Money and Banking for Transition

Building a just and environmentally sound economy

Marco Vangelisti
Essential Knowledge for Transition
Ambitious Agenda

- What’s possible
- Motivation
- The punch lines (hold on to your seat!)
- Definition and brief history of money
- Understanding money creation
- System design and key questions
- Bail-out and bail-in (lesson from Cyprus)
- Problems with the current system
- The systemic solution and new possibilities
System Hierarchy

Biosphere / Ecosystem
Social System
Economic System
Financial System
New Possibilities:

- Massive government employment program to
  - Rebuild our infrastructure
  - Improve the education system
  - Improve health care and prevention
  - Climate adaptation
  - Environmental restoration
  - Rebuild the local food system infrastructure
  - Repopulate rural areas and transition to organic agriculture
Motivation

- We are running our society and the economy on a faulty operating system

- The design of the money and banking system is directly implicated in all the largest problems we face:
  - Increasing levels of debt (public and private)
  - Economic instability
  - Concentration of wealth (video)
  - Loss of democracy
  - Environmental and climate disruption
Motivation

- We cannot solve those problems without a radical redesign of the money and banking system

- Prior to the next banking crisis we need:
  - A correct understanding of the systemic problem
  - A wide awareness of the systemic solution
  - A political movement demanding its implementation
The Punch Lines

- All money is created as debt
- No money is created to repay the interests on the debt
- The private banking sector has the monopoly on money creation
- Money is an agreed upon fiction
- The debt-based money system is in the process of collapsing
Afraid of Becoming Greece

Sure, it's carnage up ahead, but we have a long way to go until we get there!
Key Questions

- Who creates money?
- By what authority?
- Who captures the seignorage?
- What is money backed by?
- Who benefits and who bears the risk?
- Who controls the quantity of money?
- What incentives drive money creation?
Definition and Brief History of Money
What is money?

• Money is a commonly accepted means of exchange
• Its primary function is to facilitate economic transactions
The three main types of money

- Commodity money
- Representative money
- Fiat money
## 1. Commodity Money

<table>
<thead>
<tr>
<th></th>
<th>Uniform</th>
<th>Easily portable</th>
<th>Readily divisible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrow heads</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Bricks of salt</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Nails</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Pelts</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>Tobacco leaves</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Gold</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Silver</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Diamonds</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

**Yes**

**Somewhat**

**No**
2. Representative Money

- Commodity receipts
- Gold receipts
- US $ prior to 1933 ($20.67 per oz.)
- Postal stamps
3. Fiat Money

- Shells
- Tally sticks
- Colonial scrip
- Continentals
- US $ after August 15, 1971
- Most modern national currencies
Three Ways a Sovereign Government Issues Fiat Money

- **Spend** it into existence (e.g. Roman metal coins prior to Caesar, tally sticks in England, Continentals, Greenbacks)

- **Lend** it into existence (e.g. Colonial scrip in Pennsylvania pre 1765)

- **Borrow** into existence (US and most modern governments with a private central bank!)
The tally stick system

England (1100 AD to 1834)
Colonial Scrip in Pennsylvania

- March 2\textsuperscript{nd} 1723 PA assembly issues 15,000 colonial scrip
- Lends 11,000 into the economy at 5% interest
- Spends 4,000 for public works and to pay for government administrative expenses
- No more than 100 loaned to a single person
Colonial Scrip in Pennsylvania

- In December 1723 another 30,000 are issued
- 26,500 loaned at 5% interest and 3,500 spent
- Similar process repeated over following 50 years
- The period between 1721 and 1775 was the period with the most stable prices in any period of same length
Continents (currency)
Greenbacks
A Recent Proposal

SOVEREIGN MONEY
PAVING THE WAY FOR A SUSTAINABLE RECOVERY

ANDREW JACKSON & BEN DYSON
MODERNISING MONEY
WHY OUR MONETARY SYSTEM IS BROKEN AND HOW IT CAN BE FIXED
WITH A FOREWORD BY PROFESSOR HERMAN E DALY
Banking and Money Creation
Why Bother with Bank Accounting?

- It turns out, we need to know (very basic) bank accounting if we want to understand:
  - Our money supply
  - The money creation process
  - Our system of payments
Let’s start simple --
A brand new bank!

