XI. BANKING, FINANCE, AND BUSINESS ORGANIZATION, 1520 - 1750

C. ENGLAND: The Joint Stock Companies

revised 21 March 2012

22. **21 March 2012** **Davis**, ch. 14; chs. 11, 17-18 **Musgrave**, chs. 4, 6, 7 **ET 7, 10**	**25**	**BANKING AND FINANCE:** **England: Joint-Stock financial organization,** from the Muscovy Co. of 1553 to the South-Sea 'Bubble' of 1720; **English merchant banking** in the 16th century.

Joint Stock Companies: Origin of the Modern Business Corporation - 1

- 1) **Objective:** **to understand the evolution of early-modern business** organizations
- ➔ provided institutional means of financing Industrial Revolution –
- **but only in part**: why joint-stock financing was NOT available before 1825.
- 2) **Early joint-stock companies: from 1550s: their nature**
- a) **cross between the ancient partnership and modern business corporation**
- b) **capital raised by sales of shares of ownership:**
- - 'stock', jointly held by all owners: hence the term 'joint-stock company'

Joint Stock Companies: - 2

- 2) **Early joint-stock companies:**
- c) **collective business venture with common capital:**
- - **invested with company,** not individuals
- - **invested for the lifetime** of the business venture: not for one single enterprise (as with medieval Italian commenda contract – for maritime trade only):
- - **death or departure of any shareholders had no effect on the legal viability** of the company (as with a partnership)
- - **shareholders could never demand redemption**: to get capital back [similar to annuities in last lecture]

Joint Stock Companies: - 3

- 3) **Organization of early joint-stock companies:**
- a) **elected board of directors**: direct and controlled the company
- - voting power: by number of shares held
- b) **profits distributed to shareholders**: by vote of directors: allocated according to no. of shares
- c) **shares were transferable and negotiable** (on secondary markets): obviously very few would invest – buy shares – unless they could sell them (to regain some or all of their financial capital)

Joint Stock Companies: - 4

- d) **reasons to purchase shares in joint-stock companies:**
- i) **receive annual (quarterly) dividends**
- ii) **reap capital gains from selling shares at higher price**
- iii) **using shares as collateral for borrowing – loans**
- e) **underwriting IP0s (Initial Public Offerings)**: business syndicates

Joint Stock Companies: - 5

- 4) **Economic Significance of Joint Stock Companies:**
- a) **to permit business ventures to raise far larger capitals** than any partnership could do
- - **England: common law limited partnerships** to six member (not apply to Scotland)
- b) **capital pool:** typically from hundreds of investors
- c) **investors did not require their own personal capital**: could borrow investment funds from others: 'buying on margin', with 10% down was very common-
- - **Leverage:** is the financial term now applied

Leverage and Liquidity

- **LEVERAGE is the use of borrowed funds to purchase assets greater in value than the initial amount of equity.**

- **LIQUIDITY is the ability to access cash, investments or credit to finance transactions by individuals, businesses and governments.**

- **A common use of leverage is by individual homeowners** who might purchase a $500,000 home with $100,000 of equity and $400,000 of borrowed money. The leverage magnifies the rate of return: so, if for instance the value of the home increased by 20% to $600,000, the homeowner's equity increased by 100% to $200,000.

- **Liquidity Problems:** If credit is not available, the ability to transact business becomes more difficult. As the financial soundness of individuals, companies (especially financial institutions) and even governments is questioned, vendors and lenders become increasingly reluctant to transact business because of the uncertainty of being paid.

16th century Origins of Joint-Stock

- 1) **Overseas Trade Diversification: break-away from the Antwerp Market in 1550s** ➔ new trading companies
- a) **Moscovy or Russia Company**: **1553**
- b) **Levant Company: 1581** (originally, 'Turkey Company', re-organized in **1591**)
- c) **East India Company**: **1600**
- d) **Hudson's Bay Company**: **1670**
- e) **Royal African Company**: **1672** (began 1662)
- f) **Bank of England: 1694**
- g) **New East India Co**: 1698 – taken over by original East India Company in 1709
- h) **The South Sea Company**: 1711

16th century Origins of Joint-Stock - 2

- 2) **Capital Requirements of New Trading Companies:**
- a) **Merchants Adventurers:** example of old, traditional trade: exporting woollens to the Antwerp market
- i) **working capitals**: chief needs: to invest in bales of woollen cloths
- ii) **traditional partnerships & family firms** easily raised small capitals for sort-term, short-distance ventures, with very small-scale enterprises
- iii) **quick commercial turnovers in a few weeks** → profits generate new working capitals
- iv) **'Regulated Company'**: gov't sponsored guild – not a real company in modern sense

16th century Origins: 3

- b) **The New Overseas Trading Companies:**
- i) **long-distance, long-term ventures**: for several years
- ii) **needed vastly more fixed capital**: for ships, warehouses, overseas trading stations, etc.
- iii) **thus needed vastly larger sums of financial capital** → by selling shares of ownership, with hundreds of investors

Limitations on Early-Modern Joint Stock Companies: to 1720

- 1) **Legal status of most joint-stock companies:**
- a) **partnership status under Common Law:** for unincorporated companies
- - **all shareholders were legally partners, so that**
- ➔ all burdened with unlimited liability for all debts, obligations of the company (be sued personally for all assets)
- b) **The few corporations: the overseas trading companies, Bank of England, South Sea Co:**
- - **charters of incorporation provided limited liability**, so that shareholders not liable for losses in excess of value of their shares
- - **corporation: could sue and be sued in its own name**

Limitations on Early-Modern Joint Stock Companies to 1720 - 1

- - **from the Bubble Act (1720 – next topic):** Parliament unwilling to grant charters of incorporation, with a few exceptions, but at high costs
- c) **the continental alternative: the French *société en commandite***
- - **law permitted limited liability for 'silent partners'** – those investors playing no other role;
  - but investors who played an active role faced unlimited liability (as in Italian *commenda)*

Limitations on Early-Modern Joint Stock Companies: to 1720 - 2

- 2) **Limited Facilities for Marketing Stocks:**
- -a) **16th & 17th centuries: England lacked an organized exchange or stock market** – like the Antwerp and Amsterdam *Beurs (bourse)*
- - stock trades handled privately by private brokers ('stock jobbers')
- b) **London Stock Exchange: set up (unofficially) about 1694-5**
- - **group of London stock jobbers and financiers** meeting in coffee houses in financial district known as Exchange Alley
- - **Known as Royal Exchange or London Stock Exchange**, modelled on Amsterdam Beurs (1608): but not formally established until 1801
- - **initially, limited trading scope:** stock in East India Co, Royal African Co, Hudson's Bay Co, and Bank of England (founded 1694), and then government 'stock' [next lecture]

The South Sea Bubble: 1720 - 1

- 1) **Explosion of joint-stock financing from 1695:** after the LSE set up
- - **number of joint-stock companies**: from 11 to over 100 companies by 1700; and even more in early 18th century
- 2) **The South Sea Company:**
- a) **formed in 1711, with a charter of incorporation** and monopoly rights
- b) **ostensible purpose:** to exercise monopoly on British trade in the South Pacific
- – **but that trade was Spanish held**: very lucrative silver:silk trade between Mexico and Manila, with heavily armed fleets

The South Sea Bubble: 1720 - 2

- 2) **The South Sea Company:**
- c) **real purpose:** to take over and manage all of the national debt not held by the Bank of England and the East India Company (next lecture)
- - planned to use interest payments on national debt to finance its Pacific trade
- d) **sold shares to public**: to gain funds to buy up outstanding national debt

