

Exchange Rates – REST API (Version 1.0)

The new basic domain for A2A services is:

https://tassidicambio.bancaditalia.it/terzevalute-wf-web/rest/v1.0

For the sake of brevity, the basic domain is omitted from the description of the URLs.

So, for example, instead of writing

GET https://tassidicambio.bancaditalia.it/terzevalute-wf-web/rest/v1.0/currencies

we will simply write ***GET /currencies***

Or instead of writing

GET https://tassidicambio.bancaditalia.it/terzevalute-wf-web/rest/v1.0/latestRates?lang={}

we will simply write ***GET /latestRates?lang={}***

The repeatable input parameters will be indicated in the URL in square brackets, for example:

GET /dailyRates?referenceDate={}&[baseCurrencyIsoCode={}]¤cyIsoCode={}&lang={}

Latest Rates

It provides the exchange rates, against the euro and the US dollar, on the latest day for which there are quotations available for all the currencies quoted in the database.

GET /latestRates?lang={}

Media types

The result is available in the following formats: json, pdf, csv, Excel, depending on the HTTP Accept header parameter:

- **Accept:** application/json
- **Accept:** application/pdf
- **Accept:** text/csv
- **Accept:** application/vnd.ms-excel

Input Parameters

Name	Required	Description
lang	No	The language in which you want the data: "it" or "en" may be used (case insensitive). If the parameter is not specified or is incorrectly spelled, the results will be provided in the default language.

http response codes:

200 OK
500 Internal Server Error
503 Service Unavailable
400 Bad Request
408 Request Timeout
404 Not Found

Examples of responses:

Content Type: application/json

```
{
  "resultsInfo":
  {
    "totalRecords": 2,
    "timezoneReference": "Dates refer to the Central European Time Zone",
    "notice": "Foreign currency amount for 1 euro "
  },
  "latestRates":
  [
    {
      "country": "ALBANIA",
      "currency": "Lek",
      "isoCode": "ALL",
      "uicCode": "047",
      "eurRate": "0.0089",
      "usdRate": "0.0089",
      "usdExchangeConvention": "Foreign currency amount for 1 dollar",
      "usdExchangeConventionCode": "C",
      "referenceDate": "2017-09-06"
    },
    {
      "country": "ALGERIA",
      "currency": "Algerian Dinar",
      "isoCode": "DZD",
      "uicCode": "106",
      "eurRate": "1.0000",
      "usdRate": "1.0000",
      "usdExchangeConvention": "Foreign currency amount for 1 dollar",
      "usdExchangeConventionCode": "C",
      "referenceDate": "2017-09-06"
    }
  ]
}
```

Content Type: text/csv

Filename: latest_rates_yyyyMMdd.csv

Country,Currency,ISO Code,UIC Code,Euro,US dollar,Rate convention against Dollar,Rate convention against Euro,Reference date (CET)

AFGHANISTAN (Islamic State of),Afghani,AFN,115,79.6447,68.3939,Foreign currency amount for 1 Dollar,Foreign currency amount for 1 Euro ,2017-11-02

ALBANIA,Lek,ALL,047,133.59,114.72,Foreign currency amount for 1 Dollar,Foreign currency amount for 1 Euro ,2017-11-02

ALGERIA,Algerian Dinar,DZD,106,134.1344,115.1863,Foreign currency amount for 1 Dollar,Foreign currency amount for 1 Euro ,2017-11-02

ANGOLA,Adjusted Kwanza,AOA,087,193.132,165.850,Foreign currency amount for 1 Dollar,Foreign currency amount for 1 Euro ,2017-11-02

ANTIGUA AND BARBUDA,East Caribbean Dollar,XCD,137,3.1442,2.70,Foreign currency amount for 1 Dollar,Foreign currency amount for 1 Euro ,2017-11-02

Daily Exchange Rates

It provides daily exchange rates for a specific date, against the euro, the US dollar or the Italian lira, for one or more requested currencies, which are valid and for which the rates for the selected date are available. If no currency is specified, the service will return all the available currencies. If there are no quotations for the date and currencies selected, the service will return an empty list with an information message.

```
GET /dailyRates?referenceDate={ } [&baseCurrencyIsoCode={ } ]&currencyIsoCode={ }&lang={ }
```

