



ARM ATHEX

Transactions Reporting Service

Technical Specifications

Version 1.6

21/11/2017

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1. Introduction

1.1. Purpose and intended audience of this document

Investment Firms which execute transactions must report to their National Competent Authority (NCA) “as quickly as possible” and no later than the close of the following working day, i.e. T+1, using the proper format (ISO 20022 / XML). The NCA forwards them to the European Securities and Markets Authority (ESMA), which puts them through the Transaction Reporting Exchange Mechanism (TREM), which allows NCAs from other EU Member States to look at the information.

In this workflow, Investment Firms, hereafter referred to as “reporting entities” make use of an intermediate Approved Reporting Mechanism (ARM), which takes care of the pre-validation requirements for information to be submitted, and handles the intricacies of the submission and reply to NCAs.

1.2. Scope

This document provides the Technical Specification of ARM@ATHEX Service, which serves as the Approved Reporting Mechanism as described above.

Please notice that the information in this document is subject to change. A future version of this document may be applicable, as early implementation is maturing.

1.3. Changes since last version

Since version 1.5, there have been some modifications in the naming of the following data fields:

- The JSON name of the field [ATHEXAPA-4] **decisionMakerIdentificationType** has been changed into **buyerDecisionMakerType** for consistency reasons.
- The JSON names of the fields [RTS22-44] **nationalCurrency1** and [RTS22-45] **nationalCurrency2** have been changed into **notionalCurrenty1** and **notionalCurrency2**, respectively, for consistency reasons.

2. Definitions

Acronym	Definitions
TREM	Transaction Reporting Exchange Mechanism
AMP	ATHEX Members Portal
NCA	National Competent Authority

3. System overview

3.1. The ATHEX AMP

The ATHEX Members Portal (AMP) is a one-stop-shop which provides ATHEX members and other clients with a variety of services. Those services are related, but not limited to MIFID II-MIFIR regulatory obligations.

AMP consists of the following:

1. An Authentication-Authorized mechanism, which grants the reporting entities access to AMP and authorizes the use of the different services according to the corresponding service subscriptions.
2. An Information Exchange Interface, which enables the reporting entities to submit data and monitor the status of their submissions. The Information Exchange Interface supports both an interactive Web UI and a machine-purposed REST API.
3. A Validation Engine, where all submissions are checked with the appropriate validation rules in order to ensure data validity. Reporting entities are given the means to spot, correct and resubmit invalid data.
4. A Forwarding Engine, which forwards valid submitted data to a Foreign Application, which can be any application external to AMP. In the case of ARM, this is the TREM. Normally, the Forwarding Engine forwards only locally-validated data, but reporting entities have the ability to force data through, on the reporting entity's responsibility.
5. The Reporting Engine which handles the results from the Foreign Application, and makes them available to the reporting entities.

Users of AMP access all of the above functionality through a single Web UI and/or a set of REST calls. Use of the Web UI and REST is equivalent, so a submission can be made through the UI and the status be queried over REST, and so on.

3.2. ATHEX Members Portal Services

The following services are provided via AMP:

APA@ATHEX

The Approved Publication Arrangement (APA)¹ is a person authorized under [MiFID II](#)² to provide **the service of publishing trade reports** on behalf of investment firms pursuant to Articles 20 and 21 of [MiFIR](#)³.

ARM@ATHEX

¹ MIFID II Directive, article 4(1)(52)

² Directive 2014/65/EU

³ Regulation (EU) No 600/2014

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ORK@ATHEX

This is an obligatory service to the ATHEX Members in order to comply with the short/long coding requirement of ESMA.

RDS@ATHEX

By this service, all the static data (baselines) of the traded products will be available to the ATHEXGROUP Members and Data Vendors.

EMIR-TR (TRC)

In response to EMIR, ATHEX Members Portal provides to the EMIR Service subscribers the service to meet the corresponding regulatory obligations

FIRDS@ATHEX

Systemic Internalizers can benefit from ATHEX Members Portal integrated services in order to fulfill their corresponding regulatory obligations.

This document is the Technical Specification document for the **ARM@ATHEX** service. For the rest services, the respective documents are available, or will be available.

3.3. [Authorization – authentication](#)


ARM@ATHEX Registered Clients are provided with user- password credentials in order to enter **Web Interface** to upload files or inspect previous submissions status.

These credentials can be used for uploading and downloading through REST API interface.

Web interface→FORM Authentication over https

REST API → Basic Authentication over https

Other types of authentication-authorization will be provided later.



ATHEX GROUP
Athens Exchange Group

Μοναδική σύνδεση (Single Sign-On)


Παρακαλούμε δώστε τη διεύθυνση mail σας (user@domain) και το συνθηματικό σας στην παρακάτω φόρμα προκειμένου να εισέλθετε στο site.

Στην περίπτωση που αντιμετωπίζετε προβλήματα με την είσοδό σας στο site, παρακαλούμε επικοινωνήστε με τους διαχειριστές στο: AthexSite-HelpDesk@athexgroup.gr

Διεύθυνση email :

Κωδικός Πρόσβασης :

[Ξεχάσατε τον κωδικό σας;](#)



Όμιλος Χρηματιστηρίου Αθηνών

Ο Όμιλος του Χρηματιστηρίου Αθηνών (ATHEXGroup) υποστηρίζει την ανάπτυξη και οργάνωση της Ελληνικής Κεφαλαιαγοράς. Λειτουργεί τις αγορές αξιών και παραγώγων, την εναλλακτική αγορά ενώ παράλληλα διενεργεί την εκκαθάριση και το διακανονισμό των συναλλαγών. Προσφέρει λύσεις και εργαλεία χρηματοδότησης στις επιχειρήσεις, διασφαλίζοντας τις επενδύσεις παρέχοντας ένα ασφαλές, σταθερό και εύκολο περιβάλλον πλήρως εναρμονισμένο με τις διεθνείς πρακτικές και το Ευρωπαϊκό κανονιστικό πλαίσιο.

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Εργλείο	Επεκτασιμότητα
AXIAxms	RSSFeeds
AXIAweb	Χάρτης site
AXIAline	Όροι χρήσης
AXIAlei	

4. Reporting principles

4.1. Data submission

Data submission can be done either via the application's UI, or via rest web services. In both cases:

- For each submission a Unique Identification is being generated, which is called the submission Id.
- The above Submission Id enables reporting-entities to monitor the current status of the corresponding submission. The submission status is called submissionStatus. The submissionStatus indicates the submission's status in regard to the ATHEX Members Portal processing and the interaction with any Third Party Application. In case of ARM@athex service the a Third Party Application is the corresponding NCA-TREM .

