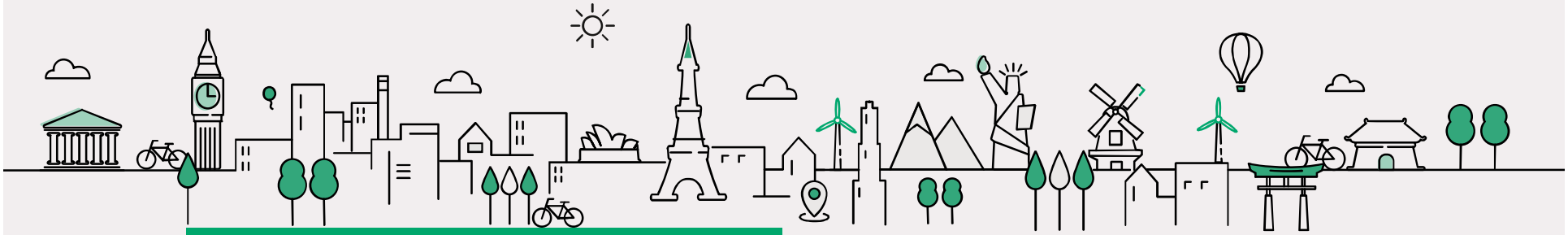
STRATEGIC REVIEWS OF MONETARY POLICY: TIME TO MANAGE EXPECTATIONS





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The asset manager for a changing world

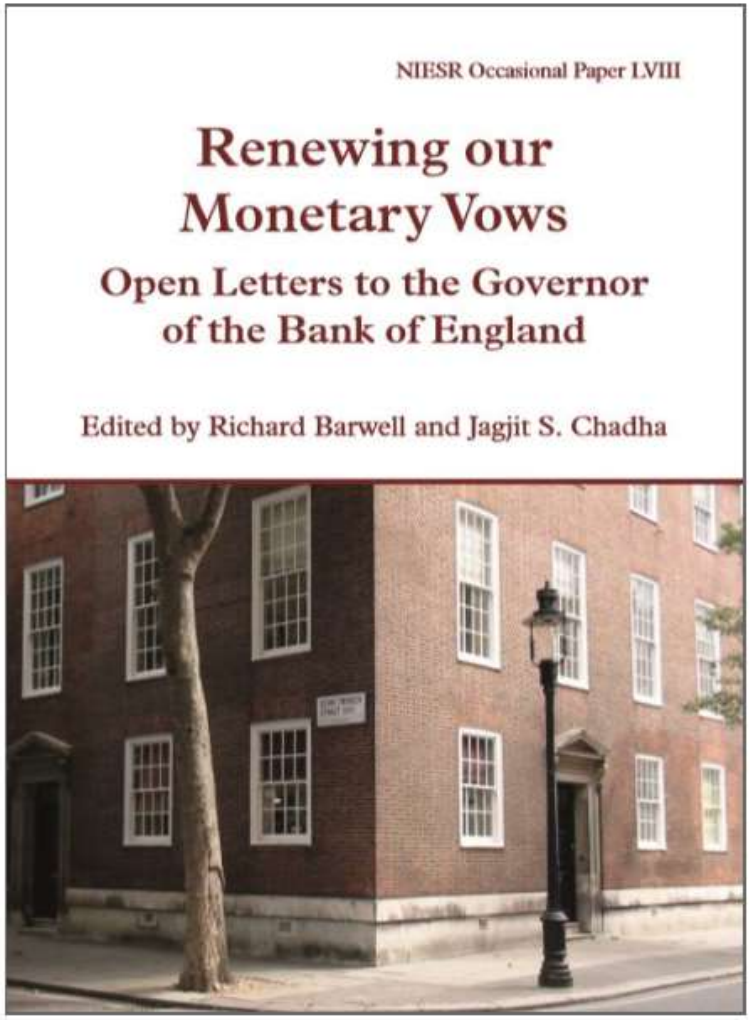
Strategic Reviews of Monetary Policy

- Strategic Reviews are all the rage in central banks these days
  - The Federal Reserve's review is close to completion
  - The ECB has just embarked on a year long review
  - The BoE is surely destined to launch a review with the arrival of a new Governor

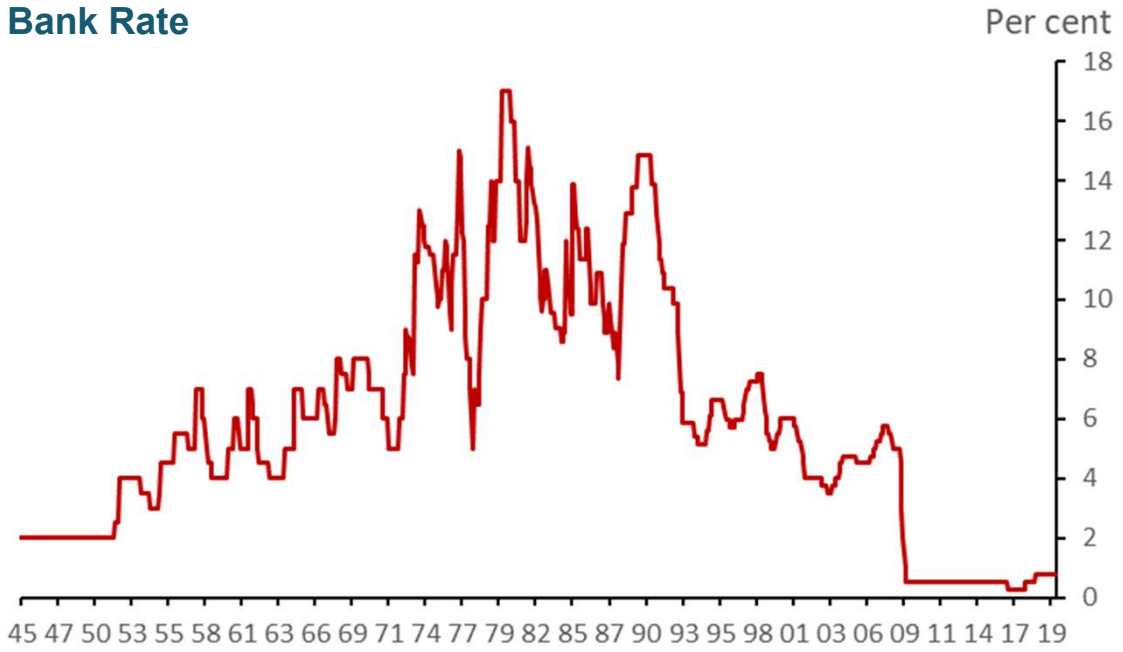
- Why have a strategic review? Why now?
  - An obvious economic problem
  - Follow the leader

