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Untertitel

Development of Financial Markets and Institutions
II. Early Financial Markets and Early Bubbles

Leipzig University | October 16, 2023
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II. EARLY FINANCIAL MARKETS AND EARLY BUBBLES

1. Early Finance: Companies and Shares
2. Early Finance: Bills of Exchange
3. Money Production
4. Money and Banking
5. Early Bubbles
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1. EARLY FINANCE: COMPANIES AND SHARES

THE EARLIEST COMPANIES

Ancient World

- Greek *trapizetai*
- Roman *societates*
- Scarce details
- None survived the ancient world

Roman Law

- Provided foundations for medieval developments
- Basis for medieval and later institutions
- *Lex mercatoria*, *ius commune*

MEDIEVAL PARTNERSHIPS

The Commercial Revolution of the Thirteenth Century

- Era of commercial flourishing, centred on Italy, Flanders, southern Germany
- Many innovations in commercial practice and technique: banking, accounting, insurance

Rise of Companies (Spufford 2002)

- Capital in partnerships usually subscribed only for a specific project or voyage
- Companies took on a more permanent appearance: capital subscribed for several years
  - Tuscany the centre, commerce and banking the key activity
  - Capital often renewed, making companies permanent
- Bardi, Peruzzi, Medici famous (banking) companies
- Commercial innovations continued in use despite economic decline in 14th century

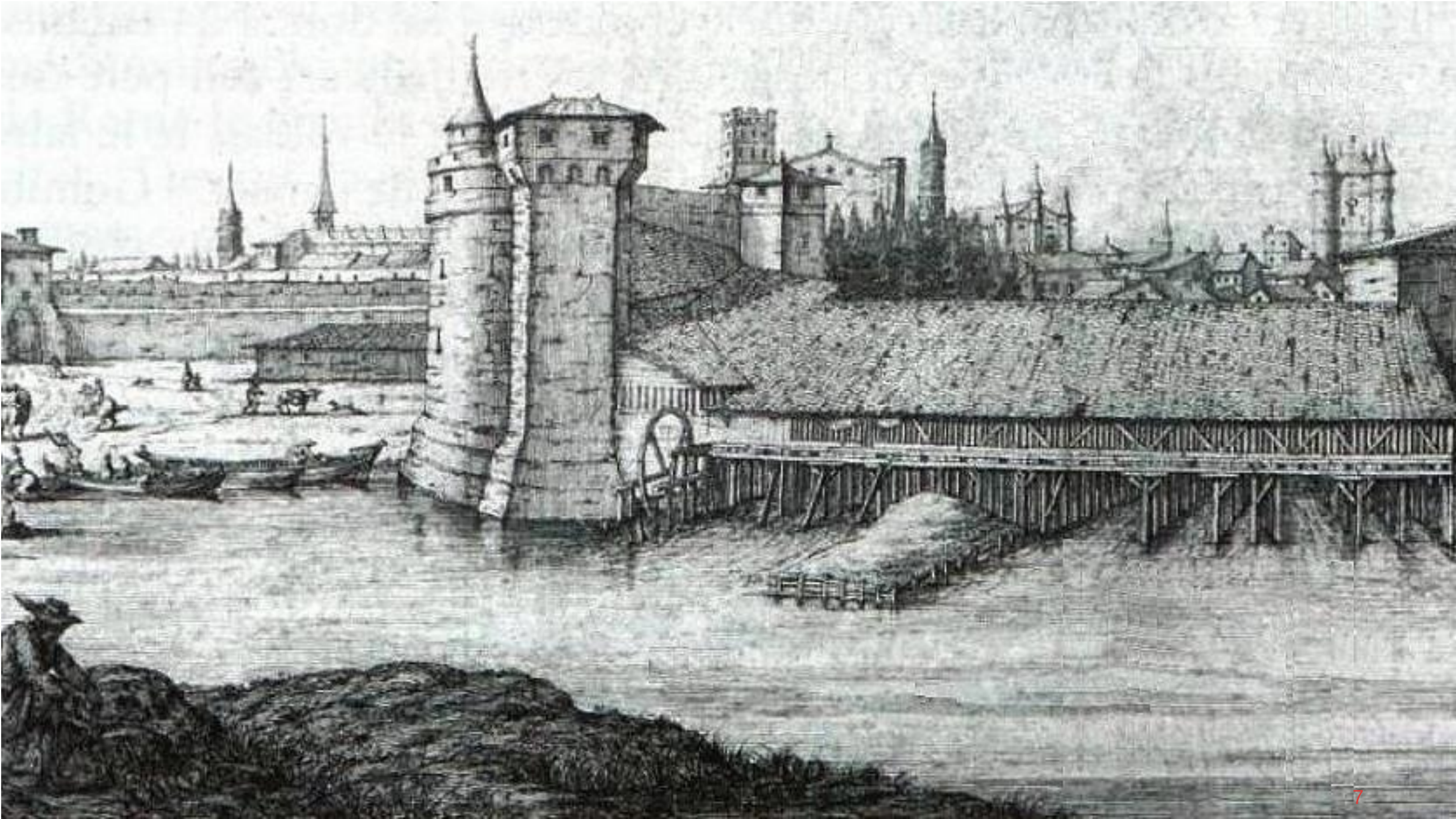
THE FIRST PUBLICLY TRADED COMPANY (?)

