



DEX Regulatory Suite

European Market Infrastructure Regulation
(EMIR)

This whitepaper discusses regulatory reporting for EMIR and the solution DEX Regulatory Suite offers for this regulation.

European Market Infrastructure Regulation (EMIR)

The European Market Infrastructure Regulation (EMIR) is a body of legislation for over-the-counter (OTC) derivatives, central counterparties and trade repositories. EMIR was introduced by the European Union (EU) as implementation of the G20 commitment to reduce systemic, counterparty and operational risk, and increase transparency in the OTC derivatives market. It was also designed as a preventative measure to avoid fallout during possible future financial crises similar to the collapse that followed the Lehman Brothers bankruptcy in 2008.

It establishes common rules for central counterparties, which interpose themselves between involved parties in a contract to serve as the focal point of each trade, and trade repositories, which collect and maintain all records of trades. EMIR requires the reporting of all derivatives, whether OTC or exchange traded, to a trade repository. EMIR covers entities that qualify for derivative contracts in regards to interest rate, equity, foreign exchange, or credit and commodity derivatives. It also outlines three sets of obligations, including the clearing, reporting and risk mitigation of applicable products.



EMIR's set of obligations were designed to take effect on a phased basis over a period of several years.

EMIR reporting

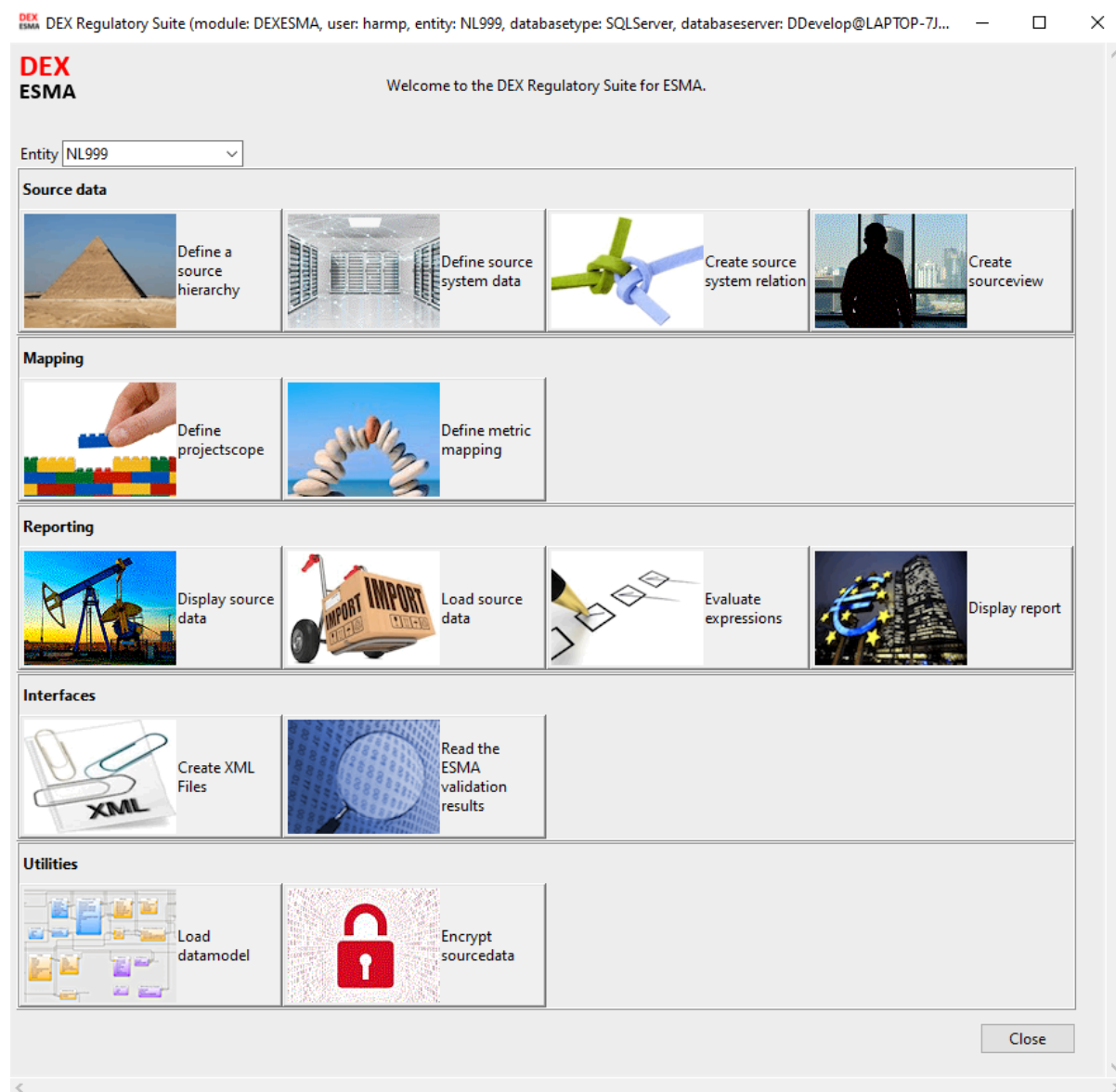
ESMA has developed detailed rules and guidance on reporting, registering, and accessing data.

