

Target2-balances and financial stability

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The views expressed here are those of the author and not necessarily those of the Bundesbank.

Propositions on Target2-balances

Balance sheet analysis of the origins of Target-balances

Exit risk of Target-balances

Profit and loss distribution in the Eurosystem with ELA

Illiquidity of a central bank in its own currency?

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Target2-balances – Propositions (Sinn 2018)

- Target balances arise when cross-border payments between banks are settled via national central banks in the Target-system and do not balance.
1. **Target-balances imply an exit risk!** If a country with Target-liabilities leaves monetary union a strong devaluation of the new national currency can be expected, thereby rendering these Target-balances unsustainable.
 - Currently, Germany has a net-exposure in Target of around 800 bn Euro. Bundesbank's capital amounts to almost 120 bn Euro.
 2. **National central banks** are allowed to conduct **refinancing operation at their own risk (ELA-loans)** if banks lack eligible collateral for refinancing operations with the ECB.
 - If ELA-loans defaulted (caused by a severe financial crisis), Target-claims would default as well. Obviously, the alleged risk shield of ELA-loans does not hold and **Target-balances may default even without exit.**

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Emergence of Target2-balances - 2007 to 2011 (capital flight)

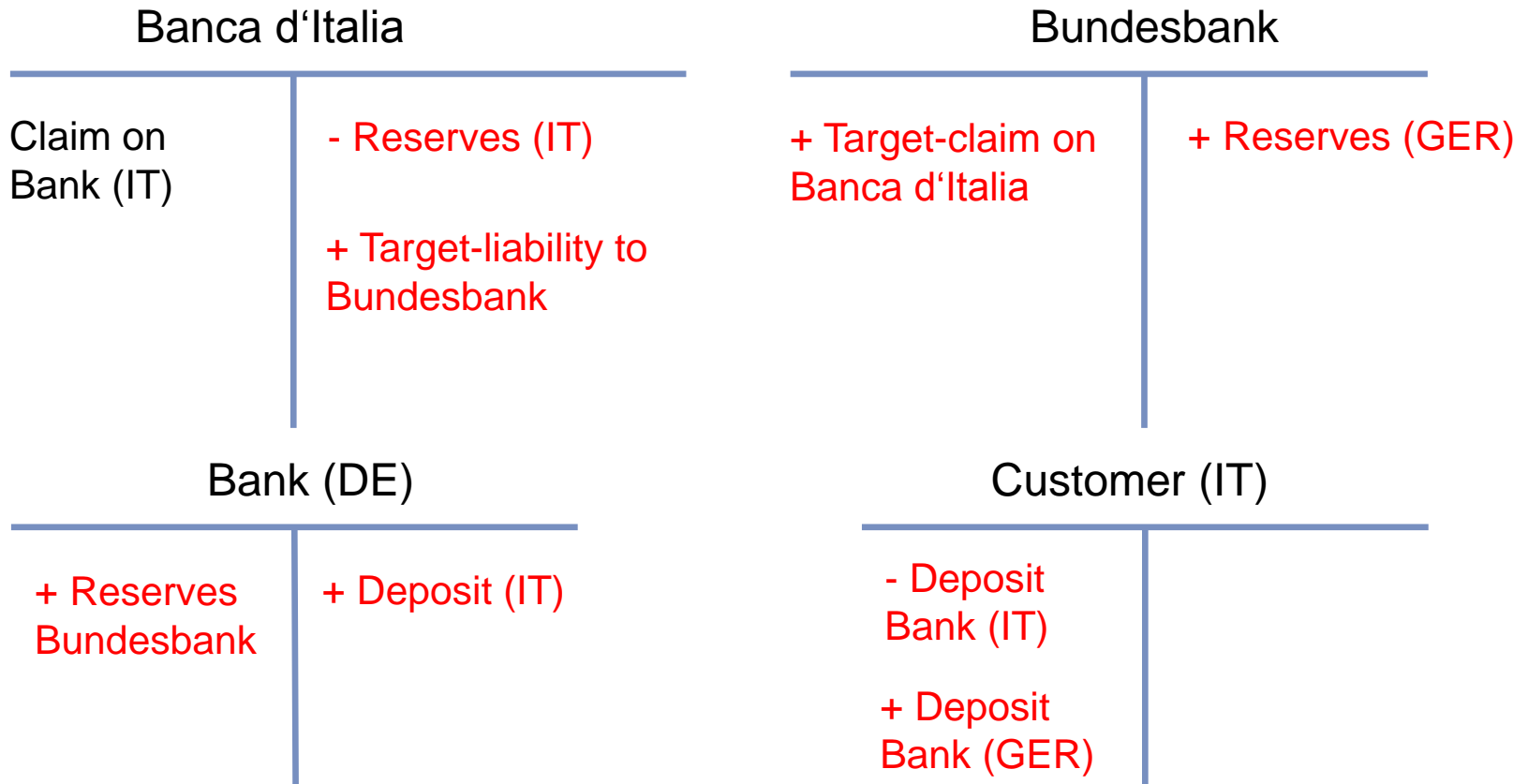
1. Transfer by Italian bank customers to Germany via Target-system (base money creation in Italy)

Bank (IT)		Banca d'Italia	
Loans (IT)	Deposits (IT)	+ Claim on Bank (IT)	+ Reserves (IT)
+ Reserves Bd'I	+ Liability to Bd'I		- Reserves (IT)
- Reserves Bd'I	- Deposit (IT)		+ Target-Liability to Bundesbank

To carry out cross-border payments, a bank needs liquidity, which is provided by refinancing with the central bank (IT). The transfer via Target2 causes a Target-liability for the Banca d'Italia.

