

DISCUSSION OF:

Payments, Credit & Asset Prices

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My plan

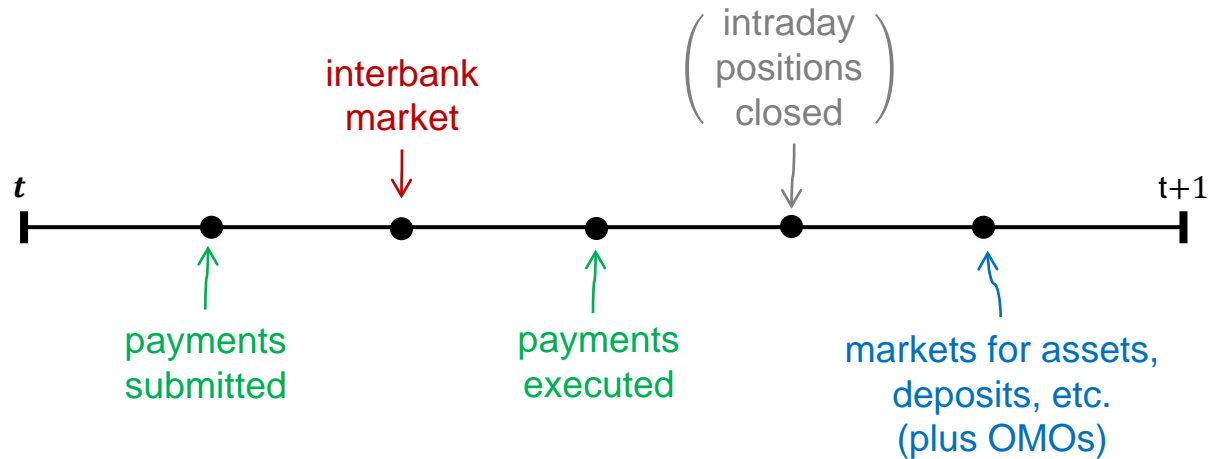
- ▶ Focus on what factor(s) drive interbank lending
 - ▶ compare their model to a more “traditional” one
 - ▶ ask which model better captures the timing of events
 - ▶ and whether implications are likely to be different or not
- ▶ Comment on possible applications/extensions

To begin

- ▶ Consider the pre-2008 situation (in many countries)
 - ▶ active market for overnight interbank loans
 - ▶ interest rate on these loans was higher than the interest rate paid by the central bank on reserves
 - ▶ Q: why were banks paying so much to borrow these reserves?

Model timeline

- ▶ Their answer: reserves are used to process payments



typical bank

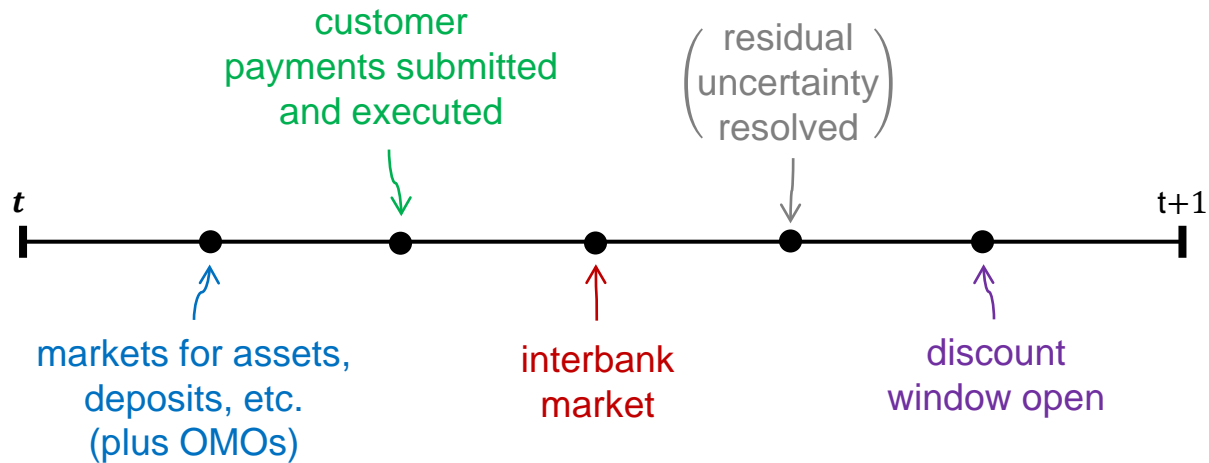
	Assets		Liabilities	
Trees	$Q_t \theta_t$		Deposits	$D_t - \tilde{\lambda}_t D_t$
Bonds	B_t		Borrowing	F_t
Reserves	$M_t + F_t - \tilde{\lambda}_t D_t$		Equity	E

