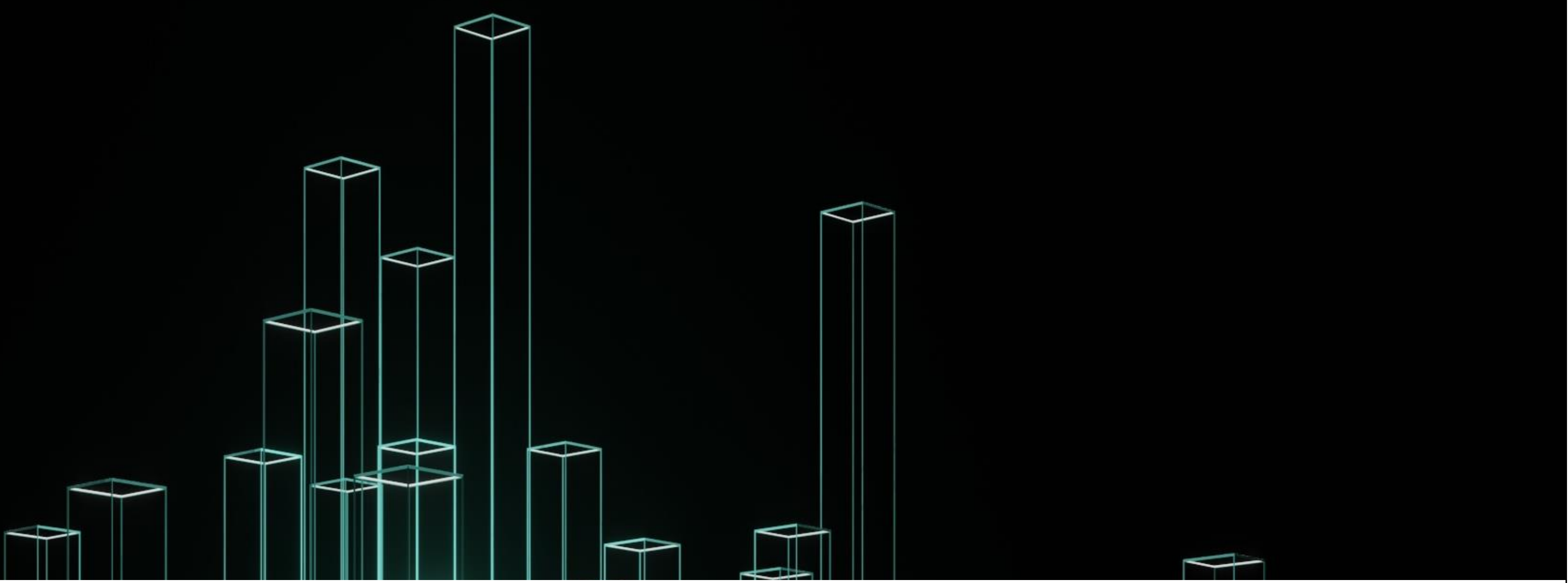
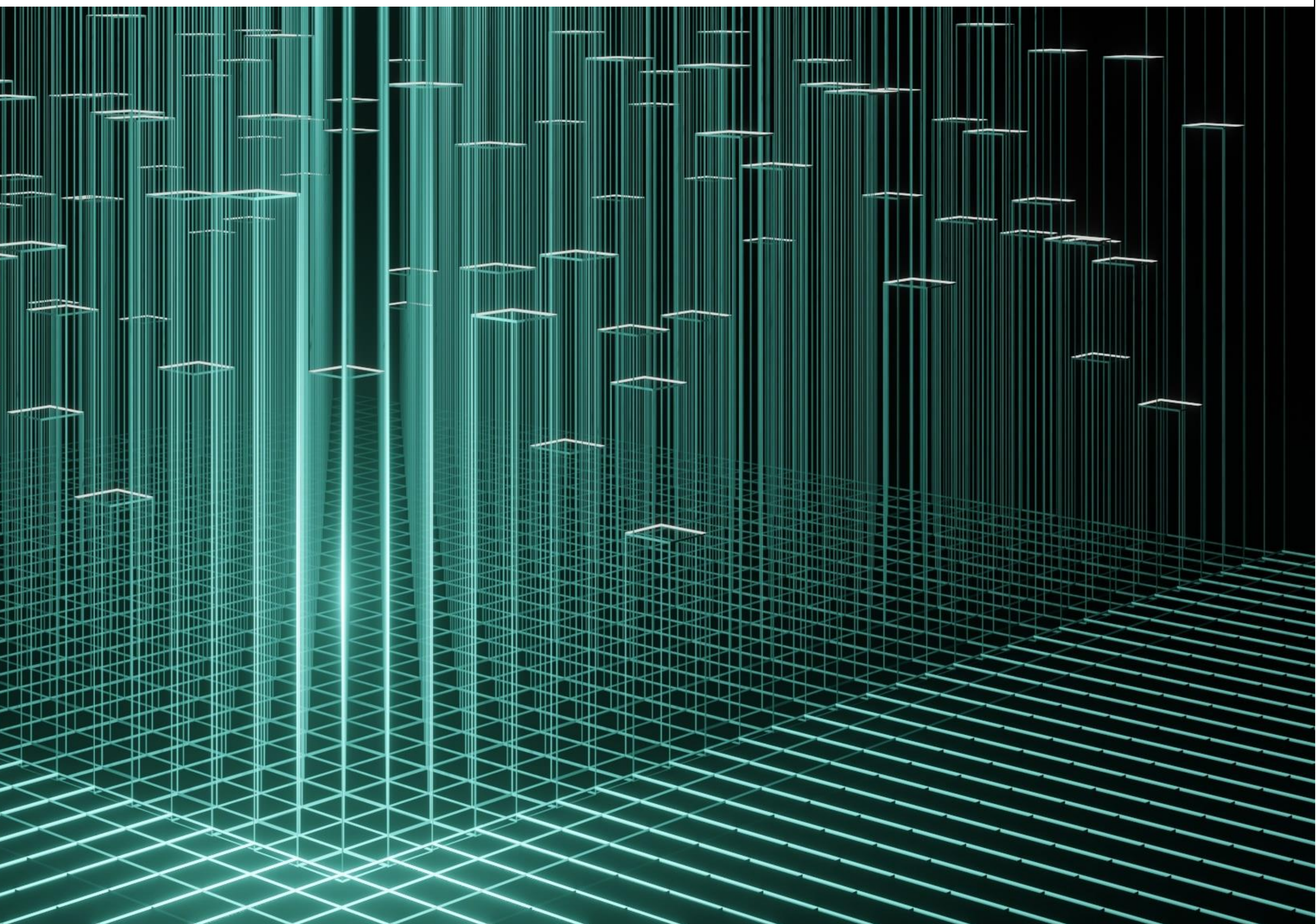


International Securities Services Association

Private Markets – Call to Action

October 2022



ABOUT ISSA

ISSA is a Swiss-domiciled association that supports the securities services industry. ISSA's members include CSDs, Custodians, technology companies and other firms who are actively involved in all aspects of the securities services value chain.

ISSA - Shaping the future of Securities Services.

DISCLAIMER

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Foreword

The ISSA Digitization Working Group (DWG) stemmed from the Future of Securities Services Paper that ISSA and Oliver Wyman wrote in late 2020. In that paper it was recognized that an area of focus should be "Private Markets and digital assets: Development of a shared Private Markets/Alternative and Digital Asset infrastructure and common industry standards with focus on both market coverage as well as cost efficiency. The aim should be to mutualize and lower required investment cost specifically for smaller players. Given the challenges of developing a shared infrastructure, the industry could, as an alternative, pursue the development of joint standards that ensure the infrastructure developed by different players would be interoperable and hence result in lower operating costs and higher efficiency for the industry overall." The DWG is delighted to present this paper as a call for comment and collaboration with all market participants to join the next phase.

