1. Pure gold money system – purchase created money by the seigneur (= state)

Gold content 0,3gr/ 1 $
charge: 0,06gr gold / coin

1000$ EMISSION

Cost of 1000$:
300gr gold = 833,3$

Ruler constraints his own money sovereignty, because of fixing the gold content of coins

Ruler can be lack of money

	A	Subjects	L	A		L
Initial state	Real asset 10000$ out of which gold: 300g=833,3$		Individual wealth 10000$	Real Asset 1000$		Individual wealth 1000$
Gold handed over to the ruler for mintage	Real asset 9166,67$		Individual wealth 10000$	Real Asset 1833,3$ out of which gold 833,3$		Individual wealth 1000$
	Claim 833,3$					Debt 833,3$
Mintage (gold is used up)	DO NOT CHANGE			Real Asset 1000$		Individual wealth 166,67$
						Debt 833,3$
				MONEY 1000$		MONEY 1000$
Honour debt	Real asset 9166,67$		Individual wealth 10000$	Real Asset 1000$		Individual wealth 166,67$
	MONEY 833,3$			MONEY 166,67$		MONEY 1000$

1

Ruler can purchas for 166,67$ anyhing he whishes (seigniorage)

1. Pure gold money system

Ruler can be lack of money:
BORROW

time

	A Lender subject	L	A Other subjects	L	A	L
Initial state	MONEY 10$	Ind. wealth 10$	Real asset 9166,67$ MONEY 823,3$	Ind. wealth 9990$	Real asset 1000$ MONEY 166,67$	Ind. wealth 166,67$ MONEY 1000$
Loan 10$ Interest rate 10% duration 1 year	Claim 10$	Ind. wealth 10$	DO NOT CHANGE		Real asset 1000$ MONEY 176,67$	Ind. wealth 166,67$ MONEY 1000$ Debt 10$
Ruler spends all his money	DO NOT CHANGE		Real asset 8990$ MONEY 1000$	Ind. wealth 9990$	Real asset 1176,67$	Ind. wealth 166,67$ MONEY 1000$ Debt 10$
Ruler collects 30$ tax	DO NOT CHANGE		Real asset 8990$ MONEY 970$	Ind. wealth 9960$	Real asset 1176,67$ MONEY 30$	Ind. wealth $196,67 MONEY $1000 Debt $10

3.3.2 **Evolution of monetary systems** : economic analysis

1. Pure gold money system

Ruler can be lack of money:

BORROW

1 year ↓

Ruler honours her debt

Lender subject		Other subjects			
A	L	A	L	A	L
MONEY $11	Ind. wealth $11	Real asset $8990	Ind. wealth $9960	Real asset 1176,67$	Ind. wealth 195,67$
		MONEY $970		MONEY 19$	MONEY 1000$

DO NOT CHANGE

Possibility of new lending

How to increase profits in a year?

2. End of pure gold money system: birth of private banks

Use other's money!

Banknote emission

PROMISE

I give on the spot one for this paper.

Rotschild

1 $

Rotschild

This banknote is a **debt**!

2. End of pure gold money system: birth of private banks

Ruler can be lack of money:
BORROW

time

	A Lender subject	L	A Other subjects	L	A	L
Initial state	MONEY 10$	Ind. wealth 10$	Real asset 9166,67$ MONEY 823,3$	Ind. wealth 9990$	Real asset 1176,67$ MONEY 166,67$	Ind. wealth 195,67$ MONEY 1000$
Loan 10$ Interest rate 10% duration 1 year	Claim 10$	Ind. wealth 10$	DO NOT CHANGE		Real asset 1000$ MONEY 176,67$	Ind. wealth 166,67$ MONEY 1000$ Debt 10$
Ruler spends all his money	DO NOT CHANGE		Real asset 8990$ MONEY 1000$	Ind. wealth 9990$	Real asset 1176,67$	Ind. wealth 166,67$ MONEY 1000$ Debt 10$

