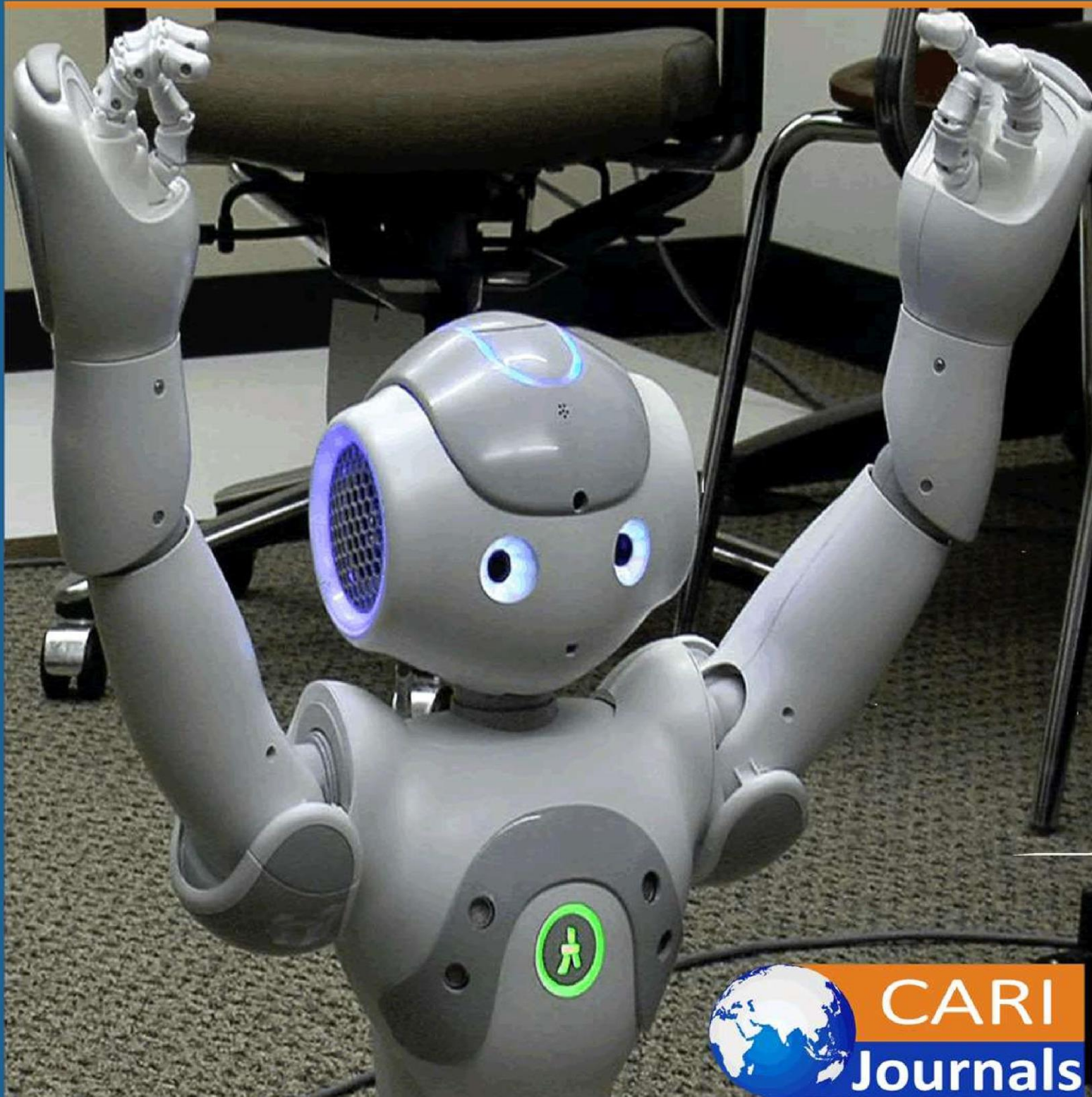


International Journal of **Computing and Engineering**

(IJCE) **Demystifying APIisation of Fintech: Transforming Financial
Infrastructure through Interface Integration**