Emergence of Target2-balances - 2007 to 2011 (capital flight)

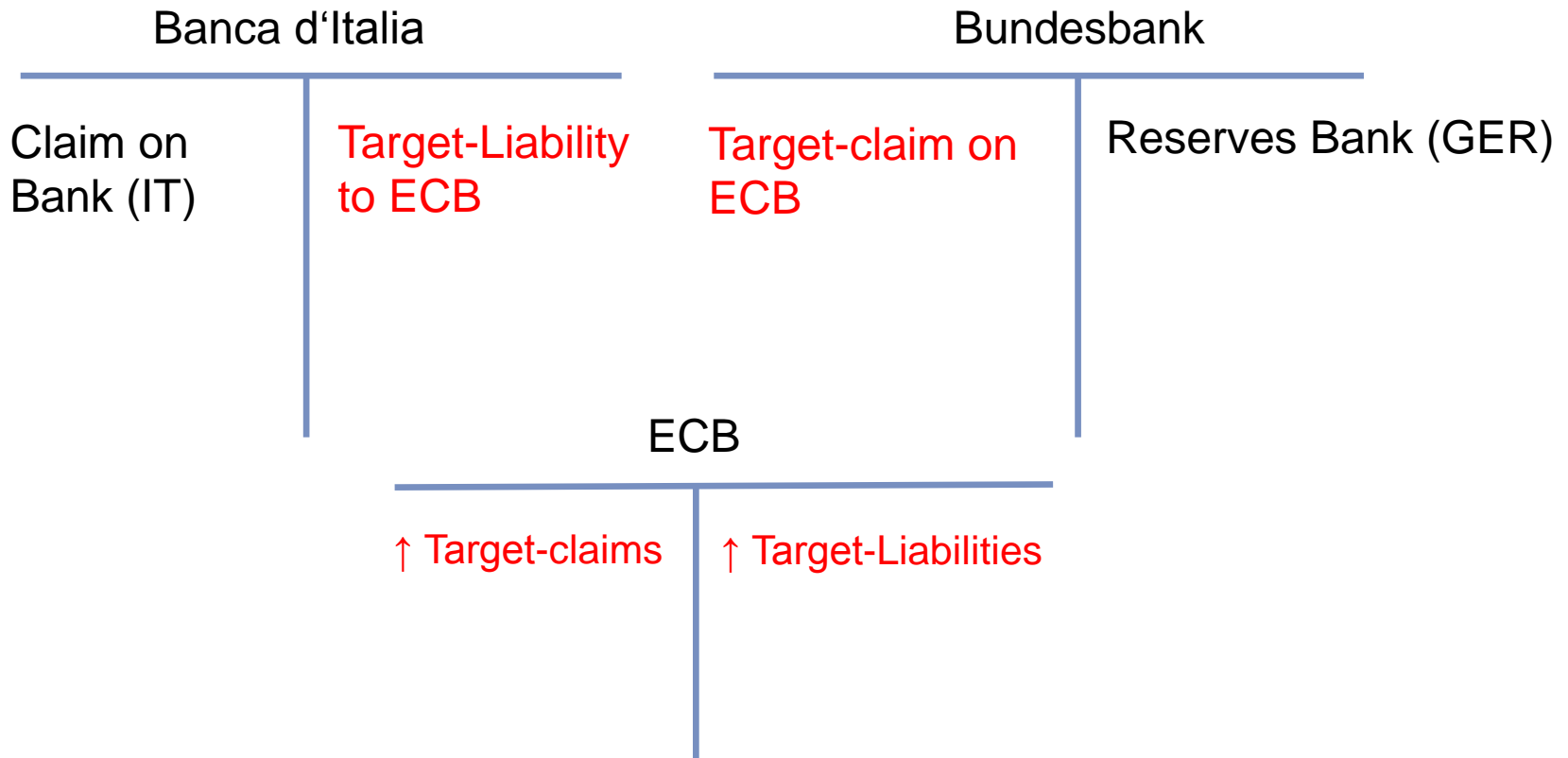
2. Settlement of the money transfer via Target-system (redistribution of liquidity from Italy to Germany)



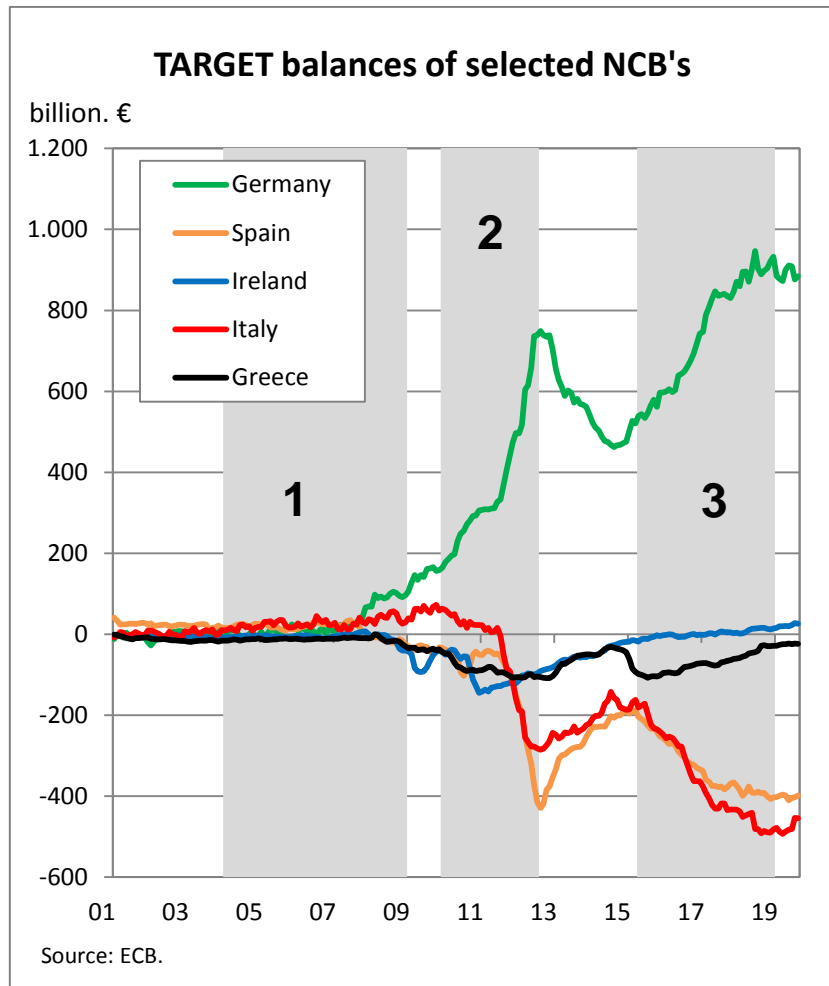
As the result of a cross-border money transfer, a Target-claim remains with the Bundesbank and a Target-liability with the Banca d'Italia.

Emergence of Target2-balances - 2007 to 2011 (capital flight)

3. Reclassification to ECB



Target2-balances – Huge diversity in EMU



- **Phase 1 (2004 to 2008):** Growing current account imbalances are causing Target balances to rise only moderately.
- **Phase 2 (2010 to 2012):** Rising government debt and under-capitalized banks triggered capital flight from peripheral countries in EMU.
- **Phase 3 (2015 to 2018):** The purchase program of the Eurosystem caused capital inflows into core countries from abroad. Capital flight continued.