Media types

The result is available in the following formats: json, pdf, csv, Excel, depending on the HTTP Accept header parameter:

- Accept: application/json
- Accept: application/pdf
- Accept: text/csv
- Accept: application/vnd.ms-excel

Input Parameters

Name	Required	Repeatable	Description
referenceDate	Yes	No	Quotation date. It is represented in relation to the Central European Time Zone in the format "yyyy-MM-dd". If the parameter is not specified or is specified incorrectly, the service will return a message with the required format.
baseCurrencyIsoCode	No	Yes	The ISO code for the currency for which you want the exchange rate (case insensitive). In the case of multiple currencies, the parameter must be repeated. If the parameter is not specified, all the currencies for which the rate is available on the requested date will be returned. ISO codes that do not exist will be discarded. If none of the ISO codes inserted exist, an empty list will be shown. For ISO codes specified incorrectly, the service will return an error message.
currencyIsoCode	Yes	No	The currency ISO code (case insensitive) against which you want the rates. It can be "EUR", "USD" or "ITL". If the parameter is not specified, or the value is not valid, the service will return an error message.
lang	No	No	The language in which you want the data: it can be "it" or "en" (case insensitive). If the parameter is not specified, or the value is incorrect, the results will be provided in the default language.

http response codes:

200 OK
500 Internal Server Error
503 Service Unavailable
400 Bad Request
408 Request Timeout
404 Not Found

Example of a response:

Content Type: application/json

```
{
  "resultsInfo":
  {
    "totalRecords": 1,
    "timezoneReference": "Dates refer to the Central European Time Zone"
  },
  "rates":
  [
    {
      "country": "UNITED ARAB EMIRATES",
      "currency": "U.A.E. Dirham",
      "isoCode": "AED",
      "uicCode": "187",
      "avgRate": "4.13942",
      "exchangeConvention": "Foreign currency amount for 1 Euro ",
      "exchangeConventionCode": "I",
      "referenceDate": "2016-08-17"
    }
  ]
}
```

Content Type: text/csv

Filename: daily_rates_yyyyMM.csv

Country	Currency	ISO Code	UIC Code	Rate	Rate convention	Reference date (CET)
AFGHANISTAN (Islamic State of)	Afghani	AFN	115	76.042074	Foreign currency amount for 1 Euro	,2016-08-17
ALBANIA	Lek	ALL	047	136.262894	Foreign currency amount for 1 Euro	,2016-08-17
ALGERIA	Algerian Dinar	DZD	106	122.767026	Foreign currency amount for 1 Euro	,2016-08-17
ANGOLA	Adjusted Kwanza	AOA	087	188.250565	Foreign currency amount for 1 Euro	,2016-08-17
ANTIGUA AND BARBUDA	East Caribbean Dollar	XCD	137	3.04452	Foreign currency amount for 1 Euro	,2016-08-17

Average Monthly Exchange Rates

It provides average monthly exchange rates for a specific month/year, against the euro, the US dollar or the Italian lira, for one or more valid currencies, and for which the rates are available. If there are no quotations for the month and currencies selected, the service will return an empty list.

```
GET /monthlyAverageRates?month={ }&year={ } [ &baseCurrencyIsoCode={ } ]&currencyIsoCode={ }&lang={ }
```

Media types

The result is available in the following formats: json, pdf, csv, Excel, depending on the HTTP Accept header parameter:

- Accept: application/json
- Accept: application/pdf
- Accept: text/csv
- Accept: application/vnd.ms-excel

Input Parameters

Name	Required	Repeatable	Description
month	Yes	No	Quotation month. Must be an integer between 1 and 12. If the parameter is not specified or the value is incorrect, the service will return an http 400 error and a message with the required format, i.e. an integer between 1 and 12.
year	Yes	No	Quotation year. Must be a 4-digit integer in the YYYY format. If the parameter is not specified or is specified incorrectly, the service will return a message with the required format. If there are no rates for the month/year pair, the service will return an empty list.
baseCurrencyIsoCode	No	Yes	The currency ISO code for which you want the exchange rate (case insensitive). In the case of multiple currencies, the parameter must be repeated. If the parameter is not specified, all the currencies for which the rate is available on the requested date will be returned. ISO codes that do not exist will be discarded. If none of the ISO insert codes exist, an empty list will be returned. For ISO codes specified incorrectly, the service will return an error message.
currencyIsoCode	Yes	No	The ISO code of the currency against which you want the rates. It can be "EUR", "USD" or "ITL". If the parameter is not specified, or the value is not valid, the service will return an error message.
lang	No	No	The language in which you want the data: it can be "it" or "en" (case insensitive). If the parameter is not specified, or the value is not valid, the results will be provided in the default language.

