LIVESTREAM

9 KEY PILLARS OF BUILDING A CRYPTO RISK FRAMEWORK

HOSTED BY: -



McGONIGLE



Speakers





Stephen T. Gannon
Shareholder
McGonigle, P.C.



Michael Glotz
CEO & Founding Partner
Strategic Risk Associates



Rachel Mains
Director of Information Security
Strategic Risk Associates



David Klein
Technology Advisor
Strategic Risk Associates

Agenda



- ✓ Introductions
- ✓ How to Get Started
- ✓ Benefits of a Crypto Risk Framework
- ✓ Deep Dive into Each of the Nine Pillars
- ✓ Key Take-Aways

How To Get Started with Crypto-Based Products





Get Board alignment

on initiatives through the Strategic Plan & Board Crypto Risk Training



Establish a Digital
Asset Policy &

related procedures



Create a **Digital**Asset (Crypto)
Risk Framework
for the Bank



Assess risk infrastructure

maturity using a framework (I.E. RMA's Risk Maturity Framework) to identify strengths & weaknesses





Begin discussions with your **Bank Supervisor** leading to Non-objection



Perform a New
Product Risk
Assessment on new
digital assets & have it
approved by the Board



Develop an action plan to enhance risk
infrastructure &
organizational

resilience over time



Assess organizational readiness in terms of DeFi, Distributed Ledger Technology (Blockchain), & Cybersecurity expertise

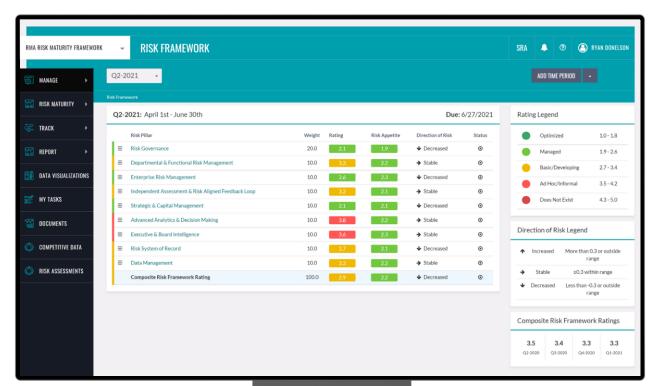


Benefits of a Crypto Risk Framework and Assessment



The Digital Asset (Crypto) Risk Maturity Framework measures the effectiveness of each bank's digital assets risk management program against industry standards and regulatory guidance.

- ✓ Supports discussion with regulators
- ✓ Informs the evolution of the strategic plan for the bank
- ✓ Facilitates approval for the Board of Directors and Executive Team
- ✓ Facilitates Development of a Risk Program Improvement Roadmap
- ✓ Peer Benchmarking will be available for "opt-in"





Digital Asset (Crypto) Risk Maturity Framework



Executive and Board Oversight

Board Education | Strategic Planning | Board Acceptance & Approval | Risk Oversight | Communications & Reporting

Risk Governance	Crypto-Asset Management	Enterprise Risk Management	Independent Review & Regulatory Oversight	Strategic Management	Advanced Analytics
Board & Executive Executive Communication	Governance & Operations	Digital Asset Risk Profile	Internal Audit Review & Continuous Monitoring	Strategic Planning & Digital Asset Initiatives	Enterprise Digital Asset Performance Dashboard
Digital Asset Board Reporting	Architecture & Design	Digital Asset Risk Appetite & KRI/KPI Monitoring	Independent Digital Asset Credit Monitoring	Peer Comparisons	Digital Asset Model Development & Validation
		Risk & Control Environment			
Digital Asset Risk Framework	Trust & Resilience	& Assessments Internal & External Fraud	Regulatory Compliance (AML Compliance)	Monetize Digital Asset Risk	Digital Asset
	System Integrations	Management	· · · · · · · · · · · · · · · · · · ·	& Stress Test Exposure	Innovation Monitoring
Digital Asset Policy Management		Digital Asset Concentrations & Risk Exposure	Regulatory Non-Objection, Review & Management	Liquidity Management & Stress Testing	Digital Asset & Economic Forecasts
	Blockchain Framework & Mechanics		Legal Structure & Exposure		
		Issue Tracking & Mitigation			
1 st , 2 nd & 3 rd Line Roles, Staffing, Experience & Training	De-Fi Partnerships, Due Diligence & Monitoring	Media Reports, Social Media & Public Disclosure/Monitoring	Stablecoin Verification & Validation	New Product Risk Assessment	Legal & Loss Events Management