1 $
Rotschild

2. End of pure gold money system, birth of private banks

LENDING

time

	A Lender subject	L	A Other subjects	L	A	L
Initial state	Claim 10$	Ind. wealth 10$	Real asset 8890$ MONEY 1000$	Ind. wealth 9990$	Real asset 1176,67$	Ind. wealth 166,67$ MONEY 1000$ Debt 10$
Subjects deposit 20% of their gold coins	Claim 10$ MONEY 200$	Ind. wealth 10$ Banknote 200$	Real asset 890$ MONEY 800$ Banknote 200$	Ind. wealth 9990$	DO NOT CHANGE	
Lending with 10% reserve ratio for other subjects	MONEY 20$ Claim 190$	Ind. wealth 10$ Banknote 200$	Real asset 890$ MONEY 980$ Banknote 200$	Ind. wealth 9990$ Debt 180$	DO NOT CHANGE	

A/ Debts are payed
B/ Again 20% of the coins are deposited and again the lender lends …

Profit of lending

10% interest rate

A Lender subject L

MONEY 10$ | Ind. wealth 10$

Lending in the pure gold money system

MONEY 10$ → Claim 10$ → MONEY 11$ **10% profit/year**

Lending with banknotes 10% reserve in gold coins, 20% of coins is deposited

A/ Lending once (out of deposit)

MONEY 10$ → Claim 190$ → MONEY 29 **190% profit/year**

200$ *Rotschild*

20+209-200

Reserve+reimbursment+conversion of banknotes

B/ Lending again and again out of depositied coins …

Multiplier effect

MONEY 10$

200$=20% of all coins deposit→10% reserve: 200/01=2000 banknote

2000$ *Rotschild*

200 (1000*0,2) +200*0,9 +…. =200/(1-0,9)=2000$

1st deposit 2nd deposit („replenish” to 200)

loan=10(initial)+2000-0,1*2000

Claim 1810$

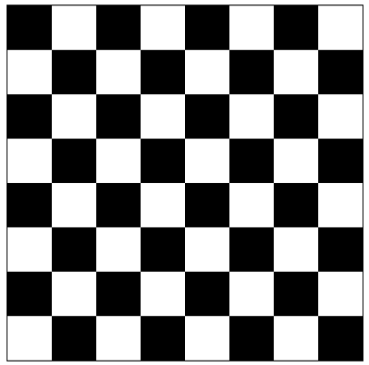
=10+200*0,9+(200*0,9)*0,9+… =10+180/(1-0,9)=1810$

1st loan 2nd loan

MONEY 191$ =200+1991-2000=191

1810% profit/year!!

Profit of lending



If „only” doubles her money (100% profit rate)

- Place one grain of wheat on the first square, two on the second, four on the third and so on, double the number of grains on each subsequent square - told Sissa – and the wheat placed on the board is my reward.
- This is a modest request. – the king smiled.

Price of the chess=$1+2+2^2+\ldots+2^{63}$

If the lender just doubles his 1$ over 63 years : **2^{63}= 9 223 372 036 854 775 808 =$9{,}2*10^{18}$**

In evidence, this is impossible; however illustrates the strong wealth concentration effect of lending.

End of pure gold money system, birth of private banks : banknote and lending

PROPOSITION

If the State is indebted toward private agents, then banknotes (bank’s debt enforcable in terms of high powered money) issued by these private agents necessarily become money; the state *de facto* looses its money power.

