

What else can the ECB do if it needs to do more ?



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Before we begin....

- Perception that the ECB is constrained twice over
 - Close to the lower bound on rates
 - Close to the upper bound on asset purchases
- This presentation is about what – if anything – the ECB could do if the Eurozone economy slows and further stimulus is needed
- We cannot delay this conversation until there is a material slowdown – asset prices should *already* reflect these considerations
 - If the ECB really is constrained then there are clear implications for the fair value of bunds, breakevens, bank equity, sovereign spreads, the euro etc.,
- **Please don't confuse this hypothetical presentation as a clumsy hint that major revisions to my central case view are imminent**

Where there is a will

- Purpose of this presentation is to highlight the constraints
- But above all to illustrate that **where there is a will there is a way**
- The problem for the Eurozone could be whether there is a will to do whatever it takes.....
- We will know more about what is possible when we know who succeeds Draghi

Agenda

- Policy rates
- Asset purchases
- Forward guidance
- Refinancing operations
- Framework changes
- Helicopter drops

Negative rates



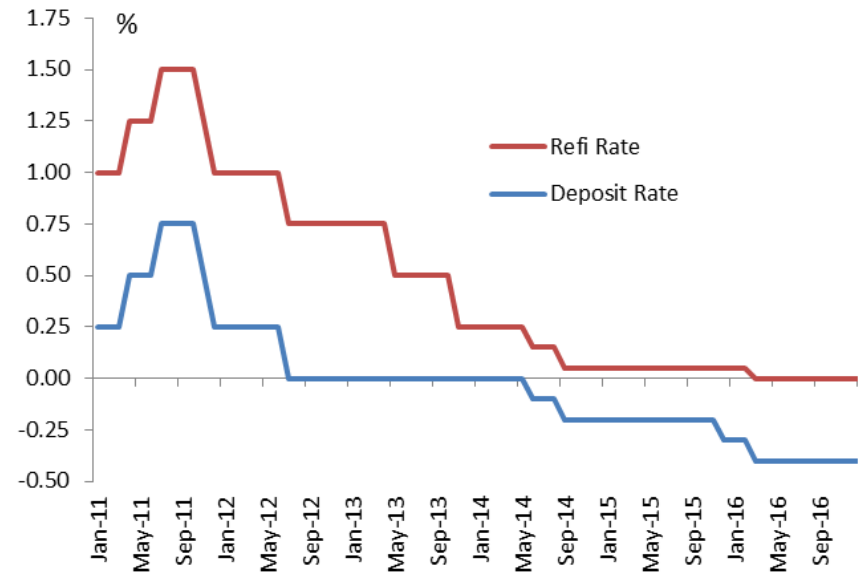
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Policy rates

- Governing Council prevaricated about taking the policy rate into negative territory
- Finally took the plunge with a mini (10bp) cut in June 2014 followed by a second in September
- Two further cuts in late 2015 and early 2016, taking deposit rate to -0.40 % and refi rate to 0.00%
- ECB removes the easing bias on rates in June 2017 when the QE taper had already begun, **but does not rule out further cuts**
- *“Now, if you ask me now, “What do you expect?” I would say that based on a current assessment, current information, I don't expect lower interest rates. If you ask me, “But in case things were to worsen, are you ready to lower interest rates?” the answer is yes”*
- *“We removed the interest rate easing bias because the tail risks on the future path of inflation have disappeared. That is to say, deflation risks have definitely gone away. If things were to turn out in a way that these risks were to reappear, we'd certainly be ready to lower rates”*

Key ECB interest rates



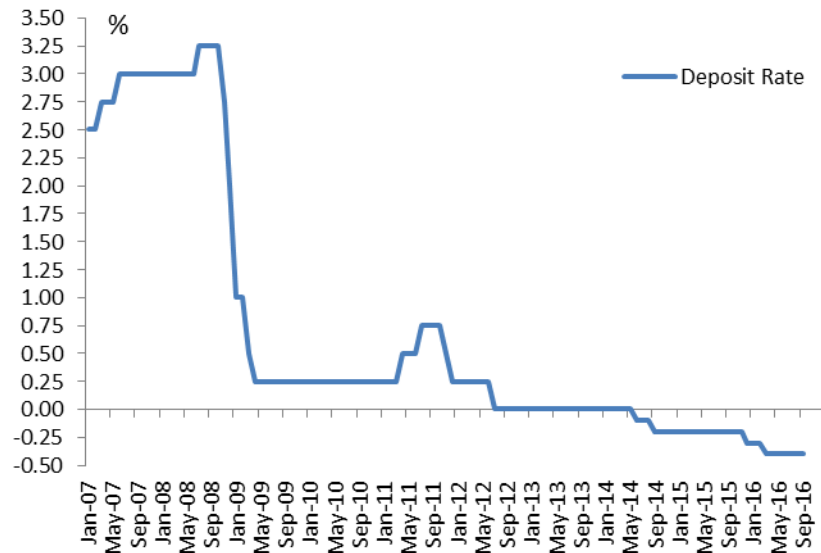
Hinting at more

- We know (ok – we are led to believe) that deposit rate cuts are still on the table
 - *“the Governing Council stands ready to adjust all of its instruments, as appropriate, to ensure that inflation continues to move towards the Governing Council’s inflation aim in a sustained manner”*
- **So why not restore two way risk on interest rates and remind investors that the ECB is not at the lower bound? Not the same thing as guidance that the ECB will cut rates**
- Currently say the following about key ECB interest rates
 - *“We continue to expect them to remain at their present levels at least through the summer of 2019, and in any case for as long as necessary to ensure the continued sustained convergence of inflation to levels that are below, but close to, 2% over the medium term”*
- Used to say
 - *“We continue to expect them to remain at present or lower levels for an extended period of time, and well past the horizon of our net asset purchases”*
- **Could say**
 - ***“We continue to expect them to remain at present or lower levels through.....”***

