Discussion of "Breaking banks or banking bad? Interest rate pass-through, bank profitability and monetary policy" by Kaspar Zimmermann

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This Paper is a Valuable Contribution on an Enormously Important Topic

- Since 2008, perceptions of a lower bound on interest rates have been a big obstacle to good monetary policy

- Perceptions of a lower bound on interest rates have a lot to do with worries about the effect of low interest rates on banks and banking

With Readily Available Tools, There Is No Effective Lower Bound on Rates

- The Paper Currency Problem can be readily handled either (a) cleanly using either a price mechanism or (b) messily using a combination of price and quantity measures.
- The Bank Profits Problem can be readily handled by transferring funds to banks when necessary
- Political Costs of low rates can be mitigated (though not eliminated) by (a) shielding small household accounts from negative rates and (b) good communications laying out in advance the case for a robust negative rate policy.

What is the Effective Lower Bound on Interest Rates Made Of?

Once the convenience of electronic money for a large fraction of transactions (especially large transactions and business to business transactions) is recognized, the key to enforcing the zero lower bound in many stark formal models that assume a traditional paper currency policy is the emergence of some equivalent to money market mutual funds backed by paper currency. That is, in the models, it is the "electrification" of paper currency by funds that have paper currency as their key asset and an electronic means of exchange as their key liability that creates the zero lower bound.

But in the real world, the business model for money market mutual funds backed by paper currency is not that promising, given the danger that the government is likely to be annoyed at such funds thwarting a negative interest rate policy, and is likely to act against such funds. Some things are relatively easy to do in opposition to a government, but setting up a money market mutual fund with access to the electronic payments system is not one of them. Even Bitcoin is much more

Thus, when a central bank lowers its target rate and interest rate on reserves, it is not large scale paper currency storage by the equivalent of money market mutual funds backed by paper currency that is the first symptom of the effective lower bound kicking in, but expanded small-scale storage of paper currency by households and businesses keeping more of their liquid balances as paper currency instead of in bank accounts, or the *fear* by banks of such a shift into paper currency. That is, the first symptom of the effective lower bound kicking in is *disintermediation* or *fear of disintermediation*.

One can debate just how important banks are to the functioning of the economy, but given how much economic activity currently runs through banks, it seems likely that trying to move all of that economic activity outside of banks within too short a time period is likely to be disruptive. So sudden disintermediation is probably something to be avoided. And banks' fear is probably something to be avoided. And banks’ fear of households and businesses shifting toward small-scale paper currency storage is likely to lead them to cut deposit rates less than the extent to which other interest rates fall when the paper currency interest rate is kept at zero in a traditional paper currency policy. This could lead to a reduction in the net interest margins that are a mainstay of bank profits.

If banks are extremely well capitalized going into a period of negative interest rates (that is, with a lot of equity on the liability side of their balance sheets), a strain on bank profits and consequent effect on equity levels will have very little effect on the probability of insolvency. But if banks go into a period of negative interest rates with relatively low levels of equity, the strain on profits could lead to more serious undercapitalization, with a consequent heightened probability of insolvency. And low bank profits can be a political problem even in situations where they are not a serious economic problem at all.

One solution to the strain on bank profits and consequent reduced capitalization is to subsidize banks. This is the approach I discuss in "How to Handle Worries about the Effect of Negative Interest Rates on Bank Profits with Two-Tiered Interest-on-Reserves Policies." But the other approach is to lower the paper currency interest rate, to avoid most of the problem of a profit squeeze on banks in the first place. That is the approach I discuss in "If a Central Bank Cuts All of Its Interest Rates, Including the Paper Currency Interest Rate, Negative Interest Rates are a Much Fiercer Animal." In other words, if a

Fiercer Animal." In other words, if a central bank begins to see the particular strains on bank profits that are symptoms of the effective lower bound in action, it should consider eliminating the effective lower bound itself by lowering the paper currency interest rate, as discussed in "How and Why to Eliminate the Zero Lower Bound: A Reader's Guide."

GOING OFF THE PAPER STANDARD

Posted by Miles Kimball on Oct 9th 2013, 1 Comment

Why There is No Arbitrage

	2009	2010	2011	2012	2013	2014	2015
electronic short-term rates	-2%	-2%	0	2%	2%	2%	2%
e-$ in a short-rate account on Jan. 1	100	98	96	96	98	100	102
p-$ face value in storage facility	100	100	100	100	100	100	100
paper currency interest rate (PCIR)	-2%	-2%	0	2%	2%	0%	0%
e-$ per p-$	1	0.98	0.96	0.96	0.98	1	1
market value (in e-$) of stored p-$	100	98	96	96	98	100	100

The Contribution of Kaspar Zimmermann's Paper: Evaluate Overall Effect of Rate Changes on Bank Profits, Return on Equity & Return on Assets of Three Channels

1. Capital Gains and Losses for Existing Assets
2. Strength of the Economy Affecting Loan Volumes and Loan Losses
3. Net Interest Rate Margin: Rate on Loans – Rate on Deposits

Overall Finding

- NIM: .22 Elasticity of the lending to deposit spread with respect to the central bank’s target rate

- But, effects of the strength of the economy and capital gains on existing assets dominate, so banks lose overall when rates rise, gain when rates fall

Recommended Adjustments to Empirical Approach

1. Do a regression with interactions with *both* the deposit share and the mortgage share at the same time!
2. Add an asymmetric interaction term (down and up not the same) with the share of refinanceable mortgages
3. (Exclusion of periods of time with deposit rate regulation is fine. No change needed there.)

What does a concern for bank profits means for negative interest rate policy?

1. Negative interest rate policy is complementary with high capital requirements:
   - ➢ With the lower bound on rates eliminated, there is no shortage of aggregate demand.
   - ➢ With high capital requirements, much reduced reason for concern about financial stability
   - ❖ **DON'T ADD RESERVES TO EQUITY: EQUITY IS ON THE LIABILITY SIDE, RESERVES ARE ON THE ASSET SIDE**
2. Relative to QE, the steeper yield curve when the short rate is negative is helpful for bank profits.
3. Lower the rate of return on paper currency is helpful for bank profits
4. As Brunnermeier acknowledges, Brunnermeier and Koby "The Reversal Rate" is a reflection of the bank profits problem and will not occur if central banks take measures to boost bank profits.

The Transmission Mechanism for Lower Rates (Including Negative Rates)

1. Many Different Borrower-Lender Relationships
2. The Principle of Countervailing Wealth Effects:
   - PDV Shift in of Lender Budget Constraint = PDV Shift out of Borrower Budget Constraint
3. Generally, Borrower MPC > Lender MPC
   - Adrien Auclert
4. \+ Substitution Effect

Examples of Borrower-Lender Relationships

- Small household deposits
- Firms with “cash” hoards
- Mortgages
- Car loans
- Venture capital
- Commercial paper
- T-bill holding
- T-bond holding
- Central bank lending
- etc. …