COMMERCIAL LENDING BY ATHENIAN BANKS: CLIOMETRIC FALLACIES AND FORENSIC METHODOLOGY

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> . . . nothing is intelligible until it has been put into statistics.
> —Fernand Braudel (disapprovingly), *The Structures of Everyday Life*

HISTORIANS of the ancient economy, apparently influenced by contemporary economists' reliance on mathematically based models, have often resorted to "statistics" to provide for their conclusions a patina of mathematical precision or "scientific" objectivity.[1] The "ignominious truth," however, is that "there are no ancient statistics."[2] Our sources do, of course, report numbers, but these are not statistics: to have produced statistics, properly so called, ancient authors would have had to assemble, classify, and tabulate numerical data in a systematic fashion, to present significant information about a specific subject. Such material does not appear in antiquity. Modern historians' efforts to overcome this deficiency have confronted numerous difficulties, of which the greatest is the nature of the data base: the notorious unreliability of numbers transmitted over thousands of years by confused and sometimes contradictory manuscripts; the patent impossibility of assuming that material that has often survived by chance constitutes a statistically meaningful sampling; and the absence, for many issues, of any data at all.

Research relating to Athenian finance provides a compelling example of the attraction, and the perils, of quantitative studies. Here the lure of an econometric approach has been irresistible: some data are available, and by its nature this information is numerical, for credit requires the calculation of amounts expended and repaid, the determination of sums due, and the valuation of collateral and the means of repayment. Unfortunately, however, the evidence does not lend itself to mathematically precise use. As this paper will show, the fragmentary nature of the data has exacerbated scholars' subjectivity in selecting material deemed relevant, and efforts to marshal this evidence in a "scientific" manner have often resulted only in an "objective" wrapping for an entirely subjective analysis, yielding—at best—inconclusive conclusions.

1. See M. I. Finley, *Ancient History: Evidence and Models* (New York, 1986), pp. 27–29; cf. J. H. D'Arms, *Commerce and Social Standing in Ancient Rome* (Cambridge, Mass., 1981), p. vii.
2. A. H. M. Jones, *Ancient Economic History* (London, 1948), introduction.

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Worse still, the attraction of cliometric generalization has inhibited the use of an often-preferable "forensic" methodology that is available for the study of Athenian finance. We possess extensive evidence for Athenian business and banking in the form of litigants' presentations in the law courts. Since such speeches were delivered to juries numbering in the hundreds, and since persuasion was the speakers' only goal, it seems reasonable to posit—even in the absence of statistical data—that the occurrence of a general practice is confirmed by a litigant's claim that presupposes such a practice, even if we cannot establish the truth of the particular assertion—provided, of course, that the generalized phenomenon would have been known to Athenian jurors. For example, from Apollodorus' claim that he borrowed money from a banker to ransom a neighbor (Dem. 53.6–13) "we can be confident" that Athenian bankers did make loans to ransom people, even if we cannot establish that Apollodorus borrowed money for this purpose in this particular case.[3] Historians of Athenian law have long employed this methodology,[4] which we might term "forensic attestation."

This paper uses forensic evidence to resolve an important economic issue, the extent to which Athenian bankers provided credit for commercial loans. The prevailing view—that bankers played no appreciable role in such finance—is based on flawed "mathematical" studies. Forensic attestation reveals the substantial involvement of bankers in financing Athenian business.

I. THE PERILS OF CLIOMETRICS

Statistical analysis of Athenian trade and finance takes two forms: the "comparative percentage" methodology that is applied to two or more groupings of data; and the "conclusory generalization," which either determines—from the presence of a few examples—that a phenomenon was generally present, or concludes—from the absence of many examples—that a phenomenon was generally absent. Both approaches have been applied to the study of Athenian credit and banking with thoroughly unsatisfactory results.

The Subjectivity of Selection: Comparative Percentage Analysis

In contrast to the sort of "traditional" scholarship that explicitly conveys the subjective judgment of its author—and that often gains acceptance because of a particular scholar's perceived wisdom—cliometric analyses tend to be presented and perceived as "objective." Two relatively recent compilations, however, provide a good example of the subjectivity that has in fact characterized arithmetical studies of Athenian credit.[5] Both

3. W. E. Thompson, "A View of Athenian Banking," *MH* 36 (1979): 224.
4. See S. C. Humphreys, *Anthropology and the Greeks* (London, 1978), p. 11.
5. E. Erxleben, "Die Rolle der Bevölkerungsklassen im Aussenhandel Athens im 4. Jahrhundert v.u.Z.," in *Hellenische Poleis*, vol. 1, ed. E. C. Welskopf (Berlin, 1974), pp. 460–520, esp. 462–82;

studies attempted "a statistical test of Hasebroek's theories on the organization of trade."[6] One analysis found that in maritime finance the majority (more than 59%) of identifiable lenders at Athens were citizens; the other study found just the opposite—most of the identifiable lenders (over 63%) were noncitizens. The first established that virtually no lenders were active as traders; the other, that the majority of lenders (57%) were so engaged. Finally, noncitizens clearly dominated, or "certainly did not dominate," the conduct of Athenian foreign trade.

