Margin Service API - Transaction Formats

The Margin Service API supports multiple formats for transaction payloads, depending on the asset class.

CME CORE supports FIXML, FpML, and CSV as transaction formats. At this time, multiple formats are not supported for each asset class.

Asset Class	Format
Interest Rate Swap (IRS)	FpML
Forward	FIXML
Future	FIXML
Option	FIXML
Delta Ladder	CSV

Transactions are converted into an internal representation upon being loaded into CME CORE. Additional attributes supplied by the client will not be retained by CME CORE and will not be returned by the get transaction or list transactions requests.

FpML

This API supports a CME-specific flavor of FpML based on the FpML 5.4 specification. This mapping is meant to convey the supported FPML fields, not necessarily their order. See the FpML schema for ordering details.

> Download the CME extension for the FpML schema here.

Interest Rate Swap

XPath	Name	Required	Notes
`/cme:FpML/clearingConfirmed/account[@id="account1"]/accountId[@accountIdScheme="clearing_firm_account"]`	Customer Account ID	No	
`/cme:FpML/clearingConfirmed/party[@id="clearing_firm"]/partyId[@partyIdScheme="clearing_member_firms"]`	Clearing Member Firm ID	No	
`/cme:FpML/clearingConfirmed/trade/swap/swapStream@id`	Swap Stream ID	Yes	Defines legs
`/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/compoundingMethod`	Compounding Method	No	
`/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/dayCountFraction`	Day Count	No	
`/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/fixedRateSchedule/initialValue`	Fixed Rate (Initial)	No	Fixed-rate streams only
`/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/fixedRateSchedule/step/stepValue`	Fixed Rate (Schedule)	No	Fixed-rate streams only
`/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/floatingRateCalculation/floatingRateIndex`	Floating Rate Index	No	Floating-rate streams only

/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/floatingRateCalculation/indexTenor/period	Floating Rate Index Period	Yes	Floating-rate streams only
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/floatingRateCalculation/indexTenor/periodMultiplier	Floating Rate Index Multiplier	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/floatingRateCalculation/spreadSchedule/step	Rate Spread	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/notionalSchedule/notionalStepSchedule/currency	Currency	Yes	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/notionalSchedule/notionalStepSchedule/initialValue	Notional Amount	Yes	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/notionalSchedule/notionalStepSchedule/step/stepValue	Notional Amount	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodDates/calculationPeriodDatesAdjustments/businessCenters/businessCenter	Calculation Period Business Center	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodDates/calculationPeriodDatesAdjustments/businessDayConvention	Calculation Period Date Convention	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodDates/calculationPeriodFrequency/period	Calculation Period Frequency Period	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodDates/calculationPeriodFrequency/periodMultiplier	Calculation Period Frequency Multiplier	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodDates/calculationPeriodFrequency/rollConvention	Calculation Period Roll Convention	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodDates/effectiveDate/unadjustedDate	Unadjusted Start Date	Yes	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodDates/firstRegularPeriodStartDate	Calculation Period Regular Start Date	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodDates/lastRegularPeriodEndDate	Calculation Period Regular End Date	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodDates/terminationDate/adjustedDate	Adjusted End Date	Yes	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodDates/terminationDate/unadjustedDate	Unadjusted End Date	Yes	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/payerPartyReference@href	Payer Party Reference	Yes	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/paymentDates/paymentDatesAdjustments/businessCenters/businessCenter	Payment Date Business Centers	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/paymentDates/paymentDatesAdjustments/businessDayConvention	Payment Date Convention	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/paymentDates/paymentFrequency/period	Payment Frequency Period	Yes	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/paymentDates/paymentFrequency/periodMultiplier	Payment Frequency Multiplier	No	

