

ECO 2210Y

Topics in the Economic and Social History of Later Medieval and Renaissance Europe

Topic No. 8: Money, Moneys-of-Account, and Coinage in Medieval and Early-Modern Europe

READINGS: all readings are listed in chronological order of publication.

A. General Studies

1. W.A. Shaw, The History of Currency, 1252 to 1894 (London, 1896).
2. Émile Bridrey, La Théorie de la monnaie au XIVe siècle: Nicole Oresme: étude d'histoire des doctrines et des faits économiques (Paris, Giard et Brière, 1906).
- ** 3. Marc Bloch, 'Le problème de l'or au moyen âge,' Annales d'histoire économique et sociale, 5 (1933), reissued as 'The Problem of Gold in the Middle Ages,' in Land and Work in Medieval Europe: Selected Papers (London, 1967), pp. 186-229.
- * 4. Michael Postan, 'The Rise of a Money Economy,' Economic History Review, 1st ser. 14 (1944), reprinted in both:
 - (a) M. Postan, Essays on Medieval Agriculture and General Problems of the Medieval Economy (Cambridge, 1973), pp. 28-40.
 - (b) E.M. Carus-Wilson, ed., Essays in Economic History, 3 vols. (London, 1954-62), Vol. I, pp. 1-12.
5. Robert S. Lopez, 'An Aristocracy of Money in the Early Middle Ages,' Speculum, 28 (1953), 1 - 43, reprinted in Robert S. Lopez, The Shape of Medieval Monetary History, Variorum Reprints CS247 (London: Variorum, 1986).
- * 6. Marc Bloch, Esquisse d'une histoire monétaire de l'Europe, Cahiers des Annales no. 9 (Paris, 1954). Mainly medieval (published posthumously).
7. Robert S. Lopez, 'Settecento anni fa: Il ritorno all'oro nell'Occidente duecetesco Indice,' Quaderni della Rivista storica italiana, 4 (1955), 5-78, and 81-87 [Rivista storica italiana, 65 (1953), 19-55, 161-98], reprinted in Robert S. Lopez, The Shape of Medieval Monetary History, Variorum Reprints CS247 (London: Variorum, 1986).
- ** 8. Robert S. Lopez, 'Back to Gold, 1252,' The Economic History Review, 2nd ser., 9 (1956), 219-40, reprinted in Robert S. Lopez, The Shape of Medieval Monetary History,

Variorum Reprints CS247 (London: Variorum, 1986).

- ** 9. Carlo Cipolla, Money, Prices, and Civilization in the Mediterranean World (Princeton, N.J., 1956).
10. Robert S. Lopez, 'Moneta e monetieri nell'Italia barbarica,' in Settimane di studi del Centre italiano di studi sull'altro medioevo VIII (Spoleto, aprile 1960): Moneta e scambi nell'altro medioevo (Spoleto, 1961), 57-88, reprinted in Robert S. Lopez, The Shape of Medieval Monetary History, Variorum Reprints CS247 (London: Variorum, 1986).
- * 11. Sir Albert Feavearyear, The Pound Sterling: A History of English Money, 2nd rev. edn. by E.V. Morgan (Oxford, 1963), especially chapters 1-3 for the medieval period.
12. Peter Spufford, 'Coinage and Currency,' in M. M. Postan et al., eds., Cambridge Economic History of Europe, Vol. III: Economic Organization and Policies in the Middle Ages (Cambridge, 1963), pp. 576-602.
13. E. Victor Morgan, A History of Money (New York and London: Penguin, 1965), chapters 8-9, pp. 177-226.
14. Robert S. Lopez, 'Prima del ritorno all'oro nell'Occidente duecentesco: i primi denari grossi d'argento,' Rivista storica italiana, 79 (1967), 174-81, reprinted in Robert S. Lopez, The Shape of Medieval Monetary History, Variorum Reprints CS247 (London: Variorum, 1986).
- * 15. Fernand Braudel, Capitalism and Material Life, 1400-1800 (London, 1967), chapter 7: 'Money,' pp. 325-72. A revised version appears in no. 13 below.
16. Pierre Vilar, Ora y moneda en la historia, 1450-1920 (Barcelona, 1969); published in English trans. as A History of Gold and Money, 1450-1920, trans. Judith White (London, 1976).
17. E. Fournial, Histoire monétaire de l'occident médiéval (Paris, 1970). Chiefly on medieval France.
18. Frank C. Spooner, The International Economy and Monetary Movements in France, 1493-1725 (Harvard Economic Studies no. 138, Cambridge, Mass. 1973).
19. Robert S. Lopez, 'Une histoire à trois niveaux: la circulation monétaire,' in Méthodologie de l'histoire et des sciences humaines: Mélanges en l'honneur de Fernand Braudel, Vol. 2 (Toulouse: Privat, 1973), pp. 335-42, reprinted in Robert S. Lopez, The Shape of Medieval Monetary History, Variorum Reprints CS247 (London: Variorum, 1986).
20. Frederic C. Lane, 'The First Infidelities of the Venetian Lire,' in The Medieval City, ed. H.A. Miskimin, David Herlihy, and A. L. Udovitch (New Haven and London: Yale University Press, 1977), pp. 43-63, reprinted in Frederic C. Lane, Studies in

Venetian Social and Economic History, ed. Benjamin Kohl and Reinhold Mueller, Variorum Reprints CS 247 (London: Variorum Reprints, 1987).