Because …

Pure gold money system

Ruler (state)
high powered money

+

Lender
private debt → private money

80$
Rotschild

PRIVATE PROBLEM
Fractional reserve – often bankrupcies

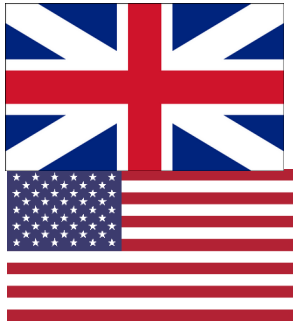
SOCIAL PROBLEM
bank is insolvent = bank's debt disappears = money disappears → monetary economy stops well-functioning

Solution:

B. SOLUTION IN THE INTEREST OF PRIVATE BANKERS: Gold standard monetary system

3. Gold standard monetary system

The private bank of privat banks disguised as national bank



1694-: Bank of England

1791-1811: First Bank of the United States;
1816-1836: Second Bank of the United States;
1913-: **Federal Reserve System**

Right to issue paper money backed by gold

main lender of the government

4. Two tier banking system
Central Bank

As they exist today, the role of central banks is to maintain the "financial stability" of the private banking system.

exclusive right to issue paper money

1971 Bretton Woods: $ is not linked to gold anymore

Not allowed to lend to the government (as a main rule)

3.3.2 **Evolution of monetary systems** : economic analysis

Parallels:

pure gold money system – **gold standard** – **modern private credit money system**

high powered money

\+ Money of account created by the central bank **Reserve**

private debt

80$ *Rotschild*

private debt disguised as public

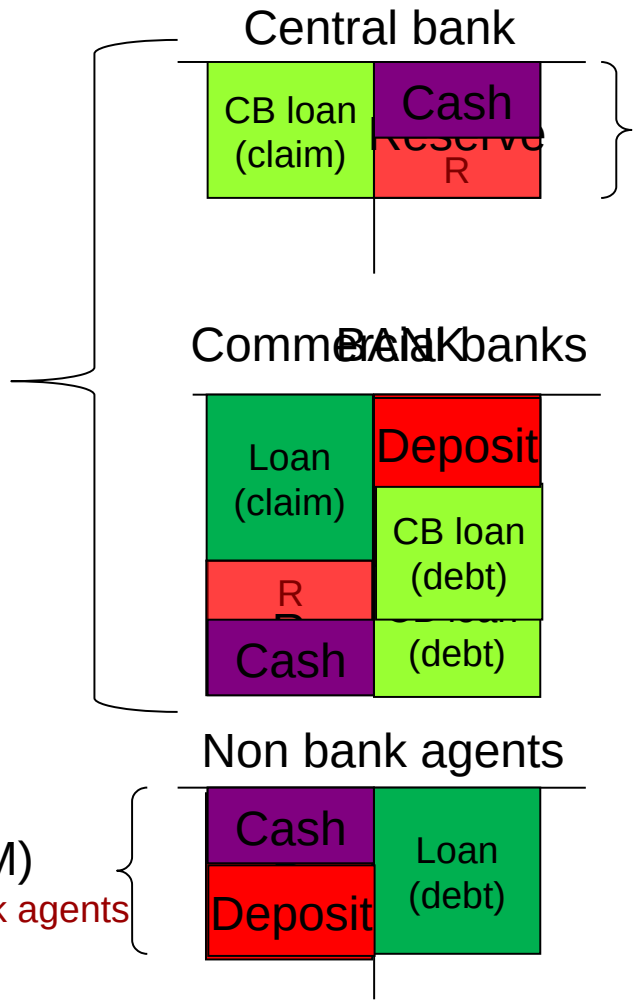
Money of account created by the commercial bank **Deposit**

1971 Bretton Woods -

1971 Bretton Woods -

4. Modern credit money system

Two tier banking system



Monetary base / High powered money

Money for all economic agents

MONEY (M)