- Predicted solutions and preferred solutions

Renewing our monetary vows



Ultra low short nominal rates

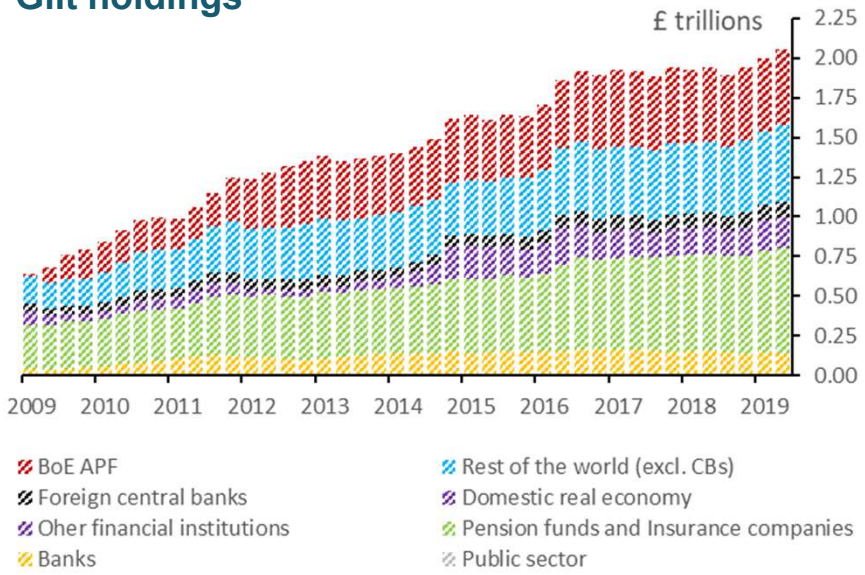


- Policy rate is very low by historical standards
  - Has been stuck close to zero for a decade now

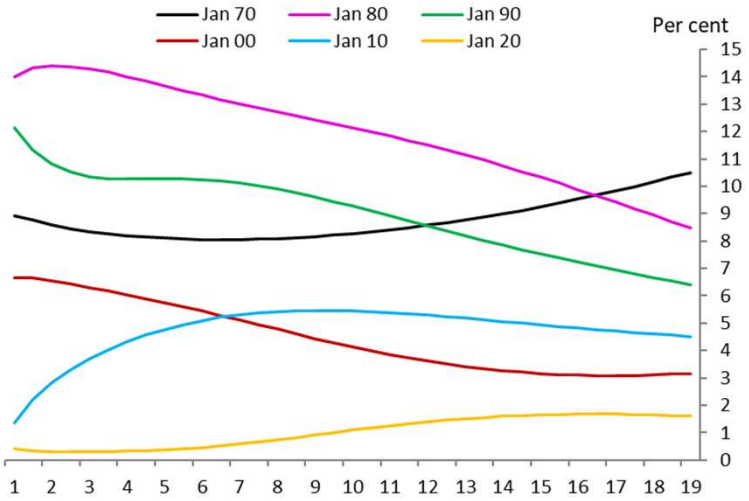
- This is not a problem unique to the United Kingdom
  - De facto policy rate is negative in the Eurozone
  - FOMC forced to cut rates last year after hiking to the dizzying height of around 2%

Ultra low long nominal rates

Gilt holdings



Gilt yields, instantaneous forwards



- Controversial in some quarters but we can think of the long rate as policy instrument too
- The Bank of England has engaged in a series of QE operations and now holds a substantial portfolio of assets – almost £½ trillion – predominantly government bonds
- Long rates are also very low indeed in the UK by historical standards
  - Note stark contrast with forward curve in the immediate aftermath of the financial crisis

Diagnosis? An equilibrium phenomenon

- If short and long interest rates are policy instruments to varying degrees then we can think of both being set depending on some reaction function – varying the level of the instrument around some equilibrium setting according to the state of the cycle (strictly arguments of the loss function)

- It is becoming increasingly difficult to characterise the ultra low interest rate environment as a cyclical phenomenon
  - Unemployment is not obviously far too high; and
  - Inflation is not obviously far too low

- It is becoming increasingly difficult to dispute the proposition that ultra low interest rates are instead an equilibrium phenomenon
  - That is, the equilibrium short-term and long-term real interest has fallen

- Don't plan to say much more about why this has happened except to point out that policymakers ought to think very hard about this
  - Low equilibrium real interest rates are but one manifestation of a shock that might have wider profound implications for the goals of economic policy

Lack of monetary space

- The focus today is on the consequences of ultra low equilibrium real interest rates on demand stabilisation policy: the lack of monetary policy space
- Claim #1: there is very little scope to stimulate demand via cutting short real rates
  - Claim #1a: there is a lower bound on the short-term nominal interest rate, limiting how far central banks can cut short real rates in a downturn to stimulate demand
  - Claim #1b: there is an effective lower bound on the short-term nominal interest rate, below which rate cuts are counter-productive
- Claim #2: there is very little scope to stimulate demand via cutting long real rates
  - Claim #2a: there are quasi-legal / reputational constraints on the capacity of the central bank to lower long rates much further via asset purchases and forward guidance
  - Claim #2b: there is a lower bound on the long-term nominal rate, reflecting the lower bound on short nominal rates (infinite horizon liquidity trap)
  - Claim #2c: there are small and diminishing returns in stimulating demand via further reductions in long real rates even if you can do it

So rely on fiscal instead?

- A decade ago a couple of papers by influential US economists reminded the world that fiscal policy can influence demand when monetary policy is constrained. So why not rely on fiscal rather than monetary policy to stimulate demand in future downturns? But…..
    - Fiscal policy *was* used to support demand in the last crisis: cyclically adjusted PSNB has been gradually reduced as a share of GDP to around 2% over half a decade
    - Familiar problems with the decision and implementation lags with the timing and scale of discretionary stimulus unless you can turbo-charge the automatic stabilisers
    - We should not confuse one-off structural arguments on the appropriate level of government investment based on low long-term interest rates with cyclical arguments about the appropriate size of discretionary stimulus (are you planning to commit to HS-***X*** in the (***X***-2)th recession from now?)
    - Experience suggests that stabilising (paying down?) debt in a recovery is difficult to do so we should not be complacent about regularly increasing debt in downturns
    - The long-term fiscal projections are not pretty last time I checked ~ OBR estimate the primary deficit will move from 0.3% in 2022-23 to 8.6% of GDP in 2067-68

A first order policy space problem

- There is precious little monetary policy space and it is unclear whether central bankers can rely on finance ministers to deploy fiscal space early enough and aggressively enough to compensate

- If this was an idiosyncratic UK problem then it would not be quite such a concern. The problem is that there is a lack of monetary policy space almost everywhere which suggests enforced coordinated inertia to global shocks

- Likely to lead to bad outcomes but our toolkit may not be able to tell us how bad

- ***Empirical perspective***: models have been trained on dataset in which policy response is expected and delivered

- ***Theoretical perspective***: two reasons to be concerned
  - Hysteresis effects on supply and expectations
  - Lucas critique

- ***Political perspective***: recent experience raises questions about behaviour of politicians and electorate in the event of another major downturn

Revisiting the bounds

- Claim: central banks are in a bind, twice over
  - Close to the lower bound on short rates
  - Close to an upper bound on unconventional tools, lower bound on long-rates

- Is this true, if so, what can be done?

