Implementing Monetary Policy

When complexity is
dangerous, be simple.

Easy solution

- Standing facilities:
  - Lend at policy: 5.50%
  - Accept deposits a little below: 5.39%
  - CBs should be a “bankers’ bank”
- Commercial banks then:
  - Satisfy their own needs one day at a time
  - Have no co-ordination problem
  - Use collateral instead of *reserves* (bizarre CB-invented concept)

Sterling banknote issue is about £39bn: BoE has lent £13bn to the government, and so the UK banking system needs to borrow about £26 billion from the BoE.

Quite rightly, CBs do not consider themselves to be in the business of taking credit risk. So they (should) lend only against high-quality collateral.

Simple system: central bank should be willing to lend money to good counterparties against good collateral, overnight and in good size, at the policy rate (of 5.50%). A central bank should be willing to accept overnight deposits from the banking system at a slightly lower rate, say, 5.39%.

For reasons of prudence a CB’s standing facilities should not be infinite in size. Since the banking sector needs to borrow a total of about £26 billion, a sensible upper limit for lending to any one large bank might be something of the order of £20 billion. As the banks are net borrowers, the limit on a bank’s remunerated deposit with the central bank could be smaller: perhaps half, perhaps a quarter this maximum overdraft. Larger borrowings would be prohibited; larger deposits would not be remunerated. Each bank would have its own maximum overdraft size, commensurate with the size of its GBP transactions.

How wide should the gap between the central bank’s deposit and lending rates be? It’s not that important. However, since 1999, the world’s leading central banks have typically moved policy rates by ±25 basis points to a new level below 5%, otherwise by an amount of about one twentieth of the new level. That suggests a default lending/deposit gap of something like the greater of ten basis points and 0.02 × the lending rate. So a policy rate of 5.50% would mean a central-bank two-way price of 5.39%/5.50%.

Why not a zero gap? Because the trade size would typically be constrained by the maximum allowed transaction sizes (necessary for credit reasons). In general, more efficient if a price rather than quota constrains volume. Bid/ask spreads of a few bp suffice to keep things finite.

BoE’s system dangerous

- When rarely-used facility to borrow (top of BoE corridor) used in crisis = “Fire!”
- Did BoE really try to impose secrecy?
- Did Northern-Rock-queuing UK read Daily Mail, Independent, Guardian?

- Northern Rock buried in rush: not fair

Daily Mail, 31st August 2007:

> The financial health of Barclays was being questioned after it was forced to ask for huge loans to bail it out. The lender has tapped an emergency credit facility with the Bank of England twice in ten days. The loans for almost £2billion are fuelling fears that it has become too deeply involved in high-risk debt investments. The worries centre on Barclays Capital investment banking division, which has experienced huge growth in recent years. BarCap has been heavily involved in highly speculative deals linked to America's mortgage market.

The Independent, 31st August 2007:

> Oh dear, it's Barclays again. There was a good explanation last night for why Barclays needed, for a second time in just over a week, to borrow heavily from the Bank of England's standing facility. … The secrecy that surrounds use of the Bank's standing facility has turned out to be a quite damaging characteristic of an otherwise vital part of the interbank payments system. The refusal to name Barclays and the technical reasons why it was forced to borrow unnecessarily unsettled currency markets yesterday as well as causing speculation to run riot over who the guilty party might be. The last time it happened, rival bankers freely named Barclays as the miscreant. This time they were under strict instructions from the Bank of England not to comment, but when did that ever stop the free flow of gossip in the City? By tea-time everyone knew. The Bank insists it cannot name the parties involved because that would stigmatise them. Furthermore, if they thought they were going to be stigmatised in this way, they wouldn't use the facility and the payments system would break down. Yet in the end the truth will always out. Part of the problem in the crisis is a lack of transparency. A little glasnost from the Bank would provide some welcome relief.

The Guardian, 2nd September 2007:

> An emergency loan of £1.6bn and speculation about the sub-prime fallout have rocked the bank - just as its battle with RBS to take over ABN Amro reaches a critical point.