http response codes:

200 OK
500 Internal Server Error
503 Service Unavailable
400 Bad Request
408 Request Timeout
404 Not Found

Examples of responses:

Content Type: application/json

```
{
  "resultsInfo":
  {
    "totalRecords": 2
  },
  "rates":
  [
    {
      "country": "ALBANIA",
      "currency": "Lek",
      "isoCode": "ALL",
      "uicCode": "047",
      "avgRate": "140",
      "exchangeConvention": "Foreign currency amount for 1 Euro ",
      "exchangeConventionCode": "I",
      "year": 2016,
      "month": 9
    },
    {
      "country": "ALGERIA",
      "currency": "Algerian Dinar",
      "isoCode": "DZD",
      "uicCode": "106",
      "avgRate": "122.522",
      "exchangeConvention": "Foreign currency amount for 1 Euro ",
      "exchangeConventionCode": "I",
      "year": 2016,
      "month": 9
    }
  ]
}
```

Content Type: text/csv

Filename: monthly_average_rates_yyyyMM.csv

Country,Currency,ISO Code,UIC Code,Average Rate,Rate convention,Year,Month

AFGHANISTAN (Islamic State of),Afghani,AFN,115,75.4016,Foreign currency amount for 1 Euro ,2016,8
ALBANIA,Lek,ALL,047,136.547,Foreign currency amount for 1 Euro ,2016,8
ALGERIA,Algerian Dinar,DZD,106,122.679,Foreign currency amount for 1 Euro ,2016,8
ANGOLA,Adjusted Kwanza,AOA,087,186.922,Foreign currency amount for 1 Euro ,2016,8
ANTIGUA AND BARBUDA,East Caribbean Dollar,XCD,137,3.02717,Foreign currency amount for 1 Euro ,2016,8

Annual Average Exchange Rates

It provides the annual average rates, against the euro, the US dollar or the Italian lira, for one or more requested currencies, which are valid and for which the rates for the selected month are available. If no currency is specified, the service will return all the available currency rates. If there are no quotations for the year and currencies selected, the service will return an empty list.

```
GET /annualAverageRates?year={}&[baseCurrencyIsoCode={}]&currencyIsoCode={}&lang={}
```

Media types

The result is available in the following formats: json, pdf, csv, Excel, depending on the HTTP Accept header parameter:

- Accept: application/json
- Accept: application/pdf
- Accept: text/csv
- Accept: application/vnd.ms-excel

Input Parameters

Name	Required	Repeatable	Description
year	Yes	No	Quotation year. Must be a 4-digit integer in the YYYY format. If the parameter is not specified or is specified incorrectly, the service will return a message with the required format. If there are no rates available for the year, the service will return an empty list.
baseCurrencyIsoCode	No	Yes	The ISO code for the currency for which you want the exchange rate (case insensitive). In the case of multiple currencies, the parameter must be repeated. If the parameter is not specified, all the currencies for which the rate is available on the requested date will be returned. ISO codes that do not exist will be discarded. If none of the ISO insert codes exist, an empty list will be returned. For ISO codes specified incorrectly, the service will return an error message.
currencyIsoCode	Yes	No	The ISO code of the currency against which you want the rates (case insensitive). It can be "EUR", "USD" or "ITL". If the parameter is not specified, or the value is not valid, the service will return an error message.
lang	No	No	The language in which you want the data: it can be "it" or "en" (case insensitive). If the parameter is not specified, or the value is not valid, the results will be provided in the default language.

http response codes:

```
200 OK
500 Internal Server Error
503 Service Unavailable
400 Bad Request
408 Request Timeout
404 Not Found
```