SubmissionStatus	Description
RCVD	The submission has been received by ATHEX Members Portal.
RJCT	The submission was rejected by ATHEX Members Portal due to submission format related errors.
PART	The submission was partially accepted by ATHEX Members Portal. In that case some records failed passing ATHEX Members Portal's validations, therefore those records are not forwarded. Only valid records are forwarded to the Third Party Application. The reporting entity has to correct all invalid records and resubmit them to ATHEX Members Portal.
ACPT	All records of the current submission have passed ATHEX Members Portal's validations
FRWD	The submission has been forwarded to the corresponding TPA. Note that in case a submission is partially accepted by ATHEX Members Portal, only the successfully validated entries are forwarded to the corresponding TPA.
TPAC	All submitted records of the current submission have been successfully submitted to the corresponding TPA.
TPRJ	The submission was rejected by the corresponding TPA. Reporting Entity has to apply corrective actions and resubmit the current record in a new submission.
TPPR	The submission was partially accepted by TPA. In that case some records failed passing TPA validations. Invalid records have to be corrected and resubmitted to AMP by the reporting entity.

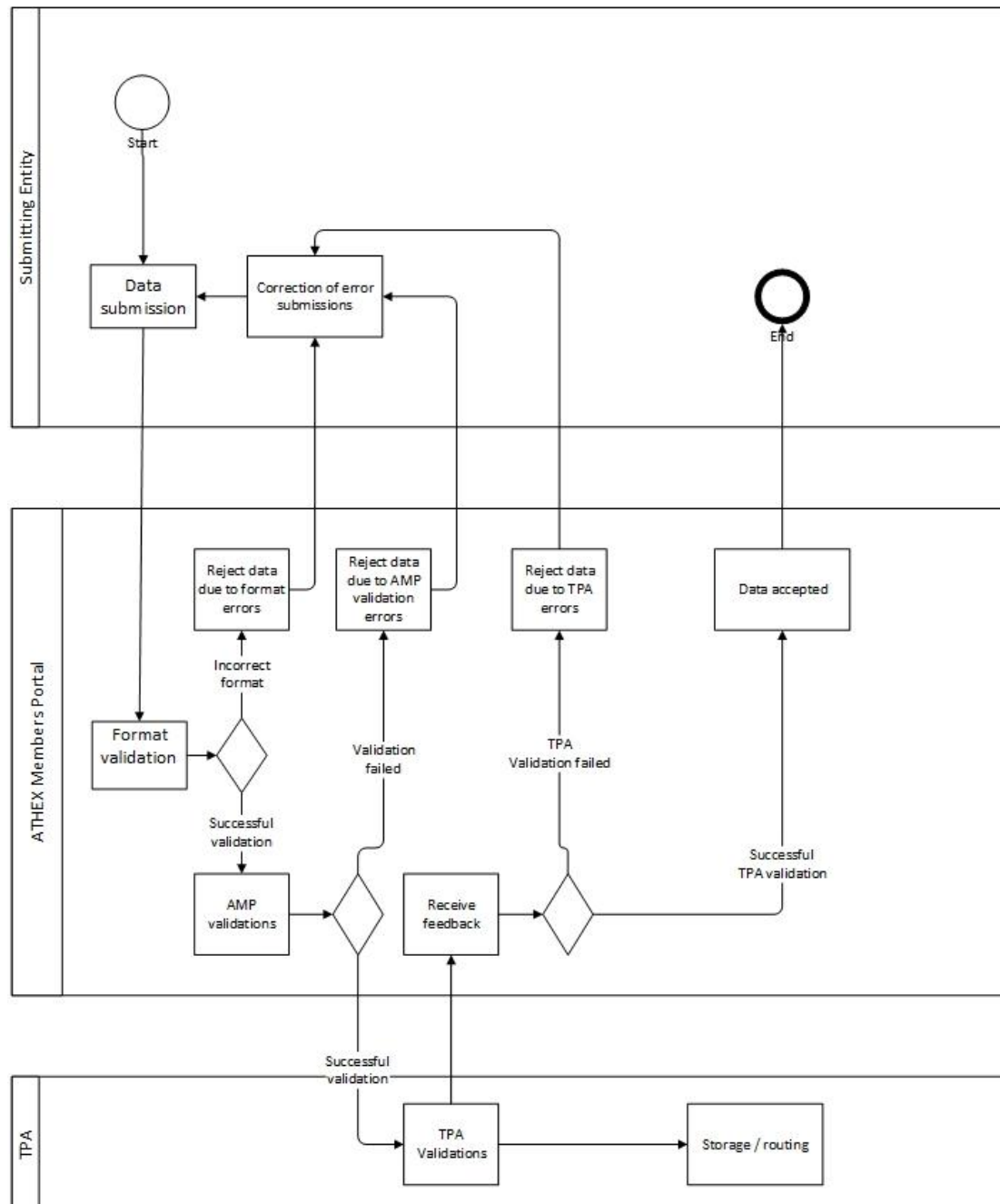
- Each submission is consisted of several records. For each record, a record identification and a record status (Entry Status) are applied. Thus reporting-entities can easily monitor the status of their submitting records.

Entry Status	Description
PVLD	Pending Validation. AMP has not yet validated this record
SVLD	Successful Validation. The record was successfully validated by AMP.
FVLD	Failed Validation. The record has not passed all AMP validations. Consult ErrorCode field.
FRWD	Record has been forwarded to the corresponding TPA. Pending response from TPA. Note that only entries of EntryStatus of SVLD are being forwarded to the TPA.

Entry Status	Description
RJCT	Record was rejected by the corresponding TPA.
ACPT	Record was successfully submitted to the corresponding TPA.

4.2. Data flow

The diagram below shows the Data flow for the ARM@ATHEX Service



4.3. Data fields

The following table summarizes the columns of a single record for an ARM submission. A submission consists of one or more rows containing the columns in this table. The legend at the end of the table explains the mandatory fields and the sub-column repetition rules.

Message Text	Req	Type	JSON name	Field Reference
Entry ID		(system-generated) {INTEGER}	entryId	
Submission ID		(system-generated) {INTEGER}	submissionId	
Entry Status		(system-generated) {ALPHANUM-4}	entryStatus	
Entry Errors		(system-generated) {ALPHANUM-500}	entryErrors	
Report status	✓	{ALPHANUM-4}	reportStatus	RTS22-1
Transaction Ref ID	✓	{ALPHANUM-52}	transactionReferenceId	RTS22-2
Trade ID indicator	✓	{INTEGER-1}	tradeIdIndicator	ATHEXARM-1
Trade ID	+	{ALPHANUM-52}	tradeId	RTS22-3
Executing entity identification code	✓	{LEI}	executingEntityIdentificationCode	RTS22-4
Investment firm directive indicator	✓	{INTEGER-1}	investmentFirmDirectiveIndicator	RTS22-5
Submitting entity identification code	✓	{LEI}	submittingEntityIdentificationCode	RTS22-6
Buyer Identification Type	✓	{INTEGER-1}	buyerIdentificationType	ATHEXARM-3
Buyer Identification Code	✓	{LEI} {MIC} {NATIONAL_ID} «INTC»	buyerIdentificationCode	RTS22-7
Buyer Country Branch	+	{COUNTRYCODE_2}	buyerCountryBranch	RTS22-8
Buyer First Name	+	{ALPHANUM-140}	buyerFirstName	RTS22-9
Buyer Last Name	+	{ALPHANUM-140}	buyerLastName	RTS22-10
Buyer Birth Date	+	{DATEFORMAT}	buyerBirthDate	RTS22-11
Buyer Decision Maker Type	+	{INTEGER-1}	BuyerDecisionMakerType	ATHEXARM-4
Buyer Decision Maker Code	+	{ALPHANUM-35}	buyerDecisionMakerCode	RTS22-12
Buyer Decision Maker First Name	+	{ALPHANUM-140}	buyerDecisionMakerFirstName	RTS22-13