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Exit risk of Target Balances – Accounting treatment of an exit

1. Neutralization of a write-down of Target-claims by use of “Equalization claims for losses on Target-balances”.

Bundesbank	
Refinancing operations (GER)	Reserves Bank (GER)
- Target-claims on ECB	Deposit Government
+ Equalization claims (revaluation account)	Capital

Details of this revaluation account have to clarified:

- **Claim against whom?** (originally the ECB, which, however, belongs to national central banks, whose shareholders are in turn the national governments)
- **Interest and repayment modalities.**

Target Balances – Accounting treatment of an exit (transfer of sovereign bonds)

2. Bundesbank receives a fixed-term bond of a weak state instead of an indefinite claim on governments of Euro area countries.

Bundesbank (1)

Refinancing operations (GER)	Reserves Bank (GER)
Revaluation account (compensation claims) on Target-claims	Deposit Government
	Capital

Bundesbank (2)

Refinancing operations (GER)	Reserves Bank (GER)
↓ Target-claims (IT)	Deposit Government
↑ Sovereign bonds (IT or pooled bonds (Krahen))	Capital

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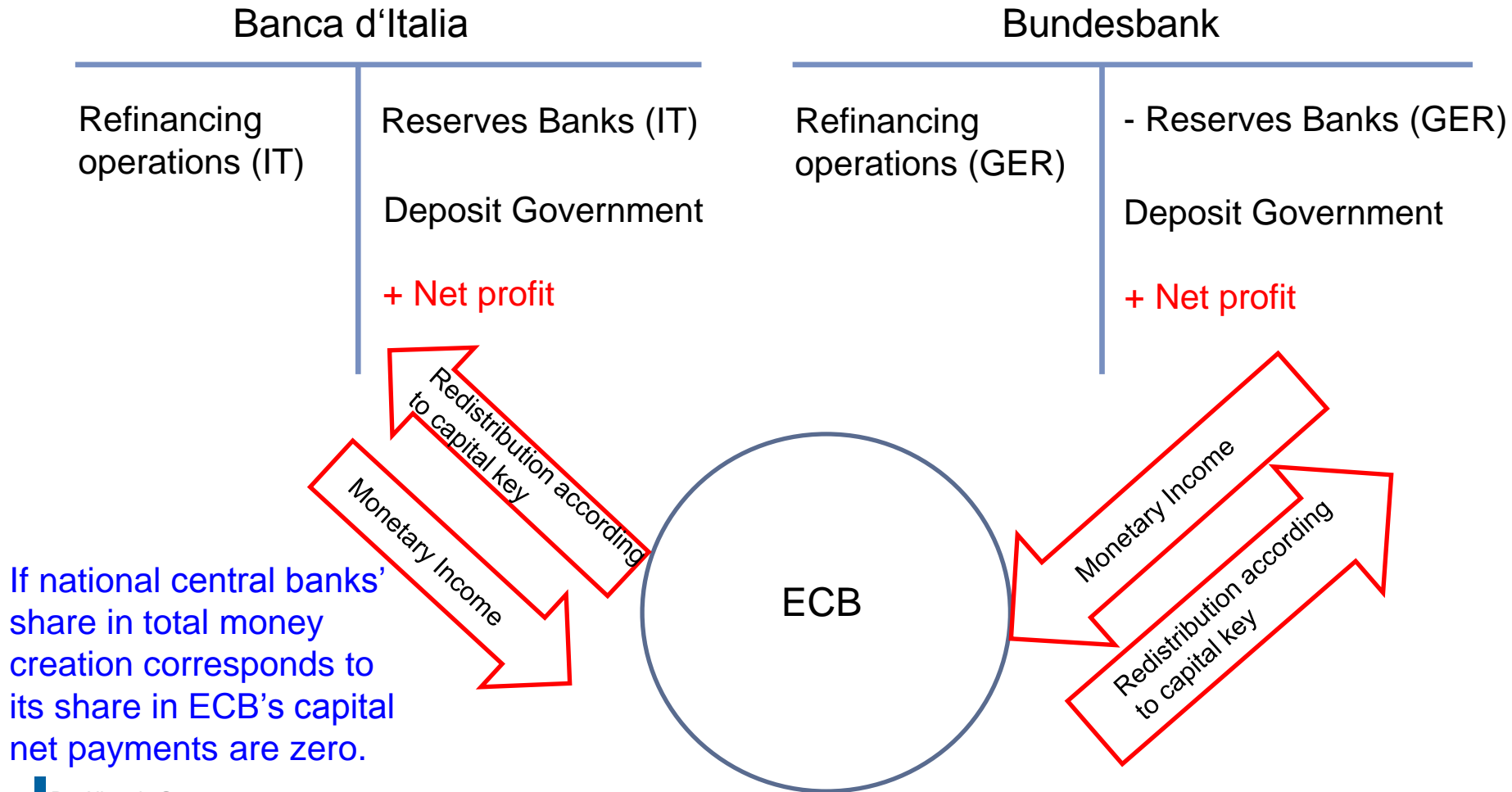
Illiquidity of a central bank in its own currency?

Distribution of profits in the Eurosystem - Monetary income of central banks

- Firstly, profits of national central banks (monetary income) from monetary policy operations are pooled at the ECB and then redistributed according to the NCBs' shares in ECB's capital.
- **Monetary income** is calculated as **interest revenues from refinancing operations minus interest payments incurred by the NCB**. In normal times interest costs consist of interest paid on minimum reserves and the deposit facility (if negative: interest receipts).
 - In addition, there are **interest costs (or interest receipts)** resulting from excessive (or disproportionately low) cash issuance (measured against the share in ECB's capital) and **from Target-claims or -liabilities** that bear interest at the main refinancing rate.
 - As interest on Target-liabilities reduces the transfer of Bd'I into the profit pool a penalty rate on Target liabilities (Meyer/Hansen (2019); FDP) is neutralized.

