

International Money and Banking:

8. How Central Banks Set Interest Rates

Karl Whelan

School of Economics, UCD

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Monetary Policy Strategies: The Fed and ECB

- Most textbook discussions of macroeconomics assume that central banks set monetary policy by controlling the money supply (shifting the LM curve left and right).
- We have seen, however, that targeting the money supply is not an effective way to produce good macroeconomic outcomes.
- Most modern central banks do not practice monetary targeting. Instead, they focus on controlling short-term interest rates.
- Here, we will take a close look at how the Federal Reserve and the ECB implement policies to control interest rates.

Part I

The Fed and the Market for Reserves

Reserves and Interbank Markets

- Banks are legally required to maintain a minimum amount of their assets in the form of reserve accounts at the Central Bank.
- Because reserve accounts are used by banks to make payments to each other, banks also need to keep a certain amount of reserves to process payments.
- So how much reserves should a bank keep? One strategy would be to behave in a “precautionary” manner, always keeping more reserves on hand than they probably need.
- But there is a downside to this. Central banks usually pay interest on reserves but traditionally this is a low interest rate. So holding large amounts of reserves is not very profitable.
- An alternative is to use what are known as **inter-bank money markets** in which banks borrow and loan reserves from each other. Banks can use these markets to make up any temporary shortfall in reserves.
- In the US, the interbank market for short-term funds is known as the Federal Funds market (despite its name, it is a private market) and the average rate in this market is known as the **Federal Funds Rate**.

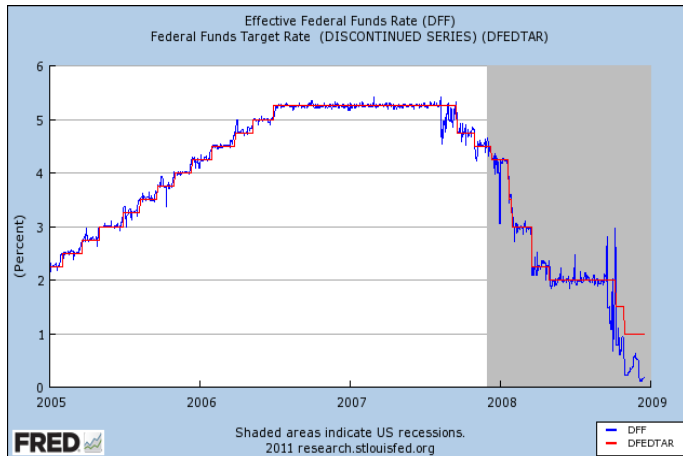
Supply and Demand in the Reserves Market

- Like all markets, the price set in the Federal Funds market—in this case the interest rate that banks charge to lend reserves—depends on both supply and demand.
- The Fed is uniquely positioned to control this price (i.e. the interest rate) because it can control both supply and demand in this market.
 - ▶ **Demand:** The Fed sets reserve requirements so they can increase or reduce demand for reserves via adjusting this requirement.
 - ▶ **Supply:** The Fed can determine the total supply of reserves to the system via open market operations.
- Traditionally, the Fed focused on controlling the supply of reserves. Adjustments in reserve requirements are generally not used by modern central banks as part of their monetary policy strategy.
- When the Fed creates lots of reserves, there is little demand for borrowing reserves and so the federal funds rate is low. When the Fed keeps the supply of reserves low, there is more demand for borrowing and the federal funds rate is high.

The Federal Reserve's Pre-QE Operational Strategy

- Prior to last decade, the Federal Reserve intervened in the Fed funds market—via its Open Market Desk at the New York Fed—on a daily basis to keep interest rates as close as possible to its target rate.
- It adjusted the supply of reserves by varying the amount of short-term loans (1 to 14 days) that it provided to banks via credits to their reserve accounts.
- The Open Market Desk would consult with the largest banks attempts to figure out how much liquidity was needed and plans its operation accordingly. Most days, the Fed succeeded in keeping the funds rate close to target.
- In addition to daily interventions in the federal funds market, the Fed also had a 'standing facility' for lending the banks, called the "discount window." The discount window interest rate was traditionally a half percentage point above the target fed funds rate. There is evidence, however, that banks generally do not want to use the discount window because it is seen as a last resort and there may be a stigma associated with using it, should others find out i.e. it could signal the bank is in crisis.

