

# *Advisory Platform Programme*

## Asset Classification Workstream

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Artefact:

Asset Classification rules

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## 2 Governance & Document Management

### 2.1 Revision History

Date	Version	Status	Prepared by	Comments
08.11.17	0.1	Draft	BlackRock	Initial Draft
14.11.17	0.2	Draft	BlackRock	Added Single-Line Equities product type
21.11.17	0.3	Draft	BlackRock	Added delisted security and risk country
04.12.17	0.4	Draft	BlackRock	Revised as per feedback. Added fixed income sections
09.01.18	0.5	Draft	BlackRock	Revised fixed income section. Added Alternatives section
26.01.18	0.6	Draft	BlackRock	Finalized Fixed Income and Equity sections. Removed Alternatives section given pending revision
21/02/18	0.7	Draft	Ntiana Beracha	Edited comments
22/02/2018	0.8	Draft	Michael Arrowsmith	Incorporating comments & recent items from the action log
01/08/2018	0.9	Draft	Declan Murphy	Edited comments and provided feedback from Equity Product Leads
06/03/2018	0.10	Draft	Michael Arrowsmith	Incorporating feedback from Equity Product Leads
07/03/2018	0.11	Draft	Michael Arrowsmith	Incorporating currency definitions and other feedback
13/03/2018	0.12	Draft	Michael Arrowsmith	Finalizing Fixed Income sections
14/03/2018	0.13	Draft	Michael Arrowsmith	Finalizing Fixed Income sections
15/03/2018	0.14	Draft	Declan Murphy	Finalizing Fixed Income & Liquidity sections
22/03/2018	0.15	Draft	Declan Murphy	Updated with final input from Laurent & Regional Asia feedback
22/05/2018	0.16	Draft	Michael Arrowsmith	Added Alternative section for HSBC to fill in
08/06/2018	0.17	Draft	Michael Arrowsmith	Added FX section (sections for HSBC to fill in)
25/06/2018	0.18	Draft	Bo Osibodu	Completed FX section following feedback from FX leads
27/06/2018	0.19	Draft	Monsur Rashid Declan Murphy	Preliminary definitions for Alternatives section added
20/07/2018	0.20	Draft	Bo Osibodu	Preliminary definitions for Structured Product section added

26/07/2018	0.21	Draft	Bo Osibodu	Asset Classification Mapping Rules for Structured Products and FX expanded
01/08/2018	0.22	Draft	Maria Makrii	Added attributes section
01/08/2018	0.23	Draft	Declan Murphy	Full Document Review
02/08/2018	0.24	Draft	Bo Osibodu	Funds & ETF Product Type and Asset Class section incorporated and Full Document Review
06/08/2018	0.25	Draft	Bo Osibodu	Asset Classification for REITs updated
07/08/2018	0.25	Draft	Geraldine Carvello	Removing "Stock Borrowing and Lending" and "Bond Borrowing and Lending" from Product types Level3, to align with Classification regime
09/08/2018	0.26	Draft	Declan Murphy	Small addition to the list of Focused Morningstar Categories in section 7.4, alignment of Attributes definitions and values to final agreed view in section 6
05/08/2018	0.27	Draft	Bo Osibodu	Structured product and Derivative Asset Classification Updated.
11/09/2018	0.28	Draft	Bo Osibodu	Deposit and Credit Facilities (Product Type) updated.
12/09/2018	0.29	Draft	Bo Osibodu	Credit Facilities, Contingent Liabilities and Margin Trading (Product Type) added.
13/09/2018	0.30	Draft	Bo Osibodu	Streamlined SP asset classification rules
17/09/2018	0.31	Draft	Michael Arrowsmith	Added sections Asset Class sector "Other mixed", Product Type section for Index and revised wording & formatting elsewhere.
20/09/2018	0.32	Draft	Michael Arrowsmith	Changed Country breaks in Appendix
03/10/2018	0.33	Draft	Michael Arrowsmith	Added section on the aggregation of Asset Classification
04/10/2018	0.34	Draft	Bo Osibodu	Added definitions for Product type Deposits and Cash, Credit, Contingent Liabilities, Margin Trading, and Others
05/10/2018	0.35	Draft	Michael Arrowsmith	Amended Morningstar categories in Focused Fund mappings in the Appendix that were back to front
19/10/2018	0.36	Draft	Michael Arrowsmith	Updated Morningstar Categories considered Focused
31/10/2018	0.37	Draft	Michael Arrowsmith	Updated Morningstar Categories considered Focused and defined the PM types
05/11/2018	0.38	Draft	Michael Arrowsmith	Updated Morningstar Categories considered Focused
19/11/2018	0.39	Draft	Michael Arrowsmith	Updating Depositary Receipt & Preferred share definition

30/11/2018	0.40	Draft	Barbora Letavayova	Addition of Asset Type section in Appendix
06/02/2019	0.41	Draft	Bo Osibodu	Separation of Accumulator and Decumulator to mirror update to ACR
08/04/2019	0.42	Draft	Barbora Letavayova	Correction of FAQ 4.2.5 Addition of Definitions
09/06/2019	0.43	Draft	Michael Arrowsmith	Updating sector names to match revised HSBC asset class schema
11/06/2019	0.44	Draft	Michael Arrowsmith	Updating Fund classification sector for Fixed Income and adding section on overrides
17/06/2019	0.45	Draft	Michael Arrowsmith	Adding EuroFund definition
08/03/2021	0.46	Live	Brian Waldele	Update For REIT & Units
06/05/2022	0.47	Live	Michael Arrowsmith	Updates to asset class for Asia AC enhancement (more granularity) and addition of new SP product types. Additions also for Liquidity – Insurance for EuroFunds
02/08/2022	0.48	Live	Vishal Suhindani	Updates to fund lookthrough for new holdings methodology
02/08/2022	0.49	Live	Michael Arrowsmith	Providing more colour on handling of FX Forward/Spot in AC in portfolios section
19/10/2022	0.50	Live	Vishal Suhindani	Updates to the handling of fund liquidity holding – now classified as other mixed upon request; Updated the focused fund mapping table in appendix

## 2.2 Document Control

Role	Name	Role	E-mail	Telephone
Owner	Hani Daou	Asset Classification Lead		
Preparer	BlackRock			
Reviewer	Ntiana Beracha	Asset Classification		
Reviewer	Sandy Choi	Asset Classification		
Reviewer	Mariia Markrii	Asset Classification		
Reviewer	Bo Osibodu	Asset Classification		
Reviewer	Barbora Letavayova	Asset Classification		
Reviewer	Kevin Lyne-Smith	Equities Product Head		
Reviewer	Nadia Hajjoub	Equities Product Specialist		
Reviewer	Laurent Lacroix	Fixed Income Product Head		
Reviewer	Georgios Leontaris	Fixed Income Product Specialist		
Reviewer	Selcuk Sanliturk	Liquidity Product Specialist		
Reviewer	Elie Abi-Abdallah	Structured Products Head		
Reviewer	Aash Shah	Structured Products Specialist		
Reviewer	Nicoletta Trovisi	FX Product Specialist		



Reviewer	Sai K Tampi	Funds & ETFs Product Head		
Reviewer	Eckhard Weidner	Funds & ETFs Product Specialist		
Reviewer	Henry D Lee	Alternatives Product Head		
Reviewer	Michael J Cox	Alternatives Product Manager		

## 2.3 Document Approval

Role	Name	Signature	Sign-off Date
Programme Sponsor	Stuart Parkinson		
Budget Owner	Muriel Danis		
HSBC Decision Panel	Tbc		
Business Lead	Hani Daou		

## 3 Background

As part of the HSBC PB roll-out of its new Advisory Services Proposition, known as Prism Advisory, BlackRock's Aladdin is being implemented as the strategic tool to act as a Risk Engine, with supporting Portfolio Construction and Portfolio Management capabilities to underpin and further enhance the GPB Prism Advisory Service Proposition.

Asset Classification will help provide an enhanced Advisory offering. The Asset Classification schema will ensure global consistency and promote alignment to the GPB Strategic Asset Allocation (SAA) which is the HSBC GPB view on the most effective way to achieve a specific Risk & Return target over the long-term.

The implementation of our new Asset Classification Regime will support the following:

- Aligning Client Risk Profiling and Knowledge and Experience assessments with the GPB SAA classification regime.
- Aligning GPB investment narratives, investment proposals, and portfolio reviews with the GPB SAA classification regime.
- Monitoring clients' portfolios against the GPB SAA effectively, without manual re-categorisation of a client's holdings.
- Provision of Advisory Reporting which aligns with the GPB SAA, without manual re-categorisation of a client's holdings.
- Enrichment of the portfolio construction process and services, as well as monitoring of clients' holdings by the provision of additional product attributes in GPB Security Master File.

Note that, although Asset Classification will be derived by Aladdin for all securities, HSBC have the ability to override both the classification in any instance (both Asset Class and Product Type). Users can reach out to their local advisory team for further information.

## 4 Product Types

### 4.1 Single-Line FI Securities

#### 4.1.1 Summary

The figure below outlines the three levels of the product schema for Single-line Fixed Income Securities. Each level will be defined in detail below.

Level 1	Level 2	Level 3
Single-Line Fixed Income	Bonds	Bonds
	Securitized	Securitized Bonds Residential MBS
		Securitized Bonds Commercial MBS
		Securitized Bonds ABS
		Securitized Bonds CMO CDO
		Securitized Other Mixed
	Convertible Bonds	Convertible Bonds
	Bond Options	Bond Options
	Bond Futures	Bond Futures
	Certificate Of Deposits And Commercial Paper	Certificate Of Deposits And Commercial Paper
	Loans	Syndicated Loans
	Single Line Fixed Income Other Mixed	Single Line Fixed Income Other Mixed

#### 4.1.2 Level 1

*Single-Line FI securities:*

Single-Line FI securities capture debt obligations and standardized derivative contracts that reference debt obligations. Debt obligations are those that entitle the holder to the payment of principal and interest and are generally issued for a fixed term (although can be perpetual) and redeemable by the issuer at the end of that term (ISO 10962 definition of debt securities).

#### 4.1.3 Level 2 and 3

*Bonds*

These instruments represent the debt obligations of companies, governments and government-related entities. These securities are used by entities to raise funds for investment and are accompanied with defined rules of payment and seniority in the event of default of the issuer.

Note that inflation linked bonds and covered bonds are captured within this product type, each will be identified through an additional (Y/N) attribute flag.

Note that this product type (i.e. Bonds) does contain Contingent Capital Notes (CCNs) of which “CoCos” are a subcomponent.

CCNs are hybrid securities issued by Financial institutions that provide a buffer in times of distress by absorbing losses. CCNs have two core features, the loss absorption method (either conversion to equity or a principal write down) and the trigger (the point at which loss absorption is activated). Triggers can be mechanical triggers (based on a specific capital ratio of the entity) or discretionary triggers (at the discretion of the relevant regulatory body, generally at the point of non-viability (PONV)).

HSBC PB distinguishes CoCos from other CCNs based on the trigger, only those instruments with a mechanical trigger are considered CoCos. These securities will be classified as bonds and separately identified through their ‘CoCo’ attribute which would indicate yes, they would also have a debt rank of “Junior Subordinated”. CCNs with

a discretionary trigger will also be classified as bonds, however will not be flagged as CoCos. All CCNs (regardless of trigger mechanism) will be identified as 'Bail-in Eligible' through a specific Bail-in Eligible attribute.

#### *Syndicated Loans*

This product type represents Syndicate Loans i.e. a loan offered by a group of lenders – referred to as a syndicate – that work together to provide funds for a single borrower. The borrower could be a corporation, a large project or a sovereignty.

HSBC's clients currently do not participate in syndicate loans through HSBC PB, nor does HSBC PB provide advice on such products. Should this change, HSBC will provide terms and conditions of these securities to BlackRock. This product type has been left in the manual to ensure completeness, since this is expected to change in the future.

#### *Securitized Bonds Residential MBS*

Securities backed by a pool of residential mortgages. Note that this product type includes adjustable rate mortgages.

#### *Securitized Bonds Commercial MBS*

A form of mortgage-backed security that is secured by mortgages on commercial properties, instead of residential.

#### *Securitized Bonds ABS*

Securities backed by financial assets other than mortgage loans, such as auto loans, whole business loans or credit cards.

#### *Convertibles Bonds*

Securities that can convert into equity. Note that this product type includes exchangeable convertible bonds. These are convertibles where the equity is that of another company and not the issuer of the convertible bond. For example, National Westminster Bank Convertible, ISIN: XS0041078535.

Note that this product type does not contain Contingent Capital Notes (CCNs) of which "CoCos" are a subcomponent. CCNs, including CoCos are captured under Bonds. CoCos specifically will be identified through a 'CoCo' attribute as stated above.

#### *Bond Options*

Options to buy or sell a bond at a certain price on or before the option expiry date. These can also be on Bond Futures.

#### *Bond Future*

Bond Futures are financial derivatives which obligate the contract holder to purchase or sell a bond on a specified date at a predetermined price. A bond future can be bought in a futures exchange market and the prices and dates are determined at the time the future is purchased.

#### *Certificates Of Deposits And Commercial Paper*

A certificate of deposit is a time deposit, akin to a saving accounts. Commercial paper is an unsecured, short-term debt instrument issued by a corporation. Note, this product type also contains commercial paper issued by municipal entities.

#### 4.1.4 Examples

The following are indicative product level examples:

- Bonds:
  - *German Nominal Government Bond:*
  - *Description:* Bundesrepublik Deutschland 1.5% 04/09/2022
  - *ISIN:* DE0001135499
  - *SEDOL:* B7YJD46
- Syndicate Loan:
  - *Description:* VERISR TL B1E 1L EUR Corp
- Securitized Bonds Residential MBS:
  - *Description:* FGOLD 30YR GIANT
  - *ISIN:* US3128M5EY23
- Securitized Bonds Commercial MBS:
  - *Description:* DBJPM\_16-C3
  - *ISIN:* US23312VAF31
- Securitized Bonds ABS:
  - *Description:* TOBACCO SETTLEMENT FING CORP L
  - *ISIN:* US88880PBW32
- Securitized Bonds CMO CDO:
  - *Description:* FNMA\_12-72
  - *ISIN:* US3136A64N15
- Convertible Bond:
  - *Description:* TWITTER 0.25 % NOTES 2015-15.9.19 CONV
  - *ISIN:* US90184LAB80
  - *SEDOL:* BYYN507
- Bond Option:
  - *Description:* MAR18 RXH8 C @ 160
  - *ISIN:* DE000C08RE47
- Bond Futures:
  - *Description:* US 10YR NOTE (CBT) FUT JUN 17
  - *Bloomberg Ticker:* TYM7 COMDTY
- Certificate Of Deposits And Commercial Paper:
  - *Description:* HINGHAM INSTITUTION FOR SAVINGS
  - *ISIN:* US433323AL65

#### 4.1.5 FAQs

*Q: Where are capital securities captured?*

A: These securities fall under both L1: Single-line FI > L2: Bonds and L1: Single-line Equities > L2: Preferred Shares. These are securities that possess characteristics of both equity and debt issues (hybrid), and if issued by a bank holding company they are treated as capital (Equity) rather than liabilities. Note, CoCos are treated differently, see below.

Capital securities are generally captured as Bonds. However, there are exceptions where Trust Preferred securities (including Bank Trust Preferred securities) and Tier 1 capital securities (excluding CoCos) are structured as preferred equities and appear in Single-Line Equities. Please see the Preferred Shares section in Single-Line Equities product type section for more details.

*Q: Where are CoCos captured?*

A: These securities are captured under bonds and are hybrid securities issued by Financial institutions. CoCos provide a buffer in times of distress by absorbing losses through converting into equity. The trigger event that causes conversion is dependent on the CET1 ratios of the issuer.

Note that “CoCos” are a subcomponent of Contingent Capital Notes (CCNs). CCNs are hybrid securities issued by Financial institutions that provide a buffer in times of distress by absorbing losses. CCNs have two core features, the loss absorption method (either conversion to equity or a principal write down) and the trigger (the point at which loss absorption is activated).

HSBC PB distinguishes CoCos from other CCNs based on the trigger, only those instruments with a mechanical trigger are considered CoCos. These securities will be classified as bonds and separately identified through their ‘CoCo’ attribute which would indicate yes, they would also have a debt rank of “Junior Subordinated”. CCNs with a discretionary trigger will also be classified as bonds, however will not be flagged as CoCos. All CCNs (regardless of trigger mechanism) will be identified as ‘Bail-in Eligible’ through a specific Bail-in Eligible attribute.

*Q: Where are Government, Municipal and Agency debt captured?*

A: These securities are captured under Bonds in the product type breakdown. Differentiation between debt issued by Governments and Municipalities will be made in the Asset Class schema. Assuming the bonds are issued by Developed Market issuers, the former will fall under Government Developed and the latter under Government Related Developed. If the bonds are issued by an Emerging Market country then the Asset Class Exposure will be either Emerging Market Debt-Hard Currency or Emerging Market Debt-Local Currency. The difference between Governments and Municipalities, however, will be mapped through the Sector attribute. From a Product Type perspective however, all forms of debt will fall under Bonds.

*Q: How are mortgage related corporate debt captured?*

These bonds have property as collateral (i.e. 1st Mortgage), which is part of the issuer’s balance sheet. These are not securitized loans. Examples include:

- *Example 1*
  - o *Description:* WESTAR ENERGY INC
  - o *ISIN:* US95709TAH32
- *Example 2:*
  - o *Description:* TRI-STATE GENERATION AND TRANSMISS
  - o *ISIN:* US89566EAK47

These securities will fall under the product type of Bonds.

*Q: How is debt that has been issued relating to a SPV/SPE to raise capital for a significant purchase (e.g. Aircraft Lease) treated?*

A: Enhanced Equipment Trust Certificates (EETCs) will fall under “Securitized Bonds – ABS (Non Mortgage)”. EETCs are collateralised corporate debt securities used primarily by airlines to purchase aircrafts. They are secured by the collateral and further supported by certain structural elements, such as debt tranching, availability of liquidity facilities, and overcollateralization.

*Q: How are non-US CMOs captured?*

A: Securitized assets that are not mortgage pass-throughs may generally be referred to as “ABS” in Europe. Within Product Classification however, all European CMOs have been captured in the “Securitized Bonds - CMO/CDO”. All European MBS securities will fall into “Securitized Bonds - Residential MBS” or “Securitized Bonds - Commercial MBS (CMBS)” bucket as appropriate.

For example,

- *Example 1*
  - o *Description:* Home Equity backed securitized asset
  - o *Ticker:* BSABS\_06-H7-IIM1
  - o *ISIN:* US07388HBK41

*Q: How are Bail-in Eligible bonds captured?*

A: Securities that are considered as loss absorbing under FRS, MREL and TLAC or local regulation criteria will be identified by an additional Bail-in Eligible attribute flag.

#### 4.1.6 Requirements

##### *Market Data*

- Distinguishing security product types for Level 1 to 3 – Thomson Reuters

##### *HSBC Security Master Data*

- HSBC are required to identify Syndicated Loans
- HSBC are required to identify Bail-in Eligible debt
- HSBC are required to differentiate CNNs with discretionary triggers vs mechanical triggers (i.e. CoCos)
- HSBC are required to identify a Dual Currency Bonds

## 4.2 Single-Line Equity Securities

### 4.2.1 Summary

The figure below outlines the three levels of the product schema for Single-line Equity Securities. Each level will be defined in detail below.

Level 1	Level 2	Level 3
Single-line Equities	Preferred Shares	Preferred Shares
	Ordinary Shares	Ordinary Share Bearer
		Ordinary Share Registered
	Depositary Receipts	Depositary Receipts
	Equity Options	Equity Options
	Warrants	Warrants
	Rights	Rights
	Futures Options	Futures Options
	Futures on Equities	Futures on Equities
	Participation Certificates	Participation Certificates
	Single Line Equity Other Mixed	Single Line Equity Other Mixed

### 4.2.2 Level 1

Single line equity:

Financial instruments representing an ownership in an entity or pool of assets. (ISO 10962 definition)

### 4.2.3 Level 2 and 3

The sections below describe each product type in the equity product type schema.

#### *Preferred Shares*

A class of ownership in a corporation that has a higher claim on the assets and earnings than common stock or corporate debt and retail bonds that are traded on stock exchanges and designed for sale to retail investors. Preferred shareholders have priority over common stockholders on earnings and assets in the event of liquidation and they have a fixed dividend (paid before common stockholders).

The definition of preferred shares includes preferred shares with a fixed dividend that often have no voting rights and perpetual preferred shares. Preference shares, which have variable dividends and may have limited voting rights are also captured under Preferred shares. There are a variety of different types of preferences shares which include the Participating Preference shares as well as the following:

- Cumulative Preference Shares
  - o E.g. AVIVA % CUM IRRD PREF PLC, ISIN GB0002114154, SEDOL: 0211415
- Redeemable Preference Shares
  - o E.g. CANADIAN UTILITIES LIMITED, ISIN CA1367176429, SEDOL: B98D0M5
- Convertible Preferences Shares
  - o E.g. BANK OF AMERICA CORP, ISIN US0605056821, SEDOL: B2PB3Z7

Note, some capital securities are captured under preferred shares. Capital securities possess characteristics of both equity and debt issues (hybrid), and if issued by a bank holding company they are treated as capital rather than liabilities. E.g. Citigroup Capital IX, ISIN: US1730662004, SEDOL: 2340618.

Capital securities generally fall within Bonds. Those that are structured as Preferred Shares however, (and thus fall in Single-Line Equity), are Trust Preferred securities (including Bank Trust Preferred securities) and Tier 1 capital securities (excluding CoCos). Tier 1 capital comprises equity-like components such as the following:

- Ordinary shareholders equity; retained earnings; perpetual (undated) non-cumulative preferred stock (Tier 1 Preferred); reserves created by appropriations of retained earnings, share premiums and other surpluses; and minority interests.

Note that this Product Type also captures Depositary Receipts on Preferred Shares and depositary receipts on Preference shares since they are considered Preferred.

#### *Ordinary Shares > Ordinary Share Bearer*

A bearer share is an equity security wholly owned by whoever holds the physical stock certificate. The issuing firm neither registers the owner of the stock nor tracks transfers of ownership.

#### *Ordinary Shares > Ordinary Share Registered*

Securities signifying ownership in a corporation and representing a claim on part of the corporation's assets and earnings. These securities represent the "Common Stock" portion of the company's Balance Sheet.

Note, Real Estate Investment Trusts, Real Estate Unit Trusts, Stapled securities and Limited Partnerships (including Master Limited Partnerships) are captured under either "Ordinary Share Registered" or "Preferred Shares" securities.

For Example:

- REIT
  - *Description:* Ashford Hospitality Trust REIT
  - *SEDOL:* 2310116
- Limited Partnership
  - *Description:* Natural Resource Partners
  - *SEDOL:* 2019015
- Stapled Securities
  - *Description:* Far East Hospitality Trust REIT TR
  - *SEDOL:* B8GM577

#### *Depositary Receipts*

A document issued by a bank to represent the foreign company's publicly traded shares in the place of ordinary registered shares, thus making it easier to deal in foreign securities because the actual stock certificates do not have to be physically transferred. Depositary receipts trade on a local exchange but the custodian bank in a foreign country holds the actual shares.

Depositary shares represents the foreign shares of the company held on deposit by a custodian bank in the company's home country and carries the corporate and economic rights of the foreign shares, subject to the terms specified on the ADR certificate.

The following types are considered within this product type:

- Depositary Receipt
- ADR (American Depositary Receipt)
- ADS (American Depositary Shares)
- EDR (European Depositary Receipt)
- EDS (European Depositary Shares)
- GDR (Global Depositary Receipt)
- GDS (Global Depositary Shares)
- IDR (International Depositary Receipt)
- IDS (International Depositary Shares)
- Chess Depositary Interests



- Subscription Receipt
- Thai Non-Voting Depositary Receipt

**Note:** Depositary Receipts on Ordinary shares are captured within this product type but Depositary Receipts on Preferred shares are not. This is also true for Depositary Receipts on Preferred Shares. Depositary Receipts on Preferred Shares are captured under the Preferred Shares level 2 Product Type.

#### *Equity Options*

In its simplest form, an equity option is the right to buy or sell the underlying equity at an agreed-upon price on a specified date or date range. The underlying equity of these instruments can be either a singular registered share or a singular equity index (e.g. the S&P 500 equity index or the Euro Stoxx 50 equity index).

#### *Warrants*

A derivative security that gives the holder the right to purchase equity from the issuer at a specific price within a certain time frame.

#### *Rights*

An issue of rights to a company's existing shareholders that entitle them to buy additional shares directly from the company in proportion to their existing holdings, within a fixed period. These securities are like warrants (described below) except that the warrants do not have to be issued only to existing shareholders.

Equity rights also includes Fully Paid rights which are the rights to acquire new shares for which full payment of the subscription price has been made.

#### *Futures Options*

Options on futures are derivatives which allow a trader to enter into either side of a futures contract. A put is the option to sell a futures contract (to take a short position) and a call is the option to buy a futures contract (to take a long position) at a strike price. The strike price represents the specified price of the contract if the option is exercised. The underlying of these instruments a singular equity index.

#### *Futures on Equities*

A future is an exchange traded forward contract. The underlying of these forward contracts is either a single stock or an index.