} set to $t+1$ values

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- ▶ The model ties together payments, money and prices in a nice way
 - ▶ related to recent work by Bianchi and Bigio (2014), others
 - ▶ Payments by customers (households and hedge funds) drive bank's payment needs ...
 - ▶ ... and these needs drive interbank borrowing/lending ...
 - ▶ ... which, in turn, determines the demand for assets (including reserves) ...
 - ▶ ... and the price level
 - ▶ I like the idea of addressing these issues jointly

Q: Suppose the timing of actions were different...

A “traditional” timeline

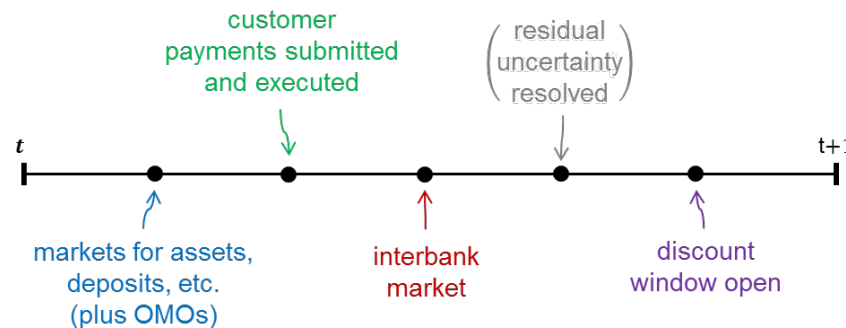
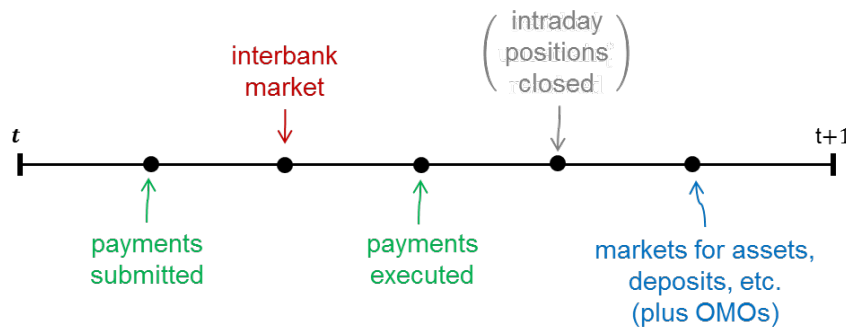


typical bank

	Assets		Liabilities
Trees	$Q_t \theta_t$		Deposits $D_t - \tilde{\lambda}_t D_t$
Bonds	B_t		Borrowing $F_t + X^i$
Reserves	$M_t - \tilde{\lambda}_t D_t + F_t + X^i$		Equity E
Requirement:	$\geq K$		

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- ▶ Aim of interbank borrowing/lending in this timeline:
 - ▶ to enable the bank to meet its reserve requirement
 - ▶ without (costly) borrowing from the central bank
 - ▶ Banks don't hold reserves for payments needs ...
 - ▶ because netting/daylight credit solve the problem (perfectly)
economics of payments
 - ▶ Banks' reserve holdings only indirectly affect prices
 - ▶ central bank uses reserve conditions to achieve a desired nominal interest rate
monetary policy implementation
 - ▶ which may determine the price level (with pricing frictions) or perhaps leave it indeterminate (without)
monetary economics
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Comparing the models



- ▶ Timing of asset market seems unlikely to matter much
- ▶ Focus: what drives demand for interbank loans?
 - ▶ reserve requirements vs. current payment needs
- ▶ Which is more relevant in practice?