Historically, the Fed Kept the Funds Rate Close to Target



Reserve Balances of US Banks



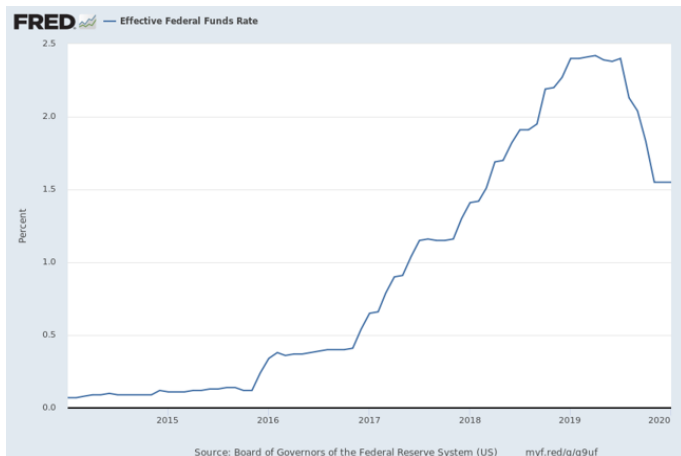
Monetary Policy When Reserves Are Plentiful

- The Fed's QE programme created brought the supply of reserves to almost \$3 trillion. With a huge supply of reserves, the traditional way of raising interest rates (by generating a shortage of reserves) did not work.
- This meant the Fed needed to use new tools to raise interest rates:
 - ① **Interest on Reserves:** In October 2008, the Federal Reserve began paying interest on reserves. They noted: *“Paying interest on excess balances should help to establish a lower bound on the federal funds rate.”* Rates on loans made by banks or other risky investments need to be higher than this interest rate because this is risk free for banks.
 - ② **Interest to Non-Banks:** The Fed also now has a programme of taking in money from a wide range of non-bank financial institutions and paying interest. The technical name for this programme is the “Overnight Reverse Repurchase Agreement Facility” (ON RRP). The Fed says *“Any counterparty that can use the ON RRP facility should be unwilling to invest funds overnight with another counterparty at a rate below the ON RRP rate, just as any depository institution eligible to earn interest on reserves should be unwilling to invest funds overnight with another counterparty at a rate below the interest rate on excess reserves.”*

Successful Implementation of New Policies

- Unlike in the past when it had a specific target for the Federal Funds rate, with its new operational regime, the Fed decided to target a range for the federal funds rate that is 25 basis points wide.
- These new tools were effective in raising the fed funds rates and have been used more recently to implement three 25 basis point cuts.
- The FOMC currently has target range for the fed funds rate of between 1.5% and 1.75%
- The interest rate on reserves is currently set at 1.6%.
- The interest rate offered in its ON RPP programmes is currently set at 1.5%.
- The interest rate available from the discount window is 2.25%.

Current Target Funds Rate Is Between 1.5% and 1.75%



Balance Sheet Reduction

- From 2015 to 2019, the Fed reduced the supply of reserves by selling securities and thus retiring the money that was created when the assets were purchased.
- While the Fed had originally planned to bring its balance sheet back to its pre-crisis size, it decided to change its plans, and stopped selling its security holdings in August 2019 with the supply of reserves being much higher than before the global financial crisis.
- The reason for this change of plans is that post-crisis regulations which we will discuss later, particularly the liquidity coverage ratio—which requires banks to hold sufficient high-quality liquid assets to meet net cash outflows over a thirty-day stress period—mean that banks now want to maintain much higher levels of reserves than previously.
- The FOMC minutes from its November 2018 meeting: *“banks’ liquidity management practices had changed markedly since the financial crisis, with large banks now maintaining substantial buffers of reserves, among other high-quality liquid assets, to meet potential outflows and to comply with regulatory requirements.”*
- See the New York Fed article “Stressed Outflows and the Supply of Central Bank Reserves”

A Decision on Monetary Policy

- By 2018, the Fed had realised the demand for reserves was going to prevent to require it to going back to its pre-crisis balance sheet size and officials discussed options for implementing monetary policy.
- Over the course of a number of meetings, the FOMC had a discussion about how to proceed, with lots of technical advice provided by its staff of economists and financial market experts. See the next slide.
- In January 2019, the FOMC announced: *After extensive deliberations and thorough review of experience to date, the Committee judges that it is appropriate at this time to provide additional information regarding its plans to implement monetary policy over the longer run. Additionally, the Committee is revising its earlier guidance regarding the conditions under which it could adjust the details of its balance sheet normalization program. Accordingly, all participants agreed to the following. The Committee intends to continue to implement monetary policy in a regime in which an ample supply of reserves ensures that control over the level of the federal funds rate and other short-term interest rates is exercised primarily through the setting of the Federal Reserve's administered rates, and in which active management of the supply of reserves is not required.*

