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INVESTIGATING THE APPARATUS

The Federal Reserve System's Influence on Research in Monetary Economics

LAWRENCE H. WHITE*

[Abstract](#), [Keywords](#), [JEL Codes](#)

THE FEDERAL RESERVE SYSTEM IS NOT ONLY THE SUBJECT OF research by American monetary economists it is also a major sponsor of their research. The Fed (the Board of Governors plus the twelve regional Reserve Banks) employed about 495 full-time staff economists in 2002. That year it engaged more than 120 leading academic economists as consultants and visiting scholars, and conducted some 30 conferences that brought 300-plus academics to the podium alongside its own staff economists. It published more than 230 articles in its own research periodicals. Judging by the abstracts compiled by the December 2002 issue of the *e-JEL*, some 74 percent of the articles on monetary policy published by US-based economists in US-edited journals appear in Fed-published journals or are co-authored by Fed staff economists.¹ Over the past five years, slightly more than 30 percent of the articles by US-based economists published in the *Journal of Monetary Economics* had at least one Fed-based co-

* Department of Economics, University of Missouri—St. Louis

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1. Here “articles on monetary policy” consists of articles falling in *e-JEL* subcategories E42 and E50-59. Details appear below.

author. Slightly more than 80 percent had at least one co-author with a Fed affiliation (current or prior Fed employment including visiting scholar appointments) listed in an online *vita*. The corresponding percentages for the *Journal of Money Credit and Banking* were 39 percent and 75 percent. The editorial boards (editors and associate editors) of these journals are even more heavily weighted with Fed-affiliated economists (9 of 11, and 40 of 46, respectively).

The stated goals of the Fed's research program are improvements in monetary policy and banking regulation. These goals are unobjectionable. But we should consider how the Fed's sponsorship may influence the character of academic research in monetary economics.² One possible influence is a simple "crowding out" effect: unless the supply curve of monetary economists is flat, incentives to study policy design within the context of the *status quo* monetary regime will crowd out research on alternative monetary regimes. But the influence may be more systemic than that. If academic research is subject to network effects—meaning that the larger the community of researchers who investigate a particular topic or take a particular approach, the greater the professional rewards to other researchers for doing likewise—then even those researchers outside the Fed's direct sphere of influence will be indirectly influenced by its program. They know, for instance, that their research must pass muster with Fed-affiliated journal editors and referees.

Federal Reserve officials themselves proclaim that the Fed's research has an impact. Anthony M. Santomero, President of the Federal Reserve Bank of Philadelphia (and a University of Pennsylvania emeritus professor) remarked to a research conference that "our Philadelphia Fed Research Department . . . continues to make substantial contributions to the field of economics and to set the standard for economic research" (2002, 2). He advised the conference's academic participants of the direction he would like their research to take: "The payments system has not received the time and attention it deserves on the academic research agenda. I encourage your interest and involvement to fill the void in this critical area of research" (2002, 3).

2. Mayer (1999) discusses the reverse question of the extent to which academic research influences the makers of monetary policy. On the convergence between academic and Fed researchers with respect to "concerns and techniques" see McCallum (1999). In a fashion parallel to my methods here, Klein and DiCola (2004) investigate the development-agency ties of the authors and editors of the *Journal of Development Economics*.

The size of the Fed's research program and its possible *status quo* bias have attracted little scholarly attention, though a few economists have made pertinent remarks in passing. Edward J. Kane (1980) has observed that Fed officials naturally promote the kind of staff research that they consider useful, particularly the better quantification of monetary policy linkages. Such research, he noted, tends to regard the Fed as a social-welfare optimizer. We might add that it takes current institutional arrangements for granted. Kane (1993, 290) has likewise noted that "by manipulating the size of staff and the activities for which they are rewarded or penalized, Fed officials help to shape the agenda of contemporary economic research on monetary policy."³ Robert D. Auerbach (1985, 52), in an account of political influences on Fed policy-making, has commented that "censorship is present in a significant portion of the Federal Reserve research departments' publications. Therefore, this voluminous research, distributed at little or no charge, should not be disguised as the work of an independent think tank." Eugenia Toma and Mark Toma (1985) have argued that the Board of Governors used budgetary allocations to penalize two Reserve Banks (St. Louis and Minneapolis) whose research departments were relatively critical of the Fed's policy-making.⁴

Milton Friedman, as reported in a Minneapolis Fed magazine article on the Shadow Open Market Committee (Fettig 1993), "maintains that since the Federal Reserve Board and its district banks hire a large number of economists in the field of money, the central bank has a sort of oligopoly on monetary opinion. In other words, if you want to advance in the field of monetary research, according to Friedman, you would be disinclined to criticize the major employer in the field. 'This problem with the Fed is why the Shadow is so relevant,' says Friedman." (The Shadow Open Market Committee is a panel of economists who critically review Fed policy actions from a Monetarist perspective.)

Here I examine the size and scope of the Fed's research program—the extent of its "oligopoly" in research—by detailing the various ways in which the Fed generates and influences research in monetary economics. I

3. The *Federal Reserve Research Roundup*, a newsletter of the Financial Markets Center (an independent think tank), makes a similar observation at the outset of a recent issue (4th quarter 2002): "As one of the world's largest employers of economists, the Federal Reserve produces an unparalleled volume of research. ... This huge program provides the Fed ongoing opportunities to shape lines of inquiry and schools of thought throughout the economics profession."

4. Rolnick (1985) challenged their claim with regard to the FRB Minneapolis.

provide some measures of the Fed's efforts, its inputs into the process of producing professional research, and some measures of the output of those efforts in the professional journals. But while we can count publications by Fed-employed and Fed-affiliated economists, we cannot observe the counterfactual world where the Fed does not exist or spends nothing on research. We thus cannot directly measure how far the Fed's research program shapes the character of monetary economics, although we can try to judge the direction of influence by observing the types of research the Fed publishes. It must of course be left to the reader to evaluate whether marginal research of those types has benefits in excess of its opportunity cost of foregone research in other directions.⁵ To be clear, my aim is to draw attention to the institutional incentives and filtering mechanisms at work in shaping Fed-sponsored research; it is certainly not to imply that researchers employed by the Fed are disreputable or act in bad faith.

MAKE OR BUY?

