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# General Notes:

Final paper:

- Research Proposal
- Find a data source
- Propose a methodology
- Find an interesting question

Look at previous works and see if you can propose

5 Pages max - 15000

Key thing is the introduction in which you raise a topic and explain why it is interesting.

**Deadline:** May 5th

## Potential Topics:

- Diff-and-Diff /RDD Design
  - Similar to US Federal Bank Case
  - Could try do the same in France or UK with creation of Central Bank
- Going more indepth into topics we already saw.
  - Examine the relationships between merchant traders and central and private bankers and politicians
  - Identify potential conflict of interest which previously hadn't been observed

# Lecture 1:

## M.Bordo & Roberds

Basically a history of money from commodity money to paper money

### Friedman's monetary paradox

*So long as the fiduciary currency has a market value greater than its cost of production - which under favorable conditions can be compressed close to the cost of paper on which it is printed - any individual issuer has an incentive to issue additional amounts. A fiduciary currency would thus probably tend through increased issue to degenerate into a commodity standard- there being no stable equilibrium price short of that at which the money value of currency is no greater than that of the paper it contains. And in view of the negligible cost of adding zeros, it is not clear that there is any finite price level for which this is the case. (Friedman, 1960, p. 7)*

Basically, as long as money is worth more than it costs to make, there is an incentive to continue to produce it. There is no price level at which there is a stable equilibrium until the cost of production is higher than the value of the money. Given the cheap cost of paper money and just printing another zero, it is not clear where this point is.

### The effects of digital currency

Digitalization of Money is a crossroad in monetary history. Gov. & CB need to adapt to ensure that money remains a public good, financial stability objectives and make monetary policy effective; risk of contradiction between micro and macro objectives.

There are benefits to fiat currency.

## **Money or “safe assets”? Gorton**

This interpretation reads the history of money & finance through a constant “demand for safe assets”

- Views financial crises as a loss of safety of the safe assets
- Views a central role of governments and central banks as providing safe assets

Money is viewed as a financial asset (eg. Debt)

## **Financing trade: early modern problems and solutions**

### **The omnipresence of private credit in early modern societies**

The rich are all lenders, borrowers or both.

Despite their lack of guarantees, many poor (both in cities and rural villages) survive only thanks to credit, especially at times of crisis or accident

Various forms of credit : network of family and neighbours; local elites (nobilities, clergy); charitable institutions; “foreigners” (Lombards, Jews, peddlers).

## **Trade Development & Credit**

# **Lecture 2: Coinage and monetary arrangements**

## **Financing government and war**

Commodity money = a quantity of a metal defines money.

This has issues as the metals also have other uses in other industries. This leads to arbitrage opportunities.

Initially Charlamagne used widely circulated silver coins. Yet, at the fall of this empire small monarchies and local regions developed their own currencies. This became a problem because there was no standard. Eventually these currencies joined with others.

This system became complex in order to satisfy various needs, and required permanent adjustments because of the unequal wear and tear of different coins

### **Exchange rate and Debasement**

Eastern governments set the mint price but did not control the supply of money.

Exchange rates: fixed between different coins (except for wear and tear) but possibility of flexible exchange rate between metal content and the unit of account.

To control for the changing value of coins, debasement was used. This involved reducing the value of metal found in the actual coins themselves.

### **Centralisation**

At certain point, there were so many different currencies it became a problem. The King of France monopolised the minting process. The crown now decided the value of the money

and the monetary standard (size weight).

This led to issues of low quality production. Production costs justify a small seignorage in normal periods. But profits from producing low-quality coins would be high compared to mint's normal profit. Therefore the crown colluded with the mint to use less silver than the stated value. The larger the seignorage the larger the profit shared by the mint and the crown.

## **Debasement**

For debasement to generate inflation and tax revenues, coins need to be exchanged at face value.

After the debasement by the royal mint has been found out, they could officially increase the price of silver and therefore the value of the coin.

Royal incomes skyrocketed through debasement. Those who lost out were those with nominal fixed incomes. Notably wage owners in the short term, and landowners in the long term.