Money for non bank agents

4. Modern credit money system (without cash): government loan

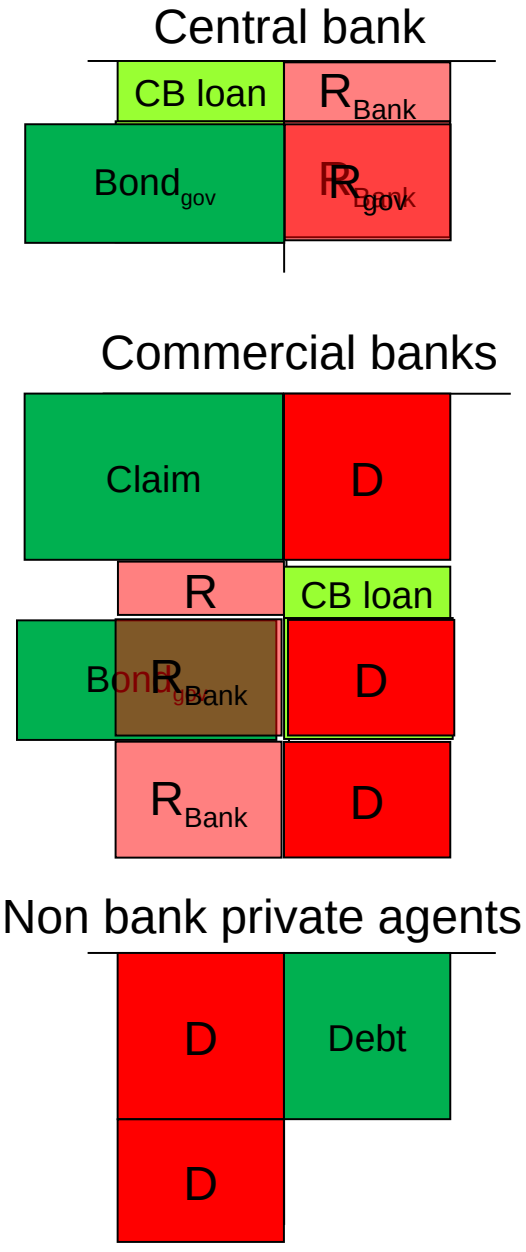
Is the central bank able to restrict the money creation of private banks by refusing lending to them?