The *Société de Bazacle* (Gimpel 1977)

- Founded in the 13th century, possibly earlier, in Toulouse, France
- An industrial company: operated dams on the Garonne river

Company Shares

- Known as *uchaux*
- Freely traded among the citizens of Toulouse
- Share prices freely established in the market
- The company lasted into the 20th century until nationalized after World War 2



THE UNITED EAST INDIA COMPANY (VOC)

Before the VOC

- Dutch East India trade began in the 1590s
- East India trade organized as partnerships for each voyage

The First Publicly Traded Company

- Organized in 1602, promoted by Oldenbarnevelt, the Dutch ”prime minister”
- The Company had chambers in each of the principle cities of the Netherlands
- Investors subscribed shares in the local chamber
- Amsterdam by far the largest chamber, had the majority of shares

Purpose

- To organize the private partnerships, create a monopoly

FOUNDING AND ORGANISATION OF THE VOC

VOC Chambers and Share Capital	
Amsterdam	3,679,915
Middelburg	1,300,405
Enkhuizen	540,000
Delft	469,400
Hoorn	266,868
Rotterdam	173,000
Total	**6,424,588**

Raising Capital

- Minimum share of 3,000 guilders
- Most merchants could afford this
- Limited liability for all investors

Organisation

- *Heeren XVII*, seat in Amsterdam
- Eight delegates from Amsterdam
- Four delegates from Zeeland, rest split among smaller chambers


Regional Trade Network
Inbound Route to Batavia
Inbound Route to Galle
Return Route
Arabia
From Coffee Silk
To Spices
India
From Cloth Yarn Silk Indigo Pepper
To Silver
China
From Porcelain Tea Sugar Silk Precious metals
To Spices Luxury goods Cloth
Japan
From Precious metals Lacquer
To Silk Porcelain Spices Luxury goods
Ceylon
Galle
From Cinnamon Pepper Cardamon Ivory Arecanuts Sappanwood Gems
To Cloth
Dutch East Indies
Spice Islands
Batavia
From Pepper Nutmeg Mace Cloves
To Cloth Silver Ivory
Amsterdam
From Silver
To Pepper Nutmeg Cinnamon Cloves Mace Cardamom Coffee Sugar Tea Sappanwood
Galle
Batavia
Cape Town

THE VOC BECOMES A PERMANENT LIMITED LIABILITY COMPANY

Early Profits and Problems

- First voyage East a great success – huge cargoes of spice returned
- … and crashed the market
- The VOC was a monopoly, but without monopoly profits

Solutions

- Directors (*Heeren XVII*) refused to pay out shares, or paid in much-depreciated spice
- Capital "locked-in" – directors decided to simply keep going, organizing expeditions
- Directors saved from liability
- Gradually, by accident, the VOC became a permanent concern – and the largest company in the world

THE VOC AND THE AMSTERDAM MARKET

An Emerging Market (Stringham 2015, chap. 4)

- Shares in the VOC freely tradable, Amsterdam the key market
- An active market soon developed – followed by stock in other companies (the West India Company in 1621)
- Dutch investors financed many other trading companies: English, French, Scandinavian
- The dream of monopolizing the spice trade never materialized (Barbour 1950)