The Fed Staff's Discussion of Two Options

November 2018 FOMC minutes. *“The staff highlighted how changes in the determinants of reserve demand since the crisis could affect the tradeoffs between two types of operating regimes: (1) one in which aggregate excess reserves are sufficiently limited that money market interest rates are sensitive to small changes in the supply of reserves and (2) one in which aggregate excess reserves are sufficiently abundant that money market interest rates are not sensitive to small changes in reserve supply. In the former type of regime, the Federal Reserve actively adjusts reserve supply in order to keep its policy rate close to target. This technique worked well before the financial crisis, when reserve demand was fairly stable in the aggregate and largely influenced by payment needs and reserve requirements. However, with the increased use of reserves for precautionary liquidity purposes following the crisis, there was some uncertainty about whether banks’ demand for reserves would now be sufficiently predictable for the Federal Reserve to be able to precisely target an interest rate in this way. In the latter type of regime, money market interest rates are not sensitive to small fluctuations in the demand for and supply of reserves, and the stance of monetary policy is instead transmitted from the Federal Reserve’s administered rates to market rates—an approach that has been effective in controlling short-term interest rates in the United States since the financial crisis, as well as in other countries where central banks have used this approach.”*

September 2019 Liquidity Shortage and Future Policy

- During September 2019, despite reserve balances still being over \$1.5 trillion, there was a temporary shortage of liquidity in US financial markets.
- The repo market—where people take on short-term loans using securities as collateral—saw a jump in interest rates and the Fed funds rate jumped up to 2.3 percent, just above the top of the Fed's target range.
- The Fed had relied on surveys of financial institutions to assess how much it needed to supply in reserves to maintain its “abundant liquidity” model. (Again, see the New York Fed article). But demand for liquidity can vary over time and in September the Fed was supplying too little.
- The Fed reacted to this shortage of liquidity supply relative to demand by conducting open market operations to increase the supply of liquidity.
- However, this raises questions about whether the Fed wants to be regularly intervening to provide liquidity “top ups” to the market or whether it should have policies that automatically provide as much liquidity as the market wants. As we will discuss in a moment, the Eurosystem's operational policies currently do this without need for day-to-day market interventions.

Why is Demand for Reserves So High?

- Prior to the global financial crisis, banks generally had very low levels of reserve balances and yet now we are seeing a “shortage” at a time when the Fed has supplied \$1.5 trillion to the system.
- What has changed?
- The answer is new liquidity regulation introduced after the global financial crisis, particularly the liquidity coverage ratio (LCR).
- The LCR requires banks to hold sufficient high-quality liquid assets (HQLA) to meet net cash outflows over a thirty-day stress period. In the US, HQLA include reserve balances held in a Federal Reserve account and Treasury securities, as well as some other assets.
- But if banks can hold Treasury bonds, why keep the money on reserve, which generally earns a lower interest rate?
- See the quote on the next page from a blog post by Cechetti and Schonholz:

Cechetti and Schonholz on Demand for Reserves

- *“Today, banks must hold significant liquid assets to back various sorts of short-term liabilities. The details of the Liquidity Coverage Ratio (LCR) are complex, but the basics are simple: banks need to hold some combination of reserves and U.S. Treasury securities to guard against deposit outflows in times of stress. That is, prior to going to the Fed to borrow, these new regulations envision that banks will use the liquid assets they have on hand to meet withdrawals.*
- *In practice, it turns out that banks prefer to hold reserves than securities to insure against the possibility of outflows. There are several reasons for this. First, if securities—even U.S. Treasuries—are sold quickly, it can drive prices down (something that banks’ own liquidity stress tests may assume). Second, everyone finds out when someone is selling securities under stress. If a bank uses reserves to meet withdrawals, only the Fed knows. The mix of liquidity considerations and the stigma from large Treasury sales makes reserves very attractive.*

Paul Volcker and Monetarism: 1979-1982

- A final mention for monetarism.
- For most of its history, the Federal Reserve has set an implicit or explicit target for the Federal Funds rate and supplied the amount of reserves on a daily basis that kept this rate close to its target.
- During the period from October 1979 to October 1982, under the chairmanship of Paul Volcker, the Fed switched from targeting the federal funds rate to targeting reserves with the intention of hitting target levels for the growth rate of the money supply.
- The background to this decision was (a) a large rise of inflation (12% in October 1979) and the appointment of Volcker (a well-known “inflation hawk”) to the position of Fed Chair by President Jimmy Carter (b) the increasing influence of Milton Friedman’s monetarist ideas.
- The Federal Reserve makes available transcripts of the meetings of its monetary policy decision-making body, the Federal Open Market Committee (FOMC) years after the meetings have happened. The October 1979 transcript suggests Volcker was probably not a hardline monetarist but rather was looking for something to break “inflationary psychology.”