- * 21. Fernand Braudel, Civilization and Capitalism, 15th - 18th Century, Vol. I: The Structures of Everyday Life: The Limits of the Possible, trans. and revised by Sian Reynolds (New York, 1981), chapter 7: 'Money,' pp. 436 - 478. See no. 9 above.
- 22. Peter Spufford, 'Le rôle de la monnaie dans la révolution commerciale du XIIIe siècle,' in John Day, ed., Études d'histoire monétaire, XIIe - XIXe siècles (Lille and Paris, 1984), pp. 355-96.
- * 23. Frederic C. Lane and Reinhold Mueller, Money and Banking in Medieval and Renaissance Venice, Vol. I: Coins and Moneys of Account (Baltimore, The Johns Hopkins Press, 1985).
- * 24. Peter Spufford, Handbook of Medieval Exchange (London, 1986), Introduction, pp. xix - lxiv.
- 25. M.-T. Boyer-Xambeu, G. Deleplace, L. Gillard, Monnaie privée et pouvoir des princes: L'économie des relations monétaires à la Renaissance (Paris, 1986). Republished in English translation as Private Money and Public Currencies: the 16th Century Challenge, translated by Azizeh Azodi (from Monnaie privée et pouvoir des princes), with a forward by Charles Kindleberger (New York and London: M.E. Sharpe, 1994).
- 26. Philip Grierson and Mark Blackburn, Medieval European Coinage, Vol. I: The Early Middle Ages (Cambridge and New York: Cambridge University Press, 1986).
- 27. N. J. Mayhew and Peter Spufford, eds., Later Medieval Mints: Organisation, Administration, and Techniques (Eighth Oxford Symposium on Coinage and Monetary History, British Archeological Reports International Series no. 389, Oxford, 1988).
- ** 28. Peter Spufford, Money and Its Use in Medieval Europe (Cambridge, 1988).
- 29. W. C. Jordan, 'Women and Credit in the Middle Ages: Problems and Directions,' Journal of European Economic History, 17 (Spring 1988), 33-62.
- * 30. Pamela Nightingale, 'Monetary Contraction and Mercantile Credit in Later Medieval England,' Economic History Review, 2nd ser. 43 (November 1990), 560 - 75.
- 31. John F. Chown, A History of Money: From AD 800 (London and New York: Routledge, 1994), chapters 1- 4 (pp. 3-40). Not very scholarly, and rather disappointing.
- 32. Glyn Davies, A History of Money: From Ancient Times to the Present Day (Cardiff: University of Wales Press, 1994), chapter 1 (pp. 1-2) and 4 (pp. 112-75). Very good survey; much better book than the Chown.

- * 33. John H. Munro, 'Patterns of Trade, Money, and Credit,' in Thomas A. Brady, jr., Heiko O. Oberman, and James D. Tracy, eds., Handbook of European History, 1400-1600: Late Middle Ages, Renaissance and Reformation, Vol. I: Structures and Assertions (Leiden/New York/Cologne: E.J. Brill, 1994), pp. 147-95.
34. Marie-Thérèse Boyer-Xambeu, Ghislain Deleplace, and Lucien Gillard, Private Money and Public Currencies: the 16th Century Challenge, translated by Azizeh Azodi, from Monnaie privée et pouvoir des princes: L'économie des relations monétaires à la Renaissance (Paris, 1986), with a forward by Charles Kindleberger (New York and London: M.E. Sharpe, 1994).
35. Michael North, Das Geld und seine Geschichte: vom Mittelalter bis zur Gegenwart (Munich: C.H. Beck, 1994).
36. Richard Duncan-Jones, Money and Government in the Roman Empire (Cambridge and New York: Cambridge University Press, 1994).
37. Michael North, ed., Von Aktie bis Zoll: Ein historische Lexikon des Geldes (Munich: Verlag C.H. Beck, 1995). An encyclopedia-dictionary collection with over a thousand entries, some as fairly long essays, that define and explain the historical significance of various terms, institutions, coins, moneys, credit instruments etc. in monetary and financial history. An English language edition is planned (since many of the essays/entries were originally written in English)
38. Kenneth W. Harl, Coinage in the Roman Economy, 300 B.C. to A.D. 700, Ancient Society and History series (Baltimore and London: Johns Hopkins University Press, 1996). See the review by Alan Stahl in Speculum: A Journal of Medieval Studies, 74:2 (April 1999): 423-24).
39. David Hackett Fischer, The Great Wave: Price Revolutions and the Rhythm of History (Oxford and New York: Oxford University Press, 1996). See my rather unfriendly review of this book, on the internet: reviewed for *EH.Net Review* <ehreview@eh.net>, 24 February 1999.
40. Henry Maguire, 'Magic and Money in the Early Middle Ages,' Speculum, 72:4 (October 1997), 1037-54.
41. Joel Kaye, Economy and Nature in the Fourteenth Century: Money, Market Exchange and the Emergence of Scientific Thought, Cambridge Studies in Medieval Life and Thought, 4th series 35 (Cambridge and New York: Cambridge University Press, 1998).
42. S.M.H. Bozorgnia, The Role of Precious Metals in European Economic Development: From Roman Times to the Eve of the Industrial Revolution, Contributions in Economics and Economic History no. 192 (Wesport, Conn. and London: Greenwood Press, 1998). An absolutely terrible book, which should be avoided like the Plague. See my review in Journal of Economic History, 59:4 (Dec. 1999).