Why CBs like complexity

- Lies: CBs tell lies to themselves
- They call it a “market”. A market!?
  - A *market* finds the price that maximises sum of producer and consumer surpluses
  - A *market* is **not** something that finds a price pre-chosen by a committee
- Short-term secured money is a game, and the CB chooses the rules

BoE really does call it a market. Some examples from Market and Operations sections of Q4 *Quarterly Bulletin*s (my emphasis):

2007 Q4

> “The Bank’s operations in the sterling money markets aim to keep **secured market overnight interest rates** in line with Bank Rate”
>
> “The combination of wider ranges and higher reserves targets, plus an apparent absence of large shocks to the demand for reserves meant that **overnight market rates** were generally close to Bank Rate and stable throughout the October–November maintenance period”

2006 Q4

> “the Bank’s objective for **overnight market interest rates** to be in line with Bank Rate during the monthly maintenance periods. Over the review period, overnight unsecured rates, in general,”

2005 Q4

> “Indeed, the primary objective of the Bank’s money market reforms is to reduce the volatility of **overnight market interest rate** around the MPC’s official rate”

2004 Q4

> “Given that OMOs span MPC dates, pivoting occurs when market participants perceive a significant likelihood that the MPC will change official rates; speculation about rate increases causes **overnight market rates** to decline in the run-up to the MPC meeting date, and *vice versa*.”
>
> “The Bank’s arrangements for refinancing the banking system work smoothly so that, in aggregate, the banking system as a whole expects to be — and *ex post* is — able to meet its reserve average target without needing to use the standing facilities, with **overnight market interest rates** therefore remaining stable and in line with the MPC’s repo rate.”

The BoE in Q4 2007

- QB describes official operations
- (If there is enough time:)
  Audience to vote on whether these are:
  - Clean coherent well-functioning system?
  - Mess held together with
    chewing gum and string?

The following page contains a condensed version of the text of the section entitled "Bank of England official operations" from the BoE's Quarterly Bulletin 2007 Q4.

In addition to the general confusion, observe that the BoE is lending money, against good collateral, in order for banks to lend it back to the BoE. This pulls collateral out of the system, for no useful purpose, making inter-bank markets less resilient.

… ahead of the start of the September-October maintenance period, there was reason to believe that banks' chosen targets did not fully reflect their demand for reserves …

The text on this page is a contracted version of that appearing in the BoE's *Quarterly Bulletin* 2007 Q4, section entitled "Bank of England official operations" from page 501. Ellipses are intended to facilitate this page being read aloud in moderate time.

— Julian D. A. Wiseman, January 2007

… a co-ordination problem seemed possible. If banks collectively had set higher reserves targets and the Bank supplied the extra liquidity, pressures in the money market might have been expected to ease. In turn, market rates, and the cost of holding reserves, might have been expected to fall. But individual banks … did not know what targets other banks would set. And the incentive for any individual bank to set a higher target was diluted to the extent that the benefit of its action would have gone partly to other banks in the form of lower funding costs.

The Bank could not know … to what extent such a co-ordination problem had affected targets set … but it took the possibility seriously. When it announced the new aggregate target on 5 September it stated that … if over the subsequent week the secured overnight rate continued to exceed Bank Rate by an unusual amount it would, … on 13 September, offer to supply, at Bank Rate, additional reserves of up to 25% of the aggregate reserves target.