For that eventuality central bank should not accept government bonds.
→ NO

Access to extra reserves

Tousend billion HUF

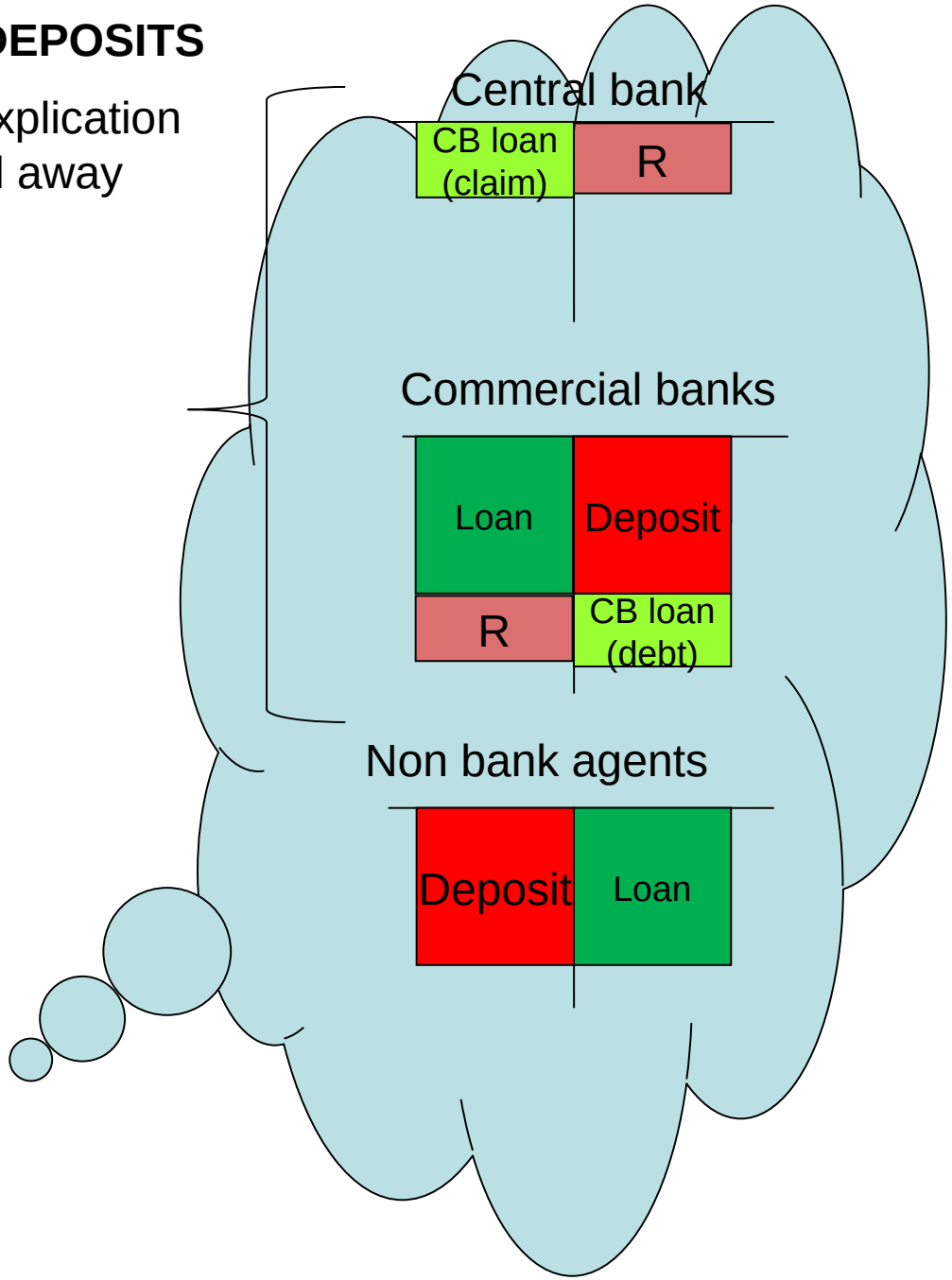
HUNGARY
Government bonds held by commercial banks$_{2024jan}$= 11,9
$R_{2024jan}$=10,5
$Cash_{2024jan}$=8,1
Thus, the quantity of (potential) reserves is enough for 1,5 times as much money stock



States have no right to create money via purchase = treasury has no right to take loans directly from the central bank