B. Specialized Studies on Money, Monetary Weights, Coinages, Debasements, and Moneys-of-Account

1. A. Engel and R. Serrure, Traité de numismatique du moyen âge, 3 vols. (Paris, 1891-1905). Still the classic work, now reprinted by Forni, Bologna, 1970.
2. Luigi Einaudi, 'Teoria della moneta immaginaria nel tempo da Carlomagno alla rivoluzione francese,' Rivista di storia economica, 1 (1936), 1-35; republished in English translation as: 'The Theory of Imaginary Money from Charlemagne to the French Revolution,' in F.C. Lane and J.C. Riemersma, eds., Enterprise and Secular Change (New York, 1953), pp. 229-31. Read with care, and do not accept all his views uncritically, without reading some of the following on moneys-of-account.
- ** 3. Hans Van Werveke, 'Monnaie de compte et monnaie réelle,' Revue belge de philologie et d'histoire, 13 (1943), 123-52; reprinted in his Miscellanea Mediaevalia (Ghent, 1968), pp. 133-58. The best statement of the alternative view, which has influenced most of the subsequent literature; and in my view, it is far more convincing than Einaudi.
- * 4. Robert Lopez, 'The Dollar of the Middle Ages,' Journal of Economic History, 11 (1951), 209-34.
- * 5. Robert Lopez, 'Back to Gold, 1252,' Economic History Review, 2nd ser. 9 (1956), 219-40.
- * 6. Peter Spufford, 'Coinage and Currency,' in M. M. Postan et al., eds., Cambridge Economic History of Europe, Vol. III: Economic Organization and Policies in the Middle Ages (Cambridge, 1963), 576-602.
- * 7. Carlo Cipolla, 'Currency Depreciation in Medieval Europe,' Economic History Review, 2nd ser., 15 (1963), 413-22. Reprinted in Sylvia Thrupp, ed., Change in Medieval Europe: Europe North of the Alps, 1050-1500 (New York, 1964), 227-36.
- * 8. Herman Van der Wee, The Growth of the Antwerp Market and the European Economy, 14th to 16th Centuries, 3 vols. (The Hague, 1963), I: Statistics. Part I, chapter 3: 'Money and the History of Prices,' pp. 107-36.
- * 9. Andrew Watson, 'Back to Gold -- and Silver,' Economic History Review, 2nd ser. 20 (1967), 1-34.
10. John Porteous, Coins in History (London, 1969).
- * 11. Peter Spufford, Monetary Problems and Policies in the Burgundian Netherlands, 1433-1496 (Leiden, 1970). See especially:

Chapter I: 'Money of Account,' pp. 13-28.
 Chapter II: 'Coinage,' pp. 29-54.
 Chapter III: 'Currency,' pp. 55-73.

12. C.C. Patterson, 'Silver Stocks and Losses in Ancient and Medieval Times,' Economic History Review, 2nd ser. 25 (1972), 205-35.
13. John Munro, 'An Aspect of Medieval Public Finance: The Profits of Counterfeiting in the Fifteenth-Century Low Countries,' Revue belge de numismatique et de sigillographie, 118 (1972), 127-48.
- * 14. John H. Munro, Wool, Cloth, and Gold: The Struggle for Bullion in Anglo-Burgundian Trade, 1340-1478 (Brussels and Toronto, 1973). Chapter I: 'Late Medieval Monetary Policies: The Economics of Bullionism,' pp. 11-42.
15. John Munro, 'Billon-Billoen-Billio: From Bullion to Base Coinage -- an essay in numismatic philology,' Revue belge de philologie et d'histoire, 52 (1974), 293-305. Reprinted in John Munro, Bullion Flows and Monetary Policies in England and the Low Countries, 1350 - 1500 (London: Variorum Reprints, 1992), no. III.
16. John Munro, 'Money and Coinage of the Age of Erasmus,' in The Correspondence of Erasmus, Vol. I: Letters 1484-1500, ed. Sir Roger Mynors, Douglas Thomson, Wallace Ferguson (Toronto, 1974), pp. 311-48.
17. John Munro, 'The Purchasing Power of Coins and of Wages in England and the Low Countries from 1500 to 1514,' in The Correspondence of Erasmus, Vol. II: Letters 1501 to 1514, ed. Mynors, Thomson, Ferguson (Toronto, 1975), 307-47.
- * 18. Philip Grierson, Numismatics (Oxford, 1975). On the science of minting and coinage.
19. Philip Grierson, Les monnaies de moyen âge (Paris, 1976).
20. Philip Grierson, Later Medieval Numismatics (11th - 16th Centuries): Selected Studies (London: Variorum Reprints, 1979).
21. John Day, 'The Great Bullion Famine of the Fifteenth Century,' Past and Present, no. 79 (May 1978), 3-54. Apart from the theme of the title, there is much on the economics of coinage. Reprinted in no. 33 below.
- * 22. E. Enno Van Gelder, 'Coins and Accounts in the Eastern Netherlands,' in Nicholas J. Mayhew, ed., Coinage in the Low Countries, 880-1500: The Third Oxford Symposium on Coinage and Monetary History, British Archeological Reports, International series no. 54 (Oxford, 1979), pp. 203-15.
23. John Munro, 'Bullionism and the Bill of Exchange in England, 1272-1663: A Study in Monetary Management and Popular Prejudice,' in The Dawn of Modern Banking, ed. Center for Medieval and Renaissance Studies, University of California (New Haven-London, 1979), pp. 169-240. Reprinted in John Munro, Bullion Flows and Monetary Policies in England and the Low Countries, 1350 - 1500 (London: Variorum Reprints, 1992), no. IV.
24. John Munro, 'Mint Policies, Ratios, and Outputs in the Low Countries and England, 1335-

1420,' Numismatic Chronicle, 141 (1981), 71-116. [8th ser. Vol. I] Reprinted in John Munro, Bullion Flows and Monetary Policies in England and the Low Countries, 1350 - 1500 (London: Variorum Reprints, 1992), no. V.

