SIGRID - Smart Instrument Global Registry ID

Sigridtech.com

1. Business Plan:

1. Executive Summary

SIGRID is a fintech startup that aims to revolutionize the financial industry by providing unique smart contract-based IDs for all financial securities. The platform streamlines the identification and settlement process by automating transactions and enabling T+0 settlements. This business plan outlines the tiered development model, financial planning, and fundraising goals for the successful launch and growth of SIGRID.

2. Business Overview

2.1. Need for an Improved Financial Security Identification System

As the financial landscape continues to evolve and expand, it has become evident that existing financial security identification systems, such as ISIN, CUSIP, and FIGI, have certain limitations that may hinder their ability to fully meet the needs of the modern financial ecosystem. This section elaborates on the factors driving the need for an improved financial security identification system that can address these limitations and better support the dynamic nature of today's financial markets.

2.1.1. Enhanced Information Content

Traditional financial security identification systems often contain limited information about the security itself. This may restrict the ability of market participants to efficiently access and analyze relevant data, potentially impacting investment decisions, risk assessments, and regulatory compliance efforts. An improved identification system should provide more comprehensive information on securities, including capital structure, lifecycle events, and other relevant attributes.

2.1.2. Improved Interoperability

As financial markets become increasingly interconnected, it is important for financial security identification systems to be compatible with a wide range of systems and platforms used by market participants. Improved interoperability can streamline communication, data exchange, and collaboration among various stakeholders, reducing the likelihood of errors and inefficiencies.

2.1.3. Greater Flexibility and Adaptability

An effective financial security identification system should be flexible and adaptable enough to accommodate the ongoing growth and diversification of financial markets. This includes the ability to seamlessly integrate new asset classes, financial instruments, and emerging technologies, such as blockchain and distributed ledger technologies, ensuring that the financial ecosystem remains efficient and resilient.

2.2. Unique Identifiers as Smart Contracts

By leveraging the concept of unique identifiers as smart contracts, an improved financial security identification system can address the limitations of existing systems and unlock new possibilities for trading, settlement, and data management.

2.2.1. Automated Lifecycle Events

By incorporating smart contract functionality into unique identifiers, lifecycle events, such as call dates and maturity date, can be automatically executed and the instrument created in any new database.. This can reduce manual intervention, minimize errors, and ensure that lifecycle events are consistently and accurately managed.

2.2.2. Enhanced Data Management and Analytics

With unique identifiers as smart contracts, more comprehensive and up-to-date information can be embedded within the identifier itself. This can improve data management and analytics capabilities for market participants, leading to better-informed investment decisions and more effective risk management.

2.2.3. Streamlined Settlement Process

Smart contract-enabled unique identifiers can facilitate faster and more efficient settlement processes by automating tasks, such as matching and confirmation, and ensuring that all parties involved have access to the same accurate and up-to-date information. This can contribute to the realization of T+0 settlements and a more streamlined back-office operation for financial institutions.

2.3. Commercialization of Unique Identifiers

The commercialization of unique identifiers, or SIGRIDs, can unlock new revenue streams and drive the adoption of next-generation financial security identification systems.

2.3.1. Access to Premium Data and Services

By offering premium data and services behind a paywall, market participants can gain access to enhanced information, analytics, and tools that can support their decision-making and risk management processes. This can generate revenue while also promoting the adoption of the improved financial security identification system.

2.3.2. Licensing and Subscription Models

By offering licensing and subscription models for the use of unique identifiers and associated data, the system can generate recurring revenue and ensure that market participants have continuous access to up-to-date and accurate information.

2.3.3. Customized Solutions for Different Market Segments

By developing customized solutions tailored to the specific needs of different market segments, such as institutional investors, retail investors, and regulatory authorities, the unique identifier system can address the diverse requirements of the financial industry and maximize its

To deliver a seamless and innovative platform for the financial industry that integrates unique IDs, smart contracts, and T+0 settlements, driving cost savings in IT and Operations, improved risk management, and enhanced operational efficiency and liquidity(**!**) for market participants.

3. Market Analysis

In this section, we provide a comprehensive market analysis for the next-generation financial security identification system, examining the market size, growth potential, customer segments, and competitive landscape.

3.1 Market Size and Growth Potential

The global financial services industry is a vast market with trillions of dollars in assets and millions of transactions occurring daily. The demand for efficient and reliable identification systems is ever-present, as financial institutions seek to streamline operations, reduce costs, and manage risk more effectively.

With the rapid adoption of digital technologies and the increasing complexity of financial instruments, the market for a next-generation identification system like SIGRID is expected to grow significantly. The transition to real-time or near-real-time settlements, along with the integration of smart contracts and distributed ledger technologies, creates a strong need for a more advanced and adaptable identification system.

3.2 Customer Segments

3.2.1 The primary customer segments for SIGRID:

- Financial Institutions: Banks, investment firms, asset management companies, and other financial institutions will benefit from the improved efficiency, reduced costs, and enhanced risk management capabilities provided by SIGRID.

- Exchanges and Trading Platforms: Stock exchanges, electronic trading platforms, and other marketplaces will benefit from the streamlined processes, accelerated settlements, and simplified compliance offered by SIGRID.

- Regulators and Compliance Agencies: Regulatory bodies and compliance agencies will benefit from the standardized data formats and reporting capabilities of SIGRID, which will simplify their oversight processes and reduce the likelihood of errors and penalties.

- Data Providers and Analytics Firms: Companies that provide financial data and analytics services can leverage the comprehensive data provided by SIGRID to offer more accurate and valuable insights to their customers.

3.2.2. Product Market Fit

Product-market fit is a crucial component of Sigrid's business strategy, and it is particularly relevant given the challenges faced by the financial industry with regards to securities identification. As Debo Ganguly, head of Investment IT at Charles River, notes, "Duplicate entries, same security, different ID's – not a day goes by without some *dupe* breaking something." Similarly, Felipe Espitia, a Portfolio Analyst at Citadel Securities, highlights the real-world impact of such problems when he states, "the other day we almost had a physical delivery because we had a mismatch on ID's for some commodity." These issues demonstrate the critical need for a standardized, reliable, and efficient identification system.

Sigrid's approach to solving this problem involves developing a methodology that is based on mapping tables, as Abhishek Thakor, Data Architect/Product Manager at UBS Asset Management, emphasizes: "it’s never glamorous to solve – nobody ever gives you credit for it, but mapping tables are integral for data work with multi-asset funds."