When reporting, counterparties should take also into account the validation rules applied by TRs to ensure that reporting is performed according to the EMIR regime, including the specifications of the Technical Standards.

DEX Data Explorers has included EMIR reporting in DEX Regulatory Suite.

DEX Regulatory Suite for ESMA

In order to support the ESMA processes DEX Data Explorers offers DEX Regulatory Suite for ESMA. DEX RS generates regulatory reports using the ESMA specifications.



DEX Regulatory Suite for ESMA generates the XML messages that are used in the EMIR processes. These XML messages are based on the same ISO 20022 message standards that also are used for SFTR and MiFID ii transaction reporting.

DEX Regulatory Suite offers the following functionality for Reporting entities:

- Reports generated according to the latest standards
- Analysis tools for mapping of own data sets with the ESMA model
- Validation of the data according to the validation rules defined by ESMA; this gives you the possibility of validating the reports before you send them in
- XML generation in accordance with the standards of ESMA
- Processing of the feedback of ESMA
- Automatically generated documentation
- Workflow support

Below an example of an EMIR report generated by DEX RS is shown.

Display EMIR table (user: harmp, entity: NL999)

DEX
ESMA

Table auth.030 - Derivatives trade report (30)
Frequency: daily
Period: 2020-06-08

Export to Excel

RptHdr	MsgPgmn				Trade Data	Rpt	Pos	New	CtrySpfcData	Counterparty	Reporting Counterparty	Identification	Other Identification	Client Identification	Any BIC	Name	Dmcl							
	CryExctnDt	PgNb	LstPgnd	NbrCrcds														DataSetActn	LEI	C160	C190	C200	C210	C220
001	2020-02-22	37140	✓	613278	✓	LEISYABCDEFHUKLM14	IDSEABCDEFG5	7590YPS0WAZ	NEWVOINC	DMCL022042														
002	2020-01-12	60742	✓	72097	✓	LEIANABCDEFHUKLM87	IDDPABCDEFG2	4738XG50VMJ	MERLEAPAGEL	DMCL022071														
003	2020-03-17	3774	✓	32366	✓	LEIZABCDEFHUKLM86	IDTQABCDEFG2	8734E15VZD	SSSTONEINC	DMCL022091														
004	2020-03-23	41877	✓	84047	✓	LEIEABCDEFHUKLM32	IDWMABCDEFG6	1168LF31TCQ	ABEL CARTA	DMCL022061														
005	2020-02-18	15430	✓	418316	✓	LEIENABCDEFHUKLM94	IDVWABCDEFG8	3212NWN38KQ	LARRYDARRINGTONIR	DMCL022084														
006	2020-03-12	76149	✓	901143	✓	LEIBAABCDEFHUKLM39	IDXGABCDEFG5	2882OC67JEA	JSSALVAGEINC	DMCL022098														
007	2020-02-24	53635	✓	107934	✓	LEIPNABCDEFHUKLM67	IDGWABCDEFG4	9763CS77YNL	NESTORALVAREZ	DMCL022077														
008	2020-03-28	42548	✓	16157	✓	LEIOSABCDEFHUKLM93	IDTHABCDEFG9	6747AG74BYF	WALTERJSTAMP	DMCL022046														
009	2020-02-19	8052	✓	43329	✓	LEICWABCDEFHUKLM48	IDZYABCDEFG5	1708VY14KAY	GARYSTRACTORSERVICEINC	DMCL022041														
010	2020-02-12	59954	✓	548372	✓	LEIPCABCDEFHUKLM29	IDTVABCDEFG4	6301KD15SOR	CHEREVANSTRUCKINGINC	DMCL022048														
011	2020-02-27	65442	✓	677332	✓	LEISVABCDEFHUKLM10	IDFIABCDEFG8	4054CA18RZE	MCKINNEYENTERPRISEINC	DMCL022073														
012	2020-01-24	72856	✓	943534	✓	LEISLABCDEFHUKLM83	IDRIABCDEFG5	4012ZD60EEN	DIAMONDCATPRODUCTIONSINC	DMCL022022														
013	2020-03-19	76128	✓	568181	✓	LEIOABCDEFHUKLM66	IDXWABCDEFG4	8970QH46CCX	THEBACKDOORFURNITURE	DMCL022089														
014	2020-01-22	3092	✓	443400	✓	LEIBNABCDEFHUKLM45	IDPOABCDEFG2	2193GA91KYI	PABLORAMIREZ	DMCL022080														

DEX Data Explorers maintains the definitions of the reports according to the regulator standards. When updates to the standards are submitted, you as a customer will receive an update on the set of reporting definitions.

Execution of validation rules

ESMA has defined a set of validation rules which are used to check whether the submitted data is correct. The rules are in the DEX RS datapoint model, so you can check if the data is correct before you submit it to the regulator. Below an example of a validation report is shown.

Display evaluation summary output/Validations_EMIR_DerivsTradRpt_20200608.csv (user-harmp/entity-NL999)

DEX
ESMA

Entity: NL999 | Taxonomy: EMIR | Period: 2020-06-08 | Tableversion: 30 - DerivsTradRpt - auth.030 - Derivatives trade report

Nr of rows: 0 | Nr of errors: 837 | Nr of warnings: 0 | Outputfile: output/Validations_EMIR_DerivsTradRpt_20200608.csv