The explanation for these contradictions is simple. Each analysis was intended to prove a thesis: the authors set out either to uphold or to refute Hasebroek's model of Athenian trade, wherein Athenian citizens form a class of *rentiers* who provide funds for commerce, but only passively, with no personal involvement in trade itself (the actual merchants, on this view, are predominantly impoverished noncitizens who borrow because of need). Despite their divergent conclusions, both studies illustrate a problem inherent in the mathematical sampling of ancient sources: the selection and categorization of examples ultimately represents the subjective judgment of the selector. Even if random selection were attempted, it would here be impossible, since the source material does not lend itself to such a procedure: the speeches of the Attic orators are skillful contrivances that describe personal characteristics, not so that we can determine an individual's status, but for rhetorical purposes of their own.[7]

Furthermore, the universe from which the data are selected is determined by the selectors' knowledge, and the information marshaled may be far from exhaustive. Thus, in defining the characteristics of the Athenian maritime lenders, a scholar familiar with Athenian comedy uses a sampling in which comic sources are appropriately represented; another scholar, without such specialization, "takes no cognizance of New Comedy."[8] The same ancient individual, described in a single ancient source and in a single context, is for one cliometrician a well-capitalized businessman (ἔμπορος or ναύκληρος); for another, not a "businessman" at all but a mere passive creditor: obviously, the divergent judgments will cause the percentile relationships to differ in lists of

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S. Isager and M. H. Hansen, *Aspects of Athenian Society in the Fourth Century B.C.* (Odense, 1975), pp. 70–74. The methodological difficulties of such numerical analyses are further suggested by yet a further study, and variant interpretation, of the underlying data: M. V. Hansen, "Athenian Maritime Trade in the 4th Century B.C.: Operation and Finance," *C&M* 35 (1984): 71–92.

6. P. Millett, "Maritime Loans and the Structure of Credit in Fourth-Century Athens," in *Trade in the Ancient Economy*, ed. P. Garnsey, K. Hopkins, and C. R. Whittaker (Berkeley and Los Angeles, 1983), p. 37.

7. Cf. Millett, "Maritime Loans," p. 38; H. J. Wolff, "Methodische Grundfragen der rechtsgeschichtlichen Verwendung attischer Gerichtsreden," in *Atti del II Congresso internazionale della Società italiana di storia del diritto* (Florence, 1969), pp. 1–13 = *Opuscula Dispersa* (Amsterdam, 1976), pp. 27–39.

8. So L. Casson, who includes in his analysis relevant material from comedy: "The Athenian Upper Class and New Comedy," *TAPA* 106 (1976): 45, n. 40 = *Ancient Trade and Society* (Detroit, 1984), p. 63, n. 40.

investors and traders.[9] To tabulate such information does not negate, though it might obfuscate, the reality that such "statistical" tables present the same subjective views as would a conventional narrative.

Most significantly, however, these "comparative percentage analyses" invariably start from the common view that only private lenders are relevant, since banks supposedly provided little credit for nonconsumptive purposes.[10] If, however, bank monies from numerous depositors provided a substantial source of funding for Athenian trade, then studies that ignore the role of the banks and the characteristics of bank customers are necessarily inadequate. In fact, there is no sound basis for the prevailing "quantitatively" grounded view that Athenian banking had little or no role in business finance.

Generalization from Inadequate Evidence

It is easy, but often invalid and sometimes even irrational, to conclude that a practice at Athens was unimportant because it is attested in only a few isolated pieces of evidence. The evaluation of the banks' role in business finance has suffered especially from this habit of negative generalization, which has been used improperly to establish the following: (*a*) Athenian banking must have been unimportant because we know of few functioning bankers; (*b*) "productive credit" must have been an insignificant aspect of bank lending because so few "productive loans" are attested.

Although ample in comparison with some other periods and places in antiquity, our evidence for fourth-century Athenians by name and occupation is, taken absolutely, very limited. We are unable to identify even by name so much as one percent of the Athenians chosen to perform festival liturgies[11]—even though liturgical honors were reserved for those Athenians having the largest and most conspicuous property holdings; and we are able to name even this small number only after decades of intensive analysis of both long-known sources and newly discovered inscriptions. It would therefore seem ill-advised to judge the importance of a particular profession from the mere number of persons who are known to us as practitioners in the field.

Yet such judgments are freely made. The conclusion that "there was no real-estate market, properly speaking, in Athens at all" is alleged to be proven in part by the further assertion that "not one Athenian is known to us who earned his livelihood by dealing in real estate."[12] The

9. Cf. the treatment of Andocides (Lysias 6. 19, 49), Androcles (Dem. 35. 10, 49), Diodotus (Lysias 32. 4, 24), Leocrates (Lycurg. 1. 55), Nicippus (Dem. 50. 17), and Nicobulus (Dem. 37. 6, 46, 54) in Erxleben, "Rolle," pp. 473–77, and Hansen, "Athenian Maritime Trade," pp. 72–75.