<table>
<thead>
<tr>
<th>Assets</th>
<th>BANK ONE</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash $500K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Building $500K</td>
<td></td>
<td>Equity Capital $1M</td>
</tr>
</tbody>
</table>
First customer arrives! Deposits $200K in cash

Assets   BANK ONE   Liabilities

Cash $500K

Bank Building $500K

Equity Capital $1M
First customer arrives!
Deposits $200K in cash

Assets

<table>
<thead>
<tr>
<th></th>
<th>BANK ONE</th>
<th>Liabilities</th>
</tr>
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<tbody>
<tr>
<td>Cash $700K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Building $500K</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Liabilities

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Checking Account A $200K</td>
</tr>
<tr>
<td>Equity Capital $1M</td>
</tr>
</tbody>
</table>
First borrower arrives
Borrows $300K

Assets

- Cash $700K
- Bank Building $500K

Liabilities

- Checking Account A $200K
- Equity Capital $1M

BANK ONE
First borrower arrives
Borrows $300K

<table>
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Bank One Deposits Cash with Federal Reserve

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<tr>
<th>Assets</th>
<th>FED</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash $500K</td>
<td>Fed Fund Dep. Bank One $500K</td>
<td></td>
</tr>
</tbody>
</table>

<table>
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How Much Money can a Bank Create by Lending?

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How Much Money can a Bank Create by Lending?

- Fractional reserve system – reserve requirements
- Reserves need to be at least 10% of demand deposits

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<td></td>
</tr>
<tr>
<td>Bank Building $500K</td>
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<td></td>
</tr>
<tr>
<td>Reserves</td>
<td></td>
<td>Demand Deposits</td>
</tr>
<tr>
<td>Cash $200K</td>
<td></td>
<td></td>
</tr>
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How Much Money can a Bank Create by Lending?

- $700K of reserves can support $7M of demand deposits
- This bank could make $6.5M of additional loans and created an additional $6.5M of electronic money!
Aggregate Balance Sheet
Commercial Banks in US 7/10/13 (in $ billions)

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury Bonds, MBSs, CDOs and other securities $2,700</td>
<td>Demand Deposits $7,900</td>
</tr>
<tr>
<td>Commercial loans $1,600</td>
<td>Time Deposits $1,600</td>
</tr>
<tr>
<td>Real Estate Loans $3,500</td>
<td>Other borrowed funds $1,500</td>
</tr>
<tr>
<td>Consumer loans $1,100</td>
<td>Other Liabilities $1,000</td>
</tr>
<tr>
<td>Other assets $2,400</td>
<td>Equity Capital $1,500</td>
</tr>
<tr>
<td>Cash and Federal funds $2,200</td>
<td></td>
</tr>
</tbody>
</table>

Source: Federal Reserve H.8
# Federal Reserve Balance Sheet

3/31/2013 (in $ billions)

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury Securities $1,950</td>
<td>Federal Fund Deposits $1,800</td>
</tr>
<tr>
<td>Federal Agency MBS $1,100</td>
<td>Federal Reserve Notes Outstanding $1,100</td>
</tr>
<tr>
<td>Other assets $150</td>
<td>Other Liabilities $250</td>
</tr>
</tbody>
</table>

Source: Federal Reserve
Key Questions

- Who creates money?
- By what authority?
- Who captures the seignorage?
- What is money backed by?
- Who benefits and who bears the risk?
- Who controls the quantity of money?
- What incentives drive money creation?
Who creates our money?

**Government**
- US Treasury
- Office of Printing and Engraving

**Private Sector**
- Banking Sector
- “Federal” Reserve

**Coins**

~ 0.1%
Who creates our money?

- **Government**
  - US Treasury
  - Office of Printing and Engraving
  - ~ 0.1%

- **Private Sector**
  - Banking Sector
  - “Federal” Reserve
  - ~ 3%

paper cash
Who creates our money?

**Government**
- US Treasury
  - Office of Printing and Engraving
  - ~ 0.1%

**Private Sector**
- Banking Sector
  - "Federal" Reserve
  - ~ 97%
- Electronic Cash
  - ~ 3%

electronic cash
Where did the banks directed the money they created? (UK 97-07)

Source: Positive Money Institute, UK
Rescuing the Banks from their own Mistakes: Bail-outs and Bail-ins
Not your typical pinko...

“It is the normal monetary system, in which the ‘printing’ of money is delegated to commercial banks, that needs defending. This delegates a core public function – the creation of money – to a private and often irresponsible commercial oligopoly.”

MARTIN WOLF
FINANCIAL TIMES
28TH JUNE 2012
Rescuing the Banks after their foolish lending

- TARP
- Government bailout
- Bail-out 2.0: Cyprus style bail-in
A Bank Gets in Trouble

Assets

- Loan to C $300K
- Loan to B $200K
- Loan to A $100K
- Cash $100K
- Bank Building $100K

Liabilities

- Checking Accounts $600K

Equity

$200K
A Bank Gets in Trouble

Borrower A defaults

Assets

- Loan to C $300K
- Loan to B $200K
- Cash $100K
- Bank Building $100K

Liabilities

- Checking Accounts $600K

Equity

$200K
A Bank Gets in Trouble

Borrower A defaults

Assets

<table>
<thead>
<tr>
<th>Loan to A</th>
<th>$100K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan to B</td>
<td>$200K</td>
</tr>
<tr>
<td>Cash</td>
<td>$100K</td>
</tr>
<tr>
<td>Bank Building</td>
<td>$100K</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>$600K</td>
</tr>
</tbody>
</table>