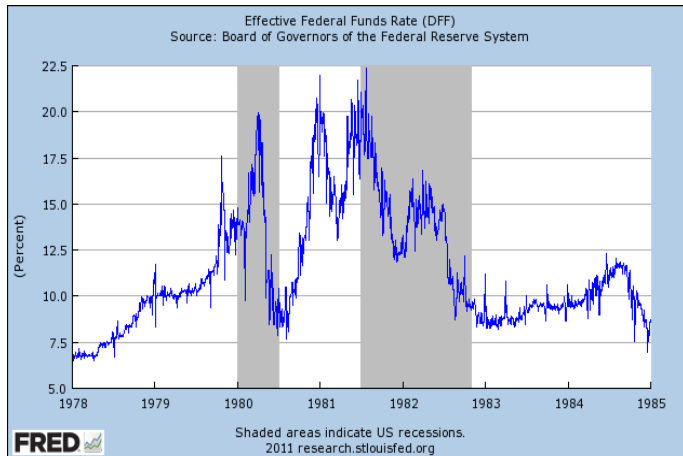
Paul Volcker and Monetarism: 1979-1982

- Daily and weekly demand for reserves tends to be very volatile, as the large amounts of transactions moving around systems like on Fedwire or TARGET2 can create unpredictable shortages and excesses of reserves at individual banks.
- If central banks follow a monetarist policy and thus supply a fixed level of reserves, this can cause interest rates in money markets to move around a lot from day to day as some days lots of banks are seeking loans, forcing the interest rate up, while other days few banks are seeking loans and interest rates are low.
- During the period when monetarist policies were pursued in the US, the Federal Funds rate was highly volatile, moving around on a daily and monthly basis in a way that was not seen before or since. Similar volatility was seen in the UK during this period, as their government also adopted monetary policies.

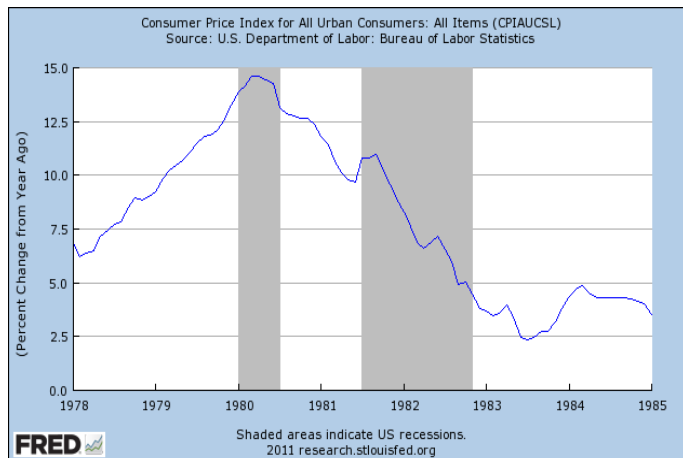
October 1982: Abandoning Monetarism

- In one sense, Volcker's monetarist strategy was a success: US inflation fell rapidly after the implementation of monetary targeting.
- However, if one looks at the pattern for interest rates, this wasn't too surprising. The Federal Funds rate reached about 20% on three different occasions between 1980 and 1982 and the US economy suffered a severe double-dip recession.
- By late 1982, with inflation conquered and interest rates high and volatile, Volcker became dissatisfied with the restrictions placed on him by monetary targeting, particularly because the link between the monetary base and M1 was proving to be so imprecise.
- Today, many believe that Volcker's apparent embrace of monetarism was a tactical decision to avoid having to take direct responsibility for the high interest rates required to bring down inflation.