Doing more

- If you have further room to cut rates then do that if you need to next time around
 - **Take rates to the true lower bound in the next downturn**
- The problem is that even if you think there is room to cut further it is unclear how much scope there will be to ease further on this margin in the near future given the current level of rates
- The 2008 crisis was hopefully an extreme event..... but the ECB cut the deposit rate by 3 percentage points in less than a year

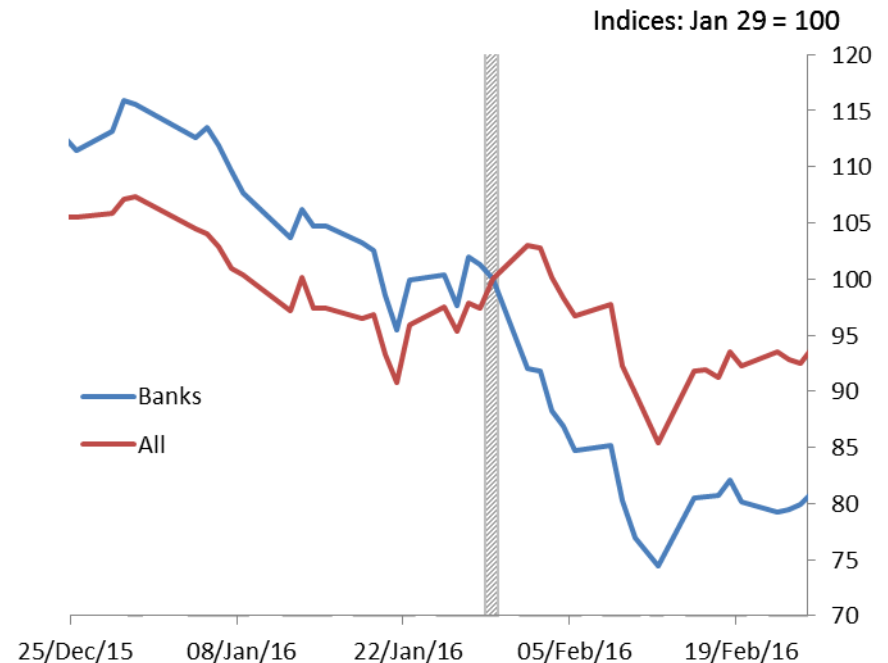
Key ECB interest rates



Is this really a good idea?

- Concern that cutting the policy rate too far is counterproductive
- Typical expression of this view is that lower rates hurt bank profitability
- That doesn't matter in of itself (to central bankers)
- But there might come a point where monetary easing (cutting interest rates) leads to a counterproductive tightening in credit conditions in retail markets (higher retail rates, less lending)
- That doesn't *necessarily* matter either
- Concern crystallised by the market reaction to the Japanese negative rate experiment
- Which surprised the Bank of Japan

Japanese equities around the negative policy rate announcement



The reversal rate

- The idea that negative rates could be counterproductive is gaining academic respectability
- **Reversal rate defined as the rate at which rate cuts lead to a contraction in lending**
- **Note:** it doesn't necessarily follow that the point at which cutting the policy rate is contractionary for lending is also the same point at which
 - cutting the policy rate is contractionary for domestic demand
 - **Think: dis-intermediated / markets-based economy!**
 - cutting the policy rate is counterproductive
 - **Think: currency wars!**
- Concern at the ECB and BoJ and elsewhere: are we at the reversal rate already? Is there no more to cut?
- So what is the source of the reversal rate?

Side issue: remuneration of excess reserves

- In a <<**QE**>> world the stock of central bank reserves and hence excess reserves is determined on the supply side. Individual banks can divest those excess reserves but the system as a whole will struggle. In practice, those excess reserves are concentrated in the core.
- In a <<**negative rate & QE**>> world the banks are effectively paying a “tax” on those excess reserves, with the tax base determined by the central bank.
- Stock of excess reserves under €2 trillion, so a tax of 0.004% implies a loss of around €10 billion every year. Not trivial. But compares to net interest income of c. €300 billion.
- Negative rate is applied to excess reserves so the ECB could reduce the tax base by introducing a tax free allowance on top of required reserves (this is often referred to as “tiering”)
- So long as the negative rate is applied to a sufficiently large stock of reserves then it will remain the marginal price that influences asset prices and the transmission through wholesale financial markets is preserved
- This is exactly what the BoJ did in July 2018 – reducing the fraction of reserves to which their negative rate applies – rather than abandon the negative rate policy
- Clear distributional consequences given that the excess reserves are concentrated in the core

Main issue: net interest income on the *retail* book

- The fundamental problem with the negative rate policy is that it squeezes the interest margin across the retail book – which is a much bigger deal because the book is much bigger!
- Banks will tend not to lower the interest rate on retail deposits below zero and may take time to introduce fees to compensate.
- So if the lower policy rate is passed through into retail lending rates then net interest income will be squeezed. And in some cases, lending rates are contractually tied to wholesale rates so there is no choice in the matter!
- Helps us understand why the reversal rate will vary across banks and jurisdictions
 - The more reliant the banking system is on **wholesale funding**, the better, because the policy rate should pass through into the rate that banks pay on the debt they issue
 - The more the deposit base is dominated by **large companies** and **financial institutions** the better, because the banks can pass on here
 - The **less competitive** a banking system is, the better, because banks have a larger stream of profits to cushion the squeeze and should have greater pricing power
 - The more lending rates are **contractually tied** to wholesale rates, the more banks lose – and potentially new customers lose – and the more existing customers gain