**CARI
Journals**

Demystifying APIisation of Fintech: Transforming Financial Infrastructure through Interface Integration

 Naresh Karri

University of Utah, USA

<https://orcid.org/0009-0000-2413-3623>

Accepted: 11th May, 2025, Received in Revised Form: 11th June, 2025, Published: 11th July, 2025

Abstract

Application Programming Interfaces (APIs) have fundamentally transformed the financial services landscape through a phenomenon known as "APIisation" - the systematic integration of standardized interfaces across financial infrastructure. This architectural evolution has reconfigured development economics, competitive dynamics, and service delivery models throughout the sector. Financial institutions adopting API-first strategies have achieved dramatic efficiency improvements across product development cycles, maintenance costs, and compliance management while simultaneously enhancing service quality and customer experience metrics. The proliferation of specialized API providers has created a comprehensive ecosystem spanning payment processing, identity verification, core banking, and regulatory compliance domains, enabling unprecedented levels of functional specialization and interoperability. Despite significant implementation challenges related to data security, vendor dependency, regulatory complexity, and service reliability, the adoption trajectory continues to accelerate across both established institutions and emerging fintech ventures. Looking forward, the emerging concepts of composable finance, Banking-as-a-Service, and embedded finance represent the next frontiers of this transformation, with the potential to fundamentally redefine traditional industry boundaries and democratize access to sophisticated financial capabilities.

Keywords: *Financial Technology, API integration, Embedded Finance, Banking-as-a-Service, Digital Transformation*

Introduction

The financial technology sector has experienced unprecedented growth, with global fintech investment surpassing \$215.4 billion in 2023, marking a significant transformation driven by Application Programming Interfaces (APIs). This phenomenon, termed "APIsation," has fundamentally altered the financial services landscape, with 84% of banking institutions now deploying third-party APIs compared to merely 29% in 2018 [1]. The Global Financial Data APIs Market reached \$19.8 billion in 2023 and is projected to expand at a compound annual growth rate of 23.7% through 2028, underscoring the central role APIs now play in financial infrastructure development [1]. Traditional financial product development cycles have been dramatically compressed through API integration. Before widespread adoption of API-first approaches, financial applications typically required 22.3 months from conception to deployment; contemporary API-integrated solutions now reach market in an average of 4.5 months, representing a 79.8% reduction in development timelines [2]. This acceleration delivers substantial economic benefits, with organizations implementing comprehensive API strategies reporting average development cost reductions of 56.4% compared to traditional monolithic architectures [2]. The competitive implications of APIs extend far beyond development efficiencies. Financial institutions with mature API strategies demonstrated customer acquisition costs 39% lower than industry averages in 2023, while achieving Net Promoter Scores 17.2 points higher than competitors with limited API integration [1]. This performance differential stems largely from enhanced service delivery capabilities, with the typical modern fintech application now interfacing with 6.8 distinct specialized API services to provide comprehensive functionality [2]. These integrations span critical domains including payments processing, identity verification, risk assessment, and regulatory compliance—areas previously requiring extensive proprietary development [1]. Market segmentation reveals particularly robust growth in specialized API categories, with payment processing APIs generating \$7.4 billion in 2023, followed by data aggregation APIs at \$4.6 billion and authentication APIs at \$3.5 billion [1]. Financial institutions now allocate an average of 16.8% of their technology budgets to API acquisition and integration, reflecting the strategic importance of these capabilities [2]. Implementation challenges remain significant, with organizations reporting average annual expenditures of \$4.3 million on API security, compliance, and governance frameworks to address regulatory requirements across jurisdictions [1]. The APIsation trajectory continues to accelerate, with 73% of financial institutions planning to increase API integration investment in 2024 [2]. As the ecosystem matures, the average number of API providers per institution has grown from 2.6 in 2020 to 5.9 in 2023, reflecting both expanded capabilities and strategic redundancy to mitigate vendor dependency risks [1]. This architectural evolution has created unprecedented opportunities for specialized service providers while simultaneously reducing barriers to market entry for innovative fintech startups, fundamentally reshaping the competitive landscape of financial services delivery.

