FDLP Academy Webinar
September 18, 2019

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Disclaimer

The views expressed in this presentation do not necessarily reflect official positions of the Federal Reserve Bank of St. Louis or the Federal Reserve System.
FRASER 101

- [fraser.stlouisfed.org](http://fraser.stlouisfed.org)
- Online for 15 years
- Originally developed as an adjunct to FRED
- In that time, we’ve amassed over half-a-million documents
- Now collects, curates, and promotes the history of the finance, banking and the U.S. economy.

Fed employees line up to clock in. Photograph by P.R. Papin. Part of the Federal Reserve Bank of St. Louis’ Centennial Timeline: [https://fraser.stlouisfed.org/timeline/st-louis-fed-centennial](https://fraser.stlouisfed.org/timeline/st-louis-fed-centennial)
Our Mission

- Collect materials related to banking, finance, and economic history.
- Curate materials so that they are easy to find and use online.
- Communicate and build relationships with our users and the public.
Collect

• Partner to digitize materials

• Donations and N&O lists, such as the FDLP eXchange

• Federal Reserve access point

FRASER @FedFRASER · Apr 2
April 2, 1951: William McChesney Martin Jr. takes office as Chairman of the Board of Governors. He would serve until 1970, under five US presidents. Browse decades of documents from his personal papers digitized in partnership with @mohistorymuseum ow.ly/lFaQ30ofuOF
Curate

- Scanning Operations
- Curation & Metadata
- Web application
Communicate

- What’s New
- Twitter
- Newsletter
- InsideFRASER
Using FRASER

• Search

• Content areas

• Browse
FRASER Themes

Browse by Theme

Available Themes (Showing 33):

Filter themes by name...

- African Americans in the Economy 23 items
- Central Bank History 13 items
- Depressions and Panics 5 items
- Financial Crisis of 2007-2009 208 items
  - Timeline: Federal Reserve Bank of St. Louis' Financial Crisis Timeline 385 items
- Great Depression 10 items
- Economic Data 190 items

Employment 8 items

- Federal Deposit Insurance Corporation (FDIC) 9 items
- Federal Reserve 0 items
  - Board of Governors of the Federal Reserve System, Federal Reserve Board 17 items
  - Timeline: Federal Reserve Chair 16 items
- Federal Open Market Committee 10 items

Theme Details:

Employment

View » (8 items)

Employment agency in Gateway District, Minneapolis, Minnesota, September 1939, Credit Library of Congress, Prints & Photographs Division, FSA/OWI Collection, ([LC-USF33-007-001S9-M1]


A selection of key documents, hearings, data publications, and speeches on employment and the workforce in America.

Related Links:
- United States Bureau of Labor Statistics
- Institute for Research on Labor and Employment, University of California, Berkeley, Digital Collection

Subjects:
- Labor
- Human capital
- Labor market
# FRASER in the classroom

## BROWSE RESOURCES FOR

<table>
<thead>
<tr>
<th>Teachers</th>
<th>School</th>
<th>Economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professors</td>
<td>Academic</td>
<td>Finance and Business</td>
</tr>
<tr>
<td>Librarians</td>
<td>These resources have been selected with various library reference and instruction uses in mind. Many of the classroom lessons cover information and data literacy topics, and lessons, newsletters, and handouts link to primary source or reliable secondary source materials. These materials may also provide ideas for student research projects.</td>
<td>History and Economic History</td>
</tr>
<tr>
<td>Students</td>
<td>Public</td>
<td>Government, Public Policy, and Political Science</td>
</tr>
<tr>
<td>Anyone</td>
<td></td>
<td>The Federal Reserve</td>
</tr>
</tbody>
</table>

## BROWSE ALL RECORDS

- Learning Toolkit: Historical Inquiry With Charts
- Booklet: Benjamin Franklin and the Birth of a Paper Money Economy
- Classroom Lesson: Ben Franklin and the Birth of a Paper Money Economy
- Classroom Lesson: From Raw Materials to Riches: Mercantilism and the British North American Colonies
- Booklet: The First Bank of the United States
- Classroom Lesson: The First Bank of the United States: A Chapter in the History of Central Banking
- Classroom Lesson: Hamilton’s National Bank
- Booklet: The Second Bank of the...
Making research possible

- What was the total number and amount of victory bonds in the first World War?

https://fraser.stlouisfed.org/title/62

https://fraser.stlouisfed.org/title/194
How is FRASER used?