25. John F. Richards, ed., Precious Metals in the Later Medieval and Early Modern Worlds (Durham, N.C., 1983):
- (a) Thomas Walker, 'The Italian Gold Revolution of 1252: Shifting Currents in the Pan-Mediterranean Flow of Gold,' pp. 29-52.
 - (b) Louise Robbert, 'Monetary Flows--Venice 1150 to 1400,' pp. 53-78.
 - (c) Harry Miskimin, 'Money and Money Movements in France and England at the End of the Middle Ages,' pp. 79-96.
 - (d) John Munro, 'Bullion Flows and Monetary Contraction in Late-Medieval England and the Low Countries,' pp. 97-158.
 - (e) Jere Bacharach, 'Monetary Movements in Medieval Egypt, 1171-1517,' pp. 159-82.
 - (f) John Richards, 'Outflows of Precious Metals from Early Islamic India,' pp. 183-206.
 - (g) Philip Curtin, 'Africa and the Wider Monetary World, 1250-1850,' pp. 231-68.
 - (h) Halil Sahilloğlu, 'The Role of International Monetary and Metal Movements in Ottoman Monetary History, 1300-1750,' pp. 269-304.
26. John Munro, 'Medieval Monetary Problems: Bimetallism and Bullionism,' Journal of Economic History, 43 (March 1983), 294-98. Summary of a Workshop in medieval monetary history held at the Sept. 1982 EHA conference.
27. John Munro, 'Mint Outputs, Money, and Prices in Late-Medieval England and the Low Countries,' in Eddy Van Cauwenberghe and Franz Irsigler, eds., Münzprägung, Geldumlauf und Wechselkurse/ Minting, Monetary Circulation and Exchange Rates, Akten des 8th International Economic History Congress, in Trierer Historische Forschungen, Vol. VII (Trier, 1984), pp. 31-122.
28. John Day, ed., , Etudes d'histoire monétaire, XIIIe-XIXe siècles (Lille, 1984): for the medieval era:
- (a) Frederic Lane, 'Exportations vénétiennes d'or et d'argent de 1200 à 1450,' pp. 29-48.
 - (b) Nicholas Mayhew, 'Frappes de monnaies et hausse des prix en Angleterre de 1180 à 1220,' pp. 159-78.

- (c) Reinhold Mueller, ‘‘Chome l'ucciello di passegio’’: la demande saisonniere des especes et le marché des changes à Venise au moyen âge,’ pp. 195-220.
 - (d) Pedro Roqué, ‘153,000 florins d'or d'Aragon, de 1414 à 1428: avatars politiques et avatars monétaires en Sardaigne médiévale,’ pp. 221-48.
 - (e) John Munro, ‘Monnayage, monnaies de compte et mutations monétaires au Brabant à la fin du moyen âge,’ pp. 263-94.
 - (f) Nicolas Morard, ‘Florins, ducats et marc d'argent à Fribourg et à Geneve au XVe siècle (1420-1481),’ pp. 295-334.
 - (g) Peter Spufford, ‘Le rôle de la monnaie dans la révolution commerciale du XIIIe siècle,’ pp. 355-96.
29. Eddy Van Cauwenberghe and Franz Irsigler, eds. Munzprägung, Geldumlauf und Wechselkurse / Minting, Monetary Circulation and Exchange Rates, Akten des 8th International Economic History Congress, Budapest 1982, in Trierer Historische Forschungen, Vol. VII (Trier, 1984). For the medieval era:
- (a) Natalie Fryde, ‘Silver, Recoinage, and Royal Policy in England, 1180-1250,’ pp. 11-30.
 - (b) John Munro, ‘Mint Outputs, Money, and Prices in Late-Medieval England and the Low Countries,’ pp. 31-122.
 - (c) Eddy Van Cauwenberghe and Rainer Metz, ‘Geld und Währung in den südlichen Niederlanden während der frühen Neuzeit,’ pp. 123-50.
 - (d) Eddy Van Cauwenberghe and Didier Haenecaert, ‘Mintage and Coin Circulation in the Southern Low Countries, 14th-18th Centuries: Some Theoretical Reflections,’ pp. 151-80.
 - (e) Dennis O. Flynn, ‘The ‘Population Thesis’ View of Inflation versus Economics and History,’ pp. 361-82.
 - (f) Dennis O. Flynn, ‘Use and Misuse of the Quantity Theory of Money in Early Modern Historiography,’ pp. 383-418.
30. Reinhold Mueller, ‘Alcune considerazioni sui significati di moneta,’ Società e storia, 27 (1985), 177-84.
31. Harry Miskimin, ‘The Enforcement of Gresham’s Law,’ in Anna Vannini Marx, ed., Credito, banche e investimenti, secoli XIII-XX, Atti della Quarta Settimana di Studio (Prato, 14-21 april 1972), Istituto internazionale di storia economica ‘F. Datini”, pp.147-161. Florence, 1985. Reproduced in his Cash, Credit, and Crisis in Europe, 1300 - 1600, Variorum Reprints CS289. London, 1989.