#### *Participation Certificates*

A participation certificate, in Europe, refers to an interest in a separate class of share capital. In this specific example, the company decided to issue participation notes rather than split the shares (trading at CHF69800 per share) to maintain voting rights.

### 4.2.4 Examples

The following are indicative product level examples:

- Single Line Equity > Preferred Shares
  - *Description:* Co-operative Bank Plc 9.25% PFD
  - *ISIN:* GB0002224516
  - *SEDOL:* 0222451
- Single Line Equity > Depositary Receipt
  - *Description:* Banco Santander ADR
  - *ISIN:* US05964H1059
  - *SEDOL:* 2018186
- Single Line Equity > Warrant
  - *Description:* FastJet Plc
  - *ISIN:* GB00BD3H7G38

- *SEDOL:* BD3H7G3
- Single Line Equity > Ordinary Shares – Ordinary Share – Registered
  - *Description:* IMPERIAL OIL LTD
  - *ISIN:* CA4530384086
  - *SEDOL:* 2454241
- Single Line Equity > Rights
  - *Description:* CORPORATE TRAVEL MANAGEMENT LTD RT
  - *ISIN:* AU0000CTDRB3
  - *SEDOL:* BD0XX88
- Single Line Equity > Futures on Equities (exchange traded)
  - *Description:* MINI-DAX FUTURE JUN 16
  - *Ticker:* DFWM6
- Single Line Equity > Equity Options
  - *Description:* DEC19 BBVA C @ 7.750000
  - *ISIN:* ES0A01070457
- Single Line Equity > Equity Options
  - *Description:* DEC18 DAX P @ 9800.000000
  - *ISIN:* DE000P93T430
- Single Line Equity > Futures Options
  - *Description:* DEC20 MTX C @ 120.000000
  - *ISIN:* DE000C8BN5D8

#### 4.2.5 FAQs

*Q: Are ETFs considered Ordinary shares?*

A: ETFs are captured elsewhere in the product type schema and not within Single Line Equity despite shared characteristics.

*Q: How are Equity Funds Treated?*

A: These securities are grouped with Funds and ETFs, a separate section to Single-Line Equities in level 1 of the Product Type schema. The Asset Class schema captures the fact that the underlying of Funds and ETFs can include equity components, whereas their Product Type captures the security's features.

*Q: How are Real Estate Investment Trusts, Real Estate Unit Trusts, Limited Partnerships and Master Limited Partnerships captured?*

A: These securities are included within Single-line Equities and captured under the L3 Product Type "Ordinary Shares Registered" or "Preferred Shares". See section 6.3.3 under *Ordinary Shares > Ordinary Share Registered*.

*Q: How are Depositary Receipt handled?*

A: The domicile of the issuer is used to drive the Asset Class mapping for depositary receipts. Take for example the Cannon ADR (ISIN: US1380063099). The Asset Class is "Developed – Japan" although this American depositary receipt is USD denominated. Note that here the country risk may differ to the currency risk for such securities.

*Q: How are Equity linked Notes handled?*

Equity Index linked notes, as well as single name Equity linked notes, will be classified as Structured Products. Please see the Structured Product section 4.4 for more information.

#### 4.2.6 Requirements

*Market Data*

- Distinguishing security product types for Level 1 to 3 – Thomson Reuters

*HSBC Security Master Data*

- HSBC are required to identify Bearer Shares
- HSBC are required to identify Participation Certificates

## 4.3 Funds and ETFs

### 4.3.1 Summary

Level 1	Level 2	Level 3
Funds and ETFs	Mutual Funds	Mutual Funds UCITS
		Mutual Funds Non UCITS US
		Mutual Funds Non UCITS Non US
		Mutual Funds - Other Mixed
	Exchange Traded Products	Exchange Traded Products UCITS
		Exchange Traded Products Non UCITS US
		Exchange Traded Products Non UCITS Non US
		Exchange Traded Products Other Mixed

### 4.3.2 Level 1

Funds and Exchange Traded Funds (ETFs) are investable and marketable securities that combine a pool of individual securities into a single financial security which aim to outperform a benchmark (mutual fund) or track a benchmark (ETF).

### 4.3.3 Level 2

- This is fully Supported by BlackRock – No assumptions needed
- BlackRock will use vendor information to distinguish between Mutual Funds and Exchange Traded products.

### 4.3.4 Level 3

- This is fully Supported by BlackRock – No assumptions needed
- UCITS designation will be sourced from Morningstar
- Country of domicile (US vs. Non-US) is sourced from other Aladdin data vendors

#### *Mutual Funds UCITS*

These are a managed pool of securities that aim to outperform a benchmark and follow the Undertakings for the Collective Investment of Transferable Securities (UCITS) directive as laid out by the European Commission.

#### *Mutual Funds Non UCITS US*

These are a managed pool of securities domiciled in the US that aim to outperform a benchmark where the Undertakings for the Collective Investment of Transferable Securities (UCITS) directive as laid out by the European Commission does not apply.

#### *Mutual Funds Non UCITS Non US*

These are a managed pool of securities not domiciled in the US that aim to outperform a benchmark where the Undertakings for the Collective Investment of Transferable Securities (UCITS) directive as laid out by the European Commission does not apply.

#### *Exchange Traded Products UCITS*

These refer to exchange traded products that aim to track a benchmark and follow the Undertakings for the Collective Investment of Transferable Securities (UCITS) directive as laid out by the European Commission.

#### *Exchange Traded Products Non UCITS US*

These refer to exchange traded products domiciled in the US that aim to track a benchmark where the Undertakings for the Collective Investment of Transferable Securities (UCITS) directive as laid out by the European Commission does not apply.

#### *Exchange Traded Products Non UCITS Non US*

These refer to exchange traded products not domiciled in the US that aim to track a benchmark where the Undertakings for the Collective Investment of Transferable Securities (UCITS) directive as laid out by the European Commission does not apply

### 4.3.5 FAQs

#### *Q: How will Unitized Equity Securities & Unit Trusts be classified?*

A: Securities that represent a unit of ownership in a company & unit trusts will be classified under Single Line Equities

#### *Q: How will Closed Ended Funds be classified?*

A: Closed Ended Funds will be classified under Mutual Funds at a level 2 and the appropriate L3 based on their UCITS/Non-UCITS and US/Non-US status.

#### *Q: Where Morning Star coverage/data is not available how will Funds be classified?*

A: These Funds and ETFs will be classified into the relevant level 3 Non UCITS buckets.

#### *Q: How will Mutual Funds following Alternative Mandates be classified?*

A: Unless explicitly listed in the Master Approved Alternative Funds Lists (MAAFL) published by HAIL, Funds & ETFs falling into Alternative Morningstar categories will still be captured under Mutual Funds. Their Asset Class will be captured under the Alternative strategies in "Alternatives > Hedge Funds" however. For example, ISIN: LU0411704413, BSF European Absolute Return Fund Class A2, will be classified as a Mutual Fund but map into Alternatives > Hedge Funds > HF Market Neutral.

## 4.4 Structured Products (SPs)

### 4.4.1 Summary

The figure below outlines the three levels of the product schema for Structured Product securities. Each level will be defined in detail below

Level 1	Level 2	Level 3
Structured Product	Fixed Income Note	Credit Linked Note
		Single Bond Repack
		Portfolio of Bond Repack
		Bond Repack with CDS Overlay
		Deposit Repack
	Rate Note	Fixed Rate Note
		Floating Rate Note
		Step Up Note
		Steepener
		Flattener
		Switchable Note
		Reverse Convertible Rates
		Autocallable Rates
		Range Accrual Note
		Callable Range Accrual Note
		Floored Note
		Cap Floor Floater Note
		Digital Note
	Equity Note	Equity Linked Note
		Reverse Convertible Equity
		Autocallable Yield Note
		Fixed Coupon Note
		Phoenix Note
		Step-down Note
		Callable Daily Accrual
		Equity-Linked Note With Daily KO
		Callable Yield Note
		Bonus Coupon Note
		Bonus Coupon Note With Floor
		Bonus Locker Note
		Bonus Locker Note With Floor
		Twin Win Note
		Growth Note
		Growth Note Up And Out
		Growth Note With Floor
		Booster Note
		Airbag Note
		Constant Proportion Portfolio Insurance Note
		Volatility Tracker Note
		Dynamic Tracker Note
		Delta One Equity Tracker
		Digital Equity Note
		Outperformance Note
		Stability Note
	FX Note	Dual Currency Digital Note
		Dual Currency Floating Rate Note
		Triple Currency Note

		Currency Principal Floored Digital Note
		Currency Principal Floored Participation Note
		Autocallable Note
		Currency Forward Rebate Note
		Twin Win Shark Fin Note
		Bullish Shark Fin Note
		Daily Range Accrual Note with Conversion
		Principal Protected Callable Range Accrual Note
	Fund Note	Fund Linked Note With Floor
	Commodities Note	Delta One Commodities Tracker
		Step Down Callable Note
		Autocallable Commodities Note
		Twin Win Callable Note
	OTC	Pivot
		Option
		Accumulator
		Decumulator
		Interest Rate Swap
		Interest Rate Cap And Floor
		Credit Default Swap
		CSTF
		Total Return Swap
		OTC Structured Product Other Mixed
	Structured Product Other Mixed	Structured Product Other Mixed

#### 4.4.2 Level 1

##### *Structured Product*

A financial instrument that gives an investor the ability to participate in the performance of one or more underlying assets.

#### 4.4.3 Level 2

##### *Fixed Income Note*

A structured note with fixed income underlying.

##### *Rate Note*

A structured note linked to an interest rate (e.g. Libor).

##### *Equity Note*

A structured note with an equity underlying including equity shares, equity ETFs and equity indices.

##### *FX Note*

A funded structured note whereby the payoff is linked to foreign exchange rates. Note: unfunded FX Positions are captured under the Level 1 'FX, PM, Other Commodities' please see section 4.5.

##### *Fund Note*

A structured note with a fund as the underlying which determines the pay off.

##### *Commodities Note*

A structured notes with a commodity underlying.

Over the Counter (OTC)

These are derivative contracts or agreements linked to an underlying and traded directly between two parties.

#### *Structured Product Other Mixed*

Other structured note not captured above.

### 4.4.4 Level 3

#### *Credit Linked Note*

Structured as a security with an embedded credit default swap allowing the issuer to transfer a specific credit risk to credit investors.

#### *Single Bond Repack*

A repackaged note where a Special purpose vehicle (SPV) holds a single bond as the charged asset. The Note in return pays an interest or coupon. The coupon is derived by the SPV entering into a cash flow conversation agreement with a swap or hedging counterparty.

#### *Portfolio of Bond Repack*

A repackaged note where a Special purpose vehicle (SPV) holds a portfolio of bond as the charged asset. The Note in return pays an interest or coupon. The coupon is derived by the SPV entering into a cash flow conversation agreement with a swap or hedging counterparty.

#### *Bond Repack with CDS Overlay*

A repackaged note where a Special purpose vehicle (SPV) holds a bond as the charged asset. In addition, the transaction to for the issuer to sell a Credit default swap (a for mf credit insurance) on a specific assets is also entered. The Note in return pays an interest or coupon. The coupon is derived by the SPV entering into a cash flow conversation agreement with a swap or hedging counterparty.

#### *Deposit Repack*

A repackaged note where a Special purpose vehicle (SPV) enters into a deposit agreement with a depository counterparty. The Note in return pays an interest or coupon. The coupon is derived by the SPV entering into a cash flow conversation agreement with a swap or hedging counterparty.

#### *Fixed Rate Note*

A fully principal protected note which pays a fixed rate coupon.

#### *Floating Rate Note*

A fully principal protected structured note whereby coupon payments are linked to the movement in a reference rate (usually money market rates, such as the EURIBOR or LIBOR).

#### *Step up Note*

100% principal protected note which pays a fixed coupon that increases at certain points during the tenor of the note.

#### *Flatteners / Steepeners*

A swap or bond where the payoff is derived from the spread between long term and short term interest rates, typically 2yr and 10yr.

#### *Switchable Note*

100% principal protected note which pays a fixed coupon that is subject to a switch option i.e. the issuer has the right to irrevocably “switch” the fixed coupon to a floating coupon linked to a Reference Rate by giving prior notice. If the Issuer does not exercise the Switch Option, then coupon payment remains at the fixed rate.



#### *Autocallable Rates*

A note linked to an underlying interest rate which pays a coupon based on predetermined conditions linked to the performance of the underlying. The security will also have an autocall feature which allows the note to be redeemed earlier than maturity if the performance of the underlying meets certain conditions. If Principal is not 100% protected, the repayment at maturity will also be linked to the performance of the underlying.

#### *Range Accrual Note*

A fully capital protected structured product where the coupon is linked to the performance of a reference rate, and the coupon rate is only accrued on days when the rate from which the coupon is derived falls within a specified range.

#### *Callable Range Accrual Note*

A fully capital protected structured product where the coupon is linked to the performance of a reference rate, and the coupon rate is only accrued on days when the rate from which the coupon is derived falls within a specified range. The security will also have a call feature which gives the issuer a right to redeem the note early at their discretion.

#### *Floored Note*

A fully principal protected structured note whereby coupon payments are linked to the movement in a reference rate (usually money market rates, such as the EURIBOR or LIBOR). The note will also have a predefined minimum coupon rate or floor rate.

#### *Cap Floor Floater Note*

A fully principal protected structured note whereby coupon payments are linked to the movement in a reference rate (usually money market rates, such as the EURIBOR or LIBOR). The note will also have a predefined minimum coupon rate and maximum coupon rate.

#### *Digital Note (Rate and Equity)*

A fully principal protected note with a payoff that is contingent upon certain events e.g. coupon paid if underlying closes above 120%; if not, no coupon paid. (Investor is a long zero coupon bond and long a digital option or strip of digital options) (NOTE: the same definition applies to a "Currency Principal Floored Digital Note" whereby it is linked to FX.)

#### *Reverse Convertible (Equity and Rate) / Equity Linked Note*

A note linked to an underlying equity position which pays a coupon based on predetermined conditions linked to the performance of the underlying. If Principal is not 100% protected, the repayment at maturity will also be linked to the performance of the underlying.

#### *Autocallable Yield Note*

A note linked to an underlying equity position which pays a coupon based on predetermined conditions linked to the performance of the underlying. The security will also have an autocall feature which allows the note to be redeemed earlier than maturity if the performance of the underlying meets certain conditions. If Principal is not 100% protected, the repayment at maturity will also be linked to the performance of the underlying.

#### *Fixed Coupon Note*

A note linked to an underlying equity position which pays a coupon based on predetermined conditions linked to the performance of the underlying. The security could also have an autocall feature which allows the note to be redeemed earlier than maturity if the performance of the underlying meets certain conditions. If Principal is not 100% protected, the repayment at maturity will also be linked to the performance of the underlying.

#### *Phoenix Note*

A note linked to an underlying equity position which pays a coupon based on predetermined conditions linked to the performance of the underlying. The security will also have an autocall feature which allows the note to be redeemed earlier than maturity if the performance of the underlying meets certain conditions. If Principal is not 100% protected, the repayment at maturity will also be linked to the performance of the underlying.

#### *Step-down Note*

A note linked to an underlying equity position which pays a coupon based on predetermined conditions linked to the performance of the underlying. The security also has an autocall feature which allows the note to be redeemed earlier than maturity if the performance of the underlying reaches a certain level. This Level will step down during certain predefined periods within the life of the note. If Principal is not 100% protected, the repayment at maturity will also be linked to the performance of the underlying.

#### *Callable Daily Accrual*

A note linked to an underlying equity position which pays a coupon based on predetermined conditions linked to the performance of the underlying. The security could also have an autocall feature which allows the note to be redeemed earlier than maturity if the performance of the underlying meets certain conditions. If Principal is not 100% protected, the repayment at maturity will also be linked to the performance of the underlying.

#### *Equity-Linked Note With Daily KO*

A note linked to an underlying equity position which is issued at a discount to the par value of the note and the return is based on predetermined conditions linked to the performance of the underlying. The security has an autocall feature which allows the note to be redeemed earlier than maturity if the performance of the underlying meets certain conditions. If Principal is not 100% protected, the repayment at maturity will also be linked to the performance of the underlying.

#### *Callable Yield Note*

A note linked to an underlying equity position which pays a coupon based on predetermined conditions linked to the performance of the underlying. The security will also have a call feature which gives the issuer a right to redeem the note early at their discretion. If Principal is not 100% protected, the repayment at maturity will also be linked to the performance of the underlying.

#### *Bonus Coupon Note*

A structured product which allows the investor to participate in the positive performance of an underlying or provides a fixed coupon based on the performance of the underlying meeting certain predefined conditions. The principal repayment at maturity will also be based on the performance of the underlying.

#### *Bonus Coupon Note With Floor*

A structured product which allows the investor to participate in the positive performance of an underlying or provides a fixed coupon based on the performance of the underlying meeting certain predefined conditions. The principal repayment at maturity will also be based on the performance of the underlying, however, there is an embedded floor feature which defines a minimum amount that will be repaid.

#### *Bonus Locker Note*

A structured product which allows the investor to participate in the positive performance of an underlying or provides a fixed coupon based on the performance of the underlying meeting certain predefined conditions. The note has a locker feature which, if triggered, will mean the note becomes fully principal protected and will generate a minimum fixed coupon return or more, linked with the performance of the underlying. If the locker feature is not triggered, the principal repayment at maturity will also be based on the performance of the underlying however, there is an embedded floor feature which defines a minimum amount that will be repaid.

#### *Twin Win*

A structured product that allows the holder exposure to the upside of an underlying asset, as well as a positive participation to the downside of the underlying (up to a limit defined by the downside barrier). If the price of

the underlying falls to or below the barrier the return of the underlying against the principal is delivered at maturity.

#### *Growth Note*

A principal protected structured note which provides the participation in a predefined amount of the positive performance of an underlying asset which is either a single-line equity, single-line fixed income or commodity instrument. (NOTE: the same definition applies to a "Currency Principal Floored Participation Note" whereby it is linked to FX. The definition also applies to a "Fund Linked Note with a Floor" whereby it is linked to a fund)

#### *Growth Note Up And Out*

A principal protected structured note which provides the participation in a predefined amount of the positive performance of an underlying asset. However, if the performance of the underlying reaches a predefined level, the note will be knocked out (or terminated) and a predetermined fixed coupon, known as a rebate, will be paid instead, together with the principal invested.

#### *Booster*

A structured product that offers typically a leveraged participation in the positive performance of the underlying up to a predefined level. The repayment of principal at maturity will be determined by the performance of the underlying.

#### *Airbag*

A structured product that offers a participation in the positive performance underlying up to a predefined level. The repayment of principal at maturity will be determined by the performance of the underlying.

#### *Constant Proportion Portfolio Insurance*

The note provides a dynamic allocation strategy between a risky asset (e.g. a mutual fund) and a riskless asset (e.g. LIBOR). The Initial allocation to the risky asset is predetermined together with a leverage factor. If the risky asset increases in value, exposure to the risky asset increases accordingly. Similarly, exposure falls when the risky asset falls in value. If the risky asset falls to a certain predetermined level it will trigger the predefined protection floor and 100% will become allocated to the riskless asset for the remainder of the investment.

#### *Vol Target*

A trading strategy whereby the strategy's weighting to the reference fund is adjusted to target a predefined volatility level. Typically there is a maximum exposure defined.

#### *Dynamic Tracker Note*

A note where the notional is linked to multiple components. Each component provides either proportionate yield return or a participation return on an underlying. The proportion of notional linked to each component changes according predefined performance levels of the underlying(s) through the life of the note.

#### *Delta One Tracker*

A structured product that has a linear, symmetric payoff profile with no optionality and as such for a given instantaneous move in the price of the underlying asset there is expected to be an identical move in the price of the note. They may be linked to an asset or a basket of assets and thus give the holder an easy way to gain exposure to a multiple securities via a single product. Furthermore, Dividend payments from the underlying can be included or excluded.

#### *Market Timer*

A Structured Product with a feature that optimises the entry point (or strike), using the most beneficial position based on observations over a predefined period (e.g. 3 months). This is a feature that is typically added to a delta-1 or airbag.

#### *Outperformance Note*

An Outperformance note is a note which provides a return which is linked to outperformance of a reference asset against another. It is generally capital protected on the downside.

#### *Stability Note*

A Structured Product based on the stability of the underlying index and a specific event known as a stability disruption event. A stability level is defined (typically the difference between the closing prices on two consecutive trading days) which the index must respect to avoid a stability disruption event. The product pays a coupon which is prorated if a stability disruption event occurs. If a stability disruption event occurs the product is automatically redeemed.

#### *Dual Currency Digital Note*

A note which pays either a maximum or minimum coupon periodically based on the performance of a reference underlying. At maturity the principal is repaid in either the one of two currencies (the principal currency or the conversion currency) depending on the level of the reference FX rate with respect to a strike rate (the conversion strike).

#### *Dual Currency Floating Rate Note*

A note which pays a variable coupon linked to a reference rate. At maturity the principal is repaid in either the one of two currencies (the principal currency or the conversion currency) depending on the level of the reference FX rate with respect to a strike rate (the conversion strike).

#### *Triple Currency Note*

A triple currency note pays is a note which pays a yield in a reference currency. However the delivery of principal at maturity is linked to the performance of the reference currency against two other counter currencies.

#### *Currency Principal Floored Digital Note*

See definition of Digital Note.

#### *Currency Principal Floored Participation Note*

See definition of Growth Note

#### *Currency Forward Rebate Note*

A note which pays a rebate coupon depending on the performance of the reference FX rate. If no rebate coupon is paid, at maturity the principal is repaid in either the one of two currencies (the principal currency or the conversion currency) depending on the level of the reference FX rate with respect to a strike rate (the conversion strike).

#### *Twin Win Shark Fin Note*

A structured product that allows the holder exposure to the upside of an underlying asset, as well as a positive participation to the downside of the underlying. However, if the performance of the underlying reaches a predefined level, the note will be knocked out (or terminated) and a predetermined fixed coupon, known as a rebate, will be paid instead, together with the principal invested. The principal may be subject to a floor which is a minimum amount that will be delivered at maturity.

#### *Bullish Shark Fin Note*

See Growth Note Up and out. [A principal protected structured note which provides the participation in a predefined amount of the positive performance of an underlying asset. However, if the performance of the underlying reaches a predefined level, the note will be knocked out (or terminated) and a predetermined fixed coupon, known as a rebate, will be paid instead, together with the principal invested. Note: The principal may be subject to a floor which is a minimum amount that will be delivered at maturity]

#### *Daily Range Accrual Note with Conversion*

A fully structured product where the coupon is linked to the performance of a reference currency pair, and the coupon rate is only accrued on days when the rate from which the coupon is derived falls within a specified range. The security will also have a call feature which gives the issuer a right to redeem the note early at their

discretion. Finally, the note is subject to conversion from the principal currency into the quote currency (or vice versa) depending on the pre-determined conditions linked to the performance of the currency pair.

*Principal Protected Callable Range Accrual Note*

See Callable Range Accrual Note

*Fund Linked Note With Floor*

See definition of Growth Note

*Delta One Commodities Tracker*

< HSBC to add definition >

*Step Down Callable Note*

< HSBC to add definition >

*Autocallable Commodities Note*

A note linked to an underlying commodities position which pays a coupon based on predetermined conditions linked to the performance of the underlying. The security will also have an autocall feature which allows the note to be redeemed earlier than maturity if the performance of the underlying meets certain conditions. If Principal is not 100% protected, the repayment at maturity will also be linked to the performance of the underlying.

*Twin Win Callable Note*

< HSBC to add definition >

*Pivot*

A Pivot is an obligation to either buy or sell an asset at one of two rates at predefined expiry dates. Whether the holder buys or sells the asset is determined by the value of the asset at each expiry.

*Option*

The holder of a call option has the right to purchase the underlying for an agreed strike price at the maturity date(s). The holder of a put option has the right to sell the underlying for an agreed strike price at the maturity date(s). The writer of a call option has the obligation to sell the underlying for an agreed strike price at the maturity date(s). The writer of a put option has the obligation to purchase the underlying for an agreed strike price at the maturity date(s).

*Interest Rate Swap*

An agreement between HSBC and the client, which specifies the nature of an exchange of payments benchmarked against an interest rate index (commonly an IBOR) and a specified notional principal amount. These can either be fixed for floating payments or floating for floating payments (against 2 different interest rates).

*Credit Default Swap*

A Product where the holder will be compensated by the seller in the event of a loan default (on another financial instrument) or other credit event. The holder of the CDS makes a series of payments to the seller and, in exchange, receives a payoff if the loan defaults.

*Accumulator*

An Accumulator is a Structured Product sold by an issuer to investors that requires the buyer to periodically purchase an amount of an underlying security at a predetermined strike price. The investors will "accumulate" holdings in the underlying security over the term of the contract.

#### *Decumulator*

A Decumulator is the reverse of an accumulator, whereby the investor takes on the obligation to sell an amount of an underlying security on a regular basis at a predetermined strike price.

#### *Commodities and Structured Trade Finance*

A note structured as a short-term loan to a corporate which repays 100% of the principal at maturity plus a coupon as long as the corporate does not default on the loan.

