

Triadic Framework Technology for Banking: Revolutionizing the Financial Sector

Introduction

Banking and financial services are undergoing a profound technological transformation, fueled by a confluence of shifting consumer expectations, intense competition from fintech disruptors, regulatory evolution, and the relentless march of digitalization. As financial institutions race to adapt, traditional dyadic frameworks—those emphasizing one-to-one or one-to-many interactions—are increasingly insufficient to capture the complexity and multi-stakeholder realities of modern financial ecosystems. Enter Triadic Framework Technology (TFT): a paradigm and methodology that places triadic relationships, systems, and logic at the heart of innovation, operational resilience, and security in banking.

The triadic approach provides structure for analyzing, designing, and securing financial products and infrastructures by evaluating not just bilateral but three-way relationships between objects, networks, and advisors; technology, efficiency, and organizational culture; and core security components like confidentiality, integrity, and availability. Throughout this paper, we explore how TFT delivers stronger alignment between consumer needs, business capabilities, and regulatory requirements. We survey the history of banking technology from ancient civilizations to 2025's open API economy, map academic and industry contributions to triadic models, address persistent social and economic challenges such as digital inequality, and highlight opportunities—and hurdles—for innovation, especially in the context of crypto infrastructure, open banking, and advanced threat modeling.

Central to our discussion is a focus on security researchers and consultants: how TFT equips them to design and audit advanced financial tools, conduct risk assessments, enable regulatory compliance, and pioneer the next generation of financial security frameworks. Real-world case studies, speculative applications in crypto-mining, and an actionable summary table will clarify how triadic logic enhances everything from data privacy and fraud prevention to AI-driven analytics, blockchain vetting, and collaborative financial product development.

The Evolution of Banking Technology: From Antiquity to Digital Transformation

Historical Milestones in Banking Technology

The origins of banking predate written history, with early prototypes emerging in Assyria, India, and Sumer around 2000 BCE. Ancient Greek and Roman temples served as vaults and lenders, while medieval and Renaissance Italy, notably Florence and Venice, witnessed the birth of merchant banking and central banking as we know it today. Throughout the centuries, the interplay between technological innovation, legal frameworks, and economic necessity catalyzed

transformative change—from the first bills of exchange and letters of credit in ancient India and China to the creation of modern risk management practices and joint-stock entities^[1].

The 20th century witnessed mechanized computation, automated ledgers, and the introduction of key banking technologies such as ATMs (1967), credit cards (1950), and real-time electronic fund transfer. By the late 1970s and 1980s, personal computing and early digital banking revolutionized customer access, enabling online balance inquiry, budgeting with spreadsheets, and electronic payments thanks to networks such as SWIFT and the ACH system^[2].

The 1990s saw the rise of the Internet, online banking, and e-commerce giants like Amazon, PayPal, and eBay. The mobile revolution of the 2000s, fueled by smartphones and wireless connectivity, made 24/7 access to accounts and payments commonplace. Key legislative changes—like the Check Clearing for the 21st Century Act (Check 21)—further digitized banking operations, leading to remote deposit capture and instant transactions by the 2010s^[3].

Today, in the 2020s, the banking landscape is marked by data-driven personalization, open banking, generative AI, digital wallets, and a relentless focus on user experience. Over 489,000 finance apps are downloaded each minute globally, and the average consumer leverages multiple finance applications in daily life. The branch experience is secondary; mobile apps, APIs, and embedded finance drive growth and competition, blurring the lines between banks, fintechs, and big tech players like Google, Apple, and Amazon^[2].

Open Banking and APIs: The Modern Core

Open banking represents the democratization of financial data, allowing consumers to grant third-party fintechs access to their account information via standardized APIs. The European Union's PSD2 and the UK's open banking frameworks—now echoed in over 100 countries—mandate secure, consent-driven sharing of financial data^[5]. This shift enables new business models like banking-as-a-service (BaaS), embedded finance, and hyper-personalized product offerings, making data integration and interoperability crucial strategic assets.

Open banking APIs offer significant benefits—ranging from improved credit-scoring and payment efficiency to customer-centric financial planning and transparency—but impose new regulatory, security, and technical challenges. Standardized security protocols (OAuth 2.0, TLS encryption), robust audit trails, real-time monitoring, and stringent compliance with privacy regulations are now essential design and operational imperatives^{[6][7]}.

Triadic Framework Theory in Banking: Conceptual and Organizational Foundations

What Is a Triadic Framework?