The South Sea Bubble: 1720 - 3

- 3) **Operations of the South Sea Company:**
- a) **why its offer to public was attractive:**
- - to exchange short-term redeemable (callable) debt earning high interest with lower-dividend (5%) South Sea Stock
- - **South Sea stock 'permanent':** not redeemable, with long-term dividend guarantee
- b) **South Sea stock fully negotiable on the LSE,** offering:
- - guaranteed annual dividends – 5%
- - prospects of capital gains, if stock price rose
- - negotiable asset ➔ collateral for borrowing (loans)
- c) **initial operations in buying up national debt**: next topic

The South Sea Bubble: 1720 - 4

- 3) **The Beginnings of the Bubble: 1720**
- a) **1720: South Sea Co markets new IPO** (stocks) to buy up remainder of national debt: £31,490,890 [next lecture]
- b) **'Boiler Room' activities:** to drive up market price of its shares on the LSE (par value: £100) from about £120 a share in January 1720 to almost £1,000 by June 1720
- c) **Why? Herein in lay the fraud and greed:**
- i) **the offer was to exchange national debt certificates (bonds, debentures, etc) for an equal value of South Sea Co. stock**
- ii) **hence: the higher the stock price, the fewer shares** had to be exchanged for equivalent value of national debt

The South Sea Bubble: 1720 - 5

- 3) **The Beginnings of the Bubble: 1720**
- d) **Speculative Boom ensued:**
- i) **As South Sea Co stock price soared**, so did prices of other stocks, if not to the same extent (see graph)
- ii) **Buying on margin** : paying only 10% down, borrowing 90% from brokers: fueled this speculative boom and Bubble.

The South Sea Bubble: 1720 - 6

- 4) **The Bubble is Inflated: 1720**
- a) **By Sept 1720: 190+ new companies formed**
- -known as 'bubble companies' (with no viable economic rationale for operations)
- - further fuelled the speculative boom on the LSE
- b) **South Sea Co directors became angry**
- -i) **feared that all these new companies would compete** for scarce funds in capital market ➔ hurt South Sea Co's chances of marketing new shares

The South Sea Bubble: 1720 - 7

- 4) **The Bubble is Inflated: 1720**
- - ii) **SS Co. demanded that Parliament (gov't) enact legislation to** curb these speculators ➔ sewed the seeds of their own destruction!
- c) **Bubble Act of April 1720**: statute 6 George I cap 18: April 1720
- - **forbade sale of shares (on LSE) in any company without a charter of incorporation** (or with charters for another business purpose

The South Sea Bubble: 1720 - 8

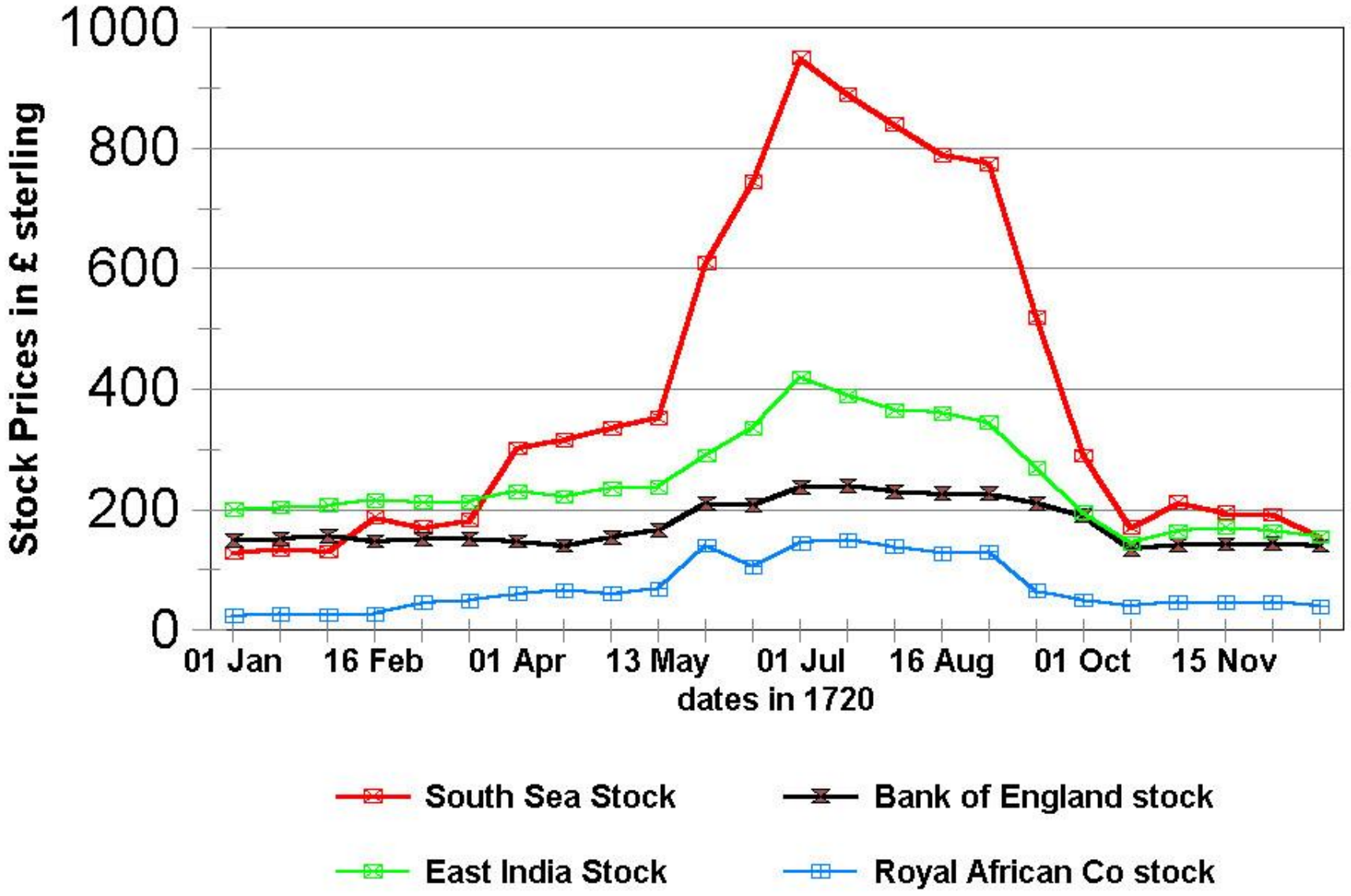
- 5) **The Bubble Act: Consequences:** to take effect in June 1720
- - surprisingly the crash did not begin right away, not in June 1720
- 6) **The Crash of August 1720:**
- a) **August 1720**: South Sea Co launched law suits against two companies on grounds of invalid business charters → panic → stock market crash
- b) **'Gresham's Law' of finance**: bad stocks drove out good stocks: → liquidity crises [i.e., lack of both cash and credit]: see chart

The South Sea Bubble: 1720 - 9

- c) **'buying on margin' was key problem: leverage**
- - **those who paid 10% down in effect borrowed the rest, 90%, from their broker**: the stock thus served as the collateral for the loan for 'call loans'
- - so long as stock prices continued to rise, everyone was happy
- - **stock buyers' hope**: resell at higher price, repay the broker, reap profits
- - **once prices began to fall, stock lost its collateral value** → broker demands immediate repayment of the 'call loans' → forcing the investor to liquidate (sell off) other, good assets → liquidity crises

Stock Prices in 1720

South Sea, B of E, East India, Roy Afr



The South Sea Bubble

Prices of the Stock of the South Sea and Royal African Companies in 1720:

Source: Ann M. Carlos, Nathalie Moyen, and Jonathan Hill, 'Royal African Company Share Prices during the South Sea Bubble', *Explorations in Economic History,* 39:1 (January 2002), 61-87.