Distribution of profits in the Eurosystem

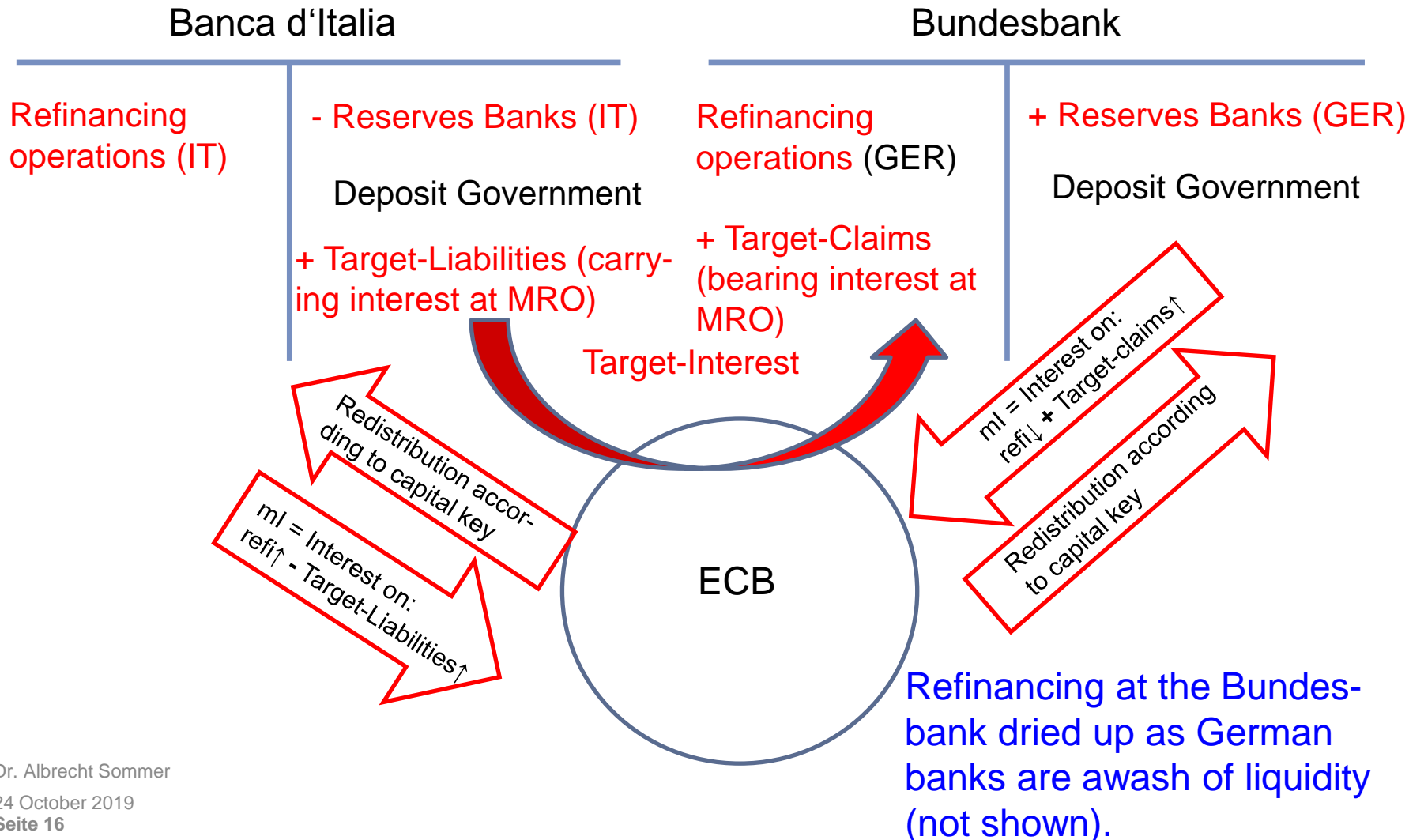
Profit transfer to the ECB and redistribution according to capital key.



If national central banks' share in total money creation corresponds to its share in ECB's capital net payments are zero.

Distribution of profits in the Eurosystem

Profit transfer to the ECB (compensation for redistribution of central bank liquidity from IT to DE due to capital flight)