/cme:FpML/clearingConfirmed/trade/swap/swapStream/paymentDates/payRelativeTo	Payment Date Relationship Type	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/resetDates/fixingDates/businessCenters/businessCenter	Fixing Date Business Center	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/resetDates/fixingDates/businessDayConvention	Fixing Date Convention	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/resetDates/fixingDates/dayType	Fixing Date Day Type	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/resetDates/fixingDates/period	Fixing Date Offset Period	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/resetDates/fixingDates/periodMultiplier	Fixing Date Offset Mulitplier	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/resetDates/resetDatesAdjustments/businessCenters/businessCenter	Reset Business Centers	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/resetDates/resetDatesAdjustments/businessDayConvention	Reset Date Convention	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/resetDates/resetFrequency/period	Reset Frequency Period	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/resetDates/resetFrequency/periodMultiplier	Reset Frequency Multiplier	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/resetDates/resetRelativeTo	Reset Date Relationship Type	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/finalStub/floatingRate[0]/floatingRateIndex	End Stub - Floating Rate Index 1	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/finalStub/floatingRate[0]/indexTenor/period	End Stub - Floating Rate Period 1	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/finalStub/floatingRate[0]/indexTenor/periodMultiplier	End Stub - Floating Rate Multiplier 1	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/finalStub/floatingRate[1]/floatingRateIndex	End Stub - Floating Rate Index 2	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/finalStub/floatingRate[1]/indexTenor/period	End Stub - Floating Rate Period 2	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/finalStub/floatingRate[1]/indexTenor/periodMultiplier	End Stub - Floating Rate Multiplier 2	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/finalStub/stubRate	End Stub - Rate	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/initialStub/floatingRate[0]/floatingRateIndex	Start Stub - Floating Rate Index 1	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/initialStub/floatingRate[0]/indexTenor/period	Start Stub - Floating Rate Period 1	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/initialStub/floatingRate[0]/indexTenor/periodMultiplier	Start Stub - Floating Rate Multiplier 1	No	

/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/initialStub/floatingRate[1]/floatingRateIndex	Start Stub - Floating Rate Index 2	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/initialStub/floatingRate[1]/indexTenor/period	Start Stub - Floating Rate Period 2	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/initialStub/floatingRate[1]/indexTenor/periodMultiplier	Start Stub - Floating Rate Multiplier 2	No	
/cme:FpML/clearingConfirmed/trade/swap/swapStream/stubCalculationPeriodAmount/initialStub/stubRate	Start Stub - Rate	No	

Sample

This is a standard fixed/float swap.

```
<cme:FpML>
    <clearingConfirmed>
      <trade>
        <swap>
          <swapStream id="fixedLeg">
            <payerPartyReference href="clearing_firm"></payerPartyReference>
            <calculationPeriodDates id="fixedCalcPeriodDates">
              <effectiveDate>
                <unadjustedDate>2013-02-04</unadjustedDate>
              </effectiveDate>
              <terminationDate>
                <unadjustedDate>2018-02-04</unadjustedDate>
              </terminationDate>
            <paymentDates>
              <paymentFrequency>
                <period>M</period>
                <periodMultiplier>6</periodMultiplier>
              </paymentFrequency>
            </paymentDates>
            <calculationPeriodAmount>
              <calculation>
                <notionalSchedule>
                  <notionalStepSchedule>
                    <initialValue>100000000.00</initialValue>
                    <currency>USD</currency>
                  </notionalStepSchedule>
                </notionalSchedule>
                                <fixedRateSchedule>
                  <initialValue>0.0125</initialValue>
                </fixedRateSchedule>
              </calculation>
            </calculationPeriodAmount>
          </swapStream>
          <swapStream id="floatLeg">
            <calculationPeriodAmount>
              <calculation>
                <floatingRateCalculation>
                  <floatingRateIndex>USD-LIBOR</floatingRateIndex>
                  <period>M</period>
                  <periodMultiplier>3</periodMultiplier>
                </floatingRateCalculation>
              </calculation>
            </calculationPeriodAmount>
          </swapStream>
        </swap>
      </trade>
    </clearingConfirmed>
  </cme:FpML>
```

FIXML

This API supports standard FIXML following the FIXML 5.0 SP2 specification and schema.

