CAST | COMPLIANT ARCHITECTURE FOR SECURITY TOKENS

Understanding Capital Markets Key Concepts

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Executive Summary

This document is an Addendum to the White Paper which has introduced a comprehensive operational model proposal, the **CAST Framework**, designed for the issuance, custody, and OTC trades of financial instruments on a blockchain (the "**Security Tokens**") published online in an open-source manner. It has been approved and trialed in substantial issuances of Security Tokens realized in 2019, 2020 and 2021 by systemic regulated institutions (banks, supranational, brokers, etc.), notably within the Societe Generale Group.

The purpose of the CAST Framework White Paper is to propose a framework at bank-grade level designed to facilitate the establishment of acceptable market practices for capital market participants (issuers and investors), recognized trusted third parties (banks, investment firms, fund administrators, lawyers, consultants, etc.), as well as start-ups and technology service providers, and to serve as a milestone for ongoing and future discussions with various policymakers and regulators across countries.

The CAST Framework has been designed to hybridize common market standards by major banks related to financial instruments with new approaches related to blockchain-based disintermediation and opensource designs. While the CAST Framework has already been subject to various internal and external approvals by regulated institutions on Security Token issuances, it may evolve over time as it may be adapted to local legal, financial and/or operational requirements, regulatory changes and potential technology improvements. The CAST Framework community is a growing ecosystem which will work on furthering the issuance and trading of Security Tokens and facilitating the gradual industrialization of this new market.

The CAST Framework is constructed around three components: the operational framework, legal & regulatory constraints, and technical rules. Its architecture is based on common reference functions within capital markets. One of the key features of Security Token architecture is to duly identify the roles and responsibilities of the stakeholders involved. Among them, some trusted parties play key roles, including:

- The Registrar, an agent of the Security Token Issuer, which is responsible for registering Investors' positions on the DLT and for keeping the register of the Security Token holders on behalf of the Issuer, and which carries out also in most cases the role of Settlement Agent, an agent of the Security Token Issuer, which is responsible for handling the cash leg of the Security Token transactions, and
- The traditional post-trade and asset servicing actors (e.g. custodians, back office/middle office departments, etc.), whose activities will be substantially impacted by the use of DLT.

Our understanding of the current adoption process of DLTs and Security Tokens by capital market participants (Issuers, Investors, etc.) is rooted in the following key tangible facts:

- Rising interest among institutional Investors for Digital Assets and DLT-based projects;
- The project by major central banks, such as the European Central Bank, to issue central bank digital currencies (CBDCs) by 2025; and

The current implementation of major regulatory reforms providing legal certainty for Digital Asset projects, such as the EU "MiCA" and "pilot regime" regulations, which will provide rules related to Digital Assets applicable directly at the European Union level by 2022.

1 | UNDERSTANDING CAPITAL MARKETS KEY CONCEPTS

UNDERSTANDING CAPITAL MARKETS KEY CONCEPTS

The objective of this Addendum to the **CAST Framework** Whitepaper is to provide a **high-level understanding of how financial markets are currently organized and regulated**. It is addressed to readers who may *not* be familiar with the way capital markets are organized and the extent to which they are regulated.

Examples are given throughout this section to help the reader understand the general principles presented. These general principles are embedded in time and space. They are in no way comprehensive. They may no longer be accurate at the time the reader goes through this section, as regulations and systems evolve over time. Furthermore, what is/was relevant in the geographical jurisdiction chosen for the example at the time this paper was produced may not be the case in another jurisdiction.

We have chosen to focus on *securities*, for simplicity purposes. Other instruments such as non-financial Digital Assets, derivatives or other financial contracts are *not* addressed here.

While our analysis below focuses on the EU regulatory environment for illustrative purposes, this brief summary highlights the main financial services that could be affected by the use of DLT, as described further below. Financial and banking regulations vary according to jurisdiction, but the impacts of the tokenization process on traditional financial services are globally similar across the main financial marketplaces. Service providers related to the primary and secondary markets of financial instruments need to implement an operating model adapted to the specificities of Security Tokens to benefit from the efficiencies brought about by Distributed Ledger Technology.

1. Financial instruments

There are two main categories of financial instruments:

- Securities (bonds, equities, investment fund shares or units)
- Financial derivatives

Financial instruments are assets which represent an economic or political right transferred by the Issuer to Investors. Any financial instrument can be issued, traded, and settled. They can represent an ownership interest in an entity (e.g. equity securities: shares) or a contractual right to receive or deliver (e.g. debt securities: bonds; derivatives: options, futures, forwards).

