UPI as the Foundation for OTC Derivatives Reporting: *The Case for UPI*

A Comprehensive Analysis of UPI Sufficiency vs OTC ISIN Over-Granularity Across Asset Classes

Introduction

The Unique Product Identifier (UPI) (ISO 4914[1]) has emerged as the most effective solution for OTC derivatives product identification, offering a streamlined, globally harmonized approach that addresses many of the inefficiencies and complexities inherent in other identification systems such as the International Securities Identification Number (ISIN).

This report by the International Swaps and Derivatives Association (ISDA[2]), presents a detailed analysis across Rates, Credit, Equities, FX, and Commodities, demonstrating that UPI not only meets but often exceeds the requirements for regulatory reporting and systemic risk monitoring of OTC derivatives markets.

The analysis further shows that the UPI, with the addition of a small number of context specific fields alongside, can fully support all regulatory goals across transaction, transparency and trade reporting. This UPI based approach ensures that regulators have access to all the contract-level details necessary for effective oversight, whilst avoiding the pitfalls of the over granular OTC ISIN based assignment in operation today. At the same time UPI offers alignment across markets globally enabling data comparability and aggregation.

Methodology

To rigorously test the hypothesis that UPI is sufficient - and, with minor additional attributes alongside, fully complete - for derivatives reporting, we conducted a comparative analysis using actual product identifier templates and regulatory report mappings.

The analysis involved:

- Collecting and reviewing ANNA-DSB[3] UPI and OTC ISIN record templates for five major asset classes.
- Focussing on 23 templates, representing dominant OTC derivative types across Rates, Credit, Equities, FX, and Commodities (by prioritising high-volume products identified by ISDA's members and the latest available product level identifier metrics from ANNA-DSB[4]).
- Mapping UPI and OTC ISIN attributes against the reporting fields required under RTS 22, the core European regulatory standard for transaction reporting.
- Identifying any attributes present in OTC ISIN but absent from UPI, and determining whether these could already be reported via RTS 22 or would require explicit inclusion in a UPI based approach.
- Consulting recent regulatory publications and consultations from the UK Financial Conduct Authority (FCA), the European Securities and Markets Authority (ESMA), and industry publications, including previously submitted and published consultation responses from ISDA, to ensure alignment with current and upcoming regulatory expectations.

This methodology ensured that the conclusions drawn are both data-driven and directly relevant to the current regulatory landscape.
To reiterate, the core analysis focused on three main dimensions. For attribute coverage, we compared the core economic attributes captured by UPI and OTC ISIN. For fragmentation, we identified which

[1] https://www.iso.org/standard/80506.html
[2] https://www.isda.org/about-isda/
[3] https://www.anna-dsb.com/about-us/
[4] https://www.anna-dsb.com/2024/02/26/dsb-monthly-metrics-december-2023/

OTC ISIN-only fields drive unnecessary proliferation of identifiers. Lastly, for RTS 22 alignment, we assessed whether existing reporting fields already cover any gaps left by UPI.

Findings by Asset Class

3.1 Interest Rates

In the interest rates asset class, UPI templates for swaps, FRAs, OIS, and swaptions capture all the economically significant features, including notional currencies, reference rates, payment schedules, and delivery types. OTC ISIN, by contrast, introduces additional fields into the code assignment such as expiry date and price multiplier, the former of which results in a proliferation of identifiers for contracts that are otherwise economically identical. For example, a standard five-year EURIBOR swap can generate a new OTC ISIN for each trading day, even though the economic terms remain unchanged. These OTC ISIN-specific attributes are already covered by RTS 22, particularly in fields related to maturity date and scaling[5] factors, and can be reported directly alongside the UPI. Similarly, these report fields can also be used for products in other asset classes with maturity dates and scaling factors.

3.2 Credit Derivatives

For credit derivatives, UPI templates encode reference entities, debt seniority, index versions, providing a clear and consistent product definition. OTC ISIN, however, fragments the space by creating new identifiers for each maturity, even when the underlying economics do not change. This is especially evident in corporate CDS, where OTC ISIN proliferation is significant – and maturity dates are more often bespoke. One notable gap is the lack of effective date reporting for forward-starting CDS, which is currently under consideration for inclusion in RTS 22, and therefore could be used for products in other asset classes with effective dates. Regulators, through recent FCA and ESMA consultations, have already indicated a preference for effective date to be added as a RTS 22 reporting field.