The Federal Reserve System faces a "make or buy" decision with respect to economic research: "make" it in-house or "buy" it from outside economists. In practice the Fed does some of each. The Fed's "making" of research comprises (1) employment of staff economists, and (2) in-house publishing of books, periodicals, and working papers. To avoid double-counting, expenses allocated to the second category would exclude the salaries of the staff economists who have written for the publications.

The system's research departments seldom interact with business economists and forecasters other than to share the stage with them at FRB regional "business outlook" conferences. Accordingly the Fed's "purchase" of research is mostly from academic economists. It most importantly includes (1) visiting scholar programs and consulting arrangements, (2) conferences and seminars where academics present papers (alongside Fed economists), and (3) sponsorship of out-of-house publications such as special issues of academic journals.

5. One Fed staff economist's reaction to a draft of this paper was the suggestion that recent academic research on money has been largely useless from the perspective of those who make monetary policy.

While the distinction between internal and external production is useful for organizing discussion, some Fed expenditures on research straddle the line. When a Reserve Bank's research department brings in an academic economist for a stint as a visiting scholar, or to present a working paper at a department seminar, the expense may contribute both to that academic's research and to the research of the staff economists by keeping them abreast of work in the field. When a visiting scholar co-authors with a staff economist, the visit's expense contributes to internal as well as external production. When a visiting scholar is expected to produce an article for the Bank's research periodical, part of the expense of her visit can be allocated to in-house publishing.

Staff Economists

Table 1 details the distribution of the Fed's 495 full-time staff economists between the Board of Governors (220) and the twelve regional Reserve Banks (275). It also reports the numbers of listed Visiting Scholars, whose role is discussed later. To put the number of Fed staff economists in context, the top 50 Ph.D.-granting US economics departments together employ about 390 economists in macroeconomics, monetary economics, and banking.⁶ That is, the Fed employs full-time about 27 percent more macro/money/banking economists than the top 50 US academic economics departments put together. (Note also that most of the economists in those departments have been visiting scholars at Federal Reserve banks.) Although some Fed economists pursue research in other areas, this is at least as true of the academic economists counted, who typically list macro or money or banking as one of several interests.⁷

6. The 390 figure is extrapolated from my own examination of 20 departmental website listings. The "top ten" US economics departments list 99 faculty who name macroeconomics, money, or banking as a research interest, while departments "41-50" list 57 such faculty. Combining the twenty departments gives an average of 7.8 macro/money/banking economists per school or an estimated 390 in the top 50 departments. I used a departmental ranking by Dusansky and Vernon (1998), based on publications in eight journals, but there is no reason to think that the count of macro/money/banking economists would change much using a different ranking. The Dusansky-Vernon list is available with hyperlinks to departmental sites at <http://edirc.repec.org/usa-top.html>.

7. I have not tried to estimate the percentages of research time spent on topics other than money/macro/banking by either academic or Fed economists.

Comparative head counts raise the question of whether a Fed staff economist devotes as much time to research as an academic economist. Fase and Vanthoor (2000, 37), who interviewed research directors at each of the twelve Reserve Banks and at the Board, indicate that staff economists spend “half of their time on basic research and the rest on policy and briefing activities.”⁸ While Fed staff economists thus have duties other than research, the same is true for academic economists who teach. My own discussions with staff economists indicate that the typical staff economist at a Federal Reserve Bank has at least as much time for research as the typical economist at a research university who teaches three or four courses per year. Jansen (1991, 735) offers a similar estimate.⁹

Table 1: Staff Economists and Visiting Scholars

	Staff Economists	Visiting Scholars
Board of Governors	220	17
FRB-Atlanta	21	3*
FRB-Boston	24	7
FRB-Chicago	36	8
FRB-Cleveland	19	16
FRB-Dallas	26	2
FRB-Kansas City	17	9
FRB-Minneapolis	7	25
FRB-New York	49	14
FRB-Philadelphia	15	16
FRB-Richmond	16	6
FRB-Saint Louis	22	11
FRB-San Francisco	23	13
Total	495	132

8. The quote from Fase and Vanthoor (2000, 37) appears in the summary of their discussions at the FRB San Francisco. Economists at the FRB Kansas City reported the same time split to them (45). The reported range across staff economists at the FRB Chicago (31) runs from 10 percent to 100 percent of time on basic research. Discussions at other Banks yielded no reported time split.

9. Jansen (1991) ranks FRB and Board research departments against each other, and against academic departments, by tabulating publications in academic journals in 1978-83 and 1983-88. My measures of Fed-produced output appear larger than his because (1) I count articles in Fed journals where he counted only articles in academic journals, and (2) FRB economists are publishing much more in academic journals now than they did 20 years ago.

Notes on Table 1: Latest year reported by each institution (2001, 2002 or 2003). Tallied 1/21/03 from Board and FRB web sites, except: Kansas City visitors for 2002 by email from Robert Hampton, Manager, Economic Research Department, FRB-Kansas City; St. Louis visitors for 2002 by email from Daniel Thornton, Visiting Scholar Coordinator, FRB-St. Louis. St. Louis staff number includes one listed as “mathematician”. “Visiting scholars” includes external economists listed as such or as “consultants” (Chicago and Minneapolis), “associates” (Dallas) or “visitors” (Minneapolis). The numbers exclude intra-Fed and inter-central bank visitors (the Board had 1 visitor from the FRB-Richmond and one from the European Central Bank.) The 132 visiting-scholar total is less than the column sum because it excludes multiple counting of scholars who visited more than one Bank.

*See text footnote 12.

In-house Research Publications

Each of the 12 Reserve Banks, and the Board of Governors, publishes one or more research periodicals. Some are formatted and bound like academic journals. Others look more like newsletters. Fed staff economists write most of the articles, but academics also contribute as authors or co-authors. All of the principal research publications, listed in Table 2, are fully available online, free of charge. All are also available free of charge in hard copy, except the FRB-Dallas *Economic and Financial Policy Review* (which has been online-only since the end of 2001) and the *Federal Reserve Bulletin* (which is \$25 per year in hard copy). I examine below the question of how large the output of these periodicals looms in monetary economics, together with the publications of Fed-affiliated economists in academic journals.