- * 32. Robert Lopez, The Shape of Medieval Monetary History (London: Variorum Reprints, 1986).
33. Joseph Ghyssens, 'Quelques mesures de poids du moyen-age pour l'or et l'argent,' Revue belge de numismatique et de sigillographie, 123 (1986), 55 - 82.
34. Arthur J. Rolnick and Warren E. Weber, 'Gresham's Law or Gresham's Fallacy?', Journal of Political Economy, 94:1 (February 1986), 185-99.
- * 35. John Day, The Medieval Market Economy (Oxford, 1987). See in particular:
- ** (a) 'The Great Bullion Famine of the Fifteenth Century,' pp. 1-54.
- (b) 'The Question of Monetary Contraction in Late Medieval Europe,' pp. 55-71.
- (c) 'The Decline of a Money Economy: Sardinia Under Catalan Rule,' pp. 72-89.
- (d) 'Late Medieval Price Movements and the 'Crisis of Feudalism', pp. 90-207.
- (e) 'The Fisher Equation and Medieval Monetary History,' pp. 108-115.
- (f) 'The Monetary Circulation in Tuscany in the Age of Dante,' pp. 129-40.
- (g) 'Money and Credit in Medieval and Renaissance Italy,' pp. 141-61.
36. John Day and Huguette Bertand, 'Les frappes de monnaies en France et en Europe aux XIVe - XVe siècles,' in Georges Depuyrot, Tony Hackens, and Ghislaine Moucharte, eds., Rythmes de la production monétaire, de l'antiquité à nos jours (Louvain-la-Neuve, 1987), pp. 537-77. Reprinted in his Monnaies et marchés au moyen âge (Paris, 1994).
- * 37. John Day, 'The Problem of the Standard in Medieval Coinage Systems,' in Mario Gomes Marques and D.M. Metcalf, eds., Problems of Medieval Coinage in the Iberian Area, Vol. III (Santerem, 1988), pp. 461-83. Reprinted in his Monnaies et marchés au moyen âge (Paris, 1994).
38. John Munro, 'Deflation and the Petty Coinage Problem in the Late-Medieval Economy: The Case of Flanders, 1334 - 1484,' in Explorations in Economic History, 25 (October 1988), 387-423. Reprinted in John Munro, Bullion Flows and Monetary Policies in England and the Low Countries, 1350 - 1500 (London: Variorum Reprints, 1992), no. VIII,
39. Harry Miskimin, Cash, Credit, and Crisis in Europe, 1300 - 1600 (London: Variorum Reprints, 1989).
40. John Munro, 'Petty Coinage in the Economy of Late-Medieval Flanders: Some Social Considerations of Public Minting,' in Eddy H. G. Van Cauwenberghe, ed., Precious Metals, Coinage and the Changes of Monetary Structures in Latin-America, Europe

and Asia: Late Middle Ages - Early Modern Times, Studies in Social and Economic History Vol. 2, (Leuven: Leuven University Press, 1989, pp. 25 - 56.

41. P. Portet, 'Remarques sur les systèmes métrologiques carolingiens,' Le Moyen Age, 97:1 (1991), 5 - 24.
42. Harald Witthöft, 'Die Markgewichte von Köln und von Troyes im Spiegel der Regional- und Reichsgeschichte vom 11. bis ins 19. Jahrhundert,' Historische Zeitschrift, 253:1 (1991), 1 - 100.
43. John Munro, Bullion Flows and Monetary Policies in England and the Low Countries, 1350 - 1500, Variorum Collected Series CS355 (Aldershot, 1992).
44. Jean-Claude Hocquet, Anciens systèmes de poids et mesures en Occident, Variorum Collected Series CS388 (London, 1992).
45. Harald Witthöft, 'Thesen zu einer Karolingischen Metrologie,' in P. L. Butzer and D. Lohrmann, eds., Science in Western and Eastern Civilisation in Carolingian Times (Basel: Birkhäuser Verlag Basel, 1993), pp. 503-24.
46. Harald Witthöft, 'The Conversion of Ancient German Weights and Measures into Units of the Metric Decimal System: About Problems in Handling Historic-Metrological Mass-Data by Means of Electronic Data Processing (EDP),' Cahiers de métrologie, 11-12: Une activité universelle: peser et mesurer à travers les âges, ed. Jean-Claude Hocquet (1993-1994), 29-42.
47. Akira Motomura, 'The Best and Worst of Currencies: Seigniorage and Currency Policy in Spain, 1597 - 1650,' The Journal of Economic History, 54:1 (March 1994), 104 - 27. Covers a later period; but the methodology is important and relevant to the late-medieval period.
48. John Day, Monnaies et marchés au moyen âge, Comité pour l'histoire économique et financière de la France (Paris, 1994):
 - (a) 'Prix agricoles en Méditerranée à la fin du XIVe siècle (1382),' pp. 1-28 [republished from Annales: Économies, sociétés, civilisations, 23 (1968), 629-56.]
 - (b) 'La circulation monétaire en Toscane au temps de Dante,' pp. 29-39 [republished from Annales: Économies, sociétés, civilisations, 23 (1968), 1054-1066.]
 - (c) 'La grande famine monétaire du XVe siècle,' pp. 41-82 [republished in translation from 'The Great Bullion Famine of the Fifteenth Century,' Past & Present, no. 79 (1978), pp. 3-54.]
 - (d) ' 'Crise du féodalisme' et conjoncture des prix à la fin du Moyen Âge,' pp. 83-100 [republished from Annales: Économies, sociétés, civilisations, 34 (1979), 305-18.]
 - (e) 'Contraction monétaire et déclin économique aux XIVe-XVe siècles,' pp. 101-16

