MONETARY POLICY UNDER STRESS

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Why do we Need Money?

a. Money is one of the most important invention similar to wheel and fire
b. Empowers division of labour
c. Without a unit of account, trade is very limited because of costs of information.
d. Meltzer (1998):
   a. “n commodities $\Rightarrow (n(n-1))/2$ number of bilateral exchange ratios (prices).
   b. $n = 100$ commodities $\Rightarrow 4,950$ prices
   c. $n = 500 \Rightarrow 124,750$
   d. $n = 1,000 \Rightarrow 499,500$ prices.
e. With money; number of prices is not $(n(n-1))/2$; but $n$...
What Backs Fiat Money?

Money is recently fiat: Does not have a backing such as gold.

Spectrum of Money may be illustrated as:

For the past, money represents total goods and services consumed.
For the present, taxation is deducted from the consumption.
For the future, money is backed by profit generating productivity supported by entrepreneurial skills. Backing is relative and strength of different monies competes contemporaneously.

Measure of strong money backing is **sustainable price stability.**
What Weakens Money? Knowns and Unknowns

WEAKENS

Inflation
Financial Instability
Fiscal Imbalances
External Imbalances
Dollarisation
Contagious (external)

KNOWNS

• Unit of Account
• Medium of Exchange
• Store of Value
• Legal Tender,
• Core to Transmission

UNKNOWNNS

• Dollarisation
• Globalised payment instruments and financial services
• Currency Competition
• E-money
Social Function of Central Banking

UNIT OF ACCOUNT: INTEGRITY of MONEY

NETWORK EXTERNALITIES

LEGAL TENDER LAW

CB MANDATE & CONSTITUTION

CURRENCY COMPETITION

Economic Stability

REGULATION & SUPERVISION

PERFECT INFORMATION

FREE ENTRY

MEDIUM of EXCHANGE ➔ PRICE STABILITY

STORE of VALUE ➔ FINANCIAL STABILITY
## Central Banking in Retrospect

<table>
<thead>
<tr>
<th>Central Banks</th>
<th>Law Enactment</th>
<th>Banknote Issue Right</th>
<th>Lender of Last Resort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sverige Riksbank</td>
<td>1668</td>
<td>1897</td>
<td>1890</td>
</tr>
<tr>
<td>Bank of England</td>
<td>1694</td>
<td>1844</td>
<td>1870</td>
</tr>
<tr>
<td>Banque de France</td>
<td>1800</td>
<td>1848</td>
<td>1880</td>
</tr>
<tr>
<td>Bank of Finland</td>
<td>1811</td>
<td>1886</td>
<td>1890</td>
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<tr>
<td>De Nederlandsche Bank</td>
<td>1814</td>
<td>1863</td>
<td>1870</td>
</tr>
<tr>
<td>Austrian Central Bank</td>
<td>1816</td>
<td>1816</td>
<td>1870</td>
</tr>
<tr>
<td>Noerges Bank</td>
<td>1816</td>
<td>1818</td>
<td>1890</td>
</tr>
<tr>
<td>Danmarks Nationalbank</td>
<td>1818</td>
<td>1818</td>
<td>1880</td>
</tr>
<tr>
<td>Banco de Portugal</td>
<td>1846</td>
<td>1888</td>
<td>1870</td>
</tr>
<tr>
<td>Belgian National Bank</td>
<td>1850</td>
<td>1850</td>
<td>1850</td>
</tr>
<tr>
<td>Banco de Espana</td>
<td>1874</td>
<td>1874</td>
<td>1910</td>
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<tr>
<td>Banco de Espana</td>
<td>1874</td>
<td>1874</td>
<td>1910</td>
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<tr>
<td>Reichsbank</td>
<td>1876</td>
<td>1876</td>
<td>1880</td>
</tr>
<tr>
<td>Bank of Japan</td>
<td>1882</td>
<td>1883</td>
<td>1890</td>
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<tr>
<td>Bank D’italia</td>
<td>1893</td>
<td>1926</td>
<td>1900</td>
</tr>
<tr>
<td>TCMB</td>
<td>1930</td>
<td>1930</td>
<td>2002</td>
</tr>
</tbody>
</table>

1. Relatively new institutions in practice.

2. Number increased after 1800. Peaked recently.


Source: Bank of England
Central Banking in Retrospect

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Central Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>18</td>
</tr>
<tr>
<td>1910</td>
<td>20</td>
</tr>
<tr>
<td>1920</td>
<td>23</td>
</tr>
<tr>
<td>1930</td>
<td>34</td>
</tr>
<tr>
<td>1940</td>
<td>41</td>
</tr>
<tr>
<td>1950</td>
<td>59</td>
</tr>
<tr>
<td>1960</td>
<td>80</td>
</tr>
<tr>
<td>1970</td>
<td>108</td>
</tr>
<tr>
<td>1980</td>
<td>137</td>
</tr>
<tr>
<td>1990</td>
<td>161</td>
</tr>
</tbody>
</table>

