Mario Draghi: Stability, equity and monetary policy

Text of the 2nd DIW Europe Lecture by Mr Mario Draghi, President of the European Central Bank, at the German Institute for Economic Research (DIW), Berlin, 25 October 2016.

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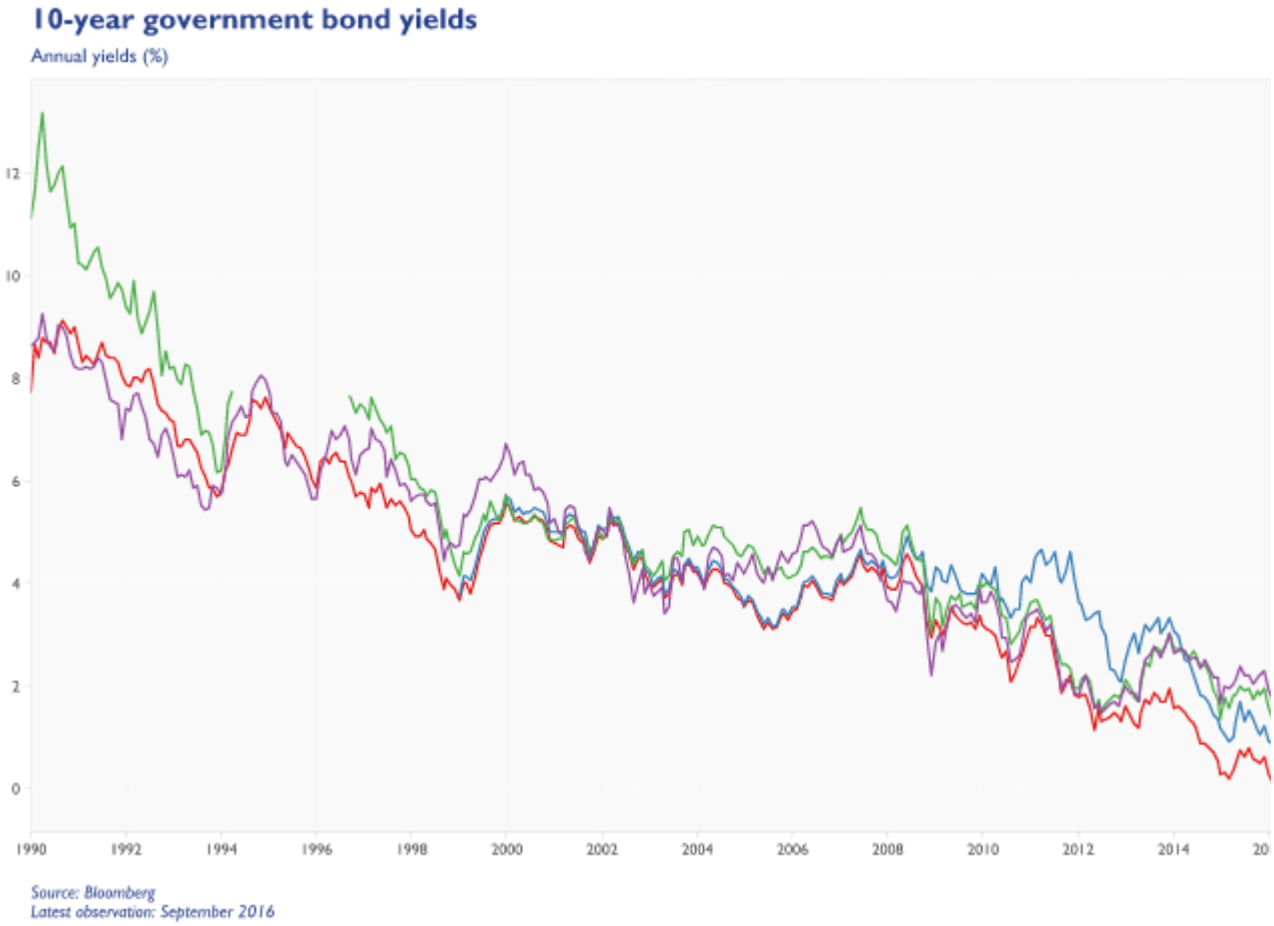
The most salient feature of the landscape facing monetary policy today is the low level of nominal and real yields everywhere. Among the G7, three countries currently have negative yielding 5-year bonds – Germany, France and Japan – representing 14% of world GDP. And that proportion rises to 22% if we include bonds yielding less than 1%.

Some observers see this as an artificial state generated by the policies of central banks – and argue that it threatens not only economic and financial stability, but social equity too. So what I would like to discuss in my remarks today is why interest rates are so low, and what the implications of those low rates really are. My focus will be in particular on the distributional effects of monetary policy.

Adjusting monetary policy to a falling natural rate

Low yields are not merely a legacy of the crisis that beset the global economy in 2008. Taking a wider view, long-term interest rates have been on a downward trend across the global economy for the better part of the past thirty years (Chart 1).



This trend has certainly had positive drivers, namely the success of central banks in advanced economies since the 1980s in achieving price stability and in anchoring inflation expectations. This has reduced both expected inflation and the inflation risk premium embedded in long-term

interest rates. The taming of inflation explains a large part of the initial fall in nominal yields in the 1980s and 1990s.

But there are also more worrying drivers. Behind the fall in nominal yields has also been a fall in *real* yields. This has been attributed to three main factors.

The first is a secular slowdown in productivity growth across advanced economies, coupled with pessimistic expectations about growth potential in the years to come, which has reduced the expected rate of return on capital. And if that real rate of return falls, it is logical that firms will only be willing to borrow at lower real rates. This is reflected in lower long-term real yields.

The second factor is a global imbalance of saving and investment, which has led real yields to fall *even relative* to growth prospects. On the saving side, a "global saving glut", produced among other things by ageing populations, has bid up the price of safe assets at a time when the supply of those assets has been shrinking, thereby compressing real yields. Factors such as a decline in the relative price of capital goods have also led to a fall in desired investment.

And this has been exacerbated by the third factor: the debt overhang in the public and private sectors bequeathed by the financial crisis. This has further raised saving – as all sectors deleverage – and depressed investment and consumption.

As a consequence, the natural rate of interest – which is the real interest rate that balances desired saving and planned investment, at a level consistent with output being at potential and stable prices – has fallen over time, to very low or even negative levels. And whatever the drivers behind this, central banks have to take it into account and cut their policy rates to commensurately lower levels.