This paper sets out the trends affecting both on the supply and demand side of Private Markets and a number of the problems which participants encounter in the market. It then explores four case studies of different markets in different continents and the opportunities for improvement that can be observed through these market experiences. These markets are:

- Private Equity markets in the United States
- Private Debt markets in South Africa
- Private Loans markets in Asia Pacific
- Alternative Asset funds in Europe

The paper concludes that there are commonalities in the challenges and opportunities across the Private Markets globally. Therefore a common approach and solution set may generate a successful, consistent answer to enable more participants to invest in these asset classes. This will increase both capital formation and the potential for democratization of finance by reducing the cost of participating in the market significantly.

This paper deliberately does not address suitability concerns but rather addresses restrictions on the market capabilities to serve an increased user base who need services such as timely settlement and frequent valuations.

Target Audience

This paper is addressed to market intermediaries, such as custodian banks, clearers, brokers as well as to asset managers, private market issuers, industry associations, financial market infrastructures such as CSDs, exchanges and CCPs, regulators and FinTech providers.

Acknowledgements

This report is the result of efforts by a team of experts drawn from Oliver Wyman, ISSA Operating Committee members and other ISSA participating firms. Special thanks go to the authors and the participating firms listed in the Appendix. The ISSA Executive Board wishes to thank all supporters for their contributions.

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1. Introduction and Digitization Themes in Capital Markets

In late 2020, ISSA and Oliver Wyman published a white paper on the Future of Securities Services. This paper reported on the results of a survey of ISSA members and the work of seven ISSA member firms, it aggregated their strategic thinking for the future of the securities industry. Further points and clarification were then added during workshops facilitated by a Design Thinking Team from Oliver Wyman. The Future of Securities Services Working Group agreed on ten "Forces" impacting the future of the industry and prioritized two broad composite Forces that would have the greatest impact on the industry over the next 5 to 10 years. These composite forces are:

- Investor behaviour: A continuation of flows into alternative and digital assets, as well as further shifts towards passive/ETF structures combined with further globalization of the asset flows and higher investor digital service expectations.
- Technology and technology-enabled competition: Larger-scale adoption of Artificial Intelligence/Machine Learning/DLT, new business models based on new technologies, as well as new entrants to the industry from the technology sector.

The paper then listed 16 different areas of focus for the securities services industry over the next three to five years including:

- **Best practice sharing digitization:** Sharing of best practices and lessons learned from the accelerated digitization induced by COVID-19 to enable participants to review and improve their own digitalization programs.
- **Private Markets and digital assets:** Development of a shared Private Markets/Alternative and Digital Asset infrastructure and common industry standards with a focus on both market coverage as well as cost efficiency. The aim should be to mutualize and lower required investment cost specifically for smaller players. Given the challenges of developing a shared infrastructure, ***the industry could, as an alternative, pursue the development of joint standards that ensure the infrastructure developed by different players would be interoperable and hence result in lower operating costs and higher efficiency for the industry overall.***

Subsequently, ISSA formed several different Working Groups to take this work forward including a Digitization Working Group (DWG) to focus upon ISSA participants' digitization journey to understand the challenges and opportunities to promote digital standardization, share best practices, enhance efficiency and risk reduction and improve investor experience within the industry.

Digitization has obviously had a major disruptive and innovative impact on many industries including the payments industry. While the securities services industry has not yet been as severely impacted, Digitization is a broad area, encompassing many potential Securities Services topics to explore including:

- Digital asset trading, clearance and settlement, custody and asset servicing [1]
- Digital currencies including stablecoins and central bank digital currencies including DLT standards [1]

[1] ISSA DLT and ISO 20022 Working Groups have published papers on these topics

- Account opening and KYC processing
- Tax documentation, at source or reclaimed
- Corporate Actions & Proxy Voting - Achieving adoption of machine-readable and standardized formats which are interoperable between intermediaries and facilitate straight-through processing
- Manual processes that include hard copy documents and wet signatures
- Development of standardized industry APIs in support of the digitization agenda [1]

However, the DWG's initial focus is on changes in investor behaviour that are driving higher demand for Private Markets investments and the challenges posed by inefficient and non-scalable settlement and registration processes.

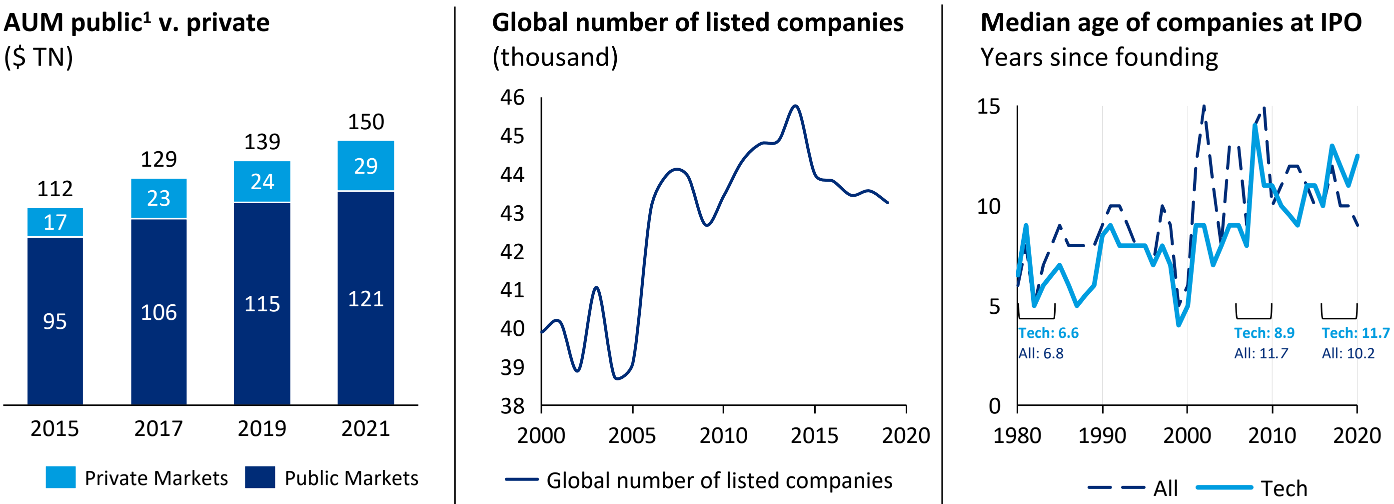
The DWG set out to review the current challenges, or "pain points", and ultimately recommend global best practices to the various service providers that attempt to solve the pain points and thus bring scale to Private Markets securities services processes.

This initial paper aims to provide a brief backdrop on trends across the Private Markets landscape. It includes the drivers of its expected future growth and, through four case studies across different regions and different Private Markets asset classes, to identify some common pain points that service providers are currently looking to solve. It is the DWG's hypothesis that the industry can derive significant benefits by designing and promoting global best practices for those service providers to adopt.

2. Private Markets Backdrop

Over the past decade, the market has witnessed a pronounced global extension in both the relevance and supporting infrastructures in private market asset classes (covering equities, debt and real assets (such as bridges and toll roads)). It has seen the total assets invested in Private Markets grow significantly in this time, both in absolute terms and relative to public assets. In part, the growth has been driven by a pronounced trend of larger privately held companies with access to alternative funding routes that allow them to stay private for longer, alongside a reduction in the total number of listed companies globally (as de-listings outpace new IPOs).