10. Cf. R. Bogaert, "Banquiers, courtiers et prêts maritimes à Athènes et à Alexandrie," *CE* 40 (1965): 140–56; id., *Banques et banquiers dans les cités grecques* (Leyden, 1968), pp. 356–57, 411–12; Isager and Hansen, *Aspects*, pp. 88, 97; Erxleben, "Rolle," pp. 490–91.

11. J. K. Davies, *Athenian Propertied Families, 600–300 B.C.* (Oxford, 1971), pp. xxviii–xxx.

12. M. I. Finley, *Economy and Society in Ancient Greece*, ed. B. D. Shaw and R. P. Saller (London, 1981), p. 81.

apparent absoluteness of the statement—"not one Athenian is known to us . . ."—obscures the subjectivity inherent in determining the actual source of income for any ancient Athenian.[13] The same author uses the same method in his derisive dismissal of Athenian banking—and here it is still more clearly illegitimate. Given the relatively small population of fourth-century Athens, the highly fragmentary nature of the evidence, and the correspondingly reasonable expectation that even a popular profession might be poorly attested, I find it remarkable that more than thirty bankers at Athens from the fourth century alone are known by name and profession. It does not, however, seem remarkable to Finley: for him, partial proof of the "rudimentary" nature of Athenian banking is supplied by the assertion that "not thirty Athenians are known from the whole of the fourth century who are specifically identified as bankers, a reflection of the rarity of the occupation."[14]

But was Greek literature also rudimentary and rare? For all of the Greek world, for all of the centuries until the Byzantine period, we know fewer than three thousand authors;[15] and this not only includes every genre of writing, both poetry and prose, from the mere compilation of lists through lyric poetry to pornography, but also includes even anonymous writers whose work (or allusion thereto) has chanced to survive without specific identification of the author, although Greek authors did not generally seek to hide their identity—in contrast to the inherently confidential, even clandestine functioning of Athenian banking.[16] In many cases, moreover, even where there is a reference to an individual clearly involved in making loans, in holding documents, or in other practices generally regarded as banking activities, our sources would have no reason explicitly to identify that person as a banker (τραπεζίτης). Indeed, because Athens did not license banks or otherwise legally define "bankers," in actual usage "bankers" are frequently denominated by circumlocution as "the money-men" or "the lenders," thus reducing still further the validity of conclusions drawn from an arithmetical counting of persons explicitly named as "bankers" (τραπεζῖται).[17]

And yet the bankers are ubiquitous. From Finley's own specialization, the ὅροι-stones, there is a striking example: among the more than two

13. More than one Athenian seems to me likely to have "earned his livelihood by dealing in real estate"; Aristolochus appears even to have speculated in real-estate acquisition (Dem. 36. 50). The Athenians even had a term for speculators in rental real-estate (σταθμοῦχοι). See A. Boeckh, *The Public Economy of Athens*² (London, 1842; repr. 1976), p. 141.

14. *Economy and Society*, p. 73.

15. L. Berkowitz and K. A. Squitier, *Thesaurus Linguae Graecae: Canon of Greek Authors and Works*² (Oxford, 1986), p. xi.

16. Cf. R. Bogaert, *Grundzüge des Bankwesens im alten Griechenland*, Konstanzer althistorische Vorträge und Forschungen, vol. 18 (Konstanz, 1986), p. 16.

17. Thus Xenophon (*Vect.* 5.3) refers to bankers as οἱ γνώμῃ καὶ ἀργυρίῳ δυνάμενοι χρηματίζεσθαι; cf., e.g., Dem. 36. 29 οἱ περὶ τὰς ἐργασίας ὄντες ταύτας. Bogaert ignores this in suggesting (*Banques*, p. 80, n. 118) that Xenophon's phrase was intended to have broader application; cf. J. H. Thiel, *ΞΕΝΟΦΩΝΤΟΣ ΠΟΡΟΙ* (Amsterdam, 1922), p. 34, H. Knorringa, *Emporos: Data on Trade and Trader in Greek Literature from Homer to Aristotle* (Amsterdam, 1926; repr. 1961), p. 44, and E. Ziebarth, *Beiträge zur Geschichte des Seeraubs und Seehandels im alten Griechenland* (Hamburg, 1929), p. 73, all of whom correctly relate the phrase solely to "bankers."

hundred inscriptions recording creditors' interests, only two professions are represented by practitioners who are identified by name and occupation—medicine and banking.[18] "The banker Eucles" in fact appears, not as a creditor or a debtor, but in his professional capacity as the recipient of the written agreement underlying the debt. No one would argue that the single reference to a doctor among these inscriptions proves "the rarity of the occupation" (whose prominence in classical Greece is of course well attested by literary and epigraphical materials). Relatively frequent and (under the circumstances) often unexpected references to Athenian bankers cannot—even by aberrant statistical method—establish that bankers were absent from, or insignificant in, Athenian life.[19]

The same flawed methodology has been applied to the use of loan proceeds. Numerical analysis is said to demonstrate that Athenian bank loans were made predominantly for purposes of "consumption." For Bogaert, author of the standard work on Greek banking, cliometric analysis establishes that bank loans for consumption were "five times more numerous" at Athens than "productive" loans.[20] This finding has itself become the basis for extended argumentation, and sweeping conclusions, by others.[21] But the fragility of the underlying data base is instructive.

