Liquidity and Financial Frictions in Macroeconomic Models

1 Overview

Any course on liquidity and financial frictions should begin with a definition of these concepts before talking about anything else. So these are the working definitions of my course.

Definition 1 (Liquidity)**.** *Given an equilibrium of an economy, an asset is said to be illiquid if there is no trade in the asset despite featuring gains from trade. All other assets are liquid. If the asset is traded with only with a certain probability, I call that asset p-liquid.*

Let me provide examples that I will develop along the course.

1. Arrow-Debreu economies: All possible state-contingent claims are liquid. Furthermore, every individual's endowment is liquid because they can be sold at any point in time. With homogeneous agents, if there's no trading motive, there is no trade. Despite seeing volumes of trade equal to zero, all assets are liquid according to this definition.

2. Transaction Costs: There are potential gains from asset exchanges. Yet, if there are transaction costs — i.e., beureaucracy, fees, fixed trading costs— and these are large, gains from trade are not materialized. Some assets may be illiquid.

3. Search: An economy may feature gains from trade, but if buyers and sellers cannot can't find each other, or only find each other with a certain probability, those gains from trade are not materialized.

4. Financial Frictions: Financial frictions are constraints on the set of actual contractual agreements that can be agreed upon. A simple example are incomplete contracts. When contracts cannot be made contingent on a possible state of nature, a claim on that state of nature is illiquid Other examples of these frictions include lack of commitment, hidden or unverifiable actions, ex-ante or ex-post private information, limited liability, limited pledgeability. I will try to discuss these features along the way.

The lack of liquidity engenders economic inefficiencies. These inefficiences manifest in different forms. For example, the may induce:

1. Productive Inefficiencies: they may distort the use of labor, or decisions between consumption and investment, or decisions regarding the choice of inputs. They may also distort the use of inputs a cross-section of heterogeneous agents.

2. Insufficient Insurance: Another classic form of inefficiency is the lack of sufficient insurance.

Another consequence of illiquidity may be the presence of externalities. These may come in different forms, as demand externalities, pecuniary externalities, congestion externalities. These externalities imply that allocations are constrained inefficient. Not every economy that features illiquidity is constrained inefficient, or features externalities, but some do.

There are ways of resolving or ameliorating these inefficiencies. One form of improvements include dynamic contracts. Other solutions that arise spontaneously are the creation of intermediaries that specialize in certain activities. Other ways include the introduction of money. The ball is set on the field, the game is ready to be played.

2 Financial Frictions

This section discusses frictions in a slightly bit of more detail.

Moral Hazard.

Asymmetric Information.

Incomplete Contracts.

- Costly State Verification
- Debt overhang

Limited Enforcement.

3 Matrix of Course Topics