Indeed, the way standard monetary policy works is to steer real short-term interest rates so that they "shadow" the natural rate, which keeps the economy in balance and prices stable. When inflation is below our objective and there is a negative output gap, monetary policy has to bring real rates below the natural rate to provide enough demand support. And when inflation is above our objective and the output gap is positive, the reverse is true.

If central banks did not act in this way – that is, if they did not lower short-term rates in tandem with the natural rate – market rates would be too high relative to the real returns in the economy, and investing would become unattractive. The economy would therefore be pushed away from full capacity and price stability. By contrast, by holding market rates below the real rate of return, we encourage the investment and consumption that is needed to bring the economy back to potential.

There are of course limits to how far central banks can shadow a falling natural rate with policy interest rates, since there is a lower bound for interest rates set by the existence of cash. But even when monetary policy approaches this point, central banks can still stimulate the economy through the same mechanism.

This is because we can still influence the whole constellation of market interest rates and asset prices in the economy that determine real investment and consumption decisions. Through forward guidance we can flatten the risk-free curve. Through asset purchases we can compress additional risk premia, both directly in the markets where we intervene and indirectly through portfolio rebalancing. And through long-term loans to banks we can bring down bank lending rates for firms and households.

This is precisely why the ECB has adopted a series of new unconventional measures since June 2014: to continue providing uplift to the economy even when policy rates approach the lower bound. These unconventional measures follow exactly the same logic as the conventional ones: they make financing conditions more expansionary relative to the natural rate, and in doing so

bring the economy back to balance and inflation back to our objective.

The distributional effects of monetary policy

But while our monetary policy, seen from this perspective, is simply a continuity of what central banks have always done – and should always do – we know it has raised concerns. Those concerns have focused in particular on the side effects of monetary policy and its distributional consequences: between savers and borrowers, weaker and stronger countries, the rich and the poor.

The question, in short, is whether there is a trade-off between stability and equity. But to answer this, we have to make a distinction between the *financial* and *macroeconomic* effects of our policy, which arise over different time frames.

Over the medium-term, it is unambiguous that monetary policy has positive distributional effects through *macroeconomic channels*.

Most importantly, it reduces unemployment, which benefits poorer households the most. For this reason, research from the US and UK has shown that monetary policy actions that boost the economy typically reduce income inequality over the cycle.[1] And a faster return to full employment should in turn contribute to lower *future* inequality, since we know that if unemployment lasts too long it can lead to permanent income losses through "labour market scarring".

Securing price stability over the medium-term also supports intergenerational equality by preventing arbitrary redistribution due to unexpected changes in prices. Indeed, data for the euro area suggests that unexpected inflation undershooting results in a redistribution of nominal wealth from younger to older households, since the young are net debtors while the old are net creditors.[2]

And both savers and borrowers ultimately benefit from an effective monetary policy too, since it increases returns on all types of financial and real assets, including deposits. Certainly, some savers might suffer from a temporary period of low interest rates, especially if they rely on interest income and cannot smooth their consumption through credit. But whatever financial assets savers hold, in the final analysis their return always depends on the growth rate of the economy.

It is therefore in savers' interest as well that growth does not remain subpar for any longer than is necessary, and hence that we avoid any permanent damage to potential growth through so-called "hysteresis effects". Otherwise, financial returns for savers would end up permanently lower over time.

It is nonetheless conceivable that, in the short-term, monetary policy might have undesirable distributional effects through *financial channels*. Monetary policy directly affects asset prices and interest rates, which redistributes wealth and income among different economies, sectors and households. This is the case for all monetary policies – indeed, it is one of the channels through which monetary policy works.

What some fear, however, is that our current policy of very low interest rates and asset purchases might exacerbate and worsen those distributional effects. One concern is that it penalises poor savers who rely on fixed income, while benefitting rich asset holders through capital gains. Another is that monetary policy redistributes income from stronger countries like Germany to more vulnerable ones.

So the question we need to examine is two-fold: in the short-term, are the financial effects of monetary policy creating regressive or unwelcome distributional effects in the euro area and in

individual countries? And over the medium-term, how is that being offset by the macroeconomic effects of our measures?

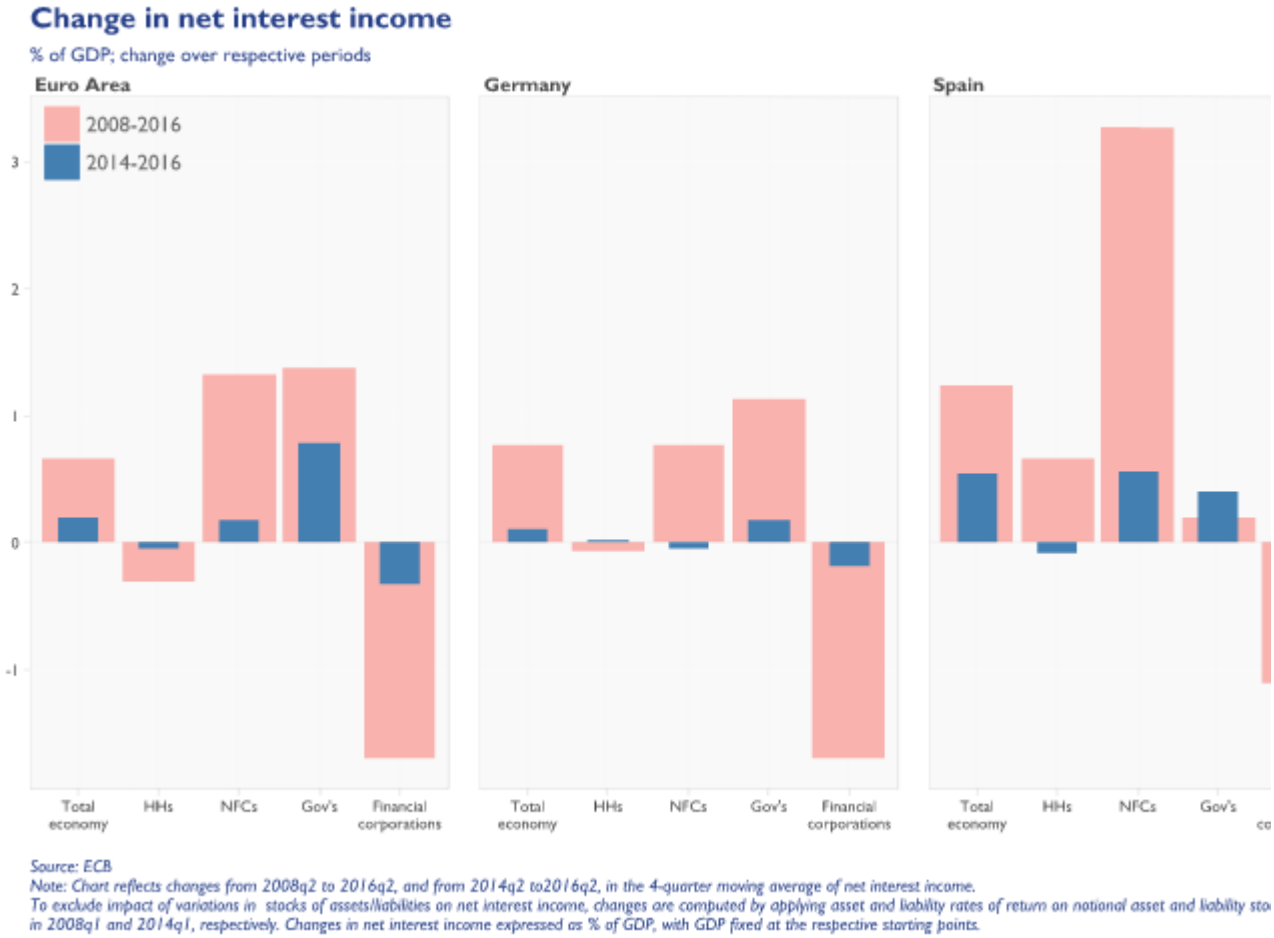
This is ultimately an empirical question. So let us take a few moments to look at the effects our monetary policy measures have had – and in particular the unconventional measures we have taken since June 2014.