Bogaert's analysis is actually based on only eleven bank loans.[22] Here again the data selected reflects only the selector's own sense of appropriateness and relevance. Since Bogaert believes that Athenian banks did not make maritime loans, he ignores the relatively large number of "productive" loans that would necessarily be included in any analysis that recognized the Athenian banks' ongoing role in sea finance.[23] Furthermore, his choice of nonmaritime examples is far from exhaustive, and it is highly subjective even in the loans that it recognizes. For example, Bogaert includes only one citation from the speech preserved as Isocrates 17: close reading of the oration reveals numerous other examples (see below). Again, of the eleven loans in Bogaert's canon,

18. Banker: M. I. Finley, *Studies in Land and Credit in Ancient Athens* (New Brunswick, 1952; repr. 1985), p. 39 = *IG* 2^2 2741. Physician: Finley, *Land and Credit*, p. 135 = *IG* 2^2 2660.

19. Fourteenth-century Florence, a city where banking was clearly an important industry, provides a useful standard for comparison. Through the chronicle of Giovanni Villani (A.D. 1338), significant demographic and commercial data have been preserved concerning this economic colossus, which ranked among the five largest cities in Europe, employed thirty thousand workers in the woolen clothing industry alone, and monopolized banking and trade in Italy and internationally. At this time, the city had a total of some eighty banking and money-changing businesses; see G. A. Brucker, *Renaissance Florence* (Berkeley, 1983), pp. 51–56, and, generally, R. Goldthwaite, *I Medici e la banca nel quattrocento fiorentino* (Milan, 1980).

20. *Banques*, pp. 356–57, 411–12; cf. id., "La banque à Athènes au IVe siècle: État de la question," *MH* 43 (1986): 26.

21. See, e.g., M. I. Finley, *The Ancient Economy*² (Berkeley, 1985), p. 141; cf. ibid., p. 208, and Millett, "Maritime Loans," pp. 42–47.

22. *Banques*, p. 370, n. 391; cf. id., "La banque," pp. 24–26. J. Andreau correctly objects that if knowledge of bank loans were truly limited to eleven examples, it would be invalid to derive from such data Finley's sweeping characterizations of Greek financial practices: see "M. I. Finley, la banque antique et l'économie moderne," *ASNP* 7 (1977): 1144–48.

23. "Banquiers, courtiers," pp. 145–46; contrast section II below.

four involve a single "consumer," Timotheus, and are the subject of a single litigation (argued in Dem. 49). But Timotheus is a highly atypical Athenian "consumer": for an extended period in the fourth century, he was also a dominant political leader and naval commander.[24] His obtaining of credit could not be completely free of political or military considerations.

Even beyond the nature of the sampling, the subjectivity of Bogaert's analysis further belies the numerical dogma. To prove that loans were made almost exclusively for personal consumption, Bogaert merely asserts that only two of his eleven loans were for "productive" purposes. He does not, however, attempt to establish that the other nine loans were in fact made for "consumption." Not surprisingly, a later investigator concluded that the purpose of three of the loans could not be known and that one additional loan should actually be considered "productive":[25] on this interpretation, statistical analysis could be said to "prove" that only a minority of all bank loans were for consumption. Indeed, Thompson has argued that only one of Bogaert's examples, a loan to a bank-owner (Apollodorus) providing funds "to ransom a friend," can properly be considered a loan for consumption.[26] If we wished to generalize from inadequate evidence, this finding could justify a claim that Athenian bank loans were "overwhelmingly" directed away from consumption, since Bogaert's "thorough study" was able to produce "only a single example" of a loan for personal use.

Furthermore, even this single example is suspect, since it is not without business coloration. By characterizing Nicostratus as a social intimate who failed to repay a loan,[27] the bank-owner perhaps better justified his own extreme efforts to collect the alleged debt; but his court presentation nevertheless reveals the business relationship that complemented their social dealings. Apollodorus employed Nicostratus "for administration and management" of his farm (Dem. 53. 4): indeed, during Apollodorus' lengthy absences, Nicostratus had been left in charge of every aspect of the property (ibid.). And even if the defendant had been "only" a friend, the loan still would not necessarily be characterized properly as a loan made for "consumption": since Athenian bankers' cultivation and retention of friends was explicitly recognized as an important business asset (Isoc. 17. 2), it was commercially vital for a bank-owner to preserve such social relationships.[28] If this financing is not to be characterized as a loan made for "consumption," there is—

24. See K. Klee, "Timotheus (3)," *RE* 6A (1937): 1324; G. L. Cawkwell, "Notes on the Social War," *C&M* 23 (1962): 45–49. Still useful is C. Rehdantz, *Vitae Iphicratis Chabriae Timothei* (Berlin, 1845).