Triadic frameworks are conceptual models and operational logics built around the dynamic interplay of three distinct but interrelated components within systems. In contrast to traditional dyadic (pairwise) relationships, triadic logic recognizes that many modern interactions, especially in finance, involve at least three actors, attributes, or perspectives^[9].

Common triads include:

- **Object-Network-Advisor:** Used for product differentiation, innovation, and stakeholder mapping in financial services^[10].
- **Technology-Efficiency-Organizational Culture:** Guides strategic and operational alignment within financial institutions, integrating digital transformation with operational and cultural change^[11].
- **Security-Stability-Sustainability:** The backbone of blockchain evaluations and digital infrastructure vetting, anchoring security (confidentiality, integrity, availability), economic robustness, and long-term viability^[13].
- **Collaborative Consumption:** Triads map relationships among platform providers, peer service suppliers, and customers in platforms like Uber or Airbnb, especially as applied to financial markets and resource sharing^[14].

These models often follow the “triple S” holistic approach-systemic (all elements are part of one system), synthetic (interfaces expose essential features), and synergic (the whole exceeds the sum of its parts)^[8].

Triadic Differentiation in Financial Innovation

Triadic differentiation provides a structured framework for analyzing and executing strategic product positioning in finance. As Simon Zais documents, differentiation must be considered at the:

- **Object level** (how is the product materially different?),
- **Network level** (brand context and cross-product or cross-service synergies), and
- **Advisor level** (personalized, contextual framing by financial advisors, sales, or digital assistants)^[10].

This approach acknowledges that sustained innovation requires more than feature enhancements; it demands systematic, multi-level coordination across technology, brand, and advisory touchpoints—a principle very much at home in today's open banking and fintech-driven world.

Triple S Holistic Triadic Model: Technology, Efficiency, Organization

Scarlat and Stanescu-Agarici's research into triadic models, notably {Technology; Efficiency; Organizational Culture}, demonstrates that successful digital transformation in banking hinges on the tight integration of these three factors^[11]:

- **Technology** drives operational capability and enables automation, AI-powered analytics, and robust business intelligence.
- **Efficiency** (including automation, process optimization, and cost management) is a necessity in a competitive and ever-evolving market.
- **Organizational Culture** (risk appetite, adaptability, digital leadership, and employee engagement) underpins successful adoption and sustained performance.

This triad encourages not just technical deployment, but also the sociotechnical alignment necessary for banks to thrive amidst disruptive innovation.

Financial Innovation and Triadic Approaches: Meta-theories and Complex Systems

The Landscape of Financial Innovation

Post-2008, the scrutiny of financial innovation has intensified due to the role that opaque and complex financial products played in precipitating the crisis. Academic inquiry now emphasizes the need for holistic models to investigate and manage the multi-stakeholder, multi-phase nature of innovation in finance^[15].

Financial innovation is not merely the creation of new products (e.g., ETFs, mobile wallets, robo-advisors); it encompasses regulatory, technological, and cultural advances that change the very structure, complexity, and risk profile of markets. Examples include:

- **Regulatory innovation** (e.g., open banking, fractional reserve banking)
- **Technological innovation** (AI, blockchain, programmatic APIs, mobile interfaces)
- **Behavioral and economic innovation** (e.g., nudges, KYC procedures, anti-fraud systems)

Meta-theoretic and Institutional Approaches

Khraisha and Arthur's meta-theory of financial innovation views the process through multiple theoretical lenses-life-cycle, economic, evolutionary, and institutional-and recognizes that real-world developments typically involve hybrid or evolving combinations of these^[15]. Triadic frameworks lend themselves well to this complexity, as they encapsulate the functional, technical, and social/behavioral dimensions in a coherent, research-backed model.

Institutional theory further emphasizes that financial technology adoption is driven by a mix of regulatory mandates, market pressures, and stakeholder expectations, all of which can be mapped-and reconciled-via triadic models^[16].

Triadic Models in Collaborative and Decentralized Finance

Emerging financial models, particularly those involving peer-to-peer platforms, decentralized ledgers, and collaborative consumption, are best understood through triadic frameworks. In collaborative finance, the interaction among platform providers, service suppliers, and customers (the triad) drives value creation, risk distribution, and regulatory compliance-far surpassing the explanatory power of traditional dyadic frameworks^{[17][12]}.