3.3 Equity Derivatives

In the equity derivatives space, UPI templates effectively capture underlier identification and for options, the relevant attributes such as option exercise styles. OTC ISIN, by contrast, generates a large number of identifiers for each strike price and expiry combination for options, as well as maturity dates for swaps and forwards – similar to issues in Interest Rates and Credit Derivatives for maturity date.

3.4 FX Derivatives

UPI is highly efficient for FX derivatives, as it provides a single identifier for each currency pair and settlement type, such as NDFs and deliverable forwards. OTC ISIN, on the other hand, creates unnecessary complexity by assigning separate identifiers to each leg of a swap and for each roll /maturity date. Similar to other asset classes, this issue has been recognized in regulatory consultations (see References), which support the adoption of UPI for swaps and forwards – with maturity date removed.

3.5 Commodities

For commodities, UPI templates capture the commodity taxonomy, including base and sub-product, as well as physical delivery parameters. OTC ISIN, however, fragments the market by generating new identifiers for each expiry/maturity, notional currencies or pricing conventions. Other commodity specific attributes found in the OTC ISIN, e.g. Final Price Type, are already embedded in the

[5] Multiplication Factor is available for reporting on RTS 22 though is almost always set to "1" for products in the interest rates asset class.

Commodities Reference Rate which is an attribute of the UPI (see References 5.) – allowing UPI to fully specify the commodity product at appropriate level of granularity.

Cross-Asset Conclusions & Recommendations on UPI

The results of this analysis confirm that UPI provides consistent and comprehensive product identification across all asset classes. In every case, UPI templates capture the essential economic attributes required for regulatory aggregation and systemic risk monitoring. Regulators, through recent ESMA and FCA consultations, have indicated a willingness to consider UPI as the primary product identifier for derivatives to improve transparency and reduce operational complexity with necessary adjustments.

OTC ISIN's approach, by contrast of over-granularity, due to inclusion of temporal and contract-specific fields, has led to excessive fragmentation and operational burden, with multiple identifiers for economically identical products. This is particularly problematic in high-volume markets such as interest rates, FX, and equity options. Industry research and regulatory consultations (see References section for: 1. FCA DP24/2, 3. ESMA targeted consultation on identifiers , ISDA and Joint Industry Papers) consistently highlight the inefficiency and costliness of OTC ISIN-based reporting for derivatives

The omission from UPI of certain temporal and contract-specific attributes - such as effective date, maturity date, forward period or tenors, and strike prices – has achieved sufficient granularity for broad product identification. Some of these temporal attributes, which are useful for risk management, transparency, and regulatory compliance with regulations such as MiFIR RTS 22, can be made available to regulators by explicitly reporting these attributes separately from the identifier (i.e. alongside the UPI) rather than within the identifier assignment (i.e. the current OTC ISIN).

To fully realize the benefits of UPI and meet all regulatory requirements, ISDA and its members recommend the following:

1. Firstly, regulators and industry participants should universally adopt UPI as the primary identifier for derivatives reporting. UPI's product-level focus ensures efficient aggregation and reduces operational complexity.
2. Secondly, RTS 22 and equivalent reporting templates should be enhanced to mandate explicit reporting of temporal attributes—such as trade date, effective date and maturity date—for all products where these are relevant. For example, swaps, forwards, and options should always include fields for effective, maturity and expiry dates, enabling precise calculation of contract tenor and forward periods (as trade date always also reported). Expiry dates, appropriate for option products should also be reported as such. These enhancements, such as the addition of an effective date field, are already under consideration by ESMA and the FCA and are consistent with global regulatory trends (see References 6, 7 & 8).
3. Thirdly, if additional information is required for novel or non-standard and more exotic products, the UPI framework should continue to evolve to include additional attributes such as valuation methodology parameters, adjustment factors for sustainability-linked or other novel derivatives, and multi-leg correlation structures. These additions should be developed through existing industry working groups (such as the ANNA-DSB product committee[6] and/or relevant ISDA member working groups) where the necessary expertise is found, and in consultation with regulators to ensure they meet both market and supervisory needs.

[6] Where the UPI templates were developed and are maintained.

4. Finally, as UPI and enhanced reporting templates become the standard, OTC ISIN reporting for derivatives should be phased out given that UPI and additional fields together provide equivalent or superior coverage. This transition will reduce reporting complexity, lower operational costs, and provide regulators with more meaningful, actionable data.