XOrdnateID	XOrdnateCode	Errormessage	Expression	Severity	Nr of messages
8900	Nm0210	Nm0210_4827: Value is not conform pattern [A-Z0-9]	[A-Z0-9]{1,105}	Blocking	3
8976	Nm0900	Nm0900_4875: Value is not conform pattern [A-Z0-9]	[A-Z0-9]{1,350}	Blocking	2
8980	NtnlCcyScndLeg0940	NtnlCcyScndLeg0940_4881: Value is not conform patt [A-Z]{3,3}	[A-Z]{3,3}	Blocking	1
9112	Cd2250	Cd2250_4936: Value is not conform pattern [A-Z0-9\.-]	[A-Z0-9\.-]{16}	Blocking	14
9115	Cd2280	Cd2280_4938: Value is not conform pattern [A-Z0-9\.-]	[A-Z0-9\.-]{16}	Blocking	14
9151	CtrySubDvsn2640	CtrySubDvsn2640_4952: Value is not conform pattern [A-Z]{2,2}\-[0-9A-Z]{1,3}	[A-Z]{2,2}\-[0-9A-Z]{1,3}	Blocking	14
9166	PlcAndNm2790	PlcAndNm2790_4958: Value is not conform pattern [A-Z0-9]{1,350}	[A-Z0-9]{1,350}	Blocking	3
9178	Nm2910	Nm2910_4962: Value is not conform pattern [A-Z0-9]	[A-Z0-9]{1,105}	Blocking	1
9254	Nm3600	Nm3600_5010: Value is not conform pattern [A-Z0-9]	[A-Z0-9]{1,350}	Blocking	2
9377	QtdCcy4820	QtdCcy4820_5061: Value is not conform pattern [A-Z]	[A-Z]{3,3}	Blocking	1
9390	Cd4950	Cd4950_5071: Value is not conform pattern [A-Z0-9\.-]	[A-Z0-9\.-]{16}	Blocking	14
9393	Cd4980	Cd4980_5073: Value is not conform pattern [A-Z0-9\.-]	[A-Z0-9\.-]{16}	Blocking	14
9429	CtrySubDvsn5340	CtrySubDvsn5340_5087: Value is not conform pattern [A-Z]{2,2}\-[0-9A-Z]{1,3}	[A-Z]{2,2}\-[0-9A-Z]{1,3}	Blocking	14
9456	Nm5610	Nm5610_5097: Value is not conform pattern [A-Z0-9]	[A-Z0-9]{1,105}	Blocking	1
9532	Nm6300	Nm6300_5145: Value is not conform pattern [A-Z0-9]	[A-Z0-9]{1,350}	Blocking	2
9536	NtnlCcyScndLeg6340	NtnlCcyScndLeg6340_5151: Value is not conform patt [A-Z]{3,3}	[A-Z]{3,3}	Blocking	1

Full lineage

DEX RS offers stores the full lineage of the values in the reports. This means that you can trace back the values of the reports to the original source data records that constitute a value in the report. This is a very useful feature which enables you to analyze the reported values. Below an example of the lineage of a value is shown. The report shown is a DGS-report. The sum of the values marked blue is the value in the report.

