Liquidity and Crises in Financial Markets

Introduction

U of Basel, HS 2012

The Crisis of 2007-2009

Overview

Three Stages:

1. some short-term funding markets are stressed (ABCP/RMBS)
2. run on some institutions (Bear Stearns/Freddie and Fanny)
3. full fledged crisis (Lehman/AIG)

Crisis has elements of a classic banking crises ("This time is NOT different!")

But: fundamental changes in financial sector lead to new facets

Design of intervention and regulation has to take these into account

Changes in Short-term Funding Markets

Formation of institutional cash pools

- low interest rates
- large (foreign) demand for safe, liquid, short-term assets
- derivatives and bond trading
- new “originate and redistribute” model of banks (role of Basel II)

“New” market segments

- CP
- ABCP
- Repo
- Rehypothecation

Consequences

Rapid Growth in certain financial asset classes (ABCP, CDS, etc.)

Explicit leverage increased sharply in the run up to the crisis.

Implicit leverage increases in case of liquidity problems

- backstop facilities
- credit lines
- margins and other risk management factors

Maturity Mismatch increased and risk was underestimated.

Security design increases fragility of short-term funding markets (e.g. ratings, opacity).

What was the crisis about?

The crisis was a classic run on short-term funding markets.

It was driven by a (consecutive) loss of confidence in

- the quality of assets being traded
- the ability to obtain liquidity
- the ability of counterparties to make good on obligations (counterparty or credit risk).

What was new?

- role of funding markets vs. bank
- connectedness among financial institutions
- the severity of amplification mechanisms
- global dimension
- how quickly the crisis spread to the real sector

Policy Responses

Pre-Lehman: temporary withdrawal and reshuffling of liquidity

- brokered bailouts
- liquidity support mainly to interbank markets

Post-Lehman: permanent withdrawal of liquidity and too-big-to-fail

- solvency support
- public takeovers
- asset purchases

Ongoing:

- capital and liquidity regulation (Basel III)
- market infrastructure (e.g. CCPs)
- better monitoring
- sovereign debt crisis

What is liquidity?

Funding Liquidity

Ability to fund a position in trading or lending markets

Linked to balance sheets and in particular to short-term liquidity demands

Examples:

- margin and haircuts
- rollover risk in repos
- redemption risk in ABCP

Market Liquidity

How easy is it to conduct a trade or turnaround a position?
Measures:

- bid-ask spread
- market depth: at what trade volume do we get a price impact?
- resiliency: how long does it take for prices to recover
- time to sell

What is "Over-the-Counter"?

OTC Markets

Trades in financial instruments or assets off exchange

Trading protocol is different:

- bilateral
- bargaining
- search

OTC markets played a key role in the crisis.

- they allocate liquidity
- they allocate risk
- they are not transparent
- have no formal clearing arrangements (... well so far)

Why would people trade OTC?

Demand side:

- allows for customization
- important for derivatives (e.g. CDS)
- supports exchange trading

Supply side:

- allows for securitization
- non-standardized assets

Market Structure Matters

Bilateral trade, search and sequential bargaining

$\longrightarrow$ endogenous liquidity

No information aggregation and assets are opaque

$\longrightarrow$ asymmetric information

intermediation matters (e.g. interdealer markets)

$\longrightarrow$ market infrastructure