A closer look at the financial effects

Monetary policy has two types of financial effects: on *income* and on *wealth*. First, when the central bank cuts rates or buys assets, there is an inevitable redistribution of financial income across economies, and among different sectors and households within those economies, according to their net financial position.

The component of financial income that monetary policy affects most directly is net interest income, so it is useful to look at how the net interest income of different countries and sectors has been affected by falling interest rates during the crisis. We can estimate this by looking at how the return on the existing stock of assets and liabilities has changed during the crisis.[3]

What we find is that for large countries such as Spain and Germany the effect of low interest rates on the total economy has been positive – that is, they have received more in interest earnings than they have disbursed in interest payments. The same is also true of the euro area vis-à-vis the rest of the world (Chart 2).



Source: ECB
Note: Chart reflects changes from 2008q2 to 2016q2, and from 2014q2 to2016q2, in the 4-quarter moving average of net interest income.
To exclude impact of variations in stocks of assets/liabilities on net interest income, changes are computed by applying asset and liability rates of return on notional asset and liability sto
in 2008q1 and 2014q1, respectively. Changes in net interest income expressed as % of GDP, with GDP fixed at the respective starting points.

For Germany this result reflects two factors. First, the fact that, in spite of its large net international investment position, the economy's stock of fixed-income liabilities has closely

tracked its stock of fixed income assets. And second, the fact that the drop in interest rates on those liabilities has been significantly larger than on its assets, since Germany has acted as both a safe haven for investors during periods of financial stress, and as the premier safe-asset provider in the euro area in the context of the shrinking supply of AAA-rated government debt.[4]

It is not possible to say definitively from the data whether these results are due to shifts in interest income within the euro area or vis-à-vis the rest of the world. But from what we can tell, there are no signs that low interest rates are shifting financial income away from stronger countries and towards weaker ones, as is often claimed.

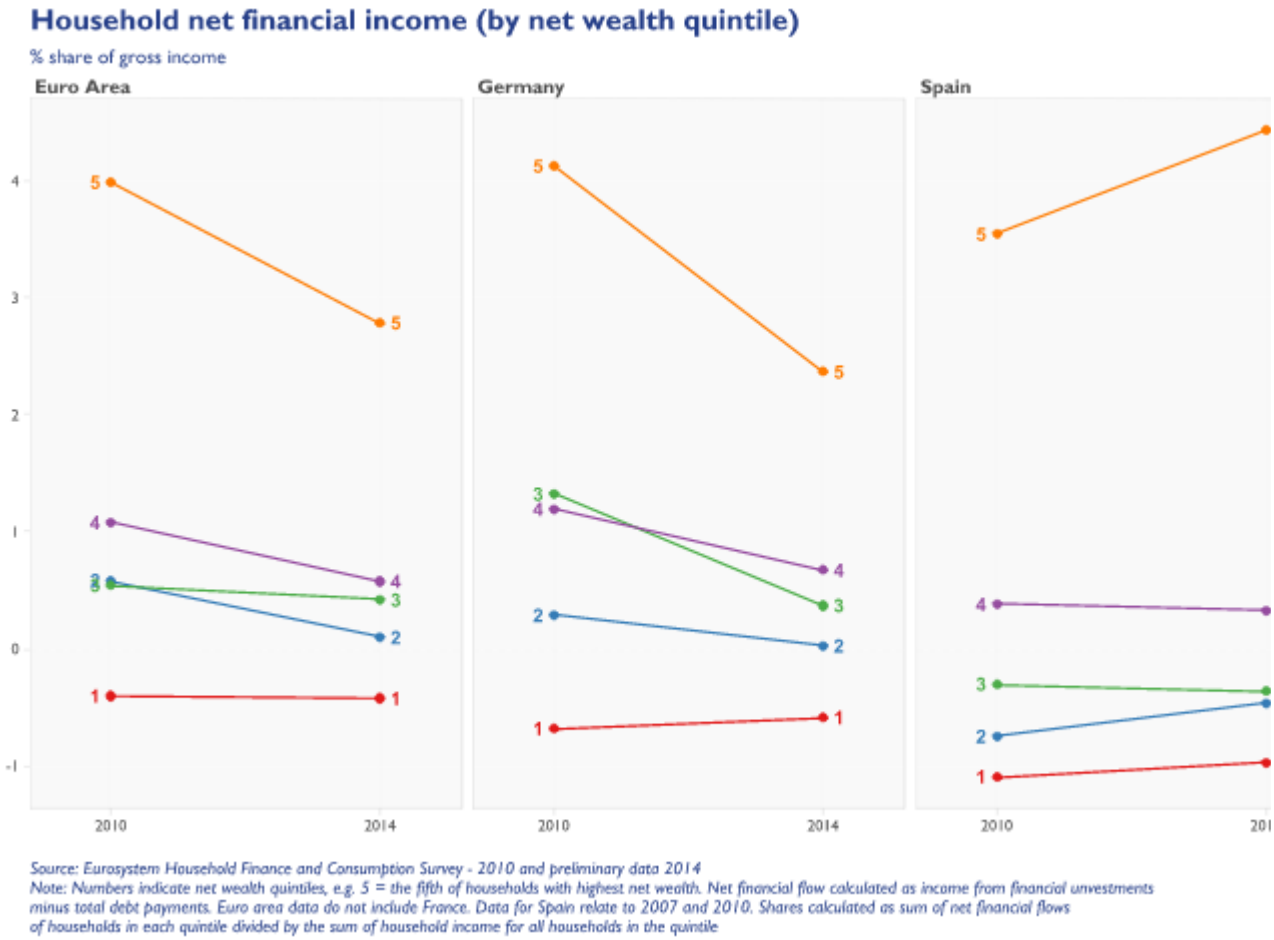
In fact, redistribution of financial income *within* countries – that is, across sectors – seems much more important than *across* countries.