Financial Innovation

- Forward contracts
- Short-selling
- Hypothecation and fractional shares

2. EARLY FINANCE: BILLS OF EXCHANGE

THE FAIRS OF CHAMPAGNE

Expanding European Trade

- Main trade route was between Northern Italy and the Low Countries
- The Fairs of Champagne were the main meeting place for international trade and finance until fourteenth century

The Fairs of Champagne

- A regular cycle of six fairs throughout the year
- Under the protection of the Count of Champagne, but the merchants autonomous

Development of Credit Instruments

- A merchant buys goods on first fair and pays with a letter of credit, on the second fair he sells goods against a letter of credit
- On the final fair credit instruments are exchanged, accounts are settled

AFTER THE FAIRS

Shifting Trade Patterns

- East along the Rhine
- Overseas around the Iberian peninsula from Genoa, Pisa and Venice to Bruges

Organizing Credit

- Italian merchant-bankers were the principal organizers of credit
- Banking houses in Siena, Florence, other cities, sent agents to Bruges, London, etc.
  - Famous houses: the Bardi, the Peruzzi, the Medici
- These networks of bankers allowed development of new credit instruments
  - Bills of exchange
- Trust was key

BILLS OF EXCHANGE

International Payments (De Roover, 1953, 1963; Geva 2016)

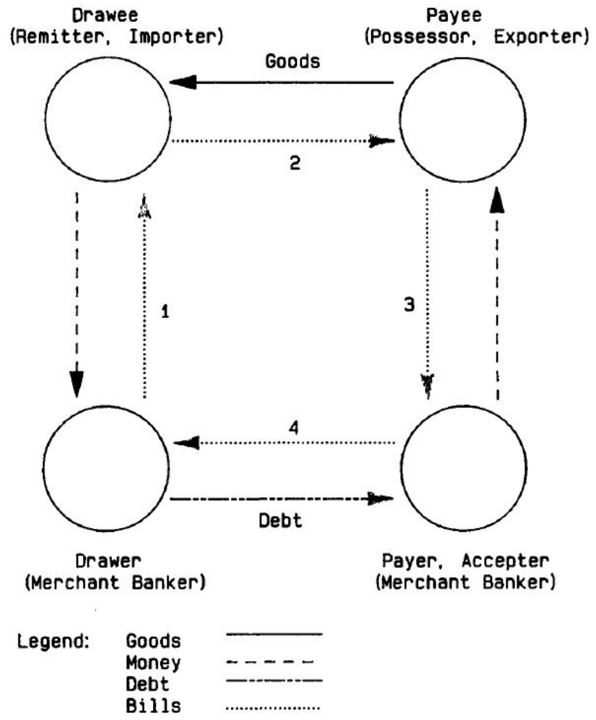
- You're in Bruges and have to pay for imports from Florence. What are your options?
  - Paying cash – expensive and time-consuming
  - Using a bill of exchange – cheap and instantaneous!

Drawing A Bill of Exchange

- The importer draws a bill on a merchant-banker in Bruges and pays him cash
- The bill instructs the correspondent bank in Florence to pay out the sum
  - The importer pays for his purchases with the bill
  - The exporter then presents the bill in Florence and is paid
- If imports and exports are roughly equal, no money needs to be transferred – all trade is carried on on the basis of credit

THE BILL OF EXCHANGE

- Who holds a financial asset in the different stages of circulation?
- Who has a liability in the different stages of the circulation?



Drawing and paying a bill of exchange

PRICING BILLS OF EXCHANGE

Supply and Demand

- The price on bills of exchange changed, reflecting supply and demand for bills on different locations
  - ➢ If the amount of payments to Italy increased, bills would be at a premium
  - ➢ If the amount of payments to Italy fell, bills on Italy would be at a discount
  - ➢ If the premium continued to rise, eventually it would be cheaper to simply send physical cash
- Limit on exchange rate: Cost of transport plus insurance plus interest foregone

Endorsement

- A bill initially made out to one individual could be signed over to another
- Endorsed bills were even more secure – all the previous holders guaranteed it
- Endorsement made bills negotiable
- Clearing of bills systematized at fairs throughout Europe and in the main centres