No article appears in any of these periodicals without first being reviewed by staff of the Board of Governors.¹⁰ A well-known academic researcher once told me that as a visiting scholar at a Federal Reserve Bank he contributed an article to the Reserve Bank’s journal, only to have the Board’s reviewers blue-pencil a passage for removal because it criticized the System’s policy-making during an episode *fifty years earlier*. Most contributors, one expects, have learned to self-censor potential criticism of the Fed’s policy-making or institutional structure. Where a Fed-published article does mention a criticism, the author is typically reporting the

10. Toma and Toma (1985, 181) briefly relate the origins of this review policy. Auerbach (1985, 52) reports that “the practice at the [Federal Reserve] Bank where I worked was to clear research through the Board of Governors and to ‘persuade’ economists to delete material that the Board or the Bank officials did not like,” adding “[n]ot all the research is changed.” Fase and Vanthoor’s (2000, 32) discussions with FRB economists confirm the review policy’s continued existence.

argument of some set of economists, which he then balances against the contrary argument of others.

Table 2: Fed Research Periodicals

	Journal Name	# of Articles, 2002
Board of Governors	<i>Federal Reserve Bulletin.</i>	14
FRB-Atlanta	<i>Economic Review.</i>	17
FRB-Boston	<i>New England Economic Review</i>	22
FRB-Chicago	<i>Economic Perspectives</i>	16
FRB-Cleveland	<i>Economic Commentary</i>	20
FRB-Dallas	<i>Economic and Financial Policy Review</i>	6
FRB-Kansas City	<i>Economic Review</i>	14
FRB-Minneapolis	<i>Quarterly Review</i>	7
FRB-New York	<i>Economic Policy Review</i>	23
FRB-Philadelphia	<i>Business Review</i>	18
FRB-Richmond	<i>Economic Quarterly</i>	16
FRB-Saint Louis	<i>Review</i>	29
FRB-San Francisco	<i>Economic Review</i>	4
	<i>Economic Letter</i>	38
Total		244

Notes: The FRB-Cleveland *Economic Review* ceased publication 4Q 2001; the *Economic Commentary* series contains the sort of articles that appear in the research journals of the other FRBs. Article count includes transcribed speeches but excludes what appear to be introductions or comments.

There have been a few conspicuous in-house criticisms of Fed policy over the years, but they are exceptions to the general pattern. The Monetarist critique of Fed discretion found its way into some Fed periodicals, most notably those of the FRB-St. Louis. Today the current president and research director in St. Louis (Robert Poole and Robert Rasche) are former members of the Shadow Open Market Committee, but

the research staff no longer produces such distinctly Monetarist work.¹¹ At the FRB-Cleveland, where recently retired president Jerry L. Jordan favorably cited laissez-faire monetary theorists (Friedrich A. Hayek, Ludwig von Mises, Benjamin Klein, George Selgin) in proposing a greater future role for competitive markets in the global monetary order (Anonymous 1995; Jordan 1999), only one staff economist (Ed Stevens) has published kindred views.

Fed journals have published a few articles that highlight the benefits of pre-commitment to a monetary policy rule, a la Kydland and Prescott (1977), but such articles are relatively rare. Lee Hoskins (1993, 50), former President of the FRB-Cleveland, once commented:

It still puzzles me that volumes of research have been published on central bank operating procedures and management of monetary aggregates, yet relatively little research has been published on the value of a credible precommitment to a price-stability objective. My intuition tells me that the latter is far more important than the former in terms of economic welfare. (Hoskins 1993, 50)

Four economists then working for the FRB-New York (Bernanke, Laubach, Mishkin, and Posen, 1999) published a book arguing for “inflation targeting,” but theirs was a proposal for “constrained discretion” (6), not for a rule. Robert Hetzel (1997) is a rare example of a Fed-employed economist explicitly setting forth an overall judgment favoring the legislative imposition of a rule to direct Fed policy.

By my count, twice as many pro-discretion articles (12) as pro-rules articles (6) have appeared in Fed publications over a recent five year period (1998-2002 inclusive).¹² Thus the preponderance—among those infrequent

11. Hafer and Wheelock (2001) trace the rise and subsequent decline (after the velocity of standard monetary aggregates became erratic in the 1980s) of proposals for money-growth rules at the St. Louis Fed, 1968-86.

12. A list with full citations is available from the author. Admittedly, personal judgment enters into any such sorting. The articles I counted as pro-discretion were by Chang (Atlanta 1998), Haubrich (Cleveland, 2000), Miller (Cleveland, 2002), Cecchetti (New York, 1998), Meyer (St. Louis, 2001), Chatterjee (Philadelphia, 1999 and 2001), Santomero (Philadelphia, two in 2002), Judd and Rudebusch (San Francisco, 1999), Anonymous (San Francisco, 1999), and Walsh (San Francisco, 2001). The articles I counted as pro-rules were by Kydland and Wynne (Dallas, 2002), McCallum (Richmond, 2000), Hetzel (Richmond, 2000), Broadus (Richmond, 2001), Wolman (Richmond, 2001), and Poole (St. Louis, 1999).

articles that broach the topic—lies on the side of the status quo. As an example, visiting scholar Carl E. Walsh (2001) writes in the FRB-San Francisco *Economic Letter*:

There is a long tradition of trying to take discretion out of monetary policy—Milton Friedman's proposal that the Fed should just ensure a constant annual growth rate for the money supply was an example of a policy designed to remove the role of the individual policymaker. While economists have identified broad principles to guide policymakers, making policy is not a science. Good policy will probably always require good policymakers, as it requires combining the science of the economist with the art of the practitioner. (Walsh 2001, page)

Federal Reserve Board chairman Alan Greenspan (2002) occasionally makes guardedly favorable comments about the gold standard as a monetary regime. A recent article by Kydland and Wynne (2002) is the only recent Fed-published article to do likewise (and they are even more guarded than Greenspan).

I have not found a single Fed-published article that calls for eliminating, privatizing, or even restructuring the Fed. Research on “free banking” has been limited to evaluations of the antebellum state banking regulatory systems that went by the name. With one exception, the notion of laissez-faire banking has not been discussed.¹³

In addition to their journals, the research departments at the Board and at each of the Reserve Banks make staff working papers available free of charge, and publicize their availability widely. For example, the FRB-New York annually mails out, free of charge, a twenty-four page summary of its *Publications and Other Research*. The website *Research Papers in Economics* (www.ideas.repec.org) lists ten different working paper series from the Board of Governors alone.

This list excludes articles specifically concerned with regime choice for *other* countries (i.e. floating, pegging, dollarization, or currency boards).

13. The exception is a brief article by British economist Kevin Dowd (1993) in a symposium of contrasting views on deposit insurance.

