Grant Application
Center for Global Economy and Business

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Proposal. I'm putting together a collection of Python "shell" programs that access public economic and business data that I use frequently in my research. The standard template would include (i) some kind of input commands (anything from simple downloads of spreadsheets to parsing XML), (ii) reformatting as needed (time series data, for example, has a specific format in Python's Pandas package), and (iii) plotted to show what it looks like. The programs will be posted on a public GitHub repository that would be accessible by anyone interested in doing research on similar data. That would include me, our PhD students, and probably others at NYU and elsewhere.

The immediate use would be a paper with Stan Zin on the statistical relation between asset prices and returns and the state of the economy. We have examples of this, but would go beyond them in using a broader range of financial data.

Here's our current list of sources:

- FRED. This one's easy. What Python adds relative to FRED's web interface is the kind of automation we use in Kim Ruhl's Stata code: input data, plot, compute cross-correlation functions, and so on.
- BEA. A lot of this is in FRED, but we would like the facility to download complete tables.
- Fama-French stock return data. Ken French has a bunch of this on his home page, but the formats vary by file. We'd write programs that link them all together in a giant array that we could then access in any way we want. Here we also want to link macro data, probably from FRED.
- Fed. The Gurkaynak-Sack-Wright Treasury prices and yields, nominal and real.
- FRED data revisions. Access different vintages of data to see how revisions affect it. FRED evidently has all this, but we have yet to work out how to access it.

We will add more as needed.

Budget. I am spending $8,000 this summer of my own money, but could do more if I had (say) $5,000 from the Center. All of it would be spent on PhD student research assistants. The current going rate is $25 an hour, so $5,000 would buy me 200 hours – probably a bit less if we add the 30% fringe the University charges.