In the event, the secured overnight rate did fall back … but it was still unusually high relative to Bank Rate. The Bank accordingly offered … extra reserves equivalent to 25% of the aggregate target and announced that it would re-offer these extra reserves at each scheduled OMO for the remainder of the maintenance period. … the additional reserves were fully allotted. … secured and unsecured overnight interest rates fell further and traded close to Bank Rate …

The announcement of a liquidity support facility to Northern Rock on 14 September provided a further disturbance … sterling overnight interest rates rose sharply. This … suggested that there might have been a further (possibly temporary) rise in the demand for reserves. The Bank … offered … additional reserves in an exceptional fine-tuning OMO … a two-day repo, … equivalent to a further 25% of the aggregate reserves target. … the additional reserves offered were all supplied. …

… [in the final scheduled OMO on 27 September], the Bank did not re-offer the additional 25% supplied in the extraordinary fine-tune…. But it did … re-offer the additional reserves supplied on 13 September. … Because banks' reserves targets had not changed, the range around those targets within which banks are remunerated on their reserves needed to be widened in order to accommodate the increased supply of reserves. The range around each bank's point reserves target is designed to reduce the probability of banks needing to use standing facilities by mitigating the effect of central bank forecast errors. This in turn helps to stabilise market interest rates. Typically, the range has been set at ±1%.

The supply of additional reserves on 13 September … was equivalent to 25% of aggregate targets offered for 21 days in a 28-day maintenance period, …, 18¾% of target. Reserves ranges were widened to plus or minus twice that amount (±37½%) to allow flexibility in the distribution of the additional reserves between banks. … Reserves offered in the exceptional fine-tuning operation on 18 September, re-offered in the subsequent scheduled OMO, were equivalent to a further 25% of aggregate targets …, reserves ranges were widened further to ±60%.

… October-November maintenance period [and the November-December maintenance period] … the Bank maintained wider ranges around reserves targets … at ±30%. …

… To alleviate [year-end] concerns, the Bank … took steps to ensure increased availability of term funding over the year end. On 29 November, the Bank announced its intention to offer £10 billion … in the form of a five-week repo … the Bank announced on 12 December further measures designed to address pressures in short-term funding markets, which had increased in the weeks before the announcement. Specifically, the Bank announced changes to its scheduled long-term repo OMOs on 18 December and 15 January. …

The range of securities eligible as collateral in the three-month operations would be wider than in the Bank's normal OMOs, but narrower than those eligible for the recent term auctions …

Collateral

- Perfect = domestic currency:
  - National gov't (€-zone: AAA nat'nl govt's)
  - AAA sovereigns, AAA supranationals
- Not foreign currency! Deutsche default?
  - Probably associated with volatile weak €
  - CB too polite to sell bonds and € quickly
  - ⇒ Chunky losses: 10%×£20bn > BoE capital

Imagine Deutsche has borrowed £20bn against short-dated € collateral, therefore subject to a 4.5% haircut. For some reason not discussed here, DB goes under. Central Bank politesse means BoE can't sell bunds nor € for a few months. (Aside: BoE criticised banks for not realising that SIVs would have to be on-balance-sheet for reputational reasons. Hello! Applies to their non-£ collateral as well.) In those few months € falls 14% (very plausible following DB default). BoE loses >£2bn. According to 2007 Annual Report†, BoE capital and reserves are £1.86bn.

This doesn't quite make the BoE a first-to-default risk on a moving collection of €-zone investment banks, because:

> if a defaulting investment bank happens to be short euros, the euro might rally;
>
> If not, BoE probably would be saved by HMT support.

† bankofengland.co.uk/publications/annualreport/2007/governancefinancialstatements2007.pdf

(The example of Deutsche Bank is used here. This is **not** because the speaker knows anything bad about the creditworthiness of Deutsche Bank: it is as likely to go bust or not to go bust as any of its peer bulge-bracket banks. Deutsche Bank has been used as the example because it is a huge €-zone bank that is very active in £.)

Hopefully not-too-bad

- Might not be enough perfect collateral
- Must accept not-too-bad stuff
  - Non-local-currency from AAA entities
  - Local-currency from local gov'ts etc
- Examples:
  - Widespread acceptance of US GSEs
  - BoE accepts € collateral (but would stop if rating agencies noticed consequence)

BoE accepts, and has accepted for most of a decade, amongst other stuff,

> "Euro-denominated securities … issued by EEA central governments and central banks and major international institutions where they are eligible for use in ESCB monetary policy operations …. These securities may either be those issued directly into Euroclear and Clearstream … or may be "CCBM securities" where the [relevant] central bank … has agreed to act as … custodian under the Correspondent Central Banking Model"
>
> "The above sovereign and supranational securities are subject to the requirement that they are issued by an issuer rated Aa3"