Other Periodicals: Newsletters, Magazines

In addition to research-oriented periodicals and working papers series, the Reserve Banks publish magazines and newsletters for business and general audiences. For example, the FRB-Minneapolis publishes *The Region*, a quarterly magazine of articles and interviews that “explores banking and economic policy issues that relate to Federal Reserve activities.” The FRB-New York publishes *Current Issues in Economics and Finance*, which it describes as “a newsletter-style publication focusing on economic and financial topics,” and *Second District Highlights*, “a regional supplement to *Current Issues* covering financial and economic developments in the Federal Reserve System’s Second District.”

Articles in these less-technical Fed periodicals are often assigned to students. As an example, consider the supplemental reader to Frederic S. Mishkin’s market-leading money and banking textbook. Articles and excerpts from Federal Reserve publications make up 31 of 32 readings in Eaton and Mishkin’s *Readings to Accompany The Economics of Money, Banking, and Financial Markets*, 4th ed. (1997).¹⁴ Nine of the 31 are from Fed periodicals other than the research journals listed in Table 2, namely the FRB-Richmond *FRB Cross Sections*, FRB-Dallas *The Southwest Economy*, FRB-St. Louis *The Regional Economist*, FRB-New York *Current Issues in Economics and Finance*, and the *Chicago Fed Letter*. One is from an FRB-Richmond monograph. Perhaps the primary reason that Fed articles are so popular with Eaton and Mishkin is that they are free to reprint. But it may also be noted that from 1994 to 1997 Mishkin was Executive Vice President and Director of Research at the Federal Reserve Bank of New York.

Books

In addition to conference proceedings (see below), occasionally one of the Federal Reserve Banks publishes under its own imprint a book directed at economists or economics students. Particularly noteworthy is the FRB-New York’s supplemental textbook on *U. S. Monetary Policy & Financial Markets* by Ann-Marie Meulendyke (1998). (Previous editions appeared in 1982 and 1990.) The FRB-New York makes the text available

14. The 4th edition was published in book form. Mishkin’s current reader is online only, password protected. The one non-Fed article in the 4th edition was a piece on the “Big Mac Index” reprinted from *The Economist*.

free of charge. A Google search finds it as assigned reading on the money and banking syllabi at 17 colleges. One syllabus declares: “This book is free and will be distributed in class.”

Fed-sponsored academic conferences

In 2002 the Federal Reserve System sponsored or co-sponsored at least 29 conferences where 328 US academics made presentations (the number of unique academic participants was somewhat smaller due to a few participating in multiple conferences). At these conferences academic economists typically made presentations on panels alongside Fed staff economists (and sometimes economists from foreign central banks). There is no reason to believe that 2002 was an unusually active year.

Visiting scholars and consultants

As Table 1 above reports, the most recent available lists name a total of 132 academics as visiting scholars at one or more Federal Reserve Banks during the year.¹⁵ Occasionally an academic visitor may spend several continuous months in residence, but more commonly the visitor stays a week, or (if teaching nearby) drives in a dozen or so days during a semester. The FRB-Philadelphia website explains:

Each year, the Research Department hires several academic researchers as visiting scholars. These scholars visit the Bank to interact with our staff economists, to present seminars, to further their own research agendas, and to advise our staff economists on their research. Several arrangements are possible—some scholars spend one day a week at the Bank for a semester or longer, and

15. At least one FRB website list seriously understates the number of visiting scholars. The FRB Atlanta site lists only 3 visiting scholars, but Gerald Dwyer, head of the Bank’s financial research group, reports (personal communication) that 26 scholars each visited the Research Department for 5 or more days in 2002. It seems likely that other FRB websites— especially those where the visitor list is fewer than 10 names—also understate the actual numbers of visitors. Twelve economists have the distinction of being simultaneously listed as visitor by two or more Fed institutions.

others visit for more extended periods. (FRB-Philadelphia 2005)

Those who visit an FRB for an extended period are commonly expected (or required) to contribute an article to the Bank's research journal. Often a visiting scholar is co-authoring with a staff economist. In cases where no such demands are made, the visitor pursues his or her own research under the Fed's roof rather than the home university's.

The prospect of being a visiting scholar at a Federal Reserve Bank or the Board of Governors presumably encourages some economists to spend more time on research considered interesting and relevant by those in charge of invitations at the Bank's or the Board's research department. (If that were not a criterion for invitation, it would be hard to see why visiting scholars are given time to pursue their own research during their visit, rather than being expected to spend all day interacting with staff economists). By the same token, the prospect discourages work that would be frowned upon at the Fed. The prospect of potential future Fed employment works in the same direction. Precisely *how much* the incentive reorients research in the profession is, for reasons noted above, an elusive empirical question.

PUBLISHED OUTPUT

To evaluate the size of the Fed's impact on professional research, we would like to know *what share of all US publications in monetary economics* is published in Fed periodicals, or authored by the Fed staff economists (wherever published), or by Fed staff plus Fed visiting scholars. It is infeasible to make the denominator the total output of all US-based economists in monetary economics (and the numerator the output of all Fed-based economists) during a year. Even if (counterfactually) the manpower for such a count were available, two important problems would arise. (1) There is no obviously correct scheme for assigning relative weights to (say) an article in the *Journal of Political Economy*, an article in the FRB-Richmond *Quarterly*, and a chapter in an NBER conference volume. (2) There would be many judgment calls as to which articles should be counted as work in monetary economics (e.g. should work in growth theory be counted?).