Data Management

Data Accuracy | Version Control | Backwards Compatibility | Other Usability Functions

Information Technology Interoperability | Resiliency | Accessibility | Maintenance Information Security Data Integrity | Confidentiality | Authentication | Authorization | Accountability



Key Questions For Each Pillar



Why is it important?

What is it?

Where are we today?

Where do we need to be in the future?



#1 Executive and Board Oversight



Strategic Planning - Digital Asset Initiative Highlight (Key Risks & Maximum Exposure) - Board Approval

Board Education

Strategic Planning

Board Acceptance & Approval

Risk Oversight

Communications & Reporting



#2 Risk Governance

Digital Assets (Crypto) Policy Management (Objectives - Roles & Responsibilities, Risk Framework, Monitoring, Governance, Reference Regulatory Guidance - Ensure Board Approval)

2 Risk Governance

Board & Executive Executive Communication

Digital Asset Board Reporting

Digital Asset Risk Framework

Digital Asset Policy Management

1st, 2nd & 3rd Line Roles, Staffing, Experience & Training





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Crypto-Asset Management

Governance & Operations

Architecture & Design

Trust & Resilience

System Integrations

Blockchain Framework & Mechanics

De-Fi Partnerships, Due Diligence & Monitoring

√ What's a Crypto-Asset?

- A sub-set of a digital asset
- Any digital asset that depends on cryptography and distributed ledger tech
 - > Cryptocurrencies
 - Utility tokens





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- ✓ Governance & Operations
 - Types of Governance:
 - Crypto-Asset Governance
 - Blockchain Governance





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✓ Governance & Operations

• What is it?

Management of Distributed Ledger-linked Product

- Payments (Payment, Clearing, and Settlement)
- Standards (Stress Test, NIST)
- Third-Party Services (Outsourced Services)
 - ✓ <u>Example:</u> Crypto-Asset Payment Governance





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De-Fi Partnerships, Due Diligence & Monitoring

- ✓ Governance & Operations
 - Crypto-Asset Payment Governance
 - ✓ How to Get Started

Define scope of payment services capability

- Distributed-ledger technologies (ex. peer-to-peer or alt DeFi platform)
- Accessibility
- Operations
- Associated fees





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✓ Blockchain Governance

- What is it and Why is it Important?
 - Day-to-day Operations of the Chain
 - Ensures Immutability, Accuracy, and Self-Healing Network

Examples:

- Overlays Blockchain Framework with Existing IT and Security Standards
- Blockchain Mechanics (ex. consensus protocols, etc)





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System Integrations

Blockchain Framework & Mechanics

De-Fi Partnerships, Due Diligence & Monitoring

✓ Blockchain Governance

- How to Get Started
 - What's the Goal?
 - Define processes
 - Procure or Build Blockchain Solution (product-centric approach)
 - RippleX Platform
 - Stellar Network
 - Diem Network





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De-Fi Partnerships, Due Diligence & Monitoring

✓ Consensus Protocol

What is it?