#### *Total return swap*

An agreement in which one party makes payments based on a set rate, either fixed or variable, while the other party makes payments based on the return of an underlying asset, which includes both the income it generates and any capital gains.

## 4.5 FX, PM, Other Commodities

### 4.5.1 Summary

The figure below outlines the three levels of the product schema for Single-line FX, PM and Other Commodities. Each level will be defined in detail below.

Level 1	Level 2	Level 3
FX, PM, Other Commodities	Option	Vanilla
		Barrier
		Binary
	Accumulators	Accrual Option
		Accrual Forward
		TARF Forward
		TARF Collar
		TARF Box
		Pivot Forward
	Forward	Forward
	Futures	Futures
	Swap	Swap
	Margin Products	Margin Products
	Precious Metals	Allocated
		Unallocated
	Currency And Precious Metal Linked Deposit Investments	Dual Currency Deposit Investment
		Digital Plus
	Other Commodity Products	Other Commodity Products

### 4.5.2 Level 1

FX, PM and Other Commodities:

Financial Instruments whereby the underlying risk is linked to currencies, precious metals and other commodities.

### 4.5.3 Level 2 and 3

The sections below describe each product type in the FX, PM and Other Commodities product type schema.

#### *Option > Vanilla*

In its simplest form, an option is the right to buy or sell the underlying at an agreed-upon price on a specified date or date range. The underlying of these instruments can be either an FX rate or a commodity.

#### *Option > Barrier*

Barrier options are options whose payoff depends on whether the underlying asset has reached or exceeded a predetermined price. The option's payoff is not predetermined.

#### *Option > Binary*

Binary options are options whose payoff is fixed and depends on whether the underlying asset has reached or exceeded a predetermined price.

#### *Accumulators > Accrual Option*

An Accrual option is a contract that provides a buyer a right to buy a currency (or receive a payment) whereby the notional to be transacted at expiry is uncertain and depends on the amount of time that the underlying currency trades within a pre-set level (or levels) known as the accrual barrier (or barriers).

#### *Accumulators > Accrual Forward*

An Accrual Forward is a contract which allows the buyer to accumulate a fixed proportion of notional for every business day (or chosen frequency) only if the spot price fixes within pre-defined limits. If the spot price fixes outside of the limits, no notional is accumulated. At expiry, the buyer buys the accrued notional at a pre-agreed rate.

#### *Accumulators > TARF Forward*

A TARF forward allows buyer to accumulate a notional amount a currency at a pre agreed rate provided that the pre-determined target level has not been reached. Once the target is reached, the structure terminates.

#### *Accumulators > TARF Collar*

A TARF Collar holder has the right to buy a currency at pre agreed rate (Strike 1), but also the obligation to buy the currency at a pre agreed lower rate (Strike 2), provided the predetermined target level has not been reached. Once the target is reached, the structure terminates.

#### *Accumulators > TARF Box*

A TARF Box is a strategy which pays the holder a cash payment if the spot price of a currency fixes within a range, otherwise the holder has the obligation to buy the currency if the spot price is below the range or sell the currency if the spot price is above the range provided the pre-determined target level has not been reached

#### *Accumulators > Pivot Forward*

A Pivot Forward is a forward obligation to either buy or sell a currency at one of two rates. Whether the holder buys or sells the currency is determined by the spot rate at each expiry.

#### *Forward > Forward*

FX Forwards are contracts which agree to exchange a specified amount of different currencies at some future date, with the exchange rate being set at the time the contract is inception.

#### *Futures > Futures*

A future is an exchange traded forward contract. The underlying of these forward contracts is a commodity in this instance.

#### *Swap > Swap*

By entering into this product, two parties enter into a binding agreement to execute two foreign exchange transactions linked to the currency exchange rate or PM. The two counterparties agree to exchange one currency for another currency (or currency linked to a precious metal) at a particular rate on one date (the "near date") and to reverse payments on a specified subsequent date (the "far date"). The exchange rates are set at inception of the contract.

#### *Margin Products > Margin Products*

Margin Products allow the holder to perform leveraged FX transactions while maintaining the appropriate collateral. The FX transactions include Spot FX, Forward FX and Plain Vanilla FX Option transactions.

#### *Precious Metals > Allocated*

Precious metals are defined as Gold, Silver, Palladium and Platinum. An investor in allocated PM is the outright owner of a certain amount of physical PM. The account provider is the custodian. The customer has his PM physically segregated and is given a detailed list of the weights and assays of his PM.

#### *Precious Metals > Unallocated*



Precious metals are defined as Gold, Silver, Palladium and Platinum. Unallocated PM accounts don't physically store your PM and the customer has not title to any particular bar. Unallocated metal remains the property of the bank- the investor is essentially a creditor of the bank.

*Currency and Precious Metal linked deposit investment > Dual Currency Deposit Investment*

A Dual Currency Deposit is an instrument that provides a guaranteed enhanced coupon. The principal is not protected and is paid at maturity either in the investment currency or in a known amount of a second currency.

*Currency and Precious Metal linked deposit investment > Digital Plus*

A Digital Plus note is a note linked to an FX underlying that pays a lower or higher coupon based on the underlying meeting predefined conditions.

*Other Commodity Products > Other Commodity Products*

All other commodities products excluded Precious Metals

#### 4.5.4 FAQs

*How are FX deposits or cash held in non-Base currency captured?*

Currency deposits or cash held outside of the client's base currency will be captured as part of liquidity. However, it is important to note that will still be FX risk implications for such holdings which will be reflected in the portfolio risk measure.

*How do we capture structured Products with an FX underlying?*

Structured products with and FX underlying are captured within the Structured product classification regime. However, it is important to note that will still be FX risk implications for such holdings which will be reflected in the portfolio risk measure.

*How do each Product Type Level 3 for FX, PM & Other Commodities to map into the Asset Class sectors?*

FX, PM and Other Commodity products are to map into one of the following 3 asset class sectors depending on their underlying:

- FX – Structured Products / Derivatives: Any derivative or SP within the category linked to a FX rates
- Alternatives – Structured Products / Derivatives: Any derivative or SP within the category linked to a precious metal or other commodity

*What is the difference between margin product and collateralized positions?*

The FX Margin products refer to FX margin in a dedicated sub account in Asia. Within this sub account, netting of positions and collateral is offered as part of FX margin service. When associated spot positions are rolled over, they use deposit and loan rate to roll them, hence there are 2 legs to a spot rollover transaction.

FX positions and trades are also done on a margined basis (collateralized). The difference here is, there is no netting of FX positions nor collateral i.e. if I have a buy AUD sell USD trade and also a sell AUD buy USD trade, these are considered 2 separate trades and hence collaterals to be provided accordingly. Any deviation will be handled by Credit on a manual case by case basis.

*How are Non-Deliverable forwards (NDFs) classified?*

NDFs will fall within the forward category, but the non-deliverable aspect will be accounted for as an additional attribute and will have different implication in terms of risk.

*How will FX strategies be handled in the classification?*

Strategies composed by two or more options (call spread, seagull, calendar spread) are considered for risk assessment in their single components.

#### 4.5.5 Requirements

##### *Market Data*

- Market Data will be used for Futures

##### *HSBC Security Master Data*

- HSBC are required to identify Precious Metals
- All other product types will require terms and conditions be sent from HSBC

## 4.6 Alternatives

### 4.6.1 Summary

The figure below outlines the three levels of the product schema for Alternatives. Each level will be defined in detail below.

Level 1	Level 2	Level 3
Alternatives	Hedge Funds	Hedge Funds
		Liquid Alternatives
		Other Hedge Funds
	Private Funds	Venture
		Buyout
		Secondaries
		Energy
		Direct Club
		Direct Club Secondaries
		Emerging Markets
		Multi-Strategy
		Distressed Debt
		Private Loans
		Other Private Funds
	Real Estate	Fund
		Club Deals
		Segregated Mandates
		Other Real Estate

### 4.6.2 Level 1

#### *Alternatives:*

Alternative investments cover a wide range of strategies and opportunities, including hedge funds, commodities, real estate, private equity and infrastructure. Alternative investments typically have low correlations with mainstream asset classes.

### 4.6.3 Level 2 and 3

#### *Hedge Funds > Hedge Funds*

Hedge funds are alternative investments using pooled funds that employ numerous different strategies to earn active return, or alpha, for their investors. Hedge funds may make use of derivatives and leverage in both domestic and international markets with the goal of generating high returns (either in an absolute sense or over a specified market benchmark).

#### *Hedge Funds > Liquid Alternatives*

Liquid hedge fund (alternative) strategies are hedge funds which aim to generate a total or absolute return and can have the ability to take both long and short position with typically improved liquidity, offering daily, weekly or twice monthly dealing. Unlike traditional alternative investments, liquid alternatives are structured within a regulated mutual fund format. This means investors may expect benefits associated with mutual funds, such as greater transparency, minimum investment levels as well as leverage and concentration limits.

#### *Hedge Funds > Other Hedge Funds*

Hedge Fund products that cannot be classified into either of the above categories.

#### *Private Funds > Venture*

Venture capital refers to investments made in start-ups and young companies with little to no track record of profitability. Venture capital investments are made with the goal of generating outsized returns by identifying and investing in the most promising companies and profiting from a successful exit.

*Private Funds > Buyout*

Buyout Private Equity Funds acquire assets, typically utilising a significant amount of leverage through borrowed capital, aiming to hold and manage a company for a period of time and exiting the company after significant value has been created. Leveraged buyout aim to generate returns on the acquisition that will outweigh the interest paid on the debt.

*Private Funds > Secondaries*

Secondary investments refer to investments made in existing private equity assets. These transactions can involve the sale of private equity fund interests or portfolios of direct investments in privately held companies through the purchase of these investments from existing investors. Often investments in Secondaries are made through a thirdparty fund vehicle, structured similar to a fund of funds. Sellers of private equity fund investments sell not only the investments in the fund but also their remaining unfunded commitments to the funds.

*Private Funds > Energy*

Energy Private Equity funds acquire assets in or lend to the oil and gas industry and/or renewable energy sector providing a key source of investment.

*Private Funds > Direct Club*

Direct Club provide access to private equity investing in part of a small club of investors alongside other institutional investors.

*Private Funds > Direct Club Secondaries*

Direct Club Secondaries provide access to secondary deals investing in part of a small club of investors alongside other institutional investors.

*Private Funds > Emerging Markets*

Emerging Markets Private Equity funds acquire assets in or lend to companies in countries that have characteristics of a developed market but does not meet the standards to be a developed market. The largest emerging markets are Brazil, Russia, India and China.

*Private Funds > Multi-Strategy*

Multi-strategy funds invest in a variety of investment strategies which can decrease asset class and single strategy risks.

*Private Funds > Distressed Debt*

Special situations funds specifically target companies that need restructuring, turnaround, or are in any other unusual circumstances. Investments typically profit from a change in the company's valuation as a result of the special situation.

*Private Funds > Private Loans*

Private Loans incorporates Direct Lending which is defined as a form of corporate debt when lenders other than banks make loans to companies, such as a private equity firm. The market has grown since around 2009 in response to banks reducing their lending activities to companies in the wake of the financial crisis.

*Private Funds > Other Private Funds*

Private Fund products that cannot be classified into any of the above categories.

#### *Real Estate > Fund*

A Real Estate Fund is a fund which invests in a number of underlying real estate assets or lends to acquire real estate assets on behalf of investors. A Real Estate fund may be a 'Fund of Funds' which invests in a number of underlying third party real estate funds.

#### *Real Estate > Club Deals*

A Real Estate Club Deal is where a direct real estate asset(s) is identified for purchase and a number of investors pool their commitments through a collective investment scheme to indirectly acquire the asset.

#### *Real Estate > Segregated Mandates*

A Real Estate Segregated Mandate is an agreement where an investor acquires direct real estate asset(s) for their own account, normally purchasing 100% ownership of the asset.

#### *Real Estate > Other Real Estate*

Private Estate investment products that cannot be classified into any of the above categories.

### 4.6.4 Examples

The following are indicative product level examples:

- Hedge Funds:
  - *L3 Hedge Fund: Anchorage Capital Partners Offshore, Ltd.*
  - *L3 Liquid Hedge Fund: Marshall Wace UCITS Funds PLC - MW Liquid Alpha UCITS Fund*
- Private Funds:
  - *L3 Ventures; HSBC Asian Ventures Syndicate II*
  - *L3 Buyout: Vintage 2017 Apollo*
  - *L3 Secondaries: HSBC Capital USA Private Equity Syndicate*
  - *L3 Energy: Vintage V Energy Special Situations*
  - *L3 Direct Club: Secondary Club Deal II*
  - *L3 Direct Club Secondary: Secondary Club Deal I*
  - *L3 Emerging Markets: HSBC Latin America Private Equity Syndicate*
  - *L3 Distressed Debt: Vintage II Energy*
- Real Estate:
  - *L3 Fund: (HEGREF) HSBC Emerging Growth Real Estate Fund - Institutional*
  - *L3 Fund: (HIPO) HSBC International Property Opportunities Fund*
  - *L3 Club Deals: HSBC Downing Student Accommodation Portfolio*
  - *L3 Segregated Mandates: Standard Life House, Edinburgh*

### 4.6.5 FAQs

*Q: How will the new 'Vision' product being launched in Asia in 2019 be classified?*

A: Vision will be classified as a Multi-Strategy Private Fund i.e. Alternatives > Private Funds > Multi-Strategy

*Q: How will liquid funds that follow an Alternative mandate, but are not covered or recommend by HSBC Alternative Investments Limited classified?*

A: From a product classification perspective these funds will be classified with other funds and ETFs under 'Funds & ETFs'. From an Asset class exposure perspective this funds will still have an Alternatives Asset class exposure, see section 5.4 for details.

*Q: How will execution only client holdings in Hedge Fund, Real Estate and Private Equity products be classified?*

A: Execution only Hedge Fund, Private Fund and Real Estate holdings may not be clearly aligned to the L3 definitions under a L2, at which point they will bucket into the respective 'Other Hedge Funds', 'Other Private Funds' and 'Other Real Estate' categories.

#### 4.6.6 Requirements

##### *HSBC Security Master Data*

- HSBC are required to identify and classify Hedge Funds
- HSBC are required to identify and classify Private Funds
- HSBC are required identify and classify Real Estate investments

## 4.7 Deposits And Cash

### 4.7.1 Summary

The figure below outlines the schema for of the product schema for Deposit And Cash:

Level 1	Level 2	Level 3
Deposits And Cash	Deposits	Fiduciary Time Deposits
		Fiduciary Call Deposits
		Time Deposits
		Call Deposits
		Murabaha Deposits (Islamic products)
		Blocked Current Accounts
		Current Accounts
		Bank Notes
	EuroFund	EuroFund
	Cash	Cash

### 4.7.2 Level 1 and 2

#### *Deposits And Cash:*

Deposits And Cash consist of monies placed into banking institutions for safekeeping. These monies are placed in deposit accounts such as Current Accounts. The account holder has the right to withdraw deposited funds, as set forth in the terms and conditions governing the account agreement.

### 4.7.3 Level 3

#### *Fiduciary Time Deposits*

A fiduciary time deposit is a deposit which offers the depositor interest but can only be withdrawn with notice after a set time period. The deposit is placed within a recipient entity with a HSBC entity acting as an agent.

#### *Fiduciary Call Deposits*

A fiduciary call deposit is a deposit which offers the depositor interest and can be withdrawn instantly. The deposit is placed within a recipient entity with a HSBC entity acting as an agent.

#### *Time Deposits*

A time deposit is a deposit which offers the depositor interest but can only be withdrawn with notice after a set time period.

#### *Call Deposits*

A fiduciary call deposit is a deposit which offers the depositor interest and can be withdrawn instantly.

#### *Murabaha Deposits (Islamic products)*

An Islam compliant product which is the holder benefits from the difference between cost and the profit of an underlying commodity. In this instance the holder does not benefit from any interest or loan rate.

#### *Blocked Current Accounts*

A blocked current account refers to current accounts on which any withdrawal or deposit is subject to certain predefined controls.

#### *Current Accounts*

A current account is a bank account whereby can be deposited or withdrawn instantly.

### *Bank Notes*

Bank Notes are promissory notes which the bank is obliged to convert to legal tender upon the request of the bearer.

### *EuroFund*

The EuroFund is a capital guaranteed financial support on which the subscriber of a life insurance policy can invest their savings. It has the advantage of guaranteeing the deposited capital and allows the capitalization of the interest acquired annually by the mechanism known as the "ratchet effect". It aims to protect savings from inflation and offer a better rate than government bonds.

Eurofund is a French/Luxembourg product with a higher return than the risk-free rate but with an equivalent risk level. Because it has its own characteristics it can't be linked to any other product known on the global financial market. It is a specific product attached to Life Insurance wrappers.

### *Cash*

Cash is legal tender which can be used to obtain goods or services.

#### 4.7.4 FAQs

*Q: How will products classified at Level 2 as Deposits And Cash be treated from and Asset Classification perspective?*

A: These will be classified in the Asset Class sector of Liquidity > Liquidity > Liquidity, please refer to sections 5.1.

#### 4.7.5 Requirements

##### *HSBC Security Master Data*

- HSBC are required to identify and classify all deposit securities



## 4.8 Credit Facilities

### 4.8.1 Summary

The figure below outlines the schema for of the product schema for Credit Facilities:

Level 1	Level 2	Level 3
Credit Facilities	Credit Facilities	Loans
		Overdrafts
		Fixed Loans

### 4.8.2 Level 1 and 2

Credit Facilities:

A loan is cash that is extended to a client in exchange for future repayment of the loan value amount along with interest or other finance charges. A loan may be for a specific, one-time amount or can be available as an open-ended line of credit up to a specified limit or ceiling amount.

### 4.8.3 Level 3

*Loan*

A loan is cash that is extended to a client in exchange for future repayment of the loan value amount along with interest or other finance charges. A loan may be for a specific, one-time amount or can be available as an open-ended line of credit up to a specified limit or ceiling amount.

*Fixed loans*

This refers to money or advances paid out by the Bank to the Borrower in exchange for future repayment of the principal amount plus interest at a defined date and interest rate.

*Overdrafts*

This refers to the withdrawal of money from the Borrower's account in excess of the balance (i.e. a negative balance)

### 4.8.4 FAQs

*Q: How will products classified at Level 2 as Credit Facilities be treated from and Asset Classification perspective?*

A: These will be classified into the Asset Class sector of Others / Mixed > Other / Mixed > Other / Mixed, please refer to sections 5.8.

### 4.8.5 Requirements

*HSBC Security Master Data*

- HSBC are required to identify and classify all Credit Facilities

## 4.9 Contingent Liabilities

### 4.9.1 Summary

The figure below outlines the schema for of the product schema for Contingent Liabilities:

Level 1	Level 2	Level 3
Contingent Liabilities	Contingent Liabilities	Received Commitments
		Granted Commitments
		Outstanding Commitments
		Other Commitments

### 4.9.2 Level 1 and 2

Contingent Liabilities:

A contingent liability is a potential liability that may occur depending on the outcome of an uncertain future event.

### 4.9.3 Level 3

*Received Commitments*

These refer to guarantees received from another bank or HSBC entity.

*Granted Commitments*

These are bank guarantees or standby letters of credit issued in favour of another bank or HSBC entity.

*Outstanding Commitments*

This can be defined as the remaining capital to be called for private equity investments.

*Other Commitments*

This refers to commitments related to credit cards.

### 4.9.4 FAQs

*Q: How will products classified at Level 2 as Contingent Liabilities be treated from an Asset Classification perspective?*

*A: These will be classified into the Asset Class sector of Others / Mixed > Other / Mixed > Other / Mixed, please refer to sections 5.8.*

### 4.9.5 Requirements

*HSBC Security Master Data*

- HSBC are required to identify and classify all Contingent Liabilities.

## 4.10 Margin Trading

### 4.10.1 Summary

The figure below outlines the schema for of the product schema for Margin Trading:

Level 1	Level 2	Level 3
Margin Trading	Margin Trading	Margin Trading

### 4.10.2 Level 1, 2 and 3

*Margin Trading:*

This refers to the amount of collateral required that the Borrower must have to trade on derivatives investments to cover the initial margin required.

### 4.10.3 FAQs

*Q: How will products classified at Level 1 as Margin Trading be treated from and Asset Classification perspective?*

A: These will be classified into the Asset Class sector of Others / Mixed > Other / Mixed > Other / Mixed, please refer to sections 5.8.

### 4.10.4 Requirements

*HSBC Security Master Data*

- HSBC are required to identify and classify all Margin Trading

## 4.11 Index

### 4.11.1 Summary

The figure below outlines the three levels of the product schema for Indices.

Level 1	Level 2	Level 3
Index	Index	Index

### 4.11.2 Level 1, 2 and 3

*Index:*

Indices are a universe of securities and associated weights defined by predetermined rules. These financial instruments are used as components of HSBC's Strategic Asset Allocations (SAAs) as well as any bespoke benchmarks.

### 4.11.3 Examples

The following are indicative product level examples:

- FTSE 100 (Ticker: UKX)
- S&P 500 (Ticker: SPX)
- Euro Stoxx 50 (Ticker: SX5E)

### 4.11.4 Requirements

*Market Data*

- Appropriate licences from index vendors are required

## 4.12 Others

### 4.12.1 Summary

The figure below outlines the three levels of the product schema for Others.

Level 1	Level 2	Level 3
Others	Others	Checks & Bills for Collection
		Pro-memoria
		Others
	Discretionary Mandates	Discretionary Mandates

### 4.12.2 Level 1

#### *Others:*

Products classified as Others at Level 1 do not fall in to any of the aforementioned Level 1 Product Type, this includes discretionary mandates.

### 4.12.3 Level 3

#### *Checks & Bills for Collection:*

Checks are guarantees that are held on behalf of HSBC clients against checks issued by a third party which need to be collected and Bills are credit guarantees held by HSBC on behalf of a client that must be paid by the client to a third party.

#### *Pro-memoria:*

This refers to all products that currently cannot be classified but will need to be reclassified into another appropriately defined category following the relevant review process.

#### *Other:*

This is a catch all section which refers to all products that cannot be classified into any aforementioned category.

#### *Discretionary Mandates:*

These are portfolio management solutions whereby HSBC manages and makes all decision on client's asset according to pre-defined mandates and guidelines.

### 4.12.4 FAQs

*Q: How will products classified at Level 2 as Others be treated from and Asset Classification perspective?*

A: Product classified as others at Level 2 will be classification as Others / Mixed > Other / Mixed > Other / Mixed, please refer to sections 5.8.

*Q: How will products classified at Level 2 as Discretionary be treated from and Asset Classification perspective?*

A: Product classified as deposits at Level 2 will be classified according to their underlying investments, please see Section 5 for detail.

### 4.12.5 Requirements

#### *HSBC Security Master Data*

- HSBC are required to identify and classify any securities identified as others

## 5 Asset Class

### 5.1 Liquidity

#### 5.1.1 Summary

Liquidity captures securities that are short term in nature and of high quality.

Level 1	Level 2	Level 3
Liquidity	Liquidity	Liquidity
	Liquidity – Other / Mixed	Liquidity - Insurance
		Liquidity – Other / Mixed

#### 5.1.2 Level 2

##### *Liquidity*

The bucket captures deposits and fixed income securities that are short term in nature and of a high quality (typically issued by entities domiciled in Developed Markets). Short term is defined as having an original maturity of less than 397 days (~13 months) which is consistent with the SEC 2a-7 ruling in the U.S. for money market funds. High quality is defined as being rated with one of the following short-term ratings:

Moody's	S&P	Fitch
P-1	A-1+	F1+
	A-1	F1

Note that an average of the available short-term ratings will be used to determine the quality of an asset. The logic used to determine the average will be the industry standard Bloomberg Barclays Index rating methodology. This is defined in more detail below in the Fixed Income section.

EuroFunds are captured under the Asset Class “Liquidity – Liquidity Insurance” as their volatility of Eurofund is zero and money invested in such products can be withdrawn at any time, at no cost. The expected value of the Eurofund can also be determined in advance.

Product Types that can map into Liquidity:

- Deposits
- Bonds
  - o Short term Government debt instruments (Inc. T-Bills)
  - o Short term Government Related debt (Inc. Municipal Paper & Agency Paper)
  - o Short term Corporate debt
- Commercial Paper
- Certificates of Deposits
- EuroFund

Note that liquidity held within Third Party Funds & ETFs are treated differently and map into Other Mixed. See section 5.6.

#### 5.1.3 Examples

The following are indicative asset class level examples:

- Liquidity > Liquidity > Liquidity
  - o *Description:* SYNCHRONY BANK
  - o *ISIN:* US87164WST61
  - o *Product Type:* Certificate of deposits/ Commercial Paper (CDs/CPs)
- Liquidity > Liquidity > Liquidity

- *Description:* NEW YORK ST LOC GOVT ASSISTANC
- *ISIN:* US649876K998
- *Product Type:* Bonds

#### 5.1.4 FAQs

*Q: Are municipal variable rate demand notes captured within Liquidity?*

A: Whilst these securities are eligible for purchase by money market funds, these are not captured within liquidity regardless of the rating. These securities typically carry a much longer maturity than other money market securities (e.g. twenty to thirty years) and they are typically money market eligible as they carry a "demand feature" which allows the investor to put the security back at par with 1 or 7 days' notice. The put feature renders these securities eligible for purchase by money market funds under rule 2a-7.