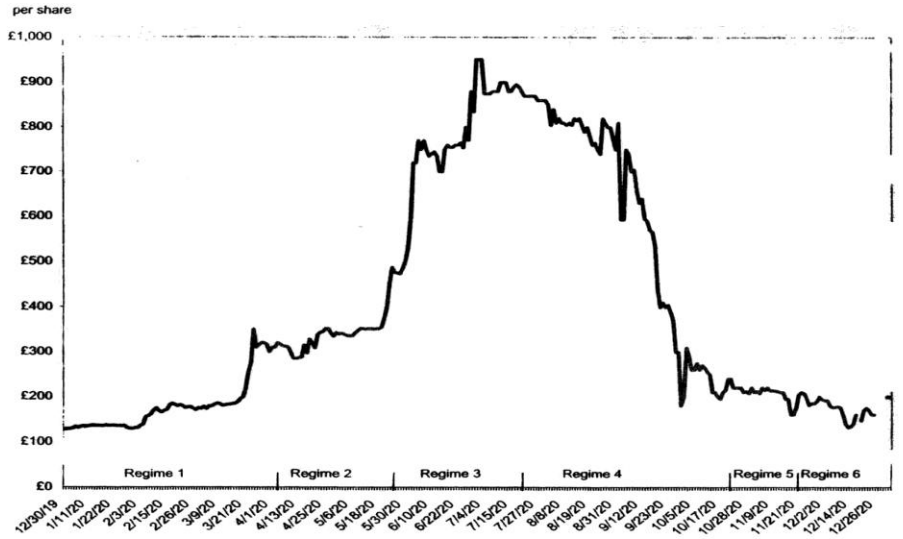


FIG. 2. Prices of South Sea Company shares.

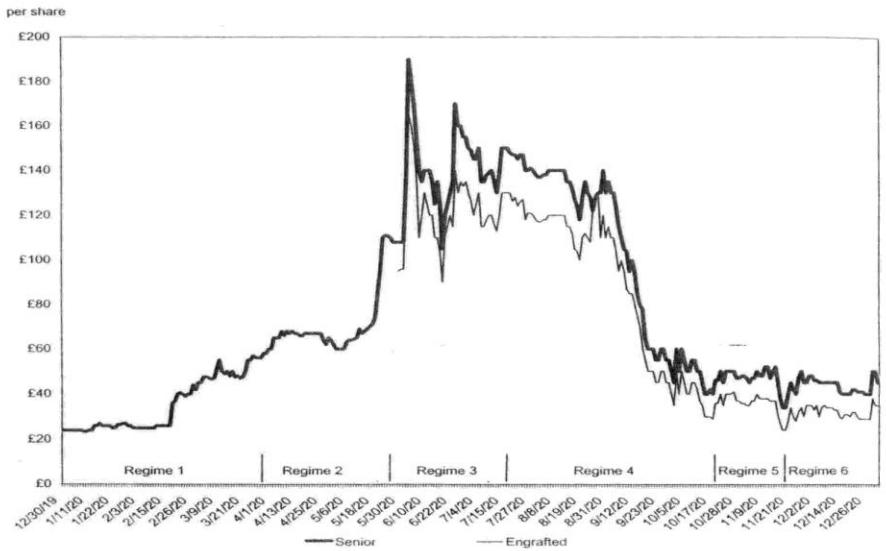


FIG. 1. Prices of Royal African Company senior and engrafted shares.

The South Sea Bubble: 1720 - 10

- 7) **Patterns of Falling Prices: values per share**
- - **York Buildings**: £305 → £30
- - **London Assurance**: £175 → 30
- - **Royal Exchange Assurance**: £250 → £60
- - **Royal African Co**: £200 → £45 (Sept) → £25 (Feb. 1721)
- - **Bank of England**: £265 → £132 (low)
- - **South Sea Co**: £1,050 → £180 (Sept) → £121 (Dec. 1720)

The South Sea Bubble: 1720 - 11

- 8) **Economic & Political Consequences of the South Sea Bubble:**
- a) **Dec. 1720: Parliamentary commission:** found that SS Co. officials
- - had bribed the gov't
- - used illegal measures to inflate its stock
- b) **British gov't had to resign,** while hundreds of powerful people suffered financial ruin (and humiliation)
- c) **How Parliament then interpreted the Bubble Act:**
- - **used the Act to prevent virtually any future company from obtaining a charter of incorporation**, while rigidly enforcing the ban on stock sales by unincorporated firms

The South Sea Bubble: 1720 - 12

- d) **charters of incorporation became very expensive to acquire**
- - **applicant firms:** had to pay for expensive Private Acts of Parliament
- - **had to put up very large deposits** with the Bank of England
- e) **only those few companies serving the 'public good' got such charters:** chiefly the canal companies of 1790s (which required large capitals: see ECO 303Y lectures)

The South Sea Bubble: 1720 - 13

- 9) **Did the Bubble Act Hinder the Industrial Revolution in England?**
- a) **Bubble Restriction Era: 1720 – 1825: when the Bubble Act was repealed**
- b) **short answer: N0** – obviously the Industrial Revolution took place, with traditional dates being 1760 – 1820
- c) **But this question lies in ECO 303Y:** where I do examine alternative methods of financing the Industrial Revolution, before 1825

The South Sea Bubble: 1720 - 14

- d) **But without this institutional hindrance, the joint-stock company might have become a powerful force** in financing fixed capital formation
- e) **In fact, joint stock companies played virtually no role**: with the major exception of financing canals
- i) **given large capital requirements for canals**, joint-stock a necessity
- ii) **canals natural monopolies** → required private acts of Parliament into which clauses of incorporation were easily included.

XI. BANKING, FINANCE, AND BUSINESS ORGANIZATION, 1520 - 1750

D. ENGLAND: Banking and Financial Institutions, 1500 – 1797:

revised 21 March 2012

22. **21 March 2012** **Davis**, chs. 14, 17-18 **Cipolla**, chs. 7, 10 (pp. 259-75); **de Vries**, chs. 6-8; **Musgrave**, chs. 3, 4, 6 **ET 7, 10**	**26**	**BANKING AND FINANCE:** **England: the London Goldsmiths,** and the Rise of Commercial Deposit-banking, 1620 - 1700; **The Founding of the Bank of England,** 1694-97; the role of the Bank of England in the 18th century; **the Bank of England and the National Debt, 1697 - 1753**;

Importance of English Banking & Financial Institutions - 1

- 1) **To demonstrate the immensely important role of financial institutions** in European economic development
- 2) **Consider their importance for ill as well as for good**: the havoc that financial institutions recently imposed on world economy
- - we have already seen the example of the **South Sea Bubble**: combining both greed and outrageous stupidity (as in 2008)

Importance of English Banking & Financial Institutions - 2

- 3) **To demonstrate their importance especially for the coming Industrial Revolution**, in providing
- - a) **the lubricant for the market economy** and industrial growth:
- - in credit instruments as mediums of exchange, in place of coined money: bills of exchange, promissory notes, then paper money
- - b) **the fuel for economic growth**: in financing capital formation
- - (i) **working capital**: chief role of banks (discounting)
- - (ii) **fixed capital formation**: plant (factory) & machinery
- - for Industrial Revolution era, banks played a minor role
- - more important were mortgage and insurance companies

