



Efficient Documentation and Life-Cycle Management of Structured Retail Products

A whitepaper of LPA and Cashlink

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1 Management Summary

Structured retail products (SRPs) have established themselves as a pivotal asset class within the world of financial investments. Yet, as the financial landscape evolves, so too must the mechanisms for issuing and trading these innovative instruments. In this white paper, LPA in cooperation with Cashlink explain the current processes around issuance and exchange of SRP and how to address key challenges in this process.

We found that the key challenges related to the complexity of document management and that lifecycle event management can be mainly overcome by implementing an automation software such as LPA Capmatix. On the other hand, we found that SRP issued on Distributed Ledger Technology (DLT) using tokenization platforms such as Cashlink offers improvements by streamlining SRP operations. This was due to a reduced reliance on intermediaries, enabling instantaneous and on-demand issuance and providing 24/7 network availability. Potential improvements in the future could be in the form of shortened Delivery-versus-Payment (DvP) settlement times involving any regulated form of tokenized money, the possibility of retail trading without brokers and the reduced reliance on issuer agents for asset servicing by integrating the logic in DLT smart contracts.

The future outlook for Cashlink would be to venture into asset servicing on the DLT and full cash integration into the DLT with adherence to regulatory frameworks. For LPA Capmatix, one opportunity would be to connect Capmatix to a Tokenizer's API such as Cashlink's API to enable SRP issuance in DLT.

We concluded that the automation capabilities of Capmatix and the tokenization platform provided by Cashlink present a synergy for a more efficient SRP processing in the DLT world.

2 Introduction

In the ever-evolving landscape of financial markets, SRPs have become a cornerstone of investment and wealth management. SRP are pre-packaged securities that derive their value from another instrument or index, e.g., equities, interest rates and commodities, which are sold to retail investors. These innovative financial instruments, characterised by their magnitude of possible risk-return profiles, have gained immense popularity among retail investors seeking diversification on a portfolio basis, risk mitigation or return opportunities.

As a result, a broad set of product variations exist on the market. In this regard, two of the largest obstacles that issuers of these products face are as follows, while both vary from one product to another:

- (1) The complexity of continuous regulatory-related document management to provide transparency to investors, and
- (2) The complexity of life cycle event management

Both obstacles above can be mainly overcome by implementing an automation software such as Capmatix.

In addition to these obstacles, primary and secondary market related processes of these products must learn to cope with inefficiencies, e.g., through the involvement of several intermediaries and multiple interfaces. Through the evolution of DLT and increasing regulatory certainty about digitization of products, there is a vast potential to curb complexity for distinct use cases in the context of SRP.

In this white paper LPA in cooperation with Cashlink decided to look deeper into the topic and provide an overview of the current process around SRP including key inefficiencies and improvement opportunities that could be successfully tackled by appropriate use of modern technology such as DLT. By looking at a dedicated use case, the whitepaper explores the opportunities and solutions presented by DLT to enhance the issuance and secondary market processes of SRP, ushering in a new era of accessibility and simplicity for market participants.

As a Europe-wide leading infrastructure provider for asset tokenization, Cashlink leverages DLT technology to enable the fully digital issuance of securities, including SRPs, helping financial institutions to benefit from the new possibilities of tokenization while saving costs and resources. In November 2021, the company received preliminary approval from BaFin to operate a crypto-securities registry that covers the entire value chain for the tokenization of securities. This allows financial institutions to benefit from the new possibilities of tokenization while saving costs and resources.

LPA, a distinguished software and consulting company, has accelerated the transformation of financial markets through its best-in-class domain expertise. LPA's Capmatix Structured Products solution supports the whole issuance and secondary market processes. It automatically updates the product information on data hubs such as RegX, WM, and SIX. Registrations of ISINs can be processed on-the-fly through the connection to various stock exchanges. The registered ISINs can then automatically reported to custodians such as Clearstream and Euroclear etc.

The whitepaper is structured as follows. The following Chapter 3 provides an in-depth examination of the end-to-end process involved in the issuance and maintenance of SRP. SRP professionals might skip this chapter and proceed to Chapter 4 directly. In Chapter 4, we present a real-world case study illustrating how a bank can issue SRP using DLT. In Chapter 5, we conclude by outlining the benefits of issuing SRP on DLT, and finally, in Chapter 6, we summarize the whitepaper and offer insights into the future perspective.

