ALFRED:
Capturing data as it happens

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The views expressed are not the official positions of the Federal Reserve Bank of St. Louis or the Federal Reserve System.
“How is the economy doing?”

Depends on when you ask.
Federal Reserve Bank of St. Louis & data

- Long History (Homer Jones)

- FRED is the Flagship
  - Over 22,000 economic time series
  - Aggregates data from many sources, in one convenient location

- ALFRED is bigger than FRED
  - Collection of vintage versions of U.S. economic data available on FRED
  - Captures every iteration of data
Looking for revisions, and then solutions

- Our former Director of Research, Bob Rasche, was looking for the economic data that were released originally—not the revised data that we have now.

- We searched high and low...
  - Philadelphia Fed created a database with important economic series with the data points that were originally released, with monthly or quarterly observations (we wanted a day-by-day history)
  - Libraries removed news releases when the final version is published
  - Agencies historically wrote over the data, as the computing storage costs were high
2nd quarter 2010 real GDP ↑ 2.4%

NATIONAL INCOME AND PRODUCT ACCOUNTS
GROSS DOMESTIC PRODUCT: SECOND QUARTER 2010 (ADVANCE ESTIMATE)
REVISED ESTIMATES: 2007 THROUGH FIRST QUARTER 2010

Real gross domestic product -- the output of goods and services produced by labor and property located in the United States -- increased at an annual rate of 2.4 percent in the second quarter of 2010, (that is, from the first quarter to the second quarter), according to the "advance" estimate released by the Bureau of Economic Analysis. In the first quarter, real GDP increased 3.7 percent.
2nd quarter 2010 real GDP ↑ 1.6%

GROSS DOMESTIC PRODUCT: SECOND QUARTER 2010 (SECOND ESTIMATE)
CORPORATE PROFITS: SECOND QUARTER 2010 (PRELIMINARY)

Real gross domestic product -- the output of goods and services produced by labor and property located in the United States -- increased at an annual rate of 1.6 percent in the second quarter of 2010, (that is, from the first quarter to the second quarter), according to the "second" estimate released by the Bureau of Economic Analysis. In the first quarter, real GDP increased 3.7 percent.
Slipping Down
Quarterly change at an annual rate in U.S. GDP

1.6%, revised from 2.4%

Source: Commerce Department
The value to capturing this history

- Revisions reflect the level of accuracy regarding early estimates
- Allows researchers and analysts to evaluate policy decisions using information available at the time, not what is known in hindsight
- Allows economists to model the economy using data that was actually available
FRED and ALFRED

- Underneath the hood, FRED and ALFRED are the same application.
  - ALFRED was populated by collecting historical data for series in FRED, and ALFRED continues to be extended by capturing "expiring" FRED values when new ones are published.
  - ALFRED only contains historical data on series that are in FRED -- it does not go back further than FRED.
Series: GDPC1, Real Gross Domestic Product, 1 Decimal

View Data | Download Data | Notify Me of Updates | Add to My Data List | Vintage Series in ALFRED

Real Gross Domestic Product, 1 Decimal (GDPC1)
Source: U.S. Department of Commerce: Bureau of Economic Analysis

(Billions of Chained 2005 Dollars)

Shaded areas indicate US recessions.
2010 research.stlouisfed.org
A quick bar chart available in ALFRED. The **red bar** shows the current release; the **blue bar** illustrates the previous release. Vintages are listed in the title, and on the legend (below).
A quick download from ALFRED of the quarterly GDP data released so far this year.

Users can download the history of the real GDP back to 1991; vintage Gross National Product data are available back to 1947. The earliest vintage available is 1927 for Industrial Production Index.
Background

- Our programmer, George Essig, used Richard T. Snodgrass' book *Developing Time-Oriented Database Applications in SQL*.

- These data are saved only when there are revisions; each data value has three pieces of information:
  - The time period it applies to (e.g., 2nd quarter 2010)
  - The time period it is true for (e.g., from July 30th to August 26th)
  - The date that the information was entered into the database to allow for tracking of data entry errors
Negative Saving Rate—or not

- Remember the negative saving rate? I thought I’d use those data and an article in our librarian newsletter for a talk I was giving to an economic education class.
From a Liber8 article: “The U.S. personal saving rate fell into negative territory during the third quarter of 2005 and has remained close to zero since then.”

Here’s the data: What’s the problem?
Just a quick check to get into ALFRED and to see what revisions look like for this data. I’m going to edit this to see an earlier vintage.
I changed the vintage to the vintage just before the publication of our *Liber*8 article. The observations date range is the last 5 years.
Here’s the chart with the original series and the revised data. Revisions have moved the saving rate into positive territory.
ALFRED’s goals

- ALFRED allows users to see the revisions to a series. Users may also select a particular date and see the data as they were at that point in time.

- Unique information, easily accessed

- Preserving important data for future research

- http://alfred.stlouisfed.org/