English Deposit Banking: Origins 1

- 1) **Money-changing: had provided both the ancient and medieval foundations of deposit- and transfer banking** (November lecture)
- a) **In fragmented feudal Europe: mistrust of other princes' coins, so often debased** → very few coins had any international circulation (except florins, ducats)
- b) **Italians: money-changers**: therefore played a vital role in exchanging foreign for domestic coins
- i) **had to maintain large reserves of coins** → required costly security measures
- ii) **merchants and others requested services** of money changers to safeguard their own coins for safekeeping

English Deposit Banking: Origins 2

- c) **fractional reserve lending arose,** as money-changers found it profitable to lend some of the moneys left on deposit
- d) **transfer banking**: as money-changers bankers allowed their clients to pay other clients by book-account transfers
- e) **Medieval banking: separation of deposit banking (money-changers) from bills-of-exchange** (acceptance) banking (international merchants)

English Deposit Banking: Origins - 3

- 2) **Banking in Tudor-Stuart England**
- a) **The Royal Exchanger monopoly → virtual absence of deposit banking**
- - **Office of the Royal Exchanger**: from ca. 1222: gov't (crown) exercised a total monopoly on money-changing: monopoly in force up to the 1640s
- - **from 1290s**: Parliament forbade import & circulation of any foreign coins → to be turned over to Royal Exchanger for the mints.
- b) **with ban on private money-changing,** no alternative institution to develop deposit-banking

English Deposit Banking: Origins - 3

- c) **Alternative financial institutions in Tudor-Stuart England:**
- i) **merchants trading with Low Countries**: Mercers and Merchants Adventurers: using bills of exchange and letters obligatory
- ii) **scriveners:** notaries public who drew up financial documents → became brokers bringing merchants together → advanced credit
- iii) **other brokers and pawnbrokers**
- iv) **London Goldsmiths**: then the least important

English Deposit Banking: Origins - 4

- 3) **The London Goldsmiths:** true origins
- a) **origins of Goldsmiths: 14th-century London guild of jewellers** & merchants in precious metals: working with & trading in precious metals
- b) **most Goldsmiths had become bullion merchants,** by early 17th century: legally delivering foreign bullion to Royal Exchanger:
- - but many also involved in illegal bullion trade
- - **some also engaged in foreign exchange** banking

English Deposit Banking: Origins 5

- c) **Civil War era of the 1640s (crown vs Parliament):**
- i) **1640: Charles I confiscated bullion in London Tower Mint:** bullion belonging to merchants (to be minted into coin)
- ii) **Traditional story:** that merchants, fearing further confiscations and general insecurity, placed moneys and valuables in safe-keeping with London goldsmiths ➔ who thus developed deposit-banking (as Italians had done, so many centuries earlier)
- iii) **My theory: Royal Exchanger's monopoly ceased to be supported** ➔ thus allowing goldsmiths to become full-fledged deposit bankers

Deposit Banking from 1660s - 1

- 1) **London Goldsmiths, following Restoration of monarchy in 1660:**
- a) **combined both deposit-transfer banking and foreign exchange banking** in one combined operation
- b) **developed paper money as substitute** for now very scarce silver coins
- 2) **Goldsmith Banking Functions: four-fold**
- a) **deposit and transfer banking:**
- - with written cheques
- - interest-bearing savings accounts & non-interest current-chequing accounts (as today)

Deposit Banking from 1660s - 2

- b) **lending: on fractional reserve system**
- - If third of deposits kept on reserve → two thirds lent out → three-fold expansion of effective money supply (reciprocal)
- c) **discounting**: bills of exchange, promissory notes, inland bills (last day): see handout
- d) **note issue**: bank notes, which began as bank's promissory notes

Deposit Banking from 1660s - 2

- 3) **Issue of paper banknotes: from the 1670s**
- a) **began as promissory notes that banks issued** against own general credit
- - demand notes: convertible into coin, on demand
- - many banks issued such notes in making loans or discounting bills
- b) **original notes: informal written notes:**
- - usually issued for odd sums of money, payable to specific persons ➔ had to be endorsed and often transferred at discount, but fully negotiable

BANKS & DISCOUNTING DURING THE INDUSTRIAL REVOLUTION

(1) **The owner of cotton-spinning mill, Frank Appleby, makes a contract with a textile merchant,** George Batemen, to sell him 1,000 yards of cotton yarn, with delivery in, say two months ("a forward-sale contract"). In return, to pay for this purchase of cotton yarn, George Bateman (merchant) gives Frank Appleyby (cotton spinner) a *promissory note* (or "inland bill"), promising full payment in 90 days.

> I, George Bateman, promise to pay Mr. Frank Appleby or his assignees [or the bearer of this note], the sum of £100 sterling, in Manchester, 90 days from the date of this note, namely on 1 February 1787, as full payment for the delivery of 1,000 yards of good spun cotton yarn of 90S fineness. I authorize my banker, James Young, to make payment on my behalf.
>
> Dated 1 November 1786 at Manchester. (Signed) George Bateman

(2) **The cotton-spinner, Frank Appleby, then immediately takes this promissory note to his Manchester banker, Samuel Glynn and Sons, and sells this note at discount**, i.e. Appleby sells his note for some amount less than its redeemable face value on maturity. Obviously he cannot sell the note for the full face value, or the bank would earn no return on the transaction. Appleby endorses the note on the back, and assigns its claim [for payment] to the banker, Samuel Glynn and Sons.

> The banker, Samuel Glynn, buys this note for, say, £97 sterling; and gives the seller of the note, Frank Appleby, this sum of money, in three possible ways:
>
> (i) By crediting Frank Appleby's bank account with £97 -- with a stroke of the pen, thus allowing Appleby to make payments with his suppliers by writing cheques on this bank account. Subsequently, Appleby can withdraw cash from this bank account -- perhaps in some mixture of bank notes and coins -- to pay his workers.
>
> (ii) By giving Appleby £97 in bank notes that are issued by the bank itself (i.e. notes drawn on the bank of Samuel Glynn and Co., redeeemable in legal-tender coin only at this bank).
>
> (iii) By giving Appleby £97 -- or part of that sum -- in Bank of England notes. [N.B. the Bank of England did not issue any £1 notes before 1797.] Bank of England notes, however, were redeemable in coin only at the Bank of England itself, in London.

(3) **The cotton-spinner, Frank Appleby, can thus use this money -- his working capital -- in order to buy the raw cotton and other supplies**, to pay the rent on his buildings, to pay the wages of his carders and spinners, and other salaries, and shipping costs in delivering the spun yarn.

(4) **On 1 February 1787, the banker, Samuel Glynn and Sons,** as *the assignee and bearer of the note*, then presents it to banker acting on behalf of the issuer, Mr. George Bateman, for collection. As indicated above, Bateman's banker, James Young, will make make the full payment of £100 to Samuel Glynn and Sons, debiting the bank of account of George Bateman.