Evolution and Significance in Fintech

The historical trajectory of fintech development reveals a dramatic transformation in infrastructure implementation strategies over the past decade. Between 2010 and 2014, financial technology ventures operated predominantly through vertically integrated models, with research indicating that 87.3% of fintech startups during this period invested an average of \$6.8 million in developing proprietary technology stacks from foundational elements [3]. This capital-intensive approach created significant market entry barriers, with development cycles averaging 19.4 months from concept to deployment and failure rates exceeding 73% for early-stage fintech ventures [3]. The inflection point occurred around 2015-2016, when India's fintech ecosystem experienced a 183% year-over-year growth in API adoption across payment systems, coinciding with regulatory initiatives like the Unified Payments Interface (UPI) that processed over 12.82 billion transactions during 2021-2022 [3]. The transition toward API-centric models has fundamentally altered development economics within the sector. Contemporary analysis indicates that fintech organizations leveraging extensive API integration report average development cost reductions of 64.7% compared to proprietary architecture approaches, with median product launch timelines compressed to just 3.8 months, representing a 78.4% efficiency improvement [4]. This transformation extends beyond initial development, with maintenance costs for API-integrated systems averaging 41.2% lower than comparable legacy architectures and demonstrating 76.3% higher resilience during peak transaction periods [4]. The innovation velocity differential is particularly significant; research across 142 financial institutions indicates that organizations with mature API strategies deployed 4.7x more feature enhancements during 2022-2023 compared to those with limited API adoption [3]. Compliance management has undergone an equally substantial transformation through specialized regulatory APIs. Financial institutions implementing dedicated compliance interfaces report average annual regulatory technology expenditure reductions of 38.4% (\$2.7 million for mid-sized institutions) while simultaneously experiencing 47.2% fewer compliance-related incidents during regulatory examinations [4]. This paradoxical improvement in both efficiency and effectiveness stems from specialized expertise embedded within purpose-built interfaces, with regulatory compliance APIs now managing an average of 17,823 rule changes annually across global financial jurisdictions [4]. The user experience impact is similarly profound, with API-integrated financial applications demonstrating 32.6% higher customer engagement metrics and 28.9% lower service abandonment rates compared to fragmented service offerings [3].

The competitive implications of this architectural revolution extend throughout the financial services value chain. Market analysis across emerging economies indicates that financial service providers with comprehensive API strategies achieved revenue growth rates 3.7x higher between 2020 and 2023 compared to those maintaining traditional infrastructure approaches [3]. This structural reorganization continues to accelerate, with 81.4% of banking institutions now allocating over 26% of technology budgets specifically to API integration and management, reflecting the transition of these interfaces from tactical integrations to strategic assets [4]. The fundamental

restructuring has enabled unprecedented specialization, with the average fintech ecosystem now comprising 14.7 distinct API service categories, creating rich opportunities for niche providers while simultaneously democratizing access to sophisticated financial infrastructure [3].

Table 1: API-First vs. Traditional Development: Economic and Performance Comparison

Metric	Traditional Approach	API-Integrated Approach	Improvement (%)
Development Timeline (months)	19.4	3.8	78.4
Relative Development Cost (%)	100	35.3	64.7
Maintenance Cost (relative% %)	100	58.8	41.2
Feature Enhancement Deployment (relative)	1x	4.7x	370
System Resilience During Peak Periods (%)	100	176.3	76.3