In search of the *true* lower bound

- Before the crisis academics used to talk about the ***zero lower bound***. In the UK we never reached zero, but in Europe and Japan we broke through zero and entered negative rate territory.
- However, the fundamental source of that "soft" zero lower bound remains: cash still offers a guaranteed zero nominal return that now dominates many assets, including potentially electronic money
- There are still benefits associated with holding electronic money rather than cash, not least security and efficient settlement
    - That ***convenience yield*** will stop commercial banks liquidating their reserves and hoarding cash and settling away from the central bank when the return differential is small
- However, households may not be willing to tolerate negative interest rates on liquid deposits that they see as equivalent to cash.
- Banks may fear ***an economy wide retail run*** on the system if retail deposit rates are taken too far below zero. In time, fees may prove a partial solution

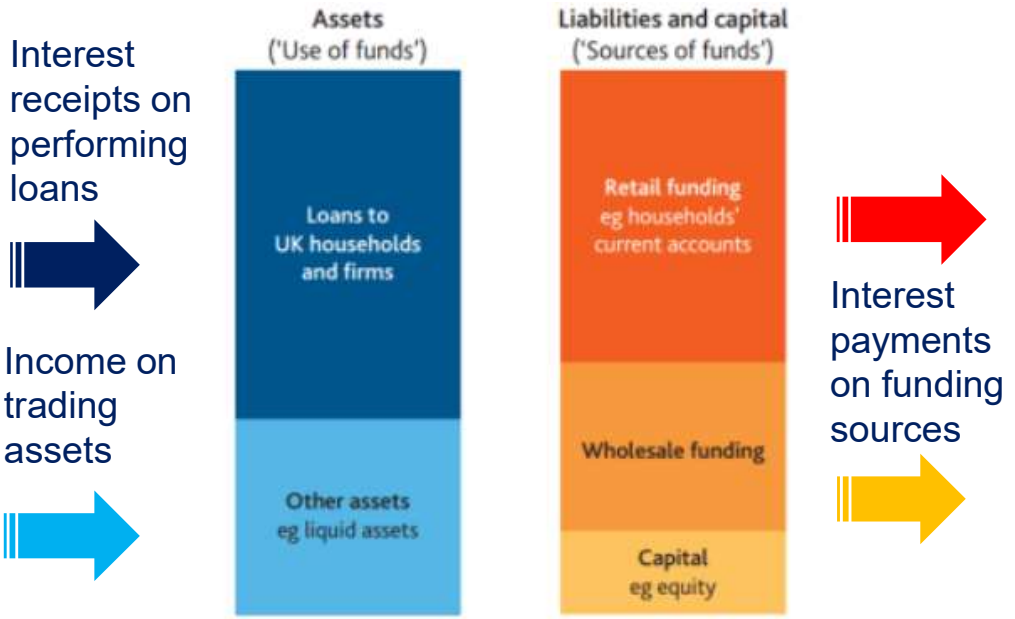
Banks and net interest income (NII)

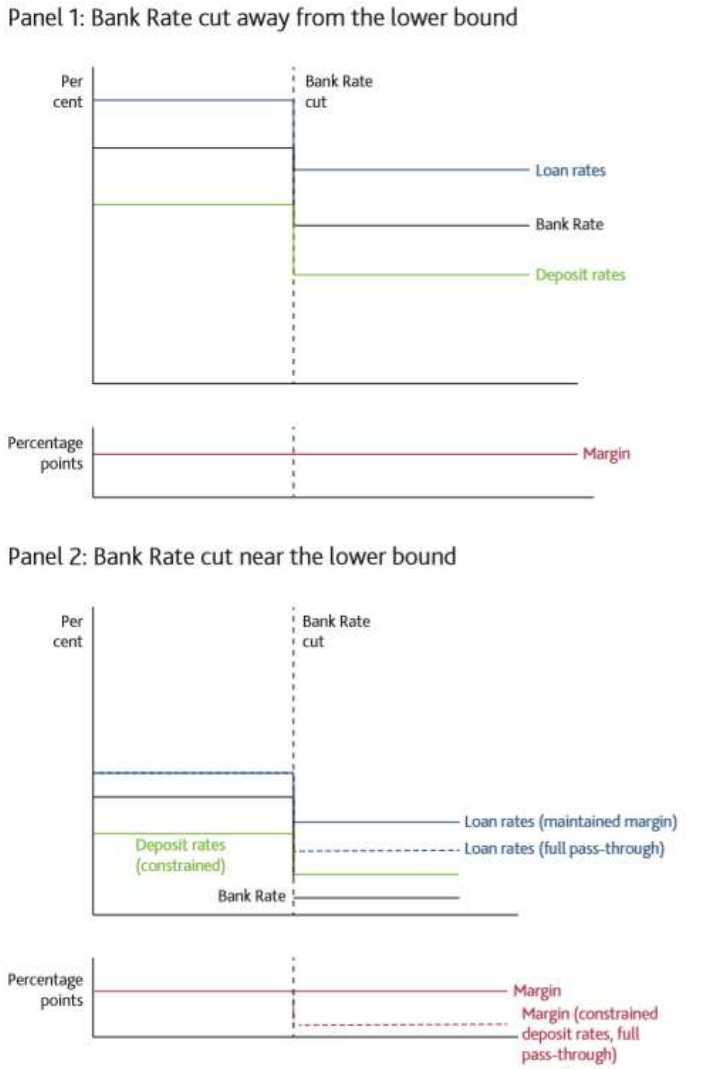
Banks fund loans and investments in trading assets by borrowing money from households and companies (deposits) and financial institutions (issuing bonds), making money on the spread between interest receipts and expenses, or so-called net interest income (NII)