Interestingly, the BoE's haircut policy suggests that it has been following a VaR model, without thinking about the stress test! Haircuts on sub-1-year euro-zone governments are 4.5%. Haircuts on 1- to 3-year are 5.5%. But Deutsche's default would be followed by a falling ECB policy rate, so 2-year paper would do better than 1-year ⇒ 2-year haircut should be less than 1-year, not greater. (Not clear for long-dated governments: in euro terms might rally, or might price later inflation.) More sensible haircuts might be 10% for ≤1-year, and 9.5% for 2-year. See appendix V of www.bankofengland.co.uk/markets/money/documentation/070803operating.pdf

For the recent longer-term auctions the list of currencies widened to include £, €, $, AUD, CAD, SEK, CHF "and, in the case of Japanese Government Bonds only, yen". Smaller currencies like AUD and CAD would be even more vulnerable to a default by a large bank. www.bankofengland.co.uk/markets/money/documentation/statement071214.pdf

Manufactured collateral

- Commercial bank:
  - Lends money to Mr Dodgy
  - Securitises loan
  - Uses security as collateral
- Near useless as credit enhancement
- Mervyn King resisted this
  - He was right
  - He was criticised

The BoE used to accept bank bills as collateral. From *Commercial Bills at the Bank of England*, p242 of 2005Q4 *Quarterly Bulletin*:

> The Bank had long had a list of requirements that a bill had to meet to be eligible for use in the Bank's operations. Some of these related to the maturity of the bill and to the accepting bank. But one was that the bill should identify the underlying transaction being financed, which was to be short-term, self-liquidating and not for capital purposes. By 2000 the Bank had concluded that this 'clausing' did not add to the creditworthiness of the bill and dropped the requirement. One unintended effect of this was to make it easier for banks to draw bills on each other. Such 'bank-on-bank' bills came to form a significant part of the bill market. Because these bills were usable at the Bank they also counted towards banks' supervisory stock liquidity requirement. However, **the Bank prefers to provide liquidity to the banking sector against high-quality collateral in the form of claims outside the banking sector**. Accordingly 'bank-on-bank' bills were made ineligible in 2003, and the decline in the bill market accelerated once more.

My **emphasis**.

Deterring useless collateral

- Since CBs politically obliged to accept rubbish: how deter frequent use?
  - Stigma?
  - Price?
  - Haircut?

Stigma?

- Observed behaviour:
  - banks don't use stigma facilities
  - unless hinting "the Fed asked me to do this but I don't need it"
- Stigma = trouble for a confidence biz.
- Stigma facilities useless ☹

Price?

- If price 2bp, won’t deter rubbish
- But 50bp ⇒ “I’m so rubbish I have to pay extra for money” ⇒ stigma
- Confusing: if ‘policy’ 5¼%, but marginal money 5¾%, what is policy?
  - Increases Libor, not decrease!
- Observe Fed: when discount window needed, cheapened

A CB’s policy rate should be the marginal cost of short-term money against good collateral. But if some counterparties are borrowing at policy+½%, then marginal cost of money has gone up. So just as financial system hits the brakes the central bank hikes rates, by accident as it were. That doesn’t suggest a clean coherent well-thought-through system.

Chairman of the Federal Reserve, 10 January 2008:

> However, as a tool for easing the strains in money markets, the discount window has two drawbacks. First, banks may be reluctant to use the window, fearing that markets will draw adverse inferences about their financial condition and access to private sources of funding--the so-called stigma problem. Second, to maintain the federal funds rate near its target, the Federal Reserve System’s open market desk must take into account the fact that loans through the discount window add reserves to the banking system and thus, all else equal, could tend to push the federal funds rate below the target set by the FOMC. The open market desk can offset this effect by draining reserves from the system. But the amounts that banks choose to borrow at the discount window can be difficult to predict, complicating the management of the federal funds rate, especially when borrowings are large.