*Q: How are unrated short term fixed income securities treated?*

Unrated short term fixed income securities will be classified into Fixed Income Asset Classes based on the issuer. If issued by a Corporate entity in a Developed Market these instruments will fall into "Fixed Income > FI – Other / Mixed". Otherwise these will be classified in to the appropriate Fixed Income Asset Class specified in section 5.2.

#### 5.1.5 Requirements

##### *Market Data*

- Short term ratings from Moody's, Standard & Poor's and Fitch to define securities falling into liquidity

## 5.2 Fixed Income

Products falling into the fixed income asset class are distributed between a further two levels of granularity, based on the country of the security's issuer, its average rating, its Bloomberg Barclays Four Pillar sector, the currency in which the security is denominated in and other security characteristics (such as protection against inflation).

The **immediate issuer's** country of domicile may differ from the **ultimate parent issuer's** country of domicile, particularly between Developed and Emerging Markets. This is common with financial institutions where debt may be issued by a branch domiciled in a different country to the parent organisation. This case demonstrates that the **ultimate parent issuer's** country classification is the most appropriate country to use to classify the debt.

For example:

*ISIN: US00182FBD78*

*Immediate Issuer Name: ANZ NEW ZEALAND INTL LTD (LONDON BRANCH)*

*Country of Domicile: United Kingdom*

*Ultimate Issuer Name: AUSTRALIA AND NEW ZEALAND BANKING GROUP LTD*

*Country of Domicile: Australia*

*This Bond would be classified as Developed Market Debt (not Emerging)*

*ISIN: AU3FN0035473*

*Immediate Issuer Name: BANK OF CHINA LTD (SYDNEY BRANCH)*

*Country of Domicile: Australia*

*Ultimate Issuer Name: CHINA PEOPLES REPUBLIC OF (GOVERNMENT)*

*Country of Domicile: China*

*This Bond would be classified as Emerging Market Debt (not Developed)*

Additionally, the ultimate parent issuer's **country of domicile** may differ from the ultimate parent issuer's **country of incorporation**, particularly between Developed and Emerging Markets. This is common with emerging market companies that are incorporated in other countries (typically countries such as The Cayman Islands, British Virgin Islands etc.). This case demonstrates that the ultimate parent issuer's **country of domicile** is the most appropriate country to use to classify the debt.

For example:

*ISIN: US01609WAC64*

*Ultimate Issuer Name: ALIBABA GROUP HOLDING LTD*

*Country of Domicile: China*

*Country of Incorporation: Cayman Islands*

*This Bond would be classified as Emerging Market Debt (not Developed)*

*ISIN: US47215PAB22*

*Ultimate Issuer Name: JD.COM INC*

*Country of Domicile: China*

*Country of Incorporation: Cayman Islands*

*This Bond would be classified as Emerging Market Debt (not Developed)*



Note when there is no ultimate issuer (as there is no shareholder with a >50% holding in the immediate issuer) the ultimate issuer is equivalent immediate issuer, in this instance the immediate issuer's country of domicile will be used for classification.

If HSBC PB wish to override the classification of a Fixed Income security, an Asset Class override can be provided to Aladdin by the overnight interface files and this can be used to drive Asset Classification.

The country of a security's issuer may differ from the primary market the securities are trading in. For example, a Hard Currency Emerging Market bond may trade in the US but have a country of exposure of China. Note that supranational entities are treated separately and will be classified as Government Related.

The currency denomination of non-derivative debt instruments is typically the currency in which the face amount of the security is quoted in. For Fixed Income derivatives, the currency denomination will be the pricing currency denoted on the exchange where the derivatives trade.

The average rating calculation leverages the industry standard Bloomberg Barclays Index rating methodology which averages the ratings from the major rating agencies, Moody's, S&P and Fitch Ratings. If three ratings are available, the middle rating is used. If two ratings are available, the most conservative (lowest) rating is used. If only one agency rates a security, that single rating is used. Please see the below three examples:

Example 1:

Moody's Rating: B1

S&P Rating: BBB

Fitch Rating: BB+

*Average Rating: Ba1/BB+*

Example 2:

Moody's Rating: Ba2

S&P Rating: BBB

Fitch Rating: BBB+

*Average Rating: Baa2/BBB*

Example 3:

Moody's Rating: Aa3

S&P Rating: A

Fitch Rating: A+

*Average Rating: A1/A+*

Note that, due to lack of coverage of the main three rating agencies in Asia, HSBC will pass additional credit ratings to BRS to be used when deriving credit quality.

### 5.2.1 Summary

The figure below outlines the three levels of the asset classification schema for Fixed Income. Each level will be defined in detail below.

Level 1	Level 2	Level 3
Fixed Income	Developed Government Debt	Developed Government Debt - Inflation Linked
		Developed Government Debt - Nominal
		Developed Government Debt - Other/Mixed
	Developed Government Related Debt	Developed Government Related Debt
	Developed Corporate Debt – IG	Developed Corporate Debt – HY
	Developed Corporate Debt – HY	Developed Corporate Debt - Mixed / Unrated
	Developed Corporate Debt - Mixed / Unrated	Developed Corporate Debt – HY
	Emerging Market Debt	Emerging Market Debt – Asia HC
		Emerging Market Debt – HC Ex Asia
		Emerging Market Debt – Asia Corporate HY HC
		Emerging Market Debt – Asia LC
		Emerging Market Debt – LC Ex Asia
		Emerging Market Debt – Other / Mixed
	Fixed Income - Structured Products / Derivatives	Fixed Income - Structured Products / Derivatives
	Fixed Income - Other / Mixed	Fixed Income - Other / Mixed

### 5.2.2 Level 2

Each level 2 sector is defined in a section below.

#### *Developed Government Debt*

*Developed* Government securities are identified using the Sovereign sector in the Bloomberg Barclays Four Pillar schema, these include Government bonds with Developed Market issuers as well as Futures and Options on Government bonds.

Government bonds range in maturity, but generally range between two and thirty years. Shorter term government debt (such as Treasury bills) can be captured within Liquidity as opposed to Government bonds. See the Liquidity section for more details. Note that this sector can include both Investment Grade and High Yield Government debt from Developed Market countries as no distinction on credit rating is made.

The definition of Developed Markets can be found below:

Note that fixed income futures will bucket under Fixed Income > Developed Government > Nominal.

#### *Developed Government Related Debt*

The developed government-related sector is designed to group all issuers with governmental affiliations separate from corporate, Emerging Markets or securitised sectors. These affiliations are identified by the Bloomberg Barclays Four Pillar sector scheme or by securities issued by agencies, dollars and non-dollar municipalities, supranationals, government guaranteed entities and government owned entities.

The following product types will map into this Asset Class:

- Bonds
  - o Those with a relevant Bloomberg Barclays Four Pillar Sector (i.e. Government Owned, Government Guaranteed, Government Sponsored, Pooled Agency, Local Authority, Municipalities, Supranational)

#### *Developed Corporate Debt - IG*

Investment grade corporates are identified by using the Bloomberg Barclays Index rating methodology. This takes an average of the ratings from the major rating agencies, Moody's, S&P and Fitch Ratings and additional rating sources if deemed appropriate. If fewer than three ratings are available, the minimum rating is used.

- |                                  |                             |                           |
|----------------------------------|-----------------------------|---------------------------|
| • Anguilla                       | • Great Britain             | • Portugal                |
| • Australia                      | • Guam                      | • Puerto Rico             |
| • Austria                        | • Guernsey, Channel Islands | • Singapore               |
| • Belgium                        | • Hong Kong                 | • Spain                   |
| • Bermuda                        | • Ireland                   | • Sweden                  |
| • British Indian Ocean Territory | • Isle of Man               | • Switzerland             |
| • Canada                         | • Israel                    | • United Kingdom          |
| • Cayman Islands                 | • Italy                     | • United States           |
| • Denmark                        | • Japan                     | • Virgin Islands, British |
| • European Union                 | • Jersey, Channel Islands   | • Virgin Islands, U.S.    |
| • Falkland Islands               | • Liechtenstein             |                           |
| • Falkland Islands (Malvinas)    | • Luxembourg                |                           |
| • Finland                        | • Monaco                    |                           |
| • France                         | • Netherlands               |                           |
| • Germany                        | • New Zealand               |                           |
| • Gibraltar                      | • Norway                    |                           |

Investment Grade bonds are defined as those with a Bloomberg Barclays Index rating methodology greater than BB+. Securities characterised as Developed Markets, are done so using the list of issuer countries defined above.

The following product types will map into this Asset Class:

- Bonds
  - o Corporate bonds with a relevant average rating
- Convertible Bonds
  - o Convertible Corporate bonds with a relevant average rating

#### *Developed Corporate Debt - HY*

High yield corporate bonds are identified by using the Bloomberg Barclays Index rating methodology (defined above). High Yield corporate bond are those with a Bloomberg Barclays Index rating of less than or equal to BB+. Securities characterised as Developed Markets, are done so using the list of issuer countries defined above.

Note, unrated corporate bonds issued by Developed Market issuers will fall under "FI – Other / Mixed" at level two and not "Developed Corporate High Yield".

The following product types will map into this Asset Class:

- Bonds
  - o Corporate bonds with a relevant average rating
- Convertible Bonds
  - o Convertible Corporate bonds with a relevant average rating

#### *Emerging Market Debt*

Emerging Market fixed income securities are defined as all those that have an issuer domiciled (or with an identified country of incorporation/risk) in an Emerging Market and are not securitized assets. Emerging Markets are currently defined as all countries that are not Developed Markets. See appendix item 8.1 for further details.

#### *Fixed Income - Structured Products / Derivatives*

All Structured Products Linked to Fixed Income underlyings or Structured products which simply pay a coupon will be classified as "Fixed Income -Structured Products and Derivatives". This will include:

- Rate Notes and Rate Derivatives linked to Interest rates
- Structured Products with Fixed Income underlyings including Credit Linked Notes, Credit Fund Linked Notes and Credit Derivative Products
- Structured Products not linked to a rate and simply pay interest

#### *Fixed Income – Other / Mixed*

This sector is defined to catch all fixed income securities that are not captured by the above. Securities that will fall into "Other / Mixed" are those such as securitized assets. For example, Commercial Mortgage backed securities will not be captured by "Government Developed", nor "Corporate Investment Grade Developed", but would fall into "Other / Mixed". The same can be said for Asset Backed Securities. See the Securitized product type definitions in Single-Line Fixed Income for more details.

Short term Corporate debt instruments that are issued by a Developed Market issuer may also fall here, in the instance that they have no short-term credit rating. See Liquidity section for more details.

Also, any other corporate bonds which have no ratings available from the main three rating agencies (Fitch, Moody's and Standard & Poors) or other rating sources will fall under "FI – Other / Mixed".

- Bonds
  - o Corporate bonds from Developed Market issuers that are unrated
- Securitized Bonds
  - o All Securitised Bonds will have an Asset Class exposure of "FI – Other / Mixed"
- Bond Futures
  - o Derivatives with an Interest Rate (e.g. LIBOR) as the underlying, rather than an interest-bearing instrument
- Syndicated Loans
  - o All Syndicated Loans, HSBC PB clients however do not currently hold these securities

### 5.2.3 Level 3

#### *Government Developed Debt- Inflation linked*

Inflation Linked bonds are defined as those captured by Thomson Reuters as Inflation Protected Bonds.

The following product types will map into this Asset Class:

- Bonds
  - o Government bonds issued by one of the countries mentioned above as Developed whose payoff is linked to inflation

#### *Government Developed Debt - Nominal*

Nominal bonds are those where the principal and/or coupon amount is not linked to inflation

The following product types will map into this Asset Class:

- Bonds
  - o Government bonds issued by one of the countries mentioned above as Developed whose payoff is not linked to inflation
- Bond Futures
- Bond Options
  - o Options where the underlying is a Future referencing government bonds

#### *Emerging Markets Debt – LC Asia and Emerging Markets Debt – LC Ex Asia*

Emerging Market fixed income securities are defined as all those that have an issuer domiciled (or with an identified country of incorporation/risk) in an Emerging Market and are not securitized assets. Emerging Markets are currently defined as all countries that are not Developed Markets. See appendix item 9.1 for further details.

Local Currency Emerging Market debt is defined as Emerging Market Debt that is not denominated in a hard currency. See appendix 9.2 for all Hard Currencies. Extra granularity has been added for Asia vs Ex Asia Emerging Markets. Asia EM markets are captured in appendix 9.6.

The following product types will map into this Asset Class:

- Bonds
  - o Emerging Market debt issued by Governments
  - o Emerging Market debt issued by Corporates
  - o Emerging Market issued by agencies, municipalities, etc.
- Convertible Bonds
  - o Convertible bonds issued by companies domiciled in an Emerging Market country

#### *Emerging Markets Debt – HC Asia and Emerging Markets Debt – HC Ex Asia*

Emerging Market fixed income securities are defined as all those that have an issuer domiciled (or with an identified country of incorporation/risk) in an Emerging Market and are not securitized assets. Emerging Markets are currently defined as all countries that are not Developed Markets. See appendix item 9.1 for further details.

Hard Currency Emerging Market debt is Emerging Market debt, that is denominated in currencies from Development Markets. For example, the United States is a Developed country, and has an associated currency of US Dollars. Thus, we could consider US Dollars a Hard Currency. Similarly, Sterling, Euros and Japanese Yen are all considered Hard Currencies. See appendix 9.2 for all Hard Currencies. An extra level of granularity has been added for Asia vs Ex Asia Emerging Markets to appendix 9.6.

The following product types will map into this Asset Class:

- Bonds
  - o Emerging Market debt issued by Governments
  - o Emerging Market debt issued by Corporates
  - o Emerging Market issued by agencies, municipalities, etc.
- Convertible Bonds
  - o Convertible bonds issued by companies domiciled in an Emerging Market country

### *Emerging Markets Debt – Corporate Asia HY HC*

Emerging Market fixed income securities are defined as all those that have an issuer domiciled (or with an identified country of incorporation/risk) in an Emerging Market and are not securitized assets. Emerging Markets are currently defined as all countries that are not Developed Markets. See appendix item 9.1 for further details.

Hard Currency Emerging Market debt is Emerging Market debt, that is denominated in currencies from Development Markets. For example, the United States is a Developed country, and has an associated currency of US Dollars. Thus, we could consider US Dollars a Hard Currency. Similarly, Sterling, Euros and Japanese Yen are all considered Hard Currencies. See appendix 9.2 for all Hard Currencies. Asia EM markets are captured in appendix 9.6.

High yield corporate bonds are identified by using the Bloomberg Barclays Index rating methodology (defined above). High Yield corporate bond are those with a Bloomberg Barclays Index rating of less than or equal to BB+.

The following product types will map into this Asset Class:

- Bonds
  - o Corporate bonds with a relevant average rating issued by companies domiciled in an Emerging Market country
- Convertible Bonds
  - o Convertible Corporate bonds with a relevant average rating issued by companies domiciled in an Emerging Market country

### 5.2.4 Product Type Mappings

The list below defines the product types that have Fixed Income exposure:

- Bonds (when not classified as Liquidity)
- Syndicate Loans
- Securitized assets (ABS, MBS, etc.)
- Convertible Bonds
- Bond Options
- Bond Futures
- Certificates of Deposit (when not classified as Liquidity)
- Commercial Paper (when not classified as Liquidity)
- Other Derivatives with interest rate and credit exposure (e.g. Structured Products)\*\*
- ETFs tracking Fixed Income Markets\*
- Funds with Fixed Income exposure\*

\*These securities have multiple underlying, so the issuer country of the security will not be used. For full details on the mapping rules please see section 5.6 of this document

\*\* For full details on Structured Product Asset Classification please see section 5.7 on Structured Product Asset Classification Mapping Rules

### 5.2.5 Examples

The following are indicative asset class examples:

- Fixed Income > Government Developed > Nominal
  - o Australian Government Bond, AU3TB0000135 (issuer country: Australia)
- Fixed Income > Emerging Markets Hard Currency
  - o Argentine Government International Bond, XS0205550170 (issuer country: Argentina, Currency: EUR)
- Fixed Income > Corporate Investment Grade Developed
  - o 21st Century Fox, US90131HAH84 (issuer country: United States, Rating: BBB+)

## 5.2.6 FAQs

*Q: How are municipal bonds handled?*

A: These securities are captured under Developed Government Related if the issuer is domiciled in one of the Developed Marketed countries listed above. If the issuer of the municipal bond is not domiciled in one of the Developed Market countries listed above, the security will fall under an Emerging Markets category.

*Q: How is agency debt handled?*

A: Securities issued by agencies (such as the Government Sponsored Entities, Federal Housing Loan Banks, etc.) will fall under Developed Government Related if the issuer is domiciled in one of the Developed Marketed countries listed above. If the issuer is not domiciled in one of the Developed Market countries listed above, the security will fall under an Emerging Markets category.

*Q: Where are short term Treasury Bills, Municipal and Agency debt captured?*

A: These securities are captured under Bonds in the product type breakdown and map into the “Liquidity” sector in the asset class breakdown given their short-term nature, high quality and developed market issuer. See liquidity section for more details.

*Q: How are Sovereign bonds that are part of international bond programmes captured?*

These bonds will fall in Government Developed or Emerging Market Debt Hard Currency, depending on the issuer’s country of domicile. An example of such as bond is as follows:

- *Description:* SWEDEN KINGDOM OF (GOVERNMENT)
- *ISIN:* XS0895508314

This bond is a part of the international funding of the Kingdom Of Sweden (i.e. not domestic) and is issued on the Euromarket.

*Q: How are securitized assets handled?*

A: Securitized assets will fall under “Fixed Income Other Mixed”. This is true of securities where the issuer is domiciled in a Developed Market country as well as those from Emerging Market countries.

*Q: How are Certificates of Deposits and Commercial Paper handled?*

A: Given these securities are short term FDIC insured money market securities, these securities will generally bucket under “Liquidity” rather than any of the Fixed Income asset class sectors. See the Liquidity section (5.1) for more details on the criteria to be classified as Liquidity.

*Q: How will inflation linked debt issued by Agencies and Corporates be handled?*

A: In the product type schema, these securities will fall under Bonds. In the Asset Class schema, inflation protected securities from these issuers will be fall into either Developed Government Related, Developed Corporate Investment Grade, Developed Corporate High Yield or Emerging Market Debt depending on the characteristics of the issuer. These securities will not fall into the Inflation Linked sub-sector under the Developed Government sector. These securities will however be identified by an additional Inflation-linked (Y/N) attribute.

*Q: How will Fixed Income derivatives be handled?*

A: All Fixed Income derivatives will map into “Fixed Income – Structured Products / Derivatives” regardless if the derivative references Government debt, corporate debt, interest rates, etc. All Structured Products and Fixed Income derivatives are captured in this sector.

*Q: How will unrated and High Yield Developed Government (or Government Related) Debt be captured?*

A: No distinction is made regarding the rating of Developed Government (or Government Related) debt. Securities are categorized as Government Developed or Government Related Developed based on the characteristics of their issuer, amongst other things (see definitions above), and ratings are not used in the logic for these sectors.

*Q: How will unrated Emerging Market debt be captured?*

A: Such securities will fall under “Emerging Market” categories, either Hard Currency or Local Currency depending on denomination.

*Q: How will dual currency bonds be captured?*

Take the following ISIN as an example: US105756BL31, which is a Brazilian Government dual currency bond. Asset Classification captures the pricing currency of dual currency bonds (BRL in this case) as the security’s currency denomination as opposed to the settlement currency (typically USD). As such this bond would have an Asset Class exposure of “Emerging Market Debt Local Currency” and the currency attribute of the bond would be BRL.

Thus, in terms of Asset Class assignments, bonds of this nature would typically be classified as EM Local Currency debt. That is, provided they are not issue by supranational entities which are classified as “Government Related” securities, or by a Developed Market Country.

### 5.2.7 Requirements

#### *Market Data*

- Distinguishing between Asset Classes Level 1 to 3 – Thomson Reuters, Bloomberg Barclays Four Pillar
- Allocation information for funds and ETFs – Morningstar

#### *HSBC Security Master Data*

- HSBC may be required to identify the country of a security’s issuer (i.e. the country to be used for asset classification) where this is different to/not available in market data feeds (to be confirmed)



### 5.3 Equity

Products falling into the equity asset class are distributed between a further two levels of granularity. For single line equity securities (ex-derivatives), securities are classified based entirely on the security's country of domicile. The country of domicile relates to the country where the company's headquarters are based, which may differ from the marketplace of the exchange the security is traded on. Consider an ADR whose market is the U.S. but country of domicile is different.

#### 5.3.1 Summary

The figure below outlines the three levels of the asset classification schema for equities. Each level will be defined in detail below.

Level 1	Level 2	Level 3
Equity	Developed – North America	North America - US
		North America - Canada
	Developed – Europe ex UK	Developed – Europe ex UK
	Developed – UK	Developed – UK
	Developed – Japan	Developed – Japan
	Developed – Asia Pacific ex Japan	APAC ex Japan - Australia
		APAC ex Japan - New Zealand
		APAC ex Japan - Hong Kong
		APAC ex Japan - Singapore
	Developed Markets Other	Developed Markets - Other / Mixed
	Emerging Markets	Emerging Markets – China
		Emerging Markets – India
		Emerging Markets – Indonesia
		Emerging Markets – Korea
		Emerging Markets – Malaysia
		Emerging Markets – Pakistan
		Emerging Markets – Philippines
		Emerging Markets – Taiwan
		Emerging Markets – Thailand
		Emerging Markets – Other Asia
		Emerging Markets - EMEA
		Emerging Markets - LATAM
		Emerging Markets - Other / Mixed
	Equity - Structured Products / Derivatives	Equity - Structured Products / Derivatives
	Equity - Other / Mixed	Equity - Other / Mixed

#### 5.3.2 Level 2 and 3

The lists below define the country of domicile used to bucket each security to its given level 2 and 3 sectors.

