I. Summary

II. Comments
I. Summary

• The paper aims to quantify the effect of the quantitative easing policy (QEP), insofar as that policy differs from a zero interest rate policy (ZIRP).

• The paper argues that macro data indicate that the QEP had a positive effect on output. Possible channels include signaling and portfolio rebalancing of banks or investors.

• But examination of the term structure, bank balance sheets, and data on asset returns finds mixed and largely negative evidence on these channels. Hence, the transmission mechanism through which QEP worked is unclear.
• Macro result (QEP had positive effect):

• Two aggregate quarterly models are estimated, a sticky price model and a structural VAR. Both models proxy the magnitude of QEP with a variable called $\Delta q_t$, which is the growth rate of a residual of a standard money demand regression. (See 3-7 on p16.) Both models also control for nonperforming loans.

• The sticky price model includes $\Delta q_t$ in the IS equation. The magnitude of the effect of QEP is measured by the effect of $q_t$ on the GDP gap. Professor Mihira finds that the gap was .2 to 1.0 percent higher in 2002-04, thanks to $\Delta q_t$.

• The structural VAR model finds that a shock to $\Delta q_t$ has a significantly positive effect on the output gap; effects on other variables generally are insignificant.
The empirical work on possible channels for transmission—the term structure, bank balance sheets and asset returns—differs from the macro work in two ways:

• The magnitude of QEP is proxied by various measures: the current account balance at the central bank (CAB), CAB in excess of required reserves, monetary base, reserves or the Bank’s holdings of JGBs. $q_t$ is not used because it is not available on a monthly or daily basis.

• To focus on effects of QEP, samples are limited to 2001-05 or dummies are interacted with measures of QEP to distinguish between pre- and post-2001 effects.
Term structure

• Measures of QE post-2001 are not significant determinants of changes in implied forward rates. On the other hand, interacting a dummy with the output gap and inflation during periods of commitment to ZIRP of long duration yields generally negative coefficients, suggesting a commitment effect.

Bank balance sheets

A panel regression finds little or no effect of reserves on bank loans, or on bank investment in bonds.

Returns

Returns on equities, JGBs, corporate bonds, bank loans do not seem to be significantly tied to the CAB or Bank holdings of JGBs, though the results are somewhat sensitive to whether level or difference specifications are use.
II. Comments

• Interesting paper on important topic.

• Road map for the rest of my comments:
  • My impression of previous literature
  • Comments on macro evidence
  • Miscellaneous comments about technicalities
  • Concluding comments
Some previous literature (e.g., Ueda (2005), Ugai (2006))

• The QEP lowered long term expectations of future short rates, thereby lowering current long rates. This might be partly or even mostly attributable to the Bank’s public announcement that it would maintain the policy until inflation turned positive.

• The macro effect of the QEP (as distinct from the ZIRP) is unclear.

• During the period of the QEP, banks with substantial non-performing loans (NPLs) became more stable.

• There is mixed evidence on whether quantitative easing per se (i.e., high CAB, purchases of JGBs) served to change expected returns

• Hence insofar as the QEP affected the economy, the transmission mechanism is unclear.
Not clear to me to what extent the present paper’s results on transmission are qualitatively inconsistent with this literature. While some of Professor Mihira’s results differ from those of other authors, it is also true that:

- Professor Mihira agrees that commitment to an extended period of low short rates can affect expectations (p8).

- Some previous literature has found, as does he, that it is difficult to detect effects of quantitative easing per se on expected returns.

- Professor Mihira’s finding that reserves are not significant in bank investment equations is consistent with the view that banks with substantial NPLs became more stable.

I believe, however, that the finding that QEP had substantial effects on aggregate output is not a standard result.
Comments on macro evidence

• One possible area of disagreement between Professor Mihira’s results and those of the papers cited above is that Professor Mihira finds a substantial macro effect. Here are some suggestions to clarify and perhaps reinforce the results in the present paper:

• In the sticky price model, Professor Mihira’s calculation of the effect on the output gap seems to involve a long run calculation that may not reflect the sort of thought experiment others have in mind when they conclude that the output effects of QEP are small. Is it possible to trace out, period by period, how the economy would have involved under a hypothetical in which QEP was not in place?

• The structural VAR reports a significant result, but does not translate this into an economic magnitude. How big is the impact on the output gap, in economic terms?
• The macro results do not distinguish between pre- and post-2001 results, in contrast to the results on transmission. What happens if a dummy is interacted with the measure of quantitative easing ($\Delta q_t$ or other measure)?

• What happens if a “traditional” measure of quantitative easing is used (CAB, say) in the stick price of VAR model? Is there a theoretical argument to use the money demand residual as opposed to CAB as the measure?
Miscellaneous comments about technicalities

• Professor Mihira emphasizes that his results sometimes contrast with earlier results because of difference vs. levels specifications. It would seem that cointegrated specifications should be used as well (forward rates should be cointegrated with call rates, for example).

• One should probably not be optimistic about finding effects on expected returns, given the notorious difficulties with such regressions.
Concluding comments

Future work should aim to better integrate measures of QEP used in macro and transmission regressions, and to better quantify the macro effects of QEP.

Nice paper!