The Federal Funds Rate: 1978-1984



US CPI Inflation: 1978-1984



Part II

The ECB's Monetary Policy

The Early Years: M3 Reference Value

- The ECB's Monthly Bulletin of January 1999 described its monetary policy strategy as follow: *“The strategy consists of three main elements: (i) a quantitative definition of the primary objective of the single monetary policy, namely price stability; and the “two pillars” of the strategy used to achieve this objective: (ii) a prominent role for money, as signaled by the announcement of a reference value for the growth of a broad monetary aggregate; and (iii) a broadly based assessment of the outlook for future price developments and the risks to price stability in the euro area as a whole.”*
- Price stability was defined as inflation below 2 percent.
- A reference value (i.e. a target) was initially set at 4.5% growth rate for M3 and was used to produce a “monetary overhang” measure: the difference between actual M3 growth and the reference value, with higher numbers representing higher risks for medium term inflation.
- Since 2001 the growth of M3 started to accelerate to values well above the 4.5%, hitting 10.9% in December 2001. This suggested significant risks for inflation that did not then show up in the data.

Post 2003: Less Emphasis on Money

- In May 2003, the ECB published a review of the monetary policy framework including the following elements.
 - 1 The medium-term target for inflation was redefined to a value “below but close to 2%”
 - 2 The presentation of the monetary policy decisions would start with the “economic analysis to identify short- to medium-term risks to price stability”.
 - 3 The monetary analysis would mainly serve as a means of cross-checking, from a medium- to long-term perspective, the indications coming from the economic analysis
 - 4 An annual review of the M3 growth reference value was dropped. While still at 4.5%, the reference value has, in fact, not been mentioned or used since then.
- See the speech by former ECB Vice-President, Vitor Constancio, “Past and future of the ECB monetary policy” for further discussion of the early years of the ECB.

European Short-Term Rates and the ECB's Policy Tools

- Traditionally, the ECB's target interest rate was the **EONIA**, a measure of average interest rates in overnight interbank markets.
- In October 2019, EONIA was replaced as the standard reference rate by **€STR** (or **ESTER**) which is published by ECB. This is a broader measure of short-term interest rates based on a superior sample of quotes to EONIA.
- The ECB controls market interest rates via a range of tools, including a weekly lending operation to banks and the use of two “standing facilities”.
- The Eurosystem conducts a weekly lending operation, known as the “main refinancing operation”, with funds due back a week later.
- The loans take the form of repurchase agreements (repos): The central bank takes a security from a financial institution, provides it with a short-term loan by boosting its reserve account and sells the security back later at an agreed higher price.
- Because all banks in the Eurosystem can borrow from the ECB as an alternative to interbank money markets, the terms of the ECB's lending programmes have traditionally had a key influence on short-term loan rates.

The ECB's Pre-2008 Operational Strategy

Prior to 2008, the ECB's operational strategy worked as follows:

- Banks need a certain supply of liquidity, to use to supply banknotes to the public and to satisfy reserve requirements. This must be supplied by the central bank.
- The ECB decided how much money it would loan out and then conducted an auction for these funds.
- It announced the minimum interest rate that banks would have to pay for the loans and then rationed the loans by giving them out to those who are willing to pay the highest rate.
- This “minimum bid rate on the main refinancing operation” was the “headline” interest rate for most of the ECB's existence.
- The ECB also had a three-month refinancing operation that provided about one third of the liquidity.
- The ECB maintained a list of high-quality assets that it was willing to accept in the refinancing operation as well as a list of “haircuts” it would apply to these assets (so, for example, an asset worth €100 million might be used to obtain a loan of €95 million).

The Eurosystem's Risk Control Framework

- There are various systems in place to ensure that banks repay the loans made to them by the Eurosystem or, alternatively, that the Eurosystem obtains an asset equivalent in value to the loan.
- Banks that don't repay their loans lose the asset pledged as collateral.
- The ECB loans feature *haircuts*, meaning the collateral is supposed to be higher in value than the loan provided to the bank.
- The haircuts get bigger (i.e. the value of the loans get smaller) as the central bank's assessment of the quality of the asset declines. So, for example, if a bond gets downgraded by a ratings agency, then a bank pledging this bond will only be eligible for a smaller loan.
- The Eurosystem also has a “risk control framework” that allows the ECB to deny credit to any bank or reject any assets as collateral should it see fit “on the grounds of prudence”.
- See my blog post on “Draghi's Secret Tool” for a description of the how the Eurosystem's risk control framework was used by the ECB at a number of key junctures in the euro crisis, including Ireland's decision to seek a bailout from the EU and the IMF.