Display lineage (user: hamp, entity: NL999)

DEX DNB

Entity: Period: Table: X-Ordnate: Y-Ordnate: Z-Ordnate: Callvalue: Sum of selected values: Number of records: Sourcesystem: Sourcetable: Sourcetabletype: Filename:
NL999:2020-Q1: T_DG501.01: C05: R018: : : 1160670.650000: 1160670.65: 8: DGSFact: bankaccountview: SQLServer: bankaccountview

Export to Excel

#	COUNTRY	BRANCH	ACCOUNT	EER_COUNTRY	TYPE	BANKACCOUNT	TYPE	ORGANISATION	ELIGIBLEACCOUNT	SINGLEORMULTIPLE	DEPOSITORS	AMOUNTINTERVAL	PERIOD	ENTITYID	BANKIDENTIFIER	REPORTINGREFERENCE	DATE	BANKACCOUNTIDENTIFIER	NUMBEROFACCOUNTS	BALANCE	CURRENCY
1671	BE			EER_COUNTRY	REK-BELEG			NIET_FINANCIELE_ZAKELIJKE_KLANTEN	DGS	single		greater_than,100000	54	1	NL999	2019-12-31		DEX621369	1	165310.250000	
1810	DK			EER_COUNTRY	REK-BELEG			NIET_FINANCIELE_ZAKELIJKE_KLANTEN	DGS	single		greater_than,100000	54	1	NL999	2019-12-31		DEX621695	1	129375.800000	
2514	BE			EER_COUNTRY	REK-BELEG			PARTICULIER	DGS	single		greater_than,100000	54	1	NL999	2019-12-31		DEX624534	1	150144.880000	
3253	DK			EER_COUNTRY	REK-BELEG			NIET_FINANCIELE_ZAKELIJKE_KLANTEN	DGS	single		greater_than,100000	54	1	NL999	2019-12-31		DEXNL42DXBA273969976	1	116839.860000	
3382	BE			EER_COUNTRY	REK-BELEG			NIET_FINANCIELE_ZAKELIJKE_KLANTEN	DGS	single		greater_than,100000	54	1	NL999	2019-12-31		DEXNL54DXBA2222411233	1	105680.900000	
3781	FR			EER_COUNTRY	REK-BELEG			NIET_FINANCIELE_ZAKELIJKE_KLANTEN	DGS	single		greater_than,100000	54	1	NL999	2019-12-31		DEXNL95DXBA2222429719	1	147177.380000	
3770	BE			EER_COUNTRY	REK-BELEG			NIET_FINANCIELE_ZAKELIJKE_KLANTEN	DGS	single		greater_than,100000	54	1	NL999	2019-12-31		DEXNL95DXBA273897381	1	178190.680000	
3780	BE			EER_COUNTRY	REK-BELEG			NIET_FINANCIELE_ZAKELIJKE_KLANTEN	DGS	single		greater_than,100000	54	1	NL999	2019-12-31		DEXNL98DXBA2222411896	1	156609.780000	