Social and Economic Challenges: Digital Inequality, Trust, and Inclusion

The Digital Divide in Banking Access

A critical challenge in banking's digital transformation is the persistence of the digital divide—socioeconomic and demographic inequalities in access to online banking, financial tools, and high-speed internet^{[19][20]}. This divide:

- **Restricts access** to modern banking services for lower-income, rural, or digitally illiterate individuals,
- **Exacerbates financial exclusion**, limiting opportunities for wealth accumulation, credit access, and financial resilience,
- **Undermines trust** in digital finance due to perceived or actual risks, further inhibiting adoption among vulnerable groups.

Digital inequality is multi-factorial, shaped by availability (infrastructure), affordability (cost of devices/services), and adoption (digital literacy and trust)^[20]. The COVID-19 pandemic further exposed these fault lines, making bridging digital inequalities a top priority for inclusive banking.

Initiatives to Bridge the Divide

Banks and policymakers are taking steps to address digital exclusion:

- **Investment in broadband infrastructure** and device subsidies,
- **Digital literacy programs** for underserved communities,
- ****Outreach to rural areas through branch staff retraining as digital navigators,**
- **Open banking** projects designed to lower technical and knowledge barriers,
- **Shared digital infrastructure** (public Wi-Fi, community fintech initiatives),
- **Regulatory incentives** (such as the Community Reinvestment Act in the U.S.) promoting inclusive digital adoption^{[20][19]}.

Regulatory Hurdles and Governance: Balancing Innovation, Security, and Consumer Protection

Regulatory Complexity in the Era of Triadic Frameworks

Modern financial innovation and open banking are regulated across multiple, sometimes fragmented, regimes. The regulatory environment is characterized by swift changes, often reactive to technological shifts and emerging risks rather than prescriptive ahead of the curve^{[21][23][24]}.

Key challenges include:

- **Data privacy and data rights** (GDPR, PSD2, CDR, etc.)
- **API security and liability** in open banking frameworks,
- **Cyber resilience** in interconnected, triadic API environments,
- **Enforcement fragmentation** (federal vs. state rules, especially in the U.S.),
- **Rapidly evolving compliance standards** for AI, blockchain, and cloud operations,
- **Consumer education** and trust-building, particularly as new technologies introduce novel risks and uncertainties.

Adaptive Regulatory Strategies

Regulators are turning to experimental, triadic approaches such as:

- **Regulatory sandboxes** to test fintech innovation in controlled environments,
- **Collaborative audits** involving banks, fintechs, and independent platforms,
- **Standardization** of technical and security requirements for APIs and data exchange,
- **Active engagement** with industry bodies and developer communities to co-design effective frameworks^{[7][25]}.

The goal is to enable responsible innovation-maximizing financial inclusion, data utility, and operational efficiency-without sacrificing privacy, systemic stability, or consumer protection.

Enhancing Banking Practices and Security with Triadic Framework Technology

Triadic Frameworks in Security, Risk, and Compliance

TFT models-centered on Security, Stability, and Sustainability-directly address the core pillars of safe financial system design. By explicitly evaluating the interplay and balance among these elements, TFT enables practitioners to:

- **Design robust policy frameworks** protecting data confidentiality, integrity, and availability (the CIA triad)^[13],
- **Map operational, infrastructural, and user roles** (object, network, advisor) for resilient systems,
- **Analyze and audit distributed systems** (blockchain, API ecosystems, open banking) for both emergent risks and systemic vulnerabilities^[12].

The CIA Triad Applied

In banking, the CIA triad is ubiquitous and foundational:

- **Confidentiality:** Only authorized users can access or modify sensitive data, enforced through authentication, authorization, and cryptographic controls.

- **Integrity:** Mechanisms such as immutable ledgers, digital signatures, and audit trails guarantee that data and transactions remain unaltered, accurate, and non-repudiable.
- **Availability:** Systems provide continuous, reliable access to authorized users-even in the face of attacks or system failures-through redundancy, load balancing, and proactive monitoring [13].

The triadic nature of the CIA model forces security teams to think holistically, identifying trade-offs and ensuring balance among these goals, rather than optimizing for any one at the expense of the whole.

Advanced Threat Modeling and Risk Management

Security researchers and consultants use TFT to operationalize threat modeling, risk assessment, and compliance mapping:

- **Continuous threat modeling** is facilitated by AI and automation, replacing manual, error-prone processes with data-driven, adaptive tools that are tailored to the unique architectures of modern banking infrastructure[27][28].
- **Regulatory compliance** can be streamlined with triadic mapping: linking regulations, platform capabilities, and user activities in a way that provides clear, actionable compliance pathways[23][24].