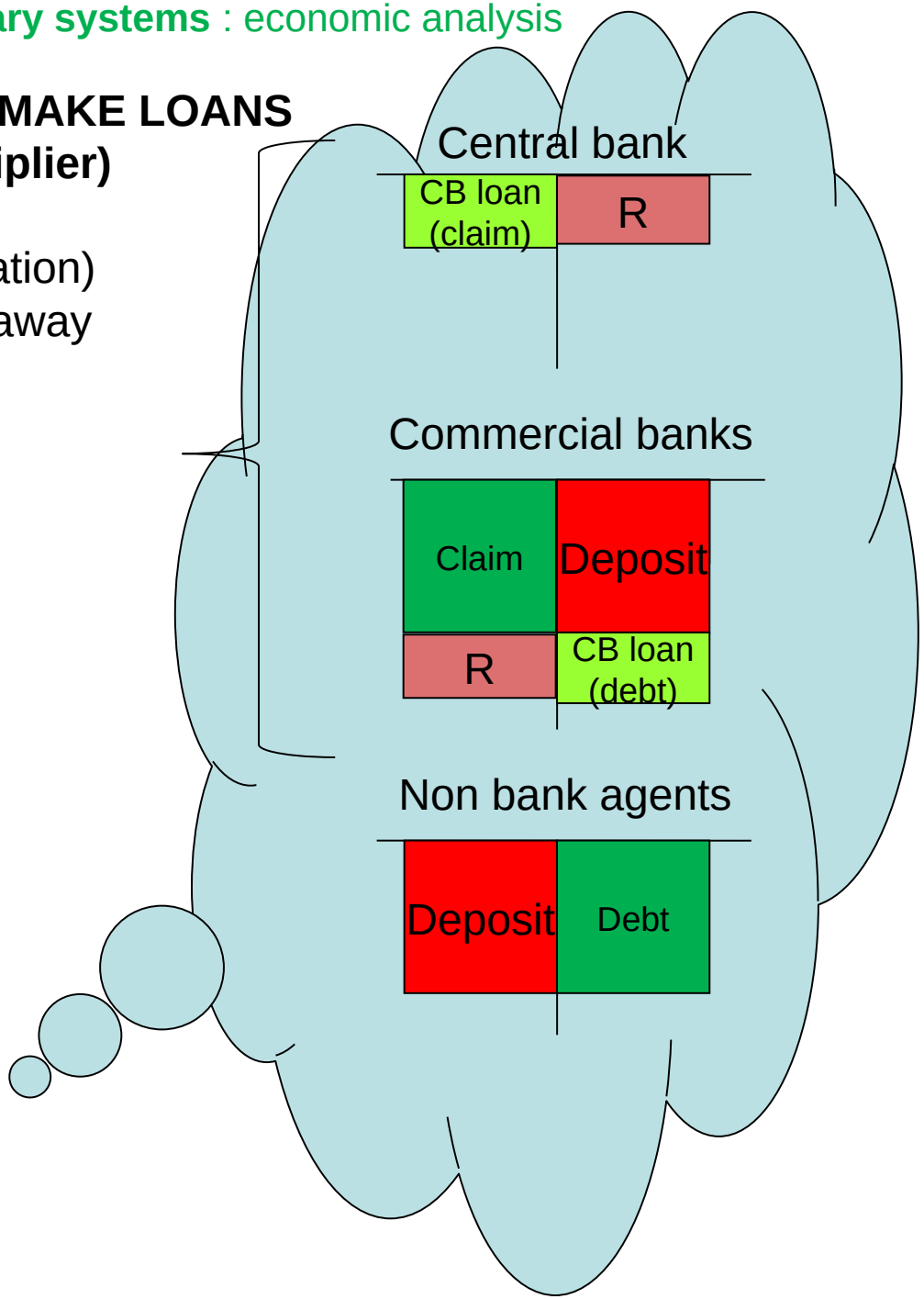
LOANS MAKE DEPOSITS

(Post-Keynesian explication
Cash simplified away



AND NOT DEPOSITS MAKE LOANS
(money multiplier)