(5) **What does the banker, Samuel Glynn and Sons, earn from this transaction?**

(i) Having purchased the bill for £97 and then having redeemed it for the full face value of £100, the banker earns the difference, namely £3. Thus £3/£97 = 3.093%.
(ii) Interest rates or yields, however, are always calculated on an annual basis. Therefore the proper calculation of his yield or return on this transaction, for the period of three months or 90 days, expressed as annual yield in percentage terms ("interest"), is about 4 times as much. The proper calculation for the annual yield is:

3/97 x 365/90 = 0.125429 or 12.54%

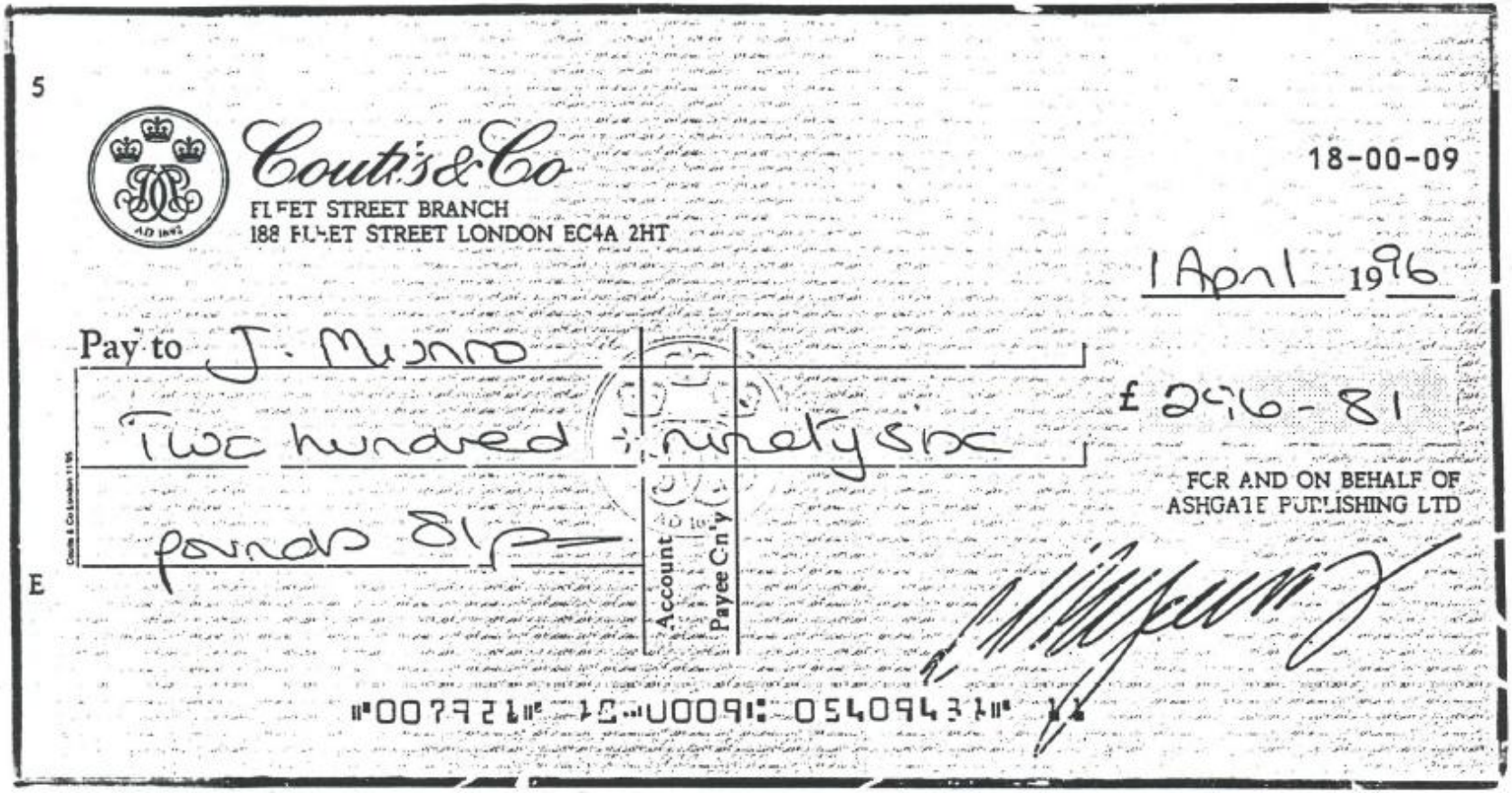
Deposit Banking from 1660s - 3

- 3) **Issue of paper banknotes: from the 1670s**
- c) **printed banknotes: from early 18th century**
- - printed notes for fixed sums (e.g., £10), payable to bearer
- d) **Importance: provided an important addition to the money supply** when silver coins becoming very scarce

Deposit Banking from 1660s - 4

- 4) **Goldsmiths' contribution to credit expansion:**
- a) **developed use of 3 negotiable credit instruments:**
- - **the cheque** (book account transfers)
- - **discounted bills**, promissory notes
- - **paper bank notes**
- b) **none was legal tender** (what is the test?)
- c) **but all functioned as money**: on the belief and confidence that they would be convertible on demand into 'real' money – in the form of gold & silver coins

Couts and Co: Goldsmith Bank (founded in 1692)



Formation of the Bank of England

- 1) **Political and Economic Background:**
- a) **lessons of the English Civil War of 1640s:**
- **that Parliament is supreme, over the Crown,** and as such, 'controls the purse strings'
- **1649: execution of Charles I made that point**
- b) **Restoration of Stuart monarchy in 1660** (after death of Cromwell, 1658): Charles II, who recognized these lessons– and behaved until his death in 1685

Bank of England: Formation - 2

- - **1672: Charles II defaulted** on royal debts ➔ future problems
- c) **1685: brother James II succeeded him** – but did not learn his lessons ➔ provoked revolt
- d) **1688: Glorious Revolution** ➔ James II overthrown ➔ William III of Orange (ruler of Dutch Republic) became king & joint-ruler: with his wife Mary II, daughter of James II (she died in 1694 – of small pox)
- e) **1689: Battle of the Boyne in Ireland**: William III defeats James II & his Irish Catholic armies

Bank of England: Formation - 3

- 2) **Reasons for Formation of Bank of England:**
- a) **Financing warfare: key problem:**
- i) **William III involved England in his Dutch wars** with Louis XIV of France (d. 1715)
- ii) **Crown: had terrible credit rating** (since Charles 1672 Stop of the Exchequer): borrowing at rates up to 14%
- iii) **Parliament:** supported William III & his war, but insisted that Parliament control all state finances
- b) **Beginnings of permanent national debt, 1693**: with the Million Pound Loan (next topic) at 14%:
- c) **chronic problem of monetary scarcities**: as noted ➔ need for a government backed legal-tender paper currency

Bank of England: Formation - 4

- 3) **Formation of Bank of England: 1694**
- a) **Project of William Paterson, Scottish financier,** with Charles Montagu, Chancellor of the Exchequer (finance minister)
- b) **Proposal:**
- i) **Paterson group provide a loan** (permanent) of £1.2 million at 8%
- ii) **in return for creating the Bank of England with:**
- (1) English monopoly on joint-stock banking
- (2) monopoly on banking for the Crown (gov't)

Bank of England: Formation - 5

- c) **Financing the project: by selling £1.2 million in shares**: but printing that amount in banknotes, while initially raising only £720,000 by selling shares ➔ thus created new money ('monetizing the debt')
- d) **May 1694: Parliament voted to accept proposal:**
- - **created an incorporated joint-stock company**, with limited liability
- - **creating the promised dual monopoly**
- - **voted special excise tax on ship tunnage**: hence 'Tunnage Bank'

Bank of England: Formation - 6

- 4) **Subsequent Events for Bank of England:**
- a) **Bank Act of 1707**: remedied loopholes to guarantee the Bank's monopoly ➔ all other English banks limited to 6-member partnerships (did not affect Scottish banks)
- b) **Interest on Bank's permanent loan to Crown**:
- i) **1707**: rate reduced from 8% to 6%
- ii) **1742**: rate further reduced to 3% + £4,000 in fees (= 3.75%)
- iii) **1757:** agreement renewed at same rates

Bank of England in 18th Century

- 1) **"Nothing Succeeds Like Success": success based on following:**
- a) **steady secure income flow:**
- i) **gov't interest on its permanent loans** → raised to £11.7 million by 1752
- ii) **other income sources:** management fees and gov't payments for its various financial services rendered
- b) **monopoly right to issue official, legal tender banknotes**: fully convertible into gold/silver