I offer two alternative measures that sidestep these two problems. First, the listing of “Articles in Current Periodicals” in a recent issue of the *e-JEL* (December 2002), under the subject classification “E-Macroeconomics and Monetary Economics,” provides information on more than 600 recent articles in the field from a very wide array of journals. Relying on the *e-JEL* database means implicitly assigning a zero weight to publications (books, book chapters, articles in unrecognized periodicals) not abstracted there, and accepting the authors’ self-categorization of their articles. The *e-JEL* lists each article under one or two author-chosen two-digit sub-classifications. I took note of the cross-listings so as not to double-count articles within any one-digit class. For each article, the *e-JEL* lists the journal of publication (with a link to the publisher’s website) and the authors’ self-reported affiliations. Although the *e-JEL* lists some articles published in languages other than English (provided they have English summaries), I eliminated those from consideration as negligibly important for the academic discussion in the United States. I then sorted the journals into four mutually exclusive groups by institutions and countries of origin. The groups are: Federal Reserve (both Board of Governors and Reserve Bank), Government (e.g. IMF, Bureau of Labor Statistics), US academic (including journals published by think tanks), and foreign.¹⁶ I likewise sorted the articles by their authors’ affiliations as reported by the *e-JEL*.¹⁷

Appendix One summarizes the numbers, by subject classification. I focus on the articles in Fed and US academic journals (the first and third groups), and by Fed and US academic authors, as representing the most important literature and participants in the US discussion. For each category I compute two ratios: (1) a relatively narrow *ratio of Fed production*, namely the share of US journal articles either published by the Fed or written by authors who identify themselves as employed by the Fed, and (2) a relatively

16. The rules for sorting journals between US and foreign were: (1) the official journal of a nationally identified non-US organization (e.g. Austrian Academy of Sciences) was assigned to the foreign category; (2) any other academic journal was considered a US journal if the publisher lists *any one* of its editors as affiliated with a US institution. Thus almost all Kluwer and Elsevier journals, though published in Europe, were counted as US journals. The sorted list of journals is available from the author on request.

17. Here the rules were: (1) the article was assigned to the Federal Reserve category if the *e-JEL* reports Fed employment for any co-author of the article; (2) otherwise the article was assigned to the government category if the *e-JEL* reports for any author employment at a US institution (all but a few were at universities). Employment affiliations reported by the *e-JEL* were those the authors self-reported in the original publication source. A few authors reported employment as a Fed visitor for an article in the Fed-published category, but not for another article in one of the other three categories.

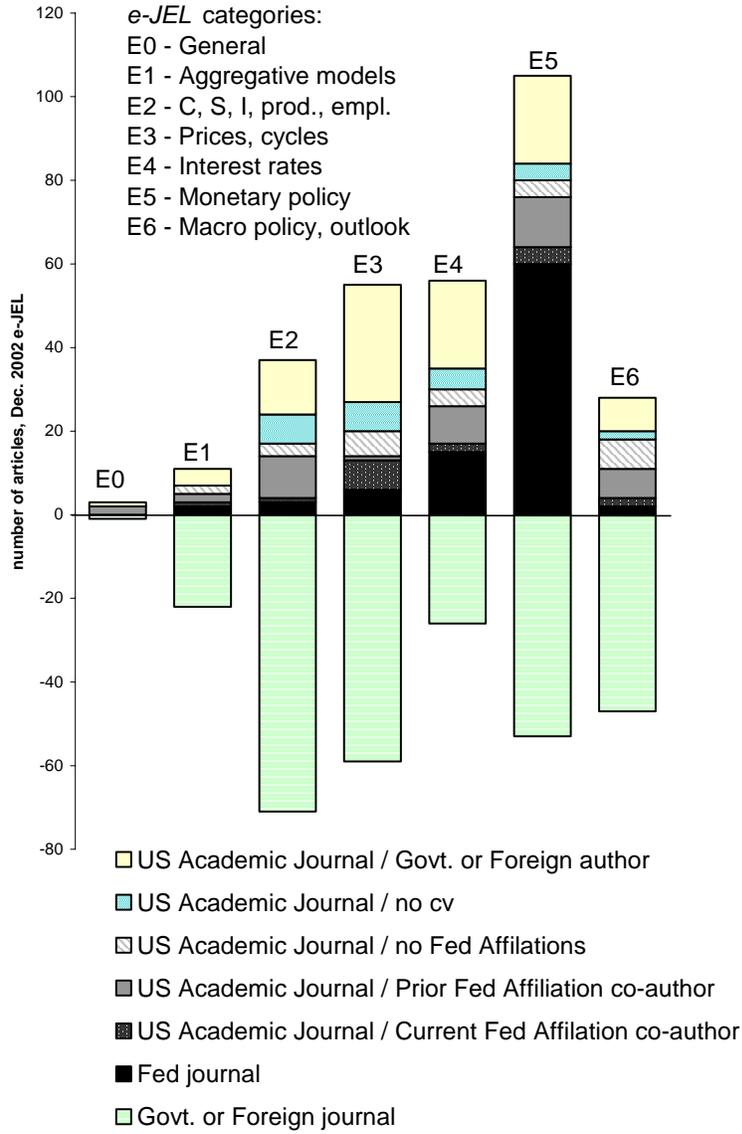
broad *ratio of Fed affiliation*, namely, the share of US-co-authored articles in broadly US journals either published by the Fed or, where the authors have online *curricula vitae*, co-authored by an economist ever employed by the Fed (current or previous staff economist; current or previous visiting scholar, consultant, or advisor).

Both ratios omit articles by government and foreign economists from the denominator, in that way increasing the reported ratios of Fed influence in the broadly US journals, but they equally omit articles by government and foreign central bank economists from the numerator. Because the Fed rarely hires visitors and consultants from foreign universities or from other government agencies, the “Fed affiliated” ratio may be viewed as answering the following question: of the articles in monetary economics in broadly US journals, any of whose co-authors *might* have worked (full-time or visitor) at the Fed, what percentage have a co-author who *has* worked at the Fed? The same numbers are shown graphically in Figure 1.

The Fed-produced and Fed-affiliated ratios are highest in *e-JEL* category “E5-Monetary Policy, Central Banking, and the Supply of Money and Credit” because that is where Fed staff economists focused their efforts. Whereas the numbers of US academic-produced articles were rather evenly distributed across categories E2, E3, E4, and E5 (respectively 20, 18, 20, and 18), the numbers of Fed-produced articles were quite skewed toward the E5 category (14, 13, 17, 64). Consistent with the hypothesis that the Fed’s incentives lead researchers to avoid considering alternatives to the institutional status quo, Fed production in subcategory “E42-Monetary Systems-Standards-Regimes-Government and the Monetary System” amounted merely to 4 articles (of 8 US articles), of which only two dealt with monetary standards or regimes (the other two concerned the retail payment system), while Fed production in subcategory “E52-Monetary Policy (Targets, Instruments, and Effects)” was 55 articles (of 68).¹⁸

18. These article counts support Kane’s (1993, 290) view that the “bureaucratically approved issues” for Fed staff research “focus on the control subsystem,” e.g. the usefulness of various intermediate targets, “rather than on the broader principal-agent conflicts comprised in the information and incentives subsystems of monetary policy-making.”