The problem with lower *and negative* for longer

- The fundamental problem with negative rates is the compression in net interest income (NII) if there is a bound close to zero on retail deposit rates
- In the best case scenario for the banks, lending rates do not come down either and net interest income is stable. However, that is not realistic
  - Banks face competition from capital markets and increasingly the shadow banking sector, where the negative rate will pass through into lower rates
  - Some lending rates are contractually tied to market rates
- The real threat to banks is via the compression of NII across the retail book
  - The rates of return on central bank reserves and loans from the central bank are (typically) a second order consideration

Banks and net interest income (NII)





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The problem with lower *and negative* forever

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  - Some lending rates are contractually tied to market rates
- The real threat to banks is via the compression of NII across the retail book
  - The rates of return on central bank reserves and loans from the central bank – the focus of the ECB review – are a second order consideration
- The problem for equity investors in particular is not the current level of the policy rate – **it is the distribution of policy rates into the infinite future**
  - *If the deposit rate will be either below zero or close to zero for the foreseeable future then is there limited upside from NII and hence profits?*

Reversal rate is institution specific

- At some point – ***the reversal rate*** – negative policy rates can encourage banks to shrink unprofitable loan books
- This reversal rate will vary from bank to bank within a country, and on average from country to country within a currency union, and on average from currency union to currency union
  - Just because negative rates makes sense in Sweden it does not mean they make sense in Eurozone or Japan
- The reversal rate for a specific bank will depend on
  - Capacity to charge fees on retail deposits
  - Retail / wholesale funding mix
  - Extent to which loans are contractually tied to wholesale market rates
  - Portfolios of tradeable securities
  - Competition (pricing power) in retail markets
  - **Mitigants put in place by central bank or fiscal authority**

Term Funding Scheme

- Central bank can try and offset the margin squeeze
- The Bank of England solution was the Term Funding Scheme
  - Lending reserves secured against high quality collateral at Bank Rate plus a fee for those deleveraging their loan books
- Bank of England believes that the TFS was effective
  - The reduction in Bank Rate was passed on to lower lending rates on loans such as mortgages, without significant compression in lenders' net interest margins or the supply of credit to the economy
- Quantity constraints on the current scheme
  - Raises questions about the post-crisis preference for retail funding?
- In theory could resolve via "courage on the fee"
  - BoE could lend funds at Bank Rate + significant subsidy
  - Political ramifications likely non-trivial (this is fiscal policy)

Reversal rate is not the lower bound

- It is sometimes assumed that the reversal rate is the lower bound on the policy rate. It is not.
- It can make sense for the central bank to cut the policy rate below the reversal rate. All we know is that at this point the costs of cutting rates increase. It does not follow that the costs necessarily exceed the benefits.
- Lower rates will continue to provide stimulus to the economy via capital markets even if the bank lending channel ceases to function
    - ….. although this will disproportionately benefit the large companies and sovereigns that issue debt in capital markets
- Lower rates will continue to provide stimulus to the economy via the FX channel even if there is little direct benefit to domestic institutions from lower lending rates

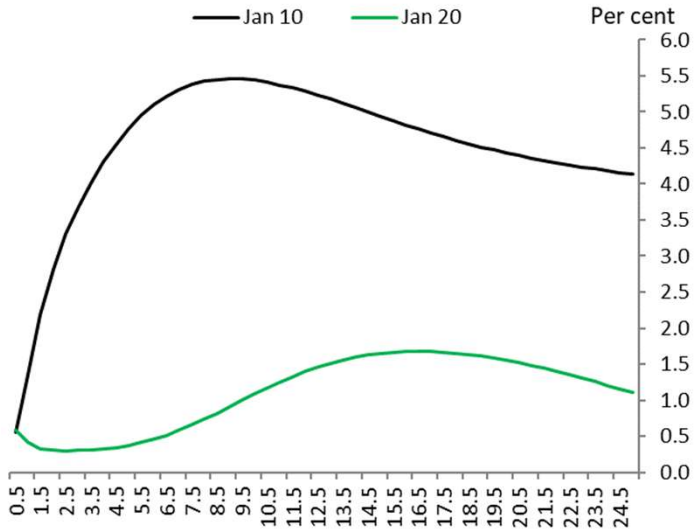
Negative rates, income effects & behavioural reversal rate

- Attention is now shifting to another source of concern about negative rates – the risk that households may start to cut back on consumption and save more when rates fall too far because they want to achieve a target level of savings for retirement
- Perhaps a more orthodox way to present the same argument is that the income effect from lower real rates (people consume less today and less tomorrow, and by saving more today prevent consumption falling too far tomorrow) is dominating the substitution effect (people consume more today and less tomorrow, because consumption tomorrow is more expensive)
- Can think of a second **behavioural** reversal rate, such that even if you could manufacture a deeply negative short- and long-rate it might not do you any good – at least in the domestic economy – because cutting rates would contract rather than stimulate domestic demand
- In principle effective lower bound could still be below this reversal rate but now you are now totally reliant on the exchange rate channel
    - this strategy increasingly looks like the declaration of a currency war

Forever bound

- Policymakers pivoted to influencing long rates (financial conditions) during the crisis when short rates hit the (perceived) lower bound
- Transmission mechanism not as unconventional as it sounds:
  - Financial conditions have always been part of the transmission mechanism
  - Just new to “target” long rates (financial conditions) directly
- Conclusion: not a huge problem if the short rate is at the effective lower bound so long as
  - there is still room to cut long rates; *and*
  - long rates influence demand

UK instantaneous forward curve: now and a decade ago



- But what happens when long rates are close to the lower bound too ?