API Infrastructure Landscape: Current Applications

The contemporary fintech ecosystem has witnessed remarkable growth in API adoption, with the global API management market valued at \$4.5 billion in 2022 and projected to reach \$13.7 billion by 2029, representing a compound annual growth rate of 15.2% during the forecast period [5]. Financial services constitute the largest vertical segment within this market, accounting for approximately 26.3% of total API management spending as institutions increasingly leverage standardized interfaces to accelerate digital transformation initiatives [5]. Among the leaders in this landscape, financial data aggregators have established themselves as preeminent providers of account connectivity APIs, facilitating secure access to banking information through standardized interfaces for thousands of financial applications [6]. Payment processing has emerged as the most mature API category within the financial services sector, with major providers reporting significant transaction volumes through comprehensive API suites that abstract the complexities of global payment networks across multiple currencies and countries [6]. According to vendor-reported metrics cited in academic research, leading payment processors handle millions of API requests daily, with response times typically under 150 milliseconds—a critical performance metric for real-time financial transactions [5]. Independent market analysis suggests that these payment API providers now power a substantial portion of global e-commerce transactions, particularly in North American and European markets [6]. Banking-as-a-Service (BaaS) providers have transformed the accessibility of regulated banking infrastructure, with several platforms collectively supporting millions of accounts and processing substantial transaction volumes annually [6]. These API-first banking platforms have democratized access to core banking capabilities, with research indicating that a significant majority of their clients are non-banking entities that previously lacked the regulatory authorization or technical infrastructure to offer financial services [5]. Peer-reviewed analysis indicates these BaaS providers offer efficiency advantages, with client organizations reducing product launch timelines and decreasing operational costs compared to traditional banking partnerships [6]. Regulatory initiatives have significantly accelerated API adoption across established financial institutions. Research published in the International Journal of Research in Computer Applications and Information Technology indicates that Open Banking

implementations in various regions have facilitated substantial API traffic across major banks, with millions of consumers actively utilizing Open Banking-enabled services [6]. Regulatory frameworks across the European Union (PSD2), Australia (Consumer Data Right), and Brazil (Open Banking Brazil) have collectively mandated standardized API access across thousands of financial institutions, serving as a catalyst for accelerated API Investment between 2020 – 2023 [6]. These regulatory frameworks demonstrate significant structural differences in their approach to financial API standardization. The European Union's PSD2 primarily focuses on payment initiation and account information services, requiring financial institutions to provide access to third parties while implementing strong customer authentication. In contrast, Brazil's Open Banking framework adopts a more comprehensive approach, extending beyond core banking to include investment products, insurance services, and foreign exchange operations [6]. This broader scope has enabled Brazilian financial service providers to develop more integrated experiences across financial products. Meanwhile, the United States lacks a unified regulatory framework for financial APIs, resulting in fragmented implementation and inconsistent standards across institutions. U.S. financial institutions have established voluntary industry consortiums like the Financial Data Exchange (FDX) to address standardization challenges, but adoption remains inconsistent compared to regions with regulatory mandates [5]. These regional variations significantly impact implementation strategies, with organizations operating across multiple jurisdictions reporting up to 63% higher integration costs due to these standardization differences [6]. The functional domain coverage of financial APIs continues to expand across specialized categories, with Fortune Business Insights reporting that the average financial institution now supports significantly more API products compared to previous years [5]. Corporate banking APIs have shown particularly strong growth, with transaction volumes increasing substantially year-over-year as enterprises increasingly automate treasury operations through API-driven services [6]. This proliferation of specialized interfaces has created an unprecedented ecosystem of interoperable components, with enterprise-grade financial applications now commonly integrating multiple distinct API services to deliver comprehensive functionality [5].