However, such a methodology is only effective if it can address the specific challenges faced by the industry. As Phil Stec, Asset Backed Security Analyst at Grandview Analytics (formerly UBS Asset Management), highlights, even simple tasks such as loading custom data fields to Bloomberg CDE can become incredibly difficult when there is a lack of standardized identification: "I’ve been struggling for days to load custom data fields to these mortgages to Bloomberg CDE using the bulk uploads because we don’t use the same ID's; I ended up loading data manually for 300 rows."

Sigrid's identification system aims to provide a solution to these issues, delivering a streamlined, efficient, and standardized approach to securities identification that will improve market efficiency and reduce errors.

3.3 Competitive Landscape

While existing identification systems like ISIN, CUSIP, and FIGI currently dominate the market, they have inherent limitations that create opportunities for a next-generation solution like SIGRID. The competitive landscape includes:

- Existing identification systems: SIGRID will compete with incumbent systems by offering a more advanced, flexible, and adaptable solution that addresses the evolving needs of the financial industry.

- Emerging solutions: Other startups and technology firms may also be developing new identification systems or complementary solutions. SIGRID will need to monitor the market and adapt to stay ahead of potential competitors.

- Industry resistance: As with any disruptive technology, there may be resistance from entrenched players who prefer to maintain the status quo. SIGRID will need to demonstrate the value and benefits of its solution to overcome potential barriers to adoption.

The market for a next-generation financial security identification system like SIGRID presents significant growth potential, driven by the increasing complexity of financial instruments, the adoption of advanced technologies, and the need for improved efficiency and risk management. By targeting key customer segments and addressing the limitations of existing identification systems, SIGRID has the opportunity to establish itself as a market leader in this space.

3.4 Strategic Partnerships and Alliances

In this section, we outline the importance of strategic partnerships and alliances in the successful implementation and adoption of SIGRID's next-generation financial security identification system. Forming strong relationships with key industry players will be crucial for building credibility, expanding market reach, and accelerating growth.

3.4.1 Bloomberg Partnership

As one of the leading providers of financial data and analytics, Bloomberg has a significant influence on the financial industry. Gaining their buy-in and support for SIGRID early on is crucial for the following reasons:

Market credibility: A partnership with Bloomberg will lend credibility to SIGRID's offering, as financial institutions often rely on Bloomberg's data and analytics services for decision-making and risk management.

Data integration: Collaborating with Bloomberg can facilitate seamless integration of SIGRID's unique identification system into their existing data feeds and analytics platforms, making it easier for customers to adopt and benefit from the new system.

Distribution: Leveraging Bloomberg's extensive network of clients and partners can help SIGRID rapidly expand its market reach and gain access to a broader customer base.

Joint development: Working with Bloomberg can provide valuable insights and resources for further development and enhancement of SIGRID's platform and features, ensuring that the solution remains at the forefront of industry trends and meets the evolving needs of financial institutions.

3.4.2 Partnerships with Financial Institutions

Forming alliances with major banks, investment firms, and other financial institutions is essential for demonstrating the value of SIGRID's identification system in real-world use cases. These partnerships can:

Provide valuable feedback: Financial institutions can offer insights into the challenges they face with existing identification systems and help identify areas where SIGRID can deliver the most significant impact.

Foster early adoption: Engaging with financial institutions as early adopters can create a strong foundation for market penetration and drive wider adoption among other industry players.

Promote industry standards: Collaborating with financial institutions can help establish SIGRID as a new industry standard for financial security identification, making it easier for other market participants to adopt the solution.

3.4.3 Alliances with Exchanges and Trading Platforms

Partnering with stock exchanges, electronic trading platforms, and other marketplaces can help streamline the integration of SIGRID's identification system into their trading infrastructure, leading to:

Accelerated settlements: By enabling more efficient identification and matching of financial securities, SIGRID can help exchanges and trading platforms achieve faster settlements and reduce counterparty risks.

Simplified compliance: Integrating SIGRID's standardized data formats and reporting capabilities can simplify compliance processes for exchanges and trading platforms, reducing errors and potential penalties.

Enhanced market efficiency: The improved data accessibility and analytics provided by SIGRID can lead to more efficient and transparent markets, benefiting all market participants.

Strategic partnerships and alliances will play a vital role in the successful implementation and adoption of SIGRID's next-generation financial security identification system. By collaborating with industry leaders in financial data, financial institutions, and exchanges, SIGRID can establish itself as a market leader and drive widespread adoption of its innovative ID solution.

4. Tiered Development Model

4.1. Achieving Network Effects through SIGRID Integration

As more financial market participants adopt and integrate SIGRID's unique identifiers into their systems, the benefits of the next-generation identification system will become increasingly apparent. Achieving network effects through widespread adoption is crucial to unlocking the full potential of SIGRID, including its role in enabling T+0 settlements. This section elaborates on the strategies for promoting the integration of SIGRID and achieving network effects.

4.1.1. Collaboration with Key Market Participants

Establishing partnerships with major financial institutions, exchanges, clearinghouses, and technology providers can help drive the adoption and integration of SIGRID. These collaborations can create synergies, promote the sharing of knowledge and resources, and demonstrate the value of SIGRID's unique identifiers to the broader financial market.

4.1.2. Education and Awareness

Raising awareness about the benefits of SIGRID, such as improved data management, streamlined settlement processes, and better interoperability, is essential to driving adoption. This can be achieved through targeted marketing campaigns, industry conferences, and educational initiatives that highlight the advantages of using SIGRID's unique identifiers over existing systems.

4.1.3. Regulatory Support and Endorsement

Engaging with regulatory authorities and seeking their support for the adoption of SIGRID can help establish the system as a trusted and reliable solution for financial security identification. This can further encourage market participants to integrate SIGRID into their operations, contributing to the network effects.

4.2. T+0 Settlements and Beyond: Realizing the Full Potential of SIGRID

Once sufficient network effects have been achieved through the integration of SIGRID's unique identifiers, the financial industry can begin to leverage these identifiers to facilitate T+0 settlements and unlock further benefits. These potential benefits include:

4.2.1. Reduced Counterparty Risk

With the implementation of T+0 settlements, the time between trade execution and settlement is significantly reduced, minimizing counterparty risk and enhancing the overall stability of the financial system.