- [republished in translation from ‘The Question of Monetary Contraction in Late Medieval Europe,’ Nordisk Numismatisk Arsskrift (1981): special issue, ed. Jorgen Steen Jensen, Coinage and Monetary Circulation in the Baltic Area, c. 1350 - c.1500, pp. 12-29.]
- (f) ‘Monnaie et crédit dans l'Italie de la Renaissance,’ pp. 117-36 [republished in translation from ‘Moneta metallica e moneta creditizia,’ in Ruggiero Romano and Ugo Tucci, eds., Economia naturale, economia monetaria, Storia d'Italia Annali 6 (Turin: Einaudi, 1983), pp. 337-60.]
- (g) ‘Colonialisme monétaire en Méditerranée au Moyen Age,’ pp. 137-48 [republished from Acte du IIe Colloque International de l'Histoire: Économies méditerranéennes: Équilibres et Intercommunications, XIIIe-XIXe siècles, Vol. I (Athens, 1985), pp. 305-19.]
- (h) ‘Les frappes de monnaie en France et en Europe aux XIVe-XVe siècles,’ p. 149-90 [republished from G. Depeyrot and Tony Hackens, eds., Rythmes de la production monétaire, de l'Antiquité à nos jours (Louvain, 1987), pp. 537-77.]
- (i) ‘Marchands et banquiers au Moyen Age,’ pp. 191-212 [republished in translation from ‘Mercanti e banchieri dal XII al XV secolo,’ in Nicola Tranfagli and Massimo Firpo, eds., La Storia: I grandi problemi dal Medioevo all'Età Contemporanea, Vol. II: Medioevo (Turin: UTET, 1988), pp. 207-25.]
- (j) ‘Crises et conjonctures à la fin du Moyen Age,’ pp. 213-50 [republished in translation from ‘Crisi e congiunture nei secoli XIV-XV,’ in Nicola Tranfagli and Massimo Firpo, eds., La Storia: I grandi problemi dal Medioevo all'Età Contemporanea, Vol. II: Medioevo (Turin: UTET, 1988), pp. 145-73.]
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QUESTIONS:

1. To begin with the basics: what constituted ‘money’ in the late-medieval and early modern European economy? In particular, what were the principal forms of money?
2. What functions did money serve in the late-medieval and early modern European economy? Did those functions differ from the modern functions of money?
3. Compare the roles that coined money, bullion, and credit played in the late-medieval, early-modern economy; and then with the roles of these monetary instruments in the present. How much of the economy of Europe from ca. 1350 to 1600 functioned without the use of monetary instruments?
4. In what respects is the following a false sequence, historically: natural (barter) economy, money economy, credit economy.
5. Compare the functions of gold, silver, and copper in Europe's money-economy from/during the 14th-16th centuries.
6. From where did Europe acquire its monetary metals: gold, silver, and copper?
7. What is ‘money-of-account’? What is ‘bank money’ (*moneta di banco*)? How is money-of-account related to coinage? What types of moneys-of-account are there?
8. What determined the exchange-value or relative prices of coins? Under what circumstances would the mint receive bullion for coinage, or lose bullion to foreign mints? In particular: gold and/or silver?
9. What is meant by coinage debasement? For what reasons were debasements undertaken: defensive and aggressive? How were debasements undertaken? Define: *traite*, *seigniorage*, *brassage*.
10. What were the consequences of debasement?
 - (a) for the prince: in the short and long runs
 - (b) for the merchants supplying bullion to the mint
 - (c) for other merchants, bankers, industrial producers, artisans, peasants, landlords, etc.
 - (d) for the economy and society and general: the possible positive and negative consequences.
11. Were debasements necessarily always inflationary? Why was the degree of inflation not necessarily proportional to the extent of the debasement?
12. What is meant by *renforcement* or ‘strengthening’ of the coinage? Why and how was it undertaken? What were its consequences: for the prince, for the merchants, and for the general public?
13. Why were silver coins usually more subject to debasement than gold ones?
14. Why were the Italian florins and ducats the most highly accepted coins in international trade? Why were they of limited use in local trade?

METROLOGY, MONEY, AND MINTING

Pound' Weights	Grams	o u n c e s <u>A v o i r - dupois</u>
1. The Roman Pound of 12 ounces	327.5 grams ^a	11.55 oz
2. Charlemagne's Pound (ca. 790-802 A.D.): 12 ounces	489.60 g. ^b	17.27 oz
3. Livre de Paris of 16 onces	489.506 g.	17.26 oz
4. Livre de Troyes of 12 onces	367.129 g.	12.95 oz
5. Marc de Troyes of 8 onces	244.753 g.	8.63 oz
6. Troy Pound of England: 12 ounces	373.242 g.	13.17 oz
7. Tower Pound of England: 12 ounces = 11.25 Troy onces	349.914 g.	12.34 oz
8. Pound Avoirdupois of England of 16 ounces	453.593 g.	16.00 oz

Charlemagne's Monetary Reform of ca. 800: deniers and money-of-account

(a) The Carolingian pound of silver was divided into 240 silver *denarii* or *deniers* (pennies).