Detailed Analytical Framework & Detailed Scope

Template-Based Approach

We analysed 23 product templates across asset classes:

- Rates: 5 templates
- Credit: 5 templates
- Equities: 5 templates
- FX: 5 templates
- Commodities: 3 templates

Representative Product Selection

As noted, we intentionally selected high-volume products that:

- Cover the main feature sets per asset class (swaps, forwards, options)
- Represent economically significant derivatives in terms of volume
- Demonstrate core attribute patterns (e.g., IRS for Rates, CDS for Credit)

RATES	FX	CREDIT
Rates.Swap.Fixed_Float	Foreign_Exchange.Swap.FX_Swap	Credit.Swap.Corporate
Rates.Option.Swaption	Foreign_Exchange.Forward.Forward	Credit.Swap.Total_Return_Swap
Rates.Swap.Fixed_Float_OIS	Foreign_Exchange.Forward.NDF	Credit.Swap.Index
Rates.Swap.Cross_Currency_Fixed_Float	Foreign_Exchange.Option.NDO	Credit.Swap.Sovereign
Rates.Forward.FRA_Index	Foreign_Exchange.Option.Vanilla_Option	Credit.Option.Index_Swaption
EQUITY		**COMMODITIES**
Equity.Swap.Price_Return_Basic_Performance_Single_Name		Commodities.Forward.Forward
Equity.Swap.Portfolio_Swap_Single_Name		Commodities.Swap.Swap
Equity.Option.Single_Name		Commodities.Option.Option
Equity.Option.Single_Index		
Equity.Swap.Portfolio_Swap		

Validation Method

The analysis derived its robustness from:

- Template Completeness: Each template represents hundreds of real-world products (e.g., UPI-005 for cross-currency swaps covers all EUR/USD, GBP/JPY, etc. variants)
- Attribute Mapping: 100% of UPI/OTC ISIN attributes were examined per template to contrast what information the attributes conveyed.
- Regulatory Alignment: Cross-referenced with RTS 22 fields for all reported attributes.

Note: RTS 22 reporting guidelines permit attributes within identifiers to be included in the identifier itself, preventing redundant reporting. The comparison analysis tables do not suggest duplicating UPI fields under RTS 22, but simply demonstrate attribute coverage.

Results of an example analysis of the templates for Cross Currency Fixed Float swap products is given in the table below; these templates are indexed by ANNA DSB as templates UPI 005 and OTC ISIN 005[7] in the product definitions.

RTS 22 field		Corresponding attribute(s) from UPI template	Corresponding attribute(s) from OTC ISIN template
Field no	**FIELD**	**UPI-005 RATES/SWAP/ CROSS_CURRENCY_FIXED_FLOAT**	**Rates. Swap. Cross_Currency_Fixed_Float**
41	**Instrument identification code**	UPI	ISIN
42	**Instrument full name**	Short Name	Full Name
43	**Instrument classification**	CFI	CFI
44	**Notional currency 1**	Notional Currency	Notional Currency
45	**Notional currency 2**	Other Notional Currency	Other Notional Currency
46	**Price multiplier**		Price Multiplier
47	**Underlying instrument code**		
48	**Underlying index name**	Reference Rate	Reference Rate
49	**Term of the underlying index**	Reference Rate Term Value+Reference Rate Term Unit	Reference Rate Term Value+Reference Rate Term Unit
50	**Option type**		
51	**Strike price**		
52	**Strike price currency**		
53	**Option exercise style**		
54	**Maturity date**		Expiry Date
55	**Expiry date**		
56	**Delivery type**	Delivery Type	Delivery Type

The results of the full analysis across the 23 products can be found here for Credit, Equities, FX, Rates and Commodities.

[7] https://www.anna-dsb.com/product-definitions1/

References

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Appendix

Detailed Key findings of analysis of UPI and RTS 22

1: Cross-Asset Class Conclusions

UPI Provides Consistent Core Coverage

- Across all five asset classes, UPI templates consistently capture the essential economic attributes needed for product identification: notional/currency, payoff/trigger, underlier/index, and settlement/delivery type.
- UPI omits contract-specific dates and scaling details, focusing on product-level grouping rather than contract-level fragmentation.

OTC ISIN Leads to Excessive Fragmentation

- OTC ISIN codes introduce additional fields—expiry date, term, price multiplier, transaction type—that create many redundant identifiers for economically identical products.
- This is especially pronounced in high-volume products (e.g., swaps, forwards, options) across all asset classes.

RTS 22 Fields Fully Backstop Missing UPI Attributes

- Any attributes not present in UPI (e.g., expiry date, price multiplier, strike price/type) are already reportable under specific RTS 22 fields.
- This ensures no loss of regulatory detail or transparency when using UPI as the primary product identifier.