Asset purchases

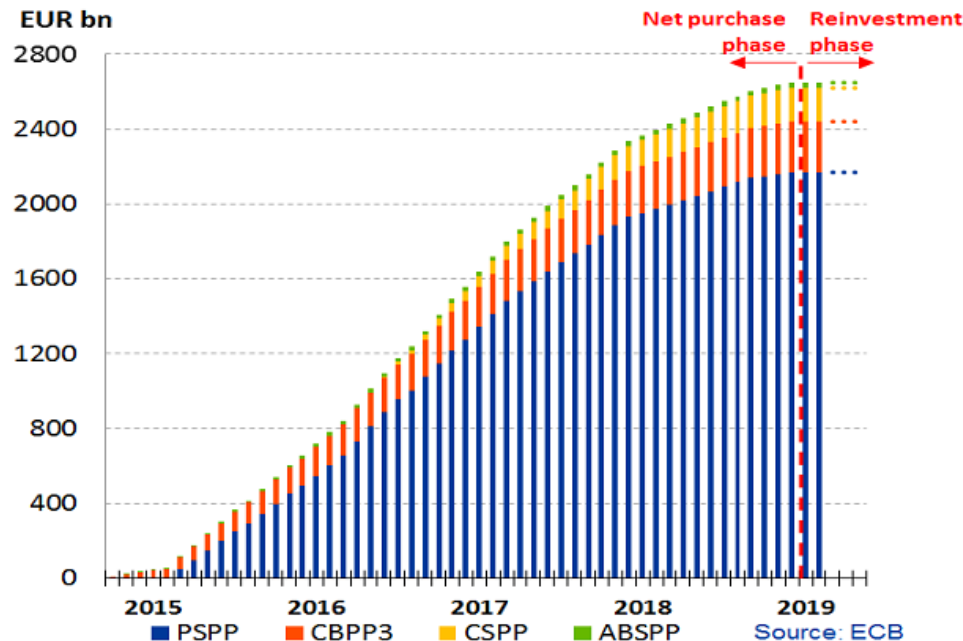


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Asset purchases

- If there is not much room to move on rates then the obvious answer is to do more next time on asset purchases – i.e., more Quantitative Easing
- We can debate whether – as with negative rates – the costs of more QE outweigh the benefits – but remember, it's the central bank making that evaluation
- Before we do that, we need to think through the constraints that the ECB has imposed upon itself where doing more QE is concerned



Self imposed constraints

- The ECB believes that the prohibition on monetary financing prevents the central bank from being complicit in a restructuring
- The ECB is concerned about the perverse implications in the event of a restructuring event given collective action clauses attached to bonds
 - If it holds too many bonds then it would be obliged to vote against any restructuring
- Explains the 33% issue limit (formerly 25%) so that the ECB cannot form a blocking minority
- The ECB is not there yet, but it seems as though this looming constraint was important in driving the decision to taper

2. Modification of Bonds

2.1 Reserved Matter Modification. The terms and conditions of the Bonds and any agreement governing the issuance or administration of the Bonds may be modified in relation to a reserved matter with the consent of the Issuer and:

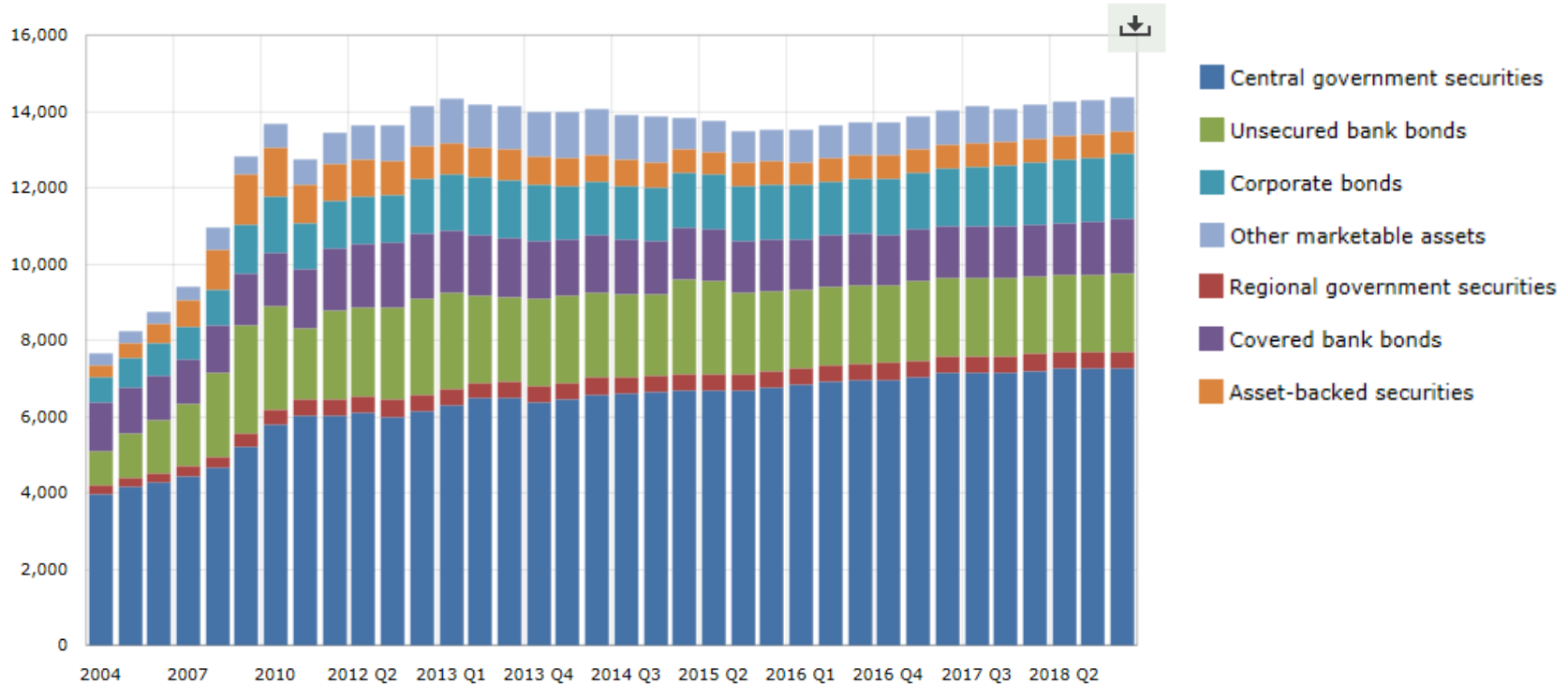
- (a) the affirmative vote of holders of not less than 75% of the aggregate principal amount of the outstanding Bonds represented at a duly called meeting of Bondholders; or
- (b) a written resolution signed by or on behalf of holders of not less than 66 2/3% of the aggregate principal amount of the Bonds then outstanding.