Figure 1: Trends in Private Markets assets over recent years



Private market assets **grew ~12% per annum** since 2015, representing nearly **20% of total global financial assets**

Global **number of listed companies** has **dropped in recent years** with delistings outpacing IPOs

The **median age** for a company to IPO has **grown by 50% over the last 40 years** (despite the recent SPAC boom)

Implications for Securities Services:

OPPORTUNITY: Play a role in private market ecosystem, facilitating capital formation and trading

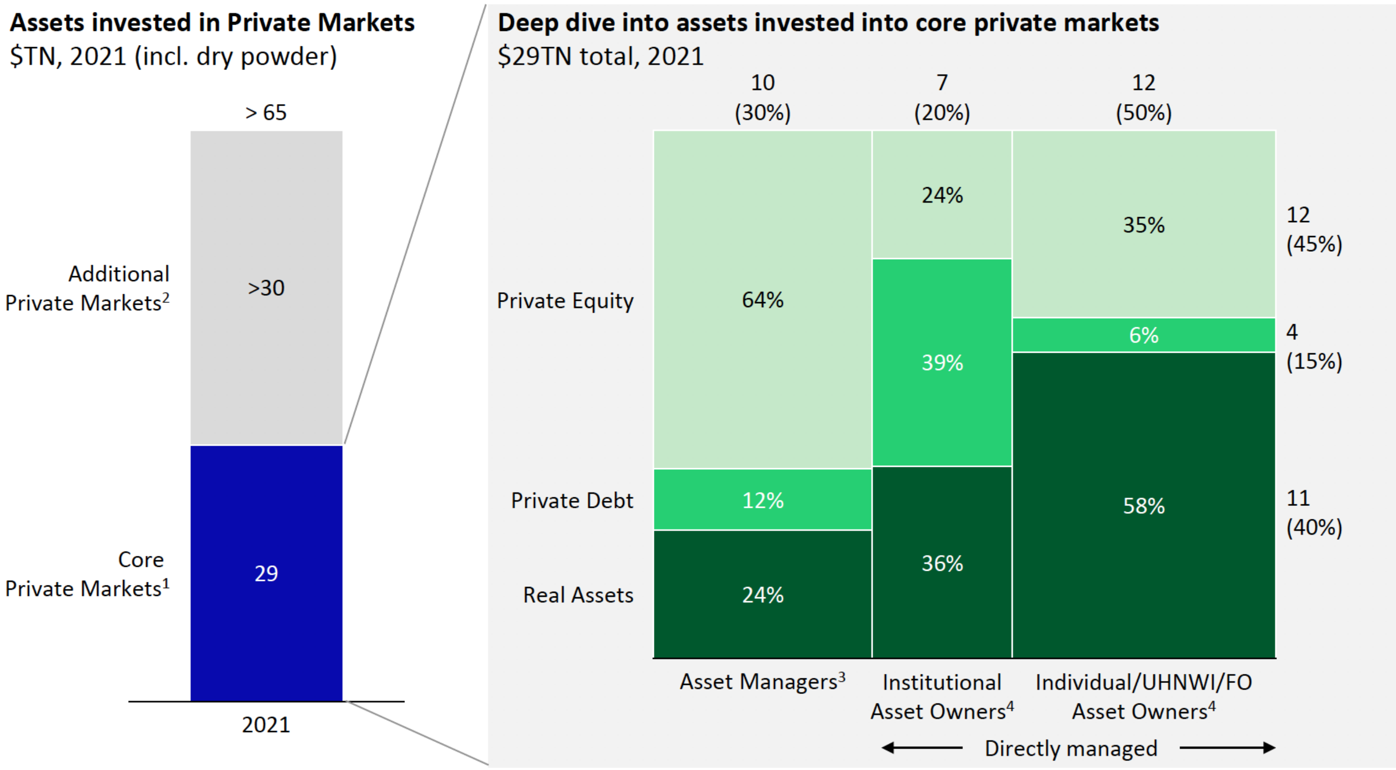
THREAT: Gradually lose business volume in core FMI activities alongside decreasing public liquidity

Source: Oliver Wyman analysis

Clearly, the prominence of this asset class accompanied by these underlying trends raises some questions for the securities services industry. Namely, what role could/should these organizations be playing to support the emerging Private Markets ecosystem, facilitating capital formation or trading in these assets? Alongside this opportunity, there is also the threat posed to traditional business models from the decreasing volumes and liquidity in the public markets.

Identifying the key investors participating across the Private Markets is important as securities services firms consider where and how to support this market. In total, Olivier Wyman now see the 'core Private Markets' asset base is a USD29 trillion pool, which represents nearly 20% of total global assets. These assets are held by a diverse range of asset managers (incl. hedge funds and Private Equity), institutional asset owners (sovereign wealth and pension funds) and (U)HNWI individuals/ family offices.

Figure 2: Composition of Private Markets assets currently in play across the globe



1. Core Private Markets include Private Equity, Private Debt, and Real Assets; Does not include assets held by Banks, Retail Investors, or other institutions. 2. Additional Private Markets include on bank BS assets, such as Syndicated Lending (ex-CLOs), SPACs, Trade Finance, ABS, Aircraft Leasing, Direct IG, Fund Finance, Solar Finance, Infra Solutions, Consumer, Resi Mortgage, Royalties, Revolvers, CRE Debt, Equipment Leasing, Railcar Leasing, and Hybrid Finance. 3. Asset Managers are defined as third party fund managers (e.g., financial sponsors, VC fund managers, alternative credit fund managers) and their AuM is derived from Preqin data – AuM from managers who do not report to Preqin is not imputed. 4. Institutional Asset Owners include sovereign wealth funds, pensions (defined benefit), and insurance, and UHNWI are defined as households with >$100MM in financial assets; Sources: Preqin, Oliver Wyman analysis.

Source: Oliver Wyman analysis

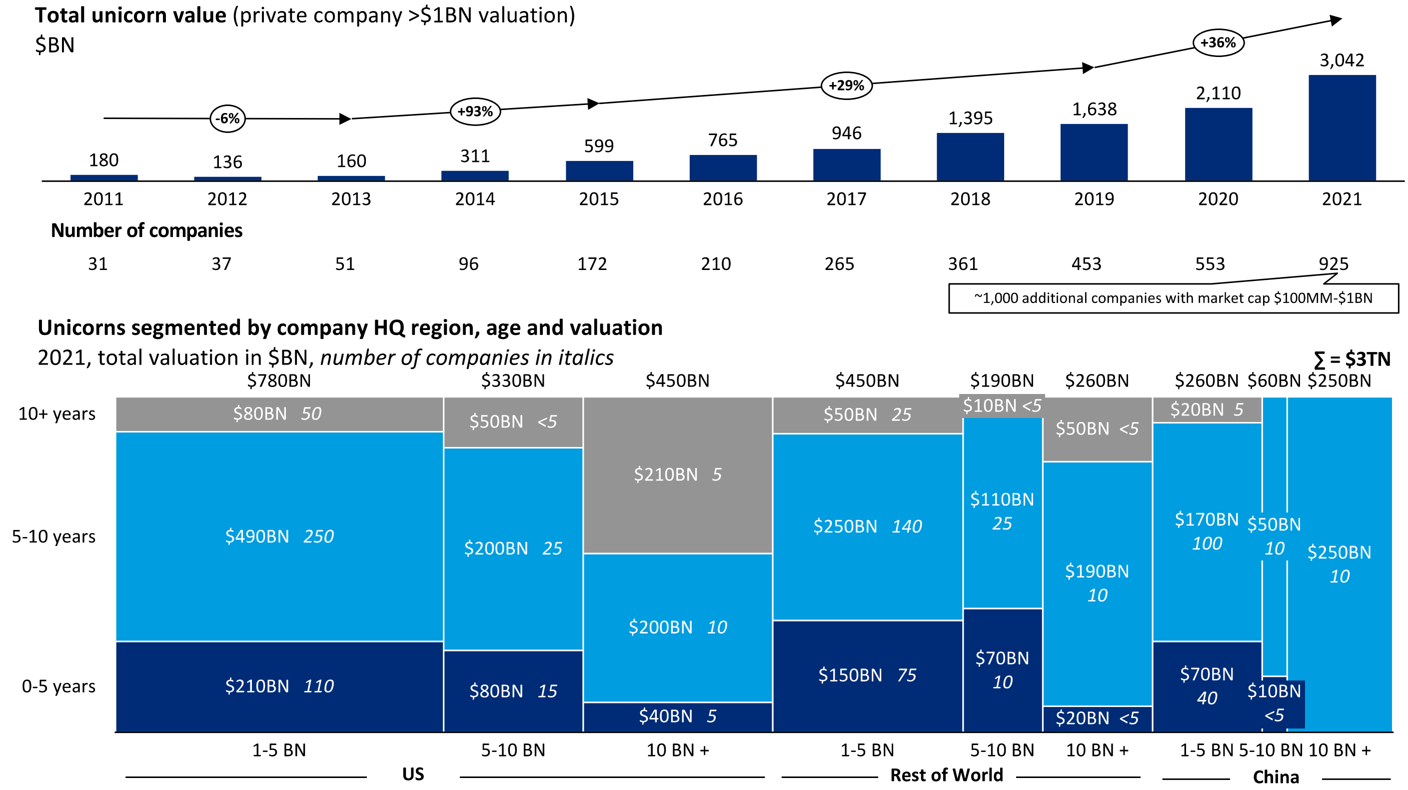
Alongside these asset owners and investors, there is still also a structural shift occurring in demand for wholesale banking services in the Private Markets, with the largest growth potential in systematic private credit. There is a clear role (and a clear opportunity) for wholesale banks in private credit, matching new or existing credit issuers (including credit origination platforms) with investors. Oliver Wyman and Morgan Stanley project a net USD 5 billion+ opportunity in private credit alone, driven by increased allocations from pensions and insurers over the next three years [2].