25. Thompson, "A View of Athenian Banking," p. 230.

26. Ibid., p. 231.

27. Dem. 53. 4 γνωρίμως μέν μοι εἶχεν καὶ πάλαι, . . . καὶ μᾶλλον ἀλλήλοις ἤδη ἐχρώμεθα διὰ τὸ γείτονές τε εἶναι καὶ ἡλικιῶται.

28. G. Herman, *Ritualised Friendship and the Greek City* (Cambridge, 1987), p. 94, assumes that "friendship" and profit-oriented commercial practice were incompatible; in fact, at Athens itself there are examples of loans at interest to relatives and friends, including several of which Herman is aware (cf. ibid., p. 94, n. 69).

mirabile dictu!—not a single Athenian bank loan positively known to have been intended for consumption.

The orthodox view of the purpose of bank loans is supposedly confirmed by yet other statistical studies; but the confirmation is derived from the same flawed use of the same flawed method. Millett asserts that from "[his] own catalogue of almost nine hundred loan transactions of all types, drawn from the whole of classical Greece, there are perhaps five—excluding maritime loans—which might conceivably be classed as productive."[29] In fact, however, it is not the hundreds of items, but the five, from which the sweeping generalization is drawn: "The case could hardly be clearer, and the five exceptions do serve to prove the rule that Greek credit was overwhelmingly unproductive."[30] The methodological excess also could hardly be clearer. Maritime loans themselves, of course, constitute the overwhelming majority of credit transactions of which we know enough to evaluate the purpose—and even Millett is forced to admit that these loans were "apparently productive": as evidence for "productive borrowing in a society supposedly dominated by a profoundly unproductive mentality, they are an embarrassment."[31]

But even if we ignore the "embarrassment" caused by these dozens of nonconforming examples, one massive group of loans remains, the ὅροι that number well over two hundred separate inscriptions attesting to creditors' property interests in Athenian real-estate. These secured transactions have received enormous scholarly attention, not least from Finley and his student Millett, who perhaps are the two scholars most insistent on the primacy of consumption credit at Athens. These loan transactions, which represent about a quarter of all known financings from the classical Greek world, are overwhelmingly from Attica and fall chronologically—where this can be determined—between the beginning of the fourth century and the first part of the third. They constitute a corpus larger in number, if not in economic significance, than even the group of maritime loans that both Finley and Millett, with varying explanations, have been forced to classify as "productive."[32]

How many of these ὅροι-loans can be shown to have been made for consumption? Not a single one. As Finley recognizes, "the *horoi* maintain almost complete silence about the reasons for the indebtedness they publicised."[33] But the silence is not total, although again the limited information available is "embarrassing." Millett is able to identify the purpose of at least one of the stones (Finley no. 3), and this single example he finds "productive."[34] Even new discoveries dog the old

29. "Maritime Loans," p. 43.
30. Ibid.
31. Ibid., pp. 42, 44.
32. Finley, *Land and Credit*, p. 87: "productive" because used "to purchase or improve income-producing property." Millett, "Maritime Loans," p. 42: "apparently productive" because "they seem to have been contracted in order to increase the existing wealth of the borrower."
33. *Economy and Society*, p. 70; similarly, id., *Land and Credit*, pp. 81, 83–84.
34. "Maritime Loans," pp. 43, 188 n. 15; ὅρος no. 3 in Finley, *Land and Credit* = *IG* 2^2 2762 (Dittenberg. *SIG* 1194).

orthodoxy. A decade after the original publication of Finley's monograph on the ὅροι, another embarrassing stone was reported: in language paralleling that of "Finley number 3," it too confirmed a "productive" purpose.[35]

But the classification of a loan's purpose finally and necessarily remains a subjective process. The fungibility of money means that the ultimate use of funds can never certainly be determined from their immediate application: a loan secured by personal assets or used directly for social purposes may free other money for business use or may actually be related to a borrower's commercial activity; the tendency for private financial transactions to remain confidential will limit the information available even to contemporary observers. What is required, then, is not so much categorization as a flexibility that will seek to understand the Athenian process of credit-extension in terms appropriate to the fourth century. If examples are to be categorized, the categories should correspond to ancient, not modern, terms and concepts. Modern scholars, however, actually warn against "the invention of categories to match up with the types of loans found in the sources" and insist on analyzing Athenian loans through modern (or actually proto-modern) terminology.[36]

Even for present-day bankers, to whom data are generally available in smothering overabundance, determining the purpose of a loan presents substantial theoretical and practical conundrums. For example, banking regulations often limit the percentages of loans of different types that may legally be provided by certain kinds of institutions. Thus "thrift institutions" in the United States have been required to invest the bulk of their funds in "real-estate loans," with a strict limitation on the percentage of their assets that may be committed to "consumer loans."[37] But the differentiation of a "real-estate loan" from a "consumer" or "commercial loan" is often quite arbitrary and ultimately dependent on subjective criteria. There is, for example, a dilemma in classifying a bank's loan to a commercial business when the financing is secured by a mortgage on real property and periodic rental receipts are expected to provide the funds for servicing the loan. Is this a commercial or a real-estate credit?