Close

Generation of interfaces

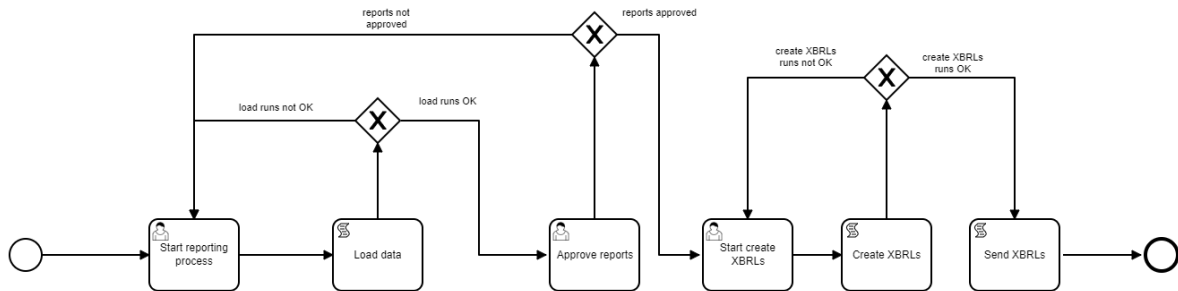
DEX RS generates the interfaces required by the regulator. In the example below an example of an XML-interface for EMIR, as required by ESMA, is shown.

```
DEX Regulatory Suite (module: DEXESMA, user: hamp, entity: NL999, databasetype: SQLServer, database: DDevelop@LAPTOP-7JAUH68S\SQLEXPRESS, directory: D:\OneDrive\DDDevelop\DEXRS)
0001: <?xml version='1.0' encoding='UTF-8'>
0002: <Document xmlns="urn:iso:std:iso:20022:tech:xsd:auth.030.001.01"*>
0003:   <DerivsTradeRpt>
0004:     <RptHdr>
0005:       <QryExctnDt>2020-02-22</QryExctnDt>
0006:       <MsgPgntn>
0007:         <PgNb>37140</PgNb>
0008:         <LastPgInd>true</LastPgInd>
0009:       </MsgPgntn>
0010:       <NbRcrds>613278</NbRcrds>
0011:     </RptHdr>
0012:     <TradeData>
0013:       <Rpt>
0014:         <Pos>
0015:           <New>
0016:             <CtrPtySpocData>
0017:               <CtrPty>
0018:                 <RptgCtrPty>
0019:                   <Id>
0020:                     <LEI>LEISYABCDEFGHIJKL14</LEI>
0021:                   <Othr>
0022:                     <Id>
0023:                       <CltId>IDSEABCDEFS</CltId>
0024:                       <AnyBIC>7590YP50WAZ</AnyBIC>
0025:                     </Id>
0026:                     <Nm>NEWVINC</Nm>
0027:                     <Emcl>EMCL02042</Emcl>
0028:                   </Othr>
0029:                 </Id>
0030:                 <Ntr>
0031:                   <FI>ORFI</FI>
0032:                   <NFI>
0033:                     <Sotr>I</Sotr>
0034:                     <ClrThrsld>true</ClrThrsld>
0035:                   <DrectlyLkdActvty>true</DrectlyLkdActvty>
0036:                 </NFI>
0037:                 <Ctr1CtrPty>NORE</Ctr1CtrPty>
0038:                 <Othr>NORE</Othr>
0039:               </Ntr>
0040:             <TradgCpty>PRIM</TradgCpty>
0041:             <CtrPtySd>SLLR</CtrPtySd>
0042:           </RptgCtrPty>
0043:           <OthrCtrPty>
0044:             <Id>
0045:               <LEI>LEI8FABCDEFGHIJKLMS6</LEI>
0046:               <CltId>IDKABCDEF</CltId>
0047:               <AnyBIC>S2270F33TIM</AnyBIC>
0048:             </Id>
0049:             <Ctry>GD</Ctry>
0050:           </OthrCtrPty>