Private Markets have become an important financing channel for the real economy, especially in North America and Europe. They are also significant in Asia and emerging markets economics, where yearly transactions compare in volume with banks' syndicated loans.

As the DWG considered the supply side of total investable assets, i.e. assessing the total market capitalization of private businesses, the acceleration in overall total valuations has been pronounced in recent years. Global 'unicorn' businesses under private ownership (i.e. those valued at over USD1 billion) now constitute a total market capitalization of over USD3 trillion, across over 1,000 companies, with the majority of these firms less than 10 years old.

[2] Oliver Wyman & Morgan Stanley Wholesale Banking Report – 'Climate, Crypto, and Competing in This Cycle' (April 2022)

Figure 3: The rise of private Unicorns across the globe



Source: Oliver Wyman analysis

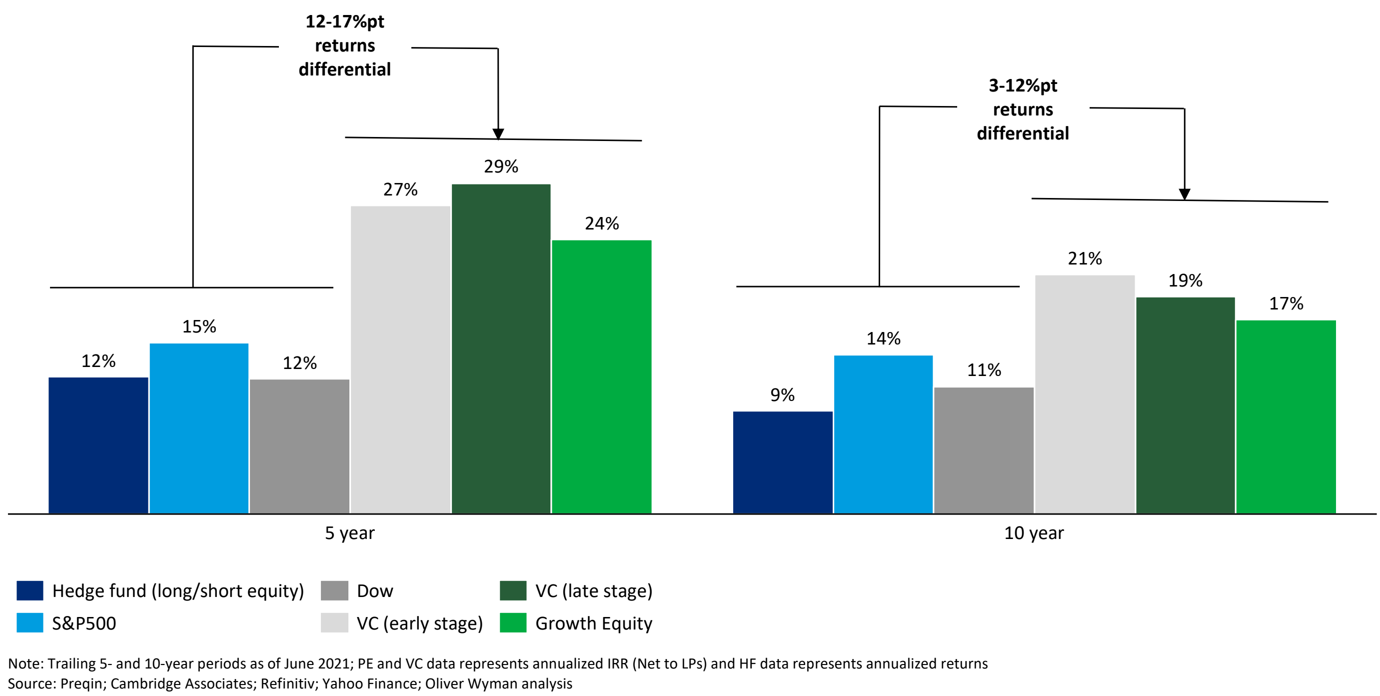
The above table demonstrates the resulting pool of assets globally, as companies are staying private for longer before moving to IPO, supported by alternative financing sources. But it is also important to consider the demand side for this asset class, as the paper characterizes the opportunity and pain points associated with Private Markets today.

Interestingly, the market has also seen a significant expansion in both retail and institutional demand for access to private market assets and instruments in recent years. Indeed, many investors are looking towards Private Markets as a way to close the recent returns gap to public markets.

If the DWG takes the US market as a barometer, investment returns of growth Private Equity and Venture Capital strategies have significantly outpaced that of hedge funds over both trailing 5- and 10-year periods. Of course, VC gains are not evenly distributed, but even those performing in the middle of the pack have beaten the S&P by 4-5%.

Even within successful hedge fund manager complexes, the public-private differential is stark (e.g. Tiger's private/venture unit has returned a net 27% IRR since its 2003 debut, vs. its public (13F) investments at 18% over 2010-19). This difference in performance will continue to increase investor demand for private securities, and therefore secondary trading of those securities.

Figure 4: Annualized returns by investment manager strategy



Source: Oliver Wyman analysis

While there has clearly been a pronounced expansion in both supply and demand side for Private Markets assets, a number of pain points persist for participants in this ecosystem. These challenges are, in some cases, areas where Securities Services firms are looking to play a critical role in supporting the development of this asset class, especially where they relate to enhancing efficiency, robustness and transparency across the market.

The ISSA DWG has developed a list of current challenges / pain points, drawing from their experiences in the market and the regional cases studies that follow later in this paper:

Inefficiencies associated with settlement and processing

- Most markets rely on emails, spreadsheets and the manual recording of transfers of ownership
- Settlement cycles are extensive, and in some cases can be reactively unwound
- DvP is not supported
- Principal risk, replacement risk and opportunity costs are often not compensated
- Liquidity is tied up for long periods of time
- Non-deliverable FX constraints, where investing in non-deliverable forward market private assets
- Settlement can be outside regulatory frameworks (such as CSDR (EU) and NMS (US)) i.e. somewhat unregulated
- Asset Servicing – corporate action information is slow, inefficient and not transparent
- Voluntary events are paper based

Opacity and availability of data relating to Private Markets

- Use of internationally recognized data standards are rare
- Uniqueness of data attributes is not guaranteed
- Pricing transparency and the liquidity of the asset is low, and not real time or near real time
- Turnover is not transparent
- Valuations are complex and not necessarily timely

Push for further democratization of access to alternative asset classes

- As outsized returns have been generated in the Private Markets, regulators and politicians are pushing to open the markets to further participation. The manual processes supporting the market would not sustain an increase in secondary volume
- Restrictions on ticket size (i.e. high minimums) prevent many potential owners' participation in the market
- Fixed costs and fees are high for a transaction reducing the attraction for retail investors
- Regulation presently prevents normal investors investing, i.e. accredited investors only

Trade failures, frictional factors associated with transactions

- Trades often fail as capital table rules and rules on restrictions are not fully understood and some firms have the right to restrict ownership
- Regulations designed to limit the number of investors can be invoked if many transactions occur in the same window exceeding limits
- Manual processes create friction and risk and both increase the costs associated with a transaction

Willingness of Private Markets issuers (i.e. the companies) to further embrace these markets

- Costs of enabling liquidity for Private Markets securities are different to the costs of public markets
- Rights of refusal often exist
- Avoidance of stringent disclosure requirements if increase in distribution of shares

Clarity of regulatory positions in a previously lightly regulated space

- Regulators across the globe are focused on transparency of ownership of assets
- "Buyer beware" is changing to highlight protections

3. Selected Case Studies for Securities Services

To better illustrate some of the opportunities posed by expanding global investor activities in capital markets ISSA has selected four case studies. Each case study outlines the current thinking of a leading securities services business on key challenges they are looking to address and the solutions currently being developed to address these.