## **Globalization & international money flows**

With rising globalisation through colonisation, the stock of precious metals increased, with more metals making their way back to Europe. The inflationary or deflationary effects of these inflows is still up for debate.

## **Government Finance and War**

War was a huge part of government budget. The buying of ships and maintenance of an army and navy became very expensive as a percentage of GDP. Financing these wars became an issue of its own. In periods of relative comfort, the governments had multiple options;

- Selling monopolies / privileges
- Short term borrowing from bankers;
- Issuance of long term debt (initially based on the reputation of cities)

- Seignorage

Yet in crisis times, only two options really stood out;

- Debt default (or restructuring)
- Debasement (at various scales).

## **Selling Privileges**

### **Government Shortterm Borrowing**

Wars need lots of money quickly. Enter short term credit markets.

Credit was widely available but quite costly!

### **Government Long-Term Borrowing**

Short term debt could be consolidated into long term ones.

These long-term bonds benefited from legal protection. These could be used as collateral and therefore became a favoured investment vehicle. These

## **The emergence of Financial Institutions**

### **Life Annuities**

### **Early securities exchanges**

Trade of securities (either public bonds or other) takes place in private places such as coffee shops. Required a large number of securities and confidence among traders.

The Dutch East India Company (VOC) was created by merger other smaller business. They needed to create a more durable type of company. Rather than funding individual expeditions, they sell shares in the company as a whole. This market became more developed and sophisticated as demand grew, and VOC shares became commonly used as collateral.

At that time, the public debt was not easily transferable, so the market was less developed and less sophisticated than for these shares.



## **Establishing Banking Monopolies / Public Banks**

These banks were not “central” like they are now.

- They did not issue/mint money
- They did not determine value

### **The Wisselbank**

Centralized settlements of bills of exchange.

- Accepted deposits of coins at legal value (at metal content if unknown)
- Deposits redeemable on demand (with a 1.5% fee)
- Deposits could be used on inter-merchant payments (no legal tender)

Every Merchant, in consequence of this regulation, was obliged to keep an account with the bank in order to pay his foreign bills of exchange, which necessarily occasioned a certain demand for bank money. This led to the bank being involved each year in business to the value of double Dutch GDP

The bank never issued coins or money in circulation, but issued fiat money in the type of “reciept” system.

### **Bank of England**

Unlike the Wisselbank, the BoE did create bank notes, and did so on a large scale. The Banks was soon made the only note issuing corporation in London until 1844.

# Private financial revolutions in the 19th century

## Financing Industrialisation

Traditional view:

Compared to financing trade, industrialization requires large amounts of fixed capital not circulating capital) before starting sales; this require new financial institutions.

But actually, it infrastructure (railroads, canal) requires much more long term finance than manufacturing until the 1890s

- Manufacturing firms rarely became very large in terms of workers, but most importantly the could grow through retained earnings.
- Many of the largest firms in the 19th Century are Railroad companies and Canal operators.

So it was infrastructural investment which required the development and innovation of legal and financial institutions.

## Legal innovations

Core issue: Case-base vs. Civil law.

Important innovations:

Business entities, the right to free incorporation, the right to trade obligations and shares.

The Functionalist view:

British law “naturally” adapted to economic needs.

however, Harris (2000) shows no link between industrial revolution and law.

British 18th c. business law is backward : other countries have legal persons, limited liability, transferability of shares, free incorporation in finance, less legal restrictions than in the Bubble act (1720 to 1825)

- 1720 bubble act: illegal for a joint stock company to operate without government charter; multiplication of multi-owner businesses not incorporated (no legal persons, no limited liability).
- Early 19th c. court decisions make fragile the private solutions based on extended partnerships, which had worked well; lobbying leads to repeal of Bubble Act (1825) but without free incorporation.
- 1844 act grants free incorporation (for non financial firms) with conditions on disclosure and governance, without granting limited liability;
- 1856-62: major shift toward *laissez-faire*

“Common Law” is now viewed as very pro-business, yet in the past it often got in the way of business and limited the opportunity for expansion.