Forward

XPath	Name	Required	Notes
`/FIXML/TrdCaptRpt@LastQty`	Quantity	Yes	
`/FIXML/TrdCaptRpt/Instrmt@Exch`	Exchange ID	Yes	
`/FIXML/TrdCaptRpt/Instrmt@ID`	Instrument ID	Yes	
`/FIXML/TrdCaptRpt/Instrmt@MMY`	Contract Period Code	Yes	
`/FIXML/TrdCaptRpt/Instrmt@SecTyp`	Product Type	Yes	
`/FIXML/TrdCaptRpt/RptSide@Side`	Market Side Indicator	Yes	
`/FIXML/TrdCaptRpt/RptSide/Pty[@R="4"]@ID`	Clearing Member Firm ID	No	
`/FIXML/TrdCaptRpt/RptSide/Pty[@R="24"]@ID`	Customer Account ID	No	

Example

CME USD/CAD forward:

```
<FIXML>
  <TrdCaptRpt LastQty="4">
    <Instrmt Exch="CME" SecTyp="FWD" ID="USDCAD" MMY="20130301" />
    <RptSide Side="2">
      <Pty R="4" ID="123" />
      <Pty R="24" ID="CUSTACCT1" />
    </RptSide>
  </TrdCaptRpt>
</FIXML>
```

Future

XPath	Name	Required	Notes
`/FIXML/TrdCaptRpt@LastQty`	Quantity	Yes	
`/FIXML/TrdCaptRpt/Instrmt@Exch`	Exchange ID	Yes	
`/FIXML/TrdCaptRpt/Instrmt@ID`	Instrument ID	Yes	
`/FIXML/TrdCaptRpt/Instrmt@MMY`	Contract Period Code	Yes	
`/FIXML/TrdCaptRpt/Instrmt@SecTyp`	Product Type	Yes	
`/FIXML/TrdCaptRpt/RptSide@Side`	Market Side Indicator	Yes	
`/FIXML/TrdCaptRpt/RptSide/Pty[@R="4"]@ID`	Clearing Member Firm ID	No	
`/FIXML/TrdCaptRpt/RptSide/Pty[@R="24"]@ID`	Customer Account ID	No	

Example

CME Eurodollar future:

```
<FIXML>
  <TrdCaptRpt LastQty="4">
    <Instrmt Exch="CME" SecTyp="FUT" ID="ED" MMY="201303" />
    <RptSide Side="1">
      <Pty R="4" ID="123" />
      <Pty R="24" ID="CUSTACCT1" />
    </RptSide>
  </TrdCaptRpt>
</FIXML>
```

Option

XPath	Name	Required	Notes
`/FIXML/TrdCaptRpt@LastQty`	Quantity	Yes	
`/FIXML/TrdCaptRpt/Instrmt@Exch`	Exchange ID	Yes	
`/FIXML/TrdCaptRpt/Instrmt@ID`	Instrument ID/Commodity Code	Yes	
`/FIXML/TrdCaptRpt/Instrmt@MMY`	Contract Period Code	Yes	
`/FIXML/TrdCaptRpt/Instrmt@PutCall`	Put/Call Indicator	Yes	
`/FIXML/TrdCaptRpt/Instrmt@SecTyp`	Product Type	Yes	
`/FIXML/TrdCaptRpt/Instrmt@StrkPx`	Strike Price	Yes	
`/FIXML/TrdCaptRpt/RptSide@Side`	Market Side Indicator	Yes	
`/FIXML/TrdCaptRpt/RptSide/Pty[@R="4"]@ID`	Clearing Member Firm ID	No	
`/FIXML/TrdCaptRpt/RptSide/Pty[@R="24"]@ID`	Customer Account ID	No	
`/FIXML/TrdCaptRpt/Undly@ID`	Underlying Instrument ID	No	
`/FIXML/TrdCaptRpt/Undly@MMY`	Underlying Contract Period Code	No	

Example

CME Eurodollar option:

```
<FIXML>
  <TrdCaptRpt LastQty="10">
    <Instrmt Exch="CME" SecTyp="OOF" ID="ED" MMY="201303" PutCall="P" StrkPx="100">
      <Undly ID="ED" MMY="201203" />
    </Instrmt>
    <RptSide Side="2">
      <Pty R="4" ID="123" />
      <Pty R="24" ID="CUSTACCT1" />
    </RptSide>
  </TrdCaptRpt>
</FIXML>
```