4.2.2. Improved Liquidity Management

Faster settlement times can lead to more efficient liquidity management for financial institutions, allowing them to optimize their capital allocation and better respond to market fluctuations.

4.2.3. Enhanced Regulatory Compliance

By providing accurate, up-to-date, and comprehensive information about financial securities, SIGRID can help market participants better comply with regulatory requirements, including the tracking and reporting of risk exposures.

4.3. Leveraging Legacy Code from Credit Suisse-UBS Acquisition

In light of the recent acquisition of Credit Suisse by UBS, there may be an opportunity to acquire legacy code and technology assets at a reduced cost. This could help accelerate the development and integration of SIGRID's unique identifiers, as well as provide valuable insights into the challenges and opportunities associated with the modernization of financial security identification systems.

4.3.1. Identifying Potential Assets

A thorough evaluation of UBS’s technology assets can help identify valuable components that can be repurposed or integrated into the SIGRID system. This may include software, databases, or even proprietary algorithms that can enhance SIGRID's capabilities.

4.3.2. Negotiating Acquisition Terms

By negotiating favorable acquisition terms, SIGRID can potentially obtain valuable technology assets at a fraction of their original cost. This can help reduce development expenses and increase the return on investment for SIGRID stakeholders.

4.3.3. Integration and Optimization

Once the legacy code and technology assets have been acquired, they can be integrated into the SIGRID system and optimized to support the unique requirements of the next-generation financial security identification system. This can help accelerate the development and adoption of SIGRID, ultimately contributing to the realization of its full potential, including T+0 settlements and beyond.

4.4 rewarding network participation - tokenization

Token Issuance: Issue native utility tokens that can be used within the system. These tokens could have a variety of uses, such as paying for identifiers, staking for governance rights, or earning rewards.

Rewards for Network Participation: Users who contribute to the network by setting up new identifiers, validating information, or linking securities could earn tokens (or cash) as rewards. This would incentivize users to contribute to the network and help maintain its accuracy and reliability.

Staking and Governance: Users could stake their tokens (or cash) to earn governance rights in the system. This would give them a say in key decisions, such as changes to the system's rules or fee structure. Staking could also earn users additional tokens as rewards, further incentivizing participation.

Data Marketplaces: Users could potentially use their tokens to buy pre-built identifiers and sell their data on a marketplace. For example, a user might pay tokens to access a particularly valuable piece of data, or they might earn tokens by providing data that others find useful.

5. Financial Planning

In this section, we elaborate on the financial planning aspects of the business plan, including revenue streams, cost structure, and financial projections.

5.1 Revenue Streams

The next-generation financial security identification system will generate revenue through several channels:

Transaction fees: The platform will charge a very small fee for each transaction processed using the new identification system. As the volume of transactions increases, this will become a significant source of revenue.

Issuance fees: SIGRID issuance fees are collected but the reward may go to the user who set up the instrument and the users who validated the instrument. To be determined.

Subscription plans for premium features: The platform will offer tiered subscription plans that provide access to premium features and services, such as advanced analytics, custom data feeds, and priority support.

Integration and consulting services: The company will offer integration and consulting services to help financial institutions implement the new identification system and maximize its benefits. This will include services such as system integration, training, and ongoing support.

Data and analytics services: The platform will provide access to valuable data and analytics services, allowing customers to make better-informed decisions and manage risk more effectively. This could include market data, historical trends, and predictive analytics.

5.2 Cost Structure

The cost structure of the business will include the following elements:

Platform development and maintenance: This includes the costs associated with designing, building, and maintaining the platform, such as software development, testing, and infrastructure expenses.

Marketing and promotion: To drive adoption and market penetration, the company will invest in marketing and promotional activities, such as digital advertising, content marketing, public relations, and industry events.

Personnel expenses: The company will need to hire and retain skilled employees to develop, market, and support the platform. This will include salaries, benefits, and training costs.

General and administrative expenses: These expenses will cover the day-to-day operations of the business, such as office rent, utilities, insurance, and legal and accounting fees.

5.3 Financial Projections

The financial projections for the business are as follows:

Year 1: During the first year, the focus will be on platform development, validation, and pilot implementations with select partners. Revenue generation will be limited during this phase, as the company works on refining the product and establishing a foothold in the market.

Year 2: In the second year, the company will focus on market adoption and expansion. With a fully-functional platform, the business will begin generating increased revenue from transaction fees, subscriptions, and services. This phase will also see a higher investment in marketing and promotional activities to drive customer acquisition.

Year 3: The third year will see continued growth and profitability, with sustained revenue growth coming from an expanded customer base and diversified revenue streams. The company will continue to innovate and develop new features and services, ensuring that the platform remains competitive and relevant in the rapidly evolving financial industry.

6. Fundraising Goals

In this section, we outline the funding goals for different stages of the business, detailing the target amount and purpose of each round of investment.

6.1 Seed Funding

Target amount: $1.5 million

Purpose: The seed funding round aims to raise capital for developing and validating the core platform, establishing strategic partnerships, and conducting pilot implementations with select partners. This initial investment will provide the necessary resources to build a solid foundation for the business and demonstrate the potential value of the next-generation financial security identification system to investors and potential customers.

6.2 Series A Funding

Target amount: $5 million

Purpose: The Series A funding round aims to raise capital for expanding market adoption, enhancing platform capabilities, and increasing marketing efforts. With a validated product and initial market traction, this investment will enable the company to scale its operations, reach a broader customer base, and further develop the platform to meet the evolving needs of the financial industry.

6.3 Series B Funding

Target amount: $10 million

Purpose: The Series B funding round aims to raise capital for accelerating growth, exploring new revenue streams, and expanding into new markets. With a proven product and growing customer base, this investment will allow the company to capitalize on its momentum, invest in research and development to explore additional revenue opportunities, and expand its market presence both

domestically and internationally. This funding will also support the company's efforts to stay ahead of industry trends and maintain its competitive edge in the rapidly evolving financial ecosystem.

7. Timeline & Unit economics

- Q1: Secure seed funding, initiate platform development
- Q2-Q3: Complete platform development, initiate pilot implementations
- Q4: Secure Series A funding, expand market adoption
- Q1-Q2 (Year 2): Enhance platform capabilities, increase marketing efforts
- Q3-Q4 (Year 2): Secure Series B funding, accelerate growth

Customer Acquisition Cost (CAC): Our plan is to maintain a lean marketing and sales strategy, where we aim to spend $250,000 per year to sign 100 enterprise contracts resulting in a CAC of $2500 per customer. We understand that market conditions may fluctuate and impact our ability to achieve this goal, but we will continue to optimize our strategy to ensure the best possible CAC.