BILLS OF EXCHANGE AND USURY

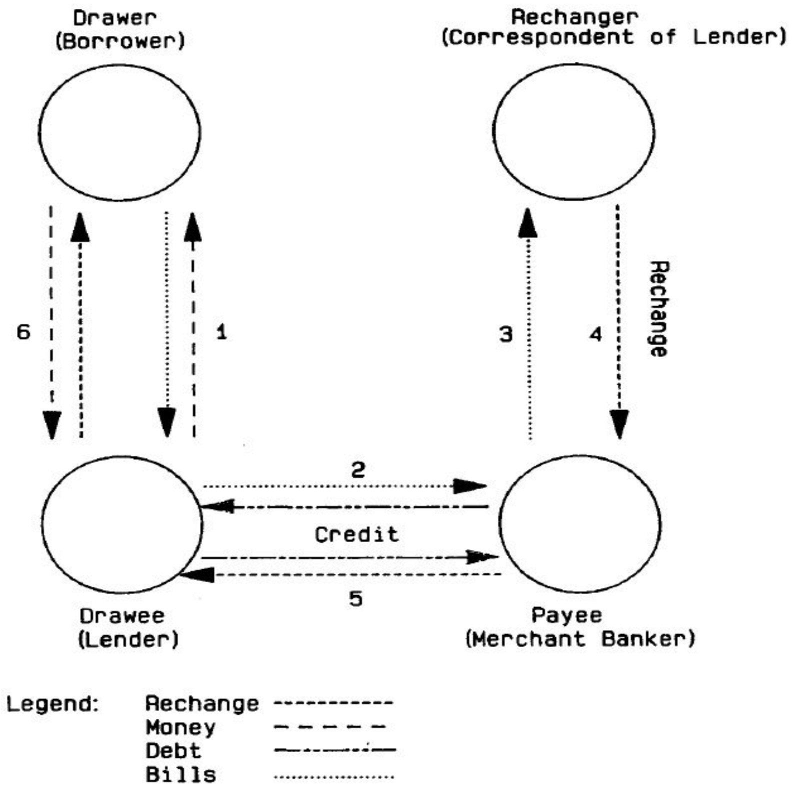
Usury

- The taking of interest, condemned and outlawed throughout Europe in the Middle Ages and early modern period
  - Version 1: total prohibition
  - Version 2: legal ceiling on permitted interest

Bills of Exchange

- Used to circumvent the prohibition
- Bills expressed in different currencies – interest could be hidden in the rate of exchange
- Dry exchange: use of fictitious bills simply for the sake of a loan
- With time, prohibition weakened, this became a less important use