Achieving agreement for validating and adding blocks to the chain

- Proof of Work (ex. Bitcoin)
 - Miners compete to solve complex puzzle, known as a cryptographic algorithm
 - Rules dictate limited supply of Bitcoin (21 million)
- Proof of Stake (ex. Solana)
 - Majority (at least 51%) of nodes act as validators to agree
 - Validators stake collateral to validate blocks to the chain



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Crypto-Asset Management

Governance & Operations

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Trust & Resilience

System Integrations

Blockchain Framework & Mechanics

De-Fi Partnerships, Due Diligence & Monitoring

✓ Architecture and Design

- What is it and Why is it Important?
 - Ensures scalability for current and future products and offerings
 - Ensures bank-to-bank interoperability
 - Ensures the data is secure, reliable, and accurate





3

Crypto-Asset Management

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Blockchain Framework & Mechanics

De-Fi Partnerships, Due Diligence & Monitoring

✓ Data Provenance

- What is it and Why is it Important?
 - Traceability from the Source with Complete Auditability
 - Data Verifiability via Immutable Transactions
- How It Works
 - Define Data Ownership and Lineage (KYC and AML)







4 Enterprise Risk

Digital Asset Risk Profile

Management

Digital Asset Risk Appetite & KRI/KPI Monitoring

Risk & Control Environment & Assessments

Internal & External Fraud Management

Digital Asset Concentrations & Risk Exposure

Issue Tracking & Mitigation

Media Reports, Social Media & Public Disclosure/Monitoring



#5 Independent Review & Regulatory Oversight



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Independent Review & Regulatory Oversight

Internal Audit Review & Continuous Monitoring

Independent Digital Asset Credit Monitoring

Regulatory Compliance (AML Compliance)

Regulatory Non-Objection, Review & Management

Legal Structure & Exposure

Stablecoin Verification & Validation

Why is it important?

- ✓ Regulators will be the gate keepers for crypto-related activity (see, OCC IL 1179; FDIC FIL 16-2022)
- ✓ They will be laser-focused on safety and soundness

What is it?

A comprehensive and clear description of:

- ✓ The new crypto product or service
- ✓ How it impacts the bank's overall strategy and risk assessment
- ✓ Any new technology (e.g., APIs to connect to a blockchain)
- ✓ How any third-party vendors have been assessed
- \checkmark How all of the above is being overseen, monitored and reported on with an emphasis on gap closure/remediation

How to get started?

✓ Must think, plan and execute holistically (e.g., The Nine Pillars)

