The Financial Crisis: Limits of Financial Re-Intermediation

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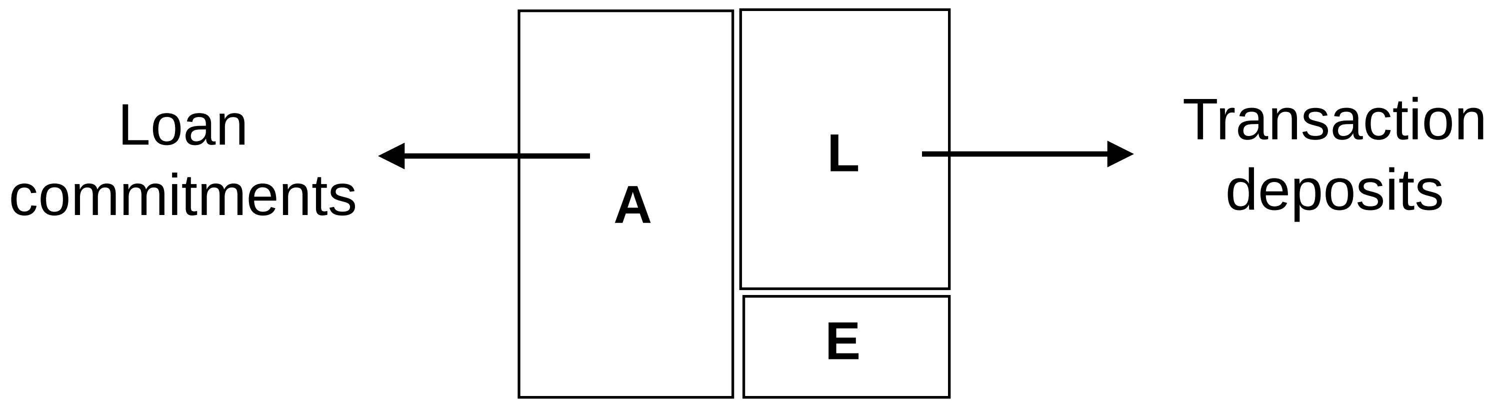
* Any views expressed represent those of the author only and not necessarily those of the Federal Reserve Bank of New York or the Federal Reserve System.

Overview

- Banks as liquidity providers of second to last resort
- The disappearance of the shadow banking system
- Capital as the binding constraint

Bank liquidity management

- A bank offers two short-term liquidity contracts



- Seems very unstable
  - What if demand spikes for both at the same time?
  - And what if that happens systematically (affecting *all* banks)
  - Worry about bank runs

Usually commercial banks are liquidity providers of second to last resort

- [Central banks are liquidity providers of last resort, of course]

- Diversification synergy
  - Combining transactions deposits and loan commitments reduces *idiosyncratic* risk
  - Transaction deposits *hedge* the systematic liquidity risk exposure of loan commitments

- Flight to quality
  - Banks can bear *systematic* shocks to liquidity demand due to funding inflows
  - Deposit-lending synergy is *stronger* in a liquidity crisis (e.g. Fall 1998)

- Seems related to government safety net
  - Funding flows not related to bank solvency or size
  - Effects absent prior to FDIC

Parallel banking systems

Early 2007

- “Shadow” banking system
  - ABCP + SIV + ARS + TOB + VRDN ≈ $2.2 trn
  - O/N tri-party repo: $2.5 trn
  - Hedge funds AUM: $1.8 trn

- Typically about 40% of consumer debt is securitized
  - No more; now it has to go back on to banks’ BSs

- Assets of big 5 investment banks: $4 trn

- Regulated banking system
  - Assets of big 5 U.S. BHCs: $6 trn
  - Assets of all U.S. banks: $10 trn
  - Tier 1 capital: $760 bn (~7.6% ratio)

So what happens if banks need to re-intermediate?