Table 1: Selected regional Private Markets case studies

	Region	Key challenge(s) highlighted in case studies
DTCC Digital Securities Management Platform (DSM)	**US**	▪ Settlement cycles measured in weeks not days ▪ Trades not completing or reactively broken ▪ Unnecessary complexity in market participants and fragmented liquidity ▪ Poor data quality and its consequences ▪ Restrictive access via high minimums and complex Special Purpose Vehicles
Strate Debt Solutions for Private Markets	**South Africa**	▪ Variation in registry, settlement and asset servicing ▪ Lack of understanding about the market rules ▪ Lack of transparency in the market ▪ Highly manual processes ▪ Lack of clarity and certainty of ownership
Private Loan Markets	**APAC**	▪ Email/paper-based (pdf) agent notices ▪ manual processes ▪ no industry standards
Alternative funds processing (Vestima - Clearstream)	**UK / EU**	▪ Inefficiencies in investor access to alternative funds ▪ Complexity of cash management and reporting given lack of single point of access

Each of these case studies provides an insight into the global and region-specific dynamics impacting the offering of Private Markets solutions by securities services firms. They also speak to some of the key areas where the ISSA Members could coordinate to support delivering improved outcomes across the global capital markets.

3.1 DTCC Digital Securities Management Platform (DSM)

Private Markets growth in the U.S.

The U.S. Private Markets have experienced a decade of enormous growth across nearly every measure. They account for larger sums of capital raised and greater year-over-year growth than virtually any other market segment across the developed world, including the U.S. public markets.

Perhaps the most observable metric in Private Markets growth in the U.S. is the number of Unicorn companies. Over the past decade, nearly one thousand Unicorn companies have come into existence with over 50% residing in the U.S. This exponential rise continuously attracts mainstream media headlines and has garnered the attention of America's retail investors who are becoming increasingly active in equity and fund markets.

Despite this growth in U.S. private market investments' allocations and valuations, the market practices and infrastructure that support them have changed very little, raising questions as to whether the inefficiencies will ultimately hamper growth or create knock-on effects to the public vehicles that invest in private assets.

The missing infrastructure piece

Alongside this last decade of Private Markets super growth, the U.S. public market has seen its fair share of changes. A race to the bottom on broker's fees, ever-evolving regulatory mandates and a mission to free up collateral have all led to major post-trade improvements including the reduction in the trade settlement cycle from T+3 to T+2 in 2017 and further to T+1, planned for 2024. But while the public markets begin to measure settlement cycles in hours, the average secondary transaction in a private asset settles upwards of T+40.

The National Market System, or NMS, first established in the 1970's and further bolstered in 2005, established (through regulation) the key elements of public equities infrastructure as the industry knows it today. This system has had the benefit of adapting and growing in conjunction with the market it serves and has been extended in places to cover adjacent markets. The rules that governed the system developed to support the asset classes most in need of structural improvements, which at that time did not include the Private Markets. The unintended consequence that resulted from this is the situation the industry is faced with today: a massive private market with a missing infrastructure piece.

While the lack of a 'Private Markets system' has not hindered sky-high valuations, it has created a web of challenges that stand in the way of an efficient functioning ecosystem – some examples include:

Table 2: Challenges preventing an efficient functioning ecosystem

Category	Challenges
Inefficient Secondary Trading	Low fill rates (i.e., trades fall apart)
	Long and highly manual settlement cycles
	Reactive transfer restriction enforcement
Silos and 'Walled Gardens'	Complex and bespoke integrations (everyone integrates to everyone)
	Fragmented pools of Investors
	One-off commercial arrangements to satisfy custody obligations
Data Standards and Quality	Operationally intensive / manual reconciliation
	Data quality and opacity issues
	Reduced automation and 'STP' opportunities
	Poor capital table hygiene
Investor Access	Limited Investor participation (due to need for high investment minimums that result from high costs to transact)
	Reliance on costly and bespoke SPV structures to enable employee transactions

Despite the wide range of challenges that remain, there fortunately are a number of large-scale industry initiatives underway that have taken aim at addressing them. The blockchain/DLT (r)evolution is in full stride and the possibility of tokenized or digital asset securities has been broadly cited as a potential solution to the challenges that exist in the Private Markets and securities markets more generally.

While DLT-based solutions continue to hold promise in serving key infrastructure roles, DTCC has found through project work and hands on experimentation that a number of legal and operational barriers stand in the way of realizing a comprehensive vision. Ultimately, more mature models will need to develop to ensure the market does not form new (albeit more 'digital') silos.

A potential vision for Private Markets infrastructure

In 2019, DTCC began researching the U.S. Private Markets to evaluate infrastructure modernization opportunities based on unmet industry needs, new technology and DTCC's ability to provide a robust and resilient market infrastructure as it does in other mature markets.

Following extensive engagement with all segments of industry participants, DTCC had identified a number of key initiatives, which, if introduced by a fit for purpose infrastructure solution, would benefit the U.S. Private Markets as a whole.

Table 3: Key initiatives for the benefit of the U.S. Private Markets

Opportunity	Potential Benefit
Assignment of Unique Asset Identifiers and Maintenance of Standardized Security Reference Data	Reduced complexity of reconciliation activities
	Compatibility with existing back-office systems and messaging protocols
	Streamlined corporate actions processes
'Depository-like' Good Control Location as golden source for ownership records	Alignment to existing securities account structures
	Ability to hold assets in omnibus alleviating the need for SPVs
	Broader Investor access (including new investor types)
	Simplified trading venue interactions and increased fill rates
Standardized DvP Settlement Cycles (Consolidated Monies Settlement)	Streamlined back-office processes (and reduced operational risk)
	Increased STP
	Faster settlement cycles
Transparent transfer restrictions with automated enforcement at trade capture	Proactive enforcement
	Faster cycle times to trade approvals
	Increased fill rates

On the back of this analysis, DTCC has designed and begun developing a solution: The Digital Securities Management Platform (DSM) in an effort to introduce these efficiencies to the Private Markets. Pre-IPO equity has been identified as the initial asset class which the solution will target, but it has been designed to expand and ultimately bring efficiencies to a wide range of Private Markets asset classes. DTCC, working through ISSA, looks forward to collaborating with market infrastructures around the world to solve common pain points across geographic markets and Private Markets asset classes with global standards and best practices.

Conclusion

The U.S. Private Markets have seen an era of unprecedented growth. Despite the rise of new assets and investors in them, the infrastructure to support these markets has not kept pace. In order to sustain growth and remain resilient through upcoming periods of expansion and contraction, it is critical that the industry adopt more modern and robust infrastructure solutions to support the Unicorns, Decacorns and Hectacorns as well as protect the investors that invest in them.

For more information on DTCC's efforts in the Private Markets, visit here

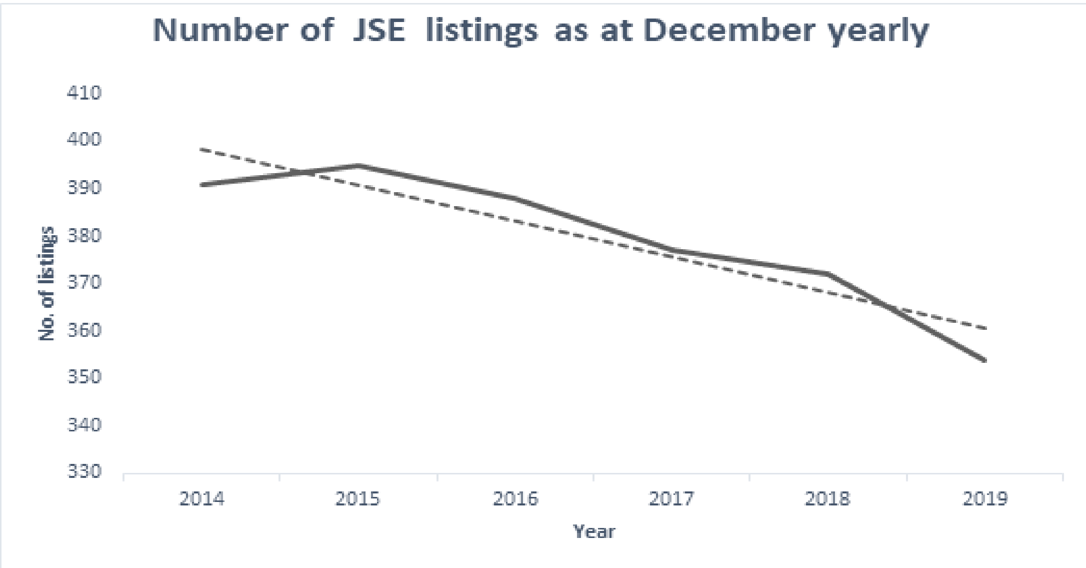
3.2 Strate Debt Solutions for Private Markets

South African Private Markets context

Current market trends in the South African ecosystem mirror the experiences of many foreign jurisdictions namely, decline in the number of listings on public platforms and an increase in capital allocated to Private Markets.