International Accounting Standards IAS 32 and 39 define a financial instrument as "any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity". Depending on the jurisdiction, the definition of what constitutes a financial instrument may differ, but the effects of tokenizing these instruments are similar for each financial market participant.

As mentioned above, this section will focus on *securities* (i.e. shares, bonds, investment fund units/shares). Other types of financial products, like derivatives, as well as non-financial Digital Assets (e.g. Utility Tokens and crypto-currencies), will *not* be treated here.

2. Securities' life cycle

The **issuing** of new securities (listed or unlisted) to raise funds from Investors takes place in the **primary market**.

Once the securities are issued, they can be traded on the secondary market.

For listed securities, when a trade is confirmed between a seller and a buyer, it goes through a **clearing** process to **settle** the trade.

A clearing process can be broken down into two main processes: netting and novation.

- **Netting** is used to preserve liquidity circulation and mitigate the associated risks in a multiparty agreement. It offsets the value of multiple positions and determines who owes what to whom. For instance, if A owes 100 to B and B owes 100 to C, then A owes 100 to C. It involves optimizing transaction flows by aggregating financial positions to obtain net positions. As a result, fewer transactions need to be made, which lowers the risks associated with them.
- Novation is the process by which a clearing house interfaces the transfer of a security from a seller to a buyer. Instead of dealing directly with one other, the buyer and the seller use a clearing house. This latter buys the security from the seller and then sells it to the buyer. This is done to reduce the counterparty risk. If A sells a security to B, then A incurs counterparty risk associated with B. In a clearing house novation process, A sells to the CCP, then the CCP sells to B. A's counterparty becomes the CCP, instead of B.

Once cleared, the security transaction can be settled, which requires the effective delivery of the security to the buyer and payment to the seller.

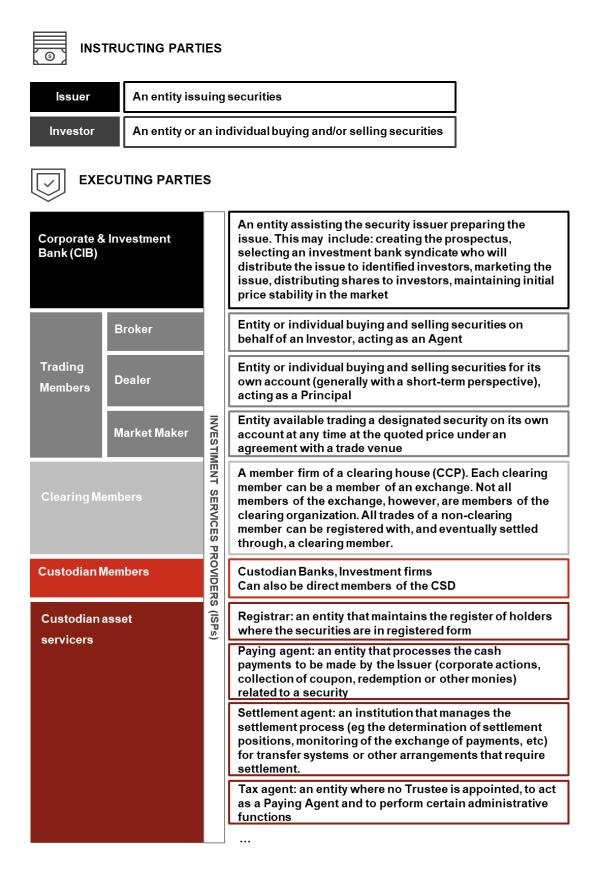
The custody or safekeeping of securities also requires a series of **asset servicing** operations throughout the security's life cycle. Asset services namely include Registrar services, event management, corporate action administration, and tax handling.

PRIMARY MARKET	Issuance	Process of offering securities in order to raise funds from investors.					
	Trading	Process of buying and selling already issued securities.					
SECONDARY MARKET	Clearing	Process by which trades are cleared, through the correct and timely transfer of funds to the seller and securities to the buyer.					
	Settlement	Process whereby securities are delivered to the buyer against payment from the seller.					
	Asset Servicing	Administration services in connection with the custody and/or safekeeping of financial instruments (e.g. registrar, the processing of corporate events or the handling of taxes).					

3. Stakeholders

Different kinds of stakeholders play very **specific roles** in the investment process for listed securities, from share issuance to trade settlement. From an operational perspective, they can be categorized in three main categories:

- Instructing parties,
- Executing parties,
- Market infrastructures.