##### **Developed - North America > North America - US**

- United States
- Virgin Islands, U.S.
- Guam
- Puerto Rico

##### **Developed - North America > North America - Canada**

- Canada

***Developed - Europe ex UK***

- Austria
- Belgium
- Channel Islands
- Denmark
- Finland
- France
- Germany
- Iceland
- Ireland
- Italy
- Liechtenstein
- Luxembourg
- Monaco
- Netherlands
- Netherlands Antilles
- Norway
- Portugal
- Spain
- Sweden
- Switzerland
- European Union

***Developed – UK***

- Anguilla
- Bermuda
- British Indian Ocean Territory
- Cayman Islands
- Falkland Islands
- Falkland Islands (Malvinas)
- Gibraltar
- Great Britain
- Guernsey, Channel Islands
- Isle of Man
- Jersey, Channel Islands
- United Kingdom
- Virgin Islands, British

***Developed – Japan***

- Japan

***Developed - Asia Pacific ex Japan > APAC ex Japan - Australia***

- Australia

***Developed - Asia Pacific ex Japan > APAC ex Japan - New Zealand***

- New Zealand

***Developed - Asia Pacific ex Japan > APAC ex Japan - Hong Kong***

- Hong Kong

***Developed - APAC Pacific ex Japan > APAC ex Japan - Singapore***

- Singapore

***Other Developed Markets***

- Israel

***Emerging Markets > Emerging Markets – China***

- China

***Emerging Markets > Emerging Markets – India***

- India

***Emerging Markets > Emerging Markets – Indonesia***

- Indonesia

***Emerging Markets > Emerging Markets – Korea***

- North Korea
- South Korea

***Emerging Markets > Emerging Markets – Malaysia***

- Malaysia

**Emerging Markets > Emerging Markets – Pakistan**

- Pakistan

**Emerging Markets > Emerging Markets – Philippines**

- Philippines

**Emerging Markets > Emerging Markets – Taiwan**

- Taiwan

**Emerging Markets > Emerging Markets – Thailand**

- Thailand

**Emerging Markets > Emerging Markets – Other Asia**

- |                                   |                                    |                    |
|-----------------------------------|------------------------------------|--------------------|
| • Afghanistan                     | • Lao People's Democratic Republic | • Palau            |
| • American Samoa                  | • Kazakhstan                       | • Papua New Guinea |
| • Armenia                         | • Kyrgyzstan                       | • Pitcairn         |
| • Azerbaijan                      | • Macau                            | • Samoa            |
| • Bangladesh                      | • Maldives                         | • Solomon Islands  |
| • Bhutan                          | • Marshall Islands                 | • Sri Lanka        |
| • Brunei Darussalam               | • Micronesia, Federated States of  | • Tajikistan       |
| • Cambodia                        | • Mongolia                         | • Timor-Leste      |
| • Christmas Island                | • Myanmar                          | • Tokelau          |
| • Cocos (Keeling) Islands         | • Nauru                            | • Tonga            |
| • Cook Islands                    | • Nepal                            | • Turkmenistan     |
| • East Timor                      | • New Caledonia                    | • Tuvalu           |
| • Fiji                            | • Niue                             | • Uzbekistan       |
| • Georgia                         | • Norfolk Island                   | • Vanuatu          |
| • Heard Island & McDonald Islands | • Northern Mariana Islands         | • Vietnam          |
| • Kiribati                        |                                    | • Wallis & Futuna  |

**Emerging Markets > Emerging Markets - EMEA**

- |                            |                                 |  |
|----------------------------|---------------------------------|--|
| • Aland Islands            | • Guinea-Bissau                 | • San Marino                                 |
| • Albania                  | • Holy See (Vatican City State) | • Sao Tome and Principe                      |
| • Algeria                  | • Hungary                       | • Saudi Arabia                               |
| • Andorra                  | • Iran, Islamic Republic of     | • Senegal                                    |
| • Angola                   | • Iraq                          | • Serbia, Republic of                        |
| • Bahrain                  | • Jordan                        | • Seychelles                                 |
| • Belarus                  | • Kenya                         | • Sierra Leone                               |
| • Benin                    | • Kuwait                        | • Slovak Republic                            |
| • Bosnia and Herzegovina   | • Latvia                        | • Slovenia                                   |
| • Botswana                 | • Lebanon                       | • Somalia                                    |
| • Bouvet Island            | • Lesotho                       | • South Africa                               |
| • Bulgaria                 | • Liberia                       | • South Georgia & the South Sandwich Islands |
| • Burkina Faso             | • Libyan Arab Jamahiriya        | • South Sudan                                |
| • Burundi                  | • Lithuania                     | • Sudan                                      |
| • Cameroon                 | • Macedonia                     | • St. Helena                                 |
| • Cape Verde               | • Madagascar                    |  |
| • Central African Republic | • Malawi                        |  |
| • Chad                     | • Mali                          |  |
| • Comoros                  | • Malta                         |  |

- Congo, Democratic Republic of the
- Cote D'Ivoire
- Croatia
- Curacao
- Cyprus
- Czech Republic
- Djibouti
- Egypt
- Equatorial Guinea
- Eritrea
- Estonia
- Ethiopia
- Faroe Islands
- French Southern Territories
- Gabon
- Gambia
- Ghana
- Greece
- Greenland
- Guinea
- Mauritania
- Mauritius
- Mayotte
- Moldova, Republic of
- Montenegro, Republic of
- Morocco
- Mozambique
- Namibia
- Niger
- Nigeria
- Oman
- Palestinian Territory, Occupied
- Poland
- Qatar
- Reunion
- Romania
- Russian Federation
- Rwanda
- Saint Helena
- Saint Pierre & Miquelon
- Svalbard and Jan Mayen
- Swaziland
- Syrian Arab Republic
- Tanzania, United Republic of
- Togo
- Tunisia
- Turkey
- Uganda
- Ukraine
- United Arab Emirates
- Uzbekistan
- Western Sahara
- Yemen
- Zambia
- Zimbabwe
- West Bank and Gaza

#### ***Emerging Markets > Emerging Markets - LATAM***

- Antigua and Barbuda
- Argentina
- Aruba
- Bahamas
- Barbados
- Belize
- Bolivia
- Bonaire
- Brazil
- Chile
- Colombia
- Costa Rica
- Cuba
- Dominica
- Dominican Republic
- Ecuador
- El Salvador
- French Antilles
- French Guiana
- Grenada
- Guadeloupe
- Guatemala
- Guyana
- Haiti
- Honduras
- Jamaica
- Martinique
- Mexico
- Montserrat
- Nicaragua
- Panama
- Paraguay
- Peru
- Saint Kitts and Nevis
- Saint Luca
- Saint Vincent and the Grenade
- Suriname
- Trinidad & Tobago
- Turks & Caicos Islands
- Uruguay
- Venezuela

#### ***Emerging Markets > Emerging Markets - Other / Mixed***

- Antarctica
- Falkland Islands (Malvinas)
- French Polynesia
- Kosovo, Republic of
- Multinational
- Saint Barthelemy
- Saint Martin (French Part)
- Saint Maarten (Dutch Part)
- United States Minor Outlying Islands

#### ***Other / Mixed***

- Supranational

#### ***Equity - Structured Products / Derivatives***

All Structured Products and derivatives with single or multiple Equity underlyings will be classified as “Equity - Structured Products / Derivatives”. This will include Structured Products and Derivatives linked to:

- Equity Shares
- Equity ETFs
- Equity Indices
- Equity Funds

### 5.3.3 Product Type Mappings

The list below defines the product types that have Equity exposure:

- Preferred Shares
- Depository Receipts (America, Global, European, etc.)
- Bearer Shares
- Ordinary Share – Registered
- Equity Options
- Warrants
- Rights
- Futures Options
- Futures on Equities
- Structured products and Other Derivatives with Equity Underlying \*\*
- Funds and ETFs with Equity exposure\*

\*These securities have multiple underlying, so the issuer country of the security will not be used. For full details on the mapping rules please see section 5.6 of this document

\*\* For full details on Structured Product Asset Classification please see section 5.7 on Structured Product Asset Classification Mapping Rules

### 5.3.4 Examples

The following are indicative asset class mapping across product types:

- Equity > Developed – North America > North America - US
  - Apple common equity (issuer country: U.S.)
- Equity > Emerging Markets > Emerging Markets - Other / Mixed
  - Ultrapetrol Bahamas Limited common equity (issuer country: Bahamas)
- Equity > Emerging Markets > Emerging Markets - APAC
  - Alibaba ADR (issuer country: China)

### 5.3.5 FAQs

*Q: What happens when the country of domicile is different from the country where the security is traded?*

A: We are using the country of domicile to define the Asset Class assignments. For example, the Alibaba ADR trades on the NYSE (SEDOL: BP41ZD1) and has a country of domicile of China. This security would fall into Emerging Markets > APAC within the asset classification.

*Q: What is the rationale behind REITs falling under the Equity bucket?*

A: REITs are explicitly referenced in the GICS equity classification industry and sub-industry categories, which makes it reasonable to bucket these securities alongside common equities, from a product classification perspective, rather than alternative products. The BRS risk model maps REITs onto equity risk factors, as they are believed to be more representative than alternative factors.

*Q: What happens when a security is issued from a territory, such as Guam or Bermuda?*

A: BRS will group these countries alongside their relevant home territory. For example, equities listed in Bermuda will fall under the 'Developed – UK' sector. Please review the country groupings above for more detail around sector definitions.

*Q: How is the issue country determined?*

A: Aladdin receives a data feed from Thomson Reuters' containing basic security information, such as currency and country of domicile. Please note there are market data constraints to consume this data, see 'Market Data' section below.

*Q: What happens if a security is captured by level 1 but not explicitly captured in levels 2 or 3 of the asset classification?*

A: The logic applied to allocate equity securities within the different sectors follows a 'waterfall' logic. In other words, each security is tested against each sector's logic following a predefined order (the list reference order). A given security will evaluate the logic defining each sector and if it returns true, it will fall into that sector, otherwise it will move onto the next sector and re-evaluate. For example, a stock issued in Trinidad and Tobago will fall within Equity > Emerging Markets > LATAM. This is because it satisfies the criteria of being an Emerging Market security but does not meet the criteria of the APAC or EMEA sub-sectors. Hence, this security will then fall into the next sector in Emerging Market Equity, LATAM.

*Q: What happens if the country of domicile is not representative of the economic exposures of the security?*

A: If HSBC feels that a security's country of domicile does not accurately represent the stock's underlying economic exposures, they can override this by providing BRS with an Asset Class override by the overnight interface files sent to Aladdin. This Asset Class override will then be used in the asset classification.

*Q: Where are Equity Volatility products captured?*

A: These will fall into the "Other / Mixed" category at level 1 in the Asset Class schema.

### 5.3.6 Requirements

#### Market Data

- Distinguishing between Asset Class types Level 1 to 3 – Thomson Reuters
- Information for funds and ETFs – Morningstar

## 5.4 Alternatives

### 5.4.1 Summary

The figure below outlines the three levels of the asset classification schema for Alternatives. Each level will be defined in detail below.

Level 1	Level 2	Level 3
Alternatives	Real Estate	Real Estate - Equity
		Real Estate - Credit
	Private Equity	Private Equity
	Private Credit	Private Credit
	Hedge Fund	Equity Long/Short
		Market Neutral
		Managed Futures (CTA)
		Macro
		Credit Long/Short
		Event Driven
		Multi-Strategy
		Volatility Arbitrage

		Distressed
		Fund of Funds
		Unclassified
	Commodities	Commodities - Precious Metals
		Commodities - Other / Mixed
	Alternatives - Structured Products / Derivatives	Alternatives - Structured Products / Derivatives
	Alternatives - Other / Mixed	Alternatives - Other / Mixed

### 5.4.2 Level 2 and 3

Each level 3 Alternative sector is defined in a section below.

#### *Real Estate > Real Estate – Equity*

Real estate equity represents a residual interest in a property. When you are an equity investor you are essentially the direct or indirect owner of a property.

#### *Real Estate > Real Estate – Credit*

Real estate credit refers to investing in debt by lending funds to an owner or purchaser of real estate. You receive periodic interest payments from the owner and a security charge against the property. At the end of the term you get back the balance of your principal.

#### *Private Equity*

Private equity is capital that is not listed on a public exchange. Private equity is composed of funds and investors that directly invest in private companies, or that engage in buyouts of public companies, resulting in the delisting of public equity. Investors provide the capital for private equity.

#### *Private Credit*

Private credit is credit that is extended to companies on a bilaterally negotiated basis. It is not publicly traded such as many corporate bonds and is originated or held by lenders other than banks. Private credit encompasses various strategies including real estate debt, distressed debt, direct lending, mezzanine financing and structured financing.

#### *Hedge Funds > Equity Long/Short*

The strategy consists of buying under-valued and selling over-valued equities, profiting from price increases in the long positions and decreases in the short positions, whilst managing market risk. The selection of equities bought or sold is usually based on quantitative models and research. Fund managers will have differing approaches to the levels of long and short positions to be held (long or short bias) and the methods of managing these to eliminate market risk.

#### *Hedge Funds > Market Neutral*

Similar to the equity long/short strategy, however there is no long or short bias. Long and short positions are held at equal monetary amounts

#### *Hedge Funds > Managed Futures (CTA)*

This strategy historically focused on commodity derivatives investing (futures contracts, options on futures contracts), however more recently this has moved to futures across all markets, such as equities and currencies (FX forwards). Long and short strategies are applied and there can be use of leverage. Traders can be described as systematic or trend followers. Their skill lies in exploiting large volumes of data to identify trading patterns

and global demand/supply imbalances. Computer systems and quantitative models are used for forecasting and go beyond rule-based trading systems.

#### *Hedge Funds > Macro*

The strategy aims to predict and benefit from underlying changes in global economic variables, such as changes in government interest rates, which have onward impact on currency markets, stock exchanges and the bond markets. Global macro managers may invest in all the principal markets, or specialise in stock index strategies, currency strategies or interest rate strategies. Use of leverage and derivatives is allowed, and can increase the effect of market movements. Derivatives are used for hedging purposes, taking bets on the effect of leverage, which can often be the greatest influence on performance.

#### *Hedge Funds > Credit Long/Short*

The strategy involves taking long and short positions in credit sensitive securities to exploit market opportunities. Positions are based on credit analysis of issuers, securities and market views.

#### *Hedge Funds > Event Driven*

This strategy concentrates on the current or future occurrence of corporate events such as mergers and acquisitions, restructurings or bankruptcies. The manager's skill lies in successfully recognising both the probability of such an event occurring and the timing of its realisation, as well as analysis into the quality of the transaction.

Opportunities of event driven investing are higher when markets are performing well due to higher volumes of corporate activity. The strategy's correlation with traditional markets is typically low. Classic underlying strategies typically include merger arbitrage, distressed securities and strategies based on "special situations".

#### *Hedge Funds > Multi-Strategy*

Offering the most flexibility in terms of capital allocation, it can consist of many or as few different Hedge Fund strategies that the manager chooses, based on their skill and expertise.

#### *Hedge Funds > Volatility Arbitrage*

Volatility arbitrage (or vol arb) is a type of statistical arbitrage that is implemented by trading a delta neutral portfolio of an option and its underlie. The objective is to take advantage of differences between the implied volatility of the option, and a forecast of future realized volatility of the option's underlie.

#### *Hedge Funds > Distressed*

This strategy is based on the purchase of heavily marked down equities, debt securities or debt of companies in financial difficulties. The distressed securities are sold at a discount and can appear attractive. Purchasers take on the view that the company issuing the distressed securities has potential for recovery and therefore profit from the transaction in time. Knowledge and skill is applied to assess and evaluate whether the distressed seller can successfully improve operations to generate positive returns.

#### *Hedge Funds > Fund of Funds*

A Fund of Funds strategy invest in multiple 3<sup>rd</sup> party funds. This could be a diversified portfolio of Hedge Funds, whose fund managers use different strategies, limiting the specific risk resulting from any individual strategy or a diversified portfolio of Portfolio Funds, whose fund managers use the same strategy, limiting the specific risk linked to any particular fund manager.

#### *Hedge Funds > Unclassified*

This sector is for securities that cannot be classified past level 2 Hedge Funds

#### *Commodities > Commodities – Precious Metals*



This sector contains physical holdings or derivatives (including Funds & ETFs and Structured Products)\* linked to the following precious metals: Gold, Silver, Palladium and Platinum. This also includes FX Investment which may have on leg of the underlying pair linked to Precious Metals (e.g. Dual Currency Deposits where one of the legs is Bullion).

#### *Commodities > Commodities – Other / Mixed*

This sector contains physical holdings or derivatives (including Funds & ETFs and Structured Products) investing only in precious metals and Structured Products)\* linked to all commodities other than precious metals.

#### *Alternatives - Structured Products / Derivatives*

This segment refers to Structured Products linked to Alternatives including:

- Commodities
- Real Estate
- Alternative Funds

#### *Alternatives - Other / Mixed*

This sector is for holdings that cannot be classified into the 1 of 5 other L2 classification.

\*For full details on Funds & ETF and Structured Product Asset Classification please see section 5.6 and 5.7 on Asset Classification Mapping Rules

### 5.4.3 Product Type Mappings

The list below defines the product types that have Alternative exposure:

- Hedge Funds
- Private Funds
- Real Estate
- Options with commodity underlyings
- Futures with commodity underlyings
- Precious Metal linked deposit investments
- Precious Metals
- Structured Products with commodity underlyings
- Funds and ETFs following Alternative strategies

\* For full details on the mapping rules please see section 5.6 of this document

### 5.4.4 Examples

The following are indicative asset class mapping across product types:

- Alternatives > Real Estate > Real Estate - Equity
  - Global Real Estate Opportunity Fund
- Alternatives > Real Estate > Real Estate - Credit
  - Real Estate Debt Strategies Fund
- Alternatives > Private Equity > Private Equity
  - HSBC European Private Equity Syndicate III
- Alternatives > Private Credit > Private Credit
  - Vintage V Energy Special Situations
- Alternatives > Hedge Funds > Equity Long/Short
  - BlackRock European Hedge Fund Limited
- Alternatives > Hedge Funds > Market Neutral
  - Renaissance Institutional Diversified Alpha Fund International LP

- Alternatives > Hedge Funds > Managed Futures (CTA)
  - AHL (Cayman) SPC Evolution
- Alternatives > Hedge Funds > Macro
  - Dymon Asia Macro Fund
- Alternatives > Hedge Funds > Credit Long/Short
  - Anchorage Capital Partners Offshore, Ltd.
- Alternatives > Hedge Funds > Event Driven
  - Davidson Kempner International (BVI), Ltd.
- Alternatives > Hedge Funds > Multi-Strategy
  - Citadel Kensington Global Strategies Fund, Ltd.
- Alternatives > Hedge Funds > Volatility Arbitrage
  - Laurion Capital Ltd
- Alternatives > Hedge Funds > Distressed
  - Silver Point Capital Offshore Ltd
- Alternatives > Hedge Funds > Fund of Funds
  - HSBC Portfolio Selection -Multi Adviser Arbitrage
- Commodities
  - Gold Spot USD (^XAUUSD)

#### 5.4.5 FAQs

*Q: What Private Funds map into Private Credit?*

A: Distressed Debt and Private Loan funds are the only Alternative > Private Funds products that will map 100% in to the Asset Class Private Credit. Multi-Strategy Private funds may have an Asset Class exposure split between Private Equity and Private Credit.

*Q: How will FX products that have one leg of the underlying linked to a commodity be classified (e.g. Dual currency Deposits with one leg linked to Bullion)?*

A: These will be mapped as Alternatives > Commodities as the underlying commodity is the key driver of the investment.

*Q: How will REITs be classified?*

A: For client reporting purposes (both in Aladdin and in outputs such as Portfolio Reviews) and in aligning to the SAA we will choose to show REITs (and funds solely investing in REITs) as giving an **Asset Class exposure to Equities**. *Note, this does not affect the Risk Methodology or Product Type classification for these securities.*

#### 5.4.6 Requirements

*HSBC Security Master Data*

- HSBC are required to identify & classify Real Estate exposures
- HSBC are required to identify Private Equity exposures
- HSBC are required to identify Private Credit exposures
- HSBC are required to identify & classify Hedge Funds exposures
- HSBC will not identify Other/Mixed exposure as this will be where BRS do not have sufficient data to provide a classification

## 5.5 FX Structured Product and Derivatives

### 5.5.1 Summary

The figure below outlines the three levels of the asset classification schema for FX Derivatives. Each level will be defined in detail below.

Level 1	Level 2	Level 3
FX Structured Products and Derivatives	FX Structured Products and Derivatives	FX Structured Products and Derivatives

### 5.5.2 Product Type Mappings

The list below defines the product types that have FX exposure:

- Structured Products with FX underlyings
- Derivatives within FX, PM, Other Commodities with FX underlyings
  - This includes Dual currency deposit/investments & Digital Plus investments
  - Note: Derivatives and Dual Currency Deposits /Investments which may have one leg of the pair linked to Commodities (e.g. DCD linked to Bullion) will be classified as “Commodities”. Please see section 5.4.2.

### 5.5.3 FAQs

*Q: Will Structured Products linked to FX rates map into this bucket?*

A: Yes. All structured products that have a payoff linked to a foreign exchange rate will map into “FX Derivatives” regardless of their payoff features.

### 5.5.4 Requirements

*HSBC Security Master Data*

- HSBC will be required to send the required terms and conditions for all securities falling into this Asset Class sector

## 5.6 Funds & ETFs – Asset Class Mapping Rules

This section outlines the Asset Class look through approach for Funds and ETFs. The Asset Class of Funds and ETFs is derived from Aladdin's fund vendor data and uses the underlying holdings. The most recent data is used for the purposes of classification.

The asset class of Focused funds and ETFs, who have targeted specific mandates aligned to the HSBC Level 3 Asset Class Regime, are separated from other vehicles as they follow a different methodology and will map 100% onto a single asset class level 3 sector rather than using holdings.

### 5.6.1 Summary

Fund classification will be derived from 'look through' into the underlying securities of the funds (stocks, bonds, cash, derivatives) and aggregating the classification of the underlying positions. Here, the same breakdown methodology that is applied to single assets held in client accounts, is applied to these assets when they exist as fund underlyings.

Please note that all underlying liquidity holdings of a fund (cash, cash equivalents, short term government debt, etc.) will be classified as 'Other Mixed'. All liquidity positions held in client account/portfolio would be classified as liquidity but any fund underlying liquidity position liquidity position would be classified as 'Other Mixed'.

Where the data is available, Aladdin will perform look through for funds held within funds (fund of fund structures). This also applies to funds held within funds, and to any funds held within those funds. Aladdin will perform look through up to 3 levels deep into fund of fund structure to source the underlying positions of funds for the purpose of classification.

In the absence of Aladdin fund vendor data, Aladdin will fall-back to the CLIENT\_SEC\_TYPE field sent (Avaloq security type for example) to classify the fund in the appropriate Other Mixed bucket (e.g., Fixed Income Other Mixed) rather than just classifying as Other Mixed. E.g., if Avaloq sec type = Fixed Income bond funds, it will bucket in Aladdin as Fixed Income Other Mixed. If the CLIENT\_SEC\_TYPE is not provided/not usable the fund will be mapped into Other / Mixed at level 1. This fall-back is booking center specific given not all booking centers are on Avaloq and has the same data model.

If HSBC wish to override the Asset Classification approach for a particular vehicle, overrides can be received via the interface files HSBC send BlackRock on a nightly basis (specifically the SECURITY\_BREAKDOWN data interface). For example, Legg Mason WA MacroOpps Bd A USD Acc (ISIN: IE00BC9S3Z47) has a category of "Alt - Long/Short Debt". Given its categorization, this fund would typically be treated as a Focused Fund and mapped 100% to Alternatives > Hedge Funds > Credit Long/Short. However, as this fund appears on the Recommend Funds List as a Fixed Income fund, HSBC can flag that this fund should follow the Non-Focused Approach. Overrides should be channelled through the central governance team at HSBC.

### 5.6.2 Focused Methodology

Focused Funds & ETFs are those vehicles with targeted mandates (and subsequently exposures) that are contained within a singular level 3 Asset Class. The Focused designation and a level 3 Asset Class is assigned based on a vehicle's categorization. For example, all vehicles within the Global category "Japan Equity" and sub-category "Japan Large-Cap Equity" are considered Focused based on their mandate and the review/assessment conducted by Morningstar. As such their Asset Class exposure will map 100% onto the level 3 Asset Class "Developed - Japan" under Equity.

Underlying Holding data will not drive the asset classification for these vehicles. Continuing the example above, any "Japan Large-Cap Equity" fund will map 100% onto "Developed - Japan" regardless of what underlying holdings the fund has.

Please find below some example Focused categories and their associated Asset Class mapping. See the Focused Category Section in the Appendix for further details.

Morningstar Category	Asset Class		
	Level 1	Level 2	Level 3
EUR Government Bond	Fixed Income	Developed Government Debt	Developed Government Debt – Nominal
GBP High Yield Bond	Fixed Income	Developed Corporate Debt - HY	Developed Corporate Debt – HY
High Yield Muni	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
USD Corporate Bond	Fixed Income	Developed Corporate Debt – IG	Developed Corporate Debt – IG
Japan Large-Cap Equity	Equity	Developed – Japan	Developed – Japan
Eurozone Large-Cap Equity	Equity	Developed – Europe ex UK	Developed – Europe ex UK
Latin America Equity	Equity	Emerging Markets	Emerging Markets - LATAM
Brazil Mid & Small Cap Equity	Equity	Emerging Markets	Emerging Markets - LATAM

Note: Aladdin’s fund vendor categories such as “US Equity Large Cap Blend” or “UK Equity Large Cap” are not considered focused. These categories typically contain stocks that are listed within the region of focus but have domiciles outside of the region. For example, funds within the “UK Equity Large Cap” may contain Royal Dutch Shell which is listed in London but domiciled in the Netherlands. Funds with “UK Equity Large Cap” will therefore follow a non-focused mapping approach so that their allocations to both “Developed - Europe Ex-UK” and “Developed - UK” are captured.

If one share class of a fund is contained within a Focused Morningstar category and follows the Focused approach, all share classes from the fund will follow the same Asset Class mapping approach.

### 5.6.3 Synthetic ETFs

“Synthetic ETFs” use derivatives to obtain the risk and return profile of the index that they are tracking. However, when the Aladdin Wealth asset classification engine classifies these instruments, due to a lack of terms and conditions provided by Aladdin’s fund vendor for these instruments, these will typically bucket in “Other Mixed”. In order to avoid this, such ETFs are identified and classified using their fund category.

For example, iShares S&P 500 Swap UCITS ETF (IE00BMTX1Y45), a bottom-up approach to classification would classify this ETF as “Other Mixed”. However, using the fund category of “US Large-Cap Blend Equity” we can identify this ETF as being focused on the US equity market and bucket it 100% in US Equities for the purpose of classification.

A full list of the categories treated for synthetic ETFs and which asset classes they map to can be found in the appendix.

This approach improves upon the bucketing of “Other Mixed” for such ETFs however it has its limitations. It can be used to map ETFs 100% to a single asset class sector, but ETFs that may track global or regional indices (e.g. MSCI World or MSCI Asia Pacific) which do not map neatly into a single asset class sector cannot be treated.

### 5.6.4 FAQs

*Q: If a fund has share classes in different Morningstar categories, what methodology will be used?*

A: Holdings of funds are captured at the mother fund level and thus asset class look through happens at the mother fund level. If one share class follows a focused approach, all share classes likely will follow the same

focused mapping approach are all Alternatives, money market and commodity fund categories are considered focused.

*Q: How will instances where there is no categorization be treated?*

A: If holdings are available but no categorization, the fund cannot be evaluated for the targeted approach and so look through will be applied into the underlying holdings.

If no holdings are available either, the HSBC provided CLIENT\_SEC\_TYPE would be used as a fallback to classify the fund. If the CLIENT\_SEC\_TYPE is not provided/not usable the fund will be mapped into Other Mixed at level 1.

*Q: How will instances where there is no fund vendor data at all be treated?*

A: In the absence of Morningstar data, Aladdin will fall back to the CLIENT\_SEC\_TYPE field sent (Avaloq security type) to classify the fund in the appropriate Other Mixed bucket (e.g. Fixed Income Other Mixed) rather than just classifying as Other Mixed. E.g. if Avaloq sec type = Fixed Income bond funds, it will bucket in Aladdin as Fixed Income Other Mixed. If the CLIENT\_SEC\_TYPE is not provided/not usable the fund will be mapped into Other / Mixed at level 1.