The diagram below provides a historic view of the number of listings on the largest South African exchange (Johannesburg Stock Exchange). As observed in other jurisdictions, there is a decline in the number of exchange listings.

Figure 5 reflects the net number of listings on the JSE since 2014 and represents a decline in overall listings of 13% over the observed period.

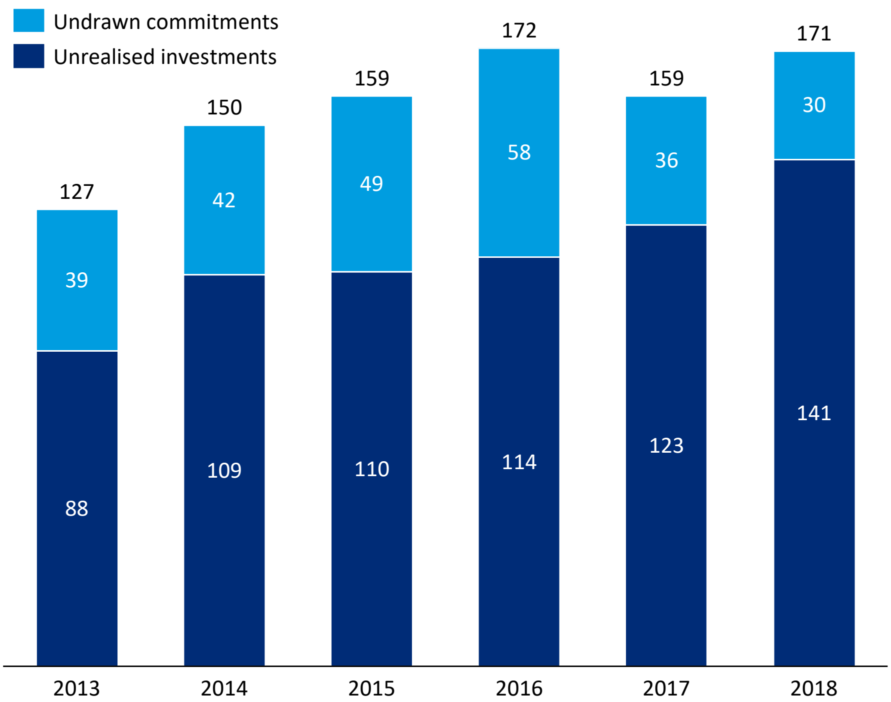


Source: JSE

When analyzing the data behind the de-listings below some common themes were identified.

- Non-compliance with exchange listing requirements.
- Low liquidity and analyst coverage.
- Corporate action (takeovers) due to attractive valuations.
- Limited institutional support.
- High listing and compliance costs as well as disclosure levels.
- No requirement to raise capital.

Figure 6: Assets under management (AuM) in the South African Private Equity market



- Total Private Equity AuM of R171bn+ (USD 11bn+)
- 79% invested under a generalist mandate
- R30.1bn dry powder available for investment
  - R13.1bn South Africa
  - R16.9bn Pan-African
- Compound annual growth rate of AuM +9.3% since 1999

Source: Southern African Venture Capital and Private Equity Association (SAVCA)

A key factor to consider - with regards to the increased flow to Private Markets - is the impact that legislation has had in the South African environment. Regulation 28, Pension Fund Act limits the extent to which retirement funds can invest in particular asset classes or individual assets, to protect retail investors from overexposing their capital to any one share or investment class. The National Treasury has been making amendments to this regulation and allowing pension funds greater allocations to Private Equity and infrastructure investments.

In addition, there is intent from legislators to promote transparency and look through to ultimate investors with regard to securities ownership. This is in relation to both public and Private Markets.

Landscape and current challenges

Strate views Private Markets as anything that is not in a listed environment. This is a vast universe that, like the public markets, have different asset classes (e.g. Private Equity, private debt, private property) as well as different stages and types of investors (e.g. seed investing, crowd funding, development finance institutions (DFI)) who participate in the capital raising process.

The South African Private Markets, in the post trade arena are fragmented and follow different registry, settlement and asset servicing models.

These models are not transparent, standardized or openly known and do not form part of the financial ecosystem in which the CSD operates. Cognizance must be taken of the nature of public markets versus Private Markets.

Some fundamental differences are:

- Different investment objectives and timelines
- Different requirements around transparency and risk appetite
- More partnership behaviour and active engagement with management governed by strict legal requirements

The question that arises is due to these key differences how the existing model is positioned to effectively serve the private market needs and requirements with respect to digitization.

The opportunity

There has been select focus on digitization in Private Markets in South Africa. Strate has found that automation is largely focused on front office functions e.g., digitization of legal agreements and creation of electronic platforms to facilitate deal flows. If the trend towards private market growth continues then the manual processes that currently exist with regard to the post trade services of digital record keeping, sound settlements and corporate actions the present methodologies will no longer be fit for purpose.

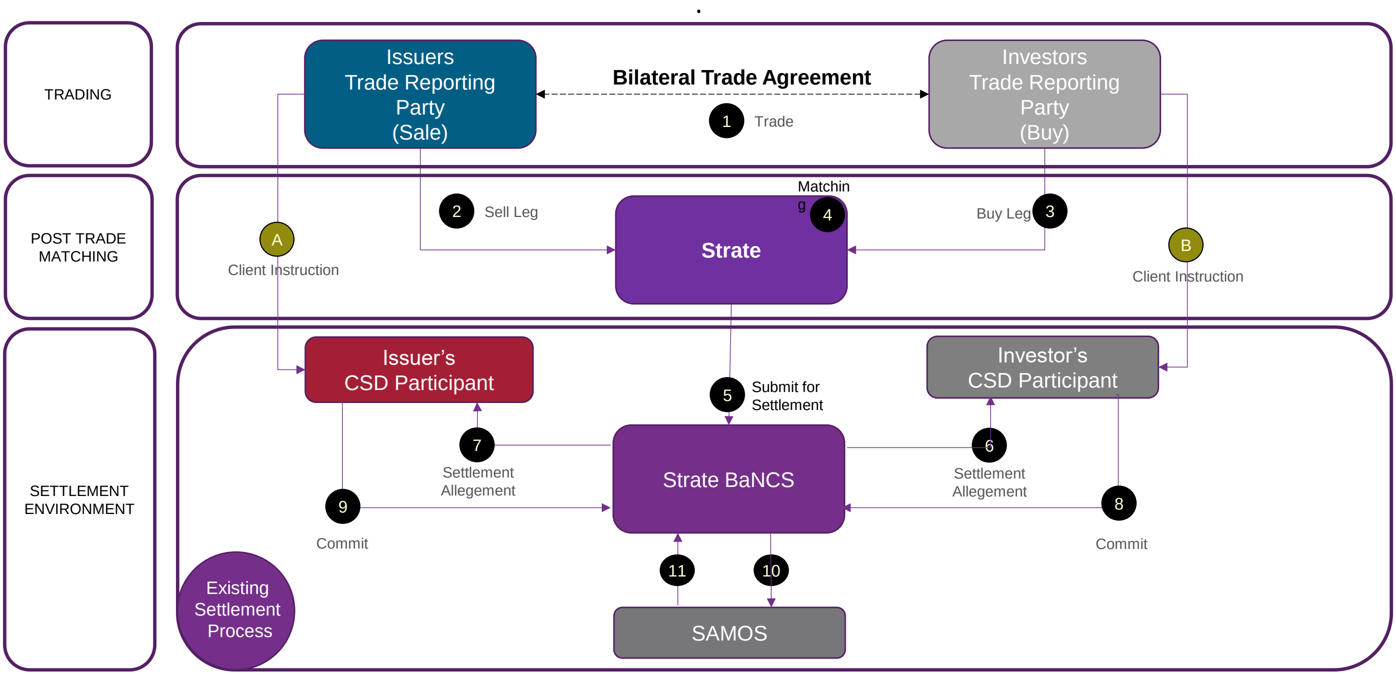
A key consideration for investors is the safety of the assets which they own. As mentioned, a core objective of Strate is safeguarding and processing of ownership rights. In Strate's view, there is a considerable opportunity to bring the same level of safety and efficiency seen in the listed space to the unlisted space.