That doesn’t suggest a coherent well-functioning system either.

A newly-fashionable alternative is for a CB to add money at a market-determined price. This can work as a means of adding money, but:

> Suggests that the reserve system is itself causing unnatural demand for money; and
>
> Can hardly be said to be implementing monetary policy!

Haircut

- Haircut good for collateral with non-manipulable observable price
  - Works for government bonds
  - Untrustworthy for manufactured collateral
    - Commercial banks can support the price of each other's rubbish — friendly 'deals' arranged over beer: it happens
- Haircut not good, but best of bad bunch

Haircuts:

• Ineffective against manufactured collateral. So don't accept rubbish — not something politicians want to hear.

• Against wrong-currency collateral, haircut needs to be large enough to withstand stress-test currency fall and interest rate move. Let's assume that, over the few months it will take to be allowed to sell, the euro or dollar would be damaged by 12½% versus £, and any other currency by 15%.

◊ ≤1 year will rally ½% in yield, say (so haircut **reduced** by 0.25%);

◊ 1- to 3-year maybe 1% in yield (haircut reduced by 1.5%);

◊ 3- to 7-year maybe nothing to ½% in yield (haircut = just currency component);

◊ longer could do anything: say is hurt by ½% yield (haircut increased by 4% say).

Add to this some penalty for rating: say ½% for each small-notch below AAA (so AA– would be haircut by an extra 3×½%).

Implies much larger total haircuts on non-£ securities. That's expensive, and would deter use of non-£ collateral when Libor–repo is wide (as the 15% that needs unsecured funding will then be dearer to fund). Fine: encourage those with € collateral borrow from the ECB, and do an FX swap to convert that borrowing to £ (hurray for CLSB). So the £ borrowing would be done by the banks with gilts: good.

Cause

- Why have CBs, especially the BoE, been so bad at implementing policy?
- My experience was BoE

Advice

- [The Bank is] *“the most hierarchical part of the UK public sector”*

— Anonymous at HMT

Cultural Problem

- “The data doesn’t matter. What matters is that the Governor likes it. And if you want a career here, you had better like it too.”
- My job is not the public interest. Irrelevant. My job is the boss.

HMT warned me, but I didn’t listen.

Cultural Problem

- Difficult to change a culture
  - Difficult to encourage a culture of internal dissent
  - Requires the very top being hard on the near-top
- But might have fixed things sooner
- Might have prevented the NR run

MPC excellent

- Four 'spies' would report if the BoE covering up mistakes by repeating them
- Vote ⇒ credibility ⇒ access to data and to meetings ⇒ no attempt to cover up.
- This critic of the BoE believes the MPC:
  - does not cover-up by repetition
  - willing to re-assess and reverse course
  - excellent

Someone at the BoE (who I shan't embarrass by naming) told me that "the externals are there to keep the internals honest".

Consider alternative: entire committee were composed of people whose careers, and to some extent pensions, controlled by the Governor. Then dissent would be more difficult and rarer. Worse, one can imagine conversations comparing the merits of undoing a move in interest rates that subsequently proved unwise with the 'damage' to the credibility of the committee.

The presence of externals prevents such deny-everything behaviour; they verify that the MPC is not covering up its errors by repeating them. But that requires externals to have access to the substance of the debate, not just to a simulacrum thereof at the meeting itself. In turn that requires externals to have a vote. Having the vote opens the door to any meeting, any data, anything of relevance.

And the structure—externals have access, expertise, and potential audience in the form of the Treasury Select Committee—is sufficiently credible that it isn't tested. The policy debate is about the best policy rate going forward, considering all the uncertainties and payoffs, and not about endorsing the (Governor's) previous decisions.

Difficult to test: if the 'real' role of the externals is to keep the internals honest, that would manifest itself only as occasional dissent. Perhaps one might compare the rates of dissent in committees with externals (BoE) against those without (FOMC)?

End

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