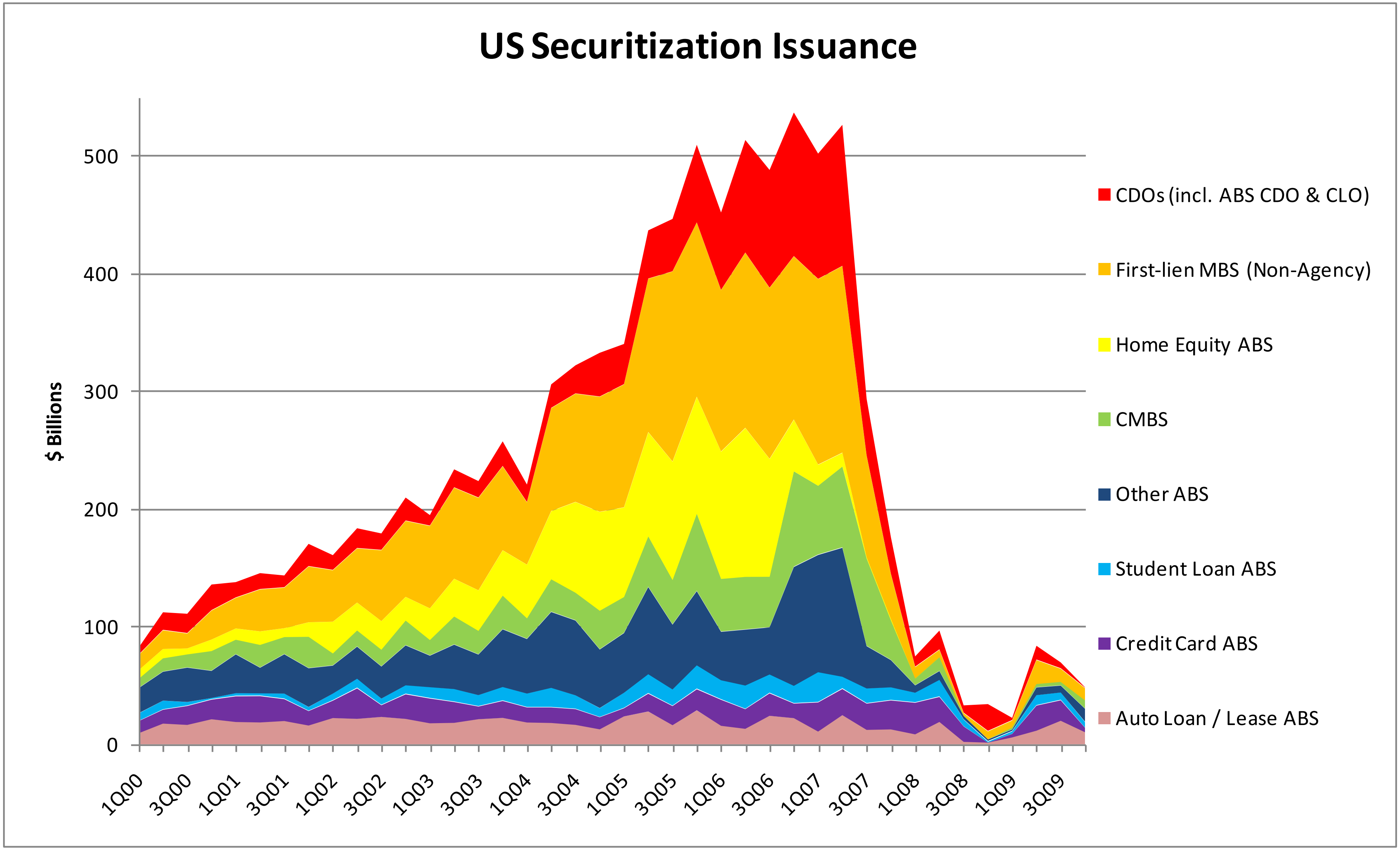
- Investment banks shrank their balance sheets significantly in 2008

- Shadow banking system virtually disappeared . . . But assets had to go somewhere . . . Banks

- By end 2008 banks had $12.3 trn in assets and $880 bn in Tier 1 capital (7.1% ratio)
  - Losses incurred since mid-2007 >$400bn (for US banks)
  - Roughly matched capital raise (including TARP)

- Given anticipated losses in 2009/10, and credit need in the economy, banks lacked balance sheet capacity
  - Need for more capital!

