CME Reference Data API - Record Relationship Linkage Examples

The examples below show the record relationship linkage depending on whether there is an overlying, underlying or related relationship.

Product Examples

Underlying products and no overlying products

- "self" reference is self-referential and returns single product or instrument referenced (productGuid will be the same as that returned in the original query).
- underlyingProducts link returns all of the underlying products for the associated productGuid.
- no overlyingProducts.
- instruments link returns all of the instruments for the associated productGuid.

```
"_links" : {
  "self" : {
    "href" : "__/v#/products/[productGuid]"
  },
  "underlyingProducts" : {
    "href" : "__/v#/products/[productGuid]/underlyings"
  },
  "instruments" : {
    "href" : "__/v#/products/[productGuid]/instruments"
  }
}
```

Has underlying and overlying products

- "self" reference is self-referential and returns single product or instrument referenced (productGuid will be the same as that returned in the original query).
- underlyingProducts link returns all of the related underlying products for the associated productGuid.
- overlyingProducts link returns all of the related overlying products for the associated productGuid.
- instruments link returns all of the instruments for the associated productGuid.

```
"_links" : {
  "self" : {
    "href" : "__/v#/products/[productGuid]"
  },
  "underlyingProducts" : {
    "href" : "__/v#/products/[productGuid]/underlyings"
  },
  "overlyingProducts" : {
    "href" : "__/v#/products/[productGuid]/overlyings"
  },
  "instruments" : {
    "href" : "__/v#/products/[productGuid]/instruments"
  }
}
```

Underlying products as referenced from underlyingProducts link

Underlying relationship example. Number of sides, ratio and legNumber may vary based on strategy type. Overlying productGuid will always be the same. Overlying products will display similarly, except that underlying productGuid will always be the same.


```
{
    "_embedded": {
        "relationships": [
            {
                "marketSide": "SELL",
                "legNumber": "2",
                "ratio": "1",
                "_links": {
                    "underlyingProduct": {
                        "href": "__/v#/products/[underlying productGuid]"
                    },
                    "overlyingProduct": {
                        "href": "__/v#/products/[overlying productGuid1]"
                    }
                }
            },
            {
                "marketSide": "BUY",
                "legNumber": "1",
                "ratio": "1",
                "_links": {
                    "underlyingProduct": {
                        "href": "__/v#/products/[underlying productGuid]"
                    },
                    "overlyingProduct": {
                        "href": "__/v#/products/[overlying productGuid2]"
                    }
                }
            }
        ]
    },
    "_links": {
        "self": {
            "href": "__/v#/products/[productGuid]/underlyings?page=0&size=20"
        }
    },
    "_metadata": {
        "size": 20,
        "totalElements": 2,
        "totalPages": 1,
        "number": 0,
        "type": "page"
    }
}
```


Basis Trade at Index Close (BTIC), TAS and TAM Products

Links that will display when there is a BTIC underlying (isBticProduct="Y"). The structure is the same for a TAM (isTamProduct="Y") or TAS (isTasProduct="Y"). This example shows what will display for a BTIC product with overlyings.

```
  "_links": {
                  "self": {
                      "href": "__/v#/products/[productGuid]"
                  },
                  "overlyingProducts" : {
                      "href" : "__/v#/products/[productGuid]/overlyings"
                  }
                  "bticUnderlying": {
                      "href": "__/v#/products/[BTIC underlying productGuid]"
                  },
                  "instruments": {
                      "href": "__/v#/products/[productGuid]/instruments"
                  }
             }[
```

Volatility Index (CVOL) Product Relationships

The related links will display when there is a relationship between the Volatility Index (CVOL) products and related futures products. Futures products with a related CVOL Index will reflect a new "relatedIndexes" href.

This link will return all CVOL related indexes related to the futures product. For example,

- relatedIndexes for the British Pound future product (Clearing code BP; CME Globex code 6B) will return
    - GBVL
    - FXVL

relatedIndexes structure:

```
links": {
            "self": {
               "href": _/v#/products/[guid]
             },
            "relatedIndexes": {
               "href": _/v#/products/[guid]/relatedindexes
             }
        }
```

This link will return all FX futures products related to the CVOL product. For example,

- relatedFutures for the GBVL product will return
    - British Pound future product (Clearing code BP; CME Globex code 6B)

relatedFutures structure:

```
 links": {
            "self": {
               "href": _/v#/products/[guid]
             },
            "relatedFuturesProducts": {
               "href": _/v#/products/[guid]/relatedfutures
             }
        }
```

Instrument Examples

Has underlying instruments and no overlying instruments

- "self" reference is self-referential and returns single product or instrument referenced (Guid will be the same as that returned in the query above).
- underlyingInstruments link returns all of the related underlying instruments for the associated Guid.

```
"_links": {
                    "self": {
                        "href": "__/v#/instruments/[guid]"
                    },
                    "underlyingInstruments": {
                        "href": "__/v#/instruments/[guid]/underlyings"
                    },
                    "product": {
                        "href": "__/v#/products/[productGuid]"
                    }
                }
```

Underlying Instruments as referenced from underlyingInstruments link

Instrument can have multiple underlying instruments, depending on related product.

```
"_embedded": {
        "relationships": [
            {
                "marketSide": null,
                "legNumber": null,
                "ratio": null,
                "_links": {
                    "underlyingInstrument": {
                        "href": "https://api.refdata.nr.cmegroup.com/v#/instruments/[underlying
instrument guid]"
                    },
                    "overlyingInstrument": {
                        "href": "https://api.refdata.nr.cmegroup.com/v#/instruments/[overlying
instrument guid]"
                    }
                }
            }
        }
```

Direct Underlying Link to CSO Tradable Spread

Instrument can have secondary underlying link at the instrument level for Calendar Spread on Options (CSO). The secondary underlying link provides clients with a simplified process to derive the tradable underlying outright futures legs of the CSO.

```
"_links" : {
    "self" : {
      "href" : "_/v#/instruments/[guid]"
    },
    "secondaryUnderlyings" : {
      "href" : "_/v#/instruments/[guid]/underlyings"
    },
    "underlyingInstruments" : {
     "href" : "_/v#/instruments/[guid]/underlyings"
    },
    "product" : {
      "href" : "_/v#/products/[guid]"
    }
  }
```