Average Revenue Per User (ARPU): Based on our projections, we estimate that our revised ARPU will be $20,000 per user per year. However, this figure could potentially increase if we successfully add new features or services that can command a higher price point.

Gross Margin: Our streamlined and largely automated operation enables us to maintain a high gross margin of 70%, which we plan to continue to sustain as we scale.

Lifetime Value (LTV): With an ARPU of $20,000, a gross margin of 70%, and an average customer lifespan of 5 years, our projected LTV is $70,000. However, if we can expand our customer base, develop new revenue streams, or increase ARPU, this figure could potentially increase.

LTV/CAC Ratio: Based on our plan to spend $500,000 per year to acquire 100 new customers, our projected LTV/CAC ratio is $70,000 / $2500 = 28. However, as we continue to optimize our customer acquisition strategy, this ratio could even increase.

Payback Period: With a projected CAC of $2500 and an average annual revenue per user of $20,000 at a gross margin of 70%, our projected payback period is approximately 2.2 months. However, if we can increase revenue or reduce costs, we may be able to achieve a shorter payback period.

Projected Revenue: (after delay) with ARPU of $20,000 and approximately 100 customer contracts, the firm revenue is projected to be around $2 million per year.

8. Why Now: Market Opportunity and Legal Framework

The current market environment and legal framework provide a unique opportunity for SIGRID to emerge as a leading player in the financial identification industry. Several factors contribute to the timing being right for SIGRID's entry into the market:

8.1. Class-Action Lawsuit

A class-action lawsuit has been filed against S&P Global, Cusip Global Services, the American Bankers Association, and FactSet, alleging that they have conspired to eliminate competition in the use of Cusip numbers. The lawsuit highlights the dissatisfaction with the current identification systems and the monopolistic behavior of the existing players. This creates an opportunity for SIGRID to offer a better solution that addresses the issues raised in the lawsuit and meets the market's demands for a more efficient and fair system.

8.2. Regulatory Environment

Increasing regulatory scrutiny and the push for transparency in financial markets have led to more stringent reporting requirements and a greater need for accurate and accessible financial data. A next-generation identification system like SIGRID can help market participants meet these evolving regulatory demands by providing a more comprehensive and transparent solution.

8.3. Industry Disruption

The financial services industry is undergoing significant disruption due to the rise of fintech companies, which are leveraging technology to offer innovative products and services. This trend has created a more competitive landscape and a willingness among market participants to embrace new solutions that can improve efficiency and reduce costs. SIGRID can capitalize on this trend by offering a cutting-edge solution that addresses the shortcomings of the current financial identification systems.

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2. Technical Product Requirement Document

1. Introduction

1.1 Purpose

The purpose of this Technical Product Requirement Document (TPRD) is to outline the technical specifications and requirements for the development and integration of the SIGRID (Smart Instrument Global Registry) platform with financial institutions. This document will provide a detailed

understanding of the system architecture, APIs, data structures, and other components necessary for the successful implementation of SIGRID.

1.2 Scope

This TPRD covers the technical requirements for implementing the SIGRID solution, including software development, infrastructure updates, data migration, and security. The primary focus will be on integrating SIGRID's smart IDs, smart contracts, and T+0 settlements into existing systems and processes.

2. Technical Requirements

2.1 System Architecture

- Design a scalable and modular system architecture that supports easy integration with existing financial systems and future expansions.
- Use microservices architecture to ensure fault tolerance, flexibility, and maintainability.

2.2 APIs and Integration

- Develop RESTful APIs for very simple integration into the SIGRID platform with existing systems, including trade and order management systems, risk management, and compliance tools.
- Use industry-standard authentication and authorization protocols, such as OAuth2 and OpenID Connect, to ensure secure access to the platform.

2.3 Data Structures and Storage

- Design a data model that efficiently stores and manages smart ID information, including capital structures, lifecycle events, and other critical details.[1]

[1] Here's a list of fields that would be useful to include, based on the asset type:

Asset Type: Distinguishes the kind of asset (e.g., stock, bond, option, futures, etc.).
Capital Structure: Information on the priority of the asset in the issuer's capital structure.
Issuing Entity: The organization that issued the asset.
Legacy Identifiers: Any existing identifiers, such as ISIN, CUSIP, or FIGI.
Maturity Date: The date on which the asset will mature (particularly relevant for bonds and certain types of derivatives).
Issue Date: The date on which the asset was issued.
Face Value / Par Value: The nominal value of the asset.
Currency: The currency in which the asset is denominated.
Interest Rate / Dividend Rate: For bonds, the interest rate; for stocks, the dividend rate.
Payment Frequency: How often interest or dividends are paid.
Underlying Asset(s): For derivatives, the asset(s) upon which the contract is based.
Strike Price: For options, the price at which the underlying asset can be bought or sold.
Call/Put Features: For callable or puttable bonds, the terms of the call or put feature.
Collateral Details: For asset-backed securities, information about the underlying collateral.
Seniority Level: Indicates the asset's rank in the issuer's capital structure, particularly important for bonds and structured products.
Optionality: Any optional features the asset may have (e.g., callable, putable, convertible).
Coupon Type: For bonds, whether the interest rate is fixed, floating, or inflation-linked.
Issuer Rating: The credit rating of the issuer.
Asset Rating: The credit rating of the asset itself.
Legal Terms: Any pertinent legal terms or conditions.
Restrictions: Any legal or contractual restrictions on the asset (e.g., non-transferability).

- Implement a distributed database solution to ensure high availability, fault tolerance, and consistency across multiple nodes.

2.4 Smart Contract Framework

- Develop a smart contract framework that supports the creation, execution, and management of smart contracts, leveraging the information contained within SIGRID's smart IDs.
- Ensure compatibility with popular blockchain platforms, such as Ethereum and Hyperledger Fabric, for seamless integration with existing financial systems.

2.5 T+0 Settlements

- Design a workflow engine that streamlines the settlement process by leveraging smart contracts and the information within smart IDs.
- Ensure the necessary infrastructure and processes are in place to support T+0 settlements, including updates to clearing and settlement systems.