Table: How Security Researchers and Consultants Can Use TFT in Financial Tools

Application Area	Description / Use Case
Digital Inclusion Auditing	Use TFT models to audit equity in broadband, device access, and regulatory compliance (e.g., CRA alignment)
AI-Driven Risk Assessment Tools	Develop triadic AI frameworks for multi-factor risk prediction and inefficiency detection in banking apps
Modular Security Frameworks	Build pluggable triadic modules for secure transaction routing across heterogeneous API endpoints
Blockchain Transparency Analysis	Apply triadic evaluation for auditing blockchain deployments-exposing imbalances and tracking asset flows
Triadic Pattern Recognition	Employ triadic data analytics to spot fraud/anomalies across multi-party platforms and user behavior
Compliance Modeling	Cross-sectional regulatory mapping (e.g., GDPR-PSD2-Bank policies) to stakeholder/user/tech triads
Crypto Mining Efficiency	Map triadic relations among energy use, miner roles, and validation network in decentralized infrastructures
Educational Platform Development	Create simulation and training tools leveraging triadic models for security and financial equity learning
Open Banking API Security	Analyze triadic relationships among user roles, permissions, and finance APIs for misconfiguration detection

Penetration Testing	Simulate attacks along triadic interaction paths for deeper testing of authentication and transaction control
Infrastructure Resilience	Assess crypto mining and fintech setups for triadic load balancing and bottleneck identification
Smart Contract Auditing	Use triadic state modeling for error/fraud prevention in DeFi and programmable financial tools

A closer analysis of the table underscores the functional versatility and context-specific benefits TFT incurs. For example, in digital inclusion auditing, TFT maps not just the technology provision but aligns organizational intent, user adoption, and policy requirements in actionable, auditable ways-enabling granular, real-world assessment and redress.

Illustrative Case Studies and Speculative Applications

Digital Transformation in Banking: Organizational Triads in Action

Multiple banks illustrate the power of triadic models:

- **ING's agile transformation** (inspired by Netflix, Spotify, and Google): implemented squads (cross-functional teams) blending IT, operations, design, and customer insight as a means to prioritize end-to-end delivery, transparency, and measurable impact on customer journeys. Performance metrics-time to market, employee engagement, customer satisfaction-increased dramatically^[29].
- **DBX Bank**: replaced outdated legacy systems with a triad-centered approach (core platform upgrade, customer-centric digital interfaces, automated compliance). The result was a major drop in operational costs, increased app engagement, and reduced compliance errors^[30].
- **Blockchain deployments** (BBVA, Ant Financial): used triadic security models (data immutability, distributed consensus, and real-time auditing) to reduce fraud, accelerate innovation, and build regulatory compliant infrastructures^{[12][13]}.

Speculative Applications: Crypto Mining Infrastructure

The triadic logic is particularly relevant in crypto mining and digital asset management:

- **Mining farms evolving into data centers**: Triadic frameworks enable operators to balance energy optimization, compliance, and user/developer needs as mining infrastructure becomes multi-purpose (e.g., AI hosting, edge compute). This triadic transformation optimizes ROI, supports ESG targets, and enables adaptation to regulatory shifts^[32].
 - **Efficiency mapping**: Optimization of triadic relationships (energy use, miner behavior, network validation) is key for sustainable, high-throughput decentralized systems.
-

Opportunities for TFT Developers: Fintech, APIs, and Toolkits

Developer Toolkits and API Ecosystem

TFT empowers both fintech startups and legacy institutions to build secure, scalable, and interoperable applications by leveraging developer toolkits and robust APIs:

- **Embedded banking APIs:** Developers can select APIs supporting triadic security and data handling standards. Straiped, Unit, Solaris, Mbanq, Railsr, and many others provide tiered, modular access to everything from payments infrastructure to KYC and anti-fraud tools^{[34][35]}.
- **Open banking APIs:** Companies like Plaid, Yodlee, Tink, and others offer aggregation, payment initiation, and financial analysis through secure API connections-enabling platforms to deliver holistic, customer-centric financial products that integrate triadic access control.
- **DevOps and testing:** Automated testing, CI/CD pipelines, and scenario-based mocking (supported by Apidog, for example) simulate triadic relationships and edge cases (e.g., multi-factor authentication, real-time fraud detection, complex regulatory mappings)^[35].

