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A Tractable Model of Indirect Asset Liquidity

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Abstract: Assets have "indirect liquidity" if they cannot be used as media of exchange, but can be traded to obtain a medium of exchange (money) and thereby inherit monetary properties. This essay describes a simple dynamic model of indirect asset liquidity, provides closed form solutions for real and nominal assets, and discusses properties of the solutions. Some of these are standard: assets and money are imperfect substitutes, asset demand curves slope down, and money is not always neutral. Other properties are more surprising: prices are flexible but appear sticky, and an increase in the supply of indirectly liquid assets can decrease welfare. Because of its simplicity, the model can be useful as a building block inside a larger model, and for teaching concepts from monetary theory.

Keywords: monetary-search models, asset liquidity, asset prices, monetary policy, monetary aggregates

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Recently, interest has increased in tractable models of asset liquidity that are easy to analyze and can provide benchmarks for understanding the relationship between monetary policy and asset market frictions. For example, Williamson (2012), Andolfatto and Williamson (2015), and Rocheteau, Wright, and Xiao (2014) analyze policy using models in which multiple assets can take the role of a medium of exchange, usually to different degrees, which makes them imperfect substitutes and the question of their relative supplies interesting. Furthermore, a number of recent papers have suggested that the notion of asset liquidity may be the key to rationalizing some long-standing asset pricing-related puzzles (see for example Lagos, 2010, Geromichalos, Herrenbrueck, and Salyer, 2016, and Jung and Lee, 2015).

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