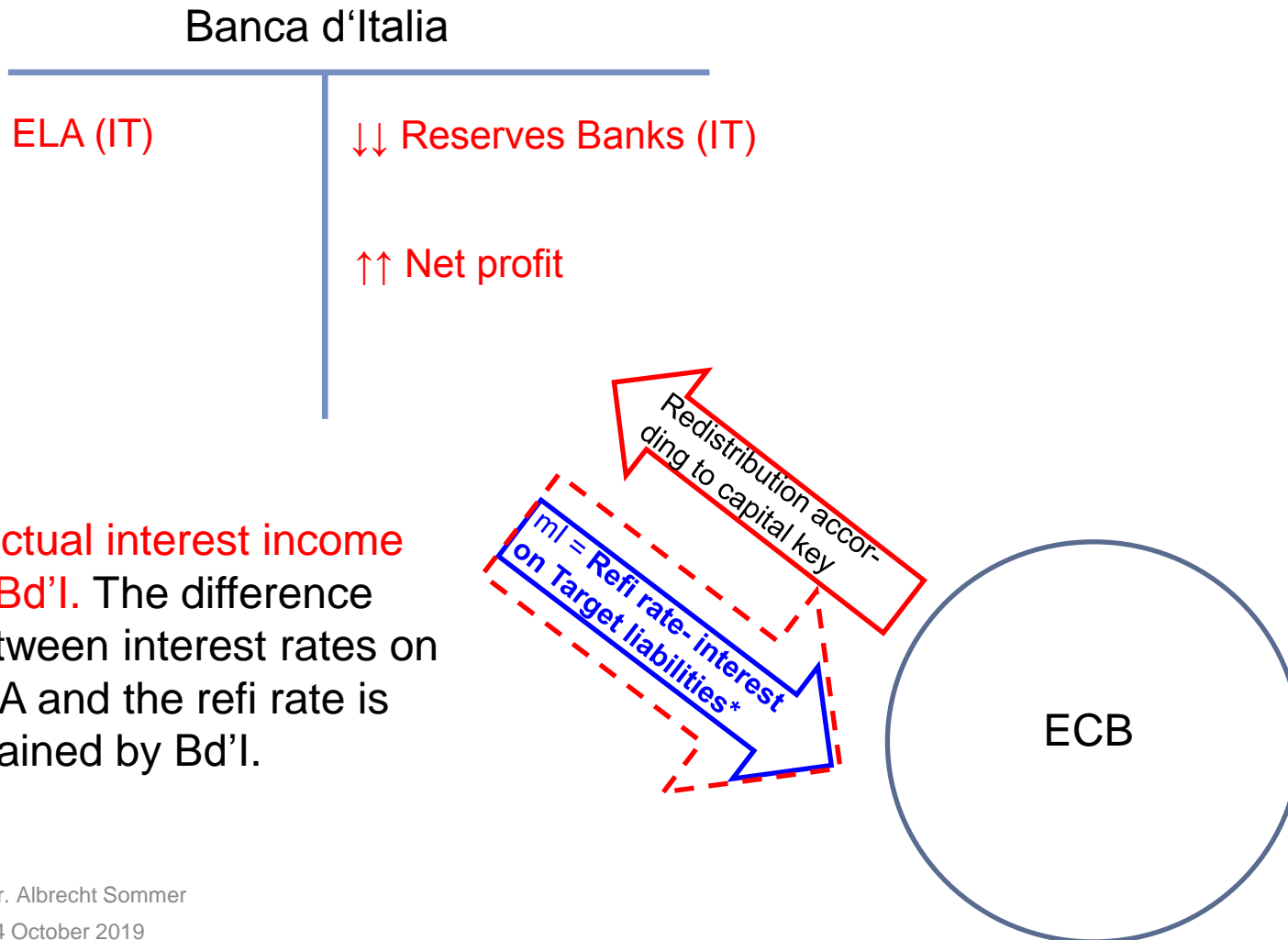


Profit distribution in the Eurosystem – ELA-loans

- Refinancing by **emergency liquidity assistance (ELA)** is carried out on the basis of guidelines issued by the national central bank regarding collateral, **(higher) interest rates** and maturities.
- As NCB's set the conditions for ELA-loans they are not subject to loss sharing in the event of default.
- ELA loans are interest-bearing. ELA loans that serve monetary policy purposes generate **monetary income**, which is determined by **imputing the rate on MRO** on them. These revenues – as with refinancing operations – are pooled at the ECB. The remainder of interest income may be retained by the NCB.
- This rule makes sense as all national central banks continue to participate in the distribution of profits according to their ECB capital key (**those who are paid out must also pay in**).

Profit distribution in the Eurosystem – ELA-loans

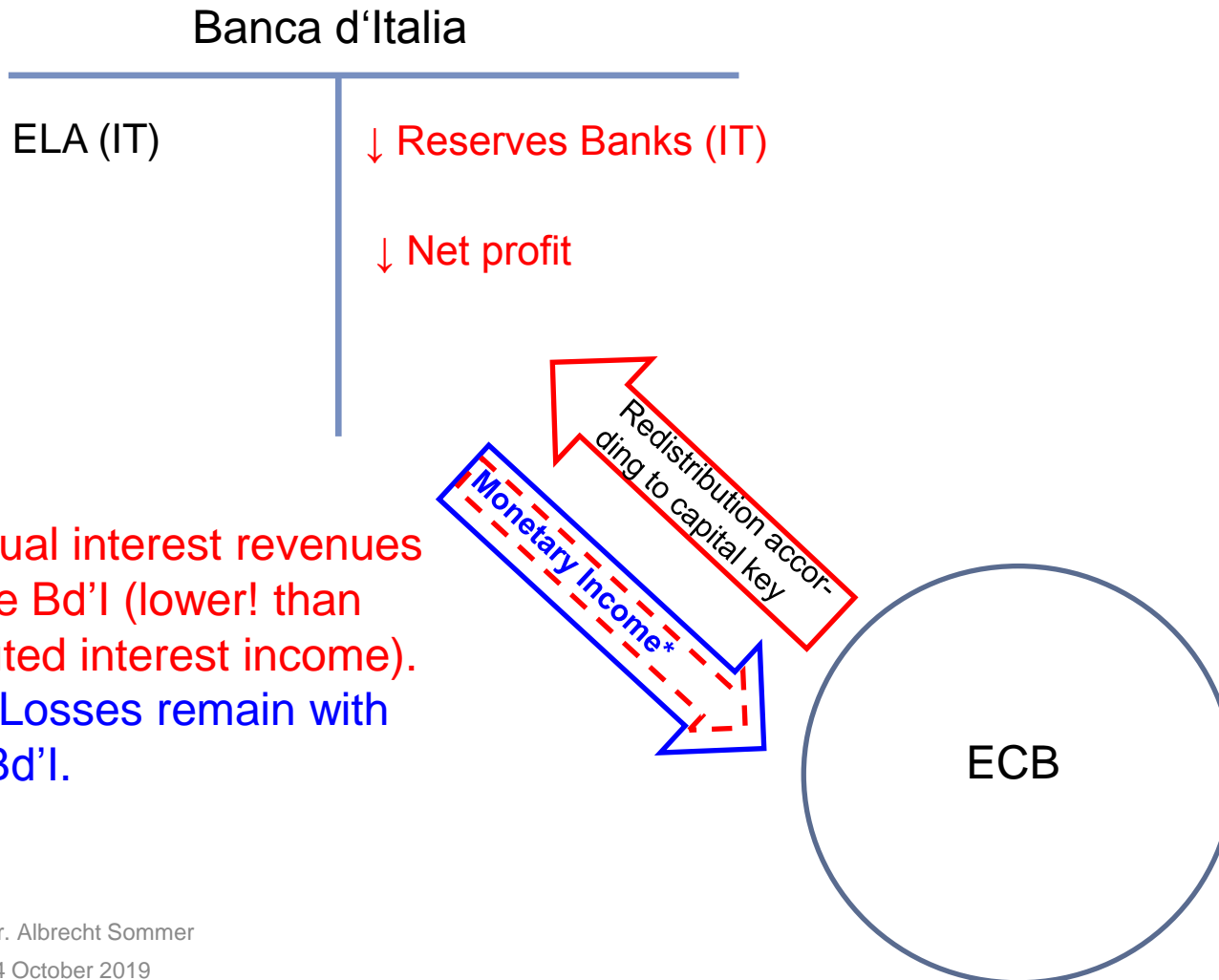
Profits on ELA-loans: Interest from ELA loans is only included in the interest pool at the main refinancing rate.



* Actual interest income of Bd'I. The difference between interest rates on ELA and the refi rate is retained by Bd'I.

Profit distribution in the Eurosystem – ELA-loans

Losses on ELA loans: Interest payments (imputed) irrespective of the amount of actual interest income.



* Actual interest revenues of the Bd'I (lower! than imputed interest income).
But: Losses remain with the Bd'I.