Timing of Fed Funds trading

- ▶ From Afonso and Lagos (2014)

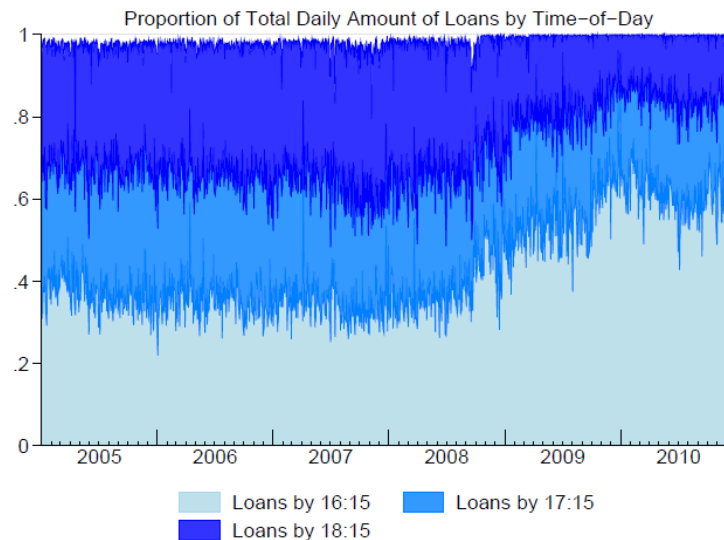
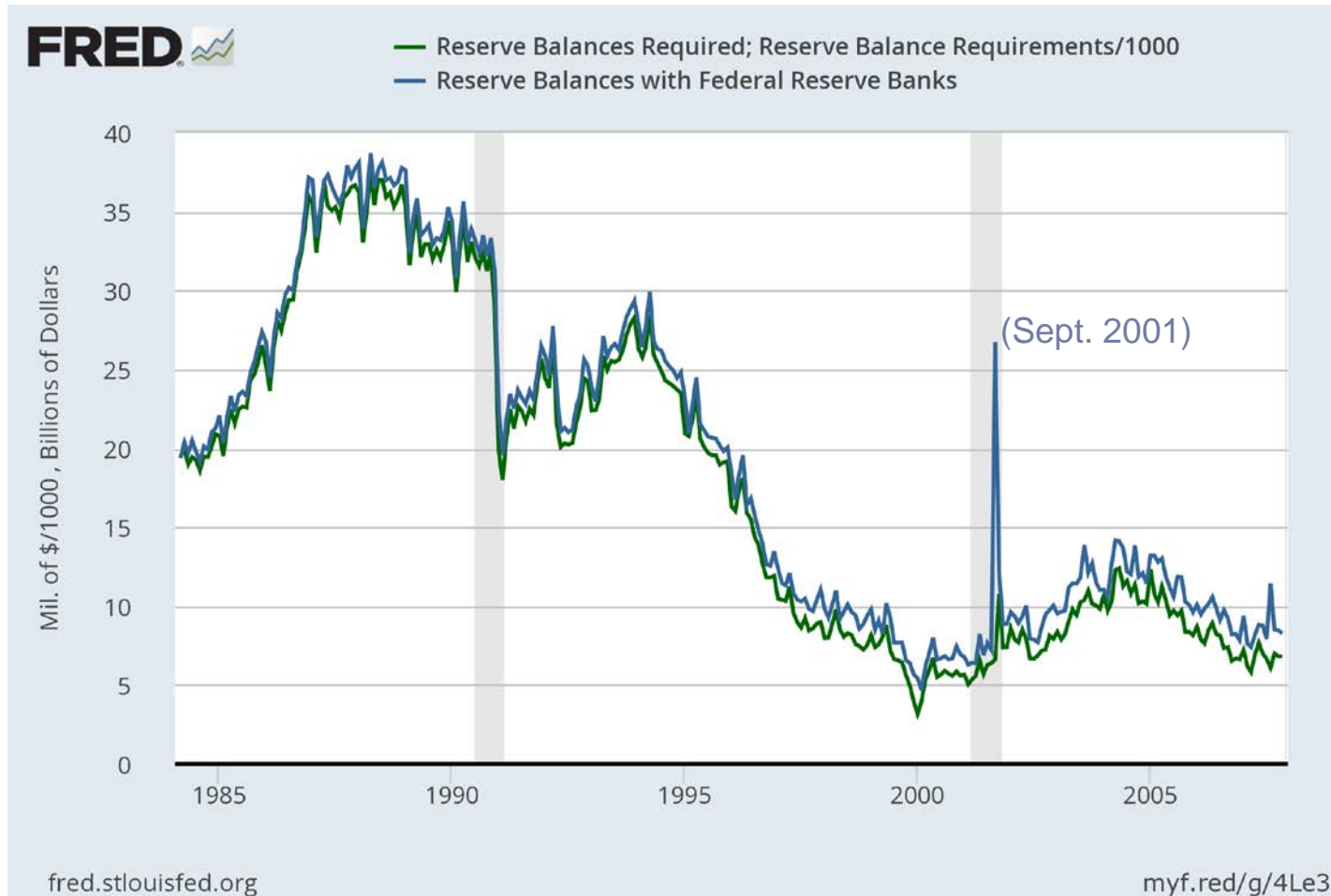