Figure 1: Fed-published and Fed-affiliated articles, by e-JEL category



As an alternative to the *e-JEL* snapshot, Appendix Two offers counts of the articles appearing in three leading academic monetary and macroeconomic journals (the *Journal of Monetary Economics*, the *Journal of Money, Credit, and Banking*, and the *Journal of Macroeconomics*) for a recent five-year period (1998-2002), apportioning the authorship of their articles in the same fashion. The numbers are shown graphically in Figure 2.

FEDERAL RESERVE AFFILIATIONS AMONG JOURNAL EDITORS

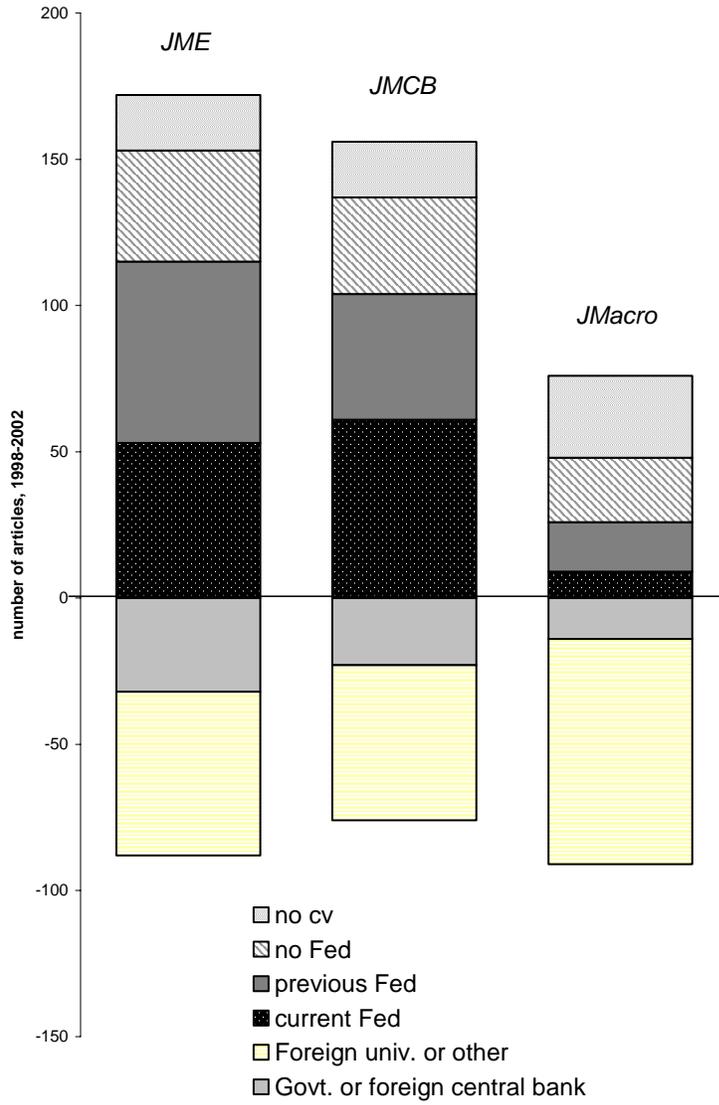
The Federal Reserve Banks draw their visiting scholars and consultants (and sometimes their research directors), as one would expect, from among the most productive academic monetary economists. So do the professional field journals in choosing their editors. Current or prior affiliation with the Fed is therefore pervasive among editors of the journals concerned with money and banking. The appearance is created that becoming a journal editor increases one's probability of being invited to become a Fed visiting scholar (or the reverse). As a result of the overlapping choices of the Fed and the journals, scholars who want to publish in the field of monetary economics must pass through a gateway controlled largely by editors affiliated with the Federal Reserve System. The overlap is personified by two cases. The FRB New York hired Stephen G. Cecchetti, who was and continued to be editor of the *JMBC*, for a two-year stint as its research director, 1997-99.¹⁹ Ben S. Bernanke, who became a member of the Board of Governors of the Federal Reserve System in August 2002, continued simultaneously to serve as the Editor of the *American Economic Review* (a position to which he was appointed in July 2001).²⁰

At the *Journal of Monetary Economics*, 1 of the 2 current editors and 8 of the 9 associate editors have been visiting scholars, advisors, or consultants

19. When Cecchetti took the FRB-New York post, he and Paul Evans (also of Ohio State U) were the *JMBC*'s editors, with Allan Berger (Federal Reserve System Board of Governors) listed as co-editor. In its next issue (November 1997), the *JMBC* began listing five editors: two from the Fed (Cecchetti and Berger), and three from Ohio State (Evans, Peter Howitt, and Nelson G. Mark).

20. According to a Board staff reply to my email inquiry, as *AER* editor he "recuses himself in rare instances that raise conflict of interest questions."

Diagram 2: Author affiliations for *JME*, *JMCB*, *JMacro* articles



at one or more Federal Reserve banks or at the Board of Governors. At the *Journal of Money, Credit, and Banking*, 3 of the 3 current editors and 37 of the 43 associate editors have Fed positions on their resumes. Of the 37 Fed-affiliated *JMCB* associate editors, 8 are currently full-time staff economists with the Federal Reserve System. Of the 6 associate editors who have no Fed affiliation, two work outside the US (one as a Bank of England staff economist, the other a Canadian-based academic and recent Bank of Canada special advisor).

Appendix Three lists the Fed affiliations for *JME* and *JMCB* editors, largely from the listed individuals' online *curricula vitae*.

CONCLUSION

It is relatively straightforward to document how the Federal Reserve System's research program pervades American monetary economics. It is a more subtle problem to evaluate what impact the Fed's research program has on the character of US academic research in monetary economics. Possibly every paper written by a visiting scholar before, after, and during his time at the Fed is exactly the paper that he would have written anyway—in which case the marginal research product of his visit would lie entirely in its indirect contribution to research by the staff economists.