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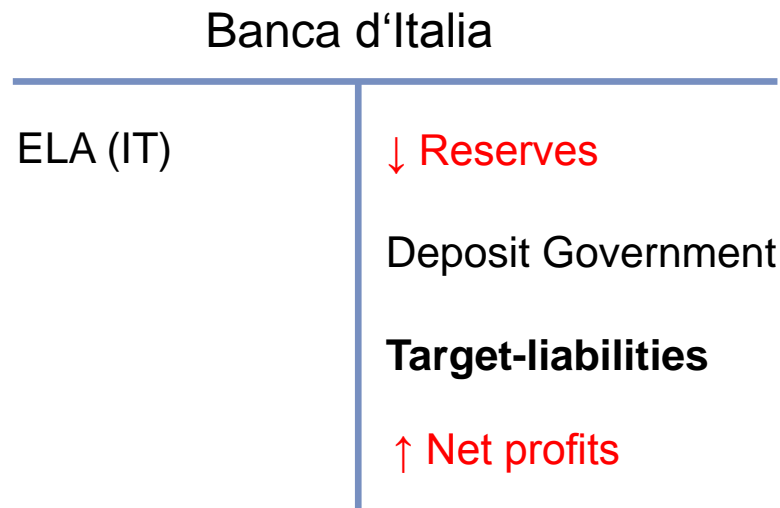
Illiquidity of a central bank in its own currency?

Discussion - Can central banks become insolvent in their own currency?

- **Thesis 2:** Sinn (2018) claims that in case of ELA-default the Bd'I is **not able to transfer:**
 - **2a.** Interest payments imputed on ELA loans all as well as
 - **2b.** Interest on Target-liabilities to the ECB!
- Without interest income on ELA-loans there is no money to be transferred to the ECB. Concerning imputed interest payments, Sinn proposed to dispense of all claims on the interest pool at the ECB forever.
- But this does not work with Target-balances. As debt service on Target-liabilities dries up, Target-claims default. Accordingly, **Target-balances pose a risk to creditors countries even if all countries stay in the Euro area.**
- **Interestingly, Sinn's assertion implies that a central bank can become illiquid in its own currency!**

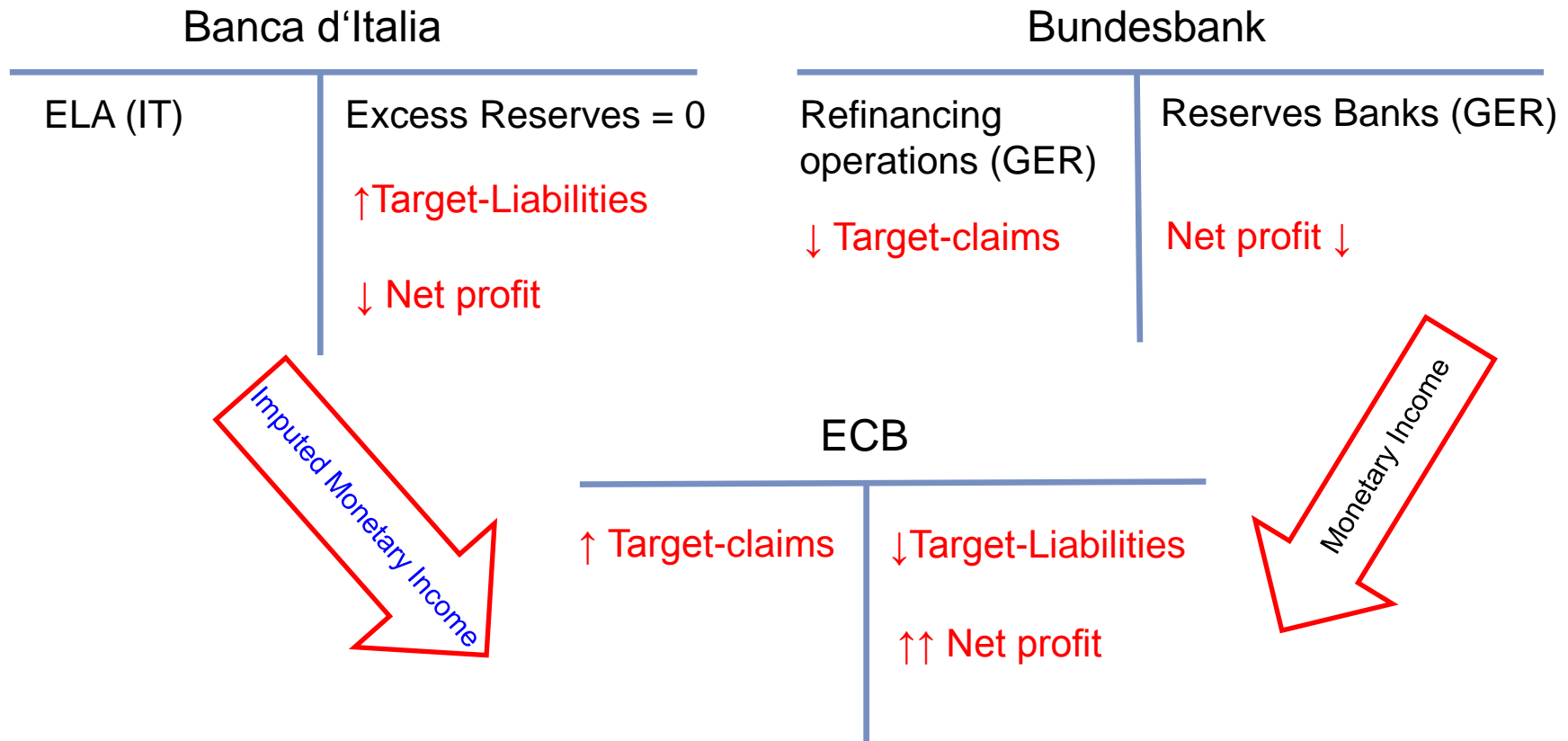
Discussion - Can central banks become insolvent in their own currency?

If banks pay interest their account at the central bank is debited. Central bank's profits increase. National central banks do not receive any assets which they could pass on to the ECB!