Message Text	Req	Type	JSON name	Field Reference
Buyer Decision Maker Surname	+	{ALPHANUM-140}	buyerDecisionMakerSurname	RTS22-14
Buyer Decision Maker Birth Date	+	{DATEFORMAT}	buyerDecisionMakerBirthDate	RTS22-15
Seller Identification Type	✓	{INTEGER-1}	sellerIdentificationType	ATHEXARM-6
Seller Identification Code	✓	{LEI} {MIC} {NATIONAL_ID} 'INTC'	sellerIdentificationCode	RTS22-16
Seller Country Branch	+	{COUNTRYCODE_2}	sellerCountryBranch	RTS22-17
Seller First Name	+	{ALPHANUM-140}	sellerFirstName	RTS22-18
Seller Last Name	+	{ALPHANUM-140}	sellerLastName	RTS22-19
Seller Birth Date	+	{DATEFORMAT}	sellerBirthDate	RTS22-20
Seller Decision Maker Type	+	{INTEGER-1}	sellerDecisionMakerType	ATHEXARM-7
Seller Decision Maker Code	+	{ALPHANUM-35}	sellerDecisionMakerCode	RTS22-21
Seller Decision Maker First Name	+	{ALPHANUM-140}	sellerDecisionMakerFirstName	RTS22-22
Seller Decision Maker Surname	+	{ALPHANUM-140}	sellerDecisionMakerLastName	RTS22-23
Seller Decision Maker Birth Date	+	{DATEFORMAT}	sellerDecisionMakerBirthDate	RTS22-24
Transmission of order indicator	✓	{INTEGER-1}	transmissionOfOrderIndicator	RTS22-25
Buyer Transmitting firm	+	{LEI}	buyerTransmittingFirm	RTS22-26
Seller transmitting firm	+	{LEI}	sellerTransmittingFirm	RTS22-27
Trading date and time	✓	{DATETIME}	tradingDateAndTime	RTS22-28
Side	✓	{ALPHANUM-1}	side	ATHEXARM-8
Trading capacity	✓	{ALPHANUM-4}	tradingCapacity	RTS22-29
Quantity notation	✓	{INTEGER-1}	quantityNotation	ATHEXARM-9
Quantity	✓	{DECIMAL-18/17}	quantity	RTS22-30
Quantity currency	+	{CURRENCYCODE_3}	quantityCurrency	RTS22-31

Message Text	Req	Type	JSON name	Field Reference
Derivatives Notional Increase or Decrease	+	{INTEGER-1}	derivativesNotionalIncreaseOrDecrease	RTS22-32
Price notation	✓	{ALPHANUM-4}	priceNotation	ATHEXARM-10
Price	✓	{DECIMAL-18/17}	price	RTS22-33
Price Currency	+	{CURRENCYCODE_3}	priceCurrency	RTS22-34
Net amount	+	{DECIMAL-18/5}	netAmount	RTS22-35
Venue	✓	{ALPHANUM-4}	venue	RTS22-36
Branch membership country	+	{COUNTRYCODE_2}	branchMembershipCountry	RTS22-37
Up-front payment	+	{DECIMAL-18/5}	upFrontPayment	RTS22-38
Up-front payment currency	+	{CURRENCYCODE_3}	upFrontPaymentCurrency	RTS22-39
Complex trade component id	+	{ALPHANUM-35}	complexTradeComponentId	RTS22-40
Instrument ID type	✓	{ALPHANUM-4}	instrumentIdType	ATHEXARM-11
Instrument ID	+	{ISIN}	instrumentId	RTS22-41
Instrument full name	+(✓)	{ALPHANUM-350}	instrumentFullName	RTS22-42
Instrument classification	+	{CFI_CODE}	instrumentClassification	RTS22-43
Notional currency 1	+	{CURRENCYCODE_3}	notionalCurrency1	RTS22-44
Notional currency 2	+	{CURRENCYCODE_3}	notionalCurrency2	RTS22-45
Price multiplier	+	{DECIMAL-18/17}	priceMultiplier	RTS22-46
Underlying instrument code	+	{ISIN}	underlyingInstrumentCode	RTS22-47
Underlying index name	+	{ALPHANUM-25}	underlyingIndexName	RTS22-48
Term of the underlying index	+	{INTEGER-3} + {ALPHANUM-4}	termOfTheUnderlyingIndex	RTS22-49
Option type	+	{ALPHANUM-4}	optionType	RTS22-50
Strike price notation	+	{ALPHANUM-4}	strikePriceNotation	ATHEXARM-12
Strike price	+	{DECIMAL-18/17}	strikePrice	RTS22-51
Strike price currency	+	{CURRENCYCODE_3}	strikePriceCurrency	RTS22-52

Message Text	Req	Type	JSON name	Field Reference
Option exercise style	+	{ALPHANUM-4}	optionExerciseStyle	RTS22-53
Maturity date	+	{DATE}	maturityDate	RTS22-54
Expiry date	+	{DATE}	expiryDate	RTS22-55
Delivery type	+	{ALPHANUM-4}	deliveryType	RTS22-56
Investment Decision Within Firm Type	+	{INTEGER-1}	investmentDecisionWithinFirmType	ATHEXARM-13
Investment Decision Within Firm	+	{ALPHANUM-50}	investmentDecisionWithinFirm	RTS22-57
Investment Decision Maker Country	+	{COUNTRYCODE_2}	investmentDecisionMakerCountryCode	RTS22-58
Execution Within Firm Type	✓	{INTEGER-1}	executionWithinFirmType	ATHEXARM-14
Execution Within Firm	✓	{ALPHANUM-50}	executionWithinFirm	RTS22-59
Executor Country	+	{COUNTRYCODE_2}	executorCountry	RTS22-60
Waiver indicator	+	{INTEGER-4}	waiverIndicator	RTS22-61
Short selling indicator	+	{ALPHANUM-4}	shortSellingIndicator	RTS22-62
OTC Post-trade indicator	+	{INTEGER-4}	otcPostTradeIndicator	RTS22-63
Commodity derivative indicator	+	{INTEGER-1}	commodityDerivativeIndicator	RTS22-64
Securities Financing Transaction indicator	✓	{INTEGER-1}	securitiesFinancingTransactionIndicator	RTS22-65
Business Unit	+	{ALPHANUM-50}	businessUnit	ATHEXARM-15
Free text 1	+	{ALPHANUM-50}	freeText1	ATHEXARM-16
Free text 2	+	{ALPHANUM-50}	freeText2	ATHEXARM-17
Routing Instructions	+	{INTEGER-1}	tremRouting	ATHEXARM-18