How to influence long rates

- Number of mechanisms to move long rates (with varying degree of predictability)
  - Forward guidance
  - Quantitative Easing (QE)
  - Yield curve control (YCC)
- Need to think about potential economic and political constraints on these tools

Two schools of thought on the transmission of QE

- One school of thought argues that QE influences the yield curve and financial conditions primarily via a **signalling channel**
  - QE signals the central bank's assessment of the economy and appropriate response, causing investors to lower their expectations of the future path of the policy rate
  - In passing this is a very expensive way to signal → you are putting a lot of money where your mouth is (versus the cost of putting a chart or two in the Inflation Report)
  - Message is opaque: what marginal information does the announcement of £50 billion of QE reveal about the level of Bank Rate 5 years from now (versus the information conveyed in a chart or two in the Inflation Report)

Two schools of thought on the transmission of QE

- An alternative school of thought argues that the price of long-term bonds depends on the **net supply** of those bonds in private hands such that if the central bank purchases a significant share of the outstanding stock then the price will rise (yields will fall)
  - Certain ‘preferred habitat’ institutional investors have a price inelastic demand for those bonds on account of their business model.
  - QE displaces these investors into other markets potentially triggering further portfolio rebalancing effects
  - QE likely to have substantial global transmission because portfolio rebalancing will not respect national borders and the relevant net supply concept is global

Stock versus flow

- These different mechanisms suggest very different conclusions about the impact of QE in the long run. Consider the life-cycle balance sheet implications of QE
  - QE = positive net flow of purchases
  - Reinvestment = zero net flow, maintain stock
  - QT = negative net flow, via incomplete reinvestment or sales
- Those who believe in the net supply channel believe that the positive effect of QE continues after the net flow of purchases ends and endures for as long as the portfolio stays big and then shrinks with run-off in QT
  - Past QE still having a substantial impact on asset prices
- Those who believe in the signalling channel think that all that really matters is when any of these decisions reveal information
  - In particular, if the central bank was forced to sell all the bonds for legal reasons that were entirely orthogonal to the state of the economy it would have little impact (according to this view) → no signal => no impact

QE constraints

- Interestingly, it is not always clear that policymakers agree (through time, across borders) over the size of the net supply channel
  - For a given belief in the signalling channel, that disagreement should be reflected in different views on the effectiveness of QE (and then reflected in differences in view on how much QE to do…)
  - Seems somewhat correlated to whether you are currently engaged in QE
- There may be an important net supply channel, but at some point you may run into constraints on how many bonds you can buy
  - At the very least you could have a lasting influence on the markets in which you buy assets
  - Vlieghe → There are practical limits to how many tradeable assets we can buy, related to not wanting to hold too large a share of a single instrument in order to preserve liquidity.

FWD GUIDANCE: Delphic vs Odyssean

- Forward guidance – talking about the future path of policy – has become the favoured tool of most modern central bankers
- The literature distinguished between two fundamentally different types of forward guidance
  - **Delphic**: central banks are telling you about the path of interest rates given their assessment of the economy and an ***unchanged*** reaction function
  - **Odyssean**: central banks are telling you about the path of interest rates given their assessment of the economy and a ***changed*** reaction function

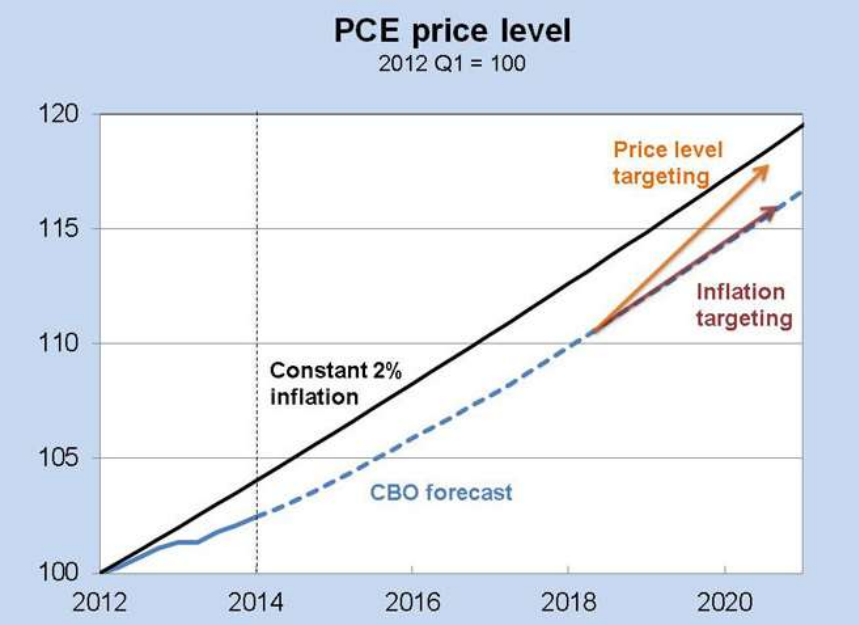
Why isn't Delphic guidance completely redundant

- Most central bankers claim to be providing Delphic guidance most of the time
- But if investors are "well" informed then that guidance should be largely redundant
  - Delphic guidance certainly would be redundant in modern macro models
- Delphic forward guidance should not move markets and, given non-zero costs in communication, should not really be produced
- We know we are not in this world which implies
  - Investors are not sufficiently well informed
  - Central bankers should publish the relevant private information
    - Data they have access to
    - Models they use
    - Reaction function that guides decisions

Delphic guidance reconsidered

- There is a limit to what you can do with Delphic forward guidance
  - You are only shifting expectations back to where they should have been in the first place
    - For example, you can avoid an unwarranted financial tightening (e.g., the policy response to the Taper tantrum)
- But depending on what investors have got wrong, Delphic forward guidance could easily be counter-productive
  - if you understand the reaction function but don't follow the data then the message in dove-ish forward guidance is that the economy is weaker than you thought it was …Do you save more or less?
  - Economists also worry about <<Morris and Shin>> coordination effects – that is, even if we are each confident that the central bank is not a good forecaster, we might still end up acting like it is .. the forward guidance is a public signal that we coordinate upon because everyone sees it

PLPT – an example of Odyssean forward guidance



If my inflation forecast is right, the price level in 2018 will be about 2.5 percent below what it would have been had the FOMC hit its inflation target over the preceding six years. forward guidance. How should the FOMC respond to this shortfall in the price level? If the FOMC simply targets a 2 percent inflation rate after 2018, then the price level will be permanently 2.5 percent lower than was expected in 2012. This approach to policy—which is the standard one followed by most leading central banks around the world—is called inflation targeting. But there is an alternative: The FOMC could target a slightly higher inflation rate for a few years after 2018 in order to make up for the shortfall in the price level. This latter policy approach is often termed price level targeting.