Figure 8: Intraday cumulative trade volume

- ▶ Most interbank lending activity was very late in the day
 - ▶ after customer payments had been processed
 - ▶ fits the timing of the “traditional” model

Data on reserve holdings

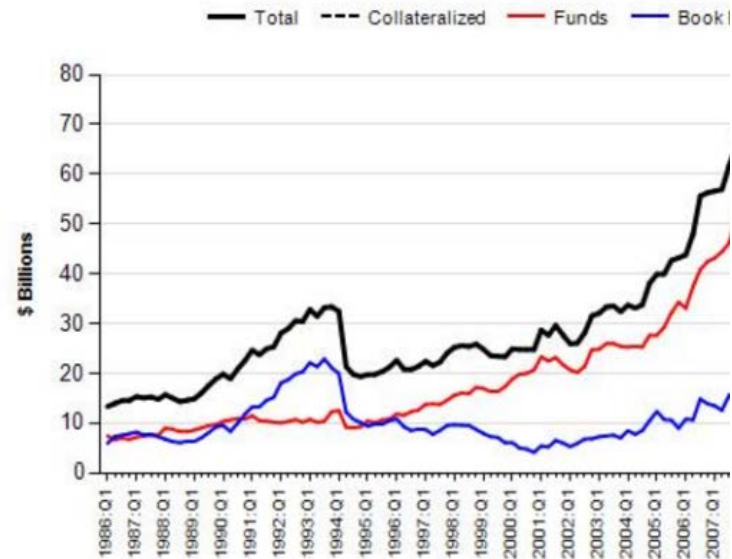
- ▶ Look total and required reserves over time:



Focus on the trend

- ▶ Requirements fell as banks introduced sweeps programs (regulatory avoidance)
- ▶ Banks held fewer reserves over time, while making more payments

How?
Daylight overdrafts:



⇒ Can be seen as evidence for the “traditional” timing

1) Does it matter?

- ▶ Suppose we change the model to allow free daylight overdrafts
- ▶ Customer payments redistribute reserves across banks
- ▶ Banks then borrow/lend in the interbank market to meet their reserve requirement
 - ▶ which may be positive or may be zero
- ▶ Would this change the results?
 - ▶ if not, why not use the more “traditional” timing?
 - ▶ may be important for matching certain features of the data
 - ▶ if so, what is evidence for the approach in the model?

Possible applications/extensions

2) Guiding policy frameworks

- ▶ The Fed is currently re-thinking its operational framework
 - ▶ should it return to a regime in which reserves are scarce?
 - ▶ or maintain abundant reserves and rely on changing i_R ?
- ▶ The model indicates these approaches are different
 - ▶ the same path for the nominal interest rate i_t ...
 - ▶ leads to different outcomes depending on how i_t is achieved
- ▶ How should a central bank set/communicate policy under each approach?
 - ▶ need to announce more than just i_t after each meeting?
- ▶ What can the model say about the optimal approach?
 - ▶ the answer depends in part on cost of govt. debt (I think)

3) Liquidity regulation

- ▶ Basel III introduces liquidity requirements for banks
 - ▶ must hold enough liquid assets (bonds + reserves + ...)
 - ▶ to cover 30 days worth of cash outflows in a stress scenario
 - ▶ note: more deposits \Rightarrow more potential outflows
- ▶ New rules are already being phased in
 - ▶ without any real study of their general equilibrium effects
- ▶ What effect will the new regulations have on:
 - ▶ interest rates? the composition of bank balance sheets?
 - ▶ interbank lending volumes and patterns?
- ▶ This model seems like a good platform for exploring these (important) questions