LEGEND

✓ - Mandatory fields

- + - Conditionally required fields
- + (V) - Mandatory when condition met fields

Fields colored in **green** may repeat. Repeating fields are denoted by subsequent CSV file lines (“continuation lines”) with all other (non-repeating) fields blank and values only for repeating fields. More than one repeating fields may exist in the same continuation line (e.g., Transaction Buyers and Transaction Sellers details).

Reference	Data format	Description
RTS22-1	{ALPHANUM-4}	'NEWT' - New 'CANC' - Cancellation
RTS22-2	{ALPHANUM-52}	
ATHEXARM-1	{INTEGER-1}	1 – OASIS Trade ID 2 – Other Venue Trade ID 3 – Not executed in a Venue
RTS22-3	{ALPHANUM-52}	
RTS22-4	{LEI}	
RTS22-5	{INTEGER-1}	1 - 'true' 0 - 'false'
RTS22-6	{LEI}	
ATHEXARM-3	{INTEGER-1}	1: LEI 2: MIC 3: NATIONAL_ID 4: INTC
RTS22-7	{LEI} {MIC} {NATIONAL_ID} «INTC»	
RTS22-8	{COUNTRYCODE_2}	
RTS22-9	{ALPHANUM-140}	
RTS22-10	{ALPHANUM-140}	
RTS22-11	{DATEFORMAT}	YYYYMMDD
ATHEXARM-4	{INTEGER-1}	1: LEI 2: NATIONAL_ID
RTS22-12	{ALPHANUM-35}	
RTS22-13	{ALPHANUM-140}	
RTS22-14	{ALPHANUM-140}	
RTS22-15	{DATEFORMAT}	YYYYMMDD
ATHEXARM-6	{INTEGER-1}	1: LEI 2: MIC 3: NATIONAL_ID 4: INTC
RTS22-16	{LEI} {MIC} {NATIONAL_ID} 'INTC'	
RTS22-17	{COUNTRYCODE_2}	
RTS22-18	{ALPHANUM-140}	
RTS22-19	{ALPHANUM-140}	

Reference	Data format	Description
RTS22-20	{DATEFORMAT}	YYYYMMDD
ATHEXARM-7	{INTEGER-1}	1: LEI 2: NATIONAL_ID
RTS22-21	{ALPHANUM-35}	
RTS22-22	{ALPHANUM-140}	
RTS22-23	{ALPHANUM-140}	
RTS22-24	{DATEFORMAT}	YYYYMMDD
RTS22-25	{INTEGER-1}	1 - 'true' 0 - 'false'
RTS22-26	{LEI}	
RTS22-27	{LEI}	
RTS22-28	{DATETIME}	YYYYMMDDHH24MISSFF
ATHEXARM-8	{ALPHANUM-1}	'B' - buy 'S' - sell 'C' - cross
RTS22-29	{ALPHANUM-4}	'DEAL' - Dealing on own account 'MTCH' - Matched principal 'AOTC' - Any other capacity
ATHEXARM-9	{INTEGER-1}	1 - Units 2- Monetary or nominal value
RTS22-30	{DECIMAL-18/17}	{DECIMAL-18/17} in case the quantity is expressed as number of units {DECIMAL-18/5} in case the quantity is expressed as monetary or nominal value
RTS22-31	{CURRENCYCODE_3}	
RTS22-32	{INTEGER-1}	1 – Increase 2 - Decrease
ATHEXARM-10	{ALPHANUM-4}	'MONE' – Monetary value 'PERC' – Percentage 'YIEL' – Yield 'BAPO' – Basis points 'PNDG' - Pending 'NOAP' – Not Applicable
RTS22-33	{DECIMAL-18/17}	{DECIMAL-18/13} in case the price is expressed as monetary value {DECIMAL-11/10} in case the price is expressed as percentage or yield {DECIMAL-18/17} in case the price is expressed as basis points
RTS22-34	{CURRENCYCODE_3}	
RTS22-35	{DECIMAL-18/5}	
RTS22-36	{ALPHANUM-4}	'MIC': Trading venues 'XOFF': OTC 'SINT': Systematic internalizes
RTS22-37	{COUNTRYCODE_2}	

Reference	Data format	Description
RTS22-38	{DECIMAL-18/5}	
RTS22-39	{CURRENCYCODE_3}	
RTS22-40	{ALPHANUM-35}	
ATHEXARM-11	{ALPHANUM-4}	'ISIN' = where ISIN is available 'OTHR' = other identifier
RTS22-41	{ISIN}	
RTS22-42	{ALPHANUM-350}	
RTS22-43	{CFI_CODE}	
RTS22-44	{CURRENCYCODE_3}	
RTS22-45	{CURRENCYCODE_3}	
RTS22-46	{DECIMAL-18/17}	
RTS22-47	{ISIN}	
RTS22-48	{ALPHANUM-25}	{INDEX} Or {ALPHANUM-25} - if the index name is not included in the {INDEX} list
RTS22-49	{INTEGER-3} + {ALPHANUM-4}	{INTEGER-3}+'DAYS' - days {INTEGER-3}+'WEEK' - weeks {INTEGER-3}+'MNTH' - months {INTEGER-3}+'YEAR' - years
RTS22-50	{ALPHANUM-4}	'PUTO' - Put 'CALL' - Call 'OTHR' - where it cannot be determined whether it is a call or a put
ATHEXARM-12	{ALPHANUM-4}	'MONE' – Monetary value 'PERC' – Percentage 'YIEL' – Yield 'BAPO' – Basis points 'NOAP' – Not Applicable
RTS22-51	{DECIMAL-18/17}	{DECIMAL-18/13} in case the price is expressed as monetary value {DECIMAL-11/10} in case the price is expressed as percentage or yield {DECIMAL-18/17} in case the price is expressed as basis points
RTS22-52	{CURRENCYCODE_3}	