President Kocherlakota, May 2014

A very soft example of Odyssean forward guidance

- Lael Brainard for how to provide guidance on lift-off from the lower bound
  - there tends to be strong pressure to "normalize" or lift off from the ELB preemptively based on historical relationships between inflation and employment. A better alternative would have been to delay lift-off until we had achieved our targets. Indeed, recent research suggests that forward guidance that commits to delay the liftoff from the ELB until full employment and 2 percent inflation have been achieved on a sustained basis—say over the course of a year—could improve performance on our dual-mandate goal
- Now tell me how much you will revise your view on the US forward curve when this guidance is introduced, depending on precise calibration of “sustained”?
- Contrast with what the BoJ has already done
  - “will continue expanding the monetary base until the year-on-year rate of increase in the observed consumer price index (CPI, all items less fresh food) exceeds 2 percent and stays above the target in a stable manner”

Fundamental concerns around FWD GUIDANCE

- A number of fundamental concerns around forward guidance as a tool

i. What if the forward curve is already flat at the lower bound before you start talking ?

ii. How powerful do we think this mechanism is – how sensitive do we think future rate expectations are to forward guidance (do we have a firm view on when core inflation will be back to 2%) and how sensitive demand is to long rates?

iii. Can you ever make guidance about the far future – the only place guidance will likely bite – credible when another strategic review will occur, the membership of the policy committee will have completely changed and countless papers on the reversal rate will have been published in the interim ?

iv. What if the primary impact of Delphic guidance is via understanding of the economy rather than the reaction function (counter-productive impact) ?

v. Has the particular experience of the Bank of Japan and the general habit of central bankers talking about the future damaged the credibility of the instrument – will we notice when central bankers get truly Odyssean ?

Aside: Complete forward guidance

- Strategic Reviews will also touch on the general approach to communication and there is a compelling case for change
- Cannot avoid expectations about the future path of policy – they influence current asset prices, demand and inflation. The only question is whether you are willing to influence them if you think they are in the wrong place
- Two stylised modes of guidance on the future path of policy
  - Say as little as possible; avoid confusion and reputational damage; but effectively cede control of the stance to markets
  - Say as much as possible; publish an optimal path, within a fan chart, emphasising the uncertainty
- Many central banks have settled on a compromise of hinting about the future path ('limited and gradual') which sounds like the worst of all worlds
  - By hinting about rates without providing clarity or emphasising uncertainty you still run the risk of people mistaking guidance for a promise
  - You are unable to guide markets effectively or correct misunderstandings

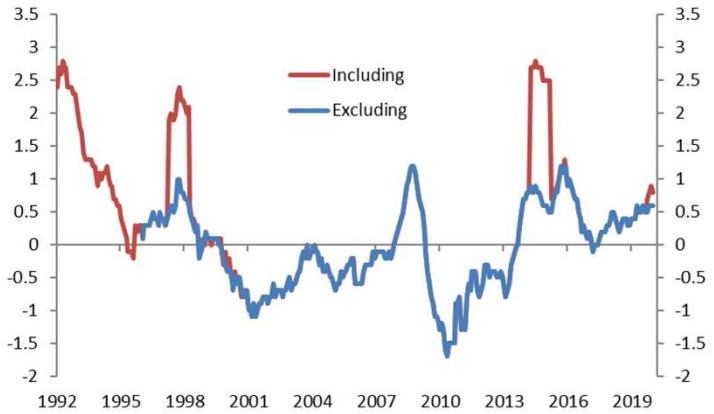
Creating space – monetary and fiscal coordination

- Not a discussion about whether fiscal policy should play a role in the next downturn but whether we need greater (explicit) monetary and fiscal coordination in the *next* crisis
- This terminology covers various options, many of which the Japanese have already done
  - **Both on offence**: Central bank and finance minister easing policy at the same time
  - **Fiscal on offence, Monetary on defence**: Finance minister easing policy and central bank engaging in YCC to prevent crowding out (create space)
- And some of the supposedly more extreme options
  - Helicopter drops

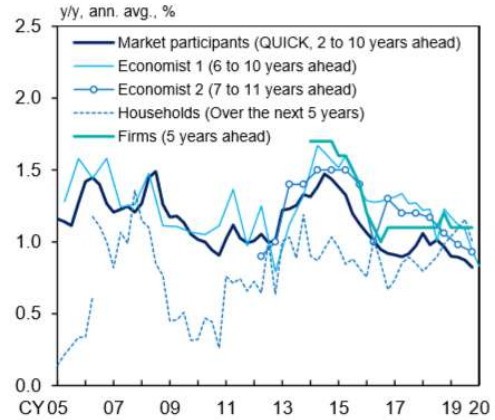
Japan and the dangers of incrementalism

- The Bank of Japan has already done a lot of the radical things that economists and policymakers believe will still have a major impact when implemented elsewhere in the next crisis … but the BoJ is still far from objective
- Plausible that effectiveness of new measures may rely in part on shock therapy. Want investors, companies and households to notice that something has fundamentally changed, which brings us back to Japan
  - Creeping towards radical solutions likely blunted the shock therapy there
  - Limited results from radical measures could blunt the impact elsewhere

Japanese inflation: with and without taxes



Japanese inflation expectations (surveys)



Sources: Bank of Japan; QUICK, "QUICK Monthly Market Survey (Bonds)"; JCER, "ESP Forecast"; Consensus Economics Inc., "Consensus Forecasts."

50 shades of helicopter drops

Plain vanilla QE:

- central bank expects to sell bonds in future

Persistent QE:

- central bank expects to sell bonds at some point, but macro implies bonds likely to stay on balance sheet for an extended period

Stealth Drops:

- central bank enables persistent fiscal stimulus without formal coordination – no commitment to hold bonds indefinitely but implied

MAC Drops:

