

# 1 Introduction

The ongoing great recession is a stark reminder that financial frictions are a key driver of business cycle fluctuations. Imbalances can build up during seemingly tranquil times until a trigger leads to large and persistent wealth destructions potentially spilling over to the real economy. While in normal times the financial sector can mitigate financial frictions, in crisis times the financial sector's fragility adds to instability. Adverse feedback loops and liquidity spirals lead to non-linear effects with the potential of causing a credit crunch. Classic economic writers who experienced the great depression firsthand like Fisher (1933), Keynes (1936), Gurley and Shaw (1955), Minsky (1957) and Kindleberger (1978) emphasized the importance of financing frictions and inherent instability of the financial system. Patinkin (1956) and Tobin (1969) also emphasized the important implication of financial stability for monetary economics.

This article surveys the growing literature that studies the macroeconomic implications of financial frictions straddling three branches of economics: macroeconomics, finance and general equilibrium theory. All of them share common themes and similar insights, but they are disconnected in the profession partly because they differ in their modeling approaches and in their identification of the root of the instability. The objective of this survey is to lay bare important theoretical macro mechanisms and highlight the connections and differences across these approaches.

In a frictionless economy, funds are liquid and can flow to the most profitable project or to the person who values the funds most. Differences in productivity, patience, risk aversion or optimism determine fund flows, but for the aggregate output only the total capital and labor matter. Productive agents hold most of the productive capital and issue claims to less productive individuals. In other words, in a setting without financial frictions it is not important whether funds are in the hands of productive or less productive agents and the economy can be studied with a single representative agent in mind. In contrast, with financial frictions, liquidity considerations become important and the wealth distribution matters. External funding is typically more expensive than internal funding through retained earnings. Incentive problems dictate that productive agents issue to a large extent claims in the form of debt since they ensure that the agent exerts sufficient effort. However, debt claims come with some severe drawbacks: an adverse shock wipes out large fraction of the levered borrowers net worth, limiting his risk bearing capacity in the future.

Hence, a temporary adverse shock is very *persistent* since it can take a long time