#6 Strategic Management



6 Strategic Management

Strategic Planning & Digital Asset Initiatives

Peer Comparisons

Monetize Digital Asset Risk & Stress Test Exposure

Liquidity Management & Stress Testing

New Product Risk Assessment



#7 Advanced Analytics



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Advanced Analytics

Enterprise Digital Asset Performance Dashboard

Digital Asset Model Development & Validation

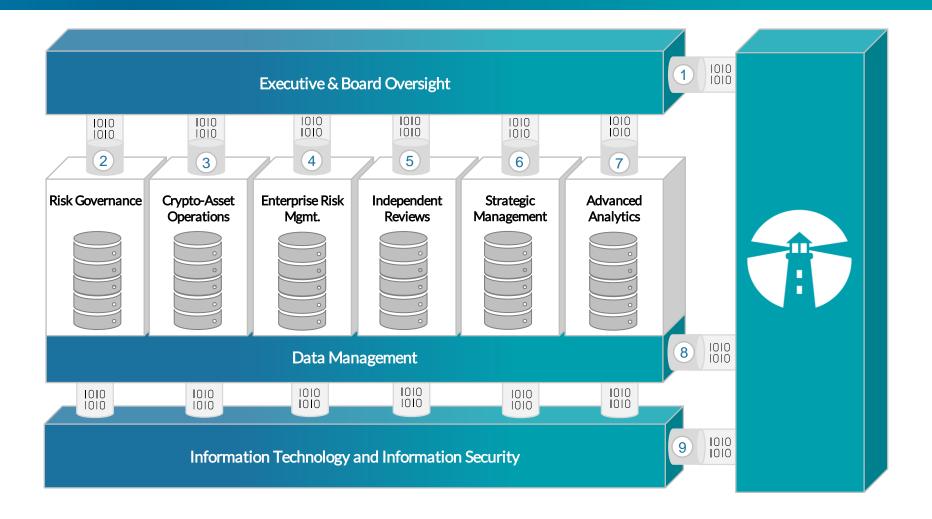
Digital Asset Innovation Monitoring

Digital Asset & Economic Forecasts

Legal & Loss Events Management



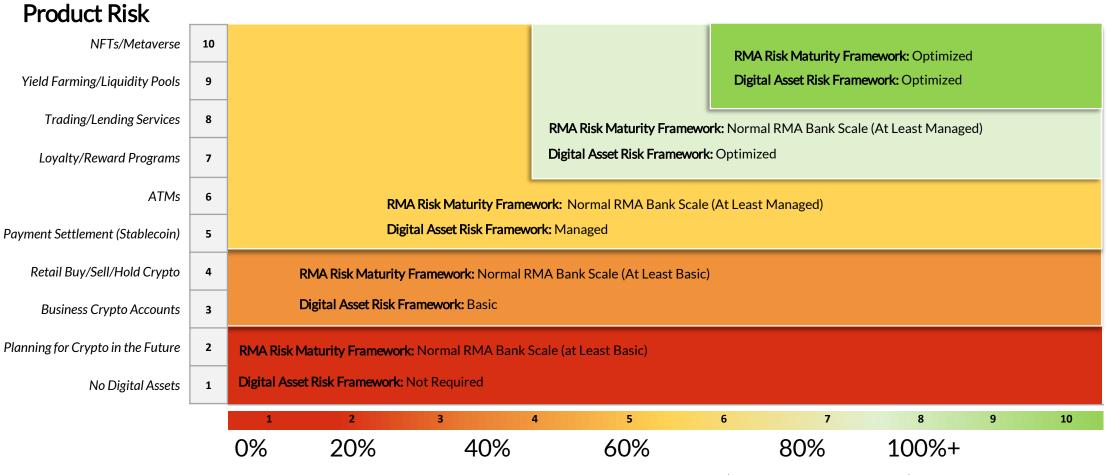
What Are The 9 Pillars of the Crypto Risk Framework?