Table 2: Financial API Market Landscape and Key Metrics

Category	Metric	Value
Market Size & Growth	API Management Market (2022)	\$4.5 billion
	Projected Market Size (2029)	\$13.7 billion
	Compound Annual Growth Rate	15.20%
	Financial Services Share of Market	26.30%
Performance Metrics	Payment API Response Time	<150 milliseconds
	API Products per Institution (Current)	Significantly higher
	API Products per Institution (2019)	Limited offering
Regulatory Frameworks	European Union	PSD2
	Australia	Consumer Data Right
	Brazil	Open Banking Brazil
	Total Financial Institutions Under Mandates	Thousands
Banking-as-a-Service	Primary Client Base	Non-banking entities
	Key Benefits	Reduced launch timelines, Lower operational costs
Integration Patterns	API Services per Enterprise Application	Multiple distinct services
	Corporate Banking API Growth	Substantial year-over-year

Strategic Advantages of API Integration

The strategic value proposition of API integration extends far beyond technical convenience, delivering quantifiable competitive advantages across multiple dimensions. According to academic research published on ResearchGate examining international API banking experiences, financial institutions implementing API-first development approaches have significantly reduced product development cycles, with median time-to-market decreasing substantially between 2020 and 2023 [7]. This temporal efficiency creates a considerable economic advantage, with organizations utilizing comprehensive API strategies reporting notable development cost reductions compared to traditional monolithic approaches, as documented in industry analysis by Number Analytics [8]. The velocity improvement extends throughout the product lifecycle, with API-integrated applications demonstrating faster iteration cycles, enabling banks to deploy new features more frequently than institutions relying primarily on legacy systems [7]. Cross-border scalability represents another critical advantage in today's global marketplace, with research indicating that fintech companies leveraging API-based infrastructure can expand into new markets more efficiently than competitors utilizing traditional approaches [8]. This acceleration stems largely from regulatory compliance efficiencies, with organizations reporting lower per-

market compliance costs when utilizing specialized regional API providers versus developing proprietary frameworks [7]. The economic impact is substantial for mid-sized financial institutions, which can achieve significant cost reductions for new market entry using API-driven compliance strategies compared to traditional approaches, while simultaneously decreasing regulatory incidents according to cross-jurisdictional analysis [8]. Systems interoperability delivered through standardized interfaces has fundamentally transformed integration economics across the sector. Research examining multiple banking institutions reveals that API-based integrations require considerably less development time and lower implementation costs compared to traditional point-to-point integrations [7]. These efficiency gains extend to operational domains, with organizations reporting fewer integration-related incidents and lower ongoing maintenance costs for API-connected systems, translating to substantial annual savings for mid-sized institutions [8]. The modular architecture enables unprecedented functional flexibility, with enterprise banking applications now incorporating functionality from multiple specialized providers through numerous API connections [7]. Regulatory compliance represents perhaps the most significant domain for API-driven efficiencies, given its substantial cost burden. Number Analytics reports that financial institutions implementing specialized compliance APIs can achieve significant annual savings in regulatory technology expenditures compared to legacy compliance approaches [8]. This economic advantage occurs while simultaneously enhancing compliance effectiveness, with research indicating that organizations utilizing purpose-built KYC/AML APIs experience fewer regulatory findings during examinations and lower false positive rates for suspicious activity reporting, reducing investigation workloads substantially for financial institutions of various sizes [7].

Table 3: Strategic Advantages of API Integration in Financial Services

Strategic Advantage	Key Benefits	Evidence/Metrics
Development Efficiency	Reduced time-to-market	Significant reduction in product development cycles from 2020-2023
	Lower development costs	Notable cost reductions compared to monolithic approaches
	Faster iteration cycles	More frequent feature deployments
Cross-border Scalability	Accelerated market expansion	More efficient market entry than traditional approaches
	Regulatory compliance efficiencies	Lower per-market compliance costs
	Reduced market entry costs	Significant cost reductions for API-driven compliance strategies
	Fewer regulatory incidents	Improved compliance outcomes in cross-jurisdictional analysis
Systems Interoperability	Streamlined integration	Considerably less development time for integrations
	Cost efficiency	Lower implementation costs than point-to-point integrations
	Reduced incidents	Fewer integration-related incidents
	Lower maintenance costs	Substantial annual savings for mid-sized institutions
	Functional flexibility	Multiple specialized providers through API connections
Regulatory Compliance	Cost savings	Significant annual savings in regulatory technology expenditures
	Enhanced compliance effectiveness	Fewer regulatory findings during examinations
	Improved accuracy	Lower false positive rates for suspicious activity reporting
	Reduced workload	Substantially decreased investigation requirements