(b) For a system of reckoning, for accounting, the following relationships were established:

12 *denarii* = 1 *solidus* or *sol* (shilling)(*sous*)

20 *solidi* (*sols*) = 1 *libra* (*livre*, or pound)
(*sous*)

and thus, 1 *libra* (pound) = 240 pence = 12 shillings,

but no coins equal to the *solidus* or *libra* were then struck.

^a Also given as 322.2 grams, on the basis of modern numismatic evidence.

^b This figure has been variously disputed, by those offering the alternative weights of 408.0 g., 411.36 g., 459.36 g., 483.33 g.

[The term *solidus* comes from the Byzantine gold *solidus aureus*, first struck by Constantine about 312 A.D., at 72 to the Roman pound or thus = theoretically 4.55 grams of fine gold; according to numismatic evidence, 4.48 g, thus indicating a pound of 322.2 g.]

The Introduction of the Large, Heavy Silver Coins: Grossi, Gros, Groot (Groten)

- c. 1192 - first *grossi* issued, at Venice.
- 1237 - issue of the *grossi* of Florence.
- ca. 1250 - issue of the *grossi* of Milan.
- 1266 - first issue of the French silver *gros*, in Louis IX's 'great monetary reform' of that year (along with first gold coins).
- 1275 - first issue of the Flemish silver *groot*, as an imitation of St. Louis' *gros*, by Countess Margaret.
- 1279 - first issue of the English silver *groat* (= 4d) by Edward I.

Gold Coins [For comparative purposes, 1 ounce = 28.35 grams]

- 312 A.D. - Constantine strikes the gold *solidus aureus* of virtually 24 carats fine gold, at 72 to the Roman pound, for a unit weight of 4.55 grams. This gold coin dominates Mediterranean commerce until the 13th century, and circulates under various other names as well: *besant*, *nomisma*, *hyperper*. From the 11th Century Byzantine 'Time of Troubles' the *besant* was seriously debased.
- 692 A.D. - The Umayyad Caliph Abd-al-Malik (Damascus) strikes the gold *dinar*, the first independent Islamic gold coin, which rivals the *besant* as the medium of international and Mediterranean commerce until the 13th century.
- 1231 A.D. - Frederick II strikes, in Sicily, the gold *augustales*, which is really an imitation *dinar*.
- 1252 A.D. - Effective resumption of gold coinage in the West, with:
 - (a) *genoin* or (*genovino*) of Genoa: 24 carats, weighing 3.560 grams.
 - (b) *florin* of Florence: 24 carats, weighing 3.536 grams,. Issued at approximately this fineness and weight, with minor deficiencies, from 1252 to 1533.
- 1257 A.D. - Issue of the gold penny of Henry III, valued at 20d, sterling; but this gold coinage was abortive.
- 1266 A.D. - Louis IX, as part of his monetary reform, strikes the first French gold coin, the *écu*, at 24

carats fine gold and a *taille* of $58 \frac{1}{3}$ to the *marc*, for a weight of 4.196 grams.

- 1282 A.D. - Venice strikes the gold *ducat*, at 24 carats fine gold, with a weight of 3,559 grams. It retains this weight and purity until 1840 (dissolution of the Republic).
- 1343 A.D. - Abortive issue of the gold *florin* in England by Edward III.
- 1344 A.D. - First successful English gold coinage, when Edward III strikes the *noble*, in August 1344: at $23 \frac{7}{8}$ carats fine gold, at $39 \frac{1}{2}$ to the Tower Pound, for a weight of 8.812 grams (= 136.7 Troy grains).
- 1354 A.D. - Four Imperial Electors of the Rhineland strike collectively the *Rijns gulden* or 'florin of the Rhine' at $23 \frac{1}{2}$ carats fine gold, and 66 to the Cologne *mark*, for a weight of 3.543 grams.

Measures of Fineness

- (a) gold: In terms of 24 carats (or $23 \frac{7}{8}$ carats as commercial fine).
- (b) silver: In terms of 12 *deniers argent-le-roi* (France) = $\frac{23}{24}$ = 95.833% fine silver. [1 denier contains 24 grains]. In England commercially fine silver was reckoned to be 92.50% pure, and fineness was calculated in terms 12 pennyweight (dwt.). Sterling silver fineness was 11 deniers 2 dwt pure silver and 18 dwt copper (= 92.5%).

MONEYS-OF-ACCOUNT SYSTEMS

There are six basic types, classified under two major categories: Type A and Type B moneys of account.

I. Type A Systems: Moneys-of-account that were based on coins of a previous era, representing a fixed quantity of gold or silver.