For Germany, we can see that the government and non-financial corporations have made large windfall gains. The household sector, often thought to have lost out the most in Germany due to its large net saver position, has in fact only recorded a mild loss in net interest income, since the household borrowing rate has fallen more than the lending rate. And if one runs the same exercise from mid-2014, when our credit easing began, the household sector actually accrues a slight gain.

In Germany the financial sector has been most affected. But this has been driven more by the earlier fall in interest rates in 2008 than the impact of our measures since mid-2014 – an issue I will return to later.

Such sectoral aggregates will nevertheless always mask a wide dispersion of effects across households. This is not straightforward to measure, but we can make some inferences from the Eurosystem's Household Finance and Consumption Survey. Two waves have taken place so far – in 2010 and 2014 – which gives us the possibility to see how net financial income[5] has shifted between different households as interest rates have fallen. In this period 2-year euro area benchmark bond yields fell by 130 basis points and 10-year bonds by 110 basis points.

What we see is that, for the whole euro area[6], net financial income as a fraction of total household income fell slightly, which is consistent with the sectoral picture we saw above. But behind this was some progressive distribution across net wealth groups. The households with the lowest net wealth had an unchanged position, since their debt payments are higher than their financial income. And the wealthiest households lost the most, as their financial income is much higher than their debt. The same story was broadly true if we look at Germany (Chart 3).



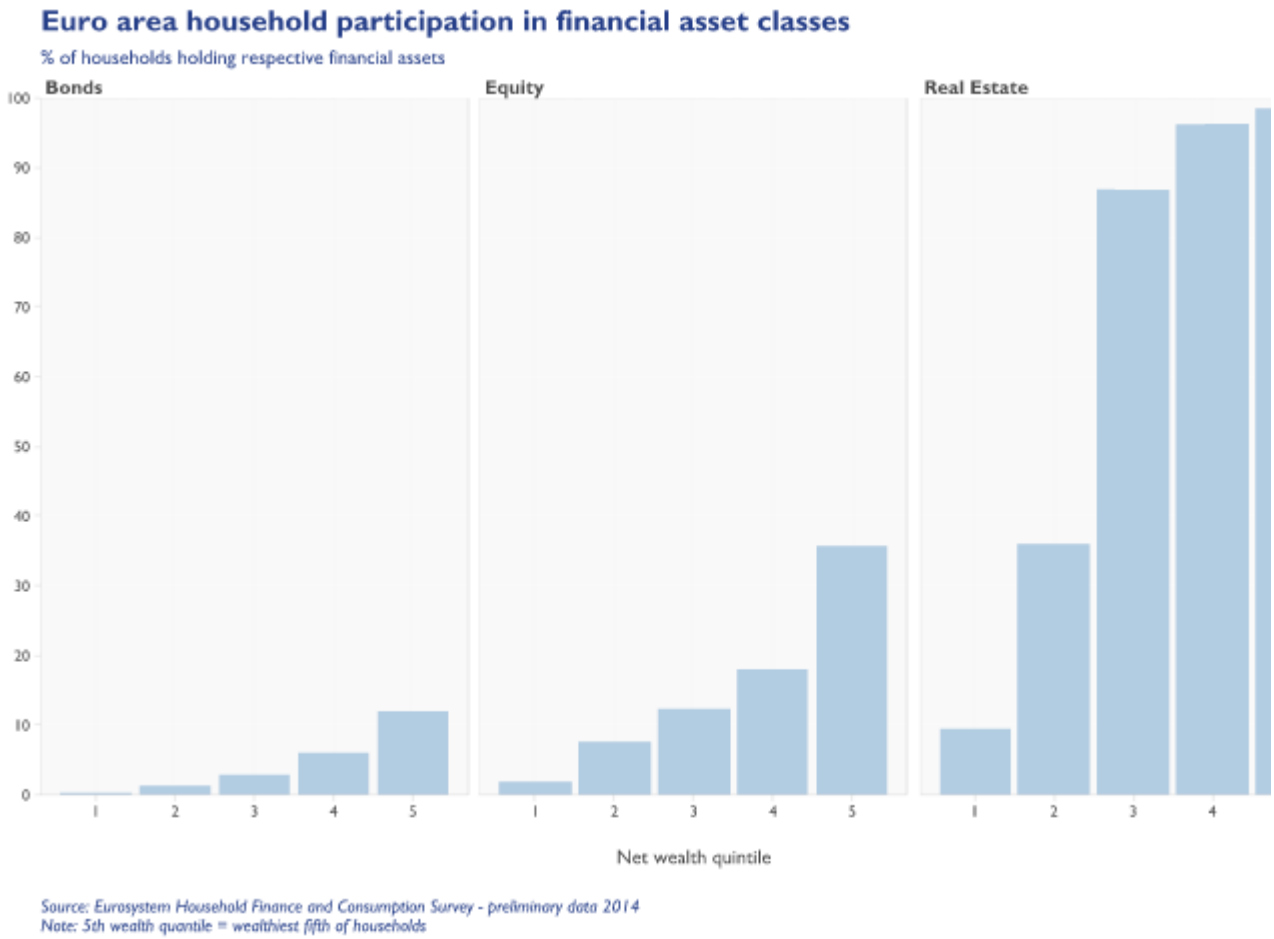
Source: Eurosystem Household Finance and Consumption Survey - 2010 and preliminary data 2014
Note: Numbers indicate net wealth quintiles, e.g. 5 = the fifth of households with highest net wealth. Net financial flow calculated as income from financial investments minus total debt payments. Euro area data do not include France. Data for Spain relate to 2007 and 2010. Shares calculated as sum of net financial flows of households in each quintile divided by the sum of household income for all households in the quintile

Certainly, within these groups there may still be savers who are poor in terms of income who are losing out significantly from low rates. But we do not see evidence that those who are suffering most are poor in terms of wealth. In fact, what these data suggest is that savers and the wealthy are, on the whole, the same people.