*Q: How do we treat liquidity held within funds?*

A: Aladdin treats liquidity held in funds different from liquidity outside of funds and in client accounts. Liquidity (which involves pure cash, cash equivalents, short-term high-quality government debt, etc.) held in funds would be classified as 'other mixed'. So, Other Mixed bucket could be inflated or reduced.

*Q: How come there are large negative / positive 'Other Mixed' allocations?*

A: Aladdin's fund vendor data in certain instances creates 'notional cash offsets'. These are synthetic cash positions sized to offset notional instruments held within funds (interest rate swaps, futures, etc.) to ensure all fund position weights sum to 100%. Such cash offset would be classified as 'Other Mixed'. So, Other Mixed bucket could be inflated or reduced.

*Q: How do we treat derivatives held within funds?*

A: Derivatives held within funds would fall under the relevant Structured Products & Derivatives bucket (depending on their underlying type).

## 5.7 Structured Products - Asset Classification Mapping Rules

This section provides the framework and rules for categorising the structures products into asset classes. All asset class levels nomenclature and mapping business rules, based on the underlying(s), referred to will comply with the regime outlined earlier in this section (Section 5).

### **Fixed Income**

*For Rate Notes, and Rate OTC Derivative (such as Interest Rate Swaps):*

- Structured Products with interest rate and credit exposure will be classified as Fixed Income. For notes with Interest rate exposure, if the underlying is a market rate, then the classification will be as follows:
  - Fixed income > FI - Structured Products And Derivatives > FI - Structured Products And Derivatives

*For Credit and Credit OTC Products:*

- Structured Products with credit underlyings will be classified as follows:
  - Fixed income > FI - Structured Products And Derivatives > FI - Structured Products And Derivatives
- Furthermore, Structured Products not linked to a government rate and simply pay interest will be classified as Fixed Income as follows:
  - Fixed income > FI - Structured Products And Derivatives > FI - Structured Products And Derivatives

### **Equity (including Equity Shares, Equity ETFs, Equity Indices and Equity OTC products)**

- Structured Products with Equity underlyings will be classified as follows:
  - Equity > Equity - Structured Products And Derivatives > Equity - Structured Products And Derivatives

### **FX**

- Structured Products with FX underlyings will be classified as follows:
  - FX Structured Products And Derivatives > FX Structured Products And Derivatives > FX Structured Products And Derivatives

### **Commodities**

- For all structured products with commodity underlyings, the classification will be as follows:
  - Alternatives > Alternatives - Structured Products And Derivatives > Alternatives - Structured Products And Derivatives

### **Hybrid**

- Structured products made up of multiple underlyings with different level 1 asset classes (e.g. Equity and Fixed Income) would be classified as follows:
  - Others / Mixed > Other / Mixed > Other / Mixed

### **Fund**

- Structured products linked to fund underlyings would be classified as follows:
  - Others / Mixed > Other / Mixed > Other / Mixed

### 5.7.1 FAQs

*Q: How will Structured Products linked to multiple underlyings be mapped (i.e. Worst Of, Best Of, Dynamic [e.g. Rainbow, Dynamic Tracker], Average, Basket, Spread)*

A: For Structured Products linked to multiple underlyings all of the Same Level 1, the Asset classification will be as follows:

- *Credit Linked Notes:* Fixed income > FI - Structured Products And Derivatives > FI - Structured Products And Derivatives
- *Rate Notes:* Fixed income > FI - Structured Products And Derivatives > FI - Structured Products And Derivatives
- *Equity Notes:* Equity > Equity - Structured Products And Derivatives > Equity - Structured Products And Derivatives
- *FX Notes:* FX Structured Products And Derivatives > FX Structured Products And Derivatives > FX Structured Products And Derivatives
- *Commodities:* Alternatives - Structured Products And Derivatives > Alternatives - Structured Products And Derivatives > Alternatives - Structured Products And Derivatives

*Note: Limitations*

#### **Lack of Delta Adjusted Asset Classification Mapping**

For notes with multiple underlyings where the weights are pre-determined (e.g. Average or Basket) the asset classification is straightforward: it will look through fully and map proportionately to where the individual underlyings sit as outlined above.

Where the underlying weights are dynamic and not pre-determined (e.g. Worst Of, Best Of, Rainbow) a dynamic delta adjusted exposure would be the most accurate reflection of the asset class exposure, although there would be some challenge in explaining the approach particularly to investors.

However, based on discussions held on the Asset Classification mapping with the BlackRock Solutions team (as at 26/07/2018), **Aladdin does not currently have the ability to produce a view of delta adjusted exposure.**

Therefore in the absence of a delta adjusted approach, the best option is to have a spate Structured Product and Derivative level and Level 3 approach outlined above. **It is important however to note that this is purely for Asset Classification purposes and the risk modelling for Structured Products will still take into account all risk factors.**



## 6 Asset Classification In Portfolios

### 6.1 Mapping

All instruments will have a one-to-one mapping onto a single Product Type.

Instruments can have a one-to-many mapping onto the Asset Class schema (for example, Multi-Asset funds can map onto multiple asset class sectors).

Individual securities will be mapped onto the Asset Class & Product Type schemas according to the methodology outlined above.

### 6.2 Direction

The direction of a security's Asset Classification (i.e. positive or negative asset classifications), will depend on whether the security is held in a long or short position. That is, if a long position is taken, then that security will contribute positively to asset classification. Conversely, if a security is held in a short position, that security will contribute negatively to asset classification.

Any purchased option or note will contribute positively and any sold/written option or note will contribute negatively to the asset class exposure.

### 6.3 Magnitude

Notional Market value is used to determine the weighting of individual security classifications to a portfolio level Asset Classification. That is the weighting of a position is the position's Notional Market Value divided by the associated portfolio's Market Value.

For most instruments, notional market value equals market value. However, there are some derivatives where this is not the case. Note the following:

- Futures have no market value since they are fully cash-settled daily. Thus, the notional market value is required for these positions which references the size of the contract, its price and the number of contracts held.
- At the money swaps have zero market value which does not capture the economic exposure of the position. Thus, notional market value, which references the notional amount of the contract, is more appropriate for all swaps.
- The notional market value of options equals the market value of the position given that these are fully funded positions. Notional Market value here equates the option premium multiplied by the number of contracts held (accounting for the block sizes that exchange traded options trade in).
- Structured Products (excluding the OTC products mentioned above) are not considered notional securities.

FX Forwards and FX Spot contracts are not notional securities and Aladdin uses their market value for the magnitude of position sizes when bucketing them in breakdowns. Note however that these are treated like notional securities elsewhere in Aladdin for analytical purposes given they are captured as a single security in Aladdin that represents both a pay & receive leg.

## 7 Attributes

### 7.1 Summary

The table below outlines attributes that shall be used in addition to asset class and product types dimensions, their relevance and respective definitions.

Attribute	Possible Values	Relevant to ...
Country	All Possible Countries Other / Mixed	All Asset Classes
Equity Sector Level 1	GICS Level 1 Classification Scheme	Equity Asset Class
Fixed Income Sector Level 1	Barclays Indices Global Sector Classification Scheme Level 1	Fixed Income & Liquidity Asset Class
Equity Sector Level 2	GICS Classification Scheme Level 2	Equity Asset Class
Fixed Income Sector Level 2	Bloomberg Barclays Indices Global Sector Classification Scheme Level 2	Fixed Income & Liquidity Asset Class
Currency	All Possible Currencies- See Appendix	Equity Asset Class
Credit Ratings (Moody's)	Moody's Ratings	Products with Fixed Income Asset Class Exposures and Single-line FI Products with Liquidity Asset Class Exposure
Credit Ratings (S&P)	S&P's Ratings	Products with Fixed Income Asset Class Exposures and Single-line FI Products with Liquidity Asset Class Exposure
Credit Ratings (Fitch)	Fitch's Ratings	Products with Fixed Income Asset Class Exposures and Single-line FI Products with Liquidity Asset Class Exposure
Credit Ratings (Other Source)	TBC	Products with Fixed Income Asset Class Exposures and Single-line FI Products with Liquidity Asset Class Exposure
Overall/Combined Credit Rating	AAA, AA, A, BBB, BB, B, Below B, Not Rated, Other	Products with Fixed Income Asset Class Exposures and Single-line FI Products with Liquidity Asset Class Exposure
Islamic Product	Y/N	All Product Types
Coupon type	Zero Coupon Fixed Coupon Floating Coupon Variable Coupon	Single Line FI Product Types
Bond Maturity Type	Perpetual Fixed Term Sinkable	Single Line FI Product Types
Bond Maturity (Years) <i>Used in client output not Asset Classification</i>		Single Line FI Product Types and Fund & ETFs
Inflation Linked	Y/N	Single Line FI Product Types
Callable/Putable	Callable Puttable Callable & Puttable No	Single Line FI Product Types
Make Whole Call	Y/N	Single Line FI Product Types
Bail-in Eligible	Y/N	Single Line FI Product Types
Debt Rank	SENIOR NON-PREFERRED JUNIOR SUBORDINATE JUNIOR SENIOR MEZZANINE SENIOR UNSECURED SENIOR SECURED SUBORDINATE COCO CAPSEC AGENCY	Single Line FI Product Types

	MORTGAGE 1 <sup>st</sup> LIEN 2 <sup>nd</sup> LIEN DIP UNSECURED OTHER	
CoCos	Y/N	Single-line FI Products
Covered Bond	Y/N	Single Line FI Product Types
Registration	Private Placements Public REG-S 144a Dual (Reg-S + 144a)	Single Line FI Product Types
Primary Market of Issue	GLOBAL EURO UNITED STATES ETC	Single Line FI Product Types
MTN	Y/N	
Dual Currency	Y/N	Single Line FI Product Types
Bullet	Y/N	Single Line FI Product Types
Non-Deliverable	Y/N	All Options, Forwards & Swaps Product Types
Margin Product Product Type	Margin Products	FX products
Hedge Fund Product Type	Hedge Fund, Liquid Hedge Fund	Hedge Funds
Private Funds Product Type	Venture, Buyout, Secondaries, Energy, Direct Club, etc.	Private Funds Products
Real Estate Product Type	Fund Of Funds, Segregated Mandates, Club Deals	Real Estate Investment Products
Precious Metals Product Type	Allocated, Unallocated	Precious Metals
Private Equity Asset Class tags	Private Equity, Private Credit	Private Equity Products
Real Estate Asset Class tags	Real Estate Equity, Real Estate Credit	Real Estate Investment Products
Hedge Fund Strategy	Market Neutral, Macro, Credit Long Short, Distressed, etc.	Hedge Funds
Hedge Fund of funds	Y/N	Hedge Funds
Real Estate Fund of funds	Y/N	Real Estate Investment Products
Private Equity Fund of Funds	Y/N	Private Funds Products
Direct/Indirect RE Investment	Direct/Indirect	Real Estate Investment Products
AIS	Y/N	Hedge Funds
UCITS	Y/N	Hedge Funds
Fund Type	Money Market Fund Equity Only Fund Fixed Income Only Fund Multi-Asset Fund Commodity Fund Hedge Fund Private Fund Real Estate Fund Other	Funds, ETFs and Hedge Fund Product Types
Coupon (Autocall Level)	Flat Step-down Other	Structured Products & FX Derivatives
Coupon (Payment Type)	Periodic Accrual Digital	Structured Products & FX Derivatives
Knock In	European American N	Structured Products & FX Derivatives
Knock Out	European American Parisian N	Structured Products & FX Derivatives

<b>Strike Observation</b>	European American Asian	Structured Products & FX Derivatives
<b>Schedule</b>	Daily Weekly Monthly Semi-Annually Annually Other	Structured Products & FX Derivatives
<b>Transatlantic</b>	Y/N	Structured Products & FX Derivatives
<b>Target</b>	Accrual Big Figures N	Structured Products & FX Derivatives
<b>With or without Call-ability</b>	Y/N	Structured Products & FX Derivatives
<b>Participation</b>	% Level	Structured Products & FX Derivatives
<b>Cap Coupon</b>	Y/N	Structured Products & FX Derivatives
<b>Floor Coupon</b>	Y/N	Structured Products & FX Derivatives
<b>Memory on Coupon</b>	Y/N	Structured Products & FX Derivatives
<b>Memory on Knock Out</b>	Y/N	Structured Products & FX Derivatives
<b>Floored Principal</b>	Full Protection Put Spread Zero Coupon N	Structured Products & FX Derivatives
<b>One Touch / Double Touch</b>	One Touch Double Touch N	Structured Products & FX Derivatives
<b>No Touch / Double No Touch</b>	No Touch Double No Touch N	Structured Products & FX Derivatives
<b>Lookback</b>	Y/N	Structured Products & FX Derivatives
<b>Underlying Valuation</b>	Average Best-Of Worst Of Basket Single	Structured Products & FX Derivatives
<b>Accu/Decu Fixing Schedule</b>	Daily Weekly Monthly Semi-Annually Annually Other	Structured Products & FX Derivatives
<b>Barrier / Double Barrier</b>	KI KO Double KI Double KO KI-KO No	All Options Product Types (Equity, FI, FX etc.)
<b>Binary Options</b>	Digital Digital KO One Touch No Touch Instant One Touch No	All Options Product Types (Equity, FI, FX etc.)
<b>Call / Put</b>	Call Put	FX Accumulators
<b>Barrier</b>	Single Double No	FX Accumulators
<b>Leveraged</b>	Y/N	FX Accumulators
<b>Strike</b>	Single Dual	FX Accumulators
<b>European KI Barrier</b>	Y/N	FX Accumulators

PM Type	Gold Silver Platinum Palladium Other	Precious Metals
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## 7.2 Attributes definition

The below table outlines further definition and details around Attributes.

Attribute	Definition	Futher Definitions
Country	This field represents the Country which is used to drive the Asset Classification a reflects the economic exposures of the security	For Single-line Equity Products - this will be the Country of Domicile (except were overwritten by a HSBC PB country of risk) For Single-line Fixed Income Products - this will be the Country of Domicile of the Ultimate Parent Issuer (except were overwritten by a HSBC PB country of risk to reflect the correct Country of the Ultimate Parent Issuer) For Fund and ETF Products the Country of Risk, as derived from the Global and M* fund categories, this would only apply to a subset of focused fund which are aligned to a single country, otherwise this field would be other/mixed For Structured Products (SPs) - look through based on the underlying, for Indexes this may be hard coded For Real Estate & Private Equity Alternative Products this will be the country(ies) provided by HSBC and used for Risk Modelling
Equity Sector Level 1	The level 1 Equity sector classification of the security, aligned to GICS	For Products with Equity Asset Class exposure - this will be driven by the GICS Classification For Funds & ETFs - this will be driven by the MorningStar Equity Sector and Bond Sector breakdown (which will be mapped to GICS) For Products with Alternative Asset Class Exposure - there will be no sector For SPs - there will be no sector
Fixed Income Sector Level 1	The level 1 Fixed Income sector classification of the security, aligned to Barclays 4 Pillar	For Products with Fixed Income Asset Class Exposure (and Single-line FI Products with Liquidity Asset Class Exposure) - this will be driven by the Bloomberg Barclays Indices Global Sector Classification Scheme For Funds & ETFs - this will be driven by the MorningStar Equity Sector and Bond Sector breakdown (which will be mapped to GICS and Barclays for consistency) TBC For Products with Alternative Asset Class Exposure - there will be no sector TBC SPs - there will be no sector
Equity Sector Level 2	The level 2 Equity sector classification of the security, aligned to GICS	For Single-line Products with Equity Asset Class exposure this will be driven by the GICS Classification
Fixed Income Sector Level 2	The level 2 Fixed Income sector classification of the security, aligned to Barclays 4 Pillar	For Single-line Products with Fixed Income Asset Class Exposure (and Single-line FI Products with Liquidity Asset Class Exposure) this will be driven by the Bloomberg Barclays Indices Global Sector Classification Scheme
Currency	The currency associated with each instrument, this will be a single value per instrument and denotes the currency of the instrument not the underlying exposure	For Single-line Equity Products this will be the currency of the security For Single-line Fixed Income Products this will be the pricing currency (as opposed to the settlement currency where different) For Fund and ETF Products this will be the currency of the share class For Alternative Products this will be the currency of that the instruments NAV is calculated in and reported For Derivative Products (across Single-line Equity, Single-line Fixed Income, Structured Products (SPs), FX, PM, Other Commodities) this will reflect the denomination of the derivative
Credit Ratings (Moody's)	The credit rating provided by Moody's where available	
Credit Ratings (S&P)	The credit rating provided by S&P where available	
Credit Ratings (Fitch)	The credit rating provided by Fitch where available	
Credit Ratings (Other Source)	The credit rating used by HSBC where none of the main 3 Ratings are available - these might be internal HSBC ratings or Private ratings produced by Markit on request from HSBC	
Overall/Combined Credit Rating	For Single-line Instrument The credit rating which is calculated using the industry standard Bloomberg Barclays Index rating methodology which averages the ratings from the major rating agencies, Moody's, S&P and Fitch Ratings (and Other Credit Rating where applicable). For Funds & ETFs the Credit Rating lookthrough provided by MorningStar.	
Islamic Product	This field will identify if a product complies with sharia (Islamic law), examples include: Mudharabah (profit sharing), Wadiah (safekeeping), Musharakah (joint	Yes: Product identified as compliant with sharia (Islamic law) No: All other securities

	venture), Murabahah (cost plus finance), Ijar (leasing), Takaful (Islamic insurance), and Sukuk (Islamic bonds).	
<b>Coupon type</b>	The type of coupon associated with Single-line Fixed Income instruments	<p>Zero Coupon: A Zero Coupon bond is issued at discount and pays no coupon (no interest) over the lifetime of the bond, but pay repay the face value (principal) at maturity</p> <p>Fixed Coupon: A bond with a Fixed Coupon pays a constant coupon (interest) rate over the lifetime of the bond</p> <p>Floating Coupon: Floaters are securities where the coupons is reset on defined frequency (generally quarterly). The coupons are set on a benchmark rate (e.g. LIBOR) + a fixed spread</p> <p>Variable Coupon: Securities where the nature of the coupon will vary throughout the life of the bond. That is, the coupon may go from fixed to floating, or vice versa. This also encompasses securities where the coupon will step up - predefined schedule of coupon increases, when the coupon is not linked to a payment rate, and step down bonds.</p>
<b>Bond Maturity</b>	This field will identify if a product has a fixed maturity or is perpetual or sinkable	<p>Perpetual: A Perpetual bond is a bond with no maturity date, the issuer is obligated to pay coupons indefinitely to the bondholder.</p> <p>Fixed Term: A Fixed Term bond is a bond with a fixed maturity date, at which point the bond's principal is paid by the issuer to the bondholder.</p> <p>Sinkable: A bond protected by a sinking fund, which ensures that principle and interest payments for that bond will be paid according to the bond agreement. It features scheduled amortization over the course of the life of the bond.</p>
<b>Bond Maturity (Years)</b> <i>Used in client output not Asset Classification</i>	The time to maturity of the bond	
<b>Inflation Linked</b>	Inflation linked bonds (or linkers) are bonds where the coupon payments and notional are adjusted for inflation through some inflation indicator, such as the Consumer Price Index (CPI) or the Retail Price Index (RPI)	<p>Yes: Security identified as linked to an inflation indicator</p> <p>No: All other securities</p>
<b>Callable/Puttable</b>	This field will capture any optionality associated with Single-line FI products (excluding Bond Options)	<p><b>Callable:</b> A callable bond (also called redeemable bond) is a type of bond (debt security) that allows the issuer of the bond to retain the privilege of redeeming the bond at some point (or one or more specified dates) before the bond reaches its date of maturity</p> <p><b>Puttable:</b> A Puttable bond (put bond, puttable or retractable bond) is a bond with an embedded put option. The holder of the puttable bond has the right, but not the obligation, to demand early repayment of the principal. The put option is exercisable on one or more specified dates.</p> <p><b>Callable &amp; Puttable:</b> A bond which is both Callable and Puttable as above</p> <p><b>No:</b> The instrument is neither Callable nor Puttable</p>
<b>Make Whole Call</b>	This field will capture a Make Whole Call feature associated with Single-line FI products (excluding Bond Options)	<b>Make Whole Call:</b> A make whole call provision is a type of call provision on a bond allowing the issuer to pay off remaining debt early. The issuer typically has to make a lump sum payment to the investor derived from a formula based on the net present value (NPV) of future coupon payments that will not be paid incrementally because of the call combined with the principal payment the investor would have received at maturity.
<b>Bail-in Eligible</b>	Security is identified as TLAC <i>This definition will later be expanded to incorporate MREL debt for disclosures once this classification is available in AVALOQ</i>	
<b>Debt Rank</b>	An attribute to identify the debt rank of Fixed Income instruments	<p><b>Secured:</b> Secured debt is backed by a specific set of assets that can be sold as collateral if the firm defaults on the loan. Secured debt is senior and claims are paid first.</p> <p><b>Senior Unsecured:</b> Senior unsecured debt is not backed by a specific set of assets, but is senior to all other debt (which is subordinated). As such claims on Senior Unsecured debt are paid before all other debt which is not Secured. Collateral from asset-backed debts may be sold to pay off senior secured debt. Senior unsecured debt is then paid using other company assets</p> <p><b>Subordinated:</b> Subordinated debt is unsecured and junior to all senior unsecured debt</p> <p><b>Junior Subordinated:</b> Junior Subordinated debt is unsecured and junior to all senior unsecured and all subordinated debt</p> <p><b>Senior Non-Preferred:</b> In Europe, banks that do not have a holding company structure have started to issue non-preferred senior debt, which will be TLAC/MREL eligible. Some call it informally 'Tier 3', as it lies below senior unsecured debt but above Tier 2 in the capital structure of the bank. It is a new category of debt instrument with a greater legal capacity to absorb losses than traditional senior unsecured debt.</p> <p><b>CoCo:</b> CoCos are a subcomponent of Contingent Capital Notes (CCNs). CCNs are hybrid securities issued by Financial institutions that provide a buffer in times of distress by absorbing losses. CCNs have two core features, the loss absorption method (either conversion to equity or a principal write down) and the trigger (the point at which loss absorption is activated). Triggers can be mechanical triggers (based on a specific capital ratio of the entity) or discretionary triggers (at the discretion of the relevant regulatory body, generally at the point of non-viability (PONV)). HSBC PB distinguishes CoCos from other CCNs based on the trigger, only those instruments with a mechanical trigger are considered CoCos and will also have the Debt Rank</p>

		"Junior Subordinated". CCNs with a discretionary trigger will not be identified as CoCos.
<b>Covered Bond</b>	Covered bonds are debt securities issued by a bank or mortgage institution and collateralised against a pool of assets that, in case of failure of the issuer, can cover claims at any point of time. They are subject to specific legislation to protect bond holders. Unlike asset-backed securities created in securitization, the covered bonds continue as obligations of the issuer; in essence, the investor has recourse against the issuer and the collateral, sometimes known as "dual recourse." Typically, covered bond assets remain on the issuer's consolidated balance sheet (usually with an appropriate capital charge).	Yes: Security Identified as a Covered Bond No: All other securities
<b>Registration</b>		Private Placements - Securities which are truly privately issued are marked as Private in the Registration. Public - Both qualified and retail clients can hold REG-S - Only EU qualified investors can hold 144a - Only US qualified investors can hold Dual (Reg-S + 144a) Both US and EU qualified investors can hold
<b>Primary Market of Issue</b>	The primary market of issue captures the market on which the security is trading and is distinct from the characteristics of the issuer.	
<b>MTN</b>		
<b>Dual Currency</b>	A Dual Currency bond is a fixed income security denominated in one currency whose interest and/or principal is payable in another currency at a predetermined rate.	Yes: Security Identified as a Dual Currency Bond No: All other securities
<b>Bullet</b>	A bullet bond is a debt instrument whose entire principal value is paid all at once on the maturity date, as opposed to amortizing the bond over its lifetime. Bullet bonds cannot be redeemed early by an issuer, which means they are non-callable. These are equivalent to non-callable, fixed term zero coupon bonds.	Yes: Security Identified as a Bullet Bond No: All other securities
<b>Non-Deliverable</b>		Yes: No: All other securities
<b>Margin Product Product Type</b>	HSBC to provide to BlackRock tags for Margin Products for the purpose of Asset Classification as per interface file requirements	
<b>Hedge Fund Product Type</b>	HSBC to provide to BlackRock tags for Hedge Funds for the purpose of Asset Classification as per interface file requirements	
<b>Private Funds Product Type</b>	HSBC to provide to BlackRock tags for Private Funds Products for the purpose of Asset Classification as per interface file requirements	
<b>Real Estate Product Type</b>	HSBC to provide to BlackRock tags for Real Estate Products for the purpose of Asset Classification as per interface file requirements	
<b>Precious Metals Product Type</b>	HSBC to provide to BlackRock tags for Allocated/Unallocated FX Products for the purpose of Asset Classification as per interface file requirements	
<b>Private Equity Asset Class tags</b>	HSBC to provide to BlackRock the tags for Private Equity and Private Credit	
<b>Real Estate Asset Class tags</b>	HSBC to provide to BlackRock the tags for Real Estate Equity & Real Estate Credit	
<b>Hedge Fund Strategy</b>	HSBC to provide to BlackRock the Hedge Funds strategy for Asset Classification purposes	
<b>Hedge Fund of funds</b>	A "fund of funds" (FOF) holds a portfolio of other investment funds rather than investing directly, this type of investing is often referred to as multi-manager investment.	Yes: Security is a Fund of Funds No: All other securities
<b>Real Estate Fund of funds</b>	A "fund of funds" (FOF) holds a portfolio of other investment funds rather than investing directly, this type of investing is often referred to as multi-manager investment.	Yes: Security is a Fund of Funds No: All other securities
<b>Private Equity Fund of Funds</b>	A "fund of funds" (FOF) holds a portfolio of other investment funds rather than investing directly, this type of investing is often referred to as multi-manager investment.	Yes: No: All other securities
<b>Direct/Indirect RE Investment</b>		Direct: Indirect
<b>AIS</b>	Product from Alternative Investment Solutions	
<b>UCITS</b>		
<b>Fund Type</b>	Identifies the 'Type' of Mutual Fund which will be used to support reporting/client output requirements in Asia	Money Market Fund: These are the focused funds that map 100% to L1 Liquidity Asset Class Exposure Equity Only Fund: These are the focused & multi region funds that map 100% to L1 Equity Asset Class Exposure, does not include Multi Asset Funds which happen to have all Equity exposure