```

Workflow support

DEX RS offers workflow integration. The DEX RS functionality has been integrated with workflow systems. Users are guided through the regulatory process; manual steps are integrated with automated steps. All actions are logged.



Design you own reports

On top of delivering the required regulatory reports DEX RS offers you the possibility of designing you own reports. This way you can reuse the data you use for regulatory reports for e.g. internal reports. Below the design screen is shown. You can add you own columns, or create a copy of an entire report and change it for internal use.

Display table (user: hamp, entity: DEX designer)

DEX
ESMA

Table: auth.030 - Derivatives trade report (30)

RptHdr		Trade Data												
MsgPgntn		Rpt	Pos	New	CtrPtySpfcData	Counterparty	Reporting Counterparty	Identification	Other Identification	Nature	Financial Institution	Sctr	ClrThrsld	DrctlyLkdActvty
ChyExctnDt	PgNb	LastPgInd	NbrRcds	DataSetActn	LEI	Client Identification	Any BIC	Name	Dmcl	C200	C240	C260	C270	C280
x999	datapointvid 5915	datapointvid 5916	datapointvid 5917	datapointvid 5918	datapointvid 5919	datapointvid 5920	datapointvid 5921	datapointvid 5922	datapointvid 5923	datapointvid 5924	datapointvid 5925	datapointvid 5926	datapointvid 5927	datapointvid 5928

You can also add your own validations.

Expression (user:hamp/entity:DEX designer)

DEX
ESMA

Tableversion: 30: DerivsTradRpt

X-axisordinate: 8895: LEI0160 - LEI

Y-axisordinate: 8766: x999 - x999

ExpressionId	ExpressionCode	Type	Severity	Formula	Message
4824	LEI0160_4824	Pattern	Blocking	[A-Z0-9]{18,18}[0-9]{2,2}	Value is not conform pattern [A-Z0-9]{18,18}[0-9]{2,2}

Scope: Row, Column, Cell

Select report Close

Available solutions

DEX Regulatory Suite supports the following regulations:

1. EMIR
2. SFTR
3. MiFID ii
4. CRD iv (COREP, FINREP, Funding Plans, Asset Encumbrance, Supervisory Benchmarking Portfolio)
5. AnaCredit
6. Residential Real Estate
7. Deposit Guarantee Scheme
8. Social Economic Reports
9. Dutch Digital Reporting (DRA)
10. Solvency
11. IORP ii
12. Country Risk
13. Financial assessment scheme (FTK)
14. Premium pension institutions (PPI)
15. Tax reporting (VIA, Fatca)

Addition Knowledge House and DEX Regulatory Suite

[Addition Knowledge House \(www.addition.nu\)](http://www.addition.nu) is a reseller of [DEX Regulatory Suite](#). Addition Knowledge House delivers the following services with regards to DEX Regulatory Suite:

- implementation support
- maintenance
- business process outsourcing



Each situation is unique. Addition Knowledge House will be happy to discuss how we can support your process in an optimal way.

DEX Data Explorers

info@dataexplorers.nl

<http://www.dataexplorers.nl>