Source: Bank of England

Central banking is sort of 20th Century Phenomenon!
What backs Central Banking?

a. A clear mandate for price stability; growth is conditional. Why? *(Public agreement is a must)*

b. Sustainable Financial stability enabling regulation and supervision. Internal or outsourced?

c. Remit. *(Fiscal rule)*

d. Structural reforms to prevent external unsustainabilities

e. Optimal Operational Framework to prevent dollarization

f. Complementary economic policy to disable contagious

g. An efficient and effective payment system infrastructure

h. Capital and money market indepthness

i. Strongest economic analysis skills to challenge any alternative views on the economic outlook
Contestable Central Banking

a. Too many monies as all countries want one.
b. Monetary Unions already here with us
c. Dollar bloc, Euro bloc, Yen Bloc
d. Does globalisation of trade and finance need a global money? No, at least up to now… And the future?
e. Global financial institutions and global lender of last resort?
f. Coordinated monetary policy and complementary monetary policy operations: Swaps now, what is next?
g. Commodity money: Can oil or gold back money?
a. Number of monies peaked ➔ more monetary unions: What about Greece, Spain or Portugal case?
b. There is a need for a global lender of last resort but how? Some sort of guarantee from the biggest central banks. Why? To distribute unlimited credit…
c. More coordination on monetary policy operations: Instant credit lines or supplementary credit facilities
d. Increasing importance of economic analysis.
e. Transparency and accountability both to the Parliament and to the Public.
a. Not among the best measured with inflation record
b. Experienced extreme central banking during 1980s and 1990s
d. Learned from mistakes especially after the 2001 crisis.
e. Now an independent central bank with a clear mandate for price stability. No primary public sector credits.
f. Has an efficient and effective operation tool-kit

g. An inflation targeter

h. Managed to increase credibility during the latest global crises with pre-emptive interest rate strategies.
Monetary Policy Framework (1986-1990)

1986-1990 Marketisation

- Liberalisation of the economy.
- Liberal banking system without deposit and credit rate floor or ceiling.
- Two-tier banking system.
- Closed economy: Capital Controls and exchange rate targeting.

- Open Market Operations, capital and money market establishment.
- Treasury Borrowing system: Bonds and bills market.
- Foreign Exchange and Banknote Market.
- Reserve Management.
- Gold Market.

1989-1993
Capital Account Liberalisation and Monetary Targeting

- Open economy.
- No Interest rate and exchange rate controls.
- More controls on the budget with the memorandum of understandings for the short-term advance limitations.
- Blind Brokerage on the money markets

1989 Implicit Monetary Targeting
- 1990 Explicit Monetary Targeting
- Success until 1993 to achieve targets but failure to control inflation
- No hyperinflation
- Money and inflation: Complex relations and measurement errors.
- Collapse of MoU in 1993, back to advances…

1994-1999
Real Exchange Rate and Financial Stability Targeting

- Terrible Earthquake in 1998.
- Mexican, Far East and Russian crises.
- Heightened political risk and lack of a credible economic stability program.
- IMF comes and goes: Failure by failure.
- Customs Union with Europe without Convergence Fund Support.

- Try to achieve real exchange rate stability.
- Prioritize financial stability.
- Prevent extreme interest rate levels such as 720 percent realized during the 1994 crises.
- Empower wholesale and retail payment system stability.
- IMF comes and goes: Failure by failure.
- Demand macro and micro reforms as part of an economic stability program.
Monetary Policy Framework (2000-2001)

2000-2001
Disinflation Programme with a Crawling Peg Exchange Rate Regime: Tablita

2000 Tablita Programme

- 7.5% (31 December 2001)
- 15% (30 June 2001)
- 22.5% (31 December 2002)
Monetary Policy Framework (2000-2001)

2000-2001 Disinflation Programme with a Crawling Peg Exchange Rate Regime: Tablita

- Crawling peg: Pre-announced targets for the nominal exchange rate.
- Inflation inertia was extremely high.
- Risk premium was at the peak
- Lack of confidence since 1994
- Not many options as a solution (Currency Board was even worse than tablita)
- Extensive macro reforms agenda
- Demand for rapid privatisation (Telecomm)

- Passive monetary policy.
- Classic IMF equation: \( BM = NDA + NIR \)
- Net Domestic Asset ceiling
- Net International Reserves floor
- Buy and sell USD depending on TRY supply and demand
- Performance criteria were set on analytical balance sheet
Monetary Policy Framework (2001)

2001 Collapse of Tablita and Economic Crisis

- Lack of ownership.
- Lack of crisis management or Plan B.
- Inflexible IMF approach to the program.
- Inadequate funding.
- Reform Fatigue.
- Risk premium inertia.
- Lack of public relationship management to create awareness of the risk of collapse.
- Cost: 20 percent /GNP for banking restructuring.

