

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](#)
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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/fixRateSchedule/initialValue	Fixed Rate (Initial)	No	Fixed-rate streams only
/cme:FpML/clearingConfirmed/trade/swap/swapStream/calculationPeriodAmount/calculation/fixRateSchedule/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 Multiplier	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