2.6 Security and Compliance

- Implement robust security measures, such as encryption, secure coding practices, and regular security audits, to protect the confidentiality, integrity, and availability of the SIGRID platform and its data.
- Ensure compliance with relevant data protection and privacy regulations, such as GDPR and CCPA.

3. Testing and Validation

- Develop comprehensive test plans and test cases to ensure the correctness, performance, security, and compatibility of the SIGRID platform.
- Conduct unit, integration, and system testing, as well as performance and stress testing, to validate the functionality and scalability of the platform.

4. Documentation and Training

- Provide detailed technical documentation, including API specifications, data models, system architecture diagrams, and user guides, to facilitate integration and maintenance.

Country of Issuance: The country in which the asset was issued.
Redemption Terms: Terms under which the asset can be redeemed before maturity.
Settlement Terms: Details about how and when the asset will be settled.
Reference Rate: For floating rate instruments, the reference interest rate (e.g., LIBOR, SOFR).
This list is not exhaustive, and the exact fields needed may vary depending on the specific asset, its complexity, and the legal jurisdiction

- Develop training materials and provide training sessions to help financial institutions' staff understand and effectively use the SIGRID platform.

5. Support and Maintenance

- Offer ongoing support and maintenance services to financial institutions, including bug fixes, system updates, and feature enhancements.
- Establish a support channel for reporting issues, asking questions, and providing feedback on the SIGRID platform.

6. Coverage

Exchange Traded:

Stocks

Data problem: Different stock classes (e.g., Class A, Class B) may have different voting rights and dividend policies, which need to be accurately reflected in the data.

Exchange-Traded Funds (ETFs)

Data problem: The underlying assets in an ETF may change frequently, requiring continuous updates on the composition and weightings of the assets.

Options

Data problem: Options contracts have multiple specifications, such as strike price, expiration date, and contract type (call or put), which need to be captured accurately.

Futures

Data problem: Futures contracts have varying expiration dates and underlying assets, and require precise tracking of contract specifications and margin requirements.

Over the Counter (OTC):

Bonds (both OTC and exchange-traded)

Data problem: Bonds have various features, such as coupon rates, maturity dates, and issue sizes, which need to be accurately represented in the data.

Callable Bonds

Data problem: In addition to standard bond features, callable bonds have call dates and call prices, which need to be included in the data.

Swaps

Data problem: Swaps are customized contracts with varying terms, such as notional amounts, interest rates, and payment frequencies, which need to be captured accurately. Swaps are two legged securities. Direction of trade will impact analytics.

Forward Rate Agreements (FRAs)

Data problem: FRAs have unique contract terms, including start and end dates, notional amounts, and reference rates, which require accurate representation in the data.

Structured Products

Data problem: Structured products often have complex payoff structures and underlying assets, necessitating detailed data on these features and their relationships.

Money Markets

Data problem: Instruments such as commercial paper, certificates of deposit, and repurchase agreements have varying terms and interest rates, which require accurate data tracking.

Foreign Exchange (FX) Forwards

Data problem: FX forwards have specific contract terms, including currency pairs, notional amounts, and forward exchange rates, which need to be captured in the data.

Mortgage-Backed Securities (MBS)

Data problem: MBS have complex structures with underlying mortgage pools, prepayment speeds, and tranching, which require detailed data representation.

Asset-Backed Securities (ABS)

Data problem: ABS have underlying asset pools and varying credit enhancements, necessitating accurate data on the composition and credit quality of the underlying assets.

Commercial Mortgage-Backed Securities (CMBS)

Data problem: CMBS have underlying commercial mortgage pools and varying credit enhancements, which require detailed data on the composition and credit quality of the underlying mortgages.

(...) list to be continued

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3. Whitepaper: *The Need for a Next-Generation Financial Security Identification System: Comparing ISIN, CUSIP, and FIGI*

Abstract

This whitepaper examines the benefits and limitations of three of the major financial security identification systems: ISIN, CUSIP, and FIGI. The paper highlights the importance of a standardized and efficient identification system in the evolving financial landscape and assesses the current systems' ability to meet these requirements. The paper also presents a case for a new, innovative approach to financial security identification that addresses the challenges posed by the existing systems.

1. Introduction

1.1. Background on ISIN, CUSIP, and FIGI

Financial security identification systems play a crucial role in enabling the efficient functioning of global financial markets. They provide unique identifiers for financial instruments, facilitating trading, settlement, clearing, and reporting processes. Three prominent identification systems are the International Securities Identification Number (ISIN), Committee on Uniform Security Identification Procedures (CUSIP), and Financial Instrument Global Identifier (FIGI). This section provides an overview of each system, including their origins, primary purposes, and features. In a significant transaction announced in December 2021, FactSet purchased Cusip Global Services for close to $2 billion from S&P Global, which had managed the standard for over 50 years on

behalf of its owner, the American Bankers Association. As a condition of its merger with IHS Markit, the European Commission had earlier required S&P to divest itself of Cusip.[2]

1.1.1. ISIN (International Securities Identification Number)

ISIN is an international standard for identifying securities, such as stocks, bonds, and other financial instruments. Established by the International Organization for Standardization (ISO) in 1989 under ISO 6166, ISIN aims to provide a globally recognized and unique identifier for each security. An ISIN consists of a 12-character alphanumeric code, which includes a two-letter country code, a nine-character alphanumeric national security identifier, and a single check digit for validation.

ISINs are issued by National Numbering Agencies (NNAs) in each country and are used by financial institutions, regulators, and market participants globally. It is owned by the International Organization for Standards (ISO) but operated by more than 120 national number agencies, which are responsible for Isin assignments in their respective countries. In the US, Cusip Global Services (CGS) is responsible for assigning US Isins in addition to Cusips.

1.1.2. CUSIP (Committee on Uniform Security Identification Procedures)

CUSIP is a widely used identification system in the United States and Canada, primarily for stocks, bonds, and other financial instruments. Developed in 1964 by the American Bankers Association, CUSIP provides a unique identifier for each security to facilitate trading, clearing, and settlement processes in North American financial markets. A CUSIP identifier consists of a nine-character alphanumeric code, with the first six characters representing the issuer and the following two characters representing the specific security. The final character is a check digit for validation. CUSIP Global Services, formerly managed by S&P Global Market Intelligence, now by Factset is responsible for the assignment and maintenance of CUSIP identifiers.