Execution Venue	Trading Venue	Regulated Market	System that is operated or managed by a market operator and that brings together or facilitates the bringing together of multiple third-party buying and selling interests in financial instruments within the system. Must execute transactions on a non- discretionary basis
		Multilateral Trading Facility	System that can be operated by an investment firm or a market operator. Like an RM, it "brings together multiple third-party buying and selling interests in a financial instrument". Like with RMs, transactions at MTFs may not be executed at their operators' discretion. Not limited to specific types of instruments, neither RMs nor MTFs may trade on own account and against own capital – all points in which they differ from OTFs.
		Organized Trading Facility	System that is operated or managed by a market operator and that brings together or facilitates the bringing together of multiple third-party buying and selling interests in financial instruments within the system. Can execute transactions on a discretionary basis.
	- Systematic Internalizer		System operated by investment firms that on a frequent, systematic and substantial basis execute client orders on own account, outside of trading venues
Central Clearing Counterparty (CCP)		party (CCP)	An entity that interposes itself between counterparties to securities traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring settlement between counterparties
Central Security Depository (CSD)		ory (CSD)	Entity providing safekeeping and asset servicing for securities, in multiple jurisdictions (Global Custodian) or in a single jurisdiction (Local Custodian)

4. Legal & regulatory environment

Financial markets are highly regulated worldwide. To provide investment or payment services, stakeholders must **obtain the relevant authorization to operate** from appropriate regulators and comply with **compulsory binding rules**.

Many variables determine which rules to follow. They include the following dimensions:

- The geographical jurisdiction,
- The types of services provided,
- The types of Investors / clients,
- The venues where the securities are traded,
- The types of products exchanged.

a) Authorizations for services related to the securities' life cycle

Authorizations to provide services related to securities are provided by the relevant local regulators.

In the **EU**, investment services on financial instruments can be provided by investment firms and credit institutions. The authorization to provide the following investment services and activities, as well as ancillary services, is granted by the national competent authority (NCA) of each EU Member State (and the ECB if applicable): Reception and transmission of orders in relation to one or more financial instruments (RTO), Execution of orders on behalf of clients, Dealing on own account, Portfolio management, Investment advice, Underwriting of financial instruments, Placing of financial instruments, Operation of a Multilateral Trading Facility (MTF), Operation of an Organized Trading Facility (OTF), Safekeeping and administration of financial instruments for the account of clients.

For instance, in **France**, the investment service authorization is issued by the prudential regulator (the Autorité de Contrôle Prudentiel et de Résolution, or ACPR).

Other examples outside of the European Union:

- In **Switzerland**, the banks, the financial market infrastructures and certain financial institutions (notably securities firms) are licensed and regulated as such by the national regulator, the Swiss Financial Market Supervisory Authority (FINMA).
- In the United States, at the federal level, the authorization to provide banking services is given by the Office of the Comptroller of the Currency (OCC) and the Federal Deposit Insurance Corporation (FDIC), while broker-dealer firms, investment companies and investment advisers must register with the US federal agency, the Securities and Exchange Commission (SEC).
- In Singapore, any company carrying on a business in one of the following regulated activities in Singapore is required to hold a Capital Markets Services (CMS) license provided by the Monetary Authority of Singapore (MAS): dealing in securities, trading in futures contracts, leveraged foreign exchange trading, advising on corporate finance, fund management, real estate investment trust management, securities financing, providing custodial services for securities and providing credit rating services.
- In Hong Kong, any company carrying on a business in one of the regulated activities in Hong Kong or that holds itself as carrying on such business is required to be licensed by or registered with (in the case of regulated banks in Hong Kong) the SFC: dealing in securities, dealing in futures contracts, leveraged foreign exchange trading, advising on securities, advising on futures contracts, advising on corporate finance, providing automated trading services, securities margin financing, asset management, and providing credit rating services.
- b) The impact of current regulatory frameworks for financial services

In most developed countries, the financial regulatory regime applicable for financial services and financial instruments has been established throughout the years and provides legal certainty for financial activities at the global level. Therefore, to assess the possibility of tokenizing financial instruments, a description of the existing regulatory regime for the primary and secondary markets of traditional securities appears necessary.