Reference	Data format	Description
RTS22-53	{ALPHANUM-4}	'EURO' - European 'AMER' – American 'ASIA' – Asian 'BERM' – Bermudan 'OTHR' - Any other type
RTS22-54	{DATE}	YYYYMMDD
RTS22-55	{DATE}	YYYYMMDD
RTS22-56	{ALPHANUM-4}	'PHYS' - Physically settled 'CASH' - Cash settled 'OPTL' - Optional for counterparty or when determined by a third party
ATHEXARM-13	{INTEGER-1}	1 – National ID 2 – Algorithm Code
RTS22-57	{ALPHANUM-50}	
RTS22-58	{COUNTRYCODE_2}	
ATHEXARM-14	{INTEGER-1}	1 – National ID 2 – Algorithm Code 3 – NORE for DEA Investor
RTS22-59	{ALPHANUM-50}	
RTS22-60	{COUNTRYCODE_2}	
RTS22-61	{INTEGER-4}	This will be a bitmap populated with one or more of the following flags: 1st bit: 'RFPT' – Reference price 2nd bit: 'NLIQ' – Negotiated (liquid) 3th bit: 'OILQ' - Negotiated (illiquid) 4th bit: 'PRIC' – Negotiated (conditions) 5th bit: 'SIZE' – Above specified size 6th bit: 'ILQD' – Illiquid instrument
RTS22-62	{ALPHANUM-4}	'SESH' 'SSEX' 'SELL' 'UNDI'

Reference	Data format	Description
RTS22-63	{INTEGER-4}	This will be a bitmap populated with one or more of the following flags: 1st bit: 'BENC' – Benchmark 2nd bit: 'ACTX' – Agency cross 3th bit: 'LRGS' - Large in scale 4th bit: 'ILQD' - Illiquid instrument 5th bit: 'SIZE' - Above specified size 6th bit: 'CANC' - Cancellations 7th bit: 'AMND' - Amendments 8th bit: 'SDIV' – Special dividend 9th bit: 'RPRI' – Price improvement 10th bit: 'DUPL' – Duplicative 11th bit: 'TNCP' – Not contributing to price discovery process 12th bit: 'TPAC' - Package 13th bit: 'XFPH' – Exchange for Physical
RTS22-64	{INTEGER-1}	1 - 'true' 0 - 'false'
RTS22-65	{INTEGER-1}	1 - 'true' 0 - 'false'
ATHEXARM-15	{ALPHANUM-50}	
ATHEXARM-16	{ALPHANUM-50}	
ATHEXARM-17	{ALPHANUM-50}	
ATHEXARM-18	{INTEGER-1}	1 - 'NBR' 2 - 'FSA'

4.4. Data Transmission Interfaces

ATHEX Members Portal provides two transmission interfaces.

REST services

A list of all available ATHEX Members Portal RESTful web services follows:

- **submitData**: this end point submits transactions to ATHEX Members Portal.
- **getSubmissions**: this end point returns all submissions. Results may be filtered by using parameters.
- **getEntries**: this end point returns all transactions. Results may be filtered by using parameters.

POST-/arm/submitData

URL : <http://t-amp.helex.gr/amp/arm/submitData/>
Method : POST
Authentication:Basic WUhZZkw4TlpknOE5rLXcuLg==
Header : Content-Type: application/json

Raw Payload: /tmp/submit-transactions.json

This endpoint is to submit a json containing transactions of any kind (NEW, DELETE)

Example Request:

```
curl -k -i -u 'user@domain:password' -X POST -H 'Content-Type: application/json' --data-binary /filepath 'http://t-amp.athexgroup.gr/amp/arm/submitData/'
```

Example Data:

```
[
  {
    "reportStatus":"NEWT"
    ,"transactionReferenceId":"2C1"
    ,"executingEntityIdentificationCode":"529900HES503722RN491"
    ,"investmentFirmDirectiveIndicator":0
    ,"submittingEntityIdentificationCode":"529900HES503722RN491"
    ,"transactionBuyers":[
      {
        "buyerType" : "1",
        "buyerIdentificationCode" : "BUYR0023123123123"
      }
    ]
    ,"transactionSellers":[
      {
        "sellerType" : "1",
        "sellerIdentificationCode" : "SELR0023123123123"
      }
    ]
    ,"tradingDateAndTime":"20151115112739839028"
    ,"side":"B"
    ,"tradingCapacity":"DEAL"
    ,"priceNotation":"NOAP"
    ,"venue":"BCMM"
    ,"underlyingInstrumentCodes": [
    ]
    ,"investmentDecisionWithinFirm":"2"
    ,"otcPostTradeIndicator":0
  }
]
```

Example Response:

```
HTTP/1.1
200 OK

{
  "submission_id" : "1234567890"
}
```

[GET-/arm/getSubmissions/](#)

URL : <http://t-amp.athexgroup.gr/amp/arm/getSubmissions>
Method : GET
Authentication:Basic WUhZZkw4TlpknOE5rLXcuLg==
Header : Content-Type: application/json

This endpoint is to get the all submissions that were previously submitted via the ARM@ATHEX service.

Parameters:

Results may be filtered using one or more of the following parameters:

- **submissionId=number** : returns data only for a specific submission with id equal to *number*.
- **submissionDateFrom=YYYYMMDD**: returns data for submissions posted on date YYYYMMDD or later.
- **submissionDateTo=YYYYMMDD**: returns data for submissions posted on date YYYYMMDD or earlier.

Notice how submissionDateFrom and submissionDateTo can be both specified to denote a time interval; if both these parameters are set to the same date, only submissions of that date will be returned

- **submissionUser=user**: returns only data for submissions posted by user *user*.
- **submissionStatus= status1[,status2]** : returns only data for submissions with status *status*.
- **resultsPerPage=number**: this parameter defines the number of results per page. See section Pagination in REST get methods.
- **resultsStartOffset=number**: this parameter indicates the pagination starting offset . See section Pagination in REST get methods.

Note that more than one values can be assigned to a parameter by using comma separators.

Example 1: \$ curl -k -i -u 'user@domain:password' -X GET -H 'Content-Type: application/json' 'http://t-amp.athexgroup.gr/amp/arm/getSubmissions/?submissionStatus=RJCT,PART'