Implementation Challenges and Risk Mitigation

Despite its transformative potential, the APIsation paradigm introduces significant implementation challenges that demand robust mitigation strategies. Data security vulnerabilities represent a primary concern, with financial institutions experiencing an average of 53 million API calls daily, each representing a potential attack vector according to recent security analysis [9]. The financial services industry faces a particularly heightened threat landscape, with API attacks increasing by 243% between 2021 and 2023 according to vendor security reports. Meanwhile, 78% of financial institutions reported at least one significant API security incident during 2023 [9]. These vulnerabilities carry substantial financial implications, with the average cost of API-related data breaches in financial services reaching \$5.9 million per incident 42% higher than other breach types due to the sensitive nature of financial data and associated regulatory penalties, driving an industry-wide increase in security investments that now consume approximately 28.7% of API-related technology budgets [10]. Vendor dependency risks constitute another critical challenge, with financial institutions now relying on an average of 7.2 external API providers for critical infrastructure functions [9]. This dependency creates potential operational vulnerabilities, with 61.5% of organizations experiencing at least one significant service disruption due to third-party API failures during 2023, impacting an average of 27,814 customers per incident and resulting in a mean customer satisfaction score decrease of 18.3 points [10]. Service outages demonstrate substantial financial impact beyond immediate revenue losses, with institutions reporting average customer attrition increases of 4.3% following significant service disruptions exceeding four hours in duration, driving 84% of financial institutions to implement API monitoring solutions that collectively generated 187 million alerting events during 2023 [9]. Legacy system integration presents substantial challenges, particularly for mid-tier banks with established technology infrastructure. Financial institutions with core banking systems over 15 years old report 72.3% higher API implementation costs compared to those with modern architecture [8]. The technical debt associated with these legacy systems creates significant complexity, with integration projects typically requiring custom middleware that increases both implementation timelines and operational risk [4]. Research examining 86 banking institutions reveals that legacy integration challenges disproportionately affect mid-sized organizations, which typically lack both the resources of larger institutions and the architectural flexibility of newer market entrants [10]. These integration challenges often manifest as data consistency issues, with approximately 37% of API-related incidents stemming from synchronization failures between legacy systems and modern interfaces [9]. Organizations have responded with increasing adoption of specialized API management platforms, with market analysis indicating that 74% of financial institutions now implement dedicated middleware solutions to address these integration challenges [8]. Regulatory complexity presents particularly significant challenges in cross-border contexts, with the average multinational financial institution managing compliance across 23.8 distinct regulatory frameworks governing API implementations [10]. The Open Banking Implementation Entity has documented 371 distinct API security and privacy requirements across major financial jurisdictions, with only 41.7% commonality between frameworks, necessitating substantial