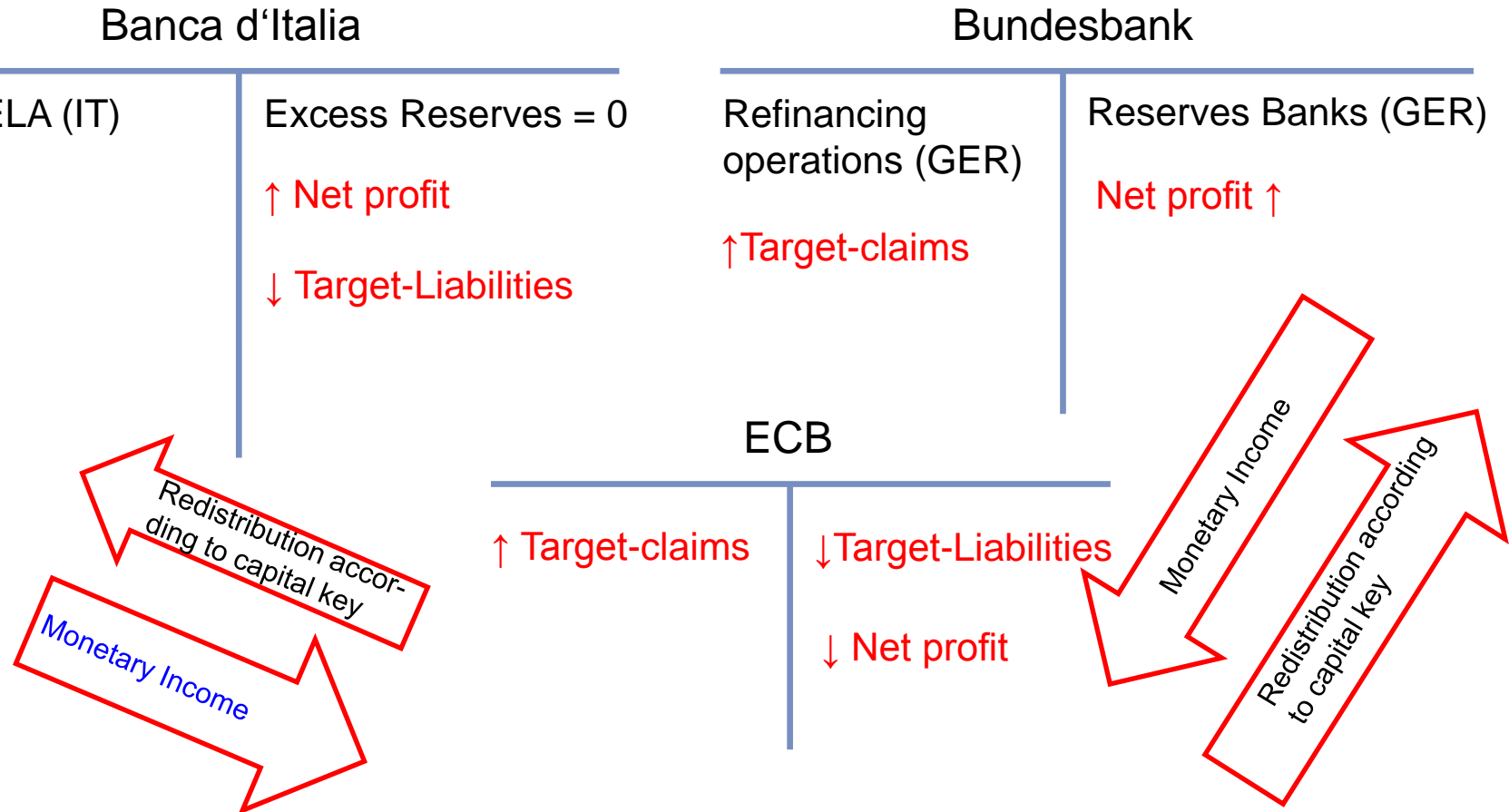
Discussion - Can central banks become insolvent in their own currency?

2a. Bd'I carries out imputed interest payments to the ECB via the Target system **although** interest payments on ELA loans have dried up!



Is an insolvent central bank illiquid?

2a. Money flows back from the pool via Target system (capital key!) – Sinn's proposal of pledging all claims on the interest pool is completely meaningless. Accordingly, there is no need to write off Target-claims.



Is an insolvent central bank illiquid?

2b. Does a complete write-off of ELA loans imply that Target claims also have to be written off?

Banca d'Italia		Bundesbank	
+ ELA (IT)	Reserves Banks (IT) ↓ Capital <0 Target-liabilities	Refinancing operations (GER) Target-claims	Reserves Banks (GER) Capital

The default on ELA-loans is fully matched by a capital loss.
Target-balances are not affected.

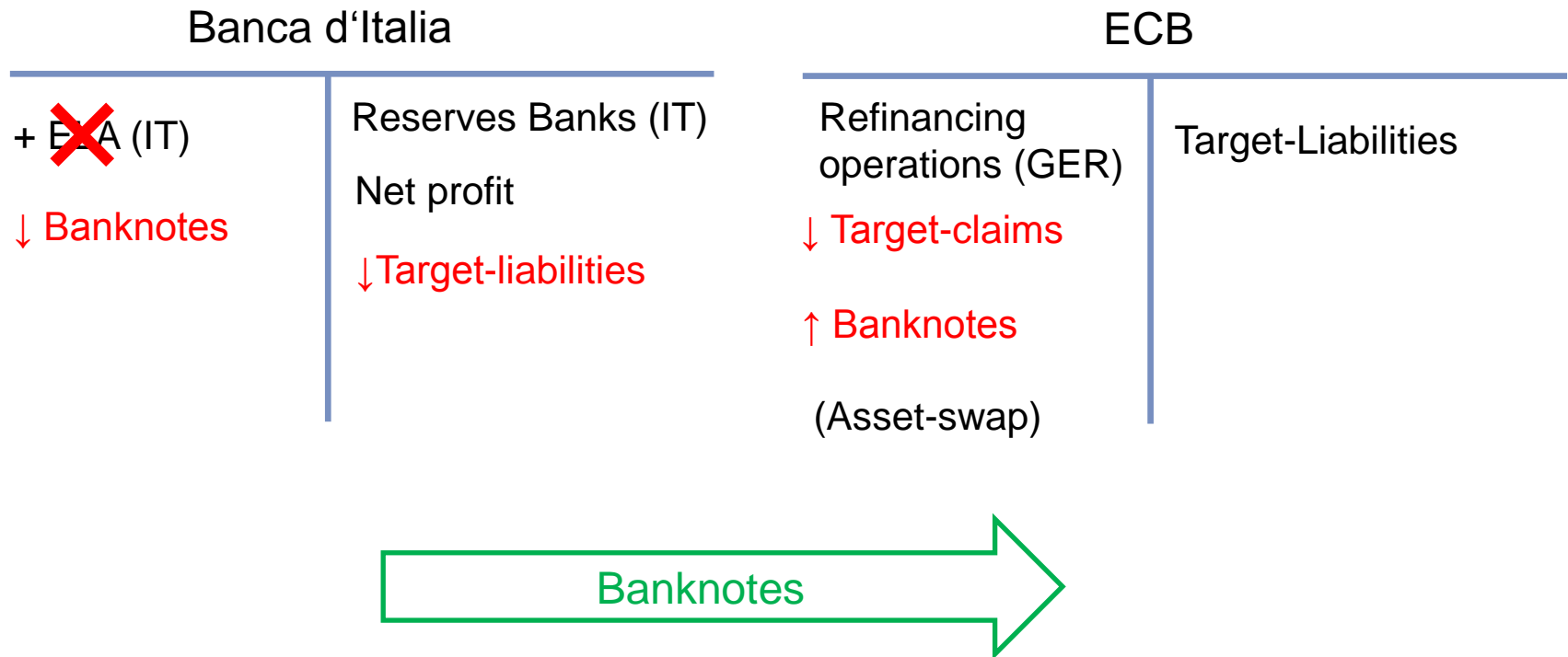
Settlement of Target-balance by an insolvent central bank – Transfer of banknotes