Identifier Complexity Reduction

- Using UPI as the main identifier can reduce identifier counts by 50–80% depending on asset class, greatly simplifying reporting and aggregation.
- OTC ISIN proliferation is most severe in Rates, FX, and Equity options, but also present in Credit and Commodities.

2: Interest Rates Derivatives Findings

(Based on "RTS-22-vs-UPI-vs-ISIN-2025-ver-Rates.xlsx")

- UPI templates for swaps, FRAs, OIS, and swaptions capture notional currency, reference rate, schedule, delivery type, and (for options) option type, exercise style, and valuation.
- OTC ISIN-only fields: Expiry date, contract term[8] (value/unit), and price multiplier—these drive unnecessary identifier proliferation for products with otherwise identical economics.

Conclusion: UPI is sufficient for product identification; ISIN adds only contract-specific granularity, which can be reported via RTS 22 fields.

3: Credit Derivatives Findings

(Based on "RTS-22-vs-UPI-vs-ISIN-2025-ver-Credit.xlsx")

- UPI templates for corporate CDS, index swaps, total return swaps, sovereign CDS, and index swaptions capture all necessary credit attributes: underlier (ISIN/LEI), debt seniority, delivery type, contract spec, series/version, and option features.
- OTC ISIN-only fields: Expiry date, price multiplier, and sometimes notional currency.

[8] See 7: Analysis of Tenor and Forward Period Requirements

Conclusion: UPI covers all economically relevant product features; OTC ISIN's extra fields are not required for regulatory aggregation and are already covered by RTS 22.

4: Equity Derivatives Findings

(Based on "RTS-22-vs-UPI-vs-ISIN-2025-ver-Equities.xlsx")

- UPI templates for index and single-name options, portfolio swaps, and price return swaps capture underlier identifiers, option type/exercise style, valuation method, payout triggers, and delivery type.
- OTC ISIN-only fields: Notional currency, expiry date, strike price/type, price multiplier, and in some swaps, underlier composition.

Conclusion: UPI covers all key economic attributes; OTC ISIN-only fields are either duplicative or can be explicitly reported via RTS 22.

5: FX Derivatives Findings

(Based on "RTS-22-vs-UPI-vs-ISIN-2025-ver-FX.xlsx")

- UPI templates for NDFs, FX forwards, FX options, NDOs, and FX swaps capture notional/other currency, settlement currency, and delivery type.
- OTC ISIN-only fields: Expiry date, price multiplier, and for swaps, OTC ISINs for each leg.

Conclusion: UPI provides all necessary product-level detail; OTC ISIN fields add only contract/date granularity, which is covered by RTS 22.

6: Commodities Derivatives Findings

(Based on "RTS-22-vs-UPI-vs-ISIN-2025-ver-Commodities.xlsx")

- UPI templates for commodity forwards, swaps, and options capture product taxonomy (base/sub/additional product), reference rate, payout trigger, option features, and delivery type.
- OTC ISIN-only fields: Notional currency, expiry date, transaction type, final price type, price multiplier.

Conclusion: UPI covers all product-defining features; OTC ISIN-only details are contract-specific and already reportable via RTS 22.

7: Analysis of Tenor and Forward Period Requirements

The Effective Date (when contractual obligations begin) and Trade Date (execution date) are critical for capturing temporal features like tenor and forward periods.

While UPI captures product-level attributes, these contract-specific dates remain essential for:

1. Calculating tenor (time remaining until maturity)
2. Identifying forward-starting contracts (where; effective date > trade date)

Current Gaps in RTS 22

- No explicit field for Effective Date (proposed but not yet implemented)
- Maturity Date not systematically reported for all derivatives
- Limited ability to derive tenor without both effective and maturity dates

Implementation Recommendations

1. Mandate Effective Date Reporting

- Add Effective Date as a field in RTS 22, aligned with ESMA's 2024 proposal for derivatives *("The proposed new field description can be aligned to the corresponding existing field for derivatives in the EMIR Refit RTS (field 43 Effective date)"*)
- Require ISO 8601 format (YYYY-MM-DD) for consistency.

2. Allow maturity date of all derivative products to be reported via RTS 22, by
   - Enhancing usage of Maturity Date through adjustment of advice on "content to be reported" for field 54 in RTS 22. It should be clear that this field is for reporting of the Maturity Date (when contractual obligations end) for Forwards, Swaps and other derivatives where maturity date is applicable.
   - Maintain existing Field 55 (Expiry Date) and continue to allow it to explicitly handle expiry dates for option products.
3. Derived values for Tenor and Forward Period are then calculable by regulators for all applicable products using trade date, effective date and maturity dates reported explicitly via RTS 22.