1.1.3. FIGI (Financial Instrument Global Identifier)

FIGI is an open-source financial security identification system developed and maintained by Bloomberg. Released in 2014, FIGI aims to provide a standardized and unique identifier for financial instruments across asset classes and markets worldwide. Unlike ISIN and CUSIP, FIGI is not tied to a specific country or region, allowing for greater flexibility and compatibility in global financial markets. A FIGI identifier is a 12-character alphanumeric code that can be assigned to various types of financial instruments, including equities, fixed income, derivatives, and commodities. Bloomberg serves as the Registration Authority for FIGI and provides free access to FIGI data, making it an attractive option for organizations seeking a cost-effective and open identification system.

[2]Class-action lawsuit takes aim at Cusip, S&P, FactSet & ABA - Rebecca Natale, 04 Mar 2022, https://www.waterstechnology.com/regulation/7936086/class-action-lawsuit-takes-aim-at-cusip-sp-factset-aba

1.2. Why is financial security identification so important?

Financial security identification systems serve as the backbone of the global financial markets by providing standardized and unique identifiers for financial instruments. These systems play a critical role in various aspects of the financial ecosystem, including trading, clearing, settlement, risk management, and regulatory compliance. This section outlines the importance of financial security identification and its impact on the functioning and efficiency of financial markets.

1.2.1. Streamlined Trading and Settlement

Unique identifiers for financial securities enable market participants to efficiently trade and settle transactions. By providing a consistent reference for each security, identification systems reduce the likelihood of errors, discrepancies, and misunderstandings that can lead to delays or failures in trade execution and settlement. This helps to maintain liquidity in financial markets and minimizes the costs associated with trading and settlement issues.

1.2.2. Enhanced Data Management

Financial security identification systems facilitate the effective management of financial data by providing a standardized and consistent method for organizing and referencing securities information. This enables market participants to easily access, store, and analyze data on various securities, which can lead to better-informed investment decisions, more accurate risk assessments, and improved portfolio management.

1.2.3. Simplified Regulatory Compliance and Reporting

Unique and standardized identifiers for financial securities assist financial institutions in fulfilling their regulatory obligations. By providing a consistent reference for securities, identification systems make it easier for institutions to track their exposure to specific assets, monitor their compliance with various rules and regulations, and submit accurate reports to regulators. This streamlines the compliance process, reduces the risk of penalties or sanctions, and ensures the stability and integrity of the financial system.

1.2.4. Facilitated Communication and Collaboration

Financial security identification systems enable efficient communication and collaboration among various market participants, including investors, traders, brokers, custodians, and regulators. By using a common language to identify securities, these systems simplify information exchange and reduce the likelihood of miscommunication or misunderstandings. This fosters transparency, trust, and cooperation within the financial industry.

1.2.5. Scalability and Adaptability

An effective financial security identification system should be scalable and adaptable to accommodate the ongoing growth and evolution of the financial markets. As new financial instruments and asset classes emerge, a robust identification system should be able to seamlessly integrate these developments, ensuring that the financial ecosystem remains efficient, resilient, and capable of meeting the needs of market participants.

1.3. Technological advancements and the evolving financial landscape

The financial landscape has undergone significant changes in recent years, driven by rapid technological advancements and evolving market dynamics. These changes have presented both opportunities and challenges for the financial industry, making it more important than ever to have an efficient and adaptive financial security identification system. This section highlights some of the key developments in the financial sector and their implications for financial security identification.

1.3.1. Digitalization and Automation

The financial industry has increasingly embraced digitalization and automation, with many processes and systems being transformed through the use of technology. This shift has led to improvements in efficiency, speed, and accuracy across various aspects of the financial ecosystem, including trading, settlement, risk management, and reporting. As a result, there is a growing need for financial security identification systems that can seamlessly integrate with digital and automated processes, ensuring that the benefits of these advancements are fully realized.

1.3.2. Emergence of New Asset Classes and Financial Instruments

The financial landscape has seen the introduction of new asset classes and financial instruments, such as cryptocurrencies, digital tokens, and novel derivatives. These developments have expanded the range of investment opportunities and risk exposures for market participants, necessitating the adaptation of financial security identification systems to accommodate these new assets. A robust and flexible identification system should be capable of supporting the growth and diversification of the financial markets, while still maintaining its core functions and standards.

1.3.3. Increased Regulatory Scrutiny

Regulatory scrutiny has intensified in the aftermath of the global financial crisis, with regulators implementing stricter rules and guidelines to ensure the stability and integrity of the financial system. As a result, financial institutions are required to manage and report their risk exposures more accurately and transparently. An effective financial security identification system plays a crucial role in enabling institutions to comply with these regulations by providing a consistent reference for tracking and reporting their securities holdings across all asset classes.

1.3.4. Growing Importance of Data and Analytics

Data has become an increasingly valuable resource in the financial industry, with market participants leveraging advanced analytics to gain insights, identify trends, and make informed decisions. The quality and accessibility of financial security data are essential for effective data-driven decision-making. A next-generation identification system that provides comprehensive and accurate data on securities can support the growing demand for data-driven analysis and decision-making in the financial industry.

1.3.5. Adoption of Blockchain and Distributed Ledger Technologies

Blockchain and distributed ledger technologies (DLT) have the potential to revolutionize the financial industry by enabling secure, transparent, and efficient processes for various applications, such as trading, settlement, and record-keeping. The integration of financial security identification systems with these emerging technologies can further enhance the benefits of blockchain and DLT, allowing for seamless and automated processes across the financial ecosystem.

The evolving financial landscape, characterized by technological advancements, new asset classes, increased regulatory scrutiny, and a growing emphasis on data and analytics, underscores the need for an efficient and adaptable financial security identification system. Such a system should be capable of supporting the ongoing growth and diversification of the financial markets while ensuring that the core functions of trading, settlement, risk management, and regulatory compliance are effectively served.

2. Comparison of ISIN, CUSIP, and FIGI

This section compares the key features, benefits, and limitations of existing financial security identification systems: ISIN, CUSIP, and FIGI. We examine their suitability for modern financial markets and identify the areas where a solution like SIGRID could provide improvements and innovations.