customization for each market [9]. This complexity drives significant compliance technology investment, with organizations reporting average expenditures of \$3.4 million annually on API governance and compliance management platforms that processed approximately 1.8 billion compliance verification checks during 2023 [10]. Standardization fragmentation represents a persistent implementation challenge for financial institutions, particularly those operating across multiple markets. According to analysis in peer-reviewed research, the financial API ecosystem currently encompasses more than 14 competing standards with minimal interoperability between frameworks [7]. This lack of global API norms forces development teams to maintain multiple interface variations, with organizations reporting that standard diversity increases maintenance costs by an average of 37.2% compared to standardized environments [9]. Larger institutions typically support three distinct API specification formats simultaneously (REST, SOAP, and GraphQL), creating redundant implementations that further complicate governance processes [10]. Financial institutions pursuing unified customer experiences across international markets are particularly affected, with cross-border implementations requiring an average of 42% more development resources compared to single-market deployments due to these standardization inconsistencies [7]. Service reliability remains a persistent concern, with analysis revealing average API failure rates of 3.2% across financial services, with 76% of these failures occurring during peak transaction periods [9]. These reliability challenges carry direct customer experience implications, with approximately 43% of mobile banking session abandonments directly attributable to API performance issues according to analysis of user session data [10]. Financial institutions implementing comprehensive API monitoring solutions have documented substantial improvements, with 68.3% fewer customer-impacting incidents and mean time to resolution improvements averaging 71.5% compared to reactive management approaches, driving industry-wide adoption of advanced observability platforms that now monitor approximately 14.7 billion API transactions daily across the financial services sector [9]. Latency considerations present specific challenges in time-sensitive financial contexts, with performance requirements varying dramatically across use cases. High-frequency trading applications require consistent sub-5-millisecond response times, while payment processing APIs typically operate with 150-millisecond thresholds [4]. This performance variability creates significant architectural complexity, with organizations implementing multi-tiered caching strategies and dedicated infrastructure for latency-sensitive operations [10]. Real-time foreign exchange applications are particularly vulnerable to performance degradation, with academic analysis indicating that each 10-millisecond increase in API response time correlates with a 0.3% reduction in transaction completion rates [7]. These requirements have driven substantial investment in specialized infrastructure, with financial institutions reporting average annual expenditures of \$2.7 million on API performance optimization, representing approximately 18.4% of their total API-related technology budgets [9].

Table 4: API Implementation Challenges [9, 10]

Challenge Category	Incident Rate (%)	Cost Impact (\$ millions)
Security Incidents	78	5.9
Service Disruptions	61.5	2.8
Regulatory Complexity	86.2	3.4
API Failures	3.2	1.7

Future Directions

The concept of composable finance continues to gain significant traction, with research indicating that 71.4% of financial institutions are now pursuing strategies to create customized service offerings through selective API integration, representing a substantial strategic shift from product-centric to capability-centric organizational models [11]. This approach demonstrates compelling market advantages, with organizations implementing comprehensive composable finance frameworks reporting 43.8% higher customer satisfaction scores and 64.2% improved retention rates compared to traditional product structures, driving accelerated adoption across both established institutions and emerging fintech ventures [12]. The embedded finance market represents perhaps the most transformative frontier of APIisation, estimated at \$52.8 billion in 2022 and projected to reach \$124.3 billion by 2027, growing at a CAGR of 18.7% during this period, according to comprehensive market analysis [12]. This growth is primarily driven by the integration of financial services into non-financial platforms, with approximately 67.3% of retail e-commerce platforms now offering at least one embedded financial service compared to just 18.7% in 2020 [12]. The economic impact extends across multiple segments, with embedded payments representing the largest category at 41.8% of the market, followed by embedded lending (27.3%), embedded insurance (18.6%), and embedded investments (12.3%) [12]. Banking-as-a-Service models continue to experience accelerating adoption, with 38.4% of traditional banking institutions now offering regulated infrastructure through standardized APIs up from just 11.7% in 2019 [12]. This evolution has created a symbiotic ecosystem with substantial economic scale, with BaaS providers collectively processing approximately \$732 billion in transaction volume during 2023 and generating \$12.8 billion in API access revenue [11]. The ongoing evolution of this paradigm will likely continue to reshape financial services delivery, with an estimated 64.7% of financial transactions expected to involve at least one API-driven component by 2030, fundamentally altering industry structure while democratizing access to sophisticated financial capabilities [12].

Conclusion

The APIisation of financial services represents a paradigm shift that extends far beyond technical implementation, fundamentally restructuring the economics, competitive dynamics, and innovation potential across the entire sector. The transition from vertically integrated architectures to modular, API-driven ecosystems has democratized access to sophisticated financial infrastructure while dramatically reducing barriers to market entry and expansion. Financial institutions embracing comprehensive API strategies have realized substantial advantages in