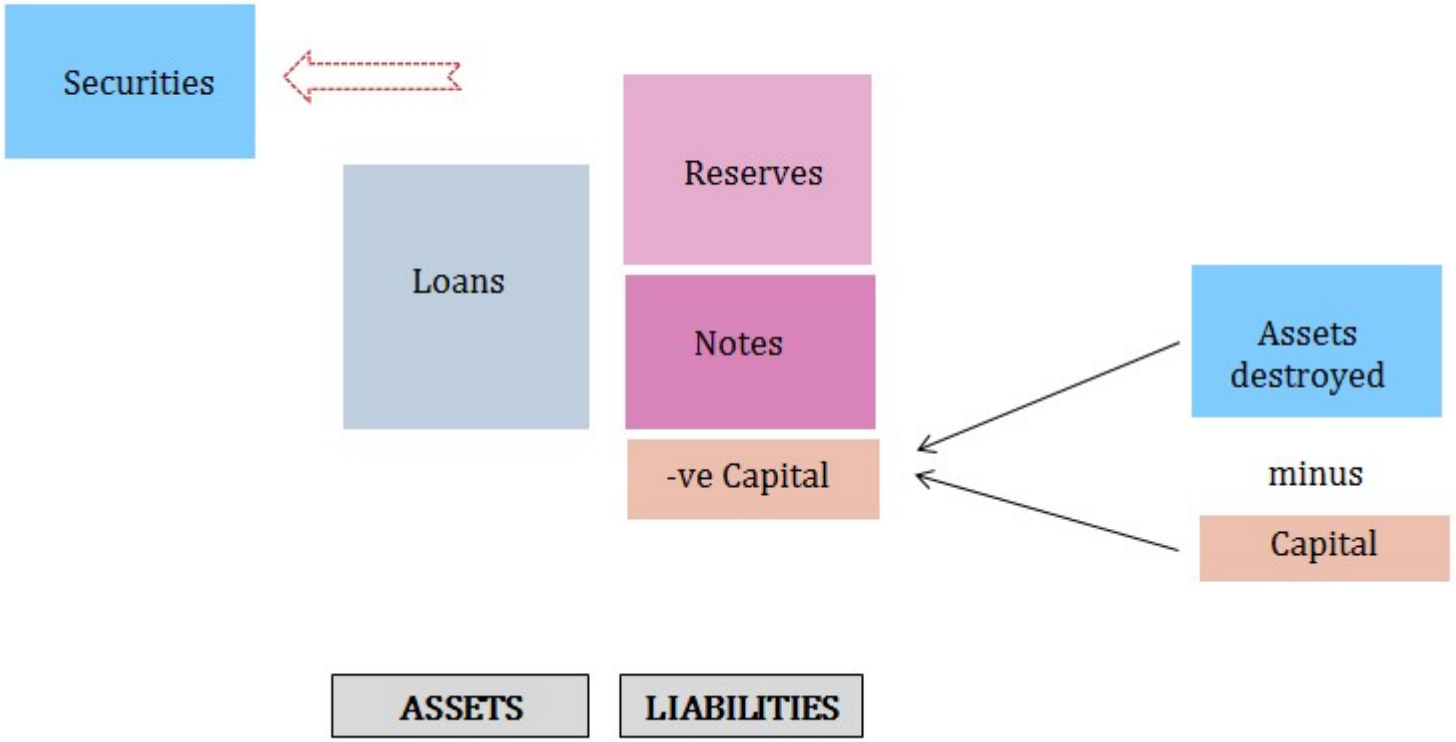
- central bank commits to permanent expansion of balance sheet but subject to inflation MAC clause

Textbook Drops:

- credible, unconditional commitment to keep bonds forever

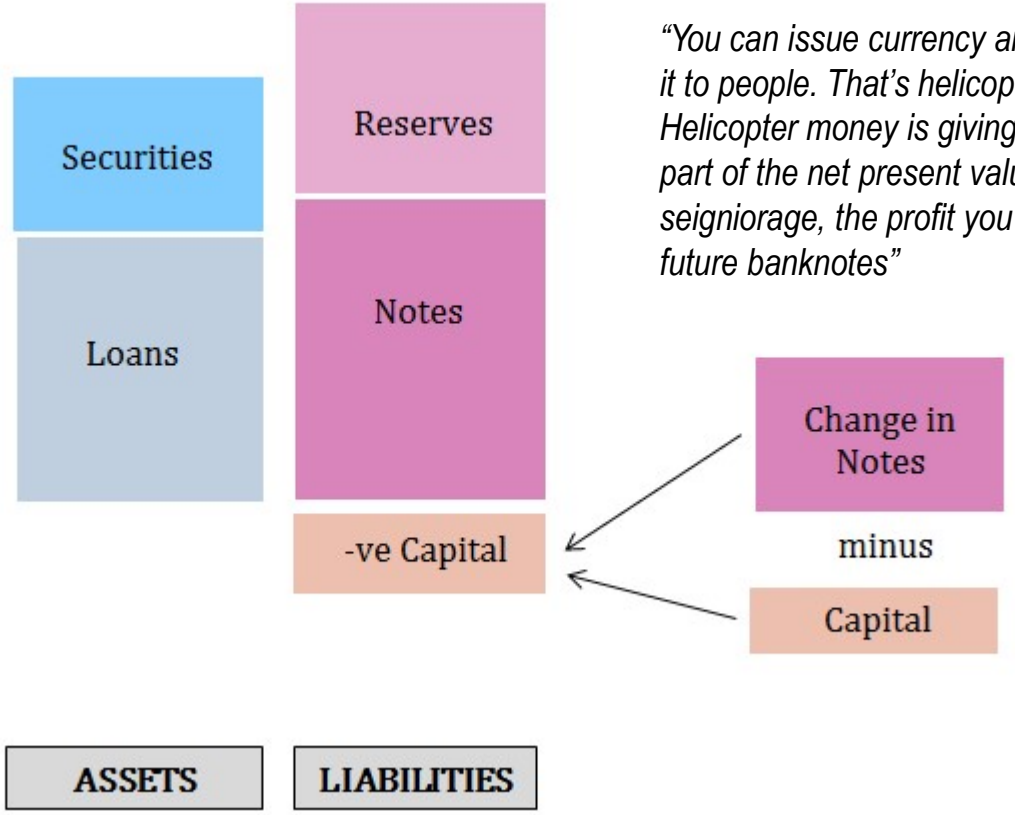
Helicopter drop by tearing up bonds

Central bank tears up the bonds in its QE portfolio or swaps them for zero coupon perpetuals … and never replaced with new bonds in the future