Examples of responses:

Content Type: application/json

```
{
  "resultsInfo":
  {
    "totalRecords": 2
  },
  "rates":
  [
    {
      "country": "ALBANIA",
      "currency": "Lek",
      "isoCode": "ALL",
      "uicCode": "047",
      "avgRate": "140",
      "exchangeConvention": "Foreign currency amount for 1 Euro ",
      "exchangeConventionCode": "I",
      "year": 2016
    },
    {
      "country": "ALGERIA",
      "currency": "Algerian Dinar",
      "isoCode": "DZD",
      "uicCode": "106",
      "avgRate": "122.522",
      "exchangeConvention": "Foreign currency amount for 1 Euro ",
      "exchangeConventionCode": "I",
      "year": 2016
    }
  ]
}
```

Content Type: text/csv

Filename: annual_average_rates_YYYY.csv

Country,Currency,ISO Code,UIC Code,Rate,Rate convention,Year

```
AFGHANISTAN (Islamic State of),Afghani,AFN,115,75.074,Foreign currency amount for 1 Euro ,2016
ALBANIA,Lek,ALL,047,137.317,Foreign currency amount for 1 Euro ,2016
ALGERIA,Algerian Dinar,DZD,106,121.097,Foreign currency amount for 1 Euro ,2016
ANGOLA,Adjusted Kwanza,AOA,087,182.079,Foreign currency amount for 1 Euro ,2016
ANTIGUA AND BARBUDA,East Caribbean Dollar,XCD,137,2.98864,Foreign currency amount for 1 Euro ,2016
```


Daily Exchange rates - Time Series

It provides daily exchange rates for a currency with reference to a specific date range. The foreign currency may be the euro, the US dollar or the Italian lira. If no rate is available for the range provided, the service will return an empty list. The end date may not be earlier than the start date, otherwise the service will return an error message.

Queries can be made about historical data from 1918 onwards.

```
GET /dailyTimeSeries?startDate={}&endDate={}&baseCurrencyIsoCode={}&currencyIsoCode={}&lang={}
```

Media types

The result is available in the following formats: json, pdf, csv, Excel, depending on the HTTP Accept header parameter:

- Accept: application/json
- Accept: application/pdf
- Accept: text/csv
- Accept: application/vnd.ms-excel

Input Parameters

Name	Required	Repeatable	Description
startDate	Yes	No	Quotation start date. It is represented in relation to the Central European Time Zone in the format "yyyy-MM-dd". If the parameter is not specified or is specified incorrectly, the service will return a message with the required format.
endDate	Yes	No	Quotation end date. It is represented in relation to the Central European Time Zone in the format "yyyy-MM-dd". If the parameter is not specified or is specified incorrectly, the service will return a message with the required format.
baseCurrencyIsoCode	Yes	No	The ISO code for the currency for which you want the exchange rate (case insensitive). If the ISO insert code does not exist, an empty list will be returned. If the parameter is specified incorrectly, the service will return an error message.
currencyIsoCode	Yes	No	The ISO code (case insensitive) for the currency against which you want the rates. It can be "EUR", "USD" or "ITL". If the parameter is not specified, or the value specified is not valid, the service will return an error message.
lang	No	No	The language in which you want the data: it can be "it" or "en" (case insensitive). If the parameter is not specified, or the value is incorrect, the results will be provided in the default language.

http response codes:

200 OK
500 Internal Server Error
503 Service Unavailable
400 Bad Request
408 Request Timeout
404 Not Found

Examples of responses:

Content Type: application/json

```
{
  "resultsInfo":
  {
    "totalRecords": 2,
    "timezoneReference": "Dates refer to the Central European Time Zone",
    "currency": "Lek",
    "isoCode": "ALL",
    "uicCode": "047",
    "exchangeConventionCode": "I"
  },
  "rates":
  [
    {
      "referenceDate": "2016-05-02",
      "avgRate": "138.812",
      "exchangeConvention": "Foreign currency amount for 1 Euro "
    },
    {
      "referenceDate": "2016-05-03",
      "avgRate": "138.349",
      "exchangeConvention": "Foreign currency amount for 1 Euro "
    }
  ]
}
```