Example 2 (including response):

```
$ curl -k -i -u 'user@domain:welcome1' -X GET -H 'Content-Type: application/json' 'http://t-amp.athexgroup.gr/amp/arm/getSubmissions/?resultsPerPage=2'
HTTP/1.1 200 OK
Date: Wed, 15 Nov 2017 15:59:29 GMT
Server: Apache/2.4.6 (Red Hat Enterprise Linux) mod_jk/1.2.42
Cache-Control: no-cache
Pragma: no-cache
ETag:
"oZHabq/sF2MC1QeNJ00lGE6tTR9xfNk0ZtRwP+Pmu3hrK9js6KIpfAZIohQFvicyXAqj17fWK2NaN8Kkt3gNaA=="
Transfer-Encoding: chunked
Content-Type: text/html; charset=UTF-8

{
  "submissions": [
    {
```

```

        "submissionId":6410
        ,"submissionTimestamp":"20171116133139"
        ,"submissionChannel":1
        ,"submissionUser":"USER@DOMAIN "
        ,"submissionStatus":"RCVD"
        ,"submissionEntriesURL":"http://t-
amp.athexgroup.gr/amp/arm/getEntries/?submissionId=6410"
    }
    ,{
        "submissionId":6432
        ,"submissionTimestamp":"20171116140834"
        ,"submissionChannel":1
        ,"submissionUser":"USER@DOMAIN "
        ,"submissionStatus":"RCVD"
        ,"submissionEntriesURL":"http://t-
amp.athexgroup.gr/amp/arm/getEntries/?submissionId=6432"
    }
]
,"hasMore":true
,"resultsPerPage":2
,"resultsStartOffset":0
,"resultsCount":2
,"links":[
    {
        "rel":"self"
        ,"href":"http://t-
amp.athexgroup.gr/amp/arm/getSubmissions/?resultsPerPage=2"
    }
    ,{
        "rel":"first"
        ,"href":"http://t-
amp.athexgroup.gr/amp/arm/getSubmissions/?resultsPerPage=2"
    }
    ,{
        "rel":"next"
        ,"href":"http://t-
amp.athexgroup.gr/amp/arm/getSubmissions/?resultsPerPage=2&resultStartOffse
t=2"
    }
]
}

```

GET – /arm/getEntries

URL : <https://t-amp.athexgroup.gr/amp/arm/getEntries>
Method : GET
Authentication: Basic WUhZZkw4TlpknOE5rLXcuLg==
Header : Content-Type: application/json

This endpoint is to get all entries that were previously submitted via the ARM@ATHEX service.

Parameters:

Results may be filtered using one or more of the following parameters:

- **entryId=number** : returns data only for a specific entry with id equal to number.
- **submissionId=number** : returns data only for a specific submission with id equal to number.
- **entryStatus=status1[,status2]**: returns only data for with entryStatus *status*.
- **reportStatus=status** returns only data for with reportStatus *status*.
- **transactionReferenceId=alphanum_value** : returns data only for a specific entry with id equal to *alphanum_value*.
- **tradeId=number** : returns data only for a specific trade with id equal to *number*.
- **executingEntityIdentificationCode=LEI** : returns data only when the executingEntityIdentificationCode is equal to the given *LEI*.
- **instrumentIdType=ISIN/OTHR** : returns data only for a specific entry where instrumentIdType is equal to ISIN or OTHR.
- **instrumentId=isin** : returns data only for a specific entry with instrument id equal to *isin*
- **businessUnit=alphanum_value** : returns data only for a specific entry with businessUnit equal to *alphanum_value*.
- **tremRouting=1/2** : returns data only for a specific entry with tremRouting equal to 1 or 2.
- **addSubmissionData=true/false** if set to *true* response includes the submission data.
- **resultsPerPage=number**: this parameter defines the number of results per page. See section Pagination in REST get methods.
- **resultsStartOffset=number**: this parameter indicates the pagination starting offset. See section Pagination in REST get methods.

Note that more than one values can be assigned to a parameter by using comma separators.

Example 1: \$ curl -k -i -u 'user@domain:password' -X GET -H 'Content-Type: application/json' 'http://t-amp.athexgroup.gr/amp/arm/getEntries/?entryStatus=FVLD,RJCT'

Example 2(including response):

```
$ curl -k -i -u 'user@domain:password' -X GET -H 'Content-Type: application/json' 'http://t-amp.athexgroup.gr/amp/arm/getEntries/'

HTTP/1.1 200 OK
Date: Wed, 8 Nov 2017 15:14:56 GMT
Server: Apache/2.4.6 (Red Hat Enterprise Linux) mod_jk/1.2.42
Cache-Control: no-cache
Pragma: no-cache
ETag: "BUSrI7ROS5I0h/vZWYME7ifJQV7M5APcek5DbzK5y0qKNRy4XPd40K24KFV/MhMRxazJO7k37WnvO+Oea/5zOg=="
Transfer-Encoding: chunked
Content-Type: text/html; charset=UTF-8

{
  "entries": [
    {
      "entryId": 120
      , "submissionId": 6300
      , "entryStatus": "RCVD"
      , "reportStatus": "NEWT"
      , "transactionRefId": "2C1"

      , "executingEntityIdentificationCode": "529900HES503722RN491"
      , "investmentFirmDirectiveIndicator": 0
    }
  ]
}
```

```

    , "submittingEntityIdentificationCode": "529900HES503722RN491"
    , "transactionBuyers": [
    ]
    , "transactionSellers": [
    ]
    , "tradingDateAndTime": "2015-11-15T11:27:39.839028000Z"
    , "side": "B"
    , "tradingCapacity": "DEAL"
    , "priceNotation": "NOAP"
    , "venue": "BCMM"
    , "underlyingInstrumentCodes": [
    ]
    , "investmentDecisionWithinFirm": "2"
    , "otcPostTradeIndicator": 0
  }
]
, "hasMore": false
, "resultsPerPage": 25
, "resultsStartOffset": 0
, "resultsCount": 1
, "links": [
  {
    "rel": "self"
    , "href": "http://t-amp.athexgroup.gr/amp/arm/getEntries/?"
  }
  , {
    "rel": "first"
    , "href": "http://t-amp.athexgroup.gr/amp/arm/getEntries/?"
  }
]
}

```

Pagination in REST get methods

As mentioned before, the REST methods do not return the full set of results at once; instead, they return “pages” of results. Each page has an offset, which is the number of results before the first result in this page. The offset of the first page is thus zero.

Pagination works by producing pages of identical size. Thus, Pagination in `getSubmissions1_1` and `getMappings1_1` is controlled by two parameters:

- **resultsPerPage=number**: this parameter defines the number of results per page
- **resultsStartOffset=number**: this parameter indicates the starting offset (as defined above).

There is an implementation upper limit to `resultsPerPage`, so that no excessive stress is placed on the AMP infrastructure by abusive values of this parameter.

At the end of each reply, a **hasMore** flag, along with the pagination parameters are provided, including links for the same page, the first page, and for the next page (if a next page exists).