Bank of England in 18th Century 2

- c) **strong confidence from all important sectors:**
- i) **from the Crown**: as the gov’ts sole bank
- ii) **from Parliament**: which created and continued to control the bank, with decennial revisions of the Bank Act
- iii) **from the mercantile, financial sector**: its actual owners, as a private joint-stock company bank

Bank of England in 18th Century - 2

- 2) **Functions of the Bank of England:**
- a) **as the Crown's bank:** 75% of its business was with government
- -i) **handling all gov't financial accounts**
- - ii) **acting as the bullion agent for royal Mint** (supervised Recoinage of 1696)
- - iii) **providing short-term credit: discounting Exchequer Bills**: most important function

Bank of England in 18th Century - 3

- - **1696: first issues of promissory notes** by which gov't paid for supplies, munitions, uniforms, etc. for the military in particular
- - **those receiving Exchequer Bills in payment** could cash them, convert them into B of E notes, at small discount, at banks that were clients of the B of E.
- - **by 1700: volume had grown to about £5 million**
- iv) **handling the government's national debt:** separate topic

Bank of England in 18th Century - 4

- 2) **Functions of the Bank of England: cont'd**

  - b) **As a private bank:**

  -i) **same deposit, transfer, and discounting functions** as undertaken by the London goldsmith banks

  -ii) **but B of E had very few clients**: had to be approved by the board of directors

- - **leading London goldsmith banks**
- - **several Amsterdam private banks**
- - **The overseas joint-stock trading companies:** East India Co, Royal African Co, Hudson's Bay Co, Levant Co, etc.

Bank of England in 18th Century - 5

- 2) **Functions of the Bank of England: cont'd**
- c) **Lender of Last Resort: embryonic central bank**
- i) **began as extension of previous function**: assisting client banks by rediscounting their commercial paper ➔ shore up their cash reserves with B of E notes ➔ to permit them to resume and extend lending functions
- ii) **Dutch financial crises (last day): 1763, 1773, 1783, 1795:** while the Wisselbank helpless (giro bank: non-credit), Bank of England rescued its Dutch clients by rediscounting their paper
- iii) **Major Factor in shift of financial power from Amsterdam to London**: even though B of E restricted help to its own clients

Bank of England in 18th Century - 5

- iv) **Financial Crisis of 1797: full rediscounting**
- - **threatened Napoleonic invasion** → panic → threatened collapse
- - **English gov't convinced the B of E to resolve crisis**
  (1) **suspended convertibility of banknotes** into coin: era of 'Paper Pound'
- (2) **extended privilege of rediscounting** to all English financial institutions

Bank of England in 18th Century - 6

- 3) **The Bank of England's note issue:**
- a) **Had issued bank notes from its inception in 1694**: furnishing the £1.2 million loan in cashiers' bills
- b) **1694 Act: allowed Bank to issue 'sealed notes'** up to its capitalization
- c) **1707 Bank Act: made Bank of England notes fully official legal tender**
- - on the obvious condition that they be fully convertible, into coin
- e) **Within London, Bank of England notes soon displaced bank notes** of the Goldsmith banks:

Bank of England in 18th Century - 7

- - **but B of E notes did not circulate outside of London,** because there was no B of E branches to cash them (before 1833: when B of E forced to open branches)
- f) **Bank Notes issued in very high denominations:**
- i) **1694-1759:** £20 was smallest denomination
- ii) **1759 – 1793**: £10 was smallest denomination
- iii) **1793 – 1797**: £5 became the smallest denomination
- iv) **1797 – 1821**: £1 notes issued: in an inflationary flood ➔ known as the 'era of the paper pound' (when they were non-convertible into gold coin)

SCOTT BARBOUR/GETTY IMAGES

Bank of England: Thomas Shepherd, 1816 (painting)

NATIONAL DEBT AND BANK OF ENGLAND - 1

- 1) **Origins of the English 'Financial Revolution'**
- a) **components of the national debt:**
- i) **short-term 'floating' debt:** short term loans and redeemable debentures + Exchequer bills
- ii) **permanent funded national debt:** beginning in 1693:
- - (1) **permanent debt**: debt obligations with no redemption dates: most never redeemed
- - (2) **funded debt**: interest or annuity payments came from specific excise taxes voted by Parliament
- - (3) **national debt**: national responsibility of Parliament, not personal responsibility of the king

NATIONAL DEBT AND BANK OF ENGLAND - 2

- iii) **this system was borrowed in its essentials from the Dutch Republic,**
- which had inherited it from Habsburg Low Countries – and which had begun with towns of 13th-century Flanders and northern France
- iv) **In Low Countries and England:**
- national debt consisted essentially of negotiable (transferable) *rentes* or annuities (redeemable by gov't).

NATIONAL DEBT AND BANK OF ENGLAND – 3

- 2) **Financial terminology:**
- a) **annuities:** same as *rentes:*
- - **term annuities**: for 32 or 99 years (vs. continental life-rents: for lifetime of holder): extinguished at end of term (no repayment)
- - **perpetual annuities**: no termination date
- b) **callable debentures**: loans without specified repayment debt, but redeemable by order of the government
- c) **perpetual stock**: British term for South Sea Co stock, and then perpetual annuities that were also traded on London Stock Exchange (and Amsterdam Beurs) ➔ from 1752 called 'Consols' = **Consolidated Stock of the Nation**

NATIONAL DEBT AND BANK OF ENGLAND – 4

- 3) **Evolution of National Debt to 1715**
- a) **1693: Million Pound Loan**: **a lifetime annuity** of 14% (or 10% to 1700 –with survivors sharing a *tontine*: lecture notes)
- b) **1694: formation of Bank of England**, with £1.2 million permanent loans @ 8%
- c) **1698: New East India Co created**, with a £2.0 million permanent loan (sale of stock)

NATIONAL DEBT AND BANK OF ENGLAND – 5

- 3) **Evolution of National Debt to 1715**
- d) **1709: East India Co absorbs its rival,** with another permanent loan of £1.2 million (by 1750: held £4.2 million of national debt
- e) **1704-1711: gov't sales of 32 year and 99-year self-liquidating annuities** (various rates of interest)
- f) **1711: formation of the South Sea Co.**
- g) **1715: Bank of England begins role as manager** of national debt

NATIONAL DEBT AND BANK OF ENGLAND – 6

- 4) **South Sea Co and the national debt**: one of the **Three Sisters** (with B of E & East India Co)
- a) **War of Spanish Succession (1701-13)** ➔ debt ballooned to £53.7 million
- b) **1711: South Sea Co. took over £9.47 million in gov't debt** (6 short term loans: paying 6.25% to 9.0%) ➔
- i) **in effect converted that into 5% South Sea Stock**

NATIONAL DEBT AND BANK OF ENGLAND – 7

- 4) **South Sea Co and the national debt**
- ii) **reasons why public accepted these terms:**
- (1) **short term loans converted into permanent stock** paying fixed 5% return
- (2) **South Sea Co stock a negotiable asset**: traded on the LSE, while gov't debt was not negotiable
- (3) **Prospects of capital gains:** from sale of South Sea Co stock on stock exchanges
- c) **1719-20: South Sea Co tried to take over rest of national debt**: that not held by the Bank of England and East India Company

Governments Debts Exchanged for South Sea Company Stock in 1711
in pounds sterling