Still, the distributional picture also has to take into account the second type of effects – wealth effects – which capture the impact of monetary policy on the value of financial assets. Are those effects accruing mainly to the rich and so worsening wealth inequality? Here again the Household Finance and Consumption Survey allows us to make some suggestions.

What we see is that euro area households' that hold financial assets – stocks and bonds – are strongly concentrated in the top end of net wealth distribution. As such, only a fairly small subset of the population benefits from capital gains in bond and equity markets; three quarters of the population fail to benefit at all. Home ownership, by contrast, is more evenly distributed across wealth groups. The median household thus benefits much more from housing price increases (Chart 4).

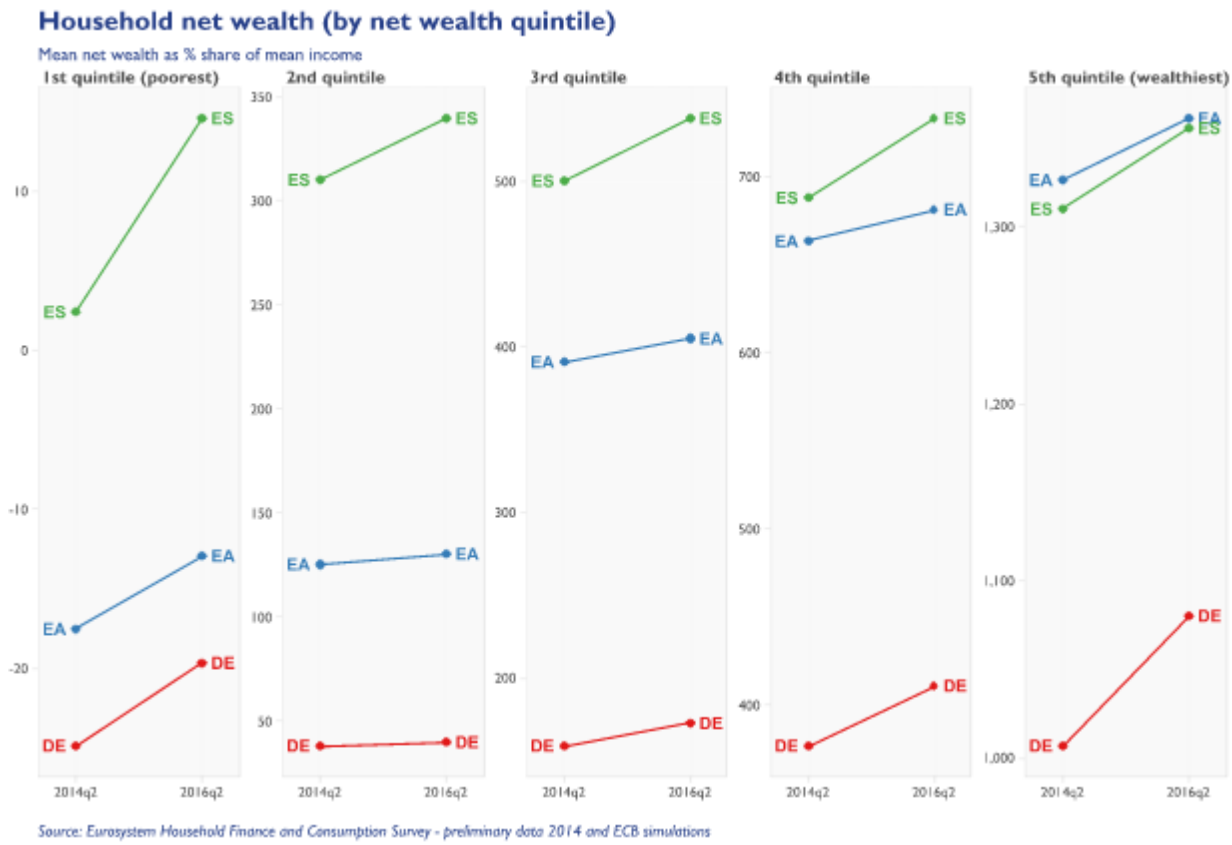
As a result, wealth inequality tends to increase when in particular equity prices rise, but tends to fall when housing prices go up – but with heterogeneity across countries. Inequality falls more in those with high home ownership rates, while in countries with low ownership rates the effect is weaker.[7]



So what is the situation in the euro area today? In this case the period we are most interested in is the one since mid-2014, as it is mostly asset purchases that are believed to create wealth inequality through asset price inflation. And while the data does not cover that period, we can look at the wealth held by households in mid-2014, and apply to that the movements of stocks, bonds and house prices since.[8]

What we observe is that, for the euro area[9], there has been an absolute gain: all net wealth groups have seen their wealth increase as a share of their mean income. This is because house prices within the euro area went up over the period, while bond prices on average rose modestly and stock prices on average actually fell. Higher net wealth households, however, benefitted more in relative terms (Chart 5).

This result is partly driven by the situation in Germany, where home ownership is comparatively low and hence the median household benefits less from rising house prices. Still, over half of German households have seen net wealth increase over the past two years. And in Spain, households all along the wealth distribution have benefitted given the high rate of home ownership.



So overall, we do see some signs that wealthier households have benefitted relatively more from increases in asset prices. But those benefits have also been broad-based, meaning the effect on distribution is unlikely to have been large.

And it is important to remember that, to the degree that monetary policy has boosted asset prices, it has often been correcting *previous falls* in asset prices due to the crisis. In this sense, monetary policy has not been distorting the distribution of wealth, but rather restoring the distribution of the status quo ante.

Bringing in the macroeconomic effects

In any case, a balanced assessment of the distributional effects of monetary policy cannot focus only on its short-run financial effects. It must also include its more slow-moving macroeconomic effects.