This notably applies to the following issues:

- the legal definitions and regulatory regime for financial services and products,
- the regulation of the issuance of financial instruments,
- the regulation of anti-money laundering and other compliance issues,
- the regulation of market infrastructures.

c) Defining investment services under EU law: MiFID 2 and MiFIR

Legal clarity is key to developing a regulated offer, especially for financial instruments. In Europe, financial services, as well as financial instruments, are defined and listed in a major EU regulation, the Markets in Financial Instruments Directive II (MiFID 2). MiFID 2 and its associated Regulation (commonly referred to as MiFIR)¹, have led to the establishment and implementation of specific operational policies and procedures within investment service providers related to financial instruments, which together form the so-called MiFID Rules.

As provided in a report on Digital Asset regulation published by ESMA in 2019 (the ESMA Digital Asset Report), "where crypto-assets qualify as financial instruments, a number of crypto-asset related activities are likely to qualify as investment services/activities such as placing, dealing on own account, operating an MTF or OTF or providing investment advice. The organizational requirements, the conduct of business rules and the transparency and reporting requirements laid down in MiFID II would then apply, depending in some cases on the type of services offered and the type of financial instrument involved."

d) Defining the primary market of financial instruments: the EU prospectus regime

The EU Prospectus Regulation² harmonizes requirements at the EU level for the drafting, approval, and distribution of a prospectus to be published when securities are offered to the public or admitted to trading on a regulated market in an EU Member State. Under the EU Prospectus Regulation, the Issuer is obliged to publish a prospectus in accordance with the applicable national law in conjunction with the provisions of the EU Prospectus Regulation.

The regulation sets out the minimum information that must be provided to potential Investors before they purchase 'transferable securities'³. Consequently, a security qualifying as a transferable security offered to the public or admitted to trading on a regulated market in an EU Member State will be subject to the prospectus requirements set out in the EU Prospectus Regulation.

According to the ESMA Digital Asset Report of 2019, "the prospectus rules should apply to crypto-assets offered to the public [...] where the instruments qualify as transferable securities. It will therefore not apply to those crypto-assets that do not qualify as transferable securities, in which case disclosure requirements will depend on national law."

¹ As well as all delegated and implementing acts and with all guidance, positions, Q&A and regulatory and/or implementing technical standards issued (and updated from time to time) by the European Securities Market Authority (ESMA) and/or detailed by a national competent authority.

² Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing directive 2003/71/EC.

³ Under MiFID2 European law, 'Transferable Securities' are classes of securities which are negotiable on the capital market.

e) The EU legal framework on anti-money laundering and counter terrorist financing and on other financial crimes

Each and every kind of risk (i.e. liquidity and solvency-related risk, market risk (including any FX and interest rate risk, credit and counterparty risk), operational risk, compliance risk (AML-CTF, sanctions & embargoes, conflicts of interests, asset freezing, etc.) relating to or arising out of an investment service provider's activities should be carefully and reasonably assessed by each investment service provider prior to such activity being executed.

Compliance and risk management measures, controls and actions must be performed by each investment service provider and shall constitute the core guidance under which they operate their activities daily. Such risk management measures, controls and actions must be enhanced, on a regular basis and frequency, in accordance with internal rules, systems and controls which are established by the investment service providers notwithstanding the objectives or intentions which may exist in relation to seeking high economic return or profit on a specific activity or transaction.

In the EU, investment service providers related to financial instruments are subject to European anti-money laundering and counter terrorist financing (AML-CFT) regulatory requirements under the 5th Anti-Money Laundering Directive (Directive (EU) 2018/843). Money laundering is defined as "any act or attempted act to conceal or disguise the identity of illegally obtained proceeds so that they appear to have originated from legitimate sources" (Interpol definition). The monitoring of money laundering is affected by the fact that it proceeds through legitimate business channels (for example, bank deposits, investments, or transfers from one place (or person) to another). However, combating terrorist financing consists in monitoring for funds with a legal origin but with a potential illegal destination (i.e. the provision or raising, by any means, of funds with the intention of using them to commit a terrorist act).

In Europe, such risks have led to strict regulations and the implementation of a robust preventive framework. Investment service providers must therefore carry out extensive AML-CFT due diligence for their projects. A non-exhaustive description of specific regulatory requirements in France is given below. For investment service providers, failure to comply with AML-CFT regulatory requirements may be subject to disciplinary, administrative, or criminal sanctions.

Example: France – Summary of regulatory requirements related to AML-CFT, KYC and sanctions & embargoes procedures

AML-CFT procedural corpus

Financial institutions are required to have an AML-CFT procedural corpus. They must set up an internal organization and procedures to combat money laundering and terrorist financing, adapting the measures taken to the level of risk. Consequently, financial institutions must consider the volume and nature of their activity as well as the risks presented by the business relationships they establish. In addition, they need to establish a profile of the business relationship enabling them to exercise constant vigilance.