Helicopter drop by distributing cash

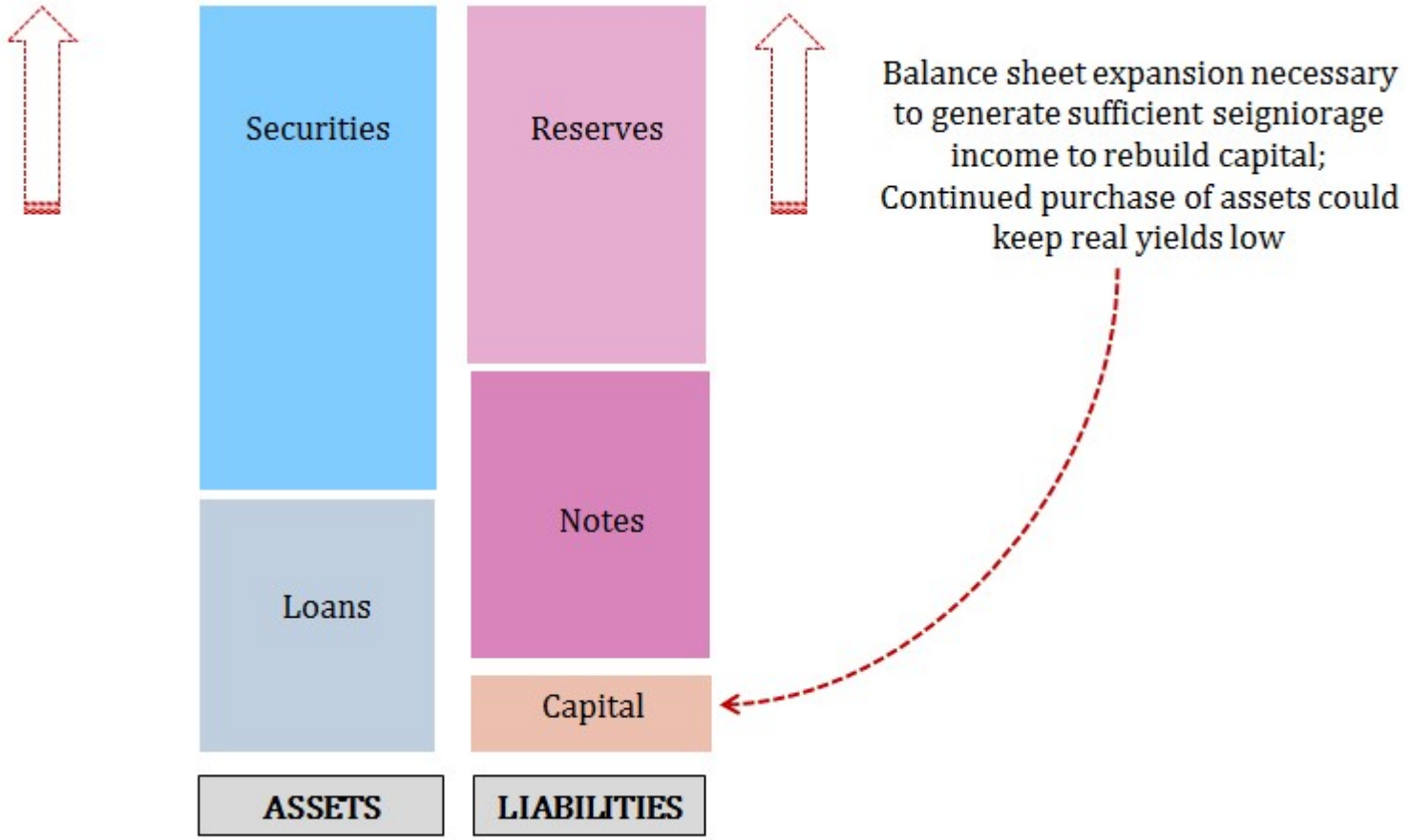
Central bank issues cash, for nothing in return – now or in the future



"You can issue currency and you distribute it to people. That's helicopter money. Helicopter money is giving to the people part of the net present value of your future seigniorage, the profit you make on the future banknotes"

Peter Praet

Second round effects



Textbook helicopter drop remains unpopular

- Mark Carney
  - “A central bank cancels the debt that is purchased, in order to make this true 'helicopter money' it cancels the debt of the government debt. In doing so, it puts a hole in its balance sheet … in order for the stimulus to be there it has to hold negative equity forever. The only way the Bank of England can then start to wind in its other policies – such as the £375 billion of assets the Bank amassed under its quantitative easing programme – is to create more money, since it has none with which to buy them back. You end up in a compounding Ponzi scheme … there's not a way of structuring around that."
  - “dangerous idea ….. I’m a strong believer in the separation of responsibilities. [A government] may have fiscal room and they may use it, but that’s not helicopter money, and the fusion of the two I think is not necessary.”

The simple solution

- Economists have already concluded that they have a policy space problem
  - Equilibrium real interest rates have fallen, reducing the space to cut real interest rates in a downturn
- Economists have suggested some (at best) second best solutions to this problem that may deliver some benefit in a downturn, but not enough
  - Not clear how sensitive demand is to very long rates
  - Signal on the future path of the short rate – via QE or FG – will have to extend too far into the future and could be counterproductive
- There is a first best solution that policymakers are trying very hard to ignore
  - Raise the inflation target

The optimal inflation target

- A lot of arguments used to justify the calibration of the optimal inflation target
  - Friedman: socially optimal for prices to fall at the real interest rate
  - Phelps: … but need to account for seigniorage (avoid other taxes)
  - Menu cost: firms need to re-calculate and implement optimal price
  - Misallocation: noise in relative prices given nominal rigidity
  - Fiscal drag: distortions with a less than fully indexed tax and benefit system
  - Credit constraints: front loading problem with high nominal interest rates
  - Grease the wheels: overcoming downward nominal rigidity
  - Mismeasurement: data over-state true inflation so need to aim above zero
- But there is one argument that we tend to put a lot of weight on: managing the lower bound problem

Four is the new two

- The calibration of the inflation target was designed to create enough policy space above what we thought was a lower bound at zero
  - Equilibrium policy rate = Equilibrium short real rate + inflation target (policy space above zero)
- We have learned two things since the crisis
  - Need more space → The distribution of potential shocks includes a tail of nasty outcomes which in turn demand a very large policy response
  - There was space below zero → but we may have used a lot of it up
- Three conclusions
  - Work on the distribution of possible shocks (financial stability policy)
  - Create alternative policy space (fiscal policy)
  - Recalibrate the inflation target to recreate policy space (monetary policy)
    - If the equilibrium real rate has fallen 2 pp then raise the target by 2 pp

You can't have it both ways

- Some people claim it is pointless to discuss raising the target because policymakers could not achieve 4% and it would damage credibility to announce an unachievable target.
- But if you believe that a one off Herculean effort of coordinated fiscal and additional unconventional monetary stimulus cannot drive inflation up by 2 pp then why would you ever believe that in every future downturn that same stimulus package will boost inflation back to 2?
- Some people argue that the scheme would be too effective because it will disturb inflation expectations, shaking confidence in price stability and the credibility of the central bank
- But if you believe that then you have a lot of confidence in the power of monetary policy to influence inflation
- It would be better if all countries announced a change in target and a stimulus at the same time – less likely to be misunderstood, more likely to shift expectations – but don't hold your breath. At least if the UK acts alone we can expect an exchange rate channel

Conclusion

- Economists have already concluded that they have a policy space problem
  - Equilibrium real interest rates have fallen, reducing the space to cut real interest rates in a downturn
- Economists have suggested some (at best) second best solutions to this problem that may deliver some benefit in a downturn, but not enough
  - Not clear how sensitive demand is to very long rates
  - Signal on the future path of the short rate – via QE or FG – will have to extend too far into the future and could be counterproductive
- There is a first best solution that policymakers are trying very hard to ignore
  - Raise the inflation target
- **We appear to be settling for second best**
  - **Things could get ugly in the next downturn**

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