		<p>Fixed Income Only Fund: These are the focused &amp; multi sector and Global bond funds that map 100% to L1 Fixed Income Asset Class Exposure, does not include Multi Asset Funds which happen to have all FI exposure</p> <p>Multi-Asset Fund: These are the funds which have asset class exposure across both Equity and Fixed Income, includes Multi Asset Funds which happen to have all FI or all Equity exposure</p> <p>Commodity Fund: These are the focused funds which map 100% on to the L2 Commodities</p> <p>Hedge Fund: These are the focused funds which map 100% on to the L2s: Hedge Funds</p> <p>Private Fund: These are the focused funds which map 100% on to the L2s: Private Equity; Private Credit</p> <p>Resl Estate Fund: These are the focused funds which map 100% on to the L2s: Real Estate</p> <p>Other: Any funds which cannot be classified based on the above rules</p>
<b>Coupon (Autocall Level)</b>	This field indicates the path of the autocall level which, if certain conditions are met, will knockout the product and pay a predefined coupon.	<p>Flat- same autocall level at each observation date</p> <p>Step-down: reducing autocall level according to predefined schedule</p> <p>Other</p>
<b>Coupon (Payment Type)</b>	This field indicates the system by which the pay-out is relayed	<p>Periodic: Coupon is paid out according to a predefined schedule</p> <p>Accrual: Coupon is accrued and paid out at maturity or redemption</p> <p>Digital: Coupon is conditional and fixed</p>
<b>Knock In</b>	This field identifies if there is a return level that will cause the barrier to be breached and cause the product to act like a normal option	<p>European: Return level observed at Maturity</p> <p>American (Daily Close): Return level observed at the close of each day during the life of the product</p> <p>American (Intraday): Return level observed throughout the life of the product</p>
<b>Knock Out</b>	This field identifies if the product is autocallable or redeemable prior to maturity based on pre-defined rules	<p>European: Autocallable with observation at the end of the period</p> <p>American: Autocallable with observation continuously during the period (Intraday or Daily Close)</p> <p>Parisian: Autocallable with observations over a pre-defined period</p> <p>No: Security will redeem at maturity</p>
<b>Strike Observation</b>	This field indicates the observation style for the strike of the options	<p>European: Observed at the end of the period</p> <p>American: Observed continuously during the period</p> <p>Asian: An average of the observations over a defined period</p>
<b>Schedule</b>	This field defines the frequency of occurrence of certain events during the life of the product	
<b>Transatlantic</b>	This field indicates whether the product constitutes of both an American and European style option	<p>Yes: Product constitutes a transatlantic option</p> <p>No: Not relevant</p>
<b>Target</b>	This field indicates the products target return either in terms of amount (accrual) or in-the-money fixings (big figures)	<p>Accrual: Maximum dollar value the holder can collect after which the contract knocks out</p> <p>Big Figures: Number of in-the-money fixings the holder can participate in before the contract knocks out</p> <p>No: Not relevant</p>
<b>With or without Call-ability</b>	This field indicates whether the product can be redeemed by the issuer prior to maturity	<p>Yes: Product can be redeemed by issuer prior to maturity</p> <p>No: Not relevant</p>
<b>Participation</b>	This field indicates the leverage level of the upside return that the product could deliver	<p>100% means no upside leverage</p> <p>&gt;100% implies upside leverage</p>
<b>Cap Coupon</b>	This field indicates the upper limit on a floating rate coupon	<p>Yes: Relevant with cap level</p> <p>No: Not relevant</p>
<b>Floor Coupon</b>	This field indicates the lower limit on a floating rate coupon	<p>Yes: Relevant with floor level</p> <p>No: Not relevant</p>
<b>Memory on Coupon</b>	This field indicates whether any previously unpaid / unaccrued coupon can be paid / accrued in a subsequent period if certain conditions are met	<p>Yes: Previously unpaid/unaccrued coupon can be paid/accrued</p> <p>No: Unpaid/unaccrued coupons are lost</p>
<b>Memory on Knock Out</b>	This field indicates whether a historic prices are used in order to determine if a product is knocked out	<p>Yes: Memory with schedule and style</p> <p>No: No knock out memory</p>
<b>Floored Principal</b>	This field indicates whether or not the security has downside protection	<p>Full Protection: Full protection of principal on the downside</p> <p>Put Spread: Principal protection at a given level in a given band of underlying performance</p> <p>Zero Coupon: Principal protection at a set % regardless of underlying performance</p> <p>N: No protection on the downside</p>
<b>One Touch / Double Touch</b>	This field indicates if the holder will receive the pay-out based on if the underlying reaches (or does not reach) certain pre-defined level or levels	<p>One Touch : A pay-out is received if the underlying reaches a certain level</p> <p>Double Touch: A pay-out is received if the underlying reaches one of two defined levels</p> <p>No: Not relevant</p>
<b>No Touch / Double No Touch</b>	This field indicates if the holder will receive the pay-out based on if the underlying reaches (or does not reach) certain pre-defined level or levels	<p>No Touch: A pay-out will be received if the underlying does not reach a certain level</p> <p>Double No Touch: A pay-out will be received if the underlying does not reach a level beyond a certain range</p> <p>No: Not relevant</p>
<b>Lookback</b>	This field indicates if the strike is determined as the best level traded over a defined period of time	<p>Yes: Indicates there is a lookback feature on the strike</p> <p>No: Not relevant</p>
<b>Underlying Valuation</b>	The field identifies what the product is linked to	<p>Average: take the average of the underlying</p> <p>Best-Of: take the best of underlying basket return</p> <p>Worst-Of: take the worst of underlying basket return</p> <p>Basket: take the weighted average</p> <p>Single: single underlying</p>



<b>Accu/Decu Fixing Schedule</b>	Tbc	Tbc
<b>Barrier / Double Barrier</b>	Tbc	Tbc
<b>Binary Options</b>	Tbc	Tbc
<b>Call / Put</b>	Tbc	Tbc
<b>Barrier</b>	Tbc	Tbc
<b>Leveraged</b>	Tbc	Tbc
<b>Strike</b>	Tbc	Tbc
<b>European KI Barrier</b>	Tbc	Tbc
<b>PM Type</b>	Specifies the specific Precious Metal held	

## 8 Definitions

Asset class – reflects the risk and return exposure of a financial instrument

Product type – identifies the type of a financial instrument that provides the aforementioned asset class exposure based on key product features

Asset type – variation of Asset class level 1, the purpose is to ensure 1:1 relationship between Asset type and a financial instrument (there can be M:1 relationship between an Asset class and a financial instrument; please see the Appendix for more details)

## 9 Appendix

### 9.1 Emerging Markets

Please find below a catalogue of all countries currently considered Emerging Markets.

- Afghanistan
- Aland Islands
- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belize
- Benin
- Bhutan
- Bolivia
- Bonaire
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- Brunei Darussalam
- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Cape Verde
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Greenland
- Grenada
- Guatemala
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Heard Island and McDonald Islands
- Holy See (Vatican City State)
- Honduras
- Hungary
- India
- Indonesia
- Iran, Islamic Republic of
- Iraq
- Jamaica
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Korea (North), Democrat People's Republic of
- Korea (South), Republic of
- Kosovo, Republic of
- Kuwait
- Kyrgyzstan
- Lao People's Democrat Republic
- Latvia
- Lebanon
- Lesotho
- Liberia
- Libyan Arab Jamahiriya
- Lithuania
- Macau
- Macedonia, The former Yugoslav Republic of
- Madagascar
- Malawi
- Malaysia
- Maldives
- Mali
- Malta
- Marshall Islands
- Martinique
- Mauritania
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn
- Poland
- Qatar
- Reunion
- Romania
- Russian Federation
- Rwanda
- Saint Barthelemy
- Saint Helena
- Saint Kitts and Nevis
- Saint Lucia
- Saint Martin (French Part)
- Saint Pierre and Miquelon
- Saint Vincent and the Grenadines
- Samoa
- San Marino
- Sao Tome and Principe
- Saudi Arabia
- Senegal
- Serbia, Republic of
- Seychelles
- Sierra Leone
- Saint Maarten (Dutch Part)
- Slovak Republic
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Sudan
- Sri Lanka
- Sudan
- Suriname
- Svalbard and Jan Mayen
- Swaziland
- Syrian Arab Republic
- Taiwan (Republic of China)
- Tajikistan

- Congo, The Democrat Republic of the
- Cook Islands
- Costa Rica
- Cote D'Ivoire
- Croatia
- Cuba
- Curacao
- Cyprus
- Czech Republic
- Djibouti
- Dominica
- Dominican Republic
- East Timor
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Eritrea
- Estonia
- Ethiopia
- Faroe Islands
- Fiji
- French Guiana
- French Polynesia
- French Southern Territories
- Gabon
- Gambia
- Georgia
- Ghana
- Guadeloupe
- Greece
- Mauritius
- Mayotte
- Mexico
- Micronesia, Federated States of
- Moldova, Republic of
- Mongolia
- Montenegro, Republic of
- Montserrat
- Morocco
- Mozambique
- Multinational
- Myanmar
- Namibia
- Nauru
- Nepal
- New Caledonia
- Nicaragua
- Niger
- Nigeria
- Niue
- Norfolk Island
- Northern Mariana Islands
- Oman
- Pakistan
- Palau
- Palestinian Territory, Occupied
- Tanzania, United Republic of
- Thailand
- Timor-Leste
- Togo
- Tokelau
- Tonga
- Trinidad and Tobago
- Tunisia
- Turkey
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United States Minor Outlying Islands
- Uruguay
- Uzbekistan
- Vanuatu
- Venezuela
- Vietnam
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

## 9.2 Hard Currencies

HSBC has defined Hard Currencies to be all currencies used in Developed Market countries. These are listed below:

<b><i>Currency Code</i></b>	<b><i>Currency Description</i></b>
USD	United States Dollar
EUR	Euro
GBP	British Pound
JPY	Japanese Yen
CAD	Canadian Dollar
AUD	Australian Dollar
NZD	New Zealand Dollar
CHF	Swiss Franc
NOK	Norwegian Kroner
SEK	Swedish Krona
DKK	Danish Krone
SGD	Singapore Dollar
BMD	Bermudian Dollar

KYD	Cayman Islands Dollar
XCD	East Caribbean Dollar
FKP	Falkland Islands Pound
GIP	Gibraltar Pound
HKD	Hong Kong Dollar
ISK	Icelandic Krona
ILS	Israeli Shekel

### 9.3 Funds & ETFs: Country Classification Breaks

The following section highlights key differences between Morningstar's country classification and HSBCs internal classification.

<b>EM vs DM Differences</b>		
<b>Country</b>	<b>Current HSBC Placement</b>	<b>Morningstar Placement</b>
<i>Taiwan</i>	<i>EM Asia</i>	<i>Asia Pacific Ex Japan</i>
<i>Netherlands Antilles</i>	<i>Developed Europe</i>	<i>EM EMEA</i>
<i>Israel</i>	<i>Developed Other</i>	<i>EM EMEA</i>
<i>Greece</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>Cyprus</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>Macau</i>	<i>EM Asia</i>	<i>Asia Pacific ex Japan</i>
<i>Malta</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>Brunei</i>	<i>EM APAC</i>	<i>Developed Asia Ex Japan</i>
<i>New Caledonia</i>	<i>EM Asia</i>	<i>Asia Pacific ex Japan</i>
<i>South Korea</i>	<i>EM Asia</i>	<i>Asia Pacific Ex Japan</i>
<i>Estonia</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>Faroe Islands</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>Greenland</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>Latvia</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>San Marino</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>Slovakia</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>Slovenia</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>Svalbard</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>Vatican City</i>	<i>EM EMEA</i>	<i>Developed Europe</i>
<i>Armenia</i>	<i>EM EMEA</i>	<i>EM Asia</i>
<i>Andorra</i>	<i>EM EMEA</i>	<i>Europe Developed</i>
<b>Regional Differences</b>		
<b>Country</b>	<b>Current HSBC Placement</b>	<b>M* Placement</b>
<i>Bermuda</i>	<i>UK</i>	<i>EM Latin America</i>
<i>Cayman Islands</i>	<i>UK</i>	<i>EM Latin America</i>
<i>British Virgin Islands</i>	<i>UK</i>	<i>EM Latin America</i>
<i>Gibraltar</i>	<i>UK</i>	<i>Europe Developed</i>
<i>Puerto Rico</i>	<i>US</i>	<i>EM Latin America</i>
<i>US Virgin Islands</i>	<i>US</i>	<i>EM Latin America</i>
<i>Anguilla</i>	<i>UK</i>	<i>EM Latin America</i>
<i>Falklands Islands</i>	<i>UK</i>	<i>EM Latin America</i>
<i>Guam</i>	<i>US</i>	<i>Asia Developed</i>
<b>Other Differences</b>		
<b>Country</b>	<b>Current HSBC Placement</b>	<b>M* Placement</b>
<i>French Polynesia</i>	<i>EM Other</i>	<i>Asia Developed</i>

## 9.4 Funds & ETFs: Focused Morningstar Categories

Please find below an outline of all the Morningstar Categories that will be considered Focused within the Fund & ETF methodology

Morningstar Category	Level 1	Level 2	Level 3
Alt - Global Macro	Alternatives	Hedge Funds	Macro
Multialternative	Alternatives	Hedge Funds	Multi-Strategy
IDR Bond	Fixed Income	Emerging Market	Asia Local Currency
RMB Bond	Fixed Income	Emerging Market	Asia Local Currency
RMB Bond - Onshore	Fixed Income	Emerging Market	Asia Local Currency
HKD Money Market	Liquidity	Liquidity	Liquidity
Liquid	Liquidity	Liquidity	Liquidity
Money Market - Malaysia	Liquidity	Liquidity	Liquidity
Money Market - Malaysia (Syariah)	Liquidity	Liquidity	Liquidity
Other Money Market	Liquidity	Liquidity	Liquidity
SGD Money Market	Liquidity	Liquidity	Liquidity
TWD Money Market	Liquidity	Liquidity	Liquidity
Money Market Fund	Liquidity	Liquidity	Liquidity
Equity Australia Derivative Income	Equity	Developed – Asia Pacific ex Japan	Australia
Equity Australia Large Growth	Equity	Developed – Asia Pacific ex Japan	Australia
Equity Australia Mid/Small Growth	Equity	Developed – Asia Pacific ex Japan	Australia
Equity Australia Mid/Small Value	Equity	Developed – Asia Pacific ex Japan	Australia
Equity Australia Other	Equity	Developed – Asia Pacific ex Japan	Australia
Equity Australia Large Blend	Equity	Developed – Asia Pacific ex Japan	Australia
Equity Australia Large Value	Equity	Developed – Asia Pacific ex Japan	Australia
Equity Australia Mid/Small Blend	Equity	Developed – Asia Pacific ex Japan	Australia
Brazil All Cap Equity	Equity	Emerging Markets	LATAM
Brazil Large-Cap Equity	Equity	Emerging Markets	LATAM
Sector Equity	Equity	Emerging Markets	LATAM
Single-Company Equity	Equity	Emerging Markets	LATAM
Brazil Mid & Small Cap Equity	Equity	Emerging Markets	LATAM
Brazil Equity	Equity	Emerging Markets	LATAM
Brazil Equity	Equity	Emerging Markets	LATAM
Brazil Equity	Equity	Emerging Markets	LATAM
Brazil Equity	Equity	Emerging Markets	LATAM
Latin America Stock	Equity	Emerging Markets	LATAM
Preferred Share Fixed Income	Equity	Other / Mixed	Other / Mixed
Canadian Money Market	Liquidity	Liquidity	Liquidity
CAD Money Market	Liquidity	Liquidity	Liquidity
Money Market - Other	Liquidity	Liquidity	Liquidity
Canadian Focused Equity	Equity	Developed – North America	Canada
Canadian Equity	Equity	Developed – North America	Canada
Canadian Dividend and Income Equity	Equity	Developed – North America	Canada
Canada Equity	Equity	Developed – North America	Canada
Canadian Focused Small/Mid Cap Equity	Equity	Developed – North America	Canada
Canadian Small/Mid Cap Equity	Equity	Developed – North America	Canada
Commodities - Broad Agriculture	Alternatives	Commodities	Other Mixed
Commodities - Grains	Alternatives	Commodities	Other Mixed
Commodities - Livestock	Alternatives	Commodities	Other Mixed

Commodities - Softs	Alternatives	Commodities	Other Mixed
Commodities Agriculture	Alternatives	Commodities	Other Mixed
Commodities Broad Basket	Alternatives	Commodities	Other Mixed
Commodities Broad Basket	Alternatives	Commodities	Other Mixed
Commodity	Alternatives	Commodities	Other Mixed
Commodity	Alternatives	Commodities	Other Mixed
QDII Commodities	Alternatives	Commodities	Other Mixed
Commodities - Broad Basket	Alternatives	Commodities	Other Mixed
Commodities - Energy	Alternatives	Commodities	Other Mixed
Commodities Energy	Alternatives	Commodities	Other Mixed
Commodities - Industrial & Broad Metals	Alternatives	Commodities	Other Mixed
Commodities Industrial Metals	Alternatives	Commodities	Other Mixed
Commodities & Precious Metals	Alternatives	Commodities	Precious Metals
Commodities Precious Metals	Alternatives	Commodities	Precious Metals
Sector - Precious Metals	Alternatives	Commodities	Precious Metals
Commodities - Precious Metals	Alternatives	Commodities	Precious Metals
Natural Resources	Alternatives	Commodities	Other Mixed
Convertible Bond	Fixed Income	Developed Corporate	Mixed / Unrated
Convertible Bond - Asia/Japan	Fixed Income	Developed Corporate	Mixed / Unrated
Convertible Bond - Europe	Fixed Income	Developed Corporate	Mixed / Unrated
Convertible Bond - Global	Fixed Income	Developed Corporate	Mixed / Unrated
Convertible Bond - Global CHF Hedged	Fixed Income	Developed Corporate	Mixed / Unrated
Convertible Bond - Global EUR Hedged	Fixed Income	Developed Corporate	Mixed / Unrated
Convertible Bond - Global GBP Hedged	Fixed Income	Developed Corporate	Mixed / Unrated
Convertible Bond - Global USD Hedged	Fixed Income	Developed Corporate	Mixed / Unrated
Convertible Bond - Other	Fixed Income	Developed Corporate	Mixed / Unrated
Convertible Bond - Other Hedged	Fixed Income	Developed Corporate	Mixed / Unrated
Convertibles	Fixed Income	Developed Corporate	Mixed / Unrated
Convertibles	Fixed Income	Developed Corporate	Mixed / Unrated
Convertibles	Fixed Income	Developed Corporate	Mixed / Unrated
Convertibles	Fixed Income	Developed Corporate	Mixed / Unrated
World Convertible Bond	Fixed Income	Developed Corporate	Mixed / Unrated
World Convertible Bond - JPY Hedged	Fixed Income	Developed Corporate	Mixed / Unrated
Alt - Currency	Alternatives	Hedge Funds	Macro
Multicurrency	Alternatives	Hedge Funds	Macro
Multicurrency	Alternatives	Hedge Funds	Macro
Single Currency	Alternatives	Hedge Funds	Macro
Trading - Leveraged/Inverse Currency	Alternatives	Hedge Funds	Macro
Eurozone Large-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
Europe ex-UK Large-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
Germany Large-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
Eurozone Mid-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
Eurozone Small-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
Europe ex-UK Small/Mid-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
Eurozone Flex-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
France Small/Mid-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
EUR Government Bond	Fixed Income	Developed Government	Nominal

EUR Corporate Bond	Fixed Income	Developed Corporate	Investment Grade
EUR Corporate Bond - Short Term	Fixed Income	Developed Corporate	Investment Grade
EUR Government Bond - Short Term	Fixed Income	Developed Government	Nominal
EUR Money Market	Liquidity	Liquidity	Liquidity
Euro Money Market PP	Liquidity	Liquidity	Liquidity
Money Market EUR	Liquidity	Liquidity	Liquidity
EUR Money Market - Short Term	Liquidity	Liquidity	Liquidity
Global Corporate Bond	Fixed Income	Developed Corporate	Investment Grade
Global Corporate Bond - CHF Hedged	Fixed Income	Developed Corporate	Investment Grade
Global Corporate Bond - EUR Hedged	Fixed Income	Developed Corporate	Investment Grade
Global Corporate Bond - GBP Hedged	Fixed Income	Developed Corporate	Investment Grade
Global Corporate Bond - USD Hedged	Fixed Income	Developed Corporate	Investment Grade
Arbitrage Fund	Alternatives	Hedge Funds	Market Neutral
Alt - Debt Arbitrage	Alternatives	Hedge Funds	Market Neutral
Alt - Diversified Arbitrage	Alternatives	Hedge Funds	Market Neutral
Alt-Market Neutral	Alternatives	Hedge Funds	Market Neutral
Alt-Market Neutral - Equity	Alternatives	Hedge Funds	Market Neutral
Debt Arbitrage	Alternatives	Hedge Funds	Market Neutral
Equity Market Neutral	Alternatives	Hedge Funds	Market Neutral
Market Neutral	Alternatives	Hedge Funds	Market Neutral
Market Neutral	Alternatives	Hedge Funds	Market Neutral
Alt - Market Neutral - Equity	Alternatives	Hedge Funds	Market Neutral
Alt - Fund of Funds - Equity	Alternatives	Hedge Funds	Fund of Funds
Alt - Equity Long biased	Alternatives	Hedge Funds	Equity Long/Short
Alt - Equity Long-short	Alternatives	Hedge Funds	Equity Long/Short
Alt - Long/Short Equity - Emerging Markets	Alternatives	Hedge Funds	Equity Long/Short
Alt - Long/Short Equity - Europe	Alternatives	Hedge Funds	Equity Long/Short
Alt - Long/Short Equity - Global	Alternatives	Hedge Funds	Equity Long/Short
Alt - Long/Short Equity - Other	Alternatives	Hedge Funds	Equity Long/Short
Alt - Long/Short Equity - UK	Alternatives	Hedge Funds	Equity Long/Short
Alt - Long/Short Equity - US	Alternatives	Hedge Funds	Equity Long/Short
Alt-Long/Short	Alternatives	Hedge Funds	Equity Long/Short
Alt-Long/Short Equity - Korea	Alternatives	Hedge Funds	Equity Long/Short
Alt-Long/Short Equity - Other Asia/Pacific Long/Short Equity	Alternatives	Hedge Funds	Equity Long/Short
Emerging Markets Long/Short Equity	Alternatives	Hedge Funds	Equity Long/Short
Europe Long/Short Equity	Alternatives	Hedge Funds	Equity Long/Short
Global Long/Short Equity	Alternatives	Hedge Funds	Equity Long/Short
Long-Short Equity	Alternatives	Hedge Funds	Equity Long/Short
Long-Short Equity	Alternatives	Hedge Funds	Equity Long/Short
Long-Short Equity	Alternatives	Hedge Funds	Equity Long/Short
Long-Short Equity	Alternatives	Hedge Funds	Equity Long/Short
Option Writing	Alternatives	Hedge Funds	Unclassified
Option Writing	Alternatives	Hedge Funds	Unclassified
Option Writing	Alternatives	Hedge Funds	Equity Long/Short
Option Writing	Alternatives	Hedge Funds	Equity Long/Short



