing classical IT infrastructure. This reliance on third-party expertise for customization, training, and ongoing optimization ensures the services segment remains critical throughout the initial commercialization and adoption phases.

The cloud-based quantum computing segment is expected to have the highest CAGR during the forecast period

The cloud-based quantum computing segment is predicted to exhibit the highest growth rate, as it offers a flexible, cost-effective gateway for financial organizations to access quantum processors. This model eliminates the need for massive upfront investment in

proprietary hardware, allowing firms to experiment, develop, and test quantum algorithms remotely. The scalability and collaborative potential of cloud platforms accelerate innovation cycles and lower entry barriers for fintech startups and academic researchers. Major cloud providers are aggressively expanding their quantum offerings, making this the most accessible and rapidly adopted deployment mode in the foreseeable future.

### **Region with largest share:**

North America is expected to dominate the market share, driven by the concentration of leading quantum computing firms, major financial hubs, and substantial governmental and private R&D funding. The presence of technology giants like IBM, Google, and Microsoft, coupled with proactive investment from Wall Street institutions, creates a fertile innovation ecosystem. Supportive regulatory initiatives and high awareness of quantum's strategic importance further solidify its lead. The region's advanced financial infrastructure and urgency to maintain technological supremacy in both finance and computing ensure it remains the primary revenue and development center for quantum finance solutions.

### **Region with highest CAGR:**

The Asia Pacific region is projected to register the highest CAGR, fueled by aggressive national quantum initiatives and rapid digitalization of financial services in China, Japan, and South Korea. Significant government investments aimed at achieving quantum advantage, coupled with a booming fintech sector and large, tech-savvy populations, are key growth drivers. Local tech giants like Baidu and Alibaba are advancing cloud quantum services. The region's need to modernize financial systems and manage enormous datasets presents a vast application playground, positioning it for explosive growth as quantum technology matures and becomes more commercially viable.

### **Key players in the market**

Some of the key players in Quantum Computing Finance Market include IBM Corporation, Google LLC (Alphabet Inc.), Microsoft Corporation, Amazon Web Services, Inc. (AWS Braket), D-Wave Systems Inc., Rigetti Computing, IonQ, Inc., Honeywell International Inc., QC Ware Corp., Zapata Computing, Inc., Quantinuum, Accenture plc, Fujitsu Limited, Toshiba Corporation, NEC Corporation, Baidu, Inc., Alibaba Group, Goldman Sachs Group, Inc., and JPMorgan Chase & Co.

## Key Developments:

In March 2024, Quantinuum announced a partnership with a major global bank to pilot quantum-powered algorithms for market risk simulation, demonstrating a significant step toward practical financial application.

In February 2024, IBM expanded its Quantum Network, adding several leading financial institutions to collaboratively explore use cases in portfolio optimization and fraud detection.

In January 2024, JPMorgan Chase & Co. published new research on quantum algorithms for option pricing, showcasing advanced theoretical frameworks poised for future implementation on hardware.

## Components Covered:

Hardware

Software

Services

## Deployment Models Covered:

On-Premises Quantum Systems

Cloud-Based Quantum Computing (QCaaS)

## Applications Covered:

Portfolio Optimization & Asset Management

Risk Analysis & Simulation

Fraud Detection & Anomaly Analysis

Algorithmic Trading & High-Frequency Trading (HFT)

Cryptography & Cybersecurity

Option Pricing & Derivatives Valuation

Credit Scoring & Loan Default Prediction

#### End Users Covered:

Banks & Financial Institutions

Insurance Companies

Investment Funds & Asset Management Firms

FinTech Companies & Startups

Stock Exchanges & Trading Platforms

Regulatory & Compliance Bodies

#### Organization Sizes Covered:

Large Enterprises

Small & Medium Enterprises (SMEs)

#### Regions Covered:

North America

United States

Canada

Mexico

## Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

## Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

**What our report offers:**

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

**Free Customization Offerings:**

All the customers of this report will be entitled to receive one of the following free customization options:

**Company Profiling**

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

**Regional Segmentation**

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

## Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

## Contents

### **1 EXECUTIVE SUMMARY**

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

### **2 RESEARCH FRAMEWORK**

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
  - 2.4.1 Data Collection (Primary and Secondary)
  - 2.4.2 Data Modeling and Estimation Techniques
  - 2.4.3 Data Validation and Triangulation
  - 2.4.4 Analytical and Forecasting Approach

