Ponzi Schemes

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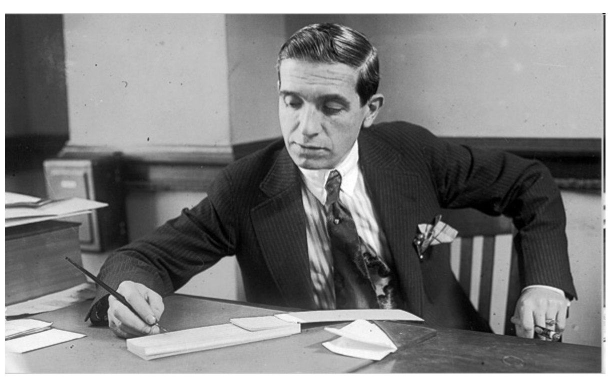
Charles Ponzi signing a check…



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 iliquid (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
  - ficticious returns
  - annouced 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 copupons 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 ficticious arabian and asian clients and forged sales and receivables
- Survived 10 years until it was exposed by a whistelblower

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

May 2006
Fund loses
$974M

Summer 2006
Recovered $1.05B
and generated
a total of $2.094B
net performance
for the year

September 14, 2006
Fund loses $560M
on Natural Gas
positions

September 21, 2006
Fund loses $3.53B on
Natural Gas futures
month–to–date. Amaranth
Advisors loses $4.35B
month–to–date

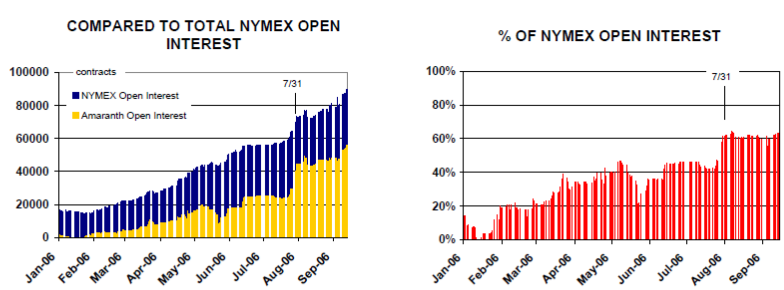
September 21, 2006
Energy portfolio
transferred to
J.P. Morgan and Citadel.
Amaranth liquidates fund

Source: Chincarini (2007)

Example 3: Amaranth Advisors LLC

- Amaranth Advisors LLC dominated the market for Natural Gas Futures

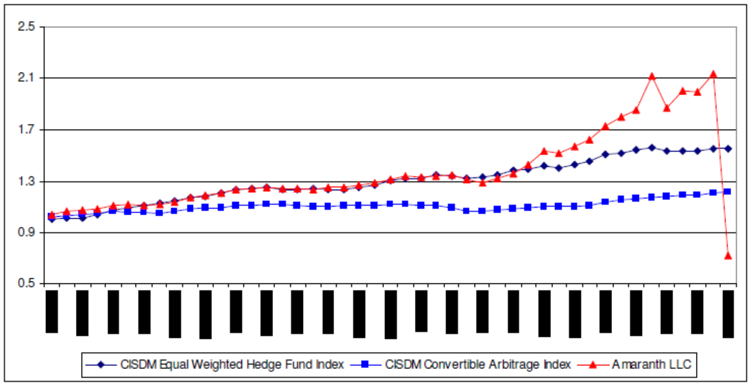
Amaranth Open Interest, NYMEX Natural Gas Futures Contract for March 2007



Source: US Senate staff report

Example 3: Amaranth Advisors LLC

Exhibit 3: Growth of $1 Invested in Amaranth



Source: Gupta and Kazemi 2009

Example 3: Amaranth Advisors LLC

- Comment: Economically a Ponzi scheme:
  - Huge investment concentrated in narrow market drives up prices
  - Increaseing 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)

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?