READING CENTRAL BANKS DOES UNCONVENTIONAL BLUR THE PICTURE?

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It is in the interest of central banks that financial market participants and the general public have a good understanding of their intentions and "reaction function", i.e. how central banks react to change in the macro-economic environment and the economic outlook.

While this seems now a general accepted view, it was not always seen as a good thing in the history of central banking for the public to have a clear understanding of what the central bank was up to. The Bank of England, for example, kept communication with the public to a bare minimum for most of its history. Between 1920 and 1945, the Governour of the Bank of England gave only one speech per year (Haldane, 2017).[1] Things have clearly changed since then, with barely a day passing by without a public intervention from one of the major central banks. Modern central banks see communication with the public and the signaling of their intentions as part of their daily life.

There are good reasons why a central bank would want the public to understand its motives and actions. On a very general level, a central bank needs to anchor medium-term private sector inflation expectations to its inflation target in order to be able to fulfill its price stability mandate. A dis-anchoring of private sector inflation expectations – given the self-fulfilling element of inflation dynamics – poses a serious

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problem for a central bank. Thus, ensuring that the private sector has "faith" in the central bank and its actions to achieve its inflation target is a necessary pre-condition for success.[2]

But the advantages of understanding the central bank's intentions go beyond stabilizing medium-term inflation expectations. By understanding the central bank's response to macro-economic changes, financial markets boost the central bank's ability to steer the economy and inflation after an exogenous shock has pushed the economy away from its equilibrium path. This also means that a misreading of a central bank's reaction function and its intentions complicates the central bank's job.[3]

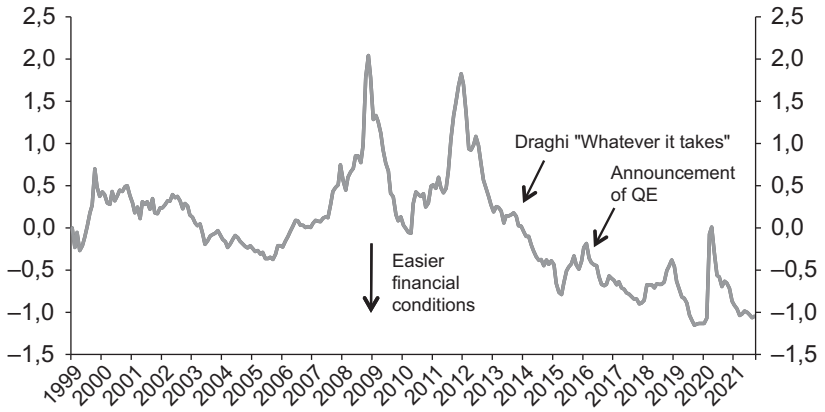
THE TRANSMISSION OF MONETARY POLICY TO THE ECONOMY

Financial markets are instrumental for conducting monetary policy and transmitting the initial monetary impulse to the broader economy. There are many steps involved in the transmission of monetary policy to the real economy and many different financial markets (bond markets, FX markets, stock markets) are influenced by monetary policy decisions. Those markets in turn determine how any change in monetary policy is passed on to households and companies.

There is now a good deal of literature on how best to take into account these different transmission channels and accordingly, how to summarize the monetary policy stance.[4] Following the work of Koop and Korobilis (2014), we have developed a financial conditions index that allows for a time-variation in the effect of specific financial variables on the economy (see Chart 1 below)(Koop and Korobilis, 2014). It is, for example, likely that changes in the level of the interest rate have different effects on the economy during the business cycle. It is conceivable that the interest rate sensitivity of corporate investment spending declines during recessions as the corporate sector deleverages and cuts back on investment spending. Being aware of the variability of transmission channels – and communicating this to the public – is part of the communication strategy of central banks.