• Archival publications of many government agencies

• Bureau of Labor Statistics

https://fraser.stlouisfed.org/author/7
How is FRASER used?

- Do you have a list of all historical FOMC meetings, the dates they occurred on, and a similar list of all minutes, and when they were released?
How is FRASER used?


[https://fraser.stlouisfed.org/archival/1343](https://fraser.stlouisfed.org/archival/1343)
Using the FRASER API for Metadata Harvesting and in the Digital Humanities

Request (HTTPS GET)
https://fraser.stlouisfed.org/oai/?verb=GetRecord&identifier=oai:fraser.stlouisfed.org%3A524

Response

```xml
<OAI-PMH xmlns="http://www.openarchives.org/OAI/2.0/">
  <responseDate>2019-09-13T15:29:45Z</responseDate>
  <request verb="Identify">https://fraser.stlouisfed.org/oai</request>
  
  <Identify>
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    <baseURL>https://fraser.stlouisfed.org/oai</baseURL>
    <protocolVersion>2.0</protocolVersion>
    <adminEmail>fraser@stlouisfed.org</adminEmail>
    <earliestDatestamp>1781-05-17T00:00:00Z</earliestDatestamp>
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    <granularity>YYYY-MM-DD</granularity>
  </Identify>
</OAI-PMH>
```
An Introduction to APIs

• API – Application Programming Interface

• Allows access to specific server data via a series of public-facing “endpoints” that allow for programmatic access to data.

• Gives access to information about FRASER documents at a scale that wouldn’t be feasible using the website.

• GET, POST, PUT, DELETE
  
  – FRASER API only uses GET
OAI-PMH

• **Open Archives Initiative Protocol for Metadata Harvesting**

• [https://www.openarchives.org/OAI/openarchivesprotocolprotocol.html](https://www.openarchives.org/OAI/openarchivesprotocolprotocol.html)

• “[…] provides an application-independent interoperability framework based on *metadata harvesting*”
Request GET endpoints

- [https://research.stlouisfed.org/docs/api/fraser/](https://research.stlouisfed.org/docs/api/fraser/)
- **Identify**
  - Returns information about the FRASER repository
- **ListMetadataFormats**
  - Returns information about metadata formats used by FRASER (FRASER currently only returns MODS metadata)
- **ListRecords**
  - Returns metadata for all or specific set of records from FRASER
- **ListIdentifiers**
  - Returns unique identifiers for all or specific set of FRASER records
- **ListSets**
  - Returns all setSpec identifiers for use in FRASER API set parameters
- **GetRecord**
  - Returns a single record’s metadata based on unique identifier
Harvesting Metadata

• Allows other digital repositories to link back to FRASER content

• https://fraser.stlouisfed.org/oai/?verb=ListRecords&metadataPrefix=mods
Digital Public Library of America

- [http://missourihub.org/](http://missourihub.org/)
- [https://dp.la](https://dp.la)
Statements and speeches of G. William Miller.

Author: G William Miller
Publisher: St Louis, Missouri : Federal Reserve Bank of St. Louis, [201-?]
Rating: ★★★★★ (not yet rated) 0 with reviews - Be the first
Subjects: Board of Governors of the Federal Reserve System (U.S.)
Banks and banking -- United States -- Sources.
Speeches, addresses, etc.

More like this
Similar Items

Find a copy online

Links to this item
fraser.stlouisfed.org
FRASER Publications
Analyzing Sentiment in Economic Reports

- [https://fraser.stlouisfed.org/title/45](https://fraser.stlouisfed.org/title/45)
GetRecord endpoint

- Documentation: https://research.stlouisfed.org/docs/api/fraser/getRecord.html
- https://fraser.stlouisfed.org/oai/?verb=GetRecord&identifier=oai:fraser.stlouisfed.org:title:45
Request
GET
https://fraser.stlouisfed.org/oai/?verb=GetRecord&identifier=oai:fraser.stlouisfed.org:title:45

API

XML Response

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</relatedItem>

<relatedItem type="constituent">
  <title>1997</title>
</relatedItem>
```

XML Parser of your choice
Text Analysis

```python
for pdf_url in pdf_urls:
    url = pdf_url[1]
    # Anaconda Powershell Prompt
    (base) PS C:\users\h1mxk04\desktop> python api_test.py
```
Final Data

Sentiment analysis of Economic Reports of the President 1953-2019
Questions and Suggestions?

Get in contact:
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Jona.Whipple@stls.frb.org
Matthew.Krc@stls.frb.org

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