In addition to asset safety, the following benefits would be realized for the Private Markets:

- Settlement processes which mitigate key risks such as principal and replacement cost
- Enhanced asset servicing in terms of corporate actions.
- Processes that are automated and cost effective.
- Optimization of the use of capital thus enhancing liquidity for the market.

Strate believes that the below ecosystem which is currently being used to service existing Money Market and Unlisted Bonds asset classes is well positioned to serve other Private Markets.

Figure 7: Existing ecosystem supporting Money Market and unlisted Bond Market assets



Source: Strate

Within this ecosystem the creation of a digital security, whether it is private or public, can be treated in an agnostic manner (e.g., ISIN). Multiple digital access points may be utilized ranging from email notifications to systems/platform integration. The technology and processes that exist in the post trade matching and settlement environments are agnostic as to whether the security is listed or not. Market conventions adopted for different instruments or bespoke arrangements can be facilitated.

In addition (not shown in the above diagram) the corporate actions and the register component of the ecosystem are likewise agnostic. Settlement of money is facilitated via the central bank funds (through the SAMOS RTGS system) therefore supporting the market in risk reduction objectives.

Use case for private market securities

Strate eligible securities include both listed and unlisted securities. State's central securities depository – to which issuers, CSD Participants, independent platforms, other market stakeholders and all South African exchanges connect – maintains accurate records through a reliable registry, clearing and settlement function and asset servicing capabilities that unlock significant benefits for issuers and investors.

Strate believes that these key operational competencies combined with comprehensive risk management and sound corporate governance built on robust, proven technology platforms, are relevant and applicable to both private and public markets.

These principles have been proved correct and are evidenced by the private market instruments that are currently housed within the CSD environment.

Strate has over R900 billion in unlisted Money Market securities and more than R320 billion in unlisted bond securities under custody. The steady growth in assets illustrates the capacity to meet multiple stakeholder needs and support their diverse objectives. Strate currently has very few unlisted equities.

The Money Market evolution began in the mid 2000`s. These securities, by their nature were short term with regular coupon payments. The risk associated with the delivery of manual certificates for safekeeping as well as presentation to issuers for payment of coupon and redemption proceeds culminated in the market working together to digitize these securities. In recognizing the potential benefit of digitizing these securities, the market stakeholders approached the CSD to engage in the process. The culmination of this market project was the issuance of the first dematerialized Money Market security in 2008. The servicing of this asset class is well entrenched within the market, facilitating same day trade and settlement activities.

Strate currently services, through the introduction of a digital reporting channel in 2019, unlisted bond securities. Growth in the value of unlisted bonds under custody exceeded 200% between the first and second year indicating that the offering addressed an unmet need within the market and provided value for various market stakeholders.

In the case of Money Market securities and unlisted bond securities, both are issued and reported electronically, and a sacrosanct digital legal record of ownership is established. Once these bilateral transactions are reported by the trading parties, the existing post-trading environment is leveraged for safe keeping, settlement, and asset servicing.

3.3 APAC Private Loans Market

APAC Private Markets context

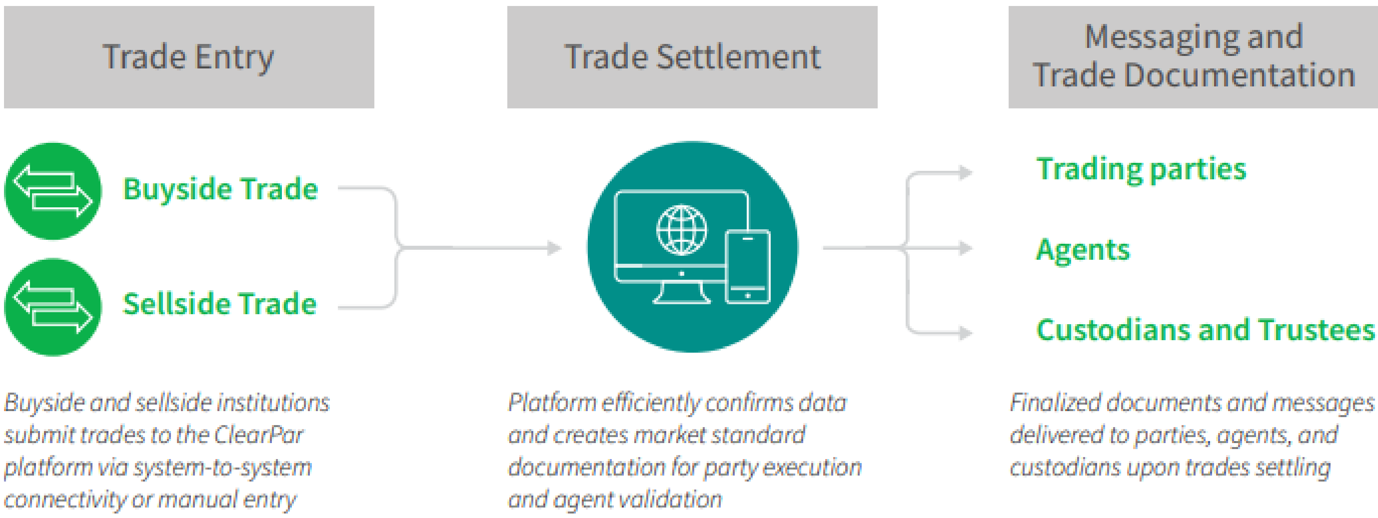
In the context of APAC private loan markets, funds with Credit Strategy may invest in Widely Syndicated Loans, Bilateral loans and private bonds. Bilateral loans are bespoke and terms vary across investments. In India and China, funds may be vested in private bonds and p-notes structure instead of Credit Facility or widely syndicated loans. Another way to obtain exposure to the loans in these markets is to trade derivatives with the underlying loans. Security Receipts is also an alternative.

Custodians will see the flow of cash (maintained with them) but not the asset's movements as these are non-custodised assets. However, it can also depend on the type of private debt. For example, custodians/trustees can be servicing the notes from Collateralise Loan Obligations (CLO) funds, and in which case, the post-trade activities of these notes would be visible to these custodians/trustees.

Widely Syndicated Loans

In general, post-trade settlement for Widely Syndicated Loans indicatively have a settlement period of T+7 business days. When settling the loan, both LSTA and LMA provide the seller to retain the right to any accrued and unpaid interest on performing loans for a period of up to 7 business days and 10 business days after trade date for LSTA and LMA trades respectively, or up 20 business days after trade date for distressed trades. Delayed settlement compensation is to put buyer and seller in position of T+ stipulated day of settlement (e.g. 10 days for LMA) Seller will pay interests and recurring fees whereas Buyer pays Settlement Amount Funding Cost. ClearPar [3] from IHS Markit serves as a syndicated loan trade settlement platform that connects buyers, sellers, agent banks, custodians and legal firms that are required to generate, manage and execute documents for LMA and LSTA trades. The manager will still be required to take a very active role in managing and executing documents for LMA and LSTA trades. Participants need to be member of ClearPar. Figure 8 highlights the platform's functionality.