Building Security by Design

Innovative development in TFT fosters:

- **Security by design:** Continuously integrated threat modeling as a routine part of software delivery, often with regulatory logic and risk controls built in from inception (Shift-left security).
- **DevSecOps:** Integrated triadic logic in development, operations, and security streams for agile, resilient product delivery frameworks (e.g., IriusRisk, ThreatModeler, AWS's standards for open banking)^{[26][4]}.

Talent and Collaboration

- **Triadic frameworks require cross-disciplinary talent:** Data scientists, compliance specialists, security engineers, UX experts, and AI/ML researchers increasingly collaborate in triads, both internal (within the organization) and external (with fintechs, regulators, and community partners)^[30].
- **Partnerships with academia:** Open banking hackathons, regulatory sandboxes, and research consortia drive new TFT solutions aligned with both policy needs and technical advances^[25].

Blockchain and Open Banking Evaluation via Triadic Framework

Blockchain Evaluation

Triadic frameworks are particularly well-suited to the evaluation, vetting, and auditing of blockchain systems in banking:

- **Security:** Data privacy, immutability, and systems availability.
- **Stability:** Economic soundness, interoperability, and extensibility for future proofing and regulatory adaptation.
- **Sustainability:** Energy use, scalability, and cost-effectiveness-all mandatory for banks (and their customers) to derive genuine benefit and trust from blockchain adoption^{[13][16]}.

Open Banking Case: Practical Triadic Integration

- **Consent management:** Aligning user rights, data custodian protocols, and third-party service provider responsibilities.
- **API governance:** Triadic controls on access, rate limiting, and endpoint security monitoring safeguard the ecosystem while adapting to policy evolution and user needs^{[7][4][5]}.
- **Real-time compliance:** Monitoring and anomaly detection along all three axes-technology, user behavior, and regulatory requirement-enable responsive, transparent, and auditable open banking systems.

The Role of Security Researchers and Consultants in Advanced Financial Tool Design

Security professionals, including researchers and consultants, are pivotal to the ongoing evolution of secure, compliant, and resilient banking systems built upon triadic frameworks. They:

- **Conduct holistic threat modeling and risk assessment** using triadic analytics to reflect the interconnectedness of users, technologies, and process flows^[28].
- **Facilitate compliance and audit readiness** by automating the mapping of technical controls (e.g., STRIDE, NIST 800-53) with operational practices and regulatory requirements.
- **Design and test modular, reusable security frameworks** that provide scalable controls-from customer-facing APIs to back-end blockchain audits.
- **Drive adoption of secure-by-design practices**, ensuring that even fast-moving agile teams build resilience and compliance into every stage of product and platform development.
- **Build immersive training platforms and simulations** that model triadic stakeholder interactions (e.g., between regulator, developer, user) for real-world skills development.

Conclusion: Towards a Triadic Future for Financial Services

Triadic Framework Technology represents a decisive leap forward in the architecture, operation, and security of modern banking and financial services. From its conceptual foundations in organizational theory and risk management, through its operationalization in open banking,

blockchain, and digital inclusion efforts, TFT equips institutions to deliver convenient, secure, and inclusive financial experiences.

By instilling triadic logic at every level-from strategic differentiation to API security, regulatory compliance, and real-time threat modeling-banks, fintechs, and their partners can transcend the limitations of traditional dyadic thinking, achieving true systemic resilience and agility.

Security researchers and consultants, empowered by triadic toolkits and methodologies, are especially well-positioned to catalyze this transition: building, assessing, and future-proofing next-generation financial tools for an industry where trust, transparency, and innovation must co-exist by design.

As technology, regulation, and social expectations continue to intersect and evolve, triadic frameworks will not only illuminate the path forward-they will shape it.