Know Your Customer (KYC)

Financial institutions are required to understand the nature and purpose of customer business relationships in order to develop a customer risk profile. In particular, they must identify their customers and the beneficial owner(s) of their legal entity customers and take reasonable measures to verify all identities.

Sanctions screening & transactions monitoring

Financial institutions must set up an internal organization, transaction detection mechanism and specific procedures to implement measures to freeze assets and prohibit the supply or use of funds or economic resources to sanctioned persons and ensure the implementation of enough material and human resources to accomplish this task. In particular, these institutions shall also set up mechanisms adapted to their activities and business relationship profiles in order to detect unusual or suspicious transactions.

As is the case for many jurisdictions, all the financial crimes-related regulations in the EU should apply to Digital Assets where the instruments qualify as financial instruments.

f) Defining financial market infrastructures under EU regulations

Financial market infrastructures regulations have been drafted, in the EU as in other jurisdictions, with bookentry form requirements and existing regulated institutions and market infrastructures (such as trading venues, Central Counterparties (CCPs) and Central Securities Depositaries (CSDs)) in mind. Current EU market infrastructure rules prevent the development of an effective secondary market for financial instruments based on Distributed Ledger Technology. SFD/CSDR rules require the existence of a CSD to operate the securities settlement system and the Delivery-versus-Payment (DvP) of listed securities, as well as the mandatory recording of listed securities in book-entry form in a CSD. For an institution to obtain a CSD license it must be designated as an operator of a securities settlement system as defined in the Settlement Finality Directive (SFD). These constraints are burdensome regulations that drastically limit the possibility of tokenizing listed securities under current regulations in the EU.

g) Securities settlement (CSDR and SFD regulation)

Securities settlement activities in Europe are governed principally by the Central Securities Depositories Regulation⁴ (CSDR) and the Settlement Finality Directive⁵ (SFD). The Central Securities Depositories Regulation was designed to harmonize certain aspects of the settlement cycle and settlement discipline and to provide a set of common requirements for Central Securities Depositories (CSDs) operating securities settlement systems across the EU.

The CSDR is built on five main pillars as outlined in the simplified figure below:

INFRASTRUCTURE

- By laying down a unified and harmonised framework for all European CSDs
- Defining a CSD, its role and its responsibilities
- Establishing a set of common requirements for CSDs operating securities settlement systems
- Freeing the choice of an issuer CSD for issuers
- Requiring CSDs to have a recovery plan

SETTLEMENT IMPROVEMENT

- Reduction of the settlement cycle
 Reinforcement of the obligation to settle transactions in transferable securities, money-market instruments, units in collective investment undertakings or emission allowances on the date agreed between the parties (also called: ISD for Intended Settlement Date)
- Imposition of a settlement disciplines regime: set of several measures aiming to prevent and address settlement fails and thus have a transaction be fully settled on ISD

TRANSPARENCY

- Setting obligations of reporting to national competent authorities (NCAs) and ESMA for CSDs but also for participants (internalized settlements)
 Identification of the
- the use of LEI (Legal Entity Identifier)

SETTLEMENT DISCIPLINE REGIME (as of February 1 st, 2021)

- Allocation / confirmation
- Functionalities to be provided by CSDs to participants
- Penalties
- Buy-ins
- · Reporting by CSDs to NCAs

STRENGHTENING THE INVESTOR

- Segregation of investors' assets within the books of the CSD
- Integrity of the issuance (appropriate rules and procedures)
- Dematerialization and immobilisation of securities, book-entry form for transferable securities (as of 1st January 2023 for new issuance and 1st January 2025 for all securities)

Figure 1: CSDR common rules across Europe aiming to improve settlement efficiency and transparency

The Settlement Finality Directive defines the payment system as a formal agreement entered into between at least three participants (mainly credit institutions), to which may be added a settlement organization (for final accounting of the said settlements), a central counterparty or a clearing house, comprising common rules and standardized procedures for the execution of settlement/delivery instructions between participants.

The SFD applies to payment and securities settlement systems and to any participant in this system and prescribes legal requirements designed to ensure finality in the settlement process. Two fundamental principles govern the 'finality' concept:

⁴ Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012.

⁵ Directive 2009/44/EC of 6 May 2009 amending Directive 98/26/EC on settlement finality in payment and securities settlement systems and Directive 2002/47/EC on financial collateral arrangements as regards linked systems and credit claims.

