



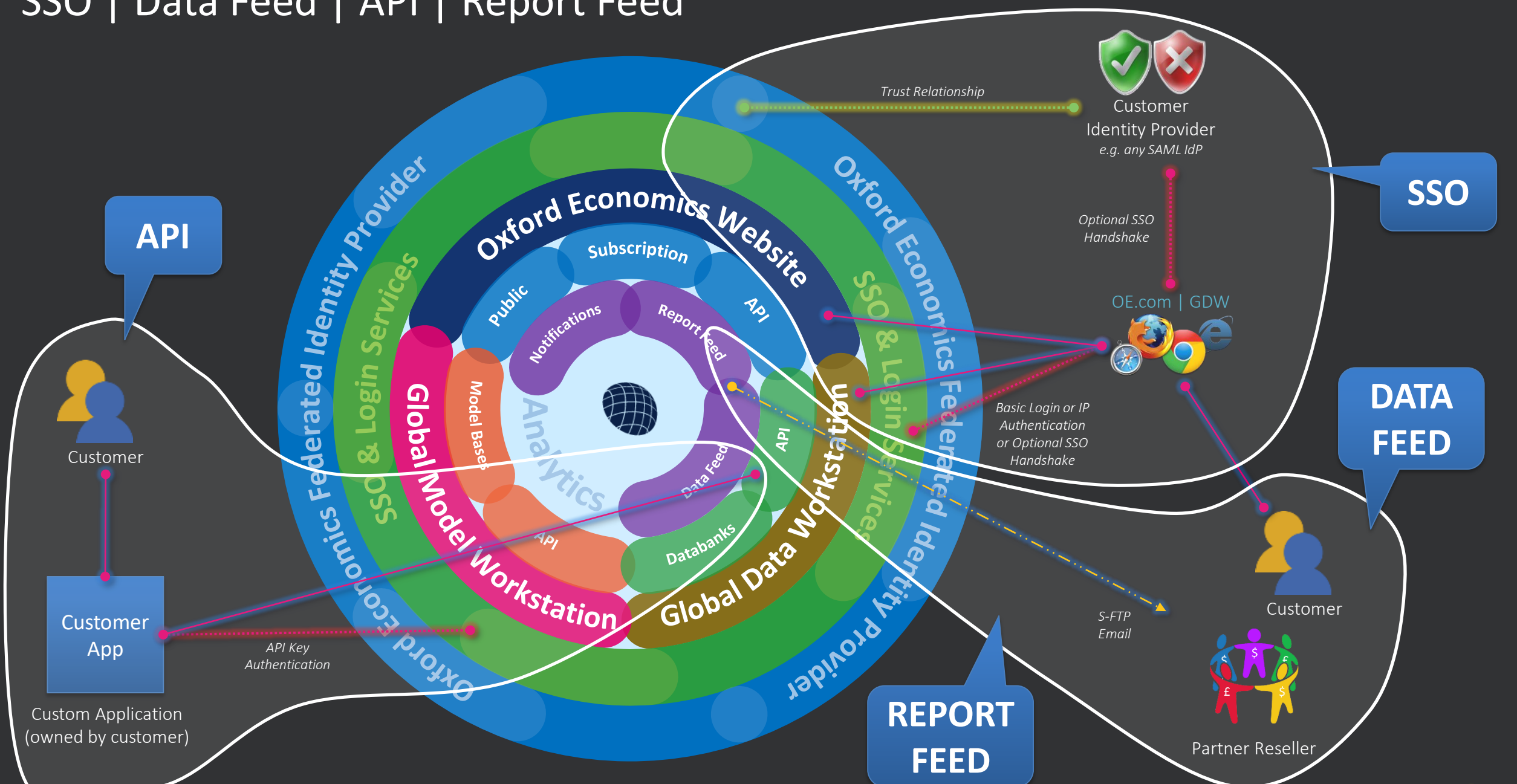
OXFORD  
ECONOMICS

**SSO, Data Feed, API, Report Feed**

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SSO | Data Feed | API | Report Feed



# SSO | Data Feed | API

## Federated Identity

- SSO takes very little time to set up if the firm uses a standards-based identity provider. E.g. Okta, PingFederate, ADFS, SharePoint, any SAML-compliant platform
- All users get unique identities
- This helps produce fine-grained usage reports
- Users leaving their company will automatically stop having access to Oxford Economics services as soon as they are removed from their company's identity system
- Password recovery can be used to get a real password which will work in addition to SSO authentication
- A real password enables off-company network access to Oxford Economics services
- A real password can be used with the mobile app and Excel Data Workstation
- *This service is a free add-on*

## Data Feeds (Oxford Economics pushes data)

- These are simple to set up and rely on saved selections in the online databank
- Oxford Economics supports email and secure FTP delivery of the data feed
- Data feeds run unattended and are pushed out whenever the relevant databanks have been updated. E.g. for the Global Economics databank, this is monthly on or around the 12th of the month
- Data is supplied in CSV & XLSX format
- Data content is shaped exactly like the download format of the relevant databank, with a couple of additional columns identifying series categories (for backwards compatibility with legacy feeds)