### **3 MARKET DYNAMICS AND TREND ANALYSIS**

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

### **4 COMPETITIVE AND STRATEGIC ASSESSMENT**

- 4.1 Porter's Five Forces Analysis
  - 4.1.1 Supplier Bargaining Power
  - 4.1.2 Buyer Bargaining Power
  - 4.1.3 Threat of Substitutes
  - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

## **5 GLOBAL QUANTUM COMPUTING FINANCE MARKET, BY COMPONENT**

- 5.1 Hardware (Quantum Processors, Cryogenic Systems)
- 5.2 Software (Quantum Algorithms, Development Platforms)
- 5.3 Services (Consulting, Deployment & Integration, Support)

## **6 GLOBAL QUANTUM COMPUTING FINANCE MARKET, BY DEPLOYMENT MODEL**

- 6.1 On-Premises Quantum Systems
- 6.2 Cloud-Based Quantum Computing (QCaaS - Quantum Computing as a Service)

## **7 GLOBAL QUANTUM COMPUTING FINANCE MARKET, BY APPLICATION**

- 7.1 Portfolio Optimization & Asset Management
- 7.2 Risk Analysis & Simulation
- 7.3 Fraud Detection & Anomaly Analysis
- 7.4 Algorithmic Trading & High-Frequency Trading (HFT)
- 7.5 Cryptography & Cybersecurity for Financial Data
- 7.6 Option Pricing & Derivatives Valuation
- 7.7 Credit Scoring & Loan Default Prediction

## **8 GLOBAL QUANTUM COMPUTING FINANCE MARKET, BY END USER**

- 8.1 Banks & Financial Institutions
- 8.2 Insurance Companies (InsurTech)
- 8.3 Investment Funds & Asset Management Firms
- 8.4 FinTech Companies & Startups
- 8.5 Stock Exchanges & Trading Platforms
- 8.6 Regulatory & Compliance Bodies

## **9 GLOBAL QUANTUM COMPUTING FINANCE MARKET, BY ORGANIZATION SIZE**

- 9.1 Large Enterprises
- 9.2 Small & Medium Enterprises (SMEs)

## 10 GLOBAL QUANTUM COMPUTING FINANCE MARKET, BY GEOGRAPHY

### 10.1 North America

10.1.1 United States

10.1.2 Canada

10.1.3 Mexico

### 10.2 Europe

10.2.1 United Kingdom

10.2.2 Germany

10.2.3 France

10.2.4 Italy

10.2.5 Spain

10.2.6 Netherlands

10.2.7 Belgium

10.2.8 Sweden

10.2.9 Switzerland

10.2.10 Poland

10.2.11 Rest of Europe

### 10.3 Asia Pacific

10.3.1 China

10.3.2 Japan

10.3.3 India

10.3.4 South Korea

10.3.5 Australia

10.3.6 Indonesia

10.3.7 Thailand

10.3.8 Malaysia

10.3.9 Singapore

10.3.10 Vietnam

10.3.11 Rest of Asia Pacific

### 10.4 South America

10.4.1 Brazil

10.4.2 Argentina

10.4.3 Colombia

10.4.4 Chile

10.4.5 Peru

10.4.6 Rest of South America

### 10.5 Rest of the World (RoW)

- 10.5.1 Middle East
  - 10.5.1.1 Saudi Arabia
  - 10.5.1.2 United Arab Emirates
  - 10.5.1.3 Qatar
  - 10.5.1.4 Israel
  - 10.5.1.5 Rest of Middle East
- 10.5.2 Africa
  - 10.5.2.1 South Africa
  - 10.5.2.2 Egypt
  - 10.5.2.3 Morocco
  - 10.5.2.4 Rest of Africa

## **11 STRATEGIC MARKET INTELLIGENCE**

- 11.1 Industry Value Network and Supply Chain Assessment
- 11.2 White-Space and Opportunity Mapping
- 11.3 Product Evolution and Market Life Cycle Analysis
- 11.4 Channel, Distributor, and Go-to-Market Assessment

## **12 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES**

- 12.1 Mergers and Acquisitions
- 12.2 Partnerships, Alliances, and Joint Ventures
- 12.3 New Product Launches and Certifications
- 12.4 Capacity Expansion and Investments
- 12.5 Other Strategic Initiatives

## **13 COMPANY PROFILES**

- 13.1 IBM Corporation
- 13.2 Google LLC (Alphabet Inc.)
- 13.3 Microsoft Corporation
- 13.4 Amazon Web Services, Inc. (AWS Braket)
- 13.5 D-Wave Systems Inc.
- 13.6 Rigetti Computing
- 13.7 IonQ, Inc.
- 13.8 Honeywell International Inc.
- 13.9 QC Ware Corp.
- 13.10 Zapata Computing, Inc.