Financial conditions, as measured through the lens of our index, have seen massive swings since the run-up to the financial crisis in 2008-2009. Two questions arise from the perspective of market participants in this context. First, what level of financial conditions is the ECB aiming for when setting its policy instruments? Second, how will the ECB affect market prices in order to prod financial conditions to the desired level? As we will argue in the remainder of this paper, as the ECB has added new instruments to its monetary toolbox, answering both these questions has become more difficult.

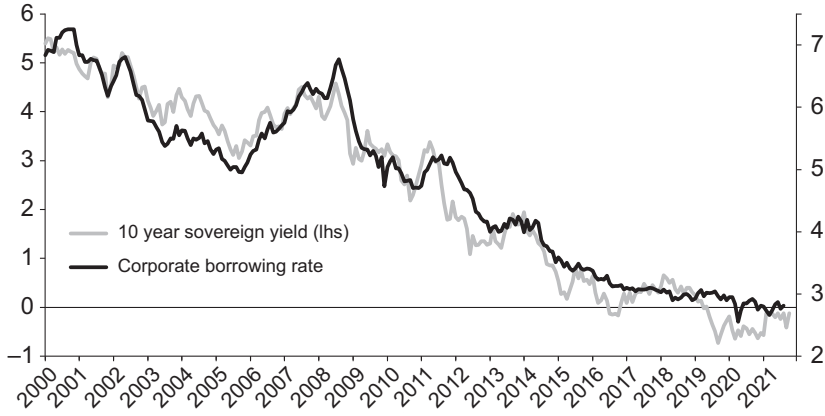
Chart 1
Euro Area: Natixis Financial Conditions Index
(%)



Source: Natixis.

Beyond the financial conditions determined in financial markets, bank lending rates, which are usually not included in Financial Conditions Indexes, are another crucial part of the transmission of central bank policy changes. As Chart 2 shows, these rates are closely linked – sometimes more, sometimes less – to sovereign yields (in this case for Germany) and therefore also influenced by the central bank's policy stance.

Chart 2
Germany: 10 Year Sovereign Yield and Bank Lending Rate for Non-Financial Corporates
(%)



Sources: Datastream; Natixis.

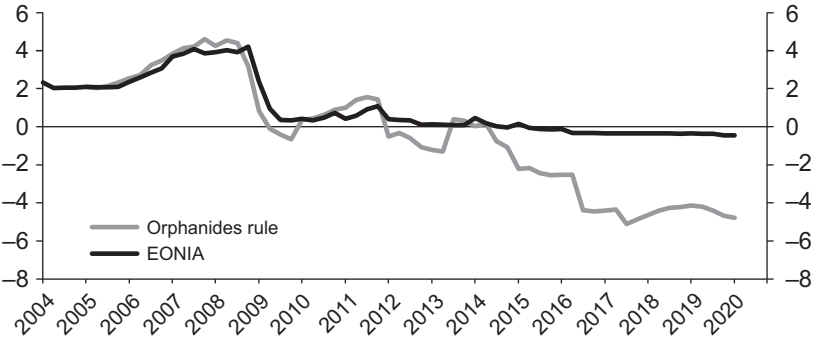
To sum up, the effectiveness of central banks in reaching their objectives necessarily depends on financial markets responding in the intended way. This in turn depends on financial market participants understanding what the intention of the central bank is. As we will show, this is usually not too difficult in "normal times".

READING CENTRAL BANKS IN "NORMAL" TIMES

The ECB's Main Refinancing Rate – the interest rate at which commercial banks can borrow money – reflects the ECB policy stance during "normal times". The level of the Refi rate determines the overnight interest rates, which is the first step in the transmission of the ECB's policy stance to the wider economy. The ECB sets its policy rate to ensure that, over the medium term, inflation stays at the ECB's inflation target. The setting of the ECB's policy rate can be calculated more or less with rather simple "policy rules".