3 End-to-end process of structured retail products

To develop innovative solutions in the SRP space, a thorough understanding of the end-to-end business processes, including their specifics and potential inefficiencies is a prerequisite. Common processes around issuance of SRP can be split into phases, where each phase is characterised by its specific challenges and associated costs.

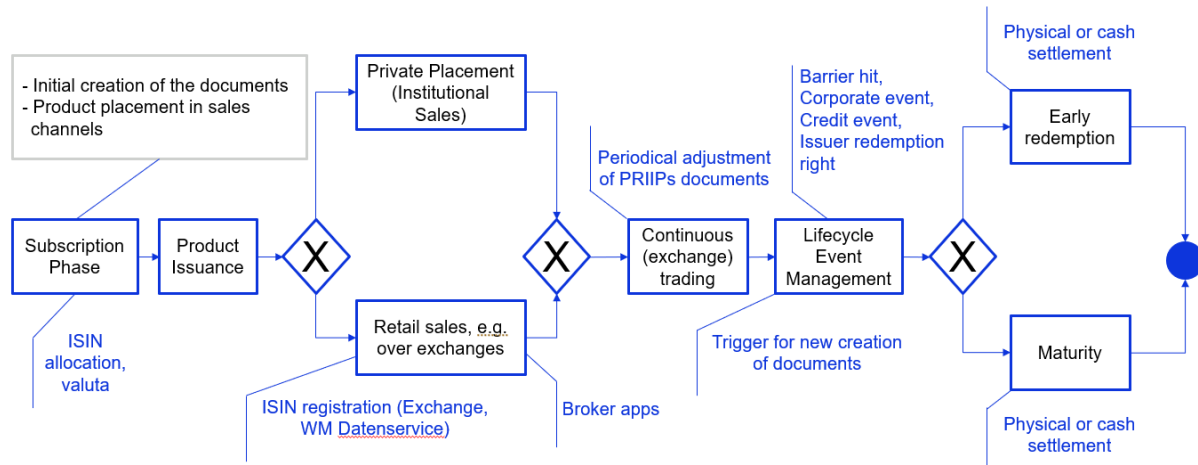


Exhibit 1: End to End process of structured retail product

3.1 SRP structuring

In the initial phase of SRP issuance, the structuring process plays a pivotal role in defining the characteristics and features of the financial instrument. The issuer, mostly a financial institution, undertakes the responsibility of designing a product that aligns with the targeted market and investor preferences. This involves a meticulous analysis of market conditions, risk tolerance, and investment objectives. The SRP can be tailored to meet specific investor needs, offering customization in terms of underlying assets, maturity dates, and risk-return profiles. Additionally, issuers may choose to structure products for high volumes, catering to a broad investor base in a dedicated subscription phase, or opt for tailor-made solutions for individual or institutional clients seeking specialised investment strategies.

3.2 Subscription phase

In case the SRP is publicly offered by the issuer (not tailor-made to cater specific investor' request), the investors enter the subscription phase where they express their interest to the issuer in purchasing the SRP. Before it starts, the issuer must furnish essential documentation such as the Key Information Document (KID), Final Terms, Prospectus, marketing materials, and underlying information in order to align their product offering with both regulatory and investor prerequisites. Then, the issuer disseminates the product and related documents via their chosen sales channels. This can comprise own and third-party product platforms, inhouse sales channels as well as third party banks and brokers. All sales channels require that investors are onboarded to purchase the products, which is nowadays a highly automated process. Afterwards, investors can signify their interest within the stipulated time frame by submitting their demands for investment, often adhering to minimum investment requirements.

The issuers who are active on the SRP market are frequently launching a variety of SRPs and need to manage the complexity of document creation and distribution for each structured product whose features differ from each other. In cases of excess demand, an allotment process may be necessary. Upon phase closure, no further subscriptions are accepted, and successful investors receive purchase confirmations. Efficiency in the

subscription phase holds pivotal significance, necessitating a swift response to the dynamic market environment.