Risk Sharing

- What happens, however, if there is a default and the value of the collateral turns out to be less than the value of the loans? In this case, the central bank that made the loan writes down the value of its assets (without writing down the value of its liabilities, i.e. the money it has created). This reduces the capital of that central bank.
- However, Article 32.4 of the ECB statute states that losses on monetary policy operations can be shared. In practice, this has meant that any losses incurred on standard monetary policy operations are shared among the various central banks in the Eurosystem.
- The shares of losses taken are determined by each country's ECB capital key. This is the share of the money that each national central bank provided to give the ECB its initial amount of capital.
- Could losses on monetary policy operations mean some NCBs lose all their capital? The Eurosystem as a whole can take losses of almost €500 billion before liabilities would exceed assets so this is unlikely, though possible. Not clear it matters though.
- Note that losses (or profits) on QE purchases by NCBs are not being shared.

Emergency Liquidity Assistance

- In some cases, banks run out of Eurosystem collateral but still need to borrow from the central bank to pay off the liabilities that are flowing out of the bank.
- Eurosystem central banks generally have a lender of last resort power that pre-dates the euro. This allows them to make loans to banks even if these banks don't have eligible collateral.
- These loans are called **Emergency Liquidity Assistance (ELA)** and the central banks of the Eurosystem do not share risks with the central bank that makes these loans.
- Article 14.4 of the ECB statute implies that the ECB Governing Council can decide by a two thirds majority to prevent any programmes (including ELA) that “interfere with the objectives and tasks” of the ECB. So while the risk stays with the central bank (and ultimately government) granting the loan, the ECB Governing Council still needs to approve these loans.
- ELA featured heavily in the Irish banking crisis (almost all the money Anglo/IBRC owed was ELA), in Cyprus (where the Cypriot banks were granted large amounts of ELA prior to 2013's crisis) and in the current situation in Greece. See my paper “The ECB's Collateral Policy and Its Future As Lender of Last Resort.”

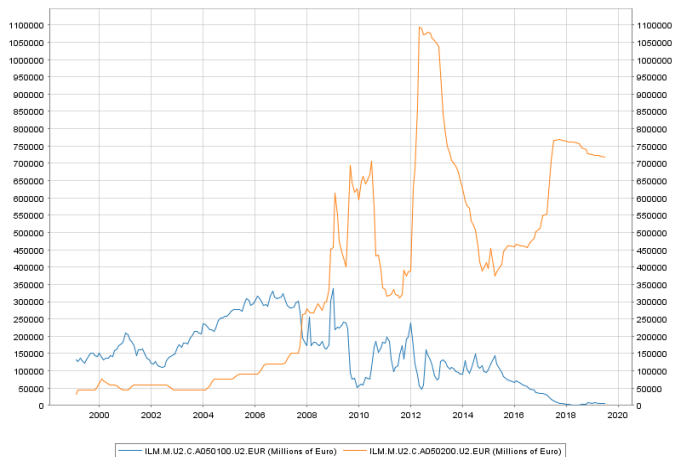
Changes to ECB Strategy Since 2008

- From late 2008 onwards, many European banks lost deposit and non-deposit funding because of fears they may fail or that their country may leave the Euro. Volume in interbank markets like Euribor fell steeply.
- This meant the Eurosystem has had to step in to become a major source of funds for the euro area banking system.
- There have been a number of major changes to ECB operations:
 - ▶ **Full Allotment:** Since October 2008, the MRO has been conducted on a fixed-rate basis and all bidders have been allocated their requested amount of funds. Of course, they still need to have the eligible collateral to obtain a loan.
 - ▶ **Longer Terms:** The weekly MRO ceased to be the major source of funding provided by the ECB, replaced by longer-term refinancing operations (LTROs) which are loans with a term of months or years.
 - ▶ **Looser Collateral Requirements:** The list of eligible collateral for all ECB operations has been widened. In particular, starting in early 2012, the ECB widened the amount of “credit claims” (i.e. bank loans) that it will accept as collateral.

The LTRO Operations

- The chart on the next page shows the size of ECB refinancing operations, broken into the main (short-term) operation and longer-term operations.
- As financial tensions increased from 2008 on, the ECB moved to six month and one year operations.
- By late 2011, the Euro crisis was entering an intense phase and banks in Spain, Italy and other European countries were having severe trouble obtaining non-deposit funds (e.g. from the bond market).
- The ECB thus introduced a new long-term refinancing operation (LTRO) which saw banks borrowing large amounts of money for three years.
- This LTRO had an influence on the sovereign debt crisis. Many banks used the funds they borrowed from the ECB to buy sovereign bonds.
- LTRO borrowings declined from early 2013 to early 2015 but ECB then introduced a new “Targeted LTRO” (TLTRO) scheme which provided low-cost loans as long as banks used them to provide additional credit. Longer-term borrowings now account for almost all of the borrowing from the the Eurosystem.