One such rule is named after the former ECB Governing Council member Athanasios Orphanides (Orphanides and Williams, 2003). The rule says that the central bank should change its policy rate in response to deviations of the projected inflation rate from the target rate and the GDP growth rate from the trend growth rate. Despite its simplicity, this rule had a good track record in closely following the ECB's actual policy stance, as reflected in the EONIA rate (a short-term money market rate) until 2015 (see Chart 3). From 2015 onwards, however, the policy rate, as determined by the Orphanides rule, has steadily declined, reflecting inflation lower than the ECB's target. According to the rule, the ECB should have lowered its policy rate – given the inflation and growth outlook – to around -6% by 2017.

Chart 3
Policy Rate According to Orphanides Rule
(%)



Source: Natixis.

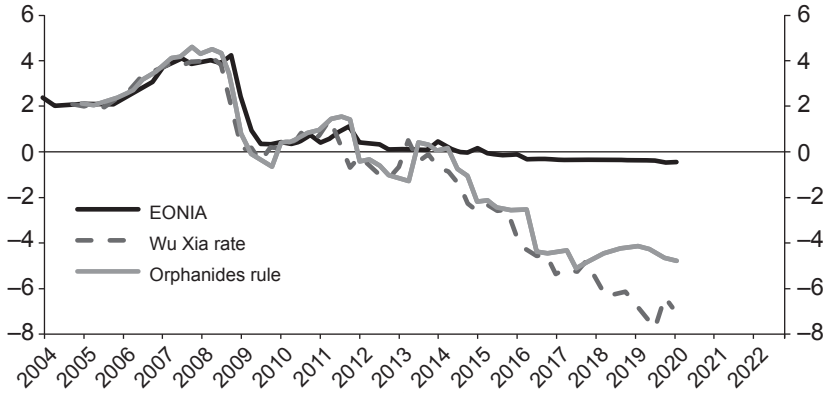
While the ECB was (and still is) not in a position to push interest rates much further into negative territory, it did not sit still once it had reached the effective lower bound for its policy rates. To accompany its record low policy rates, in early 2015 the ECB started quantitative easing (QE) on a large scale, that is, outright purchases of financial assets, such as government bonds.[5]

There are many channels through which QE works. But what matters for the purpose of this article is that comprehending the stance of monetary policy becomes more difficult as additional instruments are added to the central bank's toolbox.

This is not to say that it is impossible to translate the various instruments a central bank uses to support growth (and thereby lift inflation) into a single metric. A well-known attempt to do this is the so-called Wu-Xia shadow rate. The idea behind this approach is to calculate the impact of QE on interest rates along the yield curve and then translate this impact into equivalent changes in the policy rate. Put differently, the Wu-Xia shadow rate shows by how much the policy rate would need to have declined in order to achieve the same effect on interest rates at longer maturities that the central bank's asset purchases did (Wu and Xia, 2016).

Chart 4 shows the Wu-Xia shadow rate together with the rate implied by the Orphanides rule. While the fit between both variables is far from perfect, the chart nevertheless shows that the shadow rate – that is, when translating the effect of QE into a short-term interest rate – also moved deep into negative territory.

Chart 4
Policy Rate According to Orphanides Rule and the Wu Xia Rate
(%)



Source: Natixis.

THINGS GET MORE COMPLICATED WHEN POLICY INSTRUMENTS ARE ADDED

Analytical tools, such as the Wu-Xia shadow rate, make it possible to better understand the ECB's policy actions once QE is added. But such tools are necessarily incomplete and there are many important questions that are relevant when interpreting the ECB's intentions and effectiveness in guiding financial markets, which are not adequately captured by any shadow rate.

One crucial question, for example, is whether it is the *flow* or *stock* of ECB purchases that is the relevant variable in order to understand the effect of QE on interest rates. Put differently, is it the steady flow of purchases that are pushing interest rates down or is it the stock (the cumulated flows) sitting on the ECB's balance sheet that exerts the dampening effect? The answer to this question has starkly different implications for the ECB. If it is the flow of purchases that is the relevant variable, we should expect interest rates to start rising again quickly once QE has ended. However, if it is the stock of past purchases that is more relevant, we should expect the effect of QE to remain visible until the ECB starts selling or stops reinvesting its past purchases. The path for monetary policy is quite different, depending on which of the two explanations is correct. Again, this also shows that these purchases are adding an another layer of complexity.