ABS Issuance: growth and collapse

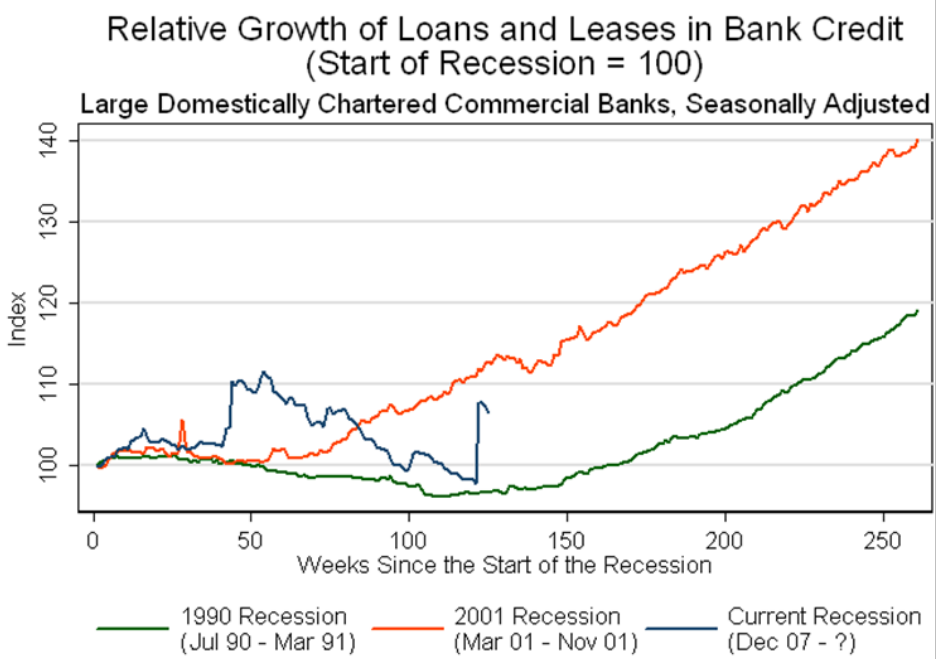


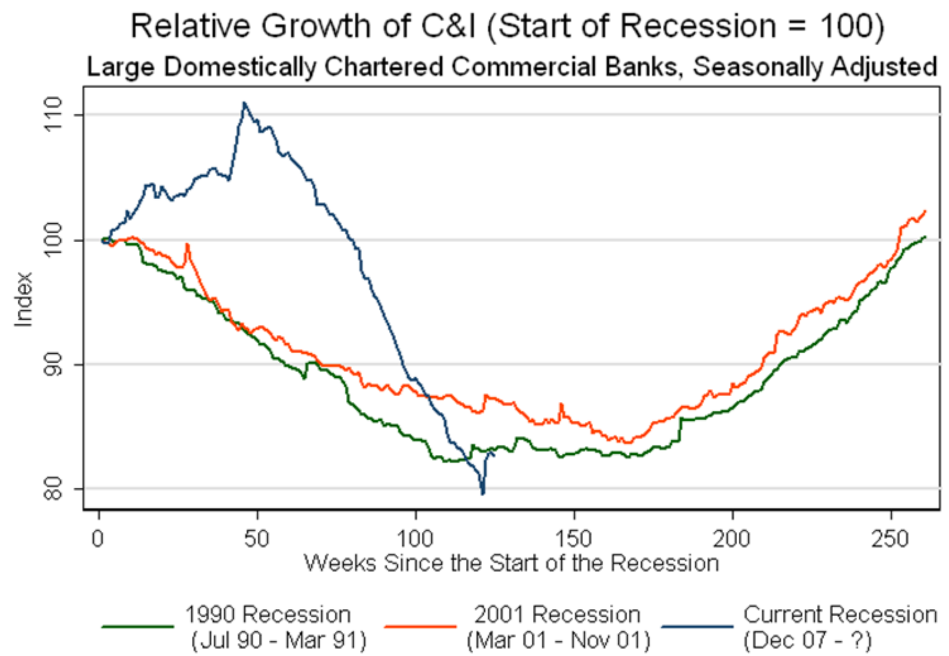
Source: JP Morgan

What was going on in depth of crisis?

- Banks were hoarding liquidity
- Deposit flows
  - Foreign/domestic ….
- Bank balance sheets are growing
  - "Voluntarily"?
  - Banks are clearly re-intermediating as the "shadow banking system" is shrinking
  - But are they extending enough new credit?
- New Fed facilities
  - To help with liquidity (TAF, TSLF, PDCF)
  - To also help with credit provision (CPFF, TALF)