3.3 Registrations

This step marks the application for ISIN and (in German markets) the WKN as well as the registration of the product with a Central Securities Depository (CSD). This stage ensures that the issued certificates are officially recorded and tracked within the CSD infrastructure. It has to be noted that there is also the ability to pre-apply for WKNs especially in the case of a tailor-made certificate in order to facilitate fast or same day issuance.

Furthermore, the information regarding the potential trading of the product on a regulated market must be reflected in the final terms. It is important to note here that the issuer has the discretion to decide whether to register securities on a regulated market or opt for a non-registered status. Despite the electronic efficiency of CSD services and the advantages they offer, these services come at a cost, a consideration that adds a layer of complexity to the overall cost structure of the SRP issuance.

3.4 Issuance phase

The issuance phase marks the official introduction of the SRP to the market, enabling investors to acquire the product based on their financial objectives and risk tolerance. The issuance process often involves collaboration with a CSD for the registration of certificates, a step essential for tracking and trading. The issuer has to make sure (either via own processes or via an agent) that the ownership of the certificates is transferred to the investors according to their subscription and allotment. In contrast, the investors need to make sure that the cash side is fulfilled and delivered to the issuer.

Sometimes, demand for special products exceeds the actual issued volume. In such cases, issuer might have the interest to issue a second tranche to meet the market interest. Therefore, it is common practice to consider increases in issuance already in the final terms in order to avoid continuous updates to this important legal document. Various CSDs support this process in an efficient manner.

3.5 (Exchange) trading

After issuance, the SRP can be privately placed or sold to retail investors, both via exchanges and retail channels. For exchange trading (“trading venues”), essential information such as ISIN allocation, CUSIP, MIC code, and other securities-related data must be registered with service providers like WM Datenservice. As mentioned earlier the possibility to trade a security on a regulated market must be stated in the final terms.

The KID document's maintenance throughout (exchange) trading remains paramount. Investors require precise and timely information regarding the performance, associated risks, and other critical details of the SRP in order to adhere to regulatory standards.

For secondary market trading on trading venues, liquidity is key. Sometimes there is only little demand for certain products in the secondary market, which is the reason why issuer sometimes do not opt for secondary market trading on regulated markets, MTFs or OTFs.

They rather act themselves as a market maker and liquidity provider to trade certificates bilaterally.

3.6 Lifecycle Event Management

This phase, driven by events such as barrier hits, corporate actions, credit events, or issuer redemption rights, demands updates to product-related documents to reflect new terms, payouts, or circumstances. Effective document management is essential to ensure regulatory compliance and product integrity. Two notable subphases within this phase are early redemption and maturity. Early redemption arises under specific conditions and involves the product's early termination, while maturity signifies the product's end at its maturity date.

The handling of lifecycle events is the most complex and effort-driven processes for issuers. It is of utmost importance to handle all events in a proper way which most of the time is still a manual process that involves various people in the middle and back-office departments of issuers.

4 Case Study: Bank issues structured retail products in DLT

In this chapter, we present a real-world case study illustrating how a bank can issue an SRP on DLT using Cashlink tokenization platform. We start with a brief explanation of the eWpG regulatory framework in Germany that serves as the legal basis for the issuance on DLT.

4.1 Regulatory framework in Germany (eWpG)

The German Electronic Securities Act, German Gesetz über elektronische Wertpapiere (eWpG), creates the legal basis for the introduction of electronic securities in Germany. An essential building block is the dematerialisation of the physical certificate and the associated classification under civil law. The law not only contributes to the digitalisation of the "classic" securitisation process, including a Central Securities Depository (CSD), but also enables a new category of electronic securities in the form of "crypto securities".

Crypto securities under eWpG are issued as tokens on DLT and are largely independent from the classical capital market infrastructure. The individual or collective entry must be made in a crypto securities register. The register can be operated by a company approved by BaFin (German Bundesanstalt für Finanzdienstleistungsaufsicht) and can be freely selected by the issuer. Crypto securities are held in a digital custody account, a so-called wallet, which can be provided in single or collective custody by custodian depot banks, crypto custodians or in self-custody in the form of individual or collective registration.