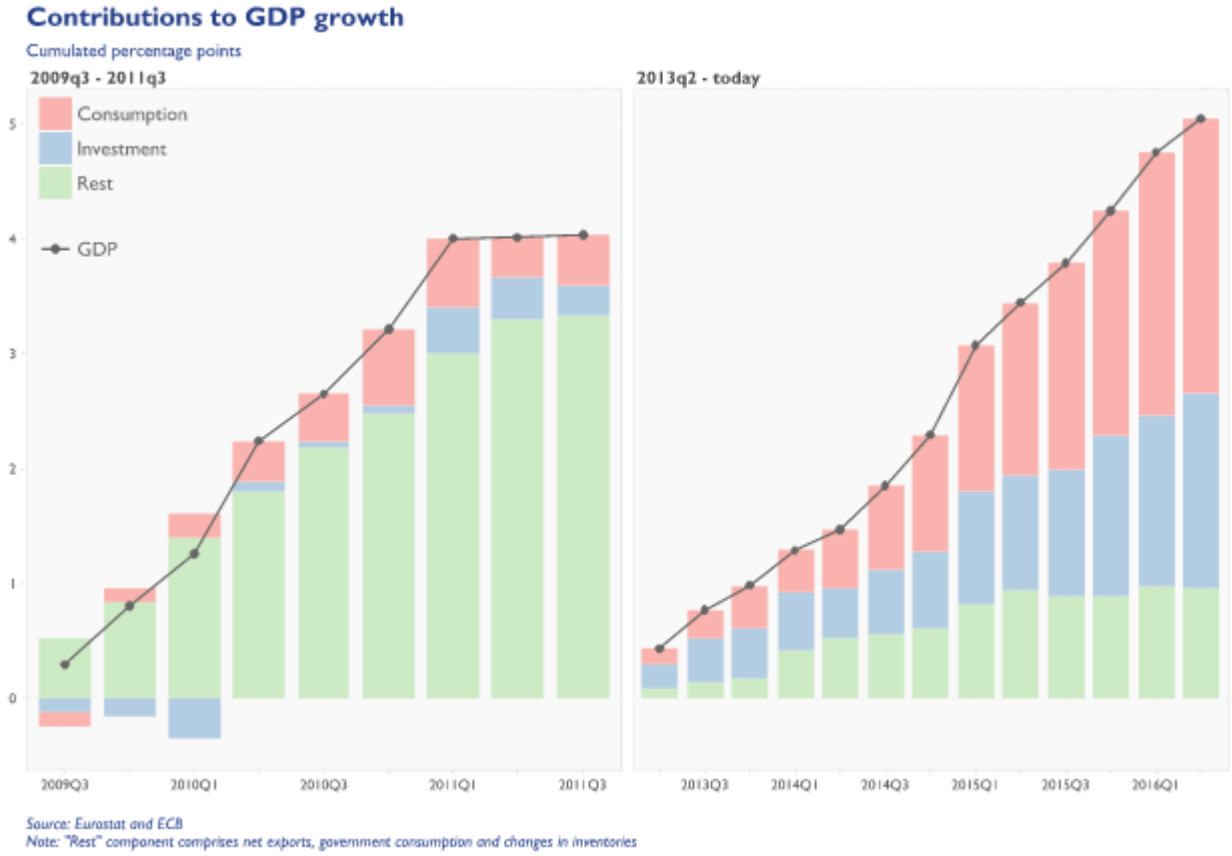
Even if low interest rates and high asset prices do worsen short-run inequality, they have positive distributional effects over the medium term. They lead to stronger aggregate demand, a faster fall in unemployment and medium-term price stability, all of which reduce inequality in the ways I described above.

The income gains support firms' profitability, which ultimately sustains higher investment. Redistribution of income across households is typically expansionary as well, given that liquidity constrained households have a higher marginal propensity to consume than more affluent ones.[10] And the wealth effects of our policy – which have been spread across all net wealth groups – boost the economy to the degree that households are able to convert asset price rises into consumption.

Alongside this are also the expansionary effects that monetary policy creates through its other channels: the exchange rate channel and intertemporal substitution. In particular, low interest

rates encourage households to bring forward durable consumption, and firms' investment, through credit.

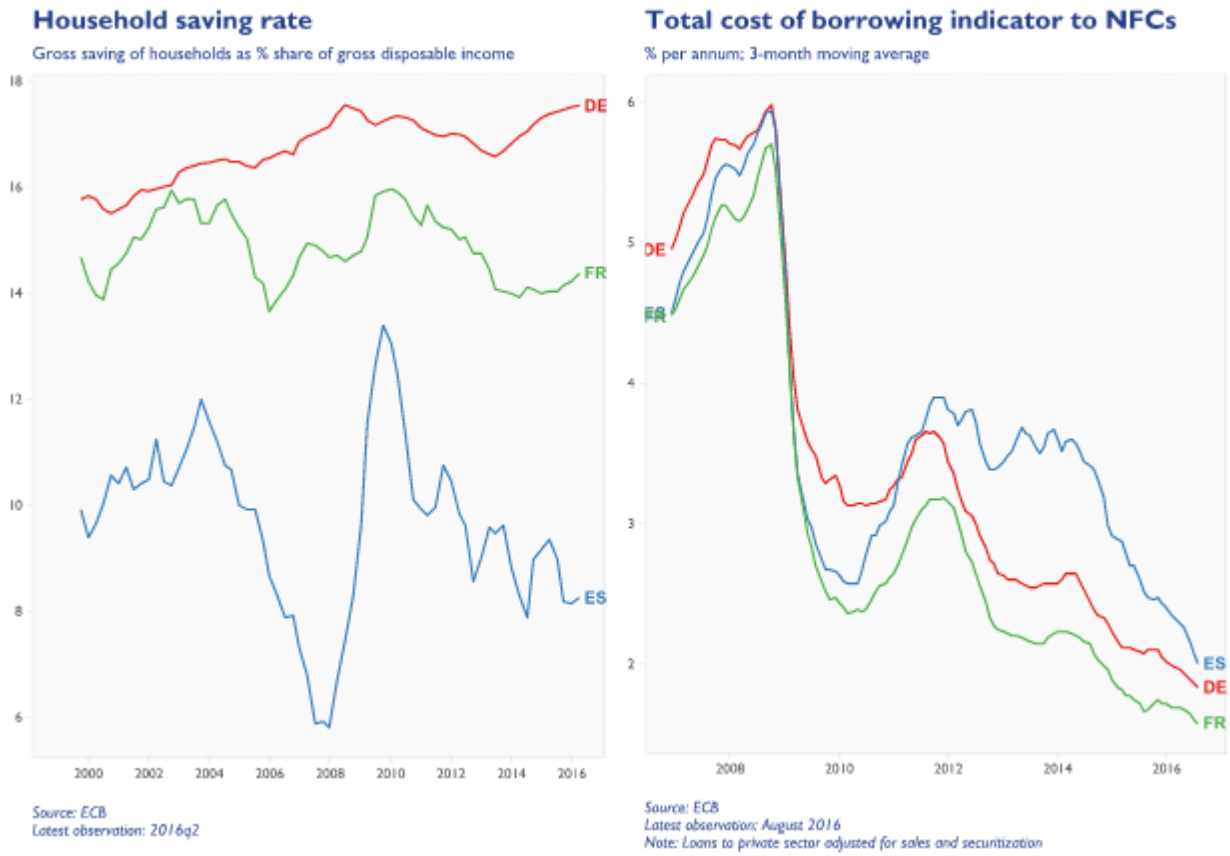
Looking at the euro area today, what is immediately clear is that since our credit easing package in June 2014, we have been benefitting from a more broad-based and domestic demand-driven recovery. This was not the case during the 2009–11 recovery which relied heavily on net exports (Chart 6). And as the economy has strengthened we have indeed seen the unemployment rate falling significantly.