Category	Type of Debt	Amount Subtotal	Amount	Percent of Total
1a	Navy and Victualling to Michaelmas 1710	5,130,539		
1b	Ordnance to Michaelmas 1710	154,325		
1c	Transport office to Michaelmas 1710	424,791		
	Subtotal		**5,709,655**	**60.28%**
2a	Army and Transport debentures up to 1702	987,157		
2a	accrued interest on these debentures to 1710	31,500		
2b	Shortfall in coal duties to pay loans: 1697, 1702	12,025		
2c	arrears in subsidy to Elector of Hanover	9,375		
	Subtotal		**1,040,057**	**10.98%**
3a	Navy, Ordnance, Transport Debts 1710	378,859		
3b	Interest of debts for 1710-1711	85,000		
	Subtotal		**463,859**	**4.90%**
4	Principal and interest on short-term loans 1710-11		1,371,428	14.48%
5	Sum for current supply		500,000	5.28%
6	Interest on whole debt for 1711		386,325	4.08%
	TOTAL		**9,471,324**	100.00%

NATIONAL DEBT AND BANK OF ENGLAND – 8

- 4) **South Sea Co and the national debt**:
- d) **South Sea Co began selling new shares (IPO)**, as seen in previous lecture:
- i) **partly to buy up remainder of national debt**, partly to raise capital for other ventures
- ii) **as noted: 'boiler-room' activities to inflate price of South Sea Co stock on LSE:** in order to trade fewer shares for various national debts
- e) **1720: Bubble Act and the Crash**: already explained in detail, when South Sea Co engineered its own destruction
- f) **From 1720: South Sea Co. existed only as a holding company:** holding its large acquired share of the national debt

Structure of British Government Long-Term Debt in 1719

in pounds sterling (current values)

1	**Debt Owed to the Three Sisters (Corporations)**				**Totals**	**Percent of Total**
1a	Bank of England			3,375,028		6.76%
1b	East India Company			3,200,000		6.41%
1c	South Sea Company			11,746,844		23.54%
					18,321,872	36.72%
2	**Redeemable Government Stock**				**16,546,202**	33.16%
3	**Annuities**					
3a	**Long Term* Annuities: 99** years (at 20 yrs purchase	666,566	5.000%	13,331,320		26.71%
3b	**Shorter Term Annuities: 32** years (at 14 years purchase)	121,669	7.143%	1,703,366		3.41%
					15,034,686	30.13%
	TOTAL				**49,902,760**	100.00%

NATIONAL DEBT AND BANK OF ENGLAND – 9

- 5) **Pelham's Conversion: 1749 to 1757**
- a) **Sir Henry Pelham, Chancellor of Exchequer**:
- **Objective:** to convert all of the national debt into 3% Consols: **Consolidated Stock of the Nation**
- i) **holders of redeemable debenture and shorter-term annuities gained:** by conversion into perpetual stock (for reasons already explained)
- ii) **but strenuous opposition of South Sea Co investors**, whose 5% and 4% stock was already perpetual – and would NOT gain from this conversion (until gov't threatened to redeem all their stock at par)
- iiii) **gov't succeeded by promising not to redeem any Consols for 30 years**

NATIONAL DEBT AND BANK OF ENGLAND – 10

- b) **conversion of interest rates:** **Consols in fact never redeemed**
- - **1749**: from 5% and 4% into 3.5% Consols ➔ to 1757
- - **from 1757**: rate reduced to 3.0%
- - **from 1888 to 1903**: rate was again reduced to 2.75% ('Goschen's Conversion': ECO 303Y)
- - **from 1903**: rated reduced to 2.5% -- and has remained unchanged to this day.

Structure of Great Britain's Redeemable Long-Term National Debt in September 1749 on the Eve of Pelham's Conversion

No	Category	At 3%	At 3.5%	At 4%	Sub-total	Totals	Percentage Share
1	**Debts Owed to the Three Corporations**						
1a	Bank of England	3,200,000		8,486,800	11,686,800		16.59%
1b	East India Company	1,000,000		3,200,000	4,200,000		5.96%
1c	South Sea Company			3,662,784	3,662,784		5.20%
	Subtotal: Three Sisters	**4,200,000**		**15,349,584**	**19,549,584**	**19,549,584**	**27.75%**
2	**Perpetual Stock Managed by:**						
	Bank of England	7,200,000		18,402,472	25,602,472		36.35%
	South Sea: Old Annuities			13,651,100	13,651,100		19.38%
	South Sea: New Annuities			9,988,319	9,988,319		14.18%
	Subtotal South Sea			23,639,419	23,639,419		33.56%
	Subtotal Corporations			**42,041,891**	**49,241,891**	**49,241,891**	**69.90%**
3	**Managed by Exchequer**						
	1731: 3.5% series		400,000		400,000		0.57%
	1736 and 1739 loans	900,000			900,000		1.28%
	St Kitts-St Nevis debenture	37,821			37,821		0.05%
	1720 loan			312,000	312,000		0.44%
	Subtotal Exchequer	**937821**		**312000**	**1649821**	**1,649,821**	**2.34%**
	TOTALS	**12,337,821**	**400,000**	**57,703,475**	**70,441,296**	**70,441,296**	**100.00%**

Consolidation of the British National Debt in 1752

Date of Loan or Stock	Manager	Debt at 3 percent	Debt at 4 percent converted to 3.5 percent	Total	percent of total
1720	Exchequer		129,750	129,750	0.49%
1721	Exchequer	37,821		37,821	0.14%
1731	Bank of England	800,000		800,000	3.00%
1736	Exchequer	600,000		600,000	2.25%
1738	Exchequer	300,000		300,000	1.12%
1742	Bank of England	800,000		800,000	3.00%
1743	Bank of England	1,800,000		1,800,000	6.74%
1744	Bank of England	1,800,000		1,800,000	6.74%
1745	Bank of England	2,000,000		2,000,000	7.49%
1746	Bank of England		2,824,429	2,824,429	10.57%
1747	Bank of England		4,189,365	4,189,365	15.68%
1747	Bank of England		929,277	929,277	3.48%
1748	Bank of England		6,660,007	6,660,007	24.94%
1749	Bank of England		2,968,496	2,968,496	11.11%
1750	Bank of England	1,000,000		1,000,000	3.74%
	TOTALS	**9,137,821**	**17,571,574**	**26,709,395**	100.00%
	percentages	34.21%	65.79%	100.00%	

Four Per Cent Debts Subscribed to 3.5 percent Conversion by 30 May 1750 [converted to 3.0 Consols at Christmas 1757]

Values in current pounds sterling

Type of Debt	Total Amount	Amount Converted	Not Converted	Percent of Total	Percent Converted
Bank of England	8,486,800	8,486,800	0	16.72%	100.00%
East India Company	3,200,000	3,200,000	0	6.31%	100.00%
South Sea Company	3,662,784	0	3,662,784	0.00%	0.00%
South Sea Old Annuities	13,651,100	12,404,270	1,246,830	24.44%	90.87%
South Sea New Annuities	9,988,319	8,958,255	1,030,064	17.65%	89.69%
Government 4% Stock managed by the B of E	18,402,472	17,571,574	830,898	34.62%	95.48%
Government 4% Stock managed by Exchequer	312,000	129,750	182,250	0.26%	41.59%
TOTALS	**57,703,475**	**50,750,649**	**6,952,826**	**100.00%**	**87.95%**

Current Yields on British 2.5% Consols as Traded on the London Stock Exchange

To obtain the current yield, divide the coupon (2.5) by the market price

Date	Market Value	Yield
March 2012	£60.95	4.10%
October 2010	£56.80	4.40%
March 2010	£50.53	4.95%
October 2008	£54.69	4.57%
March 2008	£55.14	4.53%
October 2007	£54.58	4.58%
March 2007	£54.79	4.56%
October 2006	£60.04	4.16%
March 2006	£59.43	4.21%