By issuing structured products as crypto securities under eWpG, issuers can realise benefits of the underlying DLT, such as transparency, security, and decentralisation. In comparison to the classic capital market structure, it allows a securitization process with fewer intermediaries to enable a more peer-to-peer connection between issuers and investors and among investors. This provides the opportunity to reduce costs and time associated with the processing of structured products.

4.2 Case study setup

The case study illustrates the bank issuance of an autocallable SRP with knockout barrier and coupon trigger (or "SRP" for simplicity) to the retail segment via a market maker and broker for the primary and secondary market activities. The flow diagram below illustrates key events in the SRP lifecycle process on DLT and is described in the following sections.

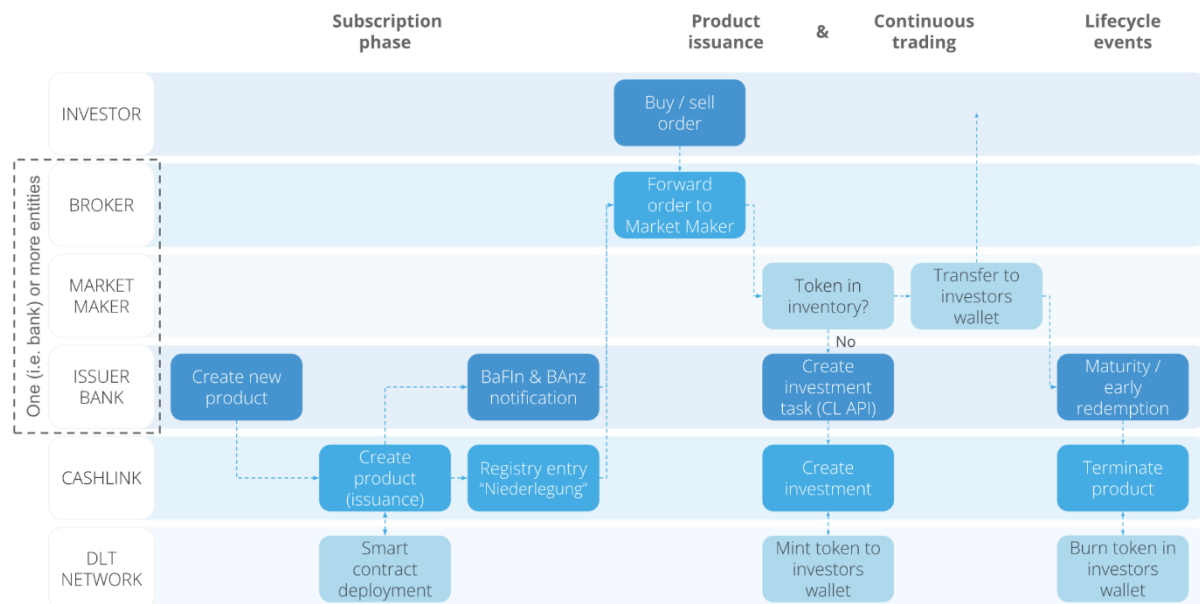


Exhibit 2: Technical DLT lifecycle flow diagram with Cashlink solution

A foundation to the DLT setup in the following case study is a contractual nexus between Cashlink and the bank as the SRP issuer. The contractual relationship with Cashlink entails a software-as-a-service agreement for the DLT SRP-tokenization infrastructure and a licensing agreement for the crypto securities register. The fiat (€) payment-leg is currently conducted by the bank as the payment agent, as the institutional application of stablecoins is still limited due to counterparty and regulatory risks.

Besides the issuing entity, the setup directed towards retail investors in both primary and secondary markets may also involve a market maker and/or a broker as the primary points of contact and the facilitating entities. However, the issuer, market maker and broker roles may also be conducted by distinct parties or a singular entity, such as the SRP issuing bank. The case study delineates the process with distinct parties, illustrating the adaptability of the setup.

The custody arrangement is subject to a separate agreement. Regarding the custody solution, Cashlink offers more flexibility than the traditional setup. As technology and crypto registrar provider, another approach known as "single entry" is enabled. This means that each retail investor's account is individually represented in the register, bypassing the need for multiple layers of intermediaries. Importantly, Cashlink enables the choice of connecting investor wallets directly, opting for the single-entry method, or utilising a traditional depot bank setup with collective entry. For the novelty of the use case, the case study illustrates a licensed crypto custodian setup with single registry entry.