### **Differences between European laws**

Large and increasing variety of legal forms for businesses exist in continental Europe (commenda with share transferability); limited liability partnerships are immediately successful with businessmen, from HmbH in 1892 Germany, PLLC in 1906 Britain to SARL in 1925 France (e.g. in France SARL almost replace partnerships within 2 years, reaching > 80% of new firms) (Lamoreaux-Rosenthal 2007).

Offering a more limited menu, the UK switches after 1862 to a model where the corporate form is the dominant option, even for small firms with few shareholders; on average leads to more use of the stock market. PLLC creates attractive alternative in 1906.

The US focuses on corporations for lack of alternatives (Lamoreaux-Rosenthal 2005) (no commenda or limited liability partnerships until 1970s). Costs of this limited menu. Role of trusts in 1890s restructurings.

Conclusion : domination of corporate form in US and UK in 1900 is not a choice or the optimal result of common law judges but a serious legal constraint on business.

## Conclustions

There is no one optimal law. Often the laws shaped the landscape of trade and business just as much as lobbying shaped the laws.

## Bank-based vs Market-based Financial Systems

There is a spectrum of financial institutions that have existed through out history and often at the same time. The polar cases are:

### Banks

long term relationship vs short term shocks ; protects secrets; adjustable contracts (better when ex-post shocks) vs difficult exit. Intertemporal smoothing of market risk (but risk of exit of investors when returns are lower than on the market) Risk of excess competition and risk taking (leverage of equity) Information gathering with private returns, so systematic accumulation

### Exchanges

- Motivate competition and efficiency.
- Information sharing (so free rider problem and underinvestment in information)
- Complex and dispersed information better dealt with (superior for innovation)
- Liquid : small transaction cost (bid-ask spread, commissions)
- Security and rapidity of operations: screening of participants and issuers vs openness
- Diversification
- Limited by market risk (fluctuations of the entire market) for investors

Yet come with the risk of bubbles and systemic risk.

# Financial and Monetary Globalisation in the 19th Century

The Gold Standard & Civilisation

# Readings

## Direct finance in the Dutch Golden Age - GELDERBLUM

While Bruges, London, and Antwerp were early to adopt deposit banking, Amsterdam did not. Why did it take until the 1870s? Amsterdam instead preferred direct business financing.

They distinguish six core functions performed by such systems:

- payments
- pooling and dividing
- transfers across time, space, and sectors
- managing risk
- generating price information
- and tackling asymmetric information.

### Payments

The Wisselbank, initiated in 1609, aimed to replace local payment services offered by cashiers. However, cashiers continued to handle payments, leading to a two-tier system. **Highly Segmented system.**

The creation of the Dutch East India Company - brought with it the use bonds which people borrowed against and used as payment. In 1612 the VOC, backed by the Estates General, refused to liquidate its first 10 years' account to achieve permanence, but this effectively barred the company from raising equity and made it entirely dependent on debt finance

**NB** Commercial lending and borrowing thus typically took place without intermediation, that is, it bypassed a formal institution. Notaries failed to build up the informational advantages they had in other cities like Paris. Only made up a very small percentage of loans.

### **Louis Trip's investment portfolio**

The paper uses lodgers from two prominent merchants.

Trip was an active private investor from the late 1650s to about 1670. During that time he supplied loans on a substantial scale, partly on bills partly on collateral of securities

He refrained from attracting deposits to increase the scale of his operations, probably because narrow interest rate spreads prevented that.

His business model was direct finance; he acted as what we now call a private equity investor.

### **Joseph Deutz's investment portfolio**

Replaced the Trip brothers as the holders of the Swedish tar and pitch monopoly in 1662.

- Meant paying the King of Sweeden, 60% of which was given to the brothers.

Deutz, like Trip, engaged in direct finance. He effected payments and transfers across time, space, and sectors, but did so in the private equity mould, without pooling and dividing, i.e. attracting deposits. Deutz raised debt with his family to obtain and keep the pitch and tar monopoly, not to fund his subsequent money market operations, presumably because narrow spreads prevented that

### **Compare the two**

Despite the monopoly, lending was a substantial part of their business dealings!

Deutz's loans spread far and wide and were for the most part collateralized.