DRY EXCHANGE



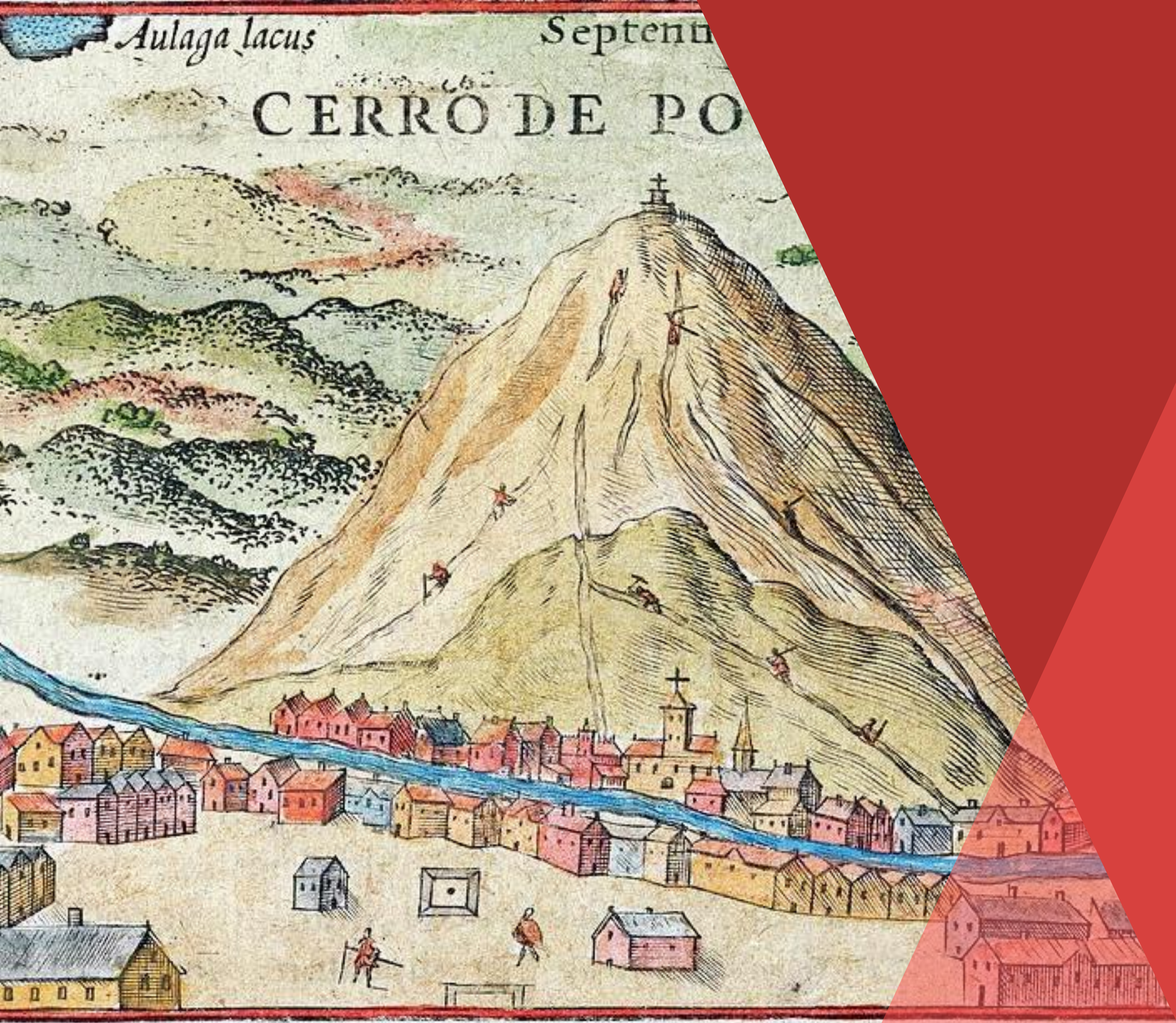
INLAND BILLS OF EXCHANGE

Financing Production

- Over time, the use of bills spread from international commerce
- Industrialists would finance their production with bills

Use of Bills in Industry

- A factory owner would pay for raw materials, other inputs with a bill
- His supplier could then hold the bill to maturity (three months, usually) or
- have it discounted by a bank: "sell" it to the bank for its discounted present value
- The rate of discount became a key indicator of the amount of liquid capital available
- Such inland bills were important in financing the Industrial Revolution in Great Britain



3. MONEY PRODUCTION

EUROPEAN COMMODITY MONEY

Silver: The Primary Commodity Money

- From the early Middle Ages on (Spufford 1988)
- Charlemagne's coinage: 1 pound of silver coined into 240 pennies
- No uniformity after him: right to mint quickly fragmented, many claimed right to mint
- Great variety of coinage, metal content also varied widely

Units of Account

- The system of money production gave rise to different units of account (Einaudi 2006)
  - 12 pennies (deniers) = 1 shilling (sou) = 1 pound (livre)
  - But the unit of account imaginary – it almost never corresponded 1:1 to a specific coinage
- It was always necessary to specify which standard one used
  - E.g., the *deniers provinois* was most common at the Champagne Fairs

THE MINES

Economic Expansion and Increased Money Production

- New mines were opened throughout the medieval period
  - Melle, France
  - Goslar, Freiberg, Friesach in Germany and Austria
  - Montieri, Iglesias in Italy
  - Kutná Hora and Joachimstal in Bohemia

Return of Gold from the Thirteenth Century

- Gold mines in Hungary and gold imports from Africa gave rise to gold coinage
- Mixed circulation: gold for wholesale trade, long-distance trade, silver for retail trade
- Mining conducted by free entrepreneurs
  - Money flowed according to profitability
  - Company forms with outside investment pioneered by Italian capitalists