4.3 Subscription phase

The subscription phase entails the first DLT relevant step. The SRP issuing bank initiates the creation of a new product token for a SRP via the Cashlink interface, which succeeds the actual SRP product structuring and document creation. Automation software such as Capmatix can be used to simplify the creation of relevant documents and to send them to Cashlink interface. To create a new SRP product token, the issuer provides Cashlink with a pre-determined “final terms document” (Niederlegung) for the entry in the registry. After its product is registered successfully in Cashlink, the issuer is required to send a notification to BaFin and federal gazette.

In addition, an SRP specific smart contract is deployed on the selected DLT-Network, which also provides an immutable connection to the final SRP terms document in form of a hash-value. The Cashlink standard smart contract solution provides critical functions to increase automation during the SRP lifecycle. This includes the enforcement of legally required investor compliance rules (investor whitelisting) or setting an investment freezing period to restrict trade. On issuer request, additional customised features can be embedded, such as specific payment schedule and details.

4.4 Issuance and continuous trading phase

The technical DLT-workflows with Cashlink for the product issuance and continuous trading phases are similar, as illustrated in Exhibit 2. Based on the SRP specific smart contract functions set by the issuing bank, an SRP token can (technically) only be distributed to legally eligible investors. In an integrated DLT-setup with the broker entity (investor onboarding) and a licensed crypto custodian (single registry entry), Cashlink, as the registrar, is automatically provided with required investor data. This includes KYC information and a custody wallet address, to enable the issuance.

The primary issuance of SRP tokens can be directly conducted towards the investor's wallet address or via the market makers wallet for further investor distribution. After the investor has placed a buy order with the broker entity and the fiat (€) investment has been received by the payment agent, the market maker initiates the respective distribution of SRP tokens to the investor's wallet. This provides a distinct advantage over the traditional setup with a central security depository, as SRPs can be issued on demand (see chapter 5).

During the continuous trading phase, the market maker only initiates the issuance (minting) of new SRP tokens if there are none left in his inventory (wallet). Therefore, the inventory can also increase through sell orders (buy-back) of investors.

4.5 Lifecycle Event Management

The Lifecycle Event Management phase for a SRP with the Cashlink solution on DLT entails one technical event for early redemption and maturity, which is the termination of the product and burning of the token(s) in the investor's wallet. The termination is triggered through the Cashlink interface. Other lifecycle events that affect the SRP's underlyings, such as coupon payments, can be handled by automation software such as Capmatix. In addition, Capmatix can distribute the event that triggers early product termination to Cashlink interface, for example in case of a knockout barrier hit.

5 Advantages of issuance of structured retail products in DLT

Though reduced reliance on intermediaries, issuers who issue SRP in DLT benefit from a more streamlined operation that provides the opportunity to reduce costs and time associated with the processing of SRP.

Another benefit of SRP issuance in DLT stems from the optimised cost model offered by provider such as Cashlink to charge issuers based on actual issued and bought SRPs. This on-demand issuance model offers flexibility compared to traditional CSD setups where issuers might over-issue SRPs in CSD (hence higher costs) to meet expected market demands as quickly as possible whilst at the same time, they face the risks that the actual demand is later proven to be lower than expected. However, a separate study is needed to quantify this potential benefit, especially with the fact that CSD also provides markup features that allow then dynamic adjustment of an issuance amount or size.

Beyond cost considerations, DLT brings about real-time market adjustments through instantaneous SRP issuance, allowing issuers to promptly respond to market shifts. Furthermore, the 24/7 availability provided by DLT networks, operating seamlessly every day of the year, transcends traditional working hours, offering continuous trading against market makers.

Potential benefits in the future could be a shortened timeframe for delivery-versus-payment settlement between SRP and any forms of regulated stable coins, reduced cost due to the possibility of retail investors' direct trading without brokers, and reduced reliance on issuer agents' service due to integration of asset servicing or lifecycle management logic in a smart contract.

6 Conclusion and future outlook

In this white paper we explored the intricacies of SRP issuance, shedding light on the collaborative efforts of LPA and Cashlink to streamline and innovate in this evolving landscape. The automation capabilities of Capmatix and the DLT infrastructure provided by Cashlink present a formidable synergy, offering efficiency, transparency, and cost-effectiveness in the issuance process and SRP lifecycle.