2b. If nevertheless a settlement of Target-balances is deemed necessary, Bd'I might temporarily activate banknotes in its balance sheet

Banca d'Italia		Bundesbank	
+ E.A (IT)	Reserves Banks (IT)	Refinancing operations (GER)	Reserves Banks (GER)
↑ Banknotes	↑ Net profit	Target-claims	Capital
	Target-liabilities		

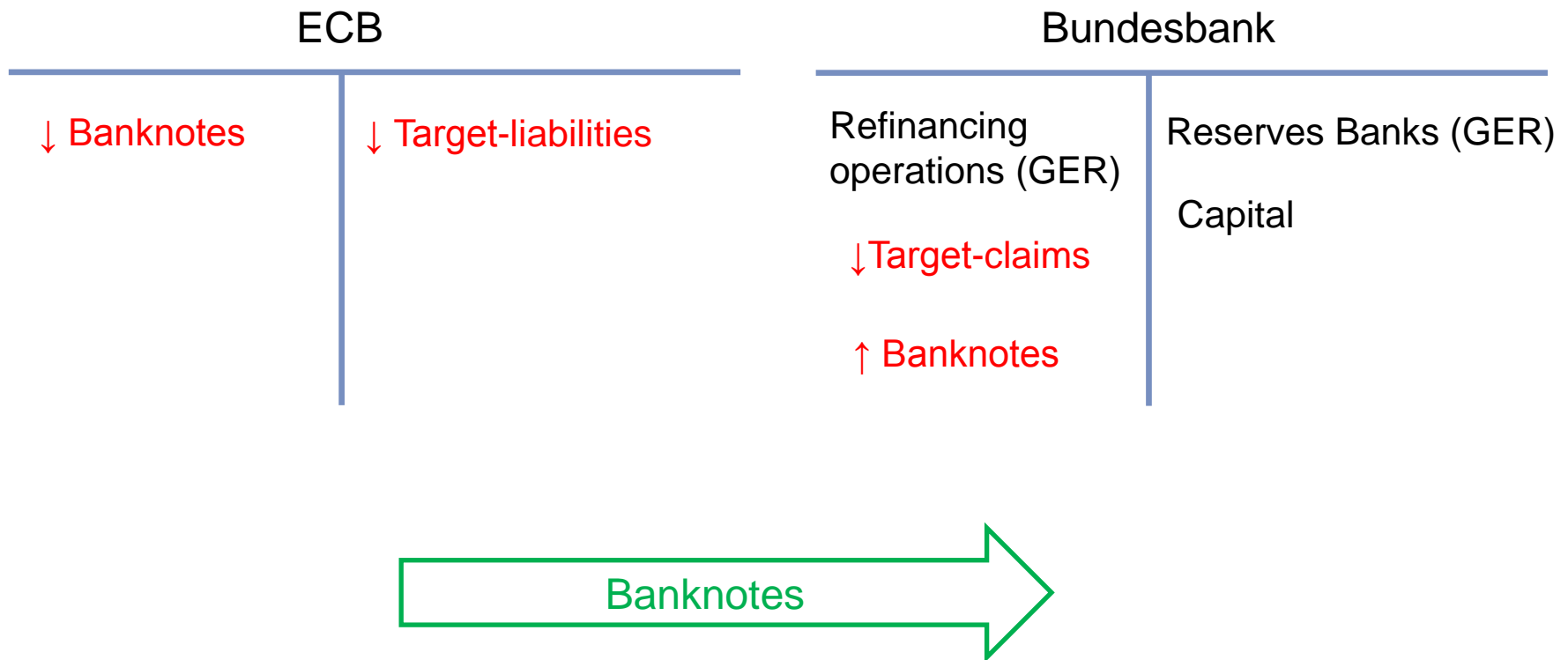
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2b. Banca d'Italia settles its Target-liabilities by transfer of banknotes to the ECB



Settlement of Target-balance by an insolvent central bank – Transfer of banknotes

2b. ECB transfers banknotes to the Bundesbank to settle its Target-liabilities with the Bundesbank



Settlement of Target-balance by an insolvent central bank – Transfer of banknotes

2b. Extinction of banknotes from the Bundesbank balance sheet

ECB		Bundesbank	
0	0	Refinancing operations (GER)	Reserves Banks (GER)
		↓ Banknotes	↓ Net profit

Note: There is neither an extension nor a reduction of **currency in circulation** involved.

Conclusion

- **Default on ELA-loans does not cause Target-claims to default as well.** The Banca d'Italia is able to pay interest regardless of the value of its net-assets. If it is deemed necessary it can redeem its Target-liabilities by transferring banknotes.
 - As a consequence the Bundesbank incurs a loss.
- However, the loss of the Bundesbank does not result from uncollectible Target-claims. On the contrary, the Bundesbank only makes a loss as its Target-claims are settled (**with banknotes!**).
- Maybe it is better to leave the Target balances as they are. They include a claim on central bank money, which the central bank can create free of charge in unlimited quantities, i.e. a right to something that is of no value to the central bank.



Thank you!