Answer #1: Chill out and ask a lawyer

- Repeat after me: Richard is not a lawyer
- But...
- There is a sense amongst many (most) ECB watchers that this was a self-imposed PR constraint that was important to pacify the criticism of QE in Germany
- It should be possible for the ECB to find legal advice that would allow the central bank to *significantly* relax this constraint
- However, the ECB could only do so if there was no expectation that the government concerned would default on the debt, so if the ECB does a lot more QE in a future downturn then the ratings threshold would presumably have to still hold
 - And at that point, this could be an issue for at least one large sovereign

Answer #2: Buy something else

- If the self imposed constraint on purchasing government bonds continues to bind then the ECB has to buy something else
- The current QE programme already includes corporate bonds, so that is easy to upscale
- The next market to disturb is “unsecured bank bonds” (> € 2 trillion)
 - There will be disquiet – but there is no clear prohibition!



Answer #3: YCC

- The Bank of Japan has already encountered this hypothetical problem
- If you are running out of bonds to buy, and the market worries that you will be forced to exit QE against your will then you have to change approach
- Yield curve control (YCC) is a superior form of unconventional easing to conventional QE
 - **Better to control the price than control the quantity to influence the price**
 - **In an ideal world, draw the yield curve you want, and have the staff deliver it**
- Once again, the monetary financial prohibition may prove a constraint on replicating what the Bank of Japan has done
 - But there is nothing to prevent the ECB pinning **swap rates**
 - And you address the scarcity problem!

Forward Guidance



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Forward guidance

- Forward guidance has become a standard tool of central banks
- For example, consider the current guidance of the ECB on interest rates
 - We continue to expect them to remain at their present levels at least through the summer of 2019, and in any case for as long as necessary to ensure the continued sustained convergence of inflation to levels that are below, but close to, 2% over the medium term
 - Links rate outlook to both state of the economy and the calendar
- Whether you think forward guidance works depends on
 - The message that central bankers are trying to send
 - How investors, companies and households think

Delphic vs Odyssean guidance

- There are two generic forms 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
- If investors are following the data closely and central banks publish private information then Delphic forward guidance should be largely redundant ... it is a statement of the obvious
 - 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 may not be monitoring the economy
 - Investors may not perfectly understand the reaction function

Counter-productive Delphic guidance

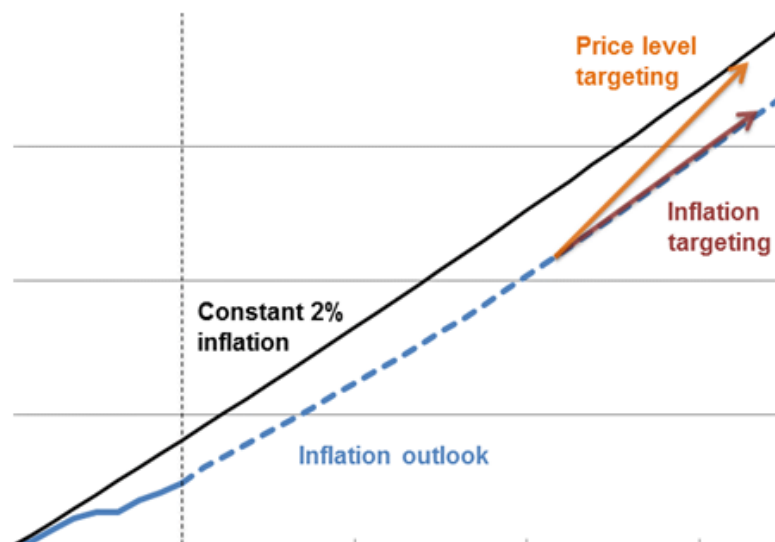
- However, there is still a limit to what you can do with Delphic forward guidance
 - If investors don't understand the reaction function then you are simply avoiding an unwarranted financial tightening (e.g., Taper tantrum)
- Depending on what investors have got wrong, Delphic forward guidance could 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 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

Enter Odysseus

- Odyssean forward guidance is a clear and time consistent statement that the reaction function has changed
 - Keep policy loose for too long (i.e., delay exit) to over-inflate the economy
 - Switch to a history dependent strategy
- With the exception of BoJ, central banks typically claim their guidance is Delphic
 - They are just telling you what they need to do to get inflation back to the target
- Risk management looks a little like Odyssean forward guidance, but the policy is conventional and more circumscribed by the outlook
 - Compensate for a downside tail risk (of far too little inflation) by aiming for a little too much inflation so that, on average, you expect to hit your target.
 - Can lead to overshoots, but only so long as the tail risk remains a pressing concern.
- If the Odyssean guidance is *credible* then it can prove effective
 - Credibility is in part about time consistency and binding the hands of your successors
 - Credibility is also about doing something to achieve your new objective
 - *This was our concern with the BoJ from the beginning*

PLPT – an example of Odyssean forward guidance

Forward guidance of a fundamental change in strategy
Compensating for past under-shoots with future over-shoots



Source: FRB of Minneapolis (2014)

'in order to counter misperceptions of an asymmetric interpretation and to underline the symmetry of the ECB's mandate, it appeared logical from a medium-term perspective for the Governing Council, after a prolonged period of undershooting of its inflation aim, to consider a limited period of overshooting in future.'