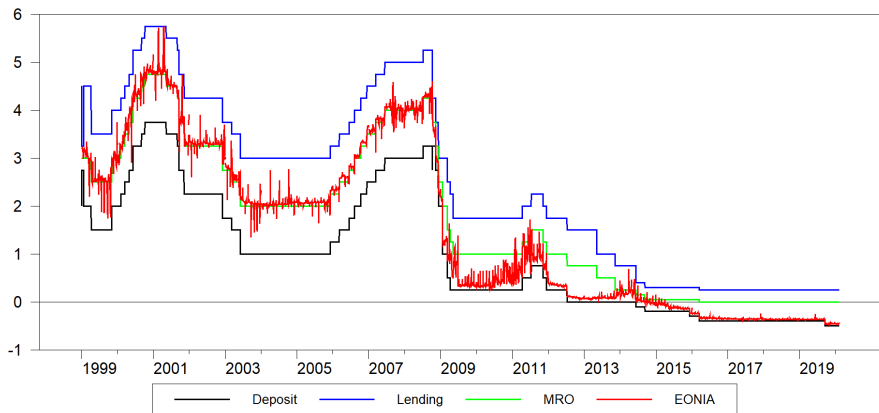
Size of the ECB's Refinancing Operations (Orange=Long-Term, Blue=Main)



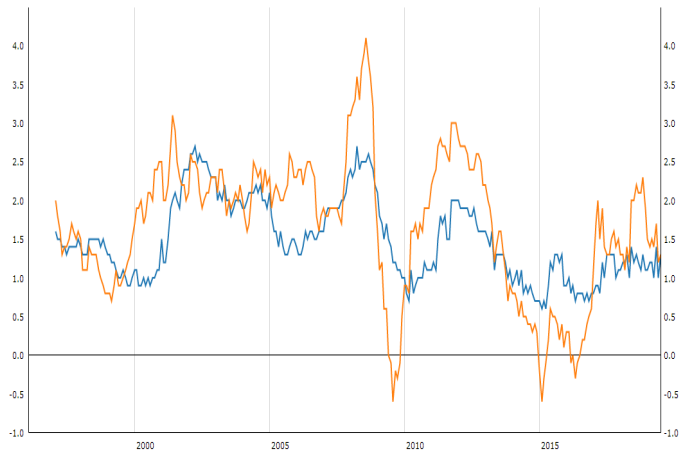
Standing Facilities

- In addition to its regular weekly and three-month refinancing operations, the ECB also has “standing facilities” that are always available.
 - ▶ A lending facility (“marginal lending facility”) traditionally set 1% above the rate on main refinancing operation.
 - ▶ A deposit facility traditionally set 1% below the rate on main refinancing operation. Since September 2014, this rate is negative so banks need to pay ECB to have money in their deposit account.
- The interest rate in the main refinancing operation was traditionally the key policy rate and, until recent years, EONIA was close to this rate most of the time. The standing facilities are intended to set an interest rate “corridor” for money market rates.
 - ▶ Since banks can borrow from the lending facility, they do not need to pay a higher interest rate than this in the money market.
 - ▶ Similarly, banks don’t need to lend at a rate lower than they can get from the deposit facility.
- These tools have done a good job of controlling Euro area money market interest rates. EONIA has never gone outside the “corridor”.

How the ECB Controls Money Market Interest Rates



Total (Orange) and Core (Blue) HICP Inflation



Low Inflation and ECB Policy In Recent Years

- After years of recession after 2008, the euro area economy began to recover in 2012. Unemployment in the euro area is now back to its pre-crisis levels.
- However, despite a number of years of steady growth and falling unemployment, the ECB has failed to get inflation back towards its target of “close to but below 2 percent”.
- The ECB has been gradually increases monetary stimulus to try to reach this target, introducing various new elements to monetary policy.
- In a July 2019 speech “Monetary Policy and Below-Target Inflation” by ECB Chief Economist, Philip Lane. He notes four different policies the ECB is pursuing to boost the economy and raise inflation.
 - ① Setting the interest rate on its deposit facility to negative values.
 - ② Forward guidance on the future path of policy (we will discuss this more in a few weeks time)
 - ③ Targeted Long-Term Refinancing Operations incentivising banks to make loans.
 - ④ The Asset Purchase Programmes, i.e the ECB’s version of QE.