- Certainty of settlement: to confirm, at some point, whether the transaction can be considered final and irrevocable;
- Correctability: ability to reverse a transaction, either in response to a mistake or a regulatory or legal mandate. In this context, the SFD provides continuation of execution of payments initiated before an insolvency and prevents the retroactive cancellation of payments.
- h) Other key EU regulations related to financial instruments

In addition to the above-mentioned EU regulations, investment firms are subject in the EU to the following regulatory texts:

- The EU Directive 2014/57/EU of the European Parliament and of the Council dated 16 April 2014 on criminal sanctions for market abuse (the Market Abuse Directive, or MAD) and Regulation (EU) No 596/2014 of the European Parliament and of the Council dated 16 April 2014 on market abuse (the Market Abuse Regulation, or MAR). According to ESMA, "where crypto-assets qualify as financial instruments, and provided they are traded or admitted to trading on a trading venue (or, where they are not traded on a trading venue, their price or value depends or has an effect on the price or value of a financial instrument traded on a trading venue), MAR would become applicable"; and
- EU Regulation No 648/2012 of the European Parliament and of the Council dated 4 July 2012 on OTC derivatives, central counterparties and trade repositories (commonly referred to as EMIR).

5. Financial markets at a glance: securities' life cycle under EU regulations

The following figure provides a simplified overview of the main points described in the previous subsections applied to securities in Europe. It is voluntarily simplified and not exhaustive. It aims at providing the reader with a broad description of the many operational and legal aspects that are covered by various financial market participants throughout a security's life cycle.

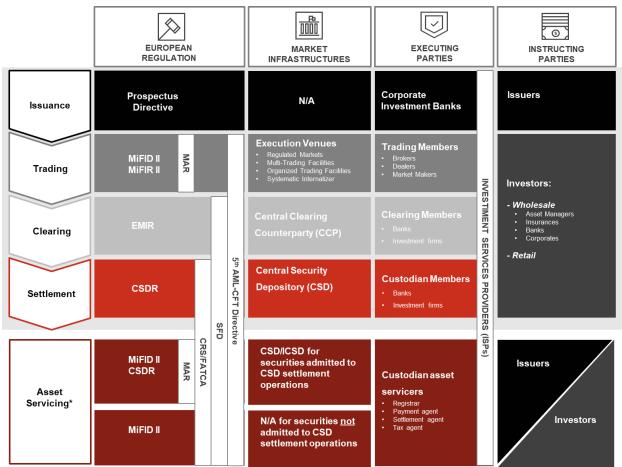


Figure 1: Overview of securities' life cycle under EU regulations.

6. Record-keeping and security transfers

Financial securities can either be:

- Admitted to the operations of a central security depository (CSD),
- Not admitted to the operations of a CSD.

In the first case, the CSD plays a notary and a settlement role. The CSD keeps the shareholders' registry. The security is said to take either a **bearer** form, or an **administered registered** form. The CSD is instrumental in **dematerializing** financial securities safekeeping. Security **transfers** are made through **Real-Time Gross Settlement (RTGS)** infrastructures. In the Eurosystem, for instance, they are transferred via the Target 2 Securities (T2S) RTGS.

In the second case, the **Issuers** themselves, or through the assistance of an appointed **Registrar**, keep the shareholders' registry. The security takes the form of a **pure registered** security or an **administered registered form**. Security transfers are made through **transfer orders**, which may take any form (paper, electronic).

	REGISTER OF SHAREHOLDERS SAFEKEEPER	SECURITY FORM	TRANSFER OF SECURITIES
Financial securities admitted to the operations of a central depository	Central Security Depository (CSD) Notary / settlement roles	Bearer Bearer security identification services perform by CSD	Scriptural via T2S With fungibility of the securities
		Administered registered	Scriptural via T2S Via sheet of nominative references (« Bordereau de Référence Nominative »)
Registered financial securities not admitted to the operations of a central depository	lssuer	Administered registered	Transfer order (« Ordre De Mouvement »)
	Registrar Appointed by issuer	Or Pure registered	

Figure 2: Forms of securities and security transfer terms under French law, as an illustration.

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This White Paper has been written by a working group composed of: (In alphabetical order)

Jonathan Benichou, Bond structurer at Societe Generale Stéphane Blemus, Legal counsel at Kalexius law firm David Durouchoux, COO IT services at Societe Generale Securities Services Stéphane Duzan, Global IT advisor at Societe Generale Corporate and Investment Banking Romain Griffiths, Blockchain architect Julien Muller, Senior trading tool developer at Societe Generale Global Markets Sylvain Prigent, Trading risk officer at Societe Generale Global Markets Jean-Marc Stenger, Chief Investment Officer at Lyxor Asset Management

The information and opinions contained herein are the sole responsibility of the authors.