Accounts of the Jan 2016 ECB Meeting

vLTROs



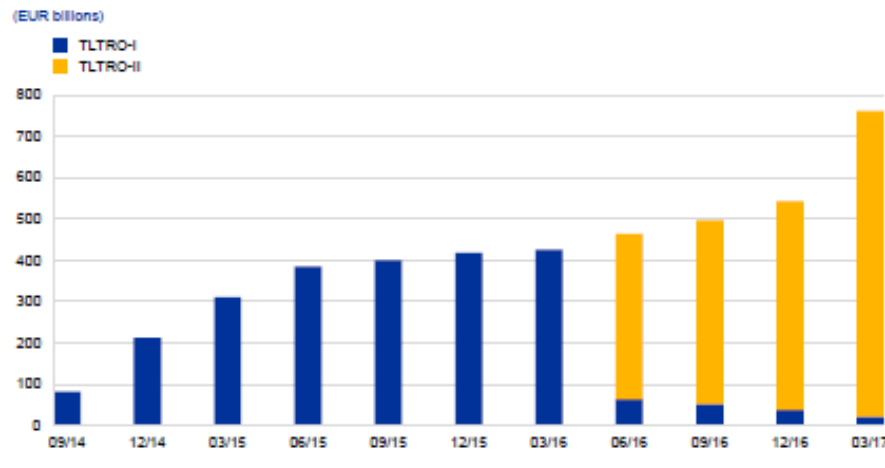
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Very long-term refinancing operations

- vLTROs have proved an important part of the ECB toolkit
 - Original version helped to prevent a wholesale run on peripheral banks
 - Later targeted versions designed to increase the balance sheet and support lending
- TLTROs currently account for almost €¾ trillion!
- However, it is important to be clear about what vLTROs can and cannot do

Evolution of banks' gross TLTRO borrowings



Source: ECB.

What vLTROs cannot really do: proxy QE

- There is a view that vLTROs can act as a proxy for QE when the ECB is no longer able to buy assets itself
- It is true that the TLTROs have increased the ECB balance sheet and they may well have helped support asset purchases by the commercial bank
- However, vLTROs should not be viewed as a genuine substitute for QE
 - The ECB does not have control over the usage, and hence the increase in the balance sheet or the total volume of asset purchases
 - The ECB does not have control over which assets are purchased
 - The ECB does not have much control over how long its balance sheet stays big
- In short, the ECB is delegating control over the monetary stance to commercial banks
 - Any signalling effect from QE is also probably lost

What vLTROs can do: forward guidance

- Central banks can use these vLTROs to lend credibility to either a dove-ish Delphic or Odyssean guidance strategy
- With an **FG-vLTRO** the central bank lends at a fixed rate (or even a capped variable path) over a long horizon that is consistent with the new guidance
- **This is precisely what the ECB did with the first round of TLTROs**
 - “the practical implementation of such measures [“Odyssean” forward guidance] is typically not discussed in the literature. The exact means by which private sector expectations could be managed are left unspecified. In the same vein, it is also unclear how the credibility of the central bank commitment would be ensured. The Governing Council of the ECB has never considered such an extreme form of forward guidance. But it has successfully adopted a simpler version of that approach. Certain forms of non-standard measures can also play a signalling role, i.e. help shape markets’ expectations about the future path of policy interest rates. An obvious example is that of refinancing operations at a pre-specified interest rate and whose maturity extends over many years. First, these operations provide an implicit signal of the central bank’s views about its intentions on future interest rates”

What vLTROs should be used for: YCC

- Not unreasonable for a central bank to have an interest in the terms on which commercial banks can gain access to term funding, particularly in a bank-centric economy where commercial banks are obliged to meet liquidity standards.
- ECB could use the vLTROs as a form of **asymmetric yield curve control in term funding markets**
- ECB could effectively cap the cost of secured funding out three of four years. The cost of accessing those facilities could reflect a combination of considerations
 - a **micro-prudential incentive**: users pay a fee for access which increases with the term of the loan and the extent of usage that is paid in instalments over the lifetime of the loan to encourage banks to self-insure ex ante and pay back ahead of schedule ex post. If the fee is sufficiently high then liquidity insurance will not crowd out market provision in most state of the world
 - a **macro-prudential over-ride**: in moments of stress the micro-prudential fee can be waived to encourage banks to use central bank facilities to fund their existing balance sheets rather than deleverage.
 - a **monetary policy signalling device**: the fees could be charged over and above a schedule for an underlying risk free curve set by the Governing Council which should reflect the expected future path of the policy rate.