Content Type: text/csv

Filename: <baseCurrencyIsoCode>_daily_time_series.csv

Currency,ISO Code,UIC Code,Rate,Rate convention,Reference date (CET)

```
Lek,ALL,047,125.868534,Foreign currency amount for 1 Dollar,2015-05-04
Lek,ALL,047,126.011245,Foreign currency amount for 1 Dollar,2015-05-05
Lek,ALL,047,124.50872,Foreign currency amount for 1 Dollar,2015-05-06
Lek,ALL,047,124.33535,Foreign currency amount for 1 Dollar,2015-05-07
```

Monthly Exchange rates - Time Series

It provides monthly exchange rates for a currency for a specific month range. The foreign currency may be the euro, the US dollar or the Italian lira. If no rate is available for the range provided, the service will return an empty list. The start month/year pair must not be after the end month/year pair, otherwise the service will return an error message.

Queries can be made about historical data from 1918 onwards.

```
GET
/monthlyTimeSeries?startMonth={}&startYear={}&endMonth={}&endYear={}&baseCurrencyIsoCode=
{}&currencyIsoCode={}&lang={}
```

Media types

The result is available in the following formats: json, pdf, csv, Excel, depending on the HTTP Accept header parameter:

- Accept: application/json
- Accept: application/pdf
- Accept: text/csv
- Accept: application/vnd.ms-excel

Input Parameters

Name	Required	Repeatable	Description
startMonth	Yes	No	Quotation start month. Must be an integer between 1 and 12. If the parameter is not specified or is specified incorrectly, the service will return a message with the required format.
startYear	Yes	No	Quotation start year. Must be a 4-digit integer in the YYYY format. If the parameter is not specified or is specified incorrectly, the service will return a message with the required format.
endMonth	Yes	No	Quotation end month.. Must be an integer between 1 and 12. If the parameter is not specified or is specified incorrectly, the service will return a message with the required format.
endYear	Yes	No	Quotation end year. Must be a 4-digit integer in the YYYY format. If the parameter is not specified or is specified incorrectly, the service will return a message with the required format. If the endMonth/endYear comes before the startMonth/startYear the service will return an error message.
baseCurrencyIsoCode	Yes	No	The ISO code for the currency for which you want the exchange rate (case insensitive). If the ISO insert code does not exist, an empty list will be returned. If the parameter is specified incorrectly, the service will return an error message.
currencyIsoCode	Yes	No	The ISO code of the currency against which you want the rates. It can be "EUR", "USD" or "ITL". If the parameter is not specified, or the value is not valid, the service will return an error message.
lang	No	No	The language in which you want the data: it can be "it" or "en" (case insensitive). If the parameter is not specified, or the value is not valid, the results will be provided in the default language.

http response codes:

200 OK
500 Internal Server Error
503 Service Unavailable
400 Bad Request
408 Request Timeout
404 Not Found

Examples of responses:

Content Type: application/json

```
{
  "resultsInfo":
  {
    "totalRecords": 3,
    "currency": "Lek",
    "isoCode": "ALL",
    "uicCode": "047",
    "exchangeConventionCode": "I"
  },
  "rates":
  [
    {
      "referenceDate": "2015-11",
      "avgRate": "138.123",
      "exchangeConvention": "Foreign currency amount for 1 Euro "
    },
    {
      "referenceDate": "2015-12",
      "avgRate": "137.585",
      "exchangeConvention": "Foreign currency amount for 1 Euro "
    },
    {
      "referenceDate": "2016-01",
      "avgRate": "138.21",
      "exchangeConvention": "Foreign currency amount for 1 Euro "
    }
  ]
}
```

Content Type: text/csv

Filename: <baseCurrencyIsoCode>_monthly_time_series.csv

Currency,ISO Code,UIC Code,Rate,Rate convention,Reference date (CET)

Lek,ALL,047,128.6655,Foreign currency amount for 1 Dollar,2015-11
Lek,ALL,047,126.5039,Foreign currency amount for 1 Dollar,2015-12
Lek,ALL,047,127.2700,Foreign currency amount for 1 Dollar,2016-01

Annual Average Exchange Rates - Time Series

It provides annual average exchange rates for a currency and for a specific year range. The foreign currency may be the euro, the US dollar or the Italian lira. If no rate is available for the range provided, the service will return an empty list. The start year must not be after the end year, otherwise the service will return an error message.