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CAST Framework | Understanding Capital Markets Key Concepts

2 | APPENDIX

APPENDIX: DEFINITIONS

Addendum refers to an additional documentation completing the CAST Framework White Paper published from time to time on the CAST website.

Agency Agreement refers to the multilateral agreement between the Issuer and its Agents (i.e. the Registrar, the Settlement Agent, the Fiscal Agent) which provides a contractual framework for the various services realized by the Issuer's Agents related to the issuance of Digital Assets.

Agent refers to a service provider which is mandated by an Issuer of Digital Assets under an Agency Agreement.

Business Continuity Plan refers to the continuity plan which, under the CAST Framework, must be put in place and maintained to prevent any potential technological disruption and to protect the data registered on a DLT infrastructure (e.g. Ethereum, Tezos, etc.), for regulatory and compliance reasons. In order to avoid a "single point of failure" risk and to enhance investor protection, the CAST Framework provides that the Registrar, acting on behalf of the Issuer, has the mandate to keep an external off-chain register of the Security Token holders and to be able to switch from one technical infrastructure to another if needed to ensure the business continuity of operations. For instance, it can switch from one DLT to another or from a DLT to current infrastructures, should that be necessary. From the instructing party's perspective (Investor, Issuer), the operational friction related to such a technological switch should be minimized by the recording of all information related to the transaction off-chain by the Registrar in an external technological infrastructure, the Settlement Transaction Repository (STR), which would not be affected by any DLT-related incident, as it is set up separate and independently from any DLT.

Calculation Agent refers to the service provider which determines the amount of payment owed by the Issuer to the Security Token holders.

CAST Framework (Compliant Architecture for Security Tokens Framework) means the operating model as well as technological developments in the form of computer programs, the Oracles, developed by Societe Generale - FORGE for the purpose of providing a life cycle target operating model for Digital Assets, notably financial instruments, issued on DLTs. For the sake of clarity, compliance with the CAST Framework does not certify any compliance with the applicable legal and/or regulatory requirements.

Central Bank refers to the public institution that manages the currency of a country or a group of countries and controls the money supply of such currency.

Central Bank Digital Currency (CBDC) refers to a Digital Asset issued by a Central Bank.

Central Counterparty (CCP) means a legal person that interposes itself between the counterparties to contracts traded on one or more financial markets, becoming the buyer for every seller and the seller for every buyer.

Central Securities Depository (CSD) means a legal person that operates a securities settlement system (settlement service), and which provides the initial recording of securities in a book-entry system (notary service) and/or provides and maintains securities accounts at the top tier level (central maintenance service).

Certification Body refers to a company responsible for granting certification and confirming to candidate companies their status as Certified Companies.

Certified Company means a company having completed the application process related to the obtention and use of CAST Certification and which has received confirmation of its status as a Certified Company from the Certification Body.

Crypto-Asset Service Provider (CASP) means any person whose occupation or business is the provision of one or more non-securities Digital Asset services to third parties on a professional basis.

Custody refers to the service of safekeeping and administration of financial instruments for the account of clients, including custodian and related services such as cash/collateral management.

Dealing on own account refers to the trading of financial instruments against the investment firm's proprietary capital.

Delivery-versus-Payment (DvP) is a securities settlement mechanism which links a transfer of securities with a transfer of cash in such a way that the delivery of securities occurs if, and only if, the corresponding transfer of cash occurs and vice versa.

Digital Assets are any digital representation of value or rights which may be registered, issued, transferred and/or stored electronically using Distributed Ledger Technology. Security Tokens are a sub-category of Digital Assets.

Distributed Ledger Technology (DLT) refers to the protocols and supporting infrastructure that allow computers in different locations to propose and validate transactions and update records in a synchronized manner across a network.

DLT MTF refers to a Multilateral Trading Facility (MTF) operated by an investment firm or a market operator that admits listed Security Tokens to trading.

Execution of orders on behalf of clients refers to the execution of buy or sell orders on financial instruments on behalf of a client.

Fiscal Agent refers to the collection and processing of tax duties applicable to Security Token holders prior to the processing of any corporate action.

Governance Body means the company which administrates and manages the community of Certified Companies as well as the CAST Framework and appoints Certification Bodies as the case may be.

Investor refers to an investor which holds one or several Digital Asset(s).