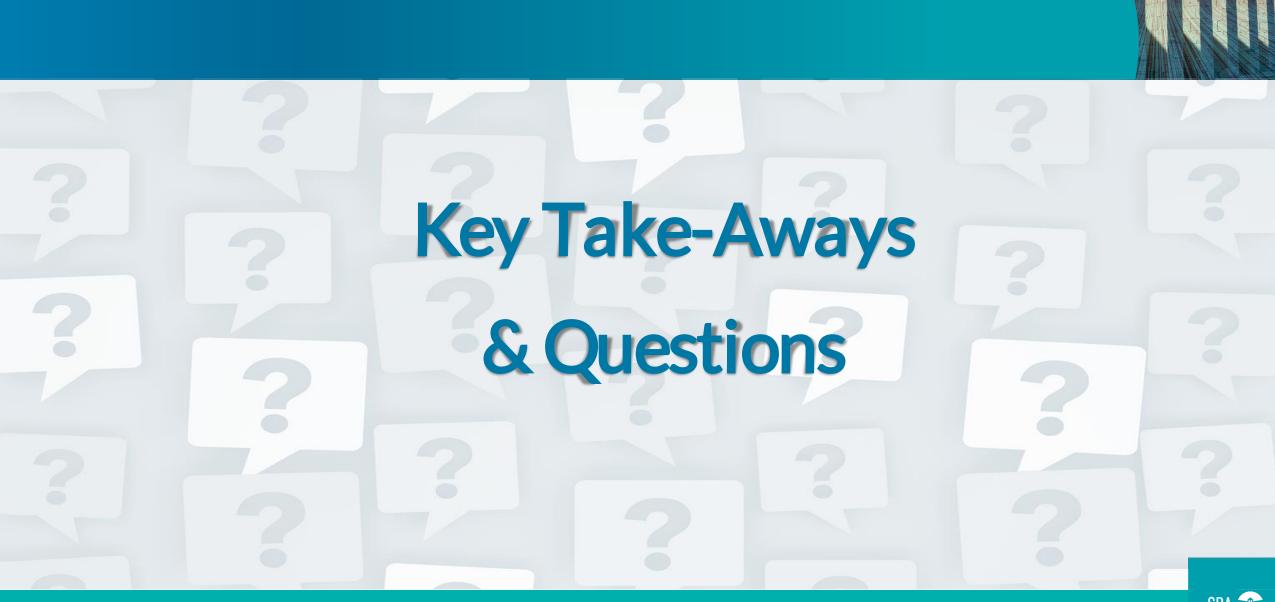
Crypto Risk Maturity Matrix





Digital Asset Capital Exposure (% of Total Capital)





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Thank You!

Please fill out the survey

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Michael Glotz





Michael Glotz CEO Strategic Risk Associates

Mr. Glotz is the Chief Executive Officer and Co-Founder of Strategic Risk Associates (SRA) and is the firms' practice leader for board governance, capital management and crypto management activities. He has led numerous risk management and capital planning engagement efforts for national, regional and community organizations. Mr. Glotz served as Senior Vice President and Strategic Financial Officer for Crestar Bank and later SunTrust Bank through acquisition. During his tenure with SunTrust Bank, he held various senior financial positions including Strategic Financial Officer and head of Strategic Cost Management.

Immediately before SRA's founding, Mr. Glotz was a Managing Vice President with Capital One Financial Corporation. Mr. Glotz held senior positions with Capital One including Managing Vice President of Corporate Audit and Credit Review Services for Capital One Bank (\$80 Billion in Assets at the time), which included the oversight and development of over 100 audit and risk professionals. Mr. Glotz also supported the implementation of Enterprise Risk Management and lead independent assessments of bank acquisition and integration activities for large-scale mergers.

Mr. Glotz is Risk-Reward Co-Chair of the American Association of Bank Directors and is a faculty member of the Institute of Bank Director Education. Mr. Glotz was a Faculty Professor of the Virginia Bankers School at the University of Virginia where he taught Risk Governance and ERM. He has delivered Bank Director training for many State Banking Association and individually for Boards. Mr. Glotz received a BBA Degree in Business with the University of Wisconsin, an MBA with the University of Richmond and completed the Executive Development Program at Wharton, University of Pennsylvania. He is a Certified Risk Professional.

Stephen T. Gannon





Stephen T. Gannon Shareholder McGonigle, P.C.

Stephen T. Gannon is a financial services industry leader who has previously served as a senior legal executive at Citizens Financial Bank, Capital One Financial Corporation and Wachovia Securities. Prior to joining McGonigle, P.C., Mr. Gannon was most recently Executive Vice President, General Counsel and Chief Legal Officer at Citizens Financial Group, the nation's 12th largest retail and commercial bank, where he served on the Executive Committee managed and directed all legal, corporate governance, corporate transactions, government relations, regulatory relations and litigation functions for the company. He has spent the last two decades as a counselor, advisor and manager with respect to the highest levels of strategic decision making for several of the country's largest financial institutions.

Mr. Gannon also has significant experience in leading teams charged with designing and overseeing frameworks and processes to ensure that products, and processes and structures are fully compliant with all applicable laws and regulations to fit within the appropriate strategic goals. Mr. Gannon also has advocated and managed advocacy before the Federal Reserve Board, the OCC, the FDIC, the CFPB and the SEC, where he served as a Branch Chief in the Division of Enforcement. He also has deep expertise in banking and broker dealer regulation, including in connection with numerous public policy issues regarding bank regulatory reform.

In addition to serving on McGonigle, P.C.'s Securities Regulation Practice and Fintech & Blockchain practices, Mr. Gannon will advise the banking industry on regulatory and strategic matters, ranging from public policy and corporate governance to litigation, compliance and administrative actions. He will also focus on helping the industry adapt to and stay on top of the burgeoning fintech space.

Mr. Gannon speaks and writes frequently on topics related to the financial services industry, including the role of FinTechs, digital assets, and cryptocurrency and their evolving impact on the industry.