- 13.11 Cambridge Quantum Computing (CQC)
- 13.12 Quantinuum
- 13.13 Accenture plc
- 13.14 Fujitsu Limited
- 13.15 Toshiba Corporation
- 13.16 NEC Corporation
- 13.17 Baidu, Inc.
- 13.18 Alibaba Group (Alibaba Cloud)
- 13.19 Goldman Sachs Group, Inc.
- 13.20 JPMorgan Chase & Co.

## List Of Tables

### LIST OF TABLES

- Table 1 Global Quantum Computing Finance Market Outlook, By Region (2023–2034) (\$MN)
- Table 2 Global Quantum Computing Finance Market Outlook, By Component (2023–2034) (\$MN)
- Table 3 Global Quantum Computing Finance Market Outlook, By Hardware (Quantum Processors, Cryogenic Systems) (2023–2034) (\$MN)
- Table 4 Global Quantum Computing Finance Market Outlook, By Software (Quantum Algorithms, Development Platforms) (2023–2034) (\$MN)
- Table 5 Global Quantum Computing Finance Market Outlook, By Services (2023–2034) (\$MN)
- Table 6 Global Quantum Computing Finance Market Outlook, By Deployment Model (2023–2034) (\$MN)
- Table 7 Global Quantum Computing Finance Market Outlook, By On-Premises Quantum Systems (2023–2034) (\$MN)
- Table 8 Global Quantum Computing Finance Market Outlook, By Cloud-Based Quantum Computing (QCaaS) (2023–2034) (\$MN)
- Table 9 Global Quantum Computing Finance Market Outlook, By Application (2023–2034) (\$MN)
- Table 10 Global Quantum Computing Finance Market Outlook, By Portfolio Optimization & Asset Management (2023–2034) (\$MN)
- Table 11 Global Quantum Computing Finance Market Outlook, By Risk Analysis & Simulation (2023–2034) (\$MN)
- Table 12 Global Quantum Computing Finance Market Outlook, By Fraud Detection & Anomaly Analysis (2023–2034) (\$MN)
- Table 13 Global Quantum Computing Finance Market Outlook, By Algorithmic Trading & HFT (2023–2034) (\$MN)
- Table 14 Global Quantum Computing Finance Market Outlook, By Cryptography & Cybersecurity (2023–2034) (\$MN)
- Table 15 Global Quantum Computing Finance Market Outlook, By Option Pricing & Derivatives Valuation (2023–2034) (\$MN)
- Table 16 Global Quantum Computing Finance Market Outlook, By Credit Scoring & Loan Default Prediction (2023–2034) (\$MN)
- Table 17 Global Quantum Computing Finance Market Outlook, By End User (2023–2034) (\$MN)
- Table 18 Global Quantum Computing Finance Market Outlook, By Banks & Financial

Institutions (2023–2034) (\$MN)

Table 19 Global Quantum Computing Finance Market Outlook, By Insurance Companies (2023–2034) (\$MN)

Table 20 Global Quantum Computing Finance Market Outlook, By Investment Funds (2023–2034) (\$MN)

Table 21 Global Quantum Computing Finance Market Outlook, By FinTech Companies (2023–2034) (\$MN)

Table 22 Global Quantum Computing Finance Market Outlook, By Stock Exchanges (2023–2034) (\$MN)

Table 23 Global Quantum Computing Finance Market Outlook, By Regulatory Bodies (2023–2034) (\$MN)

Table 24 Global Quantum Computing Finance Market Outlook, By Organization Size (2023–2034) (\$MN)

Table 25 Global Quantum Computing Finance Market Outlook, By Large Enterprises (2023–2034) (\$MN)

Table 26 Global Quantum Computing Finance Market Outlook, By SMEs (2023–2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) Regions are also represented in the same manner as above.

## I would like to order

Product name: Quantum Computing Finance Market Forecasts to 2034 – Global Analysis By Component (Hardware, Software, and Services), Deployment Model (On-Premises, and Cloud-Based Quantum Computing (QCaaS)), Application, End User, Organization Size, and By Geography

Product link: <https://marketpublishers.com/r/Q667F18AC6FBEN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/Q667F18AC6FBEN.html>