## API Programmatic Access (Customer pulls data)

- Customers can use a web service interface to download data series and create CSV download files of economic forecast data from Oxford Economics' Global Data Workstation (Databank)
- The customer's IT development team must apply to Oxford Economics IT team for:
  - An API developer key
  - The base URI for the Databank's HTTP/REST API
  - A full listing of the request and response message schemas (in JSON format)

# Options to electronically access and/or automate working with Oxford Economics forecast data

## Options suitable for automation and unattended integration with internal IT systems and databases

1. **API** - where the client pulls data from OE's online databank web (REST) service interfaces
2. **Data Feed** - where OE pushes data from OE's online databank to the client's FTP/FTPS endpoint (OE hosts an FTP store as well)
3. **Model Command Line Tool (MDL)** – batch automation of common model database operations
4. **Model Command Line Tool Server (MDL-Server)** – MDL web (REST) service wrapper ideal for remote automation of common model database operations (this tool is under development and is suitable for use in on-premises departmental workgroup settings)

## Options suitable for manually initiated data retrieval and data analysis

1. **Excel Data Workstation (Excel Plugin)** – which can pull data into Excel directly from both OE's online databank and model software
2. **Model Command Line Tool Server (MDL-Server)** – can be reached via a web browser which displays a simple web page to configure and run all MDL operations on model bases hosted by the server.

## API and Data Feed

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- Oxford Economics provides full documentation and examples of using the (REST) API and Data Feed.
- The documentation refers to our Global Economics databank, but the process is identical for all databanks.
  - See: <https://www.oxfordeconomics.com/techlabs> for further details (click on the 'API' tag to filter the posts).
- Comprehensive guidance on using the API includes examples and re-usable libraries written in .NET C#, Python and JavaScript, a Tableau Connector and Power BI Power Queries.
- Source code is available to download from our GitHub repository.

## Sample JavaScript-based web pages which exercise the API

- Suited to smallish downloads and another with paging for large downloads
- Open in a browser and simply enter the API key below to retrieve JSON data for the relevant databank.
- Can implement similar data retrieval functions in any programming language, and our libraries provide many more features.

### Global Data Workstation API Example

**Server & API Authentication Key**

Hostname:  API Key:

**Example Requests**

Annual   All Measures   GBR, USA   GDP\$, CPI   2015-2021
Quarterly   All Measures   GBR   GDP\$   2015-2021
Both   All Measures   GBR   GDP\$   2015-2021

**Simple Custom Request**

Location:  Indicator:

Annual   Level Values   CUSTOM Variable   2015-2021
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Request count: 1

```
[
  {
    "DatabankCode": "WDMacro",
    "ProductTypeCode": "WMC",
    "LocationCode": "GBR",
    "VariableCode": "CPI",
    "MeasureCode": "L",
    "Quarter": null,
    "AnnualData": {
      "2015": 100.0085,
      "2016": 100.65010000000001,
      "2017": 103.3585,
      "2018": 105.9167,
      "2019": 107.8562,
      "2020": 109.8262,
      "2021": 111.6065
    },
    "QuarterlyData": {},
    "MonthlyData": {},
    "Metadata": {
```

## Excel Data Workstation (Excel Plugin)

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- This tool is free and available to all Oxford Economics customers.
- It supports a comprehensive VBA and .NET automation API which can be used to build quite sophisticated solutions integrating OE forecasts with a client's own Excel-based data and models.
- The automation interface is fully documented in the Excel Plugin user guide available here:

<https://www.oxfordeconomics.com/techlabs/excel-data-workstation-v3-0-excel-plugin>

## Model Tools (MDL and MDL-Server)

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- This tool is free and available to all Oxford Economics model customers.
- It can be used to build quite sophisticated batch automation solutions with OE's model forecasts.
- MDL and MDL-Server are fully documented and available here:  
<http://tools.oxfordeconomics.com/mdl/readme.html>  
<http://tools.oxfordeconomics.com/mdl-server/readme.html>
- Here's an article describing a typical use case for MDL:  
<https://www.oxfordeconomics.com/techlabs/mdl-use-case-automating-model-solutions>



# IP-Based authentication

- This type of authentication is the **default only for public libraries** where there are anonymous visitors.
- Universities have **registered members**, so we should **always exhaust the possibility of adding SSO** in preference to IP-based authentication.
- If IP-based authentication must be used, IP addresses supplied must NOT be of guest wireless APs at the University, but only those which can be resolved by **public internet DNS** servers.

IP Address authentication is problematic for both us and clients.