Total Bank Credit is not Growing, and C&I Continues to Contract at a Record Pace

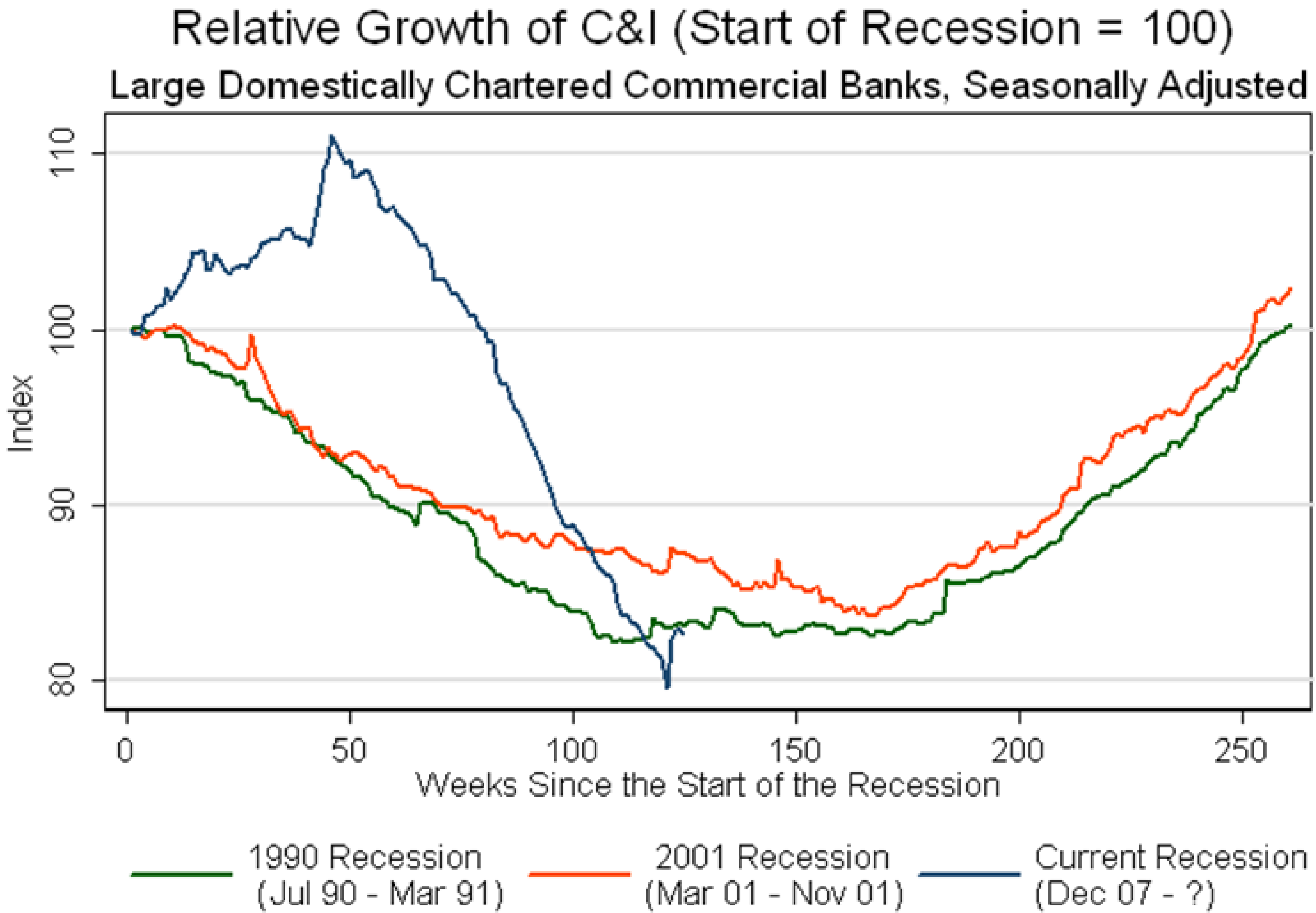




- Bank balance sheets have followed an unusual pattern this recession
  - Re-intermediation during the crisis
  - De-leveraging of bank balance sheets throughout 2009
  - (March 31, 2010: FAS 166/167 on-boarding)

- Large bank C&I loans outstanding now down 26% since peak
  - Both demand and supply factors suggest that an uptick in C&I volumes is unlikely for some time

Source: Federal Reserve H.8 data, through April 28, 2010


Relative Growth of C&I (Start of Recession = 100)
Large Domestically Chartered Commercial Banks, Seasonally Adjusted
Index
80
90
100
110
0
50
100
150
200
250
Weeks Since the Start of the Recession
1990 Recession (Jul 90 - Mar 91)
2001 Recession (Mar 01 - Nov 01)
Current Recession (Dec 07 - ?)

Liquidity demands in the face of losses

- Meeting short term borrowing demands requires
  - Immediate and (cheap) funding
    - Depositors will provide…..
  - Capital to allow ballooning of balance sheet while maintaining capital ratios

- But banks had been experiencing losses
  - And faced the prospect of further losses
  - Which eat into capital

- By mid/late 2008, capital had become the binding constraint
  - Were banks solvent?
  - How could you tell?

Where to go from here?

- Binding constraint to bank re-intermediation is capital
  - Will de-intermediation resume?
  - How much?
  - Will help drive capital determination

- Capital, financial intermediation, and economic growth
  - Policy makers needs (much) better models
  - Little insight into trade-offs

- What should be the price for contingent (public) liquidity insurance?
  - One thing we know – it was underpriced!

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