The Importance of Consols - 1

- 1) **Provided chief activity for the London Stock Exchange: from 1720s to the 1830s**
- **along with trade in shares of the Three Sisters** (Bank of England, East India Co, South Sea Company)
- a) **from 1750s to Repeal of Bubble Act in 1825:** which restored LSE market sales in stocks of other companies – but major change took place stocks of the new railway companies in the 1830s
- b) **The 'stock' of the B of E, East India Co, South Sea Co ('Three Sisters'), along with Consols:** all represented British public debt

The Importance of Consols - 2

- 2) **Economic Importance of Consols: Their universal popularity**
- a) **virtually risk free investments**: guaranteed by gov't
- b) **as 'perpetual stock' ➔ assurances of stable, life-time income** (as noted: Consols were never redeemed)
- c) **readily negotiable** on the LSE and Amsterdam *Beurs*
- d) **value as collateral: for securing loans** – better than land (as collateral for mortgage loans)
- e) **as annuities: Consols not subject to the usury law restrictions** (in force to 1854) – though by 1750s, 'coupons' had fallen below the 5% usury limit

Bank of England: Positive and Negative Features - 1

- 1) **Management of the National Debt: Positive**
- a) **well-organised secure international market for government debt:** i.e, via the London Stock Exchange, but B of E handled debt management
- b) **sharp fall in interest rate on government debt**: from 14% in 1693 to 3% in 1757
- i) **Bank of England not the only factor**, but a major factor in that interest-rate fall
- ii) **major factor in reducing the general rate of interest:**
- **-** because of the 'crowding out' effect of government borrowing : for, gov'ts will pay whatever interest is necessary to finance national defence (warfare in general), as its primary political, social, and economic obligation

Bank of England: Positive and Negative Features - 2

- 2) **Other important contributions: Positive**
- a) **issuing stable paper money as full legal tender**
- b) **serving as the 'Lender of Last Resort' (after 1797)**: when Amsterdam Wisselbank proved powerless to deal with financial crises
- c) **providing the government with low cost, efficient financial services -** lowered transactions costs of government

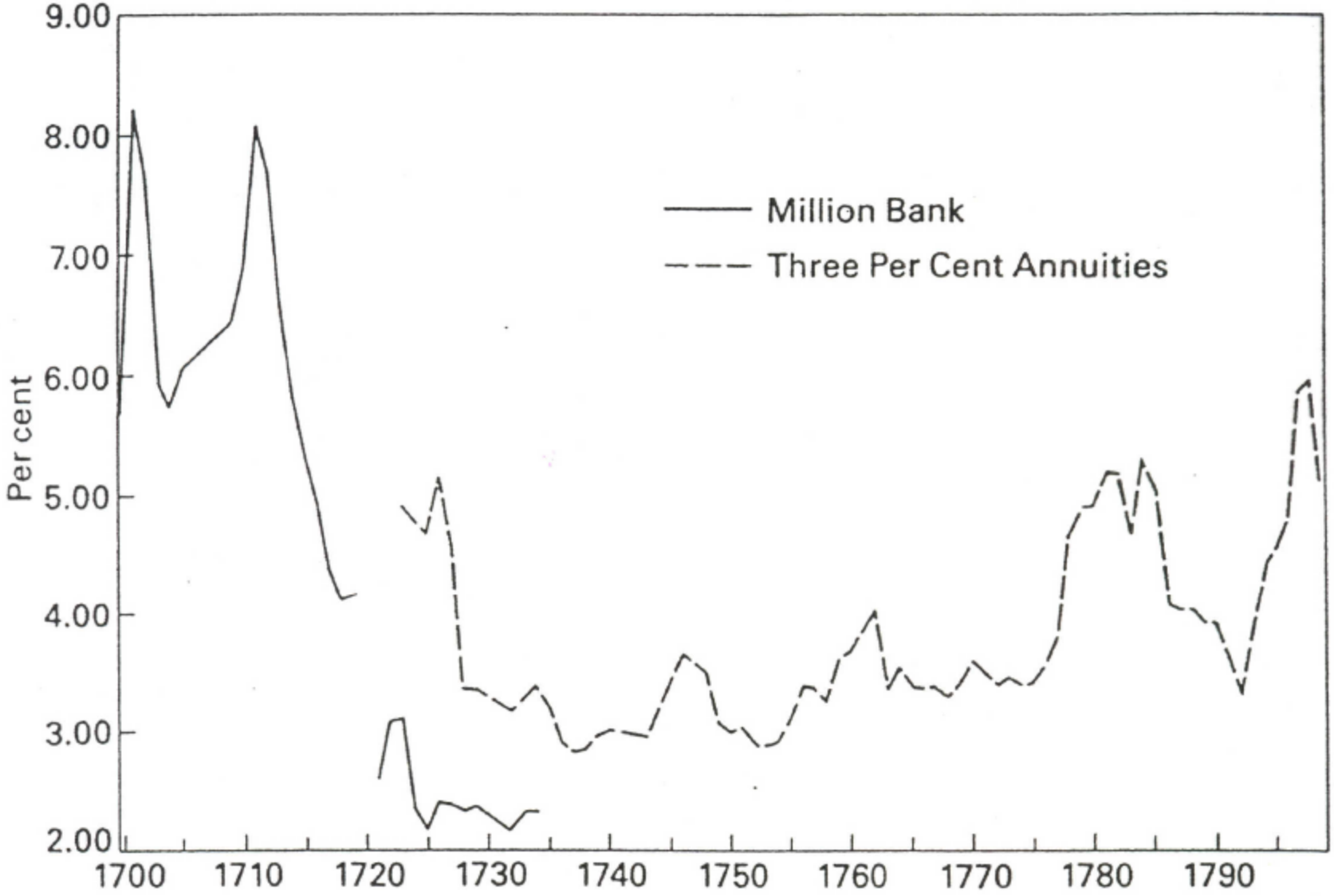


Figure 7.3 Yields on risk-free government debt, 1700–99

Unredeemed British Public Debt, in Decennial Years, 1700 - 1910
In Millions of Pounds Sterling

Date	Funded Debt in £ millions	Unfunded Debt in £ millions	TOTAL DEBT IN £ MILLIONS	Percentage Change over last decade
1700	4.7	9.4	14.2	
1710	7.3	14.1	21.4	+50.7%
1720	49.8	4.1	54.0	+152.3%
1730	47.4	4.0	51.4	-4.8%
1740	43.3	4.2	47.4	-7.8%
1750	72.8	5.2	78.0	+64.6%
1760	97.6	4.2	101.7	+30.4%
1770	128.6	2.1	130.6	+28.4%
1780	156.1	11.2	167.2	+28.0%
1790	234.6	9.4	244.0	+45.9%
1800	411.4	22.6	434.0	+77.9%
1810	567.7	39.7	607.4	+39.9%
1820	798.5	41.6	840.1	+38.3%

Bank of England: Positive and Negative Features - 3

- 3) **Negative Features of the Bank of England:**
- a) **its monopoly on joint-stock banking in England:** until Repeal of Bubble Act (1825) and the 1826 Bank Act
- - **note: this monopoly did not apply to Scotland**, which had created four incorporated joint-stock banks by the 1820s (and a far better system: with branch banking)
- b) **Refusal to establish any branches outside of London** (until Bank Act of 1833): so that B of E notes did not circulate outside of London – combined with following:
- c) **High denomination bank notes** – until 1797
- d) **How these problems were all resolved after 1830:** see lecture notes for ECO 303Y (still online).