Ponzi Schemes

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Charles Ponzi signing a check…
This talk

- What is a Ponzi Scheme?
- Examples

What is a Ponzi Scheme?

- Usual definition:
  - Investment fraud where returns to investors are paid from the invested money or money paid by subsequent investors rather than from any actual profit earned.

- In economic terms:
  - Investment scheme which from the start is insolvent (will never be able to satisfy all claims) but not illiquid (can satisfy all current claims)

- Ponzi Schemes survive as long as not too many investors withdraw their savings.
Problem with this Definition

- How can we identify insolvency if returns are uncertain?
- Insolvency is a possibility for most companies financed with debt

The easy way out

- Ponzi schemes can be easily identified if there is fraud/i.e. investors are given faulty information
  - fictitious returns
  - announced investments are not made

- However, explicit fraud is not essential for a Ponzi scheme!
Example 1: Charles Ponzi’s own Ponzi Scheme

- Announced Returns: Double investment in 90 days
- Investment Story: Arbitrage with postal reply coupons
  - Buy « international postal reply coupons » in Europe
  - Exchange these coupons into US stamps with higher value
- Between February and August 1920 scheme grew exponentially
- Survived several withdrawal waves, attempts to expose him as a fraud and even official investigations.
- Clarence Barron, calculated that 160 million postal reply coupons would have to be in circulation, in fact there were only about 27,000.
- Scheme only ended as Massachusetts Bank Commissioner froze Ponzi’s bank accounts

Comment

- Clearcut case
  - Fraud (Announced investments in postal reply coupons were never made, money was directly siphoned off)
  - Absurdly high returns promised

- Note: Even Ponzi’s original scheme was surprisingly resilient!
Example 2: Balsam AG (1994)

- Producer of synthetic turf, track, wood and urethane sports flooring

- Turned into a Ponzi scheme involving the factoring of receivables: Factoring of new receivables generates cash which is used to pay back old receivables.
  - Initially used factoring to overcome liquidity shortage
  - Then sold below cost to produce receivables
  - Finally created fictitious Arabian and Asian clients and forged sales and receivables

- Survived 10 years until it was exposed by a whistleblower

Comment

- When did Balsam AG turn into a Ponzi scheme?
  - Economically speaking as soon as they generated loss making sales in order to have receivables
  - But this is difficult to prove and insolvency is uncertain – many companies price below total cost to survive short term demand fluctuations

  - Ponzi scheme becomes clear as soon as fraud is involved!
Example 3: Amaranth Advisors LLC

- Timeline of the Amaranth Default

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2006</td>
<td>Fund losses $974M</td>
</tr>
<tr>
<td>Summer 2006</td>
<td>Recovered $1,058B and generated a total of $2.094B net performance for the year</td>
</tr>
<tr>
<td>September 14, 2006</td>
<td>Fund loses $560M on Natural Gas positions</td>
</tr>
<tr>
<td>September 21, 2006</td>
<td>Fund loses $3,538 on Natural Gas futures month-to-date, Amaranth Advisors loses $4,358 month-to-date</td>
</tr>
<tr>
<td>September 21, 2006</td>
<td>Energy portfolio transferred to J.P. Morgan and Citadel, Amaranth liquidates fund</td>
</tr>
</tbody>
</table>

Source: Chincarini (2007)

Example 3: Amaranth Advisors LLC

- Amaranth Advisors LLC dominated the market for Natural Gas Futures

Amaranth Open Interest, NYMEX Natural Gas Futures Contract for March 2007

Source: US Senate staff report
Example 3: Amaranth Advisors LLC

- **Comment:** Economically a Ponzi scheme:
  - Huge investment concentrated in narrow market drives up prices
  - Increasing prices produce high returns on existing positions
  - i.e. early investors are paid with the cash from later investors.

- **Problem:**
  - No explicit fraud involved
  - Possibility of high returns not excluded (Hunter was speculating on a Hurricane)

*Source: Gupta and Kazemi 2009*
Example 4: Bubbles and Ponzi schemes

- Bubbles: Similar to previous example but multiple investors
- Examples:
  - Art fund
  - Internet startups
  - Private equity companies
  - ...

- Warning signs:
  - Capital inflow in the industry
  - Non-investor buyers withdraw

Conclusion

- Ponzi schemes do not need to involve fraud in particular if
  - No fixed returns are promised
  - There is uncertainty about returns generated by investment strategy

- Can we define reliable criteria for Ponzi schemes without harming other joint investment schemes?