Pinning down the precise contribution of monetary policy to this is challenging, but we can see that since June 2014 our measures have triggered a downward convergence of bank lending rates and an upward trend in credit volumes, with borrowing costs in vulnerable countries now approaching those enjoyed by Germany and other stronger economies. Lending terms and conditions for SMEs have also converged rapidly towards those of large-scale borrowers.

This has been driven in part by the reversal of the unwarranted financial fragmentation we saw in 2011–12. But it also reflects a second factor: our measures have helped break a vicious circle between bank lending rates, macroeconomic outcomes and credit risk perceptions in vulnerable countries. When the economy was weak, banks tended to increase lending rates because they feared a higher probability of default. That choked off credit demand, worsened the macro situation and increased delinquencies. Those high lending rates were then validated ex post.

But starting in the summer of 2014, our measures began to increase competitive pressures on banks to reduce lending margins. Bank credit therefore became more affordable, which in turn stoked higher credit demand. And as that has fed through into a better macro picture, loan delinquencies have fallen. Accordingly, bank lending rates have fallen and the vicious circle has turned virtuous.



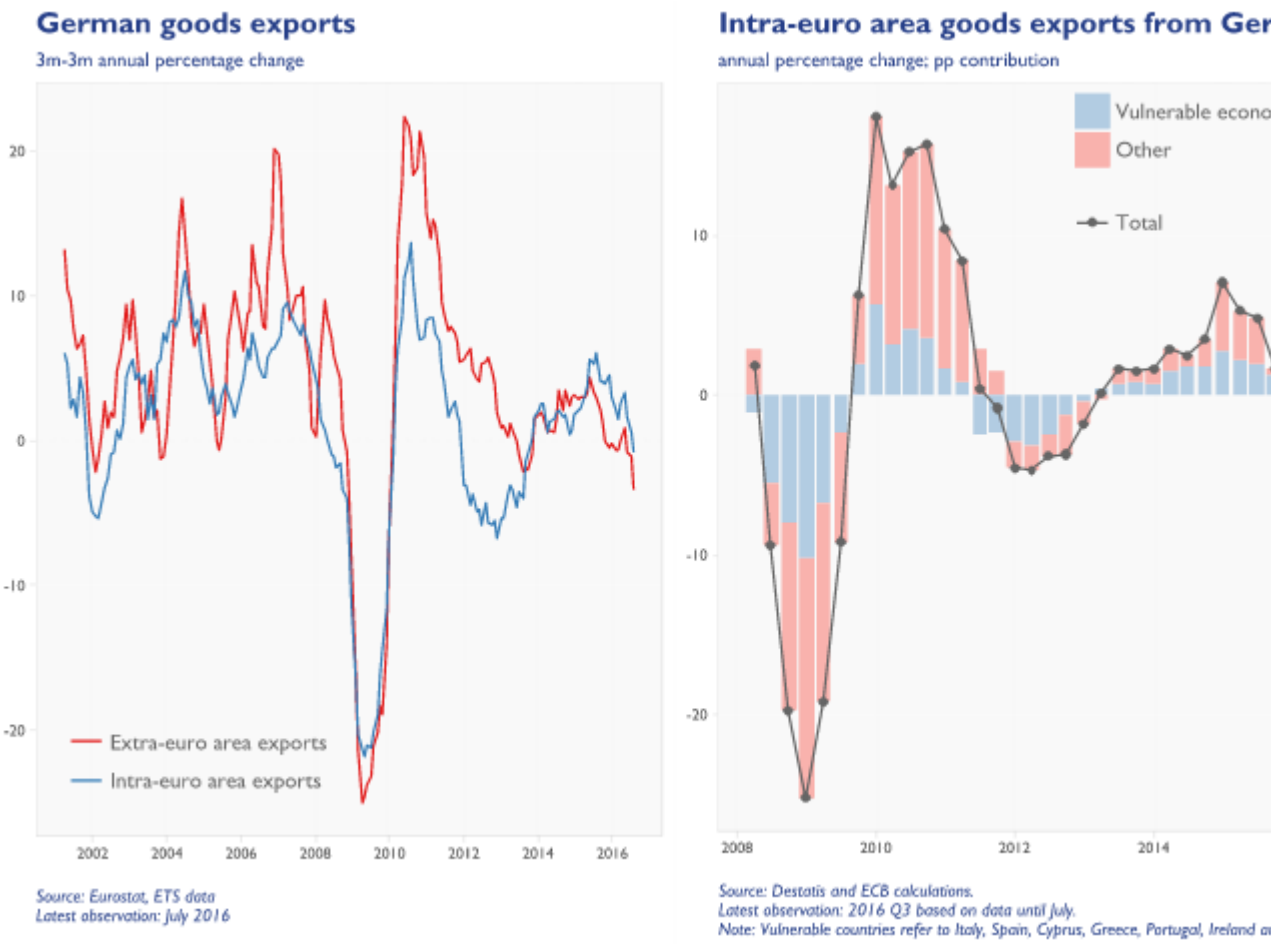
So our credit easing has helped reverse a negative distributional effect in terms of access to finance. And that is now feeding into aggregate demand through the most interest-sensitive demand components – consumption of durables and investment.

After several years of contraction, consumption of durable goods in the euro area has been rebounding, growing at rates not seen since before the crisis. Monetary policy has been a key driver. In particular in countries where credit was previously very tight, there is a close correlation between durables consumption and the improvement in credit conditions as recorded in the Bank Lending Survey.

The contribution of investment to growth has also been steadily rising. The sensitivity of investment to borrowing conditions seems, it is true, to be lower than it was before the crisis. Yet monetary policy still appears to be having an endogenous impact on investment via aggregate demand. Its growth path is relatively well explained by lagged but expected growth – the so-called accelerator effect.[11]

And though both components have grown most robustly in vulnerable economies, this has had an expansionary effect on core countries as well.