Issuance Facility refers to the facility that will provide Investors with the technological services allowing them to participate in and subscribe to the Security Token issuance.

Issuance Facility Operator refers to the operator of the Issuance Facility.

Issuer refers to the issuer of Digital Assets on a DLT.

Lead Manager refers to the service provider mandated by the Digital Assets' Issuer to facilitate the purchase and sale of the Digital Assets by Investors during the issuance of the Digital Assets.

License refers to the license under which the Oracles are made available and distributed. As of the date of publication of the White Paper, the License is identified as the open-source Apache license Version 2.0.

Operation of a Multilateral Trading Facility (MTF) means bringing together multiple third-party buying and selling interests in financial instruments – in the system and in accordance with non-discretionary rules – in a way that results in a contract. An MTF is the EU equivalent of an ATS (Alternative Trading System) under US law.

Operation of an Organized Trading Facility (OTF) means operating a multilateral system which is not a regulated market or an MTF and in which multiple third-party buying and selling interests in bonds, structured finance products, emission allowances or derivatives are able to interact in the system in a way that results in a contract. Unlike an MTF, equities cannot be listed on an OTF, but an OTF is managed by discretionary rules, contrary to an MTF.

Oracles means the computer code based on the CAST Framework designed for processing data through a distributed ledger, and which are subject to the open-source Apache License version 2.0. Oracles are autonomous and executable technological components acting as distributed ledger adapters (i.e. to capture, collect, register, process and/or transform data stored within a distributed ledger for on-chain specific events, and to enable the access to such data to third party applications via APIs or the exchange of data files using a communication protocol) and as distributed ledger-based transaction generators (i.e. to generate and broadcast on-chain specific transactions).

OTC Facility refers to a facility operated by a regulated entity providing the service of reception and transmission of orders (RTO) and/or execution of orders on behalf of Investors related to over-the-counter transfers of Security Tokens on the secondary market.

Placing of financial instruments relates to the search for subscribers or purchasers on behalf of an Issuer or a seller of financial instruments. Placing may or may not be completed on a firm commitment basis.

Portfolio management refers to the discretionary management of portfolios of financial instruments in accordance with a client mandate.

Reception and transmission of orders in relation to one or more financial instruments (RTO) refers to the receipt and transmission from one Investor to another, on behalf of a client, of orders relating to financial instruments.

Registrar refers to the Agent of the Digital Assets' Issuer mandated to provide the record-keeping of the Digital Assets on behalf of the Issuer (i.e. development of the Smart Contracts creating the Digital Assets and the recording of the Digital Assets on the relevant DLT and of the settlement transactions) as well as to provide registry management services to the Issuer (e.g. to put in place a business continuity plan which would consist notably in keeping at least one full node of the Digital Asset's DLT in order to be able to reconstitute the registry of the Digital Asset holders off-chain). The Registrar can also carry out the role and functions of a Settlement Agent.

Securities Settlement System means a formal arrangement between a plurality of participants whose activity consists of the execution of transfer orders.

Security Token means a security which is issued, recorded, transferred, and stored using a DLT.

Settlement refers to the completion of a securities transaction where it is concluded with the aim of discharging the obligations of the parties to that transaction through the transfer of cash or securities, or both.

Settlement Agent refers to the Agent of the Digital Assets' Issuer mandated to handle cash settlement instructions management in respect of the issuance of the Digital Assets, their sale on the secondary market and/or any payment of interest or principal related to the Digital Assets. The Settlement Agent is a role that can be carried out by the Registrar.

Settlement Transaction Repository (STR) is an off-chain registry managed by the Registrar that stores key information related to Security Token transactions allowing the reconstitution of Security Token holders' positions and balances for a specific date, the identity of Security Token holders or their agents for any specific date and the history of all Security Token holders or their agents since the issuance.

Smart Contracts means a computer program deployed on a distributed ledger in which some or all of the contractual obligations are recorded, replicated or performed automatically.

Stablecoins are a type of Digital Asset whose main purpose is to be used as a means of exchange, and which purport to maintain a stable value by referring to the value of one or several fiat currencies that is/are legal tender, one or several commodities or one or several Digital Assets, or a combination thereof.

Structuring Manager refers to the service provider mandated by the Digital Asset Issuer to determine the financial terms of the Digital Asset issue.

Underwriting of financial instruments means the subscription or acquisition of financial instruments directly from the Issuer or seller with a view to reselling them.

Utility Token means a type of Digital Asset which is intended to provide digital access to a good or service available on DLT, and is only accepted by the Issuer of that Digital Asset.