Modern banking organizations have been unable to resolve the problems inherent in determining the purpose of a loan. In the late 1960s in the United States, the Federal Reserve Board strongly discouraged banks

35. *Arch. Delt.* 17 (1961–62), *Khronika* 35, no. 4; Millett, "Maritime Loans," p. 188, n. 15, concedes that it is a "possible" analog to Finley no. 3.

36. Millett, "Maritime Loans," p. 43. For an effort to relate categorization to the "types of loans found in the sources," see H. W. Pleket's useful comments, in review of Bogaert, *Banques*, in *Mnemosyne* 24 (1971): 433–37.

37. Under laws and regulations presently in force, federally chartered savings institutions cannot provide "consumer loans" in excess of 30 percent of the institution's total assets. Yet certain loans likely to be for consumer purposes are not included in the category of "consumer loans"—e.g., "home equity loans," which are secured by the equity in the borrower's residence but not necessarily used for the purpose of home improvement.

from extending credit for the purpose of financing corporate acquisitions (so-called "acquisition loans"). The fungibility of money meant, however, that the expansion of "normal" credit-lines might make available for acquisition purposes corporate funds that were otherwise available (but perhaps unneeded) for ongoing business operations. Serious disputes, never resolved, arose over the purpose of credit extension.[38] In Brazil, at about the same time, similar questions, also never fully resolved, arose as to the types of loans permitted to various financial institutions: the *banco commercial,* the *banco de investimento,* the *financeira,* and the *companía de crédito imobiliário* all could accept deposits and provide specified but never fully clarified types of loans.

In the case of ancient Athens, the reconstruction of economic process (together with the "antiquarian" goal of determining the underlying "facts") necessarily precedes meaningful analysis of economic and social issues.[39] Even cliometric studies will ultimately benefit from the overtly analytical (and factually oriented) tools offered by "forensic attestation."

II. FORENSIC ATTESTATION: AN ALTERNATIVE APPROACH

Forensic analysis reveals a credit structure at Athens manifestly in conflict with the cliometric conclusions examined above. Litigants' claims presuppose the ongoing provision of commercial loans by banks in their normal business activity. For example, the son of Sopaeus demands the return of funds allegedly on deposit with the bank of Pasion, who replies by insisting (inter alia) that bank funds, far from constituting deposits, actually have been used to make or secure commercial loans (Isoc. 17): whatever his obligation to repay the alleged deposits, the banker would certainly not claim, without elaboration, that monies were used for business credit if the explanation would contradict the jurors' general knowledge or expectation of a bank's activities. Similarly, when the Athenian general Timotheus denies that he is personally liable for the repayment of a bank loan, since the financing was in fact a business advance to a trader for which Timotheus did not provide a guarantee or otherwise legally obligate himself (Dem. 49), the extent of the officer's actual involvement may be beyond our knowledge—but his contention compels the inference that Athenian banks did not avoid making commercial loans.

Although interpreting litigators' assumptions—like selecting and compiling numerical data—involves some subjectivity, the validity of the conclusions drawn from forensic attestation can be tested directly and independently: one need only read the texts cited. Generalizations based on cliometric analysis can be challenged only if the reader has the time

38. These definitional difficulties presumably are among the reasons that—after the resolution of the "credit crunch" of the late 1960s—the U.S. Federal Reserve Board has sought to avoid channeling financial resources into specifically categorized transactions.

39. On the integration of philosophical history (emphasizing the interpretation of events) and antiquarian history (focusing on the collection of facts), see A. Momigliano, "Ancient History and the Antiquarian," *JWI* 13 (1950): 285–86 = *Studies in Historiography* (London, 1966; repr. 1985), pp. 1–2.

and expertise to compile all the data anew (which of course rarely happens), or if (as here) the statistical conclusions directly contradict the premises that clearly underlie the arguments made by Athenian litigants. The following cases show the conflict between econometric studies' sweeping conclusions about the absence of commercial financing by banks, and the courtroom arguments that presuppose such loans.

Other People's Money: The General Disclaims a Business Loan (Dem. 49)

Pasion the banker advanced 1,750 drachmas to Philondas. These funds were used to pay transportation charges for the shipment of lumber by sea from northern Greece to Athens. The creditor, seeking to hold Timotheus personally responsible, asserted that the funds were advanced to Philondas at Timotheus' prior arrangement; that the loan was understood really to be Timotheus'; that in any case the lumber was taken to the general's house in the Piraeus. But in denying responsibility for repayment of the loan, Timotheus insisted that the advance was made to Philondas alone, strictly as a business financing ("for the sake of trade").[40]

We cannot ascertain the "truth" underlying these variant contentions. The text, however, necessarily presupposes an Athenian audience's willingness to believe that a banker would provide business financing. In his efforts to establish Timotheus' personal use of the loan, the creditor appealed to the jurors' personal knowledge and sought to construct a proof from reasonable assumption and argumentation (34 ἐκ τεκμηρίων), directing such argumentation specifically to this loan. But at no point did he deprecate as inherently incredible Timotheus' contention that the loan was made merely "for the sake of trade."