Framework changes



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Framework changes

- The fundamental problem is the one we discussed earlier
 - We are too close to the reversal rate
 - ECB faces additional constraints on asset purchases
- The solution may lie in a fundamental change in the policy framework

First best solution

- The first best solution to this problem is well understood
 - Raise the inflation target
 - Theory: every 1pp increase in the target gives you 1pp of room
 - Practice: the change needs to be credible (need to be able to get there)

Second best solution

- The second best solution to this problem is well understood
 - State-contingent price level path targeting (Odyssean guidance)
 - Does not solve the immediate problem (you don't move the reversal rate)
 - Theory: commitment to the path, provides some additional stimulus
 - Practice: again needs to be credible

Third best solution

- The third best solution is the one that some policymakers within the Federal Reserve are currently discussing: *average inflation targeting*
 - Does not solve the problem
 - Does not involve clear commitment
 - Particularly prone to credibility problem
 - Unfortunately is therefore precisely the sort of “framework change” the ECB might consider under a future President

Helicopter drops

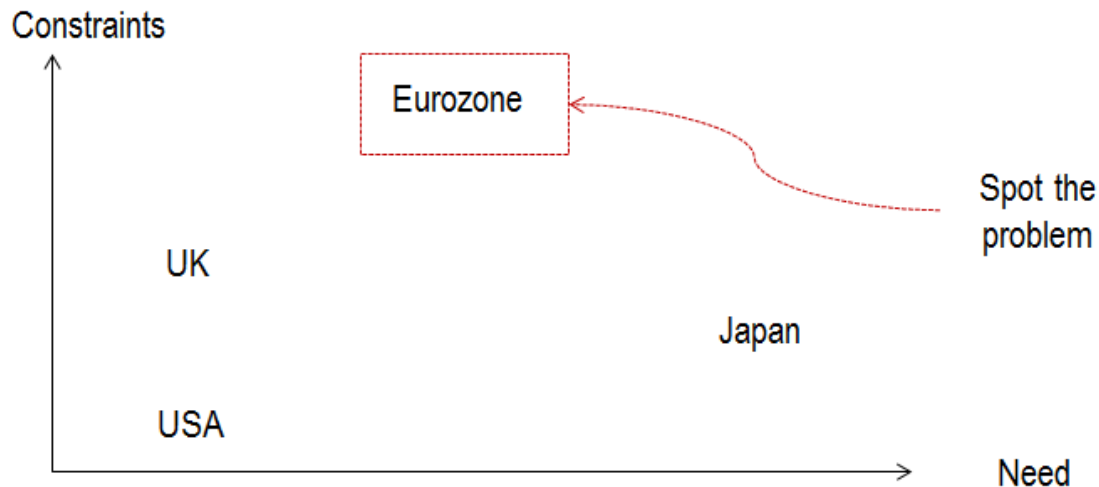


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Helicopter drops & monetary financing

- Helicopter drop thought to be the last resort of the desperate central bank but considerable political resistance in the Eurozone
- Otmar Issing: “Once you expose the money-printing machine to governments, it is done. You can try to organize, institutionalize, limits to that and argue that an independent central bank could stop it any day -- this is an illusion.”
- Peter Praet: “the independence that has been given to the ECB (and, in particular, the purpose of the monetary financing prohibition enshrined in Article 123 of the Treaty) is precisely to ensure that the central bank has full control over its balance sheet – that it cannot be forced by governments into monetising deficits or inflating away debts”



50 shades of Heli drops

- Central banks are already engaged in monetary financing through QE. What differentiates a helicopter drop from QE is that the monetary financing is **permanent**.
 - ECB could do that
- Identifying where QE as currently configured stops and where helicopter drops start is not easy

Taxonomy:

- **Plain vanilla QE**: central bank expects to sell bonds in future
- **Persistent QE**: central bank expects to sell bonds at some point, but investors expect bonds to stay on balance sheet for an extended period given anaemic outlook
- **Enhanced QE** (“Stealth Drop”): central bank finances fiscal stimulus; no formal coordination over purchases or commitment to hold bonds indefinitely but it is implied
- **Quasi-permanent QE**: central bank commits to permanent expansion of balance sheet but retains inflation MAC clause
- **Fully credible permanent QE**: central bank credibly pledges to keep bonds forever (equivalent to ‘purchase’ of zero coupon perpetual)

Do helicopter drops work?

- Academic helicopter drops may involve two related forms of stimulus: permanent injection of money and money-financed fiscal stimulus
- **Monetary:** more money now and more money later is consistent with higher prices
 - The announcement that the drop is permanent has to be credible for the drop to have a bigger impact than, say, conventional QE (at least in economic models)
 - If the central bank needs to recapitalise itself the drop can lead to a lot more money now and later which means much higher prices
- **Fiscal:** the stimulus should have a bigger impact on GDP (larger multiplier) because the standard Ricardian offset (people save more so they can pay future taxes) doesn't apply
 - Households (and their children and grandchildren) may not have to pay conventional taxes to fund government spending so there
 - but they will have to pay an inflation tax (the drop will impact on the value of any security / contract / benefit entitlement that pays a nominal return that is not indexed) and they may save more in response
 - and the government may have to raise conventional taxes to recapitalise the central bank