2.1. Key Features and Differences

ISIN (International Securities Identification Number) is a 12-character alpha-numerical code that uniquely identifies securities issued worldwide. It is the most widely used identification system for financial securities and is endorsed by the International Organization for Standardization (ISO).

CUSIP (Committee on Uniform Securities Identification Procedures) is a 9-character alpha-numerical code that primarily identifies securities issued in the United States and Canada.

Developed by the American Bankers Association, CUSIP codes are used to facilitate trade clearing and settlement in North American markets.

FIGI (Financial Instrument Global Identifier) is an open-source, globally unique security identifier developed by Bloomberg. It is a 12-character alpha-numerical code that covers multiple asset classes and is designed to promote data transparency and ease of access.

2.2. Benefits and Limitations of ISIN & co

ISIN:
Benefits: ISIN codes are widely recognized and accepted globally, providing a standardized identification system for financial securities.
Limitations: ISIN codes do not provide comprehensive information about the security itself, and they are not designed to facilitate smart contracts or other innovative financial applications.

CUSIP:
Benefits: CUSIP codes are well-established in the North American market, making them a familiar identification system for many market participants.
Limitations: CUSIP codes are limited in their global applicability and, like ISIN codes, do not offer detailed information about the security or support smart contract functionality.

FIGI:
Benefits: FIGI codes offer open-source access, promoting transparency and accessibility of financial data. They also cover multiple asset classes, increasing their utility across various financial markets.
Limitations: Although FIGI is more flexible than ISIN and CUSIP, it still does not provide the level of detail and smart contract integration that modern financial markets demand.

2.3. Suitability for Modern Financial Markets

While ISIN, CUSIP, and FIGI have been instrumental in the identification of financial securities, they may not be ideally suited for the evolving needs of modern financial markets. With the emergence of new asset classes, financial instruments, and technologies, there is a growing demand for more comprehensive, dynamic, and technologically advanced identification systems.

This growing demand highlights the potential for a solution like SIGRID, which could offer unique identifiers that incorporate smart contract functionality and provide detailed information about the security. By adopting a system like SIGRID, market participants could leverage its advanced features to streamline processes, enhance transparency, and unlock the potential of next-generation financial applications. The shortcomings of existing identification systems, as outlined in this whitepaper, emphasize the importance and necessity of developing an innovative solution like SIGRID to cater to the needs of modern financial markets.

2.3.1 Market Demand for Alternatives and Decentralization

The recent lawsuit filed against S&P Global, Cusip Global Services (CGS), the American Bankers Association (ABA), and FactSet has brought to light the industry's dissatisfaction with the current centralized identification assignment process. The allegations of monopolistic behavior and the hefty licensing fees imposed on financial institutions for using Cusip numbers indicate a clear demand for alternative solutions.

In the current market, there is a growing interest in having the choice between centralized and decentralized identification assignment processes. Decentralized systems offer several advantages, such as increased transparency, reduced risk of single-point failures, and greater control for market participants. This demand for alternatives is further fueled by the evolving financial landscape, which includes the adoption of digital assets and blockchain technology.

The lawsuit presents a timely opportunity for a new identification system to emerge—one that offers flexibility and the freedom for market participants to choose their preferred method of identification assignment. By addressing the concerns raised in the lawsuit and providing a more adaptable and inclusive solution, this new identification system can not only meet the market's needs but also foster greater innovation and competition in the financial sector.

3. The Case for a Next-Generation Identification System

3.1. Need for a global and standardized identification system

The financial industry has undergone significant technological advancements and market evolution in recent years. This has led to the emergence of new asset classes, financial instruments, and trading technologies. Some of these advancements include:

Distributed Ledger Technology (DLT) and Blockchain: These technologies have the potential to revolutionize various aspects of the financial industry, including securities issuance, trading, clearing, and settlement. They offer increased transparency, security, and efficiency, enabling market participants to streamline their operations and reduce costs.

Digital Assets and Tokenization: The rise of digital assets, such as cryptocurrencies and security tokens, has created new investment opportunities and trading platforms. Tokenization allows for the digitization of traditional assets like real estate, art, and commodities, making them more accessible and tradeable.

Smart Contracts: Smart contracts are self-executing contracts with the terms of the agreement directly written into the code. They enable automation of various processes, reducing the need for intermediaries and lowering operational costs. Smart contracts have the potential to transform the way financial transactions are executed, including securities trading and settlement.

Regulatory and Compliance Requirements: As the financial industry evolves, regulatory bodies and standards are also adapting to address emerging risks and ensure market stability. Compliance with these evolving regulations is crucial for market participants to maintain their reputation and avoid penalties.

These technological advancements and market changes have exposed the limitations of existing financial security identification systems like ISIN, CUSIP, and FIGI. They are not designed to support the dynamic needs of modern financial markets, including the integration of smart contracts, seamless global interoperability, and real-time settlement.

The growing demand for more comprehensive, dynamic, and technologically advanced identification systems underscores the need for a next-generation financial security identification system. A solution like SIGRID, which incorporates smart contract functionality and provides detailed information about the security, could address these challenges and better serve the needs of modern financial markets.

3.2. Enabling smart contracts and automation

As financial markets become more complex and interconnected, market participants face increasing challenges in managing and accessing the data associated with their securities. Traditional identification systems like ISIN, CUSIP, and FIGI provide limited information about the security itself and lack the dynamic, granular data needed for modern financial applications.

A next-generation financial security identification system, like SIGRID, could address these challenges by providing comprehensive information about the security, including its capital structure, lifecycle events, and other essential data points. This would enable market participants to access and manage their data more efficiently, leading to better-informed decision-making and improved risk management.

3.3. Harnessing data-driven decision-making

The current financial security identification systems do not facilitate the level of automation and process optimization demanded by modern financial markets. With the increasing adoption of technologies like distributed ledger technology (DLT) and smart contracts, there is a pressing need for an identification system that seamlessly integrates with these innovations.

A next-generation identification system, like SIGRID, could enable the integration of smart contracts, which would streamline various processes in the financial industry, such as trade execution, clearing, and settlement. By automating these processes, market participants could significantly reduce their operational costs and enhance overall efficiency.

3.4 Global Interoperability and Real-Time Settlement

In today's global financial markets, seamless cross-border transactions and real-time settlement are becoming increasingly important. The existing financial security identification systems, such as ISIN and CUSIP, are limited in their global applicability and do not support real-time settlement.

