BANKING AND FINANCIAL FRAGILITY

Case Study: Money Market Mutual Funds

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Mutual funds

- Mutual funds are a pooled investment arrangement
  - investors buy shares in the fund
  - the fund then buys assets (stocks, bonds, etc.)
- How is the value of a share determined?
- At the end of each day, the fund calculates:
  - the current value of all assets
  - the number of shares outstanding

    ⇒ determines the "net asset value" (NAV) of a share
- In open-end fund, investors buy/sell shares at this price
  - they deal directly with the fund in these transactions

Money Market Mutual Funds

- Operate under a particular set of rules
  - in the U.S.: Rule 2a-7 of the Securities and Exchange Commission (SEC)

- Restricts the fund to hold high-quality, short-term assets
  - short-term government debt, or
  - commercial paper from highly-rated corporations

- Allows the fund to hold the value of a share <u>fixed</u> (at $1)
  - even if the value of the fund's assets change
  - as long as the change is not too big
  - if asset values fall too much, the fund liquidates and closes (it "breaks the buck")

In other words …

- Shares in money market funds act like *bank deposits*
  - fund promises to give your money back on demand
    - value of your shares is <u>not</u> contingent on value of funds' assets
  - interest accumulates while your money is deposited
- This is a form of maturity transformation
  - very much like a Diamond-Dybvig bank
- Should we expect it to be fragile (i.e., subject to runs)?
  - as long as assets are safe and short-term …
  - these funds should be both <u>solvent</u> and <u>liquid</u> …
  - so perhaps they should be immune to runs
    - this was the dominant view prior to 2008

Overview of the industry

- Very large
  - 528 money market funds in the U.S. as of 2014
  - approximately $2.7 trillion under management
    - compared to ~ $15 trillion in banking institutions
- Different types of funds exist
  - *Prime*: commercial paper and other private securities
  - *Government*: invest in Federal, state or local govt securities
- Shareholders include:
  - small investors (retail funds)
  - non-financial firms doing cash management
  - (large) financial firms

institutional funds

The financial crisis of 2008

- Lehman Brothers filed for Bankruptcy on Sept. 15
- On Sept. 16, a prime money fund "broke the buck"
  - Reserve Primary Fund held \$785 million in Lehman debt
  - faced a wave of withdrawal requests
- This incident sparked a wider run on prime funds
  - \$321 billion was withdrawn within a week
    - this represented 16% of prime funds' total assets
- Most funds' assets were still very safe
  - but selling assets at short notice can be difficult, costly
    - especially during a financial crisis
  - when r falls $\Rightarrow$ the fund can become illiquid

- Run had immediate consequences for the real economy
  - restricted funding to both financial and non-financial firms
- Immediate policy response had two main elements
  - Federal Reserve made loans to banks that were buying commercial paper from money funds (re-intermediation)
  - Treasury guaranteed the value of eligible money fund shares (a form of deposit insurance)
- Response helped stabilize short-term funding markets
  - no other funds broke the buck
  - but many required support from govt and parent company
- This episode raised some important policy questions

Reforms

- What could be done to make the industry less fragile?
- Possible approaches:
  - allow funds to restrict withdrawals in times of stress
    - a form of deposit freeze; called “gates” in this context
  - introduce government-backed deposit insurance
    - for only small deposit or for all deposits?
  - force funds to calculate share values using NAV like a normal open-end mutual fund
    - make these funds less bank-like
  - force funds to hold capital to guard against losses
    - make these funds more like a bank

- In July 2014, the SEC in the U.S. adopted a set of reforms
  - "designed to address money market funds' susceptibility to heavy redemptions in times of stress … while preserving, as much as possible, their benefits"
- Took different approaches for different types of funds
  - institutional prime funds: require a floating NAV
    - calculate share value of the 4^{th} decimal place for all redemptions
  - retail prime funds: allow restrictions on redemptions
    - under some conditions, fund can impose withdrawal fees up to 2%
    - and suspend redemptions for up to 10 days
  - government-only funds: no significant changes
- Plus other reforms aimed at increasing transparency

Further reading

"Reforming Money Market Mutual Funds: A Difficult Assignment" by H.M. Ennis and R. Haltom, Federal Reserve Bank of Richmond Economic Brief No. 14-02, February 2012.

https://www.richmondfed.org/publications/research/economic_brief/2014/pdf/eb_14-02.pdf

"Some Theoretical Considerations Regarding Net Asset Values for Money Market Mutual Funds," by H.M. Ennis, Federal Reserve Bank of Richmond Economic Quarterly, 2012, vol. 98, no. 4, pp. 231–254.

https://www.richmondfed.org/publications/research/economic_quarterly/2012/q4/ennis.cfm

"The Minimum Balance at Risk: A Proposal to Mitigate the Systemic Risks Posed by Money Market Funds," by P. McCabe, M. Cipriani, M. Holscher, and A. Martin, Brookings Papers on Economic Activity, Spring 2013, pp. 211-271.

http://www.brookings.edu/~/media/Projects/BPEA/Spring%202013/2013a_mccabe.pdf

Press release: "SEC Adopts Money Market Fund Reform Rules," July 23, 2014

https://www.sec.gov/News/PressRelease/Detail/PressRelease/1370542347679