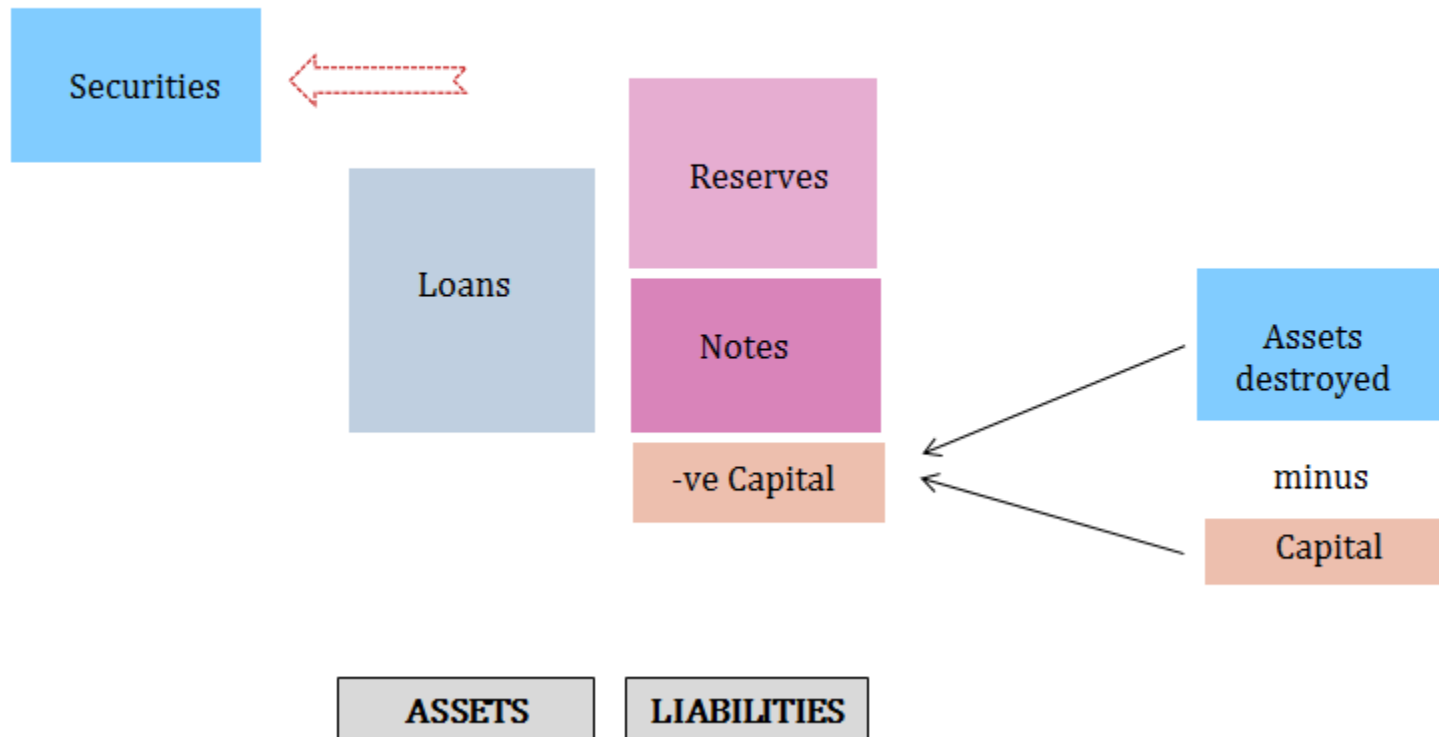
Fiscal coordination and drops

- In theory, a helicopter drop doesn't require any coordination with the fiscal authority – it doesn't even require a fiscal stimulus
 - **Direct drop:** The central bank could print currency and distribute it directly to households;
 - **Financing debt not deficits:** The central bank could buy more of the outstanding stock of government debt and announce it would hold the bonds indefinitely
 - But now issue limits bind
- However, in practice a helicopter drop is likely to involve some form of coordination with the fiscal authority on a number of fronts:
 - **Intermediation:** Government has the infrastructure (tax and benefit system) to distribute cash to the general public; central banks don't.
 - **More bang for your euro:** Government announces a significant fresh fiscal stimulus and the central bank then purchases the debt which the government issues.
 - **Consent:** Central bank may need some cover over the unconventional use of its balance sheet (entering into negative capital) and any change in the remit (adopting price level path target)
- *This is where life gets tricky for the ECB*