These moneys-of-account were tied to and reckoned in value according to some popular coin of the past that no longer circulated: and the money-of-account was a form of 'ghost money'. The money-of-account value thus represented the specific amount of gold or silver -- fixed or 'frozen' -- contained in that former coin:

1. Systems based on fixed silver weights:

Example: The *Livre de vieux gros* or *pond oude groot* of the Low Countries. 1 livre = 240 of the gros tournois struck by Louis IX in 1266. Each contained 4.044 grams pure silver (58 struck to the *marc* of silver at 23/24 or 95.83% fine). Thus 1 livre = 240 x 4.044 g. = 970.56 grams of fine silver. And 1 livre = 20 sols = 240d.

2. Systems based on fixed gold weights:

Example: the *livre de vieux écus* or *pond oude schild* of the Low Countries, based on the gold écu a la chaise as struck by Philip VI of France in Jan. 1337 at 24 carats fine gold, 54 to the marc = 4.532 g. fine gold.

II. Type B Systems: moneys-of-account that were based on and directly tied to a country's currently circulating coins, silver or gold.

1. Systems based on and tied directly to the current silver penny

[Pence, denarii, penneghen, pfennig].

a) Fixed-Value Silver Coins: not subject to debasement. The best modern example is the bank florin or gulden of Amsterdam's Wisselbank, based on the fixed silver weight

of the new United Provinces of the Netherlands, as decreed in 1619, and further though only slightly strengthened in 1681, remaining fixed at that new rate until 1822.

b) **Variable-Value Silver Coins (i.e. subject to debasement)**: One pound always equalled in value 240 of the current silver pennies; one shilling thus equalled 12 current pennies. There were some exceptions where, for example, 1 shilling = 16d; but the principle was the same. Examples: pound sterling of England, livre tournois of France, livre gros [pond groot] of the Low Countries, pound Genoese, etc.

2. **Systems based on and tied to Current Gold Coins:**

- (a) **fixed value gold coins**: e.g. the Florentine gold florin, whose gold content fluctuated only marginally during the later Middle Ages (theoretically 3.56 grams fine gold).
- (b) **variable-value gold coins**: e.g. the Rhenish florin, which lost 27.1% of its gold content through debasements, between 1354 and 1490.

Monetary Terms for Coinage Changes: Terms for Debasement

and Reinforcement in English, French and Italian

..... DEBASEMENT* RENFORCEMENT

debasement of the coinage	strengthening of the coinage
devaluation	revaluation
affaiblissement	renforcement
indebolimento	rinforzamento
weak money	strong money
monnaie faible	monnaie forte (monnaie forte)
‘cry up’ the coinage	‘cry down’ the coinage
enhancement	abatement
‘hausser la monnaie’	
augmentation	diminution
alzamento . . .	sbassamento .

Debasement means a reduction of the quantity of fine precious metal represented in the units of money-of-account: the penny, shilling, and pound. As a consequence, a greater money-of-account value, or value by **tale**, of coinage can be struck from the mint-weight unit of fine gold or silver (marc of pound).

Debasement can be achieved by one or more of the following techniques, or by some combination of them: (1) a relative addition of base metal, almost always copper, and thus a relative diminution in the silver or gold content of the specified coin(s) -- the original meaning of the term; (2) a reduction in the weight of the coin (i.e. striking more coins to the marc or pound); (3) an increase in the official-money-of account or exchange value of the coin -- ‘crying up’ its value (most commonly with gold coins).

Reinforcement is the opposite of debasement: the restoration or addition of precious metal in the unit of money-of-account, by reversing these techniques.

Table 5. Flemish Coinage Debasement: The Mint Ordinances of June 1418 and November 1428

Double Gros [Groot]	June 1418		November 1428	
Value ^a	2d gros [or <i>groot</i> Flemish]		2d gros [or <i>groot</i> Flemish]	
Fineness ^b	6 deniers AR =	50.0% fine	5 deniers 8 grains AR =	44.44% fine
	=	47.92% pure	=	42.59% pure
Weight (Taille) ^c	68 cut to the marc		68.5 cut to the marc =	
Fine silver content AR		3.599 g.		3.573 g.
Pure silver content		1.800 g.		1.588 g.
<i>Traite per marc</i> ^d	<u>68.0 x 2d. = 136d</u> =		<u>68.5 x 2d. = 137d</u> =	
<i>argent-le-roy</i>	6/12	0.5	5.333/12	0.444

Division of the Traite per marc argent-le-roy	Value in gros Flem.	Number of coins	Percentage of traite	Value in gros Flem.	Number of coins	Percentage of traite
Brassage	1s 2d	7	5.15%	1s 2d 6m	7 1/8	4.62%
Seigniorage	4d	2	1.47%	6d	3	1.95%
Total Mint Charges	1s 6d	9	6.62%	1s 8d 6m	10 1/8	6.57%
Mint Bullion Price	21s 2d	127	93.38%	24s 0d	144	93.43%
Traite per Marc	22s 8d	136	100.00%	25s 8d 6m	154 1/8	100.00%

^a **Values in money-of-account:**

1 penny or 1d gros = 24 mites = 12d or 1s parisis
12d gros = 1s (sou, sol, schelling); 20s = 1 livre or pond (£1 pound)

^b **Fineness:**

reckoned out of 12 **deniers argent-le-roy**, with 24 **grains per denier**: 23/24 or 95.833% pure

^c **Weight:**

reckoned in terms of the **taille** or number cut from the **marc de Troyes** of 8 **onces**: 244.753 g.

^d **Traite per marc:** official value of coinage struck per **marc argent le roy**: T = taille x face value/fineness
fineness: (Fineness/12 deniers Argent-le-Roy)