Looking ahead, the regulatory outlook plays a pivotal role in shaping the trajectory of structured product issuance and trading. The impending re-evaluation and potential replacement of the regulatory framework post the DLT Pilot regime in 2026 mark a significant milestone. Under the current pilot regime, limitations exist, restricting the trading of just equities, bonds, and funds with limited market capitalization in the DLT-MTF (Multilateral Trading Facility) secondary market. A DLT-MTF is a multilateral trading facility (MTF) that only admits DLT financial instruments to trading. It is part of the DLT market infrastructures introduced in a recent DLT Pilot Regime. It allows the market to experiment with secondary market trading of digital securities as opposed to over the counter (OTC) trading that is currently in place. It permits direct trading access for retail investors on a regulated secondary market without any broker involvement which can potentially reduce trading costs.

Cashlink is in close collaboration with pioneer exchanges developing DLT-MTF secondary market solutions. Current use cases focus on the German Electronic Security Act (eWpG) as no limits are imposed, allowing for OTC trading with market makers. These nuances highlight the evolving regulatory landscape, influencing the operational scope and market participation of key stakeholders.

Looking towards the future, both challenges and opportunities emerge. Cashlink's future plans involve venturing into asset servicing on the blockchain and integrating stablecoins to bring cash onto the DLT. The long-term vision entails full cash integration into the blockchain, emphasising a commitment to continuous innovation. Europe's Markets in Crypto-Asset (MiCA) regulatory framework is globally the first comprehensive foundation to include stablecoins, providing a milestone for institutional adoption.

While considering alternative solutions like trigger mechanisms, the emphasis remains on a hybrid approach. Cashlink eagerly anticipates stablecoin regulations, aligning with the broader industry trends. Collaboration with multiple banks and the vision for escrow services on the blockchain, with tokens released on-chain, underscores the commitment to a versatile and collaborative financial ecosystem.

The development of the issuance of digital assets in DLT also provides an opportunity for LPA's Capmatix to further engage in this field. One opportunity would be to retain the existing automation of the document creation and asset servicing capability in Capmatix, and to then connect Capmatix to Tokenizer's API such as Cashlink's API to enable SRP issuance in DLT. Here, issuers benefit not only from the simplified processing of SRP in Capmatix, as they already have now, but also from the opportunity to opt for issuance on DLT.

In essence, as the SRP landscape evolves, the collaboration between technology providers and regulatory bodies becomes paramount. The integration of advanced technologies, adherence to regulatory frameworks, and the pursuit of innovative solutions collectively shape the future of SRP issuance. As we navigate these dynamic waters, the commitment to efficiency, transparency, and adaptability will be the cornerstone of success in this ever-evolving financial landscape.

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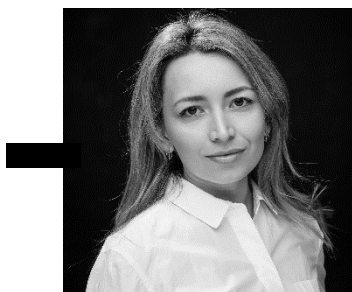
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Founded in 1999 by Stefan Lucht & Roland Probst as a way to offer solutions as the finance industry evolved, LPA was built on the needs of its clients. And as those needs have grown, so has LPA, becoming one of the world's leading creators of award-winning software and consulting for the capital markets. Today the company has over 400 employees in 12 cities worldwide, delivering cutting-edge consulting through its specialist teams and technology through Capmatix, a software framework to automate workflows and documentation for OTC derivatives, structured products, complex contracts and asset management. Motive Partners, a leading specialist financial technology investment firm, has been partnered with and invested in LPA since November 2018.



The financial technology company Cashlink offers a Europe-wide leading infrastructure for the tokenization of assets. Using blockchain technology, Cashlink enables the fully digital issuance of securities such as bonds, certificates or participation rights. In November 2021, the company received preliminary approval from BaFin to operate a crypto-securities registry that covers the entire value chain for the tokenization of securities. This allows financial institutions and FinTechs to benefit from the new possibilities of tokenization while saving costs and resources.