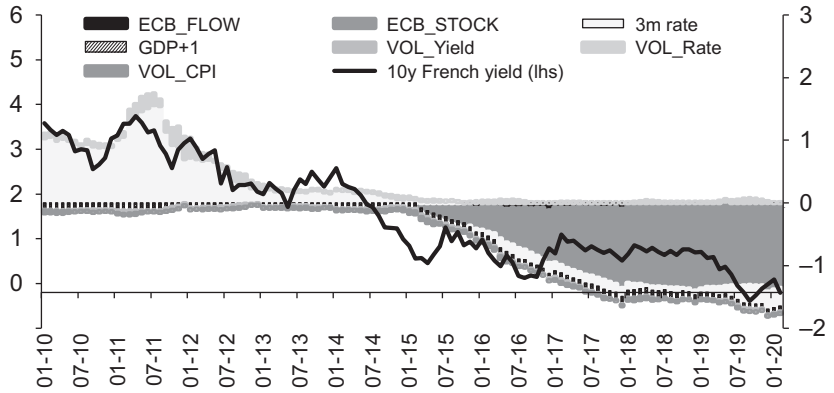
There is some evidence that the stock effect of ECB purchases is significantly more relevant in explaining the behaviour of government bond yields than the flow of purchases. We can use a simple regression model to explain the movements of sovereign yields depending on a range of macro variables and ECB flow and stock of purchases.[6] Chart 5 (below) shows the decomposition of the interest rate of the French 10-year government bond in different macro variables and the flow of ECB purchases and the stock of purchases.

Until the start of QE in early 2015, short-term interest rates (which are more or less directly influenced by the ECB) were the main driver of French 10-year rates. Since 2015, however, the stock of ECB purchases has played an increasingly important role. At the same time, the flow of purchases, at least according to our model, has only marginally contributed to the movement in French 10-year rates.

Taken at face value, all this would mean that it is still possible to assess the ECB's policy stance and its impact on the economy. But it is also clear that our model only gives an indication of what drives

French sovereign yields. Other factors, not captured in the model, are certainly at play.[7] Thus, the complexity of "reading" the ECB and understanding the implications of any change concerning its different instruments has learly increased.

Chart 5
Decomposition of French 10-Year Yield
(%)



Sources: Datastream; ECB; Natixis.

Further complexity has been added by the use of various long-term refinancing operations that the ECB has made available to banks. Under these operations, commercial banks, which are eligible counterparties for the ECB, have been able to borrow money from the ECB under favourable conditions for a number of years. The intention behind these operations has been to secure funding for banks and to induce them to expand (or at least not shrink) their lending to the private sector.

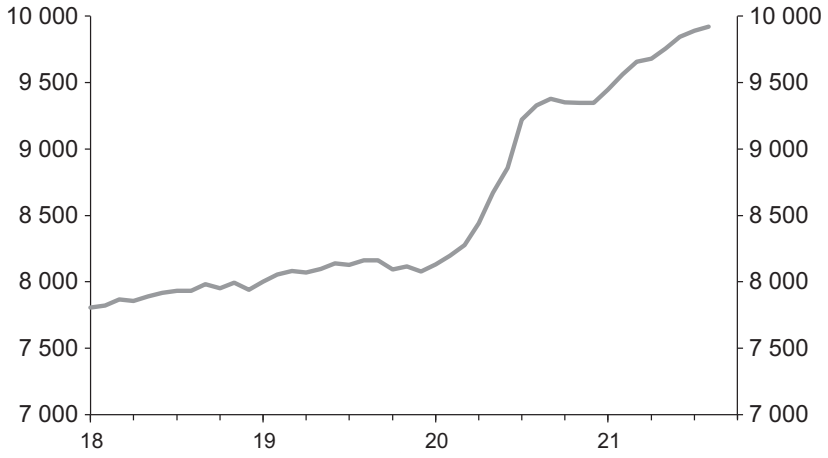
Again, there is not necessarily a definitive answer to the question of how effective these long-term operations have been, although it is safe to say that they have provided an important safety net to banks. But what these long-term operations have also done was to make it even more difficult to quantify the ECB's policy stance. To be sure, the refinancing conditions of the long-term refinancing operations have been linked to the policy rate prevailing during the lifetime of the funding operations. Nevertheless, funding conditions would, and do, remain more favorable for banks under all circumstances compared to a situation without these operations (i.e. if banks needed to refinance in the wholesale funding markets). This in turn means that the transmission of any change in the policy rate will to some extent be "diluted".