Although the research departments of the regional Reserve Banks seek to establish their own reputations,²¹ their incentives would seem to steer them away from research that would challenge the monetary regime *status quo* favored by the Board of Governors. By contrast, Fed economists are not reluctant to recommend sweeping changes in other government financial institutions, such as Fannie Mae or the Federal Deposit Insurance Corporation (for an example see Eisenbeis and Wall 2002). By extension, an academic economist who values the option to someday receive an offer from the Fed, either to become a staff economist or a visiting scholar, faces a subtle disincentive to do regime-challenging research. To repeat Fettig's (1993) characterization of Milton Friedman's view: "if you want to advance

21. See the interviews with FRB research directors summarized by Fase and Vanthoor (2000). Economists at the Reserve Banks appear to have less career attachment to the Fed, moving back and forth to academia more commonly, than do the economists at the Board of Governors.

in the field of monetary research . . . you would be disinclined to criticize the major employer in the field.”

These incentives and filtering mechanisms may produce a result *as if* the Federal Reserve were deliberately subsidizing research that takes the institutional *status quo* for granted. This should not be surprising, nor is it scandalous. We naturally expect the research that any organization sponsors to tend to promote rather than to undermine that organization’s interests. When (say) the insurance industry sponsors a report on the advisability of federal subsidies for terrorism insurance, the sponsorship alerts cautious readers to scrutinize the research methods and findings for pro-industry bias. Raising the question of the Fed’s *status quo* bias alerts us that the same sort of scrutiny is appropriate to monetary policy research, to avoid employing a double standard. The Fed has an institutional interest in preserving the legal restrictions that generate its seigniorage revenues and the privileges that give it discretionary monetary policy and regulatory powers. Fed-sponsored research generally adheres to a high level of scholarship, but it does not follow that institutional bias is absent or that the appropriate level of scrutiny is zero.

APPENDIX ONE

Summary ratios of Fed influence for articles in the *e-JEL* category “E - Macroeconomics and Monetary Economics”, December 2002 issue, by subcategory

E0 - General (4 articles)

0 in Fed journals
 3 in US academic journals, of which authorship was
 0 Fed
 2 US academic, of which
 2 had previous Fed affiliation
 1 other (foreign-based or government-employed; this residual category is not reported below)

Fed produced: 0/2
 Fed affiliated: 2/2.

E1 - General Aggregative Models (33 articles)

2 in Fed journals
 9 in US academic journals, of which authorship was
 1 Fed
 4 US academic, of which
 2 had previous Fed affiliation
 2 had no Fed affiliation

Fed produced: 3/7
 Fed affiliated: 5/7

E2 - Consumption, Saving, Production, Employment, and Investment (105 articles)

3 in Fed journals
 34 in US academic journals, of which authorship was
 1 Fed
 20 US academic, of which
 10 had previous Fed affiliation
 3 had no Fed affiliation

7 had no cv online
 Fed produced: 4/24
 Fed affiliated: 14/17

E3 - Prices, Business Fluctuations, and Cycles (114 articles)

6 in Fed journals
 49 in US academic journals, of which authorship was

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7 Fed
14 US academic, of which
 1 had previous Fed affiliation
 6 had no Fed affiliation
 7 had no cv online

Fed produced: 13/27

Fed affiliated: 14/20

E4 - Money and Interest Rates (82 articles)

15 in Fed journals
41 in US academic journals, of which authorship was
 2 Fed
 18 US academic, of which
 9 had previous Fed affiliation
 4 had no Fed affiliation
 5 had no cv online

Fed produced: 17/35

Fed affiliated: 26/30

E5 - Monetary Policy, Central Banking, and the Supply of Money and Credit (158 articles)

60 in Fed journals
45 in US academic journals, of which authorship was
 4 Fed
 20 US academic, of which
 12 had previous Fed affiliation
 4 had no Fed affiliation
 4 had no cv online

Fed produced: 64/84

Fed affiliated: 76/80

E6 - Macroeconomic Policy Formation, Macroeconomic Aspects of Public Finance, Macroeconomic Policy, and General Outlook (75 articles)

2 in Fed journals
26 in US academic journals, of which authorship was
 2 Fed
 16 US academic, of which
 7 had previous Fed affiliation
 7 had no Fed affiliation

2 had no cv online

Fed produced: 4/22

Fed affiliated: 11/18

Notes:

“Fed journal” = *e-JEL*-abstracted Federal Reserve periodicals (listed in Table 2), plus the August (part 2) issue of the *JMCB*, which is sponsored by the FRB Cleveland and consists of papers presented at an annual FRB Cleveland / *JMCB* conference

“US academic journal” = *e-JEL*-abstracted journal, not published by the Fed or a government agency, with one or more co-editors based at a US academic institution (a categorized list of journals is available from the author)

“Fed” authorship = *e-JEL* article abstract reports Fed employment (staff economist or visiting scholar) for at least one co-author

“US academic” authorship = *e-JEL* article abstract gives a US institutional affiliation (e.g. a university or think tank), other than the Fed or a government agency, for at least one co-author

“US academic” authorship articles are divided into three mutually exclusive and jointly exhaustive subsets:

“previous Fed affiliation” = Fed staff or visiting scholar position is reported on at least one co-author’s online c.v. or elsewhere

“no Fed affiliation” = a sufficiently complete online c.v. is available for at least one US academic co-author, and reports no previous Fed position

“no cv online” = no online *curriculum vitae* is available for any US academic co-author

The “Fed produced” ratio:

Numerator (Fed produced articles) = Articles in Fed journals + Articles in US academic journals with Fed authorship

Denominator (total US articles): Numerator + Articles in US academic journals with US academic authorship

The “Fed affiliated” ratio:

Numerator (broadly Fed-affiliated articles) = Articles in Fed journals + Articles in US academic journals with Fed authorship + Articles in US academic journals with previous-Fed-affiliated authorship

Denominator (total US articles for which previous Fed affiliation or its absence could be determined) = Numerator + Articles in US academic journals with “no Fed affiliation” authorship

(Both numerator and denominator exclude articles for which no US academic co-author’s c.v. is available online.)

APPENDIX TWO

Ratios of Fed influence for articles in the *JME*, *JMCB*, and *JMacro*, 1998-2002

Journal of Monetary Economics (260 articles)

Authorship was
53 Fed
32 Government bureau or foreign central bank
56 foreign university or other
119 US academic, of which
 62 had previous Fed affiliation
 38 had no Fed affiliation
 19 had no cv online
Fed produced: 53/172
Fed affiliated: 115/143

Journal of Money Credit and Banking (232 articles)

61 Fed
23 Government bureau or foreign central bank
53 foreign university or other
95 US academic, of which
 43 had previous Fed affiliation
 33 had no Fed affiliation
 19 had no cv online
Fed produced: 61/156
Fed affiliated: 104/137

Note: in this count, articles in the Fed-sponsored August (part 2) issues were not counted as Fed-produced unless an author listed the Fed as employer.