The End:

- Extreme interest rate to defend tablita: Overnight rates jumped to 6200 percent.
- Loss of reserves.
- Back to active central banking.

- Dedication to reforms including the Central Bank.
- Fastened privatisation.
- Change the rule of game forcefully: Paradigm Shift...
1990s Comparative Indicators: Growth

![Graph showing comparative indicators for Turkey, Euro area, Low income, and World from 1990 to 2002. The graph indicates fluctuations in growth rates across different regions and years.]
1990s Comparative Indicators: Inflation

- Turkey
- Euro Area
- Low income
- World
1990s Comparative Indicators: PSBR

![Graph showing PSBR/GDP from 1990 to 2002]
1990s Comparative Indicators: Private Credit to GNP
Monthly Treasury Borrowing Auctions
1990s Term Treasury Borrowing Auctions
1990s PSBR and Real Interest Rates

PSBR/GDP

Real Interest Rate (Right Axis)

[Graph showing the relationship between PSBR/GDP and real interest rates from 1990 to 2002, with peaks and troughs indicating fluctuations over the decade.]
1990s Short-term Interest Rate Quotes

O / N (Borrowing)  O / N (Lending)
## 1990s Extreme Short-term Interest Rates

### Extreme Short-term Simple Interest Rates (%): 1994 Crisis

<table>
<thead>
<tr>
<th>Date</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-03-1994</td>
<td>240.00</td>
</tr>
<tr>
<td>11-03-1994</td>
<td>720.00</td>
</tr>
<tr>
<td>21-03-1994</td>
<td>400.00</td>
</tr>
<tr>
<td>22-03-1994</td>
<td>450.00</td>
</tr>
<tr>
<td>23-03-1994</td>
<td>500.00</td>
</tr>
<tr>
<td>25-03-1994</td>
<td>700.00</td>
</tr>
<tr>
<td>29-03-1994</td>
<td>600.00</td>
</tr>
</tbody>
</table>

### Extreme Short-term Simple Interest Rate (%): 2000 and 2001 crises

<table>
<thead>
<tr>
<th>Date</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-11-2000</td>
<td>400.00</td>
</tr>
<tr>
<td>01-12-2000</td>
<td>999.00</td>
</tr>
<tr>
<td>04-12-2000</td>
<td>1950.00</td>
</tr>
<tr>
<td>05-12-2000</td>
<td>600.00</td>
</tr>
<tr>
<td>20-02-2001</td>
<td>2300.00</td>
</tr>
<tr>
<td>21-02-2001</td>
<td>6200.00</td>
</tr>
<tr>
<td>22-02-2001</td>
<td>3000.00</td>
</tr>
<tr>
<td>23-02-2001</td>
<td>800.00</td>
</tr>
</tbody>
</table>
1990s Monthly Short-term Rate Changes

The graph depicts the monthly short-term rate changes from 1990 to 2002. The x-axis represents the years from 1990 to 2002, with specific months indicated. The y-axis shows the percentage change in rates, ranging from 0 to 45%. The graph illustrates significant fluctuations, with notable peaks in 1994 and 1995.
Number of Crises around the World

- **Industrial Countries**
- **Emerging Markets**

<table>
<thead>
<tr>
<th>Period</th>
<th>Industrial Countries</th>
<th>Emerging Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880-1913</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>1919-1939</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>1945-1971</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>1973-1997</td>
<td>40</td>
<td>90</td>
</tr>
</tbody>
</table>
Concluding Remarks

- Turkey has experienced various forms of monetary regimes in the past 30 years.
  - Monetary targeting,
  - Real exchange rate targeting,
  - Crawling pegs,
  - Inflation targeting,
- 1990s was one of the worst decade measured with growth and inflation.
- Central banking and Treasury financing faced many challenges.
- More than 14 borrowing auctions were held in some stage.
- More than 40 short-term interest rate quotation changes have been observed.
- Monetary policy under extreme conditions proved costly.
- Dedication to price stability since then increased social welfare.
QUESTIONS, QUERIES, CORRECTIONS COMMENTS, and CONTRIBUTIONS PLEASE....

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