Example:

```

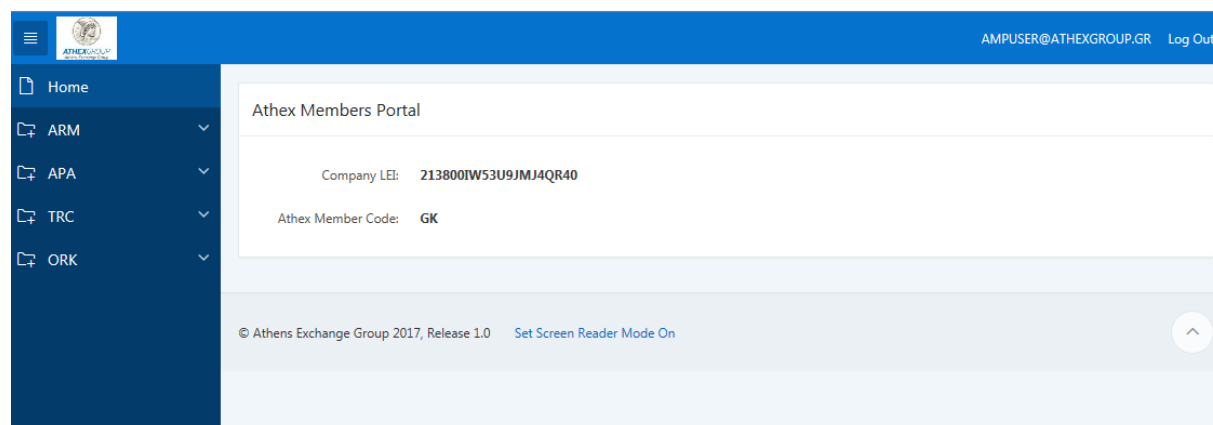
. . .
, "hasMore": true
, "resultsPerPage": 3
, "resultsStartOffset": 0
"resultsCount": 3

```

```
, "links": [
{
"rel": "self"
, "href": "http://t-amp.athexgroup.gr/amp/arm/getEntries/?resultsPerPage=
}
, {
"rel": "first"
, "href": "http://t-amp.athexgroup.gr/amp/arm/getEntries/?resultsPerPage=
}
, {
"rel": "next"
, "href": "http://t-amp.athexgroup.gr/amp/arm/getEntries/?"
, "href": " href": "http://t-
amp.athexgroup.gr/amp/arm/getEntries/?resultsPerPage=3 resultStartOffset=3"
}
]
```

Web User Interface

For each service provided via ATHEX Members Portal along with the RESTful web services a graphical user interface will be available as shown below.



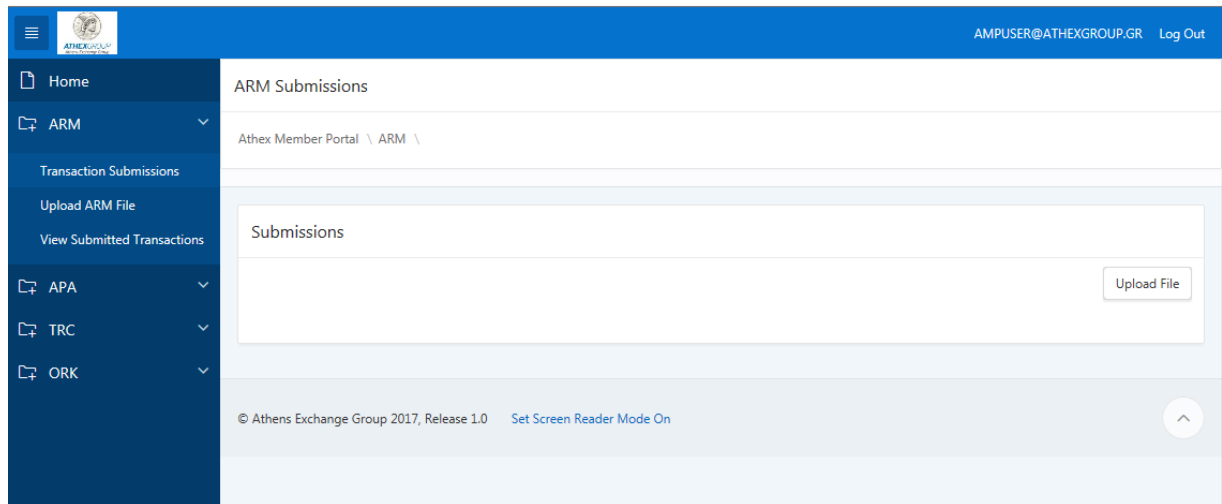
Home screen of ATHEX Members Portal

Submit Transactions via CSV file

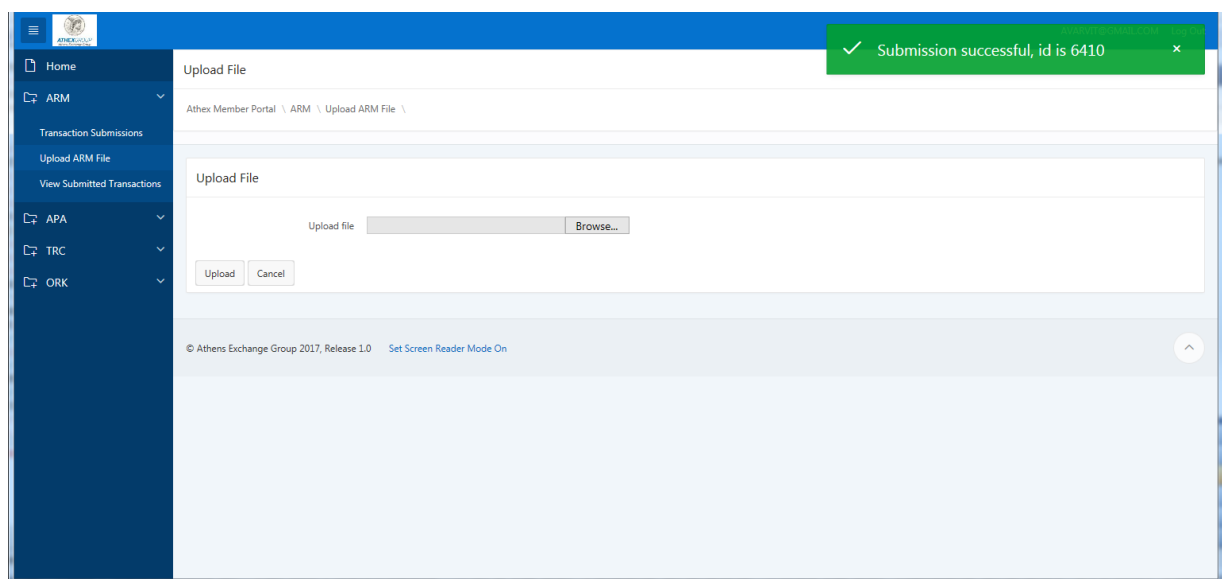
One or more transactions can be reported by uploading a CSV file via the ATHEX Members Portal user interface (UI). This CSV file contains all fields described above separated by a semicolon (;)

Example

```
NEWT;2C145;;;529900HES503722RN491;0;529900HES503722RN491;1;529900HES503722R
N491;;;;;;;;;1;529900HES503722RN492;;;;;;;;;1;529900HES503722RN491;529900
HES503722RN491;20171115112739839028;B;AOTC;1;500;;;NOAP;;;BCMM;;;;;;;;;
;;;;;;;;;2;529900HES503722RN491;;;;;;;;1;;;
```