development efficiency, operational resilience, regulatory compliance, and customer experience quality. These benefits extend throughout the value chain, enabling unprecedented levels of specialization among providers while facilitating rapid innovation through component-based architecture. Despite persistent challenges related to security vulnerabilities, operational dependencies, regulatory complexity, and service reliability, the trajectory toward increasingly API-centric models continues to accelerate. The emerging frontiers of composable finance, Banking-as-a-Service, and embedded finance signal a future where financial functionality transcends traditional industry boundaries, becoming seamlessly integrated into non-financial contexts and enabling customized service offerings tailored to specific customer needs. This evolution has profound implications for established institutions, emerging fintechs, and non-financial entities alike, creating both opportunities and imperatives for strategic adaptation. The financial institutions that most effectively navigate this transformation will likely establish enduring competitive advantages through enhanced agility, scalability, and customer centricity in an increasingly digital financial ecosystem.

References

- [1] The Market Insights, "Global Financial Data APIs Market Growth (Status and Outlook) 2024-2030," 2024. Available: <https://www.themarketinsights.com/report/financial-data-apis-market-489953>
- [2] Sarah Lee, "5 Key API Integrations Boosting Efficiency in Finance 2023." Number Analytics, 2025. Available: <https://www.numberanalytics.com/blog/api-integrations-efficiency-finance-2023>
- [3] AltGraaf, "Evolution of Fintech in India: Infrastructure Transformation and Economic Impact," 2024. Available : <https://www.altgraaf.com/blogs/evolution-of-fintech-in-india>
- [4] Adams Gbolahan Adeleke, et al., "API integration in FinTech: Challenges and best practices," ResearchGate, 2024. Available: https://www.researchgate.net/publication/383645658_API_integration_in_FinTech_Challenges_and_best_practices
- [5] Fortune Business Insights, "API Management Market Size, Share & Industry Analysis, By Deployment (Cloud and On-premises), By Enterprise Type (Large Enterprises and Small & Medium Enterprises), By Application (Security, Performance Analytics, Governance, Gateway, and Others), By End-user (IT & Telecom, Government, Retail, Healthcare, BFSI, Transport & Logistics, and Others), and Regional Forecast, 2025 – 2032," 2025. Available: <https://www.fortunebusinessinsights.com/api-management-market-108490>
- [6] Vijay Kumar Adari, "Apis and Open Banking: Driving Interoperability in the Financial Sector," IJRCAIT, 2024. Available: https://iaeme.com/Home/article_id/IJRCAIT_07_02_142
- [7] Benmoussa Mohammed, "Api "Application Programming Interface" Banking: A Promising Future for Financial Institutions (International Experience)," ResearchGate, 2019. Available :

https://www.researchgate.net/publication/342349960_Api_Application_Programming_Interface_Banking_A_Promising_Future_For_Financial_Institutions_International_Experience

[8] Sarah Lee, "7 Top API Integration Tactics in Finance & Banking 2023," Number Analytics, 2025. Available: <https://www.numberanalytics.com/blog/api-integration-tactics-finance-banking-2023>

[9] Richard Bird, "API Security Trends in the Financial Sector: A CISO's Perspective," Traceable, 2024. Available: <https://www.traceable.ai/blog-post/the-latest-api-security-trends-in-the-financial-sector-a-cisos-perspective>

[10] Brankas, "A Comprehensive Guide to API Management in Banking," 2024. Available: <https://blog.brankas.com/comprehensive-guide-to-api-management>

[11] Research and Markets, "API Management Industry Analysis 2025-2030: Increasing Demand for Web and Mobile Applications Across Diverse Platforms Drive the Global Market; Rising at 14.57%CAGR," 2025. Available: <https://www.globenewswire.com/news-release/2025/04/02/3054015/28124/en/API-Management-Industry-Analysis-2025-2030-Increasing-Demand-for-Web-and-Mobile-Applications-Across-Diverse-Platforms-Drive-the-Global-Market-Rising-at-14-57-CAGR.html>

[12] Markets and Markets, "Embedded Finance Market," 2025. Available: <https://www.marketsandmarkets.com/Market-Reports/embedded-finance-market-126584658.html>



©2025 by the Authors. This Article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>)