(standard explication)
Cash simplified away

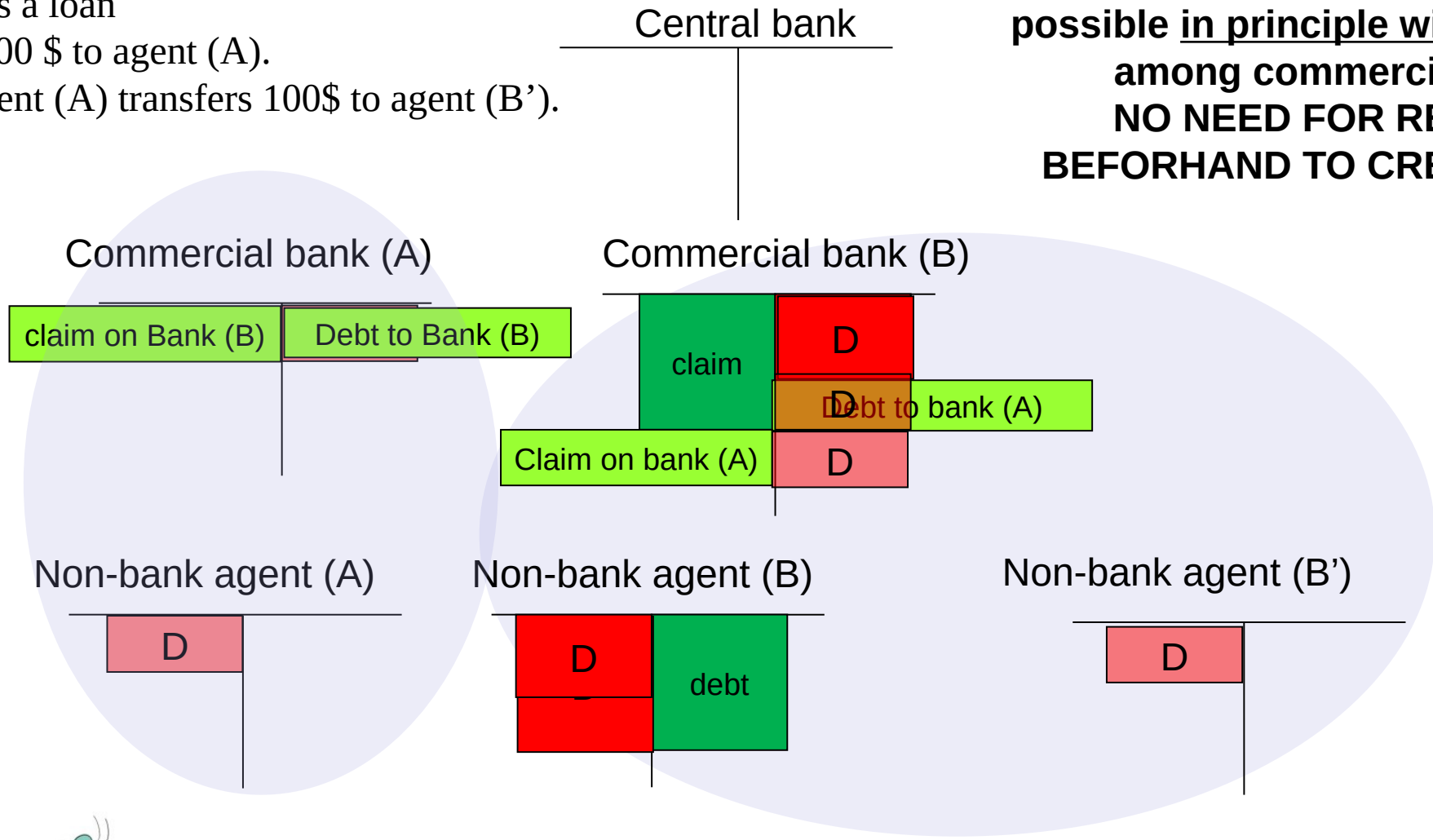


BECAUSE

BECAUSE (1)

Agent (B) takes a loan
and transfers 100 $ to agent (A).
Afterwards, agent (A) transfers 100$ to agent (B').

Clearing (settlement of mutual debts) is possible <u>in principle without reserves</u> among commercial banks!
NO NEED FOR RESERVES BEFORHAND TO CREATE MONEY



BECAUSE (2)

Out of $200 in coins, the lender can only lend $180, while the reserve in coins is 10%?? What is the reserve ratio for the first loan?

In this example, the loan is in coins only. Banks now lend only in cash?

1000$ coins, 10% reserve in gold coins, 20% of coins is deposited

B/ Lending again and again out of depositied coins …

Multiplier effect

MONEY 10$

2000$ *Rotschild*

Claim 1810$

MONEY 191$

200$=20% of all coins deposit → 10% reserve: 200/01=2000 banknote

200 (1000*0,2) +200*0,9 +…. =200/(1-0,9)=2000$

1st deposit 2nd deposit („replenish" to 200)

loan=10(initial)+2000-0,1*2000

=10+200*0,9+(200*0,9)*0,9+… =10+180/(1-0,9)=1810$

1st loan 2nd loan

=200+1991-2000=191

1810% profit/year!!