THE EUROPEAN FLOW OF MONEY

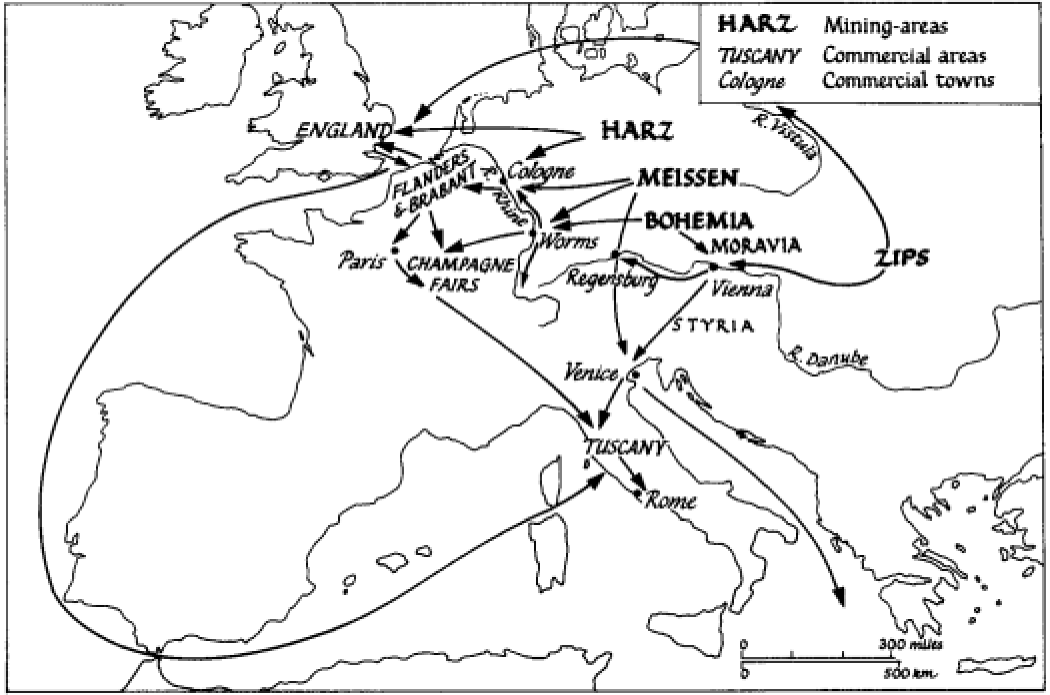
The Flow of Money and the Balance of Trade

- The flow of money is determined by the balance of trade
- Money-producing areas have a negative balance of trade (they "export" money)
- Highly productive areas have a positive balance of trade
- An increase in the demand for money leads to a temporary positive balance of trade

The European Flow of Money

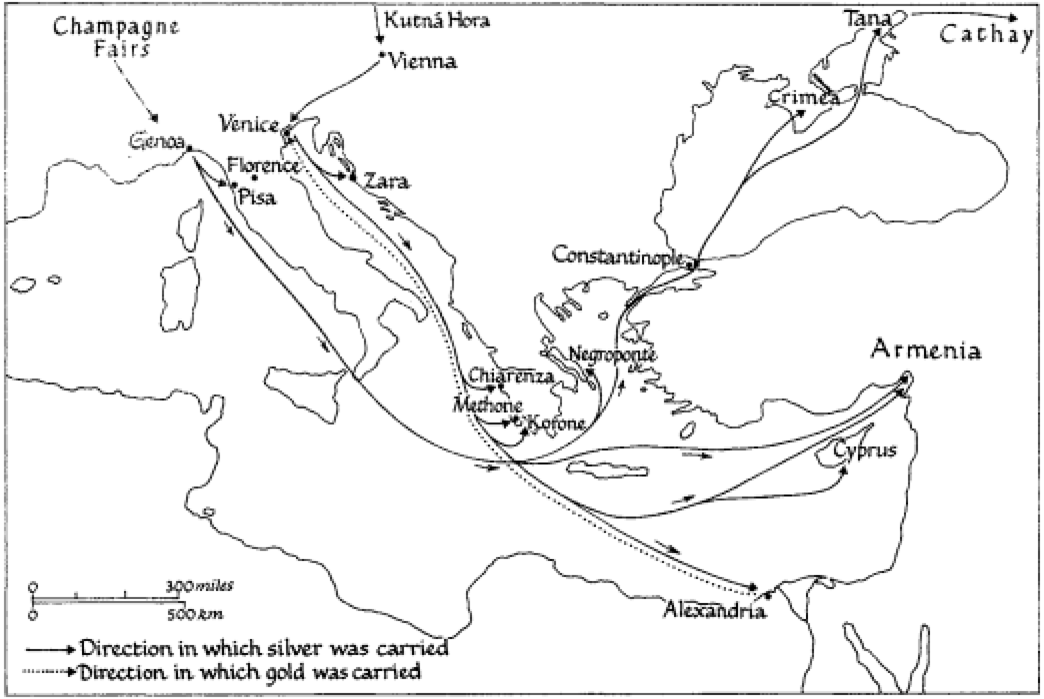
- Generally from money-producing areas to highly productive areas
- Central Europe the key money-producing area (later: Americas through Spain)
- The key productive centres: Low Countries and Northern Italy
- Generally, money also flowed out of Europe for the East – in payment for luxuries