Liabilities

<table>
<thead>
<tr>
<th>Checking Accounts</th>
<th>$600K</th>
</tr>
</thead>
</table>

Equity

| Equity              | $100K |

Loan to C

| Loan to C            | $300K |

Borrower A defaults

Cash $100K

Bank Building $100K

Loan to B $200K

Checking Accounts $600K

Loan to C $300K
Borrower C defaults

A Bank Gets in Worse Trouble

**Assets**
- Loan to C $300K
- Loan to B $200K
- Loan to A $100K
- Cash $100K
- Bank Building $100K

**Liabilities**
- Checking Accounts $600K

**Equity** $200K
L > A = Bank is Insolvent!

Borrower C defaults

Loan to C
$300K

Assets

Loan to B
$200K

Loan to A
$100K

Cash
$100K

Bank Building
$100K

Liabilities

Checking Accounts
$600K
### TARP: Government to the Rescue

#### Assets
- **Loan to A**: $100K
- **Cash**: $100K
- **Bank Building**: $100K

#### Liabilities
- **Checking Accounts**: $600K
- **Loan to B**: $200K
- **Loan to C**: $300K (?)

#### Equity
- **$200K**
TARP: Government to the Rescue

Assets

- Cash $300K
- Loan to B $200K
- Loan to A $100K
- Cash $100K
- Bank Building $100K

Liabilities

- Checking Accounts $600K

Equity

$200K

TARP fund

Loan to C $300K ?
Borrower C defaults

<table>
<thead>
<tr>
<th>Assets</th>
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<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>Bank Building $100K</td>
<td>$200K</td>
</tr>
</tbody>
</table>
# Government Recapitalizes Bank

**Borrower C defaults**

<table>
<thead>
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<th>Assets</th>
<th>Liabilities</th>
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<tr>
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<td>$100K</td>
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<tr>
<td>Bank Building $100K</td>
<td>$100K</td>
</tr>
</tbody>
</table>

Government "Equity" Equity
Cyprus Bail-out 2.0: Bail-in

**Assets**
- Bad asset $300K?
- Loan to B $200K
- Loan to A $100K
- Cash $100K
- Bank Building $100K

**Liabilities**
- Checking Accounts $600K

**Equity**
- $200K
Cyprus Bail-out 2.0: Bail-in

Bad Asset
$300K ?

Assets

- Loan to B $200K
- Loan to A $100K
- Cash $100K
- Bank Building $100K

Liabilities

- Checking Accounts $300K
- $100K
- $100K

Equity

Marked down deposits
Depositors’ Equity
Equity
System Design Flaws and Solution
Problems with Current Monetary System

- Money is created with issuance of debt but no money is created to repay interest on that debt
  - Impossible contract
  - Debt repayments/defaults shrink money supply
- Money is created by unaccountable private entities, its quantity driven by profit motive
- We the people, through the taxing power of our government, are ultimate backers of money created and directed by banks
Problems with Current Monetary System

- Our money = banks’ IOUs
- Banks’ IOUs backed by banks’ risky assets
  - Payment system linked to credit and investment risk
- Government on the hook when those risks blow up
  - Bailouts require additional borrowing by government
- Moral hazard and perverse incentives
  - FDIC
  - Too-big-to-fail
Our debt IS our Money Supply!
What We Need

National Currency ($) 

Source: Positive Money Institute, UK
How do we get out of this pickle?

- Remove the power of private banks to create money
- Return that power to a transparent and accountable process
- Create money free of debt
- Create money only when inflation is low and stable
- Make sure that new money goes into the real economy instead of financial market (or real estate speculation)
Path toward the Solution

- Build understanding and awareness
- Build on public banking movement
- Nationalize too-big-to-fail banks (at the next crash)
- Break them apart and turn them and the rest of the banks into financial intermediaries
- Nationalize the Federal Reserve (branch of US Treasury) – depository of electronic money
- De-link money and payment system from assets of banks
- Promote a diversity of local monetary systems
New Possibilities:

- Reduce power of private banks and money on government
- Remove artificial scarcity in the money system
- Government as employer of last resort
- National dividend until we reach
  - Full employment
  - Full capacity utilization
- Reduce government and private debt
New Possibilities:

- Massive government employment program to
  - Rebuild our infrastructure
  - Improve the education system
  - Improve health care and prevention
  - Climate adaptation
  - Environmental restoration
  - Rebuild the local food system infrastructure
  - Repopulate rural areas and transition to organic agriculture
Marco Vangelisti
Essential Knowledge for Transition

Website: ek4t.com

Contact: ek4t.com/about/contact/

FB: www.facebook.com/EssentialKnowledge4Transition