To conclude: the many dimensions along which monetary policy now operates have made it more complicated to understand (1) how changes of each instrument will impact financial markets and the economy and (2) how the ECB will respond to any change in financial conditions.

THE INTERPLAY BETWEEN FISCAL AND MONETARY POLICY COMPLICATES THE PICTURE FURTHER

With interest rates close to record lows across the maturity spectrum and the ECB unable to push interest rates down much further, it has been widely (though not universally) accepted that fiscal policy had to, and will in the future, play a bigger role in stabilizing the economy.[8] But for fiscal policy to be able to play that role, the ECB has had to create the fiscal space for governments to operate in. This new interplay between monetary and fiscal policy has been at full display during the pandemic. As wide parts of the economy were shut down, governments had to step in and make significant transfers to the private sector and provide financial safety nets for banks and the corporate sector. To absorb the surge in new issuance of government bonds the ECB had to step up its purchases significantly (see Chart 6).

Chart 6
Euro Area: Government Debt Securities Outstanding
(bn EUR)



Sources: Datastream; Natixis.

While most observers would agree that there was no realistic alternative for the ECB but to act in this extraordinary situation, that will not make conducting monetary policy any easier going forward.

For one, the massive additional amount of public debt sitting on the ECB's balance sheet may imply that the ECB will have to more explicitly take into account how its policy actions may affect the funding situation of governments. In particular for governments with high debt ratios, any change in the holding of government debt by the ECB may trigger an extreme market reaction. This is not to say that the ECB cannot pursue a tighter monetary policy course if this is deemed necessary to achieve its inflation target. But choosing the adequate path for monetary policy has clearly become more difficult with these additional constraints.

Another point to consider is the potential threat to the ECB's independence that could come from providing fiscal space for governments. Even if it is assumed that the ECB and its Governing Council will not waiver in their commitment to price stability, it is easy to see how under some circumstances the political pressure to act differently could mount quickly. In such a situation, the ECB might see itself forced to demonstrate its independence by pursuing an overly aggressive path.

So far, all this is speculation and time will tell how the new interplay between fiscal and monetary policy will influence how monetary policy is conducted. But one thing is sure: market participants will have to make up their minds if and to what extent future ECB policy actions will be influenced by this new implicit arrangement. All else equal, that has further increased the likelihood of misreading the ECB.

NOTES

1. Another telling example is cited in Issing (2019). In 1931, Deputy Governour Harvey defended the unwillingness of the Bank of England to give any reasons in public for its actions by arguing that "*to defend ourselves is somewhat akin to a lady starting to defend her virtue*".

2. For a thorough exposition of these arguments see Woodford (2003).

3. Michael Woodford has summarized this view as "*successful monetary policy is not so much a matter of effective control of overnight interest rates ... as of affecting ... the evolution of market expectations...*". See Woodford (2001).

4. See, for example, Hatzius *et al* (2010).

5. The ECB had been buying smaller amounts of corporate bonds and covered bonds prior to that.

6. We built a so-called SURE model that links the movements of the sovereign yields of the EMU4 countries together. Growth expectations one year out and several measures of market volatility are used as input in the model. Finally, we add the flow and the stock of ECB purchases as additional variables.

7. See also Eser *et al* (2019).

8. See also ECB (2021).

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