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Is Maturity Transformation the Devil's Work or Just Bedeviled?

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Perspectives on Maturity Transformation

✓NY Fed President Dudley speech on structural sources of instability in the financial system worth noting:

- ✓ “The first instability stems from the fact that most financial firms engage in maturity transformation.”
- ✓ “Maturity transformation means that if funding is not forthcoming, the firm will have to sell assets. Although this is easy if the assets are high quality and liquid, it is hard if the assets are lower quality.”
- ✓ “The second inherent source of instability stems from the fact that firms are typically worth much more as going concerns than in liquidation.”

A View on Maturity Transformation's Role in the Crisis

- ✓ According to one NY Fed official, banking sector contributed to phenomenon of shadow banking maturity transformation becoming a major backstop to nonbank institutions
  - ✓ Fulfilling the credit intermediation function
  - ✓ Via access by banks to central bank liquidity
  - ✓ Default put option of insured deposit insurance

- ✓ Major funding markets and bank-sponsored activities
  - ✓ Money Market Mutual Funds (MMMFs)
  - ✓ Asset-backed Commercial Paper (ABCP)
  - ✓ Tri-party Repo Market

Contributing Factors to the Crisis

- ✓ABCP Market
  - ✓ ABCP market evolved over time from a focus on short-term receivables to longer duration consumer and commercial loans, including longer duration mortgage assets, CDOs and ABS
  - ✓ This amplified the maturity mismatch between assets and funding types
- ✓Tri-party Repo Market
  - ✓ Originally limited to high quality liquid collateral – e.g., US Treasuries and related instruments
  - ✓ Over time this market evolved to allow other collateral types including loans and non-investment grade securities
  - ✓ **Perception** of liquidity since investors received cash back each day
- ✓MMMF Market
  - ✓ Maturity transformation in these markets subject to volatility under stress
  - ✓ Exposure to nonbank investments (Lehman CP)

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Regulatory Responses

- ✓ Intended Areas of Focus
  - ✓ Ensure short-term liquidity provided in a "risk-sensitive" manner
  - ✓ Maturity transformation and associated put options are appropriately priced
  - ✓ Banks must hold adequate capital and liquidity against put exercise
- ✓ Responses
  - ✓ Basel III Liquidity Ratios
    - ✓ Liquidity Coverage Ratio
    - ✓ Net Stable Funding Ratio
  - ✓ Funding Market Reforms
    - ✓ Liquidity and capital requirements on back-up lines of credit
    - ✓ Consolidation of collateral of conduit onto balance sheet
    - ✓ Collateral substitution procedures on Tri-party repo arrangements
    - ✓ 24-hour term for overnight repos
    - ✓ Minimum percentage of MMMFs in high quality liquid securities

Common Themes

✓Shift toward riskier assets

✓Lengthening of asset durations

✓Market perception of liquidity – what once was liquid became illiquid

✓Regulatory oversight issues

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Thought Experiment

- ✓Imagine if in the years preceding the crisis mortgage products had remained essentially in the same form and risk profile as in 2000 or earlier?
- ✓So-called “weapons of mass destruction” would not have been available as collateral to various markets
- ✓Unlikely then that bank runs and associated liquidity crisis that ensued would have occurred

Implications for Maturity Transformation

- ✓It goes without saying that the funding markets in question performed quite well in the years preceding the crisis

- ✓Focus on adding new regulations to these markets may feel good and to some extent limit certain liquidity stress in the future, they treat the symptom and not the disease

- ✓Or to paraphrase and old adage, maturity transformation doesn't kill markets, risky behavior does

Unintended Consequences

- ✓ Arguments supporting minimum liquidity ratios that could ameliorate problems during crises:
  - ✓ Allen and Carletti (2008) liquidity hoarding phenomenon
  - ✓ Berger and Bouwman (2008) liquidity procyclicality
- ✓ However, Basel liquidity ratios could inadvertently restrict efficient resource allocations (Longbrake and Rossi, 2011)
- ✓ No direct empirical evidence that the benefit of such ratios during stress events outweigh the costs of dampened economic activity at all other times

Other Responses

- ✓ Focus Areas
  - ✓ Asset risk-taking and aggressive growth strategies

- ✓ Regulatory/Industry Responses
  - ✓ Enhanced supervision
    - ✓ Liquidity risk
    - ✓ Credit risk
    - ✓ Counterparty risk
  - ✓ Asset securitization transparency and collateral standards
  - ✓ Adoption of systemic risk analysis within firm risk management processes
  - ✓ Better analysis on liquidity risk exposures under stress