If Athenian banks were known to specialize in "consumer" loans and to engage only very rarely, if ever, in business-related loans, then the creditor, in an argument explicitly relying on "probabilities," would necessarily have suggested that "the pattern of Greek moneylending for non-productive purposes is indubitable."[41] Instead, the creditor confirms the opposite. Apollodorus actually explains how a loan "for the sake of trade" would normally have been handled by the bank (35): "If the lumber had been brought in for the sake of trade . . . do you think that my father [the banker Pasion] . . . would have permitted Philondas to convey the lumber out of the harbor—when it was pledged to him as security for the freight-charges? Would he not have guarded it, stationing there somebody from his staff (τινα τῶν οἰκετῶν), and taken the revenue from the lumber as it was sold, until he had recovered his advances?"

40. Ἐμπορίας ἕνεκα: Dem. 49. 35, 36, trans. A. T. Murray (Loeb). Timotheus apparently characterized Philondas as "a businessman who imported the timber in order to sell it": Thompson, "A View of Athenian Banking," p. 231.

41. Finley, *Ancient Economy*^{2}, p. 141.

Bank Financing for Maritime Trade and Traders (Isoc. 17)

The case reported at Isocrates 17 focuses entirely on the relationship between a banker, Pasion, and a client (known to us only as the "son of Sopaeus") deeply involved in maritime commerce. Indeed, the transactions described—regardless of the protagonists' differing claims and interpretations—presuppose and confirm extensive commercial activity by the bank. No fewer than five credit extensions, ranging from three hundred drachmas to seven talents, are alleged, and a sixth can be added if the two loans of six talents each described at sections 12 and 50 are in fact separate transactions.

The gravamen of the case is the client's claim to repayment of substantial sums allegedly deposited with the banker Pasion; the banker, for his part, insists that the client is indebted to the bank for various financings, primarily related to maritime finance, and in amounts "frighteningly" large.[42] As usual in such cases, the speech is filled with arguments from probability and with "proofs" (τεκμήρια) based on plausibility.[43] But though the client disputes his liability for these alleged borrowings, he nowhere argues that it was inconceivable or unlikely or even rare for an Athenian banker to extend credit to facilitate maritime trade.

Indeed, the entire relationship is set in the context of business activity and commercial finance. The bank's client, an important person in the Bosporan kingdom, is clearly and significantly involved in maritime trade. He reports coming to Athens for trade (κατ' ἐμπορίαν) with two ships filled with grain and with considerable money (4; cf. 1). His involvement in maritime commerce is chronicled: we find him lending large sums on a Delian cargo ship (42); with the aid of the bank he uses funds that were otherwise being conveyed to the Pontus (35–37); and when he demands return of his own deposits, it is to facilitate a trip to Byzantium (8). He claims to have played a major role in supplying Athens with food in times of scarcity when the Bosporans sent away empty the ships of the "other merchants" (57 ἔμποροι). When the Bosporan king allegedly wishes to be helpful, he summons persons active in maritime operations (ναύκληροι) and asks them (52) to aid the client and not to "stand aside while [he is] being treated unjustly." The appeal is comprehensible only if the bank's client was engaged in maritime commerce, a participant in the so-called "world of the *emporion.*"[44]

Not surprisingly, then, the client reports a virtual loan portfolio of banking credits, acknowledged and disputed, involving a spectrum of

42. Cf. 17. 42: the potential lender, Philippus, κληθεὶς καὶ ὑπακούσας, δείσας τὸ μέγεθος τοῦ κινδύνου ἀπιὼν ᾤχετο. The banker provided the credit.

43. See, e.g., 17. 31, 36, 53 (τεκμήρια), 46, 54 (εἰκός).

44. Reference to "the ἐμπόριον" has become scholarly shorthand for the physical, financial, and ideological sphere encompassing businessmen involved in maritime trade and finance; see J. Vélissaropoulos, "Le monde de l'*emporion,*" *Dialogues d'histoire ancienne* 3 (1977): 61–85; L. Gernet, *Droit et société dans la Grèce ancienne* (Paris, 1955), p. 185, n. 5.

maritime commerce. First, as a result of the client's substantial financing of a cargo vessel allegedly owned by a Delian, he required surety for seven talents—a very large sum, but one that Pasion was able to provide through Archestratus "from the bank" (17 τὸν ἀπὸ τῆς τραπέζης): from an economic aspect, provision of a guarantee represents no less an extension of credit than does a direct loan. Another example of indirect bank financing for maritime trade is related at sections 35–37, where the client reports that he borrowed three hundred staters from Stratocles, but only after the bank, at Stratocles' request, guaranteed both principal and interest. For the bank, this guarantee was of course the functional equivalent of any other form of loan: if repayment were not made as agreed, bank funds would be expended to honor the guarantee,[45] and the banker would have to collect this loan from the beneficiary of the guarantee. Again, nothing in the speech suggests that the transaction was regarded as unusual in any way—though it would have been to the client's advantage to brand the transaction implausible if he could have done so.