Trip lent to people close to him and therefore were not collateralized were not and mostly given to

- The regression results show a remarkable similarity in the lending behaviour of the two merchants, with the exception of the role of share collateral in the regressions for the principal amount.

The evidence strongly suggests the **existence of a money market** with **mechanisms to generate price information, tackle asymmetric information, and manage risk**, enabling these two merchants to tailor

Trip and Deutz stood at the half-way mark in this evolution. One part of their lending was still relationship-based, the other part no longer. But both parts show clear signs of market mechanisms existing, since they behaved similarly in response to changing circumstances.

## Discussion

- Wisselbank
  - Played a central but secret role in payments.
  - Due to legal restrictions couldn't build a deposit base
- Bill market Developed
  - Merchants used private IOUs and using VOC shares as collateral for short-term loans.
- Middle men provided credit
  - Opting for equity over debt

The analysis challenges the traditional bank-based versus market-based dichotomy, emphasizing that while Amsterdam had a large bank (Wisselbank), credit was predominantly supplied through an active and liquid short-term credit market.

This paper suggests that deposit banking arose not as a norm or trend, but because it provided a way to simply bundle functions that well liquidated markets can already preform (as seen in the case of Amsterdam)



# The real effects of monetary expansions: evidence from a large-scale historical experiment - Nuno Palma

## Method & Empirical Strategy

Quasi-Experiment.

The discovery of massive deposits of precious metals in America during the early modern period caused an exogenous monetary injection to Europe's money supply. I use this episode to identify the causal effects of money.

Exogenous variation in European money supply: → the production of precious metals in the Americas.

Local Projections (Jordà, 2005)

Shock is common to every country. Given that these were integrated economies, the shocks will have affected them all, even if possibly with different timings.

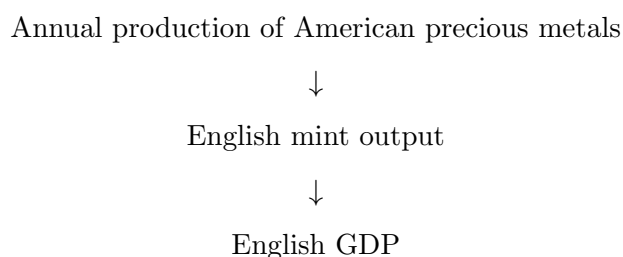
## Heterogeneous Effects

Spain and Portugal see a significant immediate effect as they have more immediate (and less variable over time) passage of metals from production to coin minting. Other countries see a lag in the effect, as they receive these metals through trade links with Spain.

## Precious Metals as an IV

English Data is the only set complete enough.

The Instrument:



## Justification

At this point, 40 percent of people lived exclusively off their wages paid in coins. By the early 1780s, few people had no involvement in the cash economy. Money mattered not only for industry and services but also for the agricultural sector: workers in this sector used money both as purchasers of goods and services and as sellers and payers of taxes.

The lower effect on inflation is intuitive and relates to contemporary ideas of price stickiness.

## Endogeneity Threats

The causal effect may be the inverse? What if the production of precious metals responded to increased demand in Europe. Therefore production would no longer be endogenous. To do this he tests the inverse hypothesis, that a rise in GDP is associated with an increase in metal production. They once again use an IV.

- I find his use of air temperatures in Europe unconvincing as a method to explain demand for precious metals across Europe. This does not account for large parts of the economy including industrial parts.

## Conclusion

Identification in macroeconomics is challenging due to a lack of convincing natural experiments or instrumental variables, making it difficult to answer important questions.

The effects of money on the real economy are hard to identify, leading to varied conclusions in the literature, ranging from no effects to strong and persistent effects.

Early modern monetary injections from America offer a source of identification for monetary non-neutrality, supporting the notion of large and persistent effects on real output during that period.

The study primarily focuses on the internal validity of results, emphasizing that the timing and magnitude of the effects apply only to the early modern European economy.

The interpretation is cautious, suggesting that the findings may not directly apply to modern economies due to significant differences in economic structures and practices.

Various extensions of the work are suggested for the future, including analyzing effects on different sectors and considering conditional effects based on the state of the economy.