Figure 8: ClearPar Settlement Lifecycle



Source: IHSMarkit.com

Bilateral Private Debt's settlement period is arranged bilaterally and aligns to the credit agreement.

Digitalization focus

Credit activities notices can be received in different forms i.e. emails, pdf, or logging in to portals. Service providers, such as SS&C loan servicing department, use technology to handle the process. Currently, processes using machine leaning and Optimal Character Recognition (OCR) automatically process approximately 70% of credit events for widely syndicated loans at SS&C. On the closing side of the process, SS&C is focusing its efforts on digital workers using Blue Prism to replace manual tasks while in-house software is used to further facilitate transparency to clients and to allow access to loan information. Settlement of the trades and post settlement events can be monitored by client. As a result, automation like those invested by SS&C [4] are value propositions specific to each service provider for their issuer and lender clients.

In closing, Asia's private loan market will have specific differences and market practice nuances by country, for example India and China, including in the way that the private loans are structured, documented and settled. As a result, it is not a "one size fits all" automation needs to address perceived post-trade inefficiencies in the private loan market – indeed, the inefficiencies are allowing service providers to differentiate themselves to their clients. Additionally, the present focus is on

[3] ClearPar-Loan-Trade-Settlement-Platform.pdf (ihsmarkit.com)
[4] SS&C Loan Services (ssctech.com)

automation and not on the use of distributed ledger technology (DLT) and DLT's associated composable features like smart contracts and programmed tokens.

3.4 Clearstream / Vestima Private Markets Fund Services

European alternative funds market context

Growing investments in alternative instruments and the fact that investors increasingly hold portfolios containing mutual funds, hedge funds, Private Equity and real estate funds have increased the demand for consolidated services covering all investment fund types on a single platform. Alternative funds are highly complex and diverse instruments compared to mutual funds – processing requires a greater manual effort and entails higher operational risks.

Investors have been looking for access to alternative funds via the same single point of entry for orders they use for all other fund types, thereby benefiting from streamlined cash management and consolidated position reporting.

The opportunity

European investors want a consolidated view of their holdings across multiple assets classes, including private market assets. This requires normalization of the investments parameters to fit a standard digitized view.

In addition investors want straight through processing and DvP settlement and to deal with all aspects from the routing of the order, through confirmation and settlement. Additionally there is a demand for dividends to be re-invested where that fulfils the mandate.

Many investors are switching investments and cash management and funding is a service missing from a singular Private Asset fund (proceeds are delivered to a client's nostro but then have to be sent to a different fund to be reinvested) and there is a desire from investors to optimize the cash management and liquidity within a singular solution.

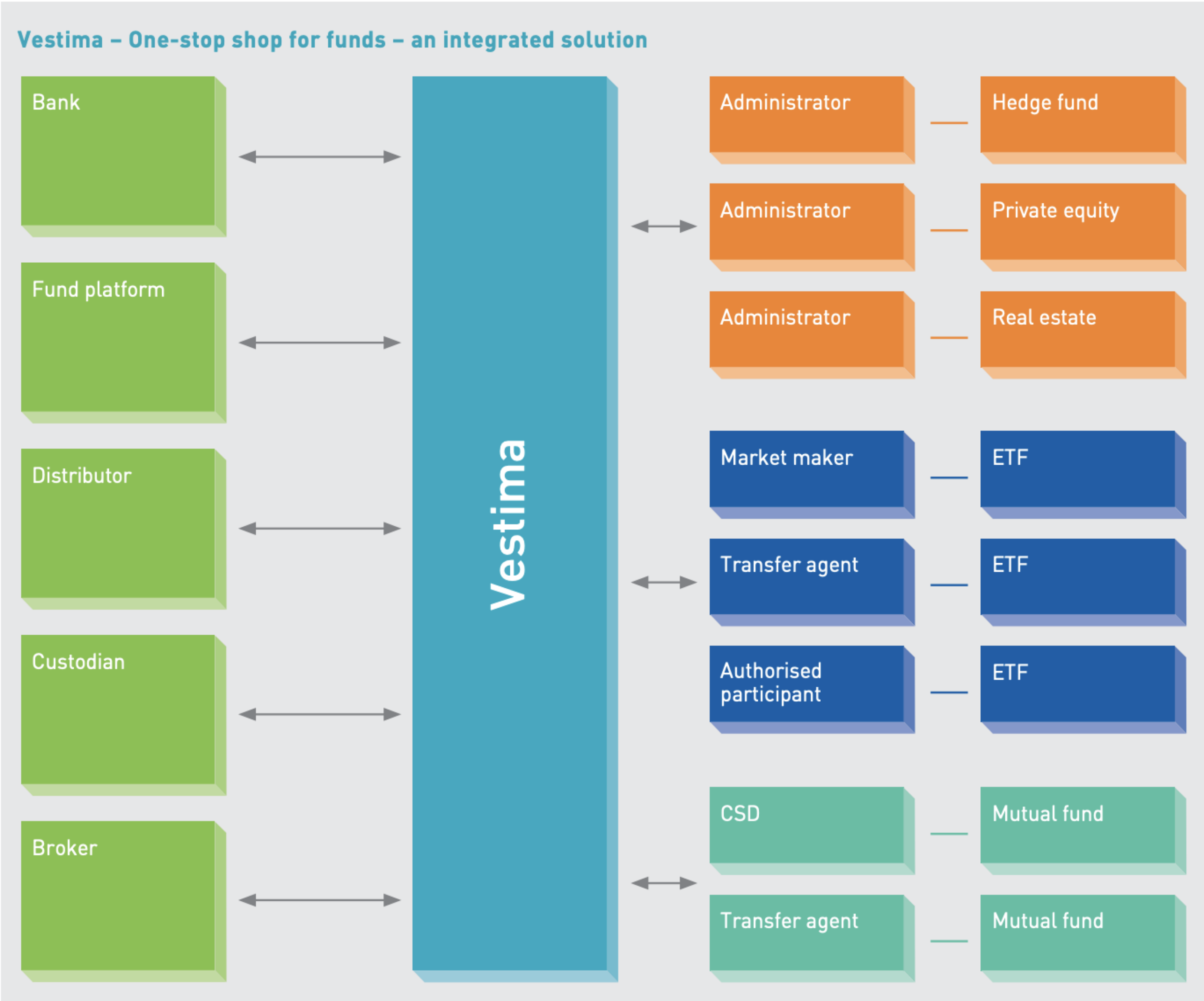
Realizing efficiencies for investors in these instruments

Clearstream has developed its Vestima solution to increasingly cater to the needs of investors in these alternative funds, offering three key solutions in the face of the complexity of this market:

- **One-stop shop for all fund types:** Fund distributors benefit from a single, fully automated point of entry for routing orders to fund managers across all fund types: Mutual funds, Alternative funds (Private Equity / Real Estate / Hedge Funds), Exchange traded funds.
- **Greater efficiency:** Improved scalability of operations and reduced manual effort thanks to automation and the use of stored reference data.
- **Security:** Fund processing services provided by Clearstream Banking S.A., a fully licensed bank with an AA rating, regulated in Luxembourg. Centralized cash management via existing Clearstream accounts.

A schematic of Vestima services is shown overleaf.

Figure 9: Vestima services overview schematic



Source: Clearstream

4. Summary Conclusions and areas for ISSA Member Considerations

As this paper illustrates, there are significant drivers for the continued growth of the markets for private securities and the broader participation by institutional and retail investors has significant benefits. There are however a number of pain points in the lifecycle of issuance, trading, settlement and asset servicing of these instruments. Thus, the Securities Services industry can be either an enabler of that growth or a passive observer. The four case studies from different regions of the world and in different asset classes within Private Markets start to show that there are pain points in common. The ISSA Digitalization Working Group will continue its work surveying various potential solutions to these common pain points and highlight those in a follow up paper. The intention will be to attempt to forge global market practices to alleviate the common pain points across geographies and the various Private Markets asset classes. ISSA welcomes input from all parties with an interest in Private Markets both as commentary on this paper but more importantly as a contribution to the solutions.

Appendix: Working Group Members

The following individuals have contributed significantly to authoring the final report:

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Steven Ingleby	Strate (Pty) Ltd
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