- We **cannot identify users** which leads to **degraded user experience** on a lot of our platforms. For example, saved selections are unusable, the upcoming profile service would be unusable too, any user on the network can apply personalisation on the main website which would affect every user.
- We cannot identify users, so we have no idea about usage and whether they are compliant to their contract and **have no useful metrics, apart from total usage**.
- Literally anyone plugged into their network can access the account's base subscription, leading to an **access and revenue leaks**.
- **IP auth is deprecated by our third party Identity Provider (Auth0)** and is likely to be stopped completely in the future  
<https://auth0.com/docs/connections/enterprise/ip-address>

There are **no redeeming features for IP authentication**, Universities especially, these days should be able to support SSO federated login like we would provide for any big enterprise.

**Our Identity Provider supports a huge variety of SSO federation options**  
<https://auth0.com/docs/connections/identity-providers-enterprise>

# Data Feed | API - Fees

## Service Fees (Data Feeds & API)

- Each service requires a one-time setup fee of \$3,000 plus a \$2,000 annual subscription (i.e. \$5,000 in year one)
  - This includes consultation with Oxford Economics IT
- If both data feed and API are set up at the same time, the total setup fee is \$3,000 (i.e. 50% discount)
- The subscription fee for both data feed and API together is \$3,000 per annum (i.e. 25% discount)

## Data Feeds & API Details

- The API Key is only available to subscribers of Global Data Workstation
  - Provides access to all databanks included in your subscription
- The API subscription fee is in addition to the subscription fees paid for databank web access in Global Data Workstation
  - The API subscription cannot be taken alone without a databank subscription

## Data Feeds & API Details (cont.)

- The API Key is authenticated by the user's subscription credentials and provides access only to databanks and variables authorised in the subscription.
  - Any attempt to circumvent this authorisation and/or use another organisation's API Key will be in breach of the terms and conditions of the subscription contract.
  - Note, the API does not return any data for unauthorised variable requests, and the API is governed to prevent abuse and protect the main service.
- The setup fee for data feeds and API applies to as many databanks as required.
- The subscription fee for data feeds is per databank.
- The subscription fee for API access covers all databanks in the subscription.

# Report Feed & Fees

## Report Feeds (OE pushes research content)

- A report feed is like a data feed, but delivers published research articles instead of data
- Oxford Economics supports email and secure FTP delivery of the report feed (OE hosts its own FTP server too)
- Report feeds run unattended and push content daily when new research reports have been published. E.g. newly published subscription reports in the Global Macro Service.
- Reports are packaged in a Zip file along with a RIXML format manifest (which describes the table of contents, report titles, authors, dates, topics, etc.)

## Service Fees (Report Feeds)

- The service requires a one-time setup fee of \$3,000 plus a \$2,000 annual subscription (i.e. \$5,000 in year one)
  - This includes consultation with Oxford Economics IT
- If combined with the data feed or API, *at the same time*, the setup fee is not required (\$0), and subscription is reduced to \$1,000 (i.e. 50% discount)
- If combined with the data feed or API, *at any other time*, the setup fee is reduced to \$1,500 (i.e. 50% discount), and subscription is reduced to \$1,000 (i.e. 50% discount)

## Report Feeds Details

- The Report Feed is normally reserved for ENTERPRISE clients only, clients who use a CONTENT AGGREGATOR to deliver research, and RESELLERS. All other customer types are discouraged.
  - We prefer clients visit the website and My Oxford, subscribe to email notifications and newsletters, use our advanced search facilities, and/or use the mobile app to consume content
- The Report Feed subscription fee is in addition to the normal subscription fees paid for the products and services which carry the reports in the feed
  - The Report Feed subscription cannot be taken alone without a product or service subscription

# Fees Example

## API & Report Feed

Assuming 1x databanks and 1x report feed:

### Year 1 cost

IF set up at the same time as API

API = \$3k + \$2k

Reports = \$0k + \$1k, i.e. setup waived and 50% discount on subscription

TOTAL = \$6k

IF NOT set up at the same time as API

API = \$3k + \$2k

Reports = \$1.5k + \$1k, i.e. 50% discount on setup and subscription

TOTAL = \$7.5k

### Year 2+ cost

API = \$2k

Reports = \$1k

TOTAL = \$3k

## Resources

- [Oxford Economics Website](#)
- [Global Data Workstation](#)
- [Global Economic Model](#)
  - [Video](#) (requires login)
- [Global Model Workstation](#)
  - [Blogs](#)
- [Excel Data Workstation](#)
  - [Blogs | Videos](#)
- [Oxford Economics Mobile](#)
  - [Videos](#)
- [Economic and Political Risk Evaluator](#)
  - [Videos \(note they are unlisted\)](#)
- [Excel Data Workstation User Guide \(incl. API\)](#)
- [MDL User Guide](#)
- Global Data Workstation User Guide
  - *Available in My Oxford – requires login*
- Global Model Workstation User Guide
  - *Available in My Oxford – requires login*
- Data Feeds User Guide
  - *Contact OE support*
- Global Data Workstation API User Guide
  - *Contact OE support*
- Technical Support
  - [support@oxfordeconomics.com](mailto:support@oxfordeconomics.com)

**Thank you**

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