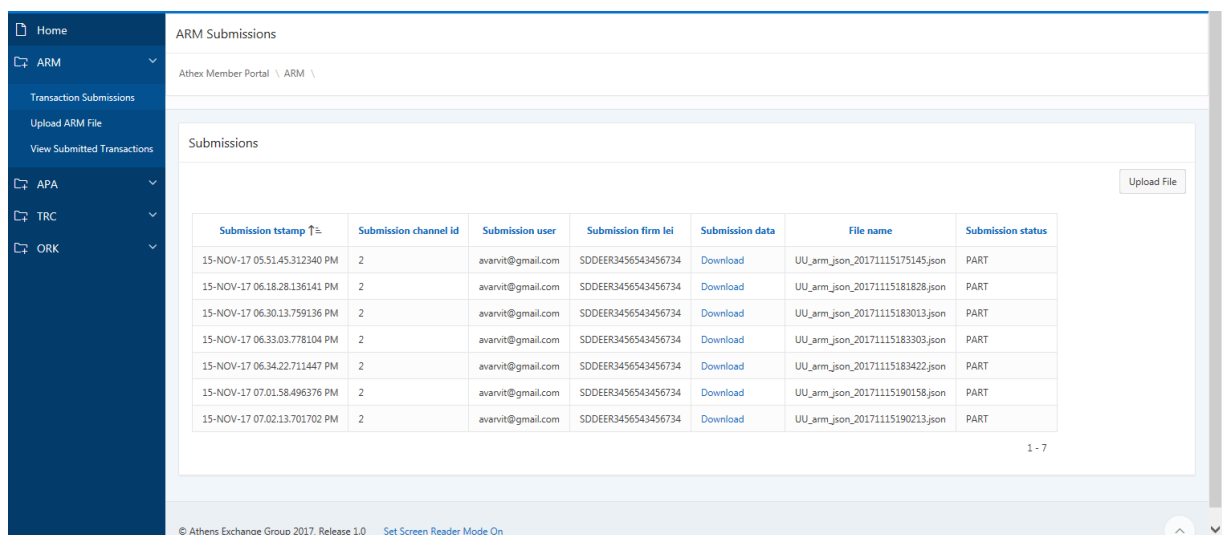
File upload interface of ATHEX Members Portal



Successful CSV upload via the ATHEX Members Portal UI

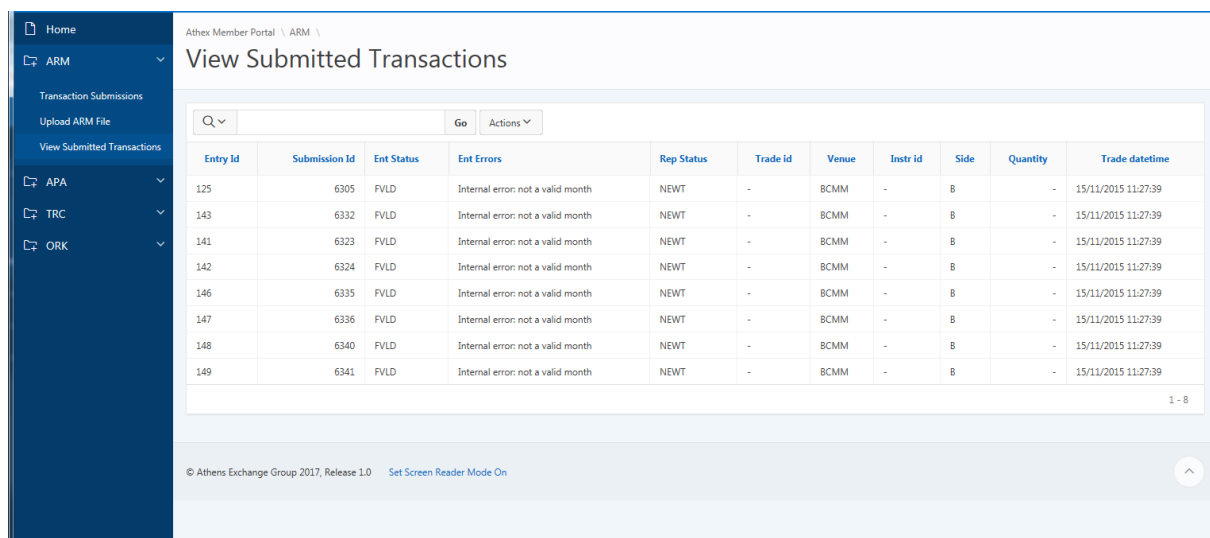
Review submissions

Users can view their submissions and their statuses as well as download them.



Submission report screen of ATHEX Members Portal

Users may view the submitted entries and their status via the ATHEX Members Portal user interface (UI). They can also download a report by selecting under **ARM** the **View Submitted Transactions** and then actions → download → CSV or any other available format.



Entry Id	Submission Id	Ent Status	Ent Errors	Rep Status	Trade id	Venue	Instr id	Side	Quantity	Trade datetime
125	6305	FVLD	Internal error: not a valid month	NEWT	-	BCMM	-	B	-	15/11/2015 11:27:39
143	6332	FVLD	Internal error: not a valid month	NEWT	-	BCMM	-	B	-	15/11/2015 11:27:39
141	6323	FVLD	Internal error: not a valid month	NEWT	-	BCMM	-	B	-	15/11/2015 11:27:39
142	6324	FVLD	Internal error: not a valid month	NEWT	-	BCMM	-	B	-	15/11/2015 11:27:39
146	6335	FVLD	Internal error: not a valid month	NEWT	-	BCMM	-	B	-	15/11/2015 11:27:39
147	6336	FVLD	Internal error: not a valid month	NEWT	-	BCMM	-	B	-	15/11/2015 11:27:39
148	6340	FVLD	Internal error: not a valid month	NEWT	-	BCMM	-	B	-	15/11/2015 11:27:39
149	6341	FVLD	Internal error: not a valid month	NEWT	-	BCMM	-	B	-	15/11/2015 11:27:39

Entry report screen of ATHEX Members Portal

Example

```
"Entry Id ","Submission Id ","Ent Status ","Ent Errors ","Rep
Status","Trade id","Venue","Instr id","Side","Quantity","Trade datetime"
```

```
"218","6463","FVLD","validation error: Securities Financing transaction
indicator should have a value (Mandatory)"
```

```
; validation error: New transaction report has already been imported with
the same Transaction Reference Number
```

```
; validation error: Securities Financing Transaction Indicator is mandatory
for new reports
```

```
","NEWT","-","BCMM","-","B","500","15/11/2017 11:27:39"
```

```
"189","6408","SVLD","-","NEWT","-","BCMM","-","B","500","15/11/2017
11:27:39"
```