U.S. Long/Short Equity	Alternatives	Hedge Funds	Equity Long/Short
U.S. Small Cap Long/Short Equity	Alternatives	Hedge Funds	Equity Long/Short
Volatility	Alternatives	Hedge Funds	Volatility Arbitrage
Bear Market	Alternatives	Hedge Funds	Equity Long/Short
Long-Short Credit	Alternatives	Hedge Funds	Credit Long/Short
Long-Short Credit	Alternatives	Hedge Funds	Credit Long/Short
Alt - Long/Short Debt	Alternatives	Hedge Funds	Credit Long/Short
Global High Yield Bond Fix Term	Fixed Income	Developed Corporate	High Yield
World High Yield Bond Global - JPY Hedged	Fixed Income	Developed Corporate	High Yield
High Yield Bond	Fixed Income	Developed Corporate	High Yield
High Yield Bond	Fixed Income	Developed Corporate	High Yield
High Yield Bond	Fixed Income	Developed Corporate	High Yield
High Yield Fixed Income	Fixed Income	Developed Corporate	High Yield
USD High Yield Bond	Fixed Income	Developed Corporate	High Yield
GBP High Yield Bond	Fixed Income	Developed Corporate	High Yield
Europe High Yield Bond	Fixed Income	Developed Corporate	High Yield
Global High Yield Bond	Fixed Income	Developed Corporate	High Yield
High Yield Bond - Other Hedged	Fixed Income	Developed Corporate	High Yield
Global High Yield Bond - EUR Hedged	Fixed Income	Developed Corporate	High Yield
Global High Yield Bond - GBP Hedged	Fixed Income	Developed Corporate	High Yield
Global High Yield Bond - CHF Hedged	Fixed Income	Developed Corporate	High Yield
RMB High Yield Bond	Fixed Income	Emerging Market	Asia Local Currency
Global High Yield Bond	Fixed Income	Developed Corporate	High Yield
EUR High Yield Bond	Fixed Income	Developed Corporate	High Yield
India Equity	Equity	Emerging Markets	India
India Equity	Equity	Emerging Markets	India
India Equity	Equity	Emerging Markets	India
India Equity	Equity	Emerging Markets	India
India Equity	Equity	Emerging Markets	India
Bonds - Inflation-linked	Fixed Income	Developed Government	Inflation Linked
Canadian Inflation Protected Fixed Income	Fixed Income	Developed Government	Inflation Linked
Global Inflation-Linked Bond	Fixed Income	Developed Government	Inflation Linked
SEK Inflation-Linked Bond	Fixed Income	Developed Government	Inflation Linked
World Bond Inflation / Floating	Fixed Income	Developed Government	Inflation Linked
Inflation-Protected Bond	Fixed Income	Developed Government	Inflation Linked
EUR Inflation-Linked Bond	Fixed Income	Developed Government	Inflation Linked
GBP Inflation-Linked Bond	Fixed Income	Developed Government	Inflation Linked
USD Inflation-Linked Bond	Fixed Income	Developed Government	Inflation Linked
Other Inflation-Linked Bond	Fixed Income	Developed Government	Inflation Linked
Global Inflation-Linked Bond - EUR Hedged	Fixed Income	Developed Government	Inflation Linked
Global Inflation-Linked Bond - GBP Hedged	Fixed Income	Developed Government	Inflation Linked
Global Inflation-Linked Bond - USD Hedged	Fixed Income	Developed Government	Inflation Linked
Japan Equity	Equity	Developed – Japan	Japan
Japan Equity	Equity	Developed – Japan	Japan
Japan Equity	Equity	Developed – Japan	Japan
Japan Large-Cap Blend Equity	Equity	Developed – Japan	Japan
Japan Large-Cap Growth Equity	Equity	Developed – Japan	Japan

Japan Large-Cap Value Equity	Equity	Developed – Japan	Japan
Japan Other Equity	Equity	Developed – Japan	Japan
Japan Small/Mid-Cap Growth Equity	Equity	Developed – Japan	Japan
Japan Small/Mid-Cap Value Equity	Equity	Developed – Japan	Japan
Japan Stock	Equity	Developed – Japan	Japan
Japan Stock	Equity	Developed – Japan	Japan
Japan Stock	Equity	Developed – Japan	Japan
Japan Stock	Equity	Developed – Japan	Japan
Equity Japan	Equity	Developed – Japan	Japan
Japan Large-Cap Equity	Equity	Developed – Japan	Japan
Japan Small/Mid-Cap Equity	Equity	Developed – Japan	Japan
Japan Equity - Currency Hedged	Equity	Developed – Japan	Japan
Japan Flex-Cap Equity	Equity	Developed – Japan	Japan
Japan Small/Mid-Cap Blend Equity	Equity	Developed – Japan	Japan
Japan Specialty Equity	Equity	Developed – Japan	Japan
Japan Money Market	Liquidity	Liquidity	Liquidity
Korea Small/Mid-Cap Equity	Equity	Emerging Markets	Korea
Korea Equity	Equity	Emerging Markets	Korea
Korea Large-Cap Equity	Equity	Emerging Markets	Korea
Latin America Stock	Equity	Emerging Markets	LATAM
Latin America Equity	Equity	Emerging Markets	LATAM
Latin America Equity	Equity	Emerging Markets	LATAM
Latin America Equity	Equity	Emerging Markets	LATAM
Chile Equity	Equity	Emerging Markets	LATAM
Mexico Equity	Equity	Emerging Markets	LATAM
Alt - Fund of Funds - Multistrategy	Alternatives	Hedge Funds	Fund of Funds
Alt - Multistrategy	Alternatives	Hedge Funds	Multi-Strategy
Alt - Fund of Funds - Other	Alternatives	Hedge Funds	Fund of Funds
Fund of Funds - Equity	Alternatives	Hedge Funds	Fund of Funds
Alternative Strategies - Diversified	Alternatives	Hedge Funds	Multi-Strategy
Alt-Multistrategy	Alternatives	Hedge Funds	Multi-Strategy
Fund of Funds - Debt	Alternatives	Hedge Funds	Fund of Funds
Multialternative	Alternatives	Hedge Funds	Multi-Strategy
Multialternative	Alternatives	Hedge Funds	Multi-Strategy
Multistrategy	Alternatives	Hedge Funds	Multi-Strategy
Fund of Funds - Multistrategy	Alternatives	Hedge Funds	Fund of Funds
Alt - Multistrategy	Alternatives	Hedge Funds	Multi-Strategy
MXN Medium-Term Debt	Fixed Income	Emerging Market	Hard Currency ex Asia
Money Market MXN	Liquidity	Liquidity	Liquidity
Cash	Liquidity	Liquidity	Liquidity
Indonesia Equity	Equity	Emerging Markets	Indonesia
Alt - Debt & Currencies	Alternatives	Hedge Funds	Unclassified
Alt - Volatility	Alternatives	Hedge Funds	Volatility Arbitrage
Trading - Leveraged/Inverse Equity	Alternatives	Hedge Funds	Unclassified
Global Macro	Alternatives	Hedge Funds	Macro
Miscellaneous - Income and Real Property	Alternatives	Real Estate	Real Estate - Equity
Alt - Event Driven	Alternatives	Hedge Funds	Event Driven
Alt - Systematic Futures	Alternatives	Hedge Funds	Managed Futures (CTA)
Managed Futures	Alternatives	Hedge Funds	Managed Futures (CTA)
Managed Futures	Alternatives	Hedge Funds	Managed Futures (CTA)

Alt - Other	Alternatives	Hedge Funds	Unclassified
Alt - Other	Alternatives	Hedge Funds	Unclassified
Alternative Strategies	Alternatives	Hedge Funds	Unclassified
Alternative Strategies	Alternatives	Hedge Funds	Unclassified
Alternative Strategies	Alternatives	Hedge Funds	Unclassified
Austria Equity	Equity	Developed – Europe ex UK	Europe ex UK
Belgium Equity	Equity	Developed – Europe ex UK	Europe ex UK
Finland Equity	Equity	Developed – Europe ex UK	Europe ex UK
Greece Equity	Equity	Emerging Markets	EMEA
Netherlands Equity	Equity	Developed – Europe ex UK	Europe ex UK
Portugal Equity	Equity	Developed – Europe ex UK	Europe ex UK
Sweden Large-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
Sweden Small/Mid-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
Denmark Equity	Equity	Developed – Europe ex UK	Europe ex UK
Nordic Equity	Equity	Developed – Europe ex UK	Europe ex UK
Norway Equity	Equity	Developed – Europe ex UK	Europe ex UK
Switzerland Large-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
France Large-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
Germany Small/Mid-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
Italy Equity	Equity	Developed – Europe ex UK	Europe ex UK
Spain Equity	Equity	Developed – Europe ex UK	Europe ex UK
Switzerland Small/Mid-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
Poland Equity	Equity	Emerging Markets	EMEA
Nordic Small/Mid-Cap Equity	Equity	Developed – Europe ex UK	Europe ex UK
CHF Money Market	Liquidity	Liquidity	Liquidity
French PEA Eonia SWAP	Liquidity	Liquidity	Liquidity
NOK Money Market	Liquidity	Liquidity	Liquidity
PLN Money Market	Liquidity	Liquidity	Liquidity
SEK Money Market	Liquidity	Liquidity	Liquidity
CLP Money Market	Liquidity	Liquidity	Liquidity
Singapore Equity	Equity	Developed – Asia Pacific ex Japan	Singapore
GBP Government Bond	Fixed Income	Developed Government	Nominal
GBP Corporate Bond	Fixed Income	Developed Corporate	Investment Grade
GBP Money Market	Liquidity	Liquidity	Liquidity
GBP Money Market - Short Term	Liquidity	Liquidity	Liquidity
Leveraged Equity	Alternatives	Hedge Funds	Unclassified
Passive Inverse/Leveraged Trading - Leveraged/Inverse Commodities	Alternatives	Hedge Funds	Unclassified
Trading - Leveraged/Inverse Fixed Income	Alternatives	Commodities	Other Mixed
Trading - Leveraged/Inverse Other	Alternatives	Hedge Funds	Unclassified
Trading--Inverse Commodities	Alternatives	Hedge Funds	Unclassified
Trading--Inverse Equity	Alternatives	Commodities	Other Mixed
Trading--Leveraged Commodities	Alternatives	Hedge Funds	Unclassified
Trading--Leveraged Debt	Alternatives	Commodities	Other Mixed
Trading--Miscellaneous	Alternatives	Hedge Funds	Unclassified
Trading - Leveraged/Inverse Equity	Alternatives	Hedge Funds	Unclassified
Trading--Inverse Debt	Alternatives	Hedge Funds	Unclassified
Trading--Leveraged Equity	Alternatives	Hedge Funds	Unclassified
Thailand Equity	Equity	Emerging Markets	Thailand

Taiwan Large-Cap Equity	Equity	Emerging Markets	Taiwan
Taiwan Small/Mid-Cap Equity	Equity	Emerging Markets	Taiwan
Bank Loan	Fixed Income	Other / Mixed	Other / Mixed
Intermediate Government	Fixed Income	Developed Government	Nominal
Preferred Stock	Equity	Other / Mixed	Other / Mixed
Corporate Bond	Fixed Income	Developed Corporate	Investment Grade
Bank Loan	Fixed Income	Other / Mixed	Other / Mixed
Intermediate Government	Fixed Income	Developed Government	Nominal
Long Government	Fixed Income	Developed Government	Nominal
Short Government	Fixed Income	Developed Government	Nominal
Preferred Stock	Equity	Other / Mixed	Other / Mixed
Corporate Bond	Fixed Income	Developed Corporate	Investment Grade
Bank Loan	Fixed Income	Other / Mixed	Other / Mixed
Intermediate Government	Fixed Income	Developed Government	Nominal
Long Government	Fixed Income	Developed Government	Nominal
Short Government	Fixed Income	Developed Government	Nominal
Corporate Bond	Fixed Income	Developed Corporate	Investment Grade
Bank Loan	Fixed Income	Other / Mixed	Other / Mixed
Intermediate Government	Fixed Income	Developed Government	Nominal
Long Government	Fixed Income	Developed Government	Nominal
Preferred Stock	Equity	Other / Mixed	Other / Mixed
Corporate Bond	Fixed Income	Developed Corporate	Investment Grade
USD Government Bond	Fixed Income	Developed Government	Nominal
USD Corporate Bond	Fixed Income	Developed Corporate	Investment Grade
Muni California Intermediate	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni California Intermediate	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni California Intermediate	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Massachusetts	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Massachusetts	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Massachusetts	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Minnesota	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Minnesota	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Minnesota	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni New Jersey	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni New Jersey	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni New Jersey	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Ohio	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Ohio	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Ohio	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Pennsylvania	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Pennsylvania	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Pennsylvania	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Single State Interm	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Single State Interm	Fixed Income	Developed Government Related Debt	Developed Government Related Debt

Muni Single State Interim	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Single State Long	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Single State Long	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
High Yield Muni	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni California Long	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni National Interim	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni National Long	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni New York Intermediate	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni New York Long	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
High Yield Muni	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni California Long	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni National Interim	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni National Long	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni New York Intermediate	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni National Short	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni New York Long	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni Single State Short	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
High Yield Muni	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni California Long	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni National Interim	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni National Long	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni New York Intermediate	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Muni New York Long	Fixed Income	Developed Government Related Debt	Developed Government Related Debt
Money Market-Tax-Free	Liquidity	Liquidity	Liquidity
Money Market-Taxable	Liquidity	Liquidity	Liquidity
Prime Money Market	Liquidity	Liquidity	Liquidity
Money Market-Tax-Free	Liquidity	Liquidity	Liquidity
Money Market-Taxable	Liquidity	Liquidity	Liquidity
Prime Money Market	Liquidity	Liquidity	Liquidity
US Money Market	Liquidity	Liquidity	Liquidity
USD Money Market	Liquidity	Liquidity	Liquidity
USD Money Market	Liquidity	Liquidity	Liquidity
USD Money Market - Short Term	Liquidity	Liquidity	Liquidity
Money Market USD	Liquidity	Liquidity	Liquidity
Africa Equity	Equity	Emerging Markets	EMEA
Africa & Middle East Equity	Equity	Emerging Markets	EMEA
Other Africa & Middle East Equity	Equity	Emerging Markets	EMEA
South Africa & Namibia Equity	Equity	Emerging Markets	EMEA
South Africa & Namibia	Equity	Emerging Markets	EMEA
Small-Cap Equity	Equity	Emerging Markets	EMEA
Africa & Middle East Equity	Equity	Emerging Markets	EMEA

ZAR/NAD Money Market	Liquidity	Liquidity	Liquidity
Russia Equity	Equity	Emerging Markets	EMEA
Russia Equity	Equity	Emerging Markets	EMEA
Turkey Equity	Equity	Emerging Markets	EMEA
Commodities - Other	Alternatives	Commodities	Other Mixed
Options Trading	Alternatives	Hedge Funds	Unclassified
Systematic Trend USD	Alternatives	Hedge Funds	Unclassified
Commodities Focused	Alternatives	Commodities	Other Mixed
Commodities Focused	Alternatives	Commodities	Other Mixed
Convertible Bond - Global	Fixed Income	Developed Corporate	Mixed / Unrated
Emerging Europe Equity	Equity	Emerging Markets	EMEA
Emerging Europe Equity	Equity	Emerging Markets	EMEA
Options Trading	Alternatives	Hedge Funds	Unclassified
Options Trading	Alternatives	Hedge Funds	Unclassified
Options Trading	Alternatives	Hedge Funds	Unclassified
Macro Trading	Alternatives	Hedge Funds	Macro
Event Driven	Alternatives	Hedge Funds	Market Neutral
Event Driven	Alternatives	Hedge Funds	Market Neutral
Multistrategy	Alternatives	Hedge Funds	Multi-Strategy
Global Allocation	Alternatives	Hedge Funds	Multi-Strategy
Multistrategy	Alternatives	Hedge Funds	Multi-Strategy
Multistrategy	Alternatives	Hedge Funds	Multi-Strategy
Other	Alternatives	Commodities	Other Mixed
Vietnam Equity	Equity	Emerging Markets	Other Asia
Other	Alternatives	Hedge Funds	Unclassified
Vietnam Equity	Equity	Emerging Markets	Other Asia
Other	Alternatives	Commodities	Other Mixed

## 9.5 Asset Type

This section outlines the use of Asset Type classification in Aladdin. Asset Type is a variation of asset class Level 1 but it does not have any impact on Asset Class nor Product Type classification detailed in the main body of this document.

Asset Type maps all assets one-to-one to an Asset Type value. This is necessary because Asset Class is a vectorized breakdown and funds, for instance, can fall into multiple asset classes (eg 50% equity, 50% fixed income). Asset Type allows Aladdin users to see holdings grouped together uniquely whereas asset class cannot.

The main business case for the use of Asset Type is that Investment counsellors (ICs) typically want to view assets based on asset class. Additionally, ICs want to be able to show grouped risk analytics in client outputs. Using asset class for this purpose would not be optimal because one asset can belong to multiple asset classes. However, this is addressed by using Asset type, as there is one-to-one mapping between an asset and an asset type.

Full list of available Asset Types:

- Liquidity
- Fixed Income
- Equity
- Alternative
- FX Derivatives

- Other / Mixed

Logic to identify the relevant Asset Type:

- If a security maps 100% to a level 1 asset class, that security falls within the corresponding Asset Type. For example, for a Single Line Equity domiciled in the US with an Asset Class of 100% Equity > Developed - North America > US, or an Equity fund allocated 50% to Equity > Developed - UK and 50% Equity > Developed - Europe ex UK, the Asset Type is the relevant level 1 asset class (Equity).
- For securities that do not map 100% into a single level 1 asset class, Other / Mixed Asset Type is used. These assets are primarily allocation-based mutual funds and ETFs that are identified as Non-Focused Multi Asset Funds (please see section 5.6 of this document).
  - An example is MFS Global Total Return Fund Class A (Ticker MFWTX). This is an allocation mutual fund that is approx. 50% equity/50% fixed income:

Aladdin Deep Dive/relevant Asset Type:

JB2005375

SAA: No Benchmark

Send to Proposal Builder

JB2005375

Analysis as of November 27, 2018

Summary

Holdings

Asset Class

Product Type

Equity Sleeve

Fixed Income Sleeve

Risk

Scenarios

Alerts

Grouping

Asset Type

Column Preferences

Group / Sec ID	Name	Market Value	% Weight	Expected Shortfall
> EQUITY (4)		483,255.86	24.37	-3.81
> OTHER MIXED (1)		229,979.86	11.60	-0.82
MFWTX	MFS Global Total Return Fund Class A	229,979.86	11.60	-0.82
> FIXED INCOME (5)		804,080.26	40.55	-1.16
> LIQUIDITY (2)		465,396.38	23.47	0.01

Aladdin Deep Dive/relevant Asset Class:

JB2005375

SAA: No Benchmark

Send to Proposal Builder

JB2005375

Analysis as of November 27, 2018

Summary

Holdings

Asset Class

Product Type

Equity Sleeve

Fixed Income Sleeve

Risk

Scenarios

Alerts

Level 1

Level 2

Asset Class - Level 1

Current (%)

Liquidity

23.47

Fixed Income

45.13

Equity

31.14

Alternatives

0.00

FX - Structured Products / Derivatives

0.00

Other Mixed

0.26

- Discretionary models that are multi asset class fall into the Other/Mixed Asset Type bucket as well. This would show only when a user is proposing a new discretionary portfolio in an investment proposal in Aladdin.

#### Multi Asset Discretionary Model Asset Type:

▼ OTHER MIXED (1)		0.00	0.00	0.00	1,000,000.00	100.00	-
● CMSMOD_20	CMS w/ Alternatives: Aggressive	0.00	0.00	0.00	1,000,000.00	▲100.00	-

#### Multi Asset Discretionary Model Asset Allocation:

##### Asset Class - Level 1

	Current (%)	Proposed (%)
Liquidity	100.00	2.00
Fixed Income	0.00	5.94
Equity	0.00	72.66
Alternatives	0.00	19.40
FX - Structured Products / Derivatives	0.00	0.00
Other Mixed	0.00	0.00

For both models and other multi asset funds, the actual asset classification is accurate but the Asset Type will be Other / Mixed. In the client output, the core classification (detailed in the main body of this document) is shown where asset class is specifically presented. Asset Type is used only when it is impossible to show the analytics without a one-to-one mapping.

## 9.6 Asia EM Markets

Below are all the countries that are captured as Asia EM countries:

- Afghanistan
- American Samoa
- Armenia
- Azerbaijan
- Bangladesh
- Bhutan
- Brunei Darussalam
- Cambodia
- China
- Christmas Island
- Cocos (Keeling) Islands
- Cook Islands
- East Timor
- Fiji
- Georgia
- Kazakhstan
- Korea
- Kyrgyzstan
- Macau
- Maldives
- Malaysia
- Marshall Islands
- Micronesia, Federated States of
- Mongolia
- Myanmar
- Nauru
- Nepal
- New Caledonia
- Niue
- Philippines
- Pitcairn
- Samoa
- Solomon Islands
- Sri Lanka
- Tailand
- Taiwan
- Tajikistan
- Timor-Leste
- Tokelau
- Tonga
- Turkmenistan
- Tuvalu
- Uzbekistan
- Vanuatu



- Heard Island & McDonald Islands
- India
- Kiribati
- Indonesia
- Lao People's Democratic Republic
- Norfolk Island
- Northern Mariana Islands
- Palau
- Pakistan
- Papua New Guinea
- Vietnam
- Wallis & Futuna

## 9.7 Synthetic ETF Mapping

Below is the table of Morningstar categories and the Asset Class they map to. These mappings will only apply to ETFs that have been identified as Synthetic ETFs based on their holding characteristics:

Morningstar Category Code	Morningstar Category Name	HSBC Classification Schema
EUCA000779	Asia ex-Japan Equity	Equity Developed Asia Pacific Ex Japan
EUCA000502	Asia-Pacific Equity	Other Mixed
		Equity Other Mixed
EUCA000501	Asia-Pacific ex-Japan Equity	Equity Developed Asia Pacific Ex Japan
		Other Mixed
EUCA000503	Australia & New Zealand Equity	Equity Developed Asia Pacific Ex Japan
EUCA000504	China Equity	Other Mixed
EUCA000896	China Equity - A Shares	Equity Emerging Markets China
EUCA000633	Emerging Europe ex-Russia Equity	Equity Emerging Markets China
		Equity Emerging Markets Emea
EUCA000622	EUR Bond - Long Term	Fixed Income Developed Government
EUCA000564	EUR Cautious Allocation - Global	Other Mixed
EUCA000875	Europe Equity Income	Equity Other Mixed
EUCA000511	Europe Large-Cap Blend Equity	Equity Other Mixed
EUCA000512	Europe Large-Cap Growth Equity	Equity Other Mixed
EUCA000513	Europe Large-Cap Value Equity	Equity Other Mixed
EUCA000850	Europe Mid-Cap Equity	Equity Other Mixed
EUCA000515	Europe Small-Cap Equity	Equity Other Mixed
EUCA000759	Global Bond	Fixed Income Other Mixed
EUCA000624	Global Bond - EUR Hedged	Fixed Income Other Mixed
EUCA000761	Global Bond - GBP Hedged	Fixed Income Other Mixed
EUCA000763	Global Bond - USD Hedged	Fixed Income Other Mixed
EUCA000586	Global Emerging Markets Bond	Fixed Income Emerging Market Debt
		Other Mixed
EUCA000764	Global Emerging Markets Bond - EUR Biased	Fixed Income Emerging Market Debt
EUCA000507	Global Emerging Markets Equity	Other Mixed
EUCA000876	Global Equity Income	Equity Emerging Markets Other Mixed
CACA000133	Global Fixed Income	Equity Other Mixed
EUCA000845	Global Frontier Markets Equity	Fixed Income Other Mixed
EUCA000555	Global Large-Cap Blend Equity	Equity Emerging Markets Other Mixed
		Equity Other Mixed

EUCA000557	Global Large-Cap Value Equity	Equity Other Mixed
EUCA000519	Hong Kong Equity	Equity Developed Asia Pacific Ex Japan Hong Kong
CACA000045	International Equity	Equity Other Mixed
EUCA000771	Other Bond	Fixed Income Other Mixed
EUCA000539	Other Equity	Equity Other Mixed
EUCA000921	Pacific ex-Japan Equity	Equity Developed Asia Pacific Ex Japan Other Mixed
EUCA000532	Sector Equity Biotechnology	Equity Other Mixed
EUCA000533	Sector Equity Communications	Equity Other Mixed
EUCA000534	Sector Equity Consumer Goods & Services	Equity Other Mixed
EUCA000706	Sector Equity Ecology	Equity Other Mixed
EUCA000535	Sector Equity Energy	Equity Other Mixed
EUCA000536	Sector Equity Financial Services	Equity Other Mixed
EUCA000537	Sector Equity Healthcare	Equity Other Mixed
EUCA000538	Sector Equity Industrial Materials	Equity Other Mixed
EUCA000707	Sector Equity Infrastructure	Equity Other Mixed
EUCA000646	Sector Equity Precious Metals	Equity Other Mixed
EUCA000708	Sector Equity Private Equity	Equity Other Mixed
EUCA000542	Sector Equity Technology	Equity Other Mixed
EUCA000543	Sector Equity Utilities	Equity Other Mixed
EUCA000550	UK Large-Cap Equity	Equity Developed Uk
EUCA000852	UK Mid-Cap Equity	Equity Developed Uk
CACA000065	US Equity	Equity Developed North America United States
EUCA000526	US Large-Cap Blend Equity	Equity Developed North America United States
EUCA000527	US Large-Cap Growth Equity	Equity Developed North America United States
EUCA000528	US Large-Cap Value Equity	Equity Developed North America United States
EUCA000530	US Small-Cap Equity	Equity Developed North America United States
EUCA000853	US Mid-Cap Equity	Equity Developed North America United States