Even when the client does dispute the actual receipt of a loan—three hundred drachmas that he had previously acknowledged (38)—he attempts to explain away his prior admissions, instead of arguing that an Athenian bank would probably not have extended credit to a foreign businessman. Although we do not know the alleged purpose of this loan, the fungibility of money and the client's financial involvement in trade suggest that any funds loaned to him would have been available for business purposes, either directly or by freeing some of his other resources for commerce.

Other extensions of credit are mentioned. Although the client admits that he "permitted" his associate Hippolaides to borrow at the bank (38), he denies Pasion's claim that he himself (with his associate Menexenus) had borrowed a further six talents from the bank (12).[46] But again the actual nature of the advance is of no importance: the failure of the client to treat the disputed loan as "improbable" is critical. Funding of such magnitude could not have been intended for "consumption," especially in view of the involvement of Menexenus, the scion of one of the "wealthiest and most distinguished" Athenian houses.[47]

45. Financing, as here, through suretyships and guarantees of repayment, rather than through the actual handling of bulky coins or bullion, enormously increased the Athenian bankers' capacity for providing credit. Finley failed to take such mechanisms into account when he insisted on the "rudimentary" nature of Athenian credit resulting from the absence of "a clearance procedure and, to a lesser extent, negotiable paper" (*Economy and Society*, p. 74).

46. The funds had been disbursed by Cittus, who was at the exchange-counter and was allegedly "persuaded" and "bribed" to let them take six talents of silver. The banker would have insisted that the transaction was an actual loan (cf. Thompson, "A View of Athenian Banking," pp. 232–33), not a theft (κλοπή), as the client characterizes the banker's position. This comports with Athenian litigants' tendency to present a contractual dispute as the rhetorical equivalent of "theft"; cf. D. Cohen, *Theft in Athenian Law*, Münchener Beiträge zur Papyrusforschung und antiken Rechtsgeschichte, vol. 74 (Munich, 1983), p. 23.

47. Davies, *Athenian Propertied Families*, p. 145.

A Routine Maritime Financing (Dem. 33)

Heraclides' bank extended a loan of three thousand drachmas to Apaturius, a ship-owner (ναύκληρος) from Byzantium, in order to permit him to repay commercial-maritime creditors seeking to execute on his vessel (7). Although this financing would appear a prime example of maritime lending by a bank, it has actually been counted in one statistical analysis as an example of nonproductive credit, since it was used merely for "the repayment of a loan."[48] Such number-counting ignores the reality set forth clearly, in context, in the courtroom presentation.

The financing was arranged in the ἐμπόριον, the commercial portion of the Piraeus,[49] by an individual engaged full-time in maritime finance after years as a sea-going merchant (4); he was particularly active in trade between Byzantium and Athens (5). This bank transaction was not an isolated case: the merchant-financier had an established relationship with the banker (7 χρώμενος Ἡρακλείδῃ τῷ τραπεζίτῃ). The bank's ongoing involvement in maritime finance is further confirmed by its skill in fashioning the loan,[50] and by its subsequent success in effectuating repayment through the sale of the security (12).

But all this evidence is ignored by the cliometric approach. The speech not only presupposes, but indeed explicitly and implicitly describes, lending activity in the ἐμπόριον for which the banks are an ongoing and natural source. For the arithmetician, however, the financing is merely another "nonproductive loan" to be statistically cataloged.

In contrast to the conclusions reached in econometric studies, the ancient arguments considered here presuppose the involvement of Athenian banks in commercial financing. Despite the popular assumption that "nothing is intelligible until it has been put into statistics," modern arithmetical interpretations must not be granted priority over the careful analysis of direct evidence in its societal context.[51]

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48. See Bogaert, "La banque," p. 28. On the economic and cultural characteristics of the "maritime loan," see E. E. Cohen, "A Study in Contrast: 'Maritime Loans' and 'Landed Loans' at Athens," in *Symposion (1988): Akten der Gesellschaft für griechische und hellenistische Rechtsgeschichte* (Cologne, forthcoming).

49. See above, n. 44.

50. Note the personal guarantee by a third party, participation with another lender, written loan-agreement, and the taking of the ship as security. There is no basis for Bogaert's assertion ("La banque," p. 28) that the financing was made against the personal guarantee alone: indeed, the bank loan was repaid with funds generated by the sale of the vessel; the speaker's "purchase" of the ship is specifically referred to as an "amendment" of the terms of the transaction (presumably in contrast to the form of security-interest held by the original lenders, who on default had not been able promptly to obtain possession of the vessel; note the imperfect in 33. 6, ἐνεβάτευον).

51. I am grateful to the referees and Editor of *CP* for helpful advice on language and substance.