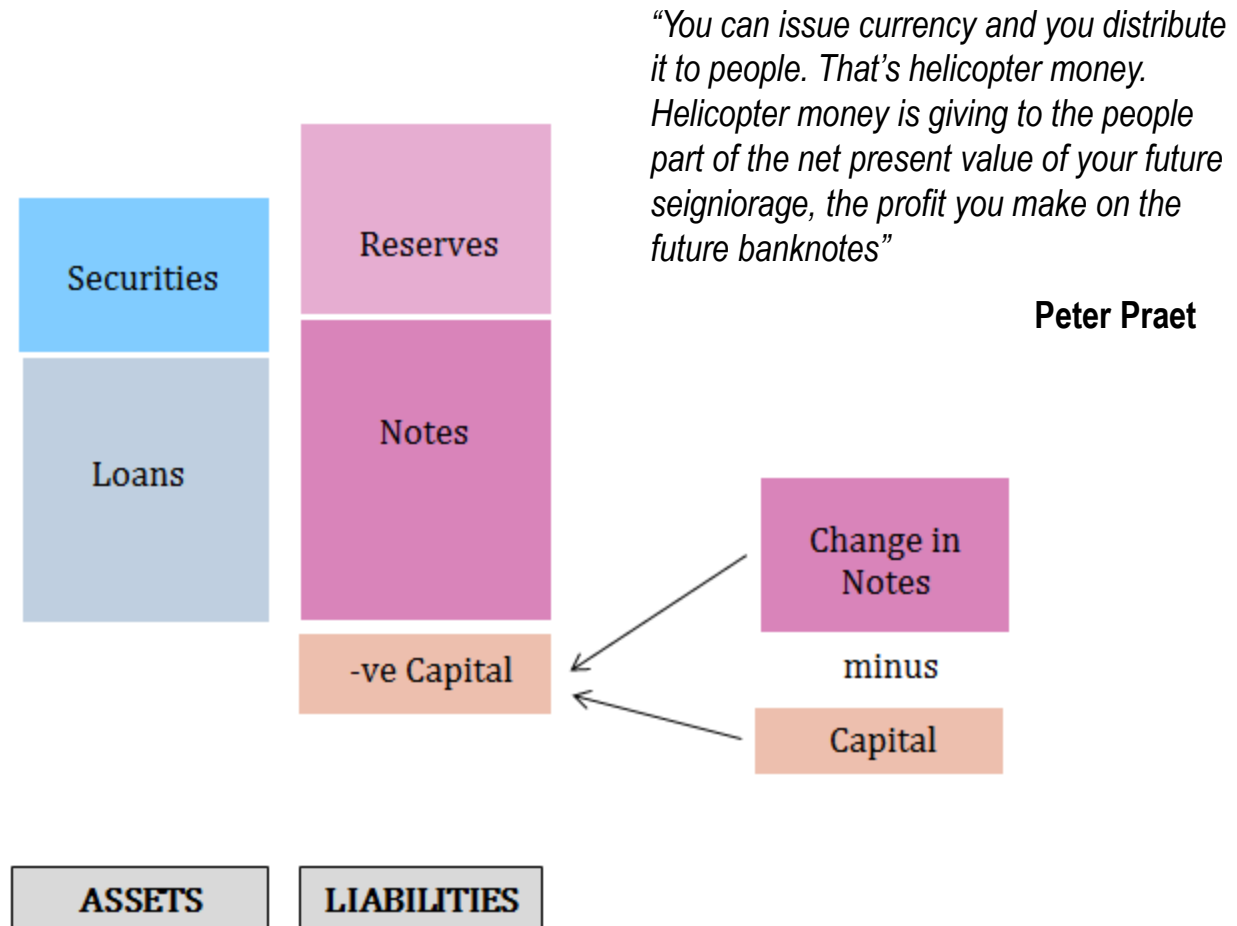
Living with negative net worth

- In the pure (academic) variant of the drop the central bank is issuing a liability (cash) and getting nothing in return which reduces its net worth, potentially driving it into a negative capital position
- Some commentators claim central banks can function with negative capital, but it seems unlikely that central banks can indefinitely achieve their objectives if they try to operate with large negative capital position. There are two basic ways to recapitalise a central bank
- **Seigniorage**: the central bank uses the flow of net interest margin on the liabilities that it creates to recapitalise itself. There are two options here:
 - Print more money: the central bank increases the size of its balance sheet – potentially significantly – to earn more income
 - Keep more: the central banks distributes less seigniorage income to the fiscal authority
- **Support from the sovereign**: the government can provide the central bank with assets (e.g. government bonds) which transforms the academic drop into enhanced/permanent QE

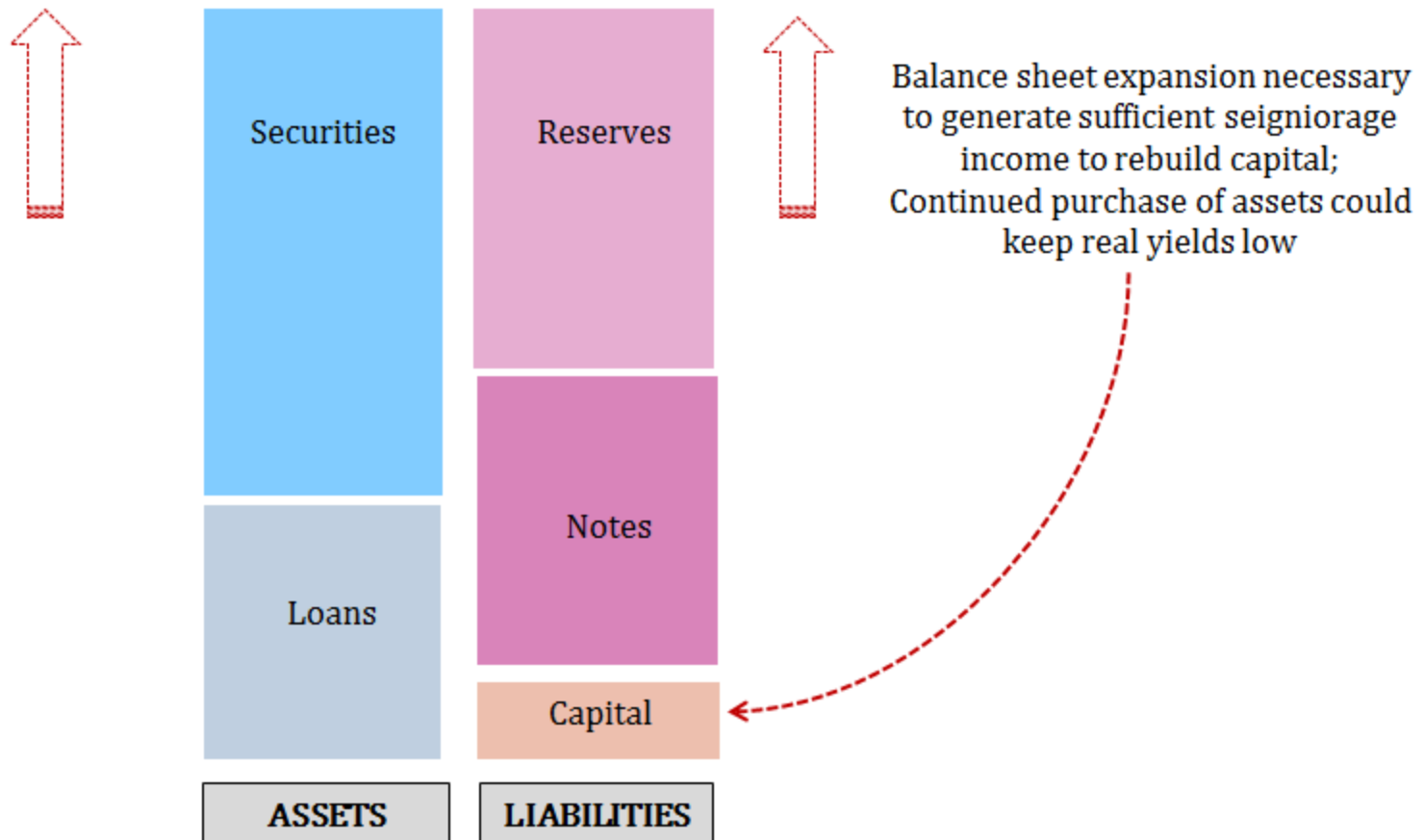
Helicopter drop by tearing up bonds



Helicopter drop by distributing cash



Second round effects



Agenda

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