Journal of Macroeconomics (167 articles)

9 Fed
14 Government bureau or foreign central bank
77 foreign university or other
67 US academic, of which
 17 had previous Fed affiliation
 22 had no Fed affiliation
 28 had no cv online
Fed produced: 9/77
Fed affiliated: 26/48

APPENDIX THREE

Fed affiliations among current *JME* and *JMCB* editors*Journal of Monetary Economics**Editors:*

Robert G. King, Boston U

Advisor, FRB-Richmond,
July 1984-present.
Visiting Scholar, FRB-
Minneapolis, Jan.-June
1985

Charles I. Plosser, U Rochester

(No Fed affiliation known)

Associate Editors:

David K. Backus, NYU

Economist, FRB-
Minneapolis, 1988-1990.

Marianne Baxter, Boston U

Visiting Scholar, FRB-
Richmond, Summer 1997
Visiting Scholar, Board of
Governors, 1987

Mark J. Bilal, U Rochester

Visiting Scholar, FRB-
Minneapolis, 1984-1985

Ricardo J. Caballero, MIT

(no Fed affiliation known)
Visiting Scholar / Consultant,
Federal Reserve Board,
“multiple occasions”

Janice Eberly, Northwestern U

Visiting Scholar, “several” FRBs and
Board of Governors

Martin Eichenbaum, Northwestern U

Senior Consultant, FRB-Chicago

Sergio Rebelo, Northwestern U

Consultant to Board of Governors

Richard Rogerson, U Pennsylvania

Visiting Scholar, FRB-Minneapolis

Steven Williamson, U Iowa

Economist, FRB-Minneapolis, 1987-
1989Visiting Scholar, Board of
Governors, 2002Visiting Scholar, FRB-Richmond,
2002

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Journal of Money, Credit, and Banking

Editors

Paul Evans (Managing Ed.), Ohio State U	Visiting Scholar, FRB-San Francisco, Sept 1980-June 1981
Mark J. Flannery, U Florida	Research Adviser, FRB-Philadelphia, 1981-1984 Senior Economist, FRB-Philadelphia, 1980 Summer Research Associate, FRB-Boston (1973, 1974), and Board of Governors (1975)
Kenneth D. West, U Wisconsin	Visiting Scholar, FRB-Kansas City, 1998 Visiting Scholar, Board of Governors, 1988-90, 1992, 1993, 1996

Associate Editors

George J. Benston	Visiting Scholar, FRB Atlanta
Mark Carey	staff, BoG
Todd Clark	staff, FRB KC
Mario Crucini	ex staff, FRB Minneapolis
Wouter den Haan	Visiting scholar, FRB Chicago, 1997; BoG, 1994
William Dupor	Consultant, FRB Minn, June 1999
Martin Eichenbaum	Senior Consultant, FRB-Chicago
Robert P. Flood	ex BoG staff
Timothy S. Fuerst	visiting scholar, FRB Cleveland
Jeffrey C. Fuhrer	staff, FRB Boston
Michelle R. Garfinkel	ex staff, FRB St. Louis
Marvin Goodfriend	staff, FRB-Richmond Advisor, FRB Richmond, 1988-92; Visiting Scholar, BoG, 1991, 1992, 1994, and 1996; FRB New York, 1995
Iftekhar Hasan	visiting scholar, FRB Atlanta 2002
Patric H. Hendershott	ex staff, BoG
Donald D. Hester	ex consultant, BoG (dates unknown)
Joel F. Houston	ex staff, FRB Philadelphia 1986-87
Peter N. Ireland	ex staff, FRB Richmond, 1991-1994

George C. Kaufman	consultant, FRB Chicago
Kenneth N. Kuttner	staff, FRB NY (non-US-based; visiting economist and advisor, Bank of Canada)
Karen K. Lewis	ex staff, BoG, 1987, 1991, 1995
Deborah J. Lucas	Advisory Board, FRB New York
Loretta J. Mester	staff, FRB Philadelphia
Frederic S. Mishkin	ex Research Director, FRB-NY, 1994-97
Don Morgan	staff, FRB NY
Charles R. Nelson	Consultant, BoG, 1990-96
Edward Nelson	(staff, Bank of England)
David H. Papell	(U Houston; no Fed affiliation known)
Jonathan A. Parker	visiting scholar, FRB Minneapolis, 2002
Joe Peek	Visiting Economist, FRB Boston, 1985-2000
George Pennacchi	Research Associate, FRB Cleveland, 1995-96, 98-02
Paolo Pesenti	staff, FRB NY
Manju Puri	(Stanford U; no Fed affiliation known)
David Romer	ex visitor, BoG
Stephanie Schmitt-Grohe	ex staff, BoG, 1994-98
Anna J. Schwartz	(NBER; no Fed affiliation known)
Phillip E. Strahan	ex staff, FRB New York, 1993- 2001
Stephen J. Turnovsky	(U Washington; no Fed affiliation known)
Gregory F. Udell	Visiting Economist,, BoG, 1988- 1989; Consultant 1991-1992
Martin Uribe	ex staff, BoG, 1994-98
Christopher Waller	Visiting Scholar, FRB St.Louis, 1994-1995
Carl Walsh	Visiting Scholar, BoG, 1994, May ex staff, FRB SF, 1985 – 1987; current consultant

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ABOUT THE AUTHOR



Lawrence H. White is the F. A. Hayek Professor of Economic History at the University of Missouri—St. Louis. He is also Visiting Professor at the Queen’s University of Belfast. He received his AB in economics from Harvard in 1977 and his Ph.D. in economics from UCLA in 1982. He previously taught at NYU and the University of Georgia. White is the author of *The Theory of Monetary Institutions*, *Competition and Currency*, and *Free Banking in Britain*, and the editor of numerous volumes. His research on monetary regimes and banking history (often co-authored with George Selgin) has appeared in the *American Economic Review*, *Journal of Economic Literature*, *Journal of Monetary Economics*, *Journal of Money, Credit, and Banking*, and other leading journals. He is a co-editor of *Econ Journal Watch*. White’s webpage is www.umsl.edu/~whitelh. He contributes to the weblog Division of Labour (www.divisionoflabour.com).