References (35)

1. *History of banking - Wikipedia*. https://en.wikipedia.org/wiki/History_of_banking
2. *Addressing the Digital Divide in Access to Banking and Financial Services*. <https://www.globalbankingandfinance.com/addressing-the-digital-divide-in-access-to-banking-and-financial-services>
3. *What is Digital Inequality and Why does it Matter?*. <https://www.beaconvc.fund/knowledge/what-is-digital-inequality-and-why-does-it-matter>
4. *Why 'Regulatory Pullback' Could Be Fintech's Biggest Risk In 2025*. <https://www.forbes.com/sites/ajdhaliwal/2025/08/14/why-regulatory-pullback-could-be-fintechs-biggest-risk-in-2025/>
5. *A Guide to the Bank Risk Management Framework* . <https://visbanking.com/bank-risk-management-framework/>
6. *Bank Risk Management - 2025 Comprehensive Guide - SelectHub*. <https://www.selecthub.com/risk-management/bank-risk-management/>
7. *Open Banking API Platform* . <https://www.openbankproject.com/platform/>
8. *For Banking and Finance* . <https://threatmodeler.com/why-threatmodeler/for-banking-and-finance/>
9. *Threat Modeling For Financial And Banking Cybersecurity*. <https://www.iriusrisk.com/threat-modeling-for-financial-services>
10. *ING's agile transformation* . <https://www.mckinsey.com/industries/financial-services/our-insights/ings-agile-transformation>
11. *15 Digital Transformation in Finance Case Studies [2025]*. <https://digitaldefynd.com/IQ/digital-transformation-in-finance-case-studies/>
12. *Key Infrastructure Components for Efficient Bitcoin Mining Operations*. <https://corescientific.com/resources/blog/understanding-the-infrastructure-required-for-efficient-operation/>

13. *Top Development Tools for Fintech Apps - nimbleappgenie*.
<https://www.nimbleappgenie.com/blogs/development-tools-for-fintech-apps/>
14. *Threat Modeling-LLM: Automating Threat Modeling using Large Language ...*
<https://arxiv.org/pdf/2411.17058>
15. *Timeline: 180 years of banking technology*.
<https://www.independentbanker.org/article/2017/11/01/timeline-180-years-of-banking-technology>
16. *The Evolution of Banking Technology over 55 Years - MX*. <https://www.mx.com/whitepapers/55-years-technology-banking/>
17. *Open banking APIs explained* . <https://stripe.com/resources/more/open-banking-apis-explained-what-they-are-and-how-they-work>
18. *10 Challenges for Open Banking Regulators* . <https://www.openbankproject.com/blog/open-banking-10-challenges-for-regulators/>
19. *Open Banking_v2*. <https://finpolicy.georgetown.edu/articles/open-banking-lessons-challenges-and-opportunities/>
20. *Triadic Technology Configuration: A Relational Perspective on*
<https://journals.sagepub.com/doi/pdf/10.1177/00197939241232992>
21. *Triadic Differentiation: A New Paradigm for Financial Services ...*
<https://caia.org/blog/2023/12/04/triadic-differentiation-new-paradigm-financial-services-innovation>
22. *Triadic Models: On the Triad Technology-Efficiency-Culture at the*
https://link.springer.com/chapter/10.1007/978-3-031-07265-9_14
23. *The triad that secures blockchain - PwC*. <https://www.pwc.com/m1/en/media-centre/articles/the-triad-that-secures-blockchain.html>
24. *A triadic framework for collaborative consumption (CC) Motives ...*.
https://www.researchgate.net/publication/316910405_A_triadic_framework_for_collaborative_consumption_C
[triadic-framework-for-collaborative-consumption-CC-Motives-activities-and-resources-capabilities-of-actors.pdf](https://www.researchgate.net/publication/316910405_A_triadic_framework_for_collaborative_consumption_C/triadic-framework-for-collaborative-consumption-CC-Motives-activities-and-resources-capabilities-of-actors.pdf)
25. *Triadic Models: On the Triad Technology-Efficiency-Culture at the*
https://link.springer.com/content/pdf/10.1007/978-3-031-07265-9_14.pdf
26. *Can we have a general theory of financial innovation processes? A* <https://jfin-swufe.springeropen.com/articles/10.1186/s40854-018-0088-y>
27. *Blockchain for Sustainable Development: A Systematic Review*. <https://www.mdpi.com/2071-1050/17/11/4848>
28. *Triadic framework: Navigating the blockchain revolution with precision*
<https://www.bsvblockchain.org/news/triadic-framework-navigating-the-blockchain-revolution-with-precision-and-balance/>
29. *Triadic framework: Navigating the blockchain revolution with precision*
<https://www.bsvblockchain.org/triadic-framework-navigating-the-blockchain-revolution-with-precision-and-balance/>
30. *10 Fintech APIs and Solutions for Developers in 2025*. <https://apidog.com/blog/fintech-api/>

31. *Open banking - Financial Services Industry Lens.*

<https://docs.aws.amazon.com/wellarchitected/latest/financial-services-industry-lens/open-banking.html>