A next-generation financial security identification system, like SIGRID, could offer global interoperability, enabling market participants to conduct cross-border transactions more efficiently. Additionally, by incorporating smart contracts and leveraging technologies like DLT, a system like SIGRID could facilitate real-time or near-real-time settlement (T+0), significantly reducing counterparty risk and enhancing the overall stability of the financial system.

In summary, the limitations of existing financial security identification systems like ISIN, CUSIP, and FIGI emphasize the need for a next-generation system that addresses the evolving demands of modern financial markets. A solution like SIGRID, with its advanced features and seamless integration with emerging technologies, could provide the necessary improvements to better serve the needs of market participants and the financial industry as a whole.

4. Key Features of a Next-Generation Identification System

In this section, we elaborate on the key features that a next-generation financial security identification system should possess to address the limitations of existing systems and better serve the needs of modern financial markets.

4.1. Unique and Universally Recognized Identifiers

A next-generation identification system should provide unique and universally recognized identifiers for all types of financial securities, regardless of their country of issuance or asset class. This would ensure seamless global interoperability, enabling market participants to conduct cross-border transactions more efficiently and reducing the complexity associated with managing multiple identification systems.

4.2. Comprehensive Data on Securities

To enhance data management and accessibility, a next-generation identification system should provide comprehensive information about the security itself. This includes data on capital structure, lifecycle events, and other essential data points that are crucial for risk management,

regulatory compliance, and informed decision-making. Providing granular data on securities would also enable better integration with advanced financial applications and analytics tools.

4.3. Integration with Modern Technologies (e.g., Blockchain, Smart Contracts)

The next-generation identification system should be designed to seamlessly integrate with emerging technologies, such as blockchain and smart contracts. This would allow market participants to leverage the benefits of these technologies, including enhanced transparency, security, and automation. By enabling the integration of smart contracts, the identification system could streamline various processes, such as trade execution, clearing, and settlement, reducing operational costs and improving overall efficiency.

4.4. Enhanced Security and Data Integrity

As financial markets become more digital and interconnected, ensuring the security and integrity of data is paramount. A next-generation identification system should employ advanced security measures, such as cryptography and distributed ledger technology, to protect against data breaches and ensure the authenticity and accuracy of the information it stores. This would instill greater confidence in market participants and regulatory bodies, promoting trust in the financial system.

4.5. Simplified and Standardized Processes

Finally, a next-generation identification system should simplify and standardize processes across the financial industry. This includes creating a uniform methodology for assigning and managing identifiers, as well as offering standardized data formats and protocols for information exchange. By streamlining these processes, the identification system would reduce the complexity and costs associated with managing securities data, enabling market participants to focus on their core business activities and driving innovation in the financial industry.

5. Benefits of a New Identification System

In this section, we elaborate on the benefits that a next-generation financial security identification system could offer to market participants and the financial industry as a whole.

5.1. Improved Efficiency and Reduced Costs

An incumbent methodology would streamline processes across the financial industry, enabling market participants to manage and access their securities data more efficiently. By automating tasks and integrating with modern technologies, such as smart contracts, the new identification system could significantly reduce operational costs, allowing market participants to allocate their resources more effectively.

5.2. Accelerated Settlements and Reduced Counterparty Risks

By leveraging advanced technologies like distributed ledger technology (DLT) and smart contracts, the next-generation identification system could facilitate real-time or near-real-time settlement (T+0), reducing the time it takes to complete transactions. This accelerated settlement process would minimize counterparty risk and enhance the overall stability of the financial system, providing a significant competitive advantage to market participants using the new identification system.

5.3. Streamlined Compliance and Reporting

The new identification system would provide comprehensive and granular data on securities, making it easier for market participants to meet their regulatory and reporting obligations. The standardized data formats and protocols would simplify the compliance process and enable more efficient communication between market participants and regulatory bodies, reducing the likelihood of errors and penalties.

5.4. Enhanced Data Accessibility and Analytics

A next-generation financial security identification system would offer market participants greater access to detailed information about their securities, enabling better-informed decision-making and risk management. By providing comprehensive data, the new system would facilitate more accurate analytics and forecasting, helping market participants to identify trends, opportunities, and risks more effectively.

5.5. Greater Adaptability to Future Industry Changes

The financial industry is continually evolving, with new asset classes, financial instruments, and trading technologies emerging regularly. A next-generation identification system would be designed with adaptability in mind, enabling it to accommodate these changes and integrate with emerging technologies, such as blockchain and DLT. This flexibility would ensure the new system

remains relevant and continues to serve the needs of market participants as the financial industry evolves.

In this paper, we have examined the limitations of existing financial security identification systems like ISIN, CUSIP, and FIGI, and discussed the need for a next-generation system that addresses the evolving demands of modern financial markets. We outlined the key features that a next-generation identification system should possess, such as unique and universally recognized identifiers, comprehensive data on securities, seamless integration with modern technologies, enhanced security, and simplified processes.

Furthermore, we highlighted the benefits that a next-generation financial security identification system could offer to market participants and the financial industry as a whole. These benefits include improved efficiency and reduced costs, accelerated settlements and reduced counterparty risks, streamlined compliance and reporting, enhanced data accessibility and analytics, and greater adaptability to future industry changes.

A next-generation financial security identification system could significantly contribute to a more efficient, transparent, and stable financial ecosystem by addressing the limitations of existing systems and offering a range of valuable benefits to market participants. As the financial industry continues to evolve and embrace new technologies, the need for such a system becomes increasingly apparent, paving the way for innovative solutions that can better serve the needs of the financial markets.

4. Appendix

Miro Board Mind map:
https://miro.com/app/board/uXjVMMfVSyY=/?share_link_id=635426490077

https://www.businesswire.com/news/home/20230111005516/en/Blockchain-In-Banking-And-Financial-Services-Global-Market-Report-2023-Featuring-SAP-Amazon-Web-Services-IBM-Accenture-Oracle-Corporation---ResearchAndMarkets.com/?feedref=JjAwJuNHiystnCoBq_hl-dlHYeAIprxOkdTSF_Uf_A90VFf5yBLNzs_9rEh3ez4KnkvYMqDDYxFrLs-oQ2BHQ_r0JiFgzivLWUL8KebZqumzYbpfzrhxLNaHGnbX3fuDaa3BBsykuNaxKAeWLwp_XrHbLUTDu7-53qdFAPwj0SM=