CSV

Delta Ladder

Column		Name	Required	Notes
Index	**Name**			
0	`Value Date`	Value Date	Yes	The date must be in `MM/DD/YYYY` format.
1	`CMF ID`	Clearing Member Firm ID	No	
2	`PB Account`	Customer Account ID	No	
3	`Curve Name`	Curve Name	Yes	
4	`Currency`	Currency	Yes	
5	`91D`	91 Days/3 Months	No	The values in columns 5-27 represent the amount of money the holder of a position with the given maturity will gain or lose based on a parallel shift in the yield curve.
6	`183D`	183 Days/6 Months	No	
7	`274D`	274 Days/9 Months	No	
8	`365D`	365 Days/12 Months	No	
9	`457D`	457 Days/15 Months	No	

10	`548D`	548 Days/18 Months	No
11	`639D`	639 Days/21 Months	No
12	`731D`	731 Days/2 Years	No
13	`1096D`	1,096 Days/3 Years	No
14	`1461D`	1,461 Days/4 Years	No
15	`1826D`	1,826 Days/5 Years	No
16	`2192D`	2,192 Days/6 Years	No
17	`2557D`	2,557 Days/7 Years	No
18	`2922D`	2,992 Days/8 Years	No
19	`3287D`	3,287 Days/9 Years	No
20	`3653D`	3,653 Days/10 Years	No
21	`4383D`	4,383 Days/12 Years	No
22	`5479D`	5,479 Days/15 Years	No
23	`7305D`	7,305 Days/20 Years	No
24	`9131D`	9,131 Days/25 Years	No
25	`10958D`	10,958 Days/30 Years	No
26	`14610D`	14,610 Days/40 Years	No
27	`18263D`	18,263 Days/50 Years	No

Example

```
Value Date,CMF ID,PB Account,Curve Name,Currency,91D,183D,274D,365D,457D,548D,639D,731D,1096D,1461D,1826D,
2192D,2557D,2922D,3287D,3653D,4383D,5479D,7305D,9131D,10958D,14610D,18263D
12/19/2012,370,TEST,GBP_SONIA_1D_ERS,GBP,
1.259281222,20.76525023,3.465603536,42.06051445,6.283750536,61.02984956,8.46213416,125.3130612,237.1899163,2
68.8585818,261.9443043,227.7187867,164.0846059,101.8959109,28.02228836,-82.28976317,-267.0751157,
-628.6599712,-564.7170309,0,0,0,0
12/19/2012,370,TEST,EUR_EURIBOR_6M_ERS,EUR,-23.86144403,-503.8325898,-0.012342894,
-0.109441629,0.056223172,0.889136286,0.190284323,5.320121523,17.61191748,41.69369937,76.53479732,116.5582631
,
155.7398315,199.1134546,424.4469821,9555.998135,0,0,0,0,0,0,0

12/19/2012,370,TEST,USD_LIBOR_3M_ERS,USD,1295.348262,-0.947378425,-1.507154652,-2.225674175,-3.790210125,
-5.348897812,-5.123161447,-30.79241436,-106.5422871,-174.757589,4253.547932,-828.2373279,-1122.159443,
-1325.38267,-10230.54327,-38611.60815,-970.6118909,-1733.127909,
-15870.1614,0,0,0,0
12/19/2012,370,TEST,USD_FEDFUNDS_1D_ERS,USD,-5.952118396,-3.976646163,-17.75223842,-7.936085488,
-28.16528605,-10.20066844,-38.78231391,-47.1974095,-95.56009177,
-14.94260527,154.1852705,342.9522899,548.6102746,740.6938355,918.3396562,601.3185352,636.5864455,1094.560435
,807.8897466,0,0,0,0
12/19/2012,370,TEST,GBP_LIBOR_6M_ERS,GBP,-89.33347124,
-1473.087861,0.411748914,5.242664916,0.804199476,8.33752525,1.417096505,25.24656019,72.44794565,145.605333,2
51.7102313,372.2033202,528.1370162,677.6290944,814.3180617,1428.937946,2795.373043,5293.852463,42608.97393,0
,0,0,0
12/19/2012,370,TEST,JPY_TONAR_1D_ERS,JPY,-18.71594834,-395.1858388,-53.5088762,-855.3238861,-102.3792524,
-1273.611851,-140.7688785,-2670.863615,-5383.476942,-6587.315195,-7184.161494,-6924.80635,-5971.991452,
-4687.688642,-3056.503915,-112.3961059,10461.76639,36296.69839,52734.60429,39614.53775,18379.56104,0,0
```