Negative Deposit Rates and Market Interest Rates

- In the past, the EONIA rate tended to be close to but slightly higher on average than the MRO rate, reflecting the fact that banks could substitute between borrowing from ECB and borrowing in interbank markets.
- In recent years, the MRO rate has been at zero but the ECB has lowered the interest rate on its deposit facility, most recently cutting it from -0.40% to -0.50% in September.
- With the QE programme creating huge amounts of reserves, the deposit rate has become the key interest rate for banks and short term money market rates have followed the deposit rate in recent years. Many European sovereign bonds also now have negative yields.
- Other market interest rates (such as for mortgages) have not gone negative (because banks still have to account for credit risk) but the negative deposit facility rate has led to a general lowering of market rates.
- Why would banks keep money in the deposit facility when they are being charged money for it? Shouldn't they just take the money out as cash and store it in warehouses? So far we see little evidence of banks doing this. Storage costs for large sums of cash could be high and there is risk (it could be stolen or burn) and insurance costs.

Tiering of Reserves

- While the negative interest rate in the deposit facility has been successful in reducing market interest rates, there have been concerns about a possible negative side effect.
- This policy acts effectively as a “tax” on the euro area banking sector at a time when banking profitability is already quite low.
- This raised concerns that by reducing bank profits and thus their capital levels, it may lead to a reduction in the provision of credit. Alternatively, banks may decide to increase the interest rates they charge customers to compensate for the costs associated with the deposit facility.
- In response to these concerns, in September 2019, the ECB Governing Council introduced a new “tiering” policy for reserves. For each bank, the negative deposit facility rate is only applied to reserves they hold in excess of six times their reserve requirements.
- This maintains the negative deposit facility rate as the key “marginal” rate in the banking system but reduces the impact on bank profits.

What Next for ECB Monetary Policy?

- Despite providing significant monetary stimulus to the economy, the ECB has still not met its target level of “close to” 2 percent inflation.
- While many have believed for some time that the next steps for monetary policy will be a “normalisation” with policy rates increased after inflation is brought back to target, it is possible this may not happen in the next few years.
- One hypothesis being increasingly discussed is that due to low productivity growth and demographic developments, modern advanced economies now have a much lower “equilibrium interest rate” so a “future normal” interest rate for ECB might be no more than the 2 percent inflation rate, for example.
- See my paper, “Monetary Policy in an Era of Low Average Growth Rates.”
- The current global expansion has also been going on for a relatively long time by historical standards. Should a world recession take place, the ECB may find itself scaling up the its QE programme and pushing harder on other “unconventional” policies.

The ECB's Monetary Policy Strategy Review

- Under new President Christine Lagarde, the ECB is conducting a review of its monetary policy strategy
- This review includes:
 - 1 The quantitative formulation of price stability
 - 2 The monetary policy toolkit
 - 3 The economic and monetary analyses and communication practices
 - 4 Other considerations, such as financial stability, employment and environmental sustainability, will also be part of review
- The review is expected to conclude by end of 2020

What Might the Review Consider?

- My recent briefing paper “Recommendations for the ECB’s Monetary Policy Strategy Review” discusses the issues that might be considered by the strategic review.
- The paper’s recommendations include:
 - ① The ECB adopting a 2 percent average inflation rate over a relatively long period as its inflation target.
 - ② Removing the monetary pillar from its official monetary policy strategy.
 - ③ Permanent adoption of the fixed rate full allotment approach to the provision of liquidity to banks.
 - ④ Clarification of the ECB’s policy on how much risk it is willing to take on its balance sheet.
 - ⑤ Devote more effort to communicating the broadness of its mandate, i.e. the non-price-stability elements.

Recap: Key Points from Part 8

Things you need to understand from these notes:

- 1 Why interbank “money markets” exist.
- 2 Why central banks are able to influence money market interest rates.
- 3 How the Fed traditionally conducted monetary policy.
- 4 How the Fed’s approach to monetary policy has evolved.
- 5 Why Paul Volcker adopted (and then abandoned) monetary targeting.
- 6 The ECB’s refinancing operations and how they have changed in recent years.
- 7 Risk control and risk sharing in the Eurosystem.
- 8 Emergency Liquidity Assistance in the Eurosystem.
- 9 How the ECB’s “corridor” system affects market interest rates.
- 10 Why the deposit rate has become the ECB’s key policy rate.
- 11 Recent changes to ECB policy: QE, TLTRO and a tiered reserves system.