THE FLOW OF SILVER IN THE THIRTEENTH CENTURY



Source: Spufford 1988, map 15.

THE FLOW OF GOLD AND SILVER IN THE THIRTEENTH CENTURY



Source: Spufford 1988, map 18.

GOVERNMENTS AND GRESHAM'S LAW

Government Monopoly of Coinage

- Kings and governments gradually reasserted control over money
  - Legal tender laws
  - Control of the coinage

Gresham's Law

- Really a form of price control
  - Bad money drives out good
  - Legally overvalued money drives out legally undervalued money
- Main types: debasement, wear and tear, bimetallism
- Bank money was not subject to violent fluctuations ("fiat deflation") from Gresham's Law (Hülsmann 2004)

THE IMPORT OF GRESHAM'S LAW

Debasement

- Altering the alloy of coins, mixing in base metal
- Debased coins had same face value as the old – old coins thus driven from circulation
- Not a standard practice: a form of emergency financing

Wear and Tear

- Coins naturally wore down, resulting in noticeable loss over decades
- Older coins therefore lighter, less valuable than newer coins
- But legally, they circulate at par – therefore, new coins driven out

Bimetallism

- Gold and silver circulate at a fixed exchange rate
- Gold and silver exchanged on the market at a rate of 1:15 – but it fluctuated (14-16)
- A legal rate mandated everywhere – when it differed from the market rate, trouble ensued
- When silver legally overvalued, gold flowed out; when gold legally overvalued, silver flowed out

4. MONEY AND BANKING

EMERGENCE OF BANKING

- Banks creating money seem to be a constant, from the earliest times of finance

Ancient Greece and Rome

- Athens in the fourth century BC (Cohen 1992)
- Rome in the first century BC (Collins and Walsh 2014)

From the Middle Ages On

- Banking was and is an integrated part of economic life

Key Distinction

- Deposit banking vs. loan banking (financial intermediation)
  - ➢ Clear in theory, often obscured in practice
- Banks that create money can out-compete those that don't

MONEY AND MONEY SUBSTITUTES

The Key Distinction

- Banks as financial intermediaries ("lending other people's money")
- Versus banks as custodians of money
- Loan banking transfers capital
- Deposit banking creates claims to money

Money Substitutes

- Fully secure, instantly redeemable claims to money can perform all the functions of money
- Since their claims circulate as money, bankers are continually tempted (or misled) to invest the deposits – fractional reserve banking
- This expands the money supply, makes borrowing more attractive – and destabilizes the banking system

EARLY BANKING: FLORENCE

Key Banking Centre for Centuries

- The Medici Bank, founded in the fourteenth century, a good example (De Roover 1963)
- Financed international trade, banker to the pope
- A family concern, but accepted money on deposit

Deposit Banking

- Originally, deposits were pure investments, pure loans
  - Depositors only received them back at the end of a year, with a share of the profits
- Over time, the Bank started paying a set return on deposits – the *discrezione*
  - A share of profits formally, but not really
- Depositors also allowed to withdraw their funds before term
- Unfortunately, we cannot assess and quantify the scope of their business
- The bank collapsed in the late fifteenth century

EARLY BANKING: VENICE

Development of Venetian Banking

- Deposit banking, bank transfers, and the use of bank money normal by the early sixteenth century (Lane and Müller 1985)
- Bank money dominated commercial life
- When gold arrived from mines in Hungary, miners received bank money in return
- Only in foreign trade was specie payment necessary

Government Support(?)