As export demand has fallen off in emerging markets since early 2015, the recovery in those economies has provided a cushion for exporters in core economies. In Germany, for instance, intra-euro area exports rose throughout 2015 as exports to the rest of the world slowed, in part offsetting that global slowdown. Increasing domestic demand in vulnerable euro area countries absorbed a sizeable share of this slack in foreign demand (Chart 8).



And even vis-à-vis the rest of the world, our monetary policy has helped insulate the euro area from the steep slowdown in world trade. In fact, net exports have been buffered in 2015–16 by the lagged effect of previous exchange rate depreciation, with euro area exporters able to regain market shares. The divergence between the monetary policy path of the euro area and that of other major economies was one factor supporting this.

So we have every reason to believe that, with the impetus provided by our recent measures, monetary policy is working as expected: by boosting consumption and investment and creating jobs, which is always socially progressive.

And importantly, we do not see any signs of another claim one sometimes hears: that low interest rates on savings are causing households to *increase* saving to maintain their lifecycle saving targets, thereby causing our policy to backfire. Since June 2014, there has only been a meaningful rise in the household saving rate in one large economy, Germany. But if one looks more closely, this is largely explained by an increase in residential investment among German households financed out of current income. The net lending position of German households has barely risen.

In other words, decisions by households are supporting the macroeconomic objectives of monetary policy, not countering it. This is also confirmed by survey evidence: the Bundesbank has found that just 1% of German households are saving more because of low interest rates.[12]

Raising the natural rate and returning to normal

So if we net out the effects of the financial and macroeconomic channels, I find it hard to reach the conclusion that, over a longer time frame, the outcome of our policies has been – or will be –

to redistribute wealth and income in an unfair or unequal way. That is certainly not true across countries, and there is not much to suggest it is true within countries either.

What is more, as a recent study by the Bundesbank points out[13], those who claim that monetary policy worsens inequality typically do not consider the counterfactual. They take the distributional situation as given, but forget that monetary policy is acting precisely because the macroeconomic situation was at risk of changing. In fact, according to ECB simulations, euro area GDP would be cumulatively at least 1.5% lower between 2015 and 2018 without the expansionary policy measures we have adopted since mid-2014, with worse outcomes for inflation too.

Yet all this does not mean that very low interest rates are costless. We are aware of the other distortions that can result from them. Indeed, we would certainly prefer not to have to keep interest rates at such low levels for an excessively long time, since the unwelcome side-effects may accumulate over time.

The financial sector provides a good example. As I showed above, its net interest income has declined. And that is not necessarily a problem right now, since – at least for banks – lower net interest margins are being partly offset by higher asset valuations and a more robust recovery, which in turn creates further demand for bank credit and reduces loan delinquencies.

But as very low interest rates persist, some of these offsetting factors, such as the capital gains will diminish, whereas the drawbacks will remain in place – for instance due to the downward stickiness of interest rates on retail deposits.

Therefore we should seek to create the conditions for a return of interest rates to higher levels. And this requires two types of actions.

The first are actions to bring output to potential without undue delay, so that inflation can return sustainably to our objective and policy interest rates can rise back to the natural rate. That is the best, indeed the only way for monetary policy to normalise. And this is why, looking ahead, we remain committed to preserving the very substantial degree of monetary accommodation which is necessary to secure a sustained convergence of inflation towards levels below, but close to, 2% over the medium term.

But it is also clear that the more other macroeconomic stabilisation policies work alongside monetary policy, the faster the closure of the output gap will be.

Still, returning to potential will not solve the fundamental problem we started with: the fact that the natural interest rate is itself very low. It is this that is ultimately driving interest rates down near zero. So the second type of actions we need, if we want interest rates at higher levels, are those that can raise the natural rate. And this requires a focus on policies that can address the root causes of excess saving over investment – in other words, fiscal and structural policies.

High saving can be partially mitigated by public policies, but there is only so much that one can do to reduce saving in an ageing society like the euro area. Thus more important is a focus on raising investment demand.

This hinges crucially on structural reforms to reverse the declining trend in productivity. And it depends on governments enacting investment-friendly tax and regulatory policies, as well as reversing the stagnation in the public capital stock we have seen since the crisis with investments aimed at raising productivity.

In short, monetary policy is today protecting the interests of savers by ensuring a faster closing of the output gap and preserving the economic potential on which savers' income depends. But for real returns to rise further still, other policies need to buttress monetary policy by raising

investment and productivity.

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1 For an overview see Deutsche Bundesbank Monthly Report (2016), "Distributional Effects of Monetary Policy", September 2016.

2 Adam, Klaus and Junyi Zhu (2014), "Price Level Changes and the Redistribution of Nominal Wealth Across the Euro Area", Journal of the European Economic Association, Vol. 14, pp 871–906.

3 The chart reflects the changes from Q2-2008 to Q2-2016, and from Q2-2014 to Q2-2016, in the 4-quarter moving average of net interest income. To exclude the impact of variations in the stocks of assets/liabilities on net interest income, the changes are computed by applying the asset and liability rates of return on the notional asset and liability stocks in Q1-2008 and Q1-2014, respectively. Changes in net interest income are expressed as percentages of GDP, with GDP fixed at the respective starting points.

4 See Gourinchas, Pierre-Olivier and Hélène Rey (2016), "Real Interest Rates, Imbalances and the Curse of Regional Safe Asset Providers at the Zero Lower Bound", NBER Working Paper No. 22618.

5 Net financial income is household's income on financial investments (interest and dividends) net of their total debt payments.

6 Excluding France as second wave data on financial income is not yet available.

7 Adam, Klaus and Panagiota Tzamourani (2016), "Distributional Consequences of Asset Price Inflation in the Euro Area", European Economic Review, Vol 89, pp. 172–192.

8 The simulation assumes the changes in wealth components between mid-2014 and mid-2016 are driven by country-specific developments in house prices, stock prices and bond prices. It then backs out the implications for changes in net wealth of individual households, which depend on the share of each asset that each household holds.

9 Including France.

10 See Jappelli, Tullio and Luigi Pistaferri (2014), "Fiscal Policy and MPC heterogeneity", American Economic Journal: Macroeconomics, Vo. 6, No. 4, October 2014.

11 See Bussière, M., L. Ferrara and J. Milovich (2015), "Explaining the recent slump in investment: the role of expected demand and uncertainty", Banque de France Working Paper No. 571, September 2015.

12 Deutsche Bundesbank Monthly Report (2015), "German households' saving and investment behaviour in light of the low-interest-rate environment", October 2015.

13 Deutsche Bundesbank Monthly Report (2016), op. cit.