It is possible to make queries about historical data from 1918 onwards.

```
GET /annualTimeSeries?startYear={}&endYear={}&baseCurrencyIsoCode={}&currencyIsoCode={}&lang={}
```

Media types

The result is available in the following formats: json, pdf, csv, Excel, depending on the HTTP Accept header parameter:

- Accept: application/json
- Accept: application/pdf
- Accept: text/csv
- Accept: application/vnd.ms-excel

Input Parameters

Name	Required	Repeatable	Description
startYear	Yes	No	Quotation start year. Must be a 4-digit integer in the YYYY format. If the parameter is not specified or is specified incorrectly, the service will return a message with the required format.
endYear	Yes	No	Quotation end year. Must be a 4-digit integer in the YYYY format. If the parameter is not specified or is specified incorrectly, the service will return a message with the required format. If the endYear comes before the startYear, the service will return an error message.
baseCurrencyIsoCode	Yes	No	The ISO code for the currency for which you want the exchange rate (case insensitive). If the ISO insert code does not exist, an empty list will be returned. If the parameter is specified incorrectly, the service will return an error message.
currencyIsoCode	Yes	No	The ISO code for the currency against which you want the rates(case insensitive). It can be "EUR", "USD" or "ITL". If the parameter is not specified, or the value is not valid, the service will return an error message.
lang	No	No	The language in which you want the data: it can be "it" or "en" (case insensitive). If the parameter is not specified, or the value is not valid, the results will be provided in the default language.

http response codes:

```
200 OK
500 Internal Server Error
503 Service Unavailable
400 Bad Request
408 Request Timeout
404 Not Found
```

Examples of responses:

Content Type: application/json

```
{
  "resultsInfo":
  {
    "totalRecords": 2,
    "currency": "Lek",
    "isoCode": "ALL",
    "uicCode": "047",
    "exchangeConventionCode": "I"
  },
  "rates":
  [
    {
      "referenceDate": "2015",
      "avgRate": "137.585",
      "exchangeConvention": "Foreign currency amount for 1 Euro "
    },
    {
      "referenceDate": "2016",
      "avgRate": "138.21",
      "exchangeConvention": "Foreign currency amount for 1 Euro "
    }
  ]
}
```

Content Type: text/csv

Filename: <baseCurrencyIsoCode>_annual_time_series.csv

Currency, ISO Code, UIC Code,Rate,Rate convention,Reference date (CET)

Lek,ALL,047,125.9701,Foreign currency amount for 1 Dollar,2015

Lek,ALL,047,124.1039,Foreign currency amount for 1 Dollar,2016

List of Currencies

Returns a list of all currencies, including expired currencies.

```
GET /currencies?lang={}
```

Media types

The result is available in json format with the HTTP Accept header parameter:

- Accept: application/json

Input Parameters

Name	Required	Repeatable	Description
lang	No	No	The language in which you want the data: it can be "it" or "en" (case insensitive). If the parameter is not specified, or the value is not valid, the results will be provided in the default language.

http response codes:

```
200 OK
500 Internal Server Error
503 Service Unavailable
400 Bad Request
408 Request Timeout
404 Not Found
```

Examples of responses:

Content Type: application/json

```
{
  "resultsInfo":
  {
    "totalRecords": 2,
    "timezoneReference": "Dates refer to the Central European Time Zone"
  },
  "currencies":
  [
    {
      "countries":
      [
        {
          "currencyISO": "ADP",
          "country": "ANDORRA",
          "countryISO": "AD",
          "validityStartDate": "1999-02-01",
          "validityEndDate": "2003-10-31"
        }
      ],
      "isoCode": "ADP",
      "name": "Andorra Peseta",
      "graph": false
    }
  ],
  "countries":
  [
    {
```

```
        "currencyISO": "AED",
        "country": "UNITED ARAB EMIRATES",
        "countryISO": null,
        "validityStartDate": "1981-06-15",
        "validityEndDate": null
    }
],
"isoCode": "AED",
"name": "U.A.E. Dirham",
"graph": false
}
]
```