- Throughout, banking evolved in close connection to the Venetian state
- Unlike in Florence, Venetian banking appears to have been very stable – despite a reserve ratio as low as 5 percent
- Government support likely important here

BANKS OF ISSUE AND PAPER MONEY

The bank Note – A Late Invention

- First banks issuing notes: Sveriges Riksbank (1668), Bank of England (1694)
- The banknote is an immediately redeemable promise to pay to the bearer of the note
- It is a claim on the money on deposit with the issuer

Spread of Bank Notes

- English goldsmiths probably the pioneers (Selgin 2012)
- Banks of issue spread across Europe in the eighteenth century
- Supported by legal tender privileges – fiat equivalence between notes and money
  - BoE most successful – other banks very inflationary
  - Always connected to financing government
  - BoE rewarded with privileges in return for managing government debt

5. EARLY BUBBLES

THE FIRST EPISODES

- Tulipmania, 1637
- The Mississippi Bubble, 1718-20
- The South Sea Bubble, 1720
- In all three cases, interventions affecting the money supply played a crucial role

TULIPMANIA

- The first financial bubble: Dutch tulips 1634-37

Explanations

- Garber (1990): the bubble is simply **price discovery**
  - ➢ The price of bulbs was all along in accord with market fundamentals, accounting for uncertainty
- French (2009) sees a **monetary connection**
  - ➢ The privileged position of the Bank of Amsterdam and the policy of free coinage of silver led to huge inflow of money

Free Coinage

- Policy of not charging a fee – or one below cost – for minting bullion
- In effect, **subsidizes production of money**
- It also **redirects the flow of money** to free-coinage jurisdictions
  - ➢ Can fuel speculation if investors are the first recipients of new money

THE MISSISSIPPI BUBBLE

John Law and Privileged Banking

- The Banque Générale founded in 1716 with a royal charter and the right to issue notes
  - To fund commercial ventures in America
  - To reorganize the public debt
- Bank notes at first were to be payable in specie

Debt for Equity Scheme

- The bank a public company, shares could be acquired in exchange for government bonds
- In 1717, all taxes were to be paid in bank notes
- Law appeared successful:
  - the bank used to fund various schemes, acquisition of colonial companies, the Mint
  - … but little real activity generated

CANTILLON EFFECTS

Law Expands

- From 1719 on the issue of banknotes expanded
- Banque Royale (renamed 1718) funded merger of companies into the *Compagnie des Indes* (Mississippi Company)
- Banknotes issued to buy company shares, pushing prices even higher

Richard Cantillon and the Cantillon Effect

- Speculator, became enormously wealthy, escaped to London before the bubble burst
- Later, Cantillon ([1755] 2010) wrote a treatise explaining the impact of money creation
  - ➢ Producing new money pushes prices up unevenly
  - ➢ Prices rise first where the new money enters the economy, elsewhere only later
- This leads to a redistribution of real wealth to the early receivers of new money

LAW'S SYSTEM FALLS APART

By Early 1720

- Share price had reached 9,000 livres from an initial price of 150
- Attempts to demonetize gold and silver led to the collapse of the livre exchange rate
- Law issued more notes to stabilize the share price – but failed

December

- the system collapses – Law goes into exile
- The result was no real economic activity, but a **redistribution of wealth:**
  - from workers and the rural population to speculators and the politically well-connected
- Banking was not attempted in France again for decades


Kool te Koop
Acties int Gros

THE SOUTH SEA BUBBLE

An Echo of Law's System

- An attempt to organize the English public debt and to reduce interest payments
- South Sea Company founded for trade on Spanish America
- Bond holders induced to exchange bonds for South Sea stock
- Reality: a vehicle for financial reorganization
- Investors fleeing Paris pushed prices higher in the summer of 1720 – but share prices collapsed by the end of the year
- The Company reorganized as a holding company for public debt – all it ever was

Main Difference From Law's System

- The Bank of England stood apart
- New note issues could not be channelled directly into South Sea shares

6. LITERATURE

LITERATURE

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