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Monetary Policy in a Fragmented World¹

Ladies and Gentlemen,

It is a great pleasure for me to speak here today at the Oesterreichische Nationalbank. In my remarks, I would like to address an issue that central bankers don't consider as central to their role even though it attracts much public attention: the distributional consequences of central bank action.

More than five years have passed since the financial crisis started. This period has been a time of particular economic hardship. The recession and the subsequent sovereign debt crisis in the euro area have been accompanied by rising unemployment, lower incomes and reduced household wealth as house prices have dropped in some countries. But the pain was not evenly shared. Between 2007 and 2010 the distribution of income widened in OECD countries and poorer households have been hit harder, especially in several euro area countries.² Taken together, these developments are a source of great concern to all Europeans.

To be clear, the central bank's mandate is not to address rising inequalities or to steer the distribution of income. In fact, the use of explicit redistributive monetary policy tools, such as credit controls, was abandoned decades ago. Since then, central banks have been granted goal independence and assigned a clear mandate to keep inflation low.

To borrow from Padoa-Schioppa, monetary policy is mandated to focus on stability rather than equity or efficiency.³ In the given framework, the distributional consequences of monetary policy are temporary, unintended, with a view to safeguarding price stability. Ensuring a fair distribution of income and consumption, or promoting economic justice for society as a whole are issues that lie outside the realm of monetary policy. They are the tasks of other economic and financial policies.⁴



Since the beginning of the crisis, monetary policy has been acting, however, in a fragmented world. And the fragmentations were along different fault lines.

In the euro area, fragmentations had a horizontal dimension (among individuals), a vertical dimension (over

¹ I wish to thank A. Saint-Guilhem and O. Vergote for their contributions to this speech, and F. Smets and O. Tristiani for their comments. I remain solely responsible for the opinions contained herein.

² See OECD, 2013: *Crisis squeezes income and puts pressure on inequality and poverty*, New Results from the OECD Income Distribution Database, 15 May 2013. It includes the comment: "In Spain and Italy, while the income of the top 10% remained broadly stable, the average income of the poorest 10% in 2010 was much lower than in 2007."

³ See T. Padoa-Schioppa, 1987: *Efficiency, Stability, and Equity*, 1987: *Strategy for the Evolution of the Economic System of the European Community*, Oxford University Press.

⁴ There are two main reasons why central banks should be shielded from distributive politics. The first one is legitimacy: the degree of fairness in society should be decided by society itself through the mechanisms of representative democracy. Although it is generally not the case, distributive policies can, however, be delegated to unelected bureaucrats if they can be instructed to be fair behind the veil of ignorance. The second reason is efficiency. Central banks' limited number of instruments should be directed at a limited number of objectives, with a clear priority. For an assessment of why distributive policies are usually not delegated to bureaucrats, see A. Alesina and G. Tabellini, 2007: *Bureaucrats or Politicians? Part I: A Single Policy Task*, *American Economic Review*, March, 169–179.

time) and a spatial dimension (across participating countries). And they have significantly impaired the potency of our standard monetary policy actions. The crisis measures of the ECB have accordingly acted on the horizontal, vertical and spatial transmission impair-



ments of monetary policy. Most importantly, our measures have prevented catastrophic outcomes for the euro area economy. And these outcomes would have had the biggest impact on the weakest in society.

Does all this – as the conference title asks – imply a changing role for central banks in macroeconomic stabilisation? The answer is no. Monetary policy should aim at preserving price stability, the primary mandate given to us by the EU Treaty. With regard to the objective, there are no differences between monetary policy in normal and crisis times. Only the intensity and the choice of instruments might require an adjustment.

Affecting *intra*-temporal and spatial allocations should remain the responsibility of governments and other authorities. Rather than being redistributive, central banks in a fragmented world should aim at repairing monetary pol-

icy transmission, and restoring thereby the distributional neutrality of monetary policy.

I will structure my remarks along three lines. First, I will describe the distributional consequences of monetary policy and the channels through which monetary policy can affect the distribution of income in normal times. Second, I will consider the crisis period and the role of non-standard monetary policy measures. And finally, I will look at the role of other economic and financial policies.

Distributional Consequences of Monetary Policy in Normal Times

Back in the 1960s, monetary policy in western European economies had explicit and legal redistributive functions. For example, central banks used credit control measures to complement more traditional instruments consisting of quantitative ceilings on lending rates or controls over the volume of bank lending to the private sector. Direct control over credit was thought at that time to better stabilise economic cycles and inflation. Yet credit controls were also used for other policy purposes, such as to finance government debt at lower interest rates than markets would allow, and to foster the allocation of credit to specific sectors considered as priority activities – in short, to pursue an industrial policy.

Central banks came to realise that credit controls were not the best way to fulfil their stability objective. What's more, they came with undesired side effects. In particular, quantitative credit ceilings were negatively affecting competition, innovation and efficiency in the banking sector.⁵ In some countries,

⁵ For a detailed account of these experiments with credit controls, see: D. R. Hodgman, 1973: *Credit Controls in Western Europe: An Evaluative Review*, paper presented at the conference on "Credit Allocation Techniques and Monetary Policy", Federal Reserve Bank of Boston, September.

the use of credit controls as one of the main instruments of policy led to a rapid expansion in the money supply, persistent inflation and frequent balance of payment crises.

Today, central banks conduct monetary policy by altering the short-term interest rate to affect inter-temporal decisions on consumption and savings. This inter-temporal – or vertical – redistribution is at the heart of the monetary policy, which aims at price stability. A change in the policy rate is transmitted to other interest rates at various maturities through a long sequence of inter-temporal arbitrages. Ultimately, any change in interest rates for consumers and firms affects saving, investment and spending decisions through an inter-temporal substitution effect.

Monetary policy also affects the distribution of income on the intra-temporal – or *horizontal* – dimension. Changes in short-term interest rates impact on consumption, savings and wealth in different ways, depending on the characteristics of individual households. But all these effects can be considered as temporary, indirect and unintended, that is, a side effect of a strategy which aims at ensuring price stability in the economy.

So let me briefly describe how monetary policy can, in principle, affect the distribution of income. Let me start with the impact over the short term before taking a longer-term perspective.

Over the short term, we can see three main channels through which monetary policy may have distributional consequences.

First, monetary policy may act upon the cyclical component of the distribu-

tion of income. In fact, income distribution may narrow during an economic expansion and widen during an economic contraction, especially if labour markets are not functioning well and the burden of adjustment is disproportionately felt by outsiders. Just think of the case where, for example, an increase in unemployment and a decline in the labour force participation are felt excessively by low-skilled workers.⁶ Hence, this cyclical pattern of the income distribution would imply that an expansionary monetary policy shock would also contribute to a narrowing of the income distribution.

Second, an unanticipated surge in inflation will lower the real value of nominal assets and liabilities. This tends to redistribute wealth from lenders to borrowers. As a majority of net borrowers are in the lowest part of the income distribution, an expansionary monetary policy shock would help to narrow the income distribution.⁷

Third, a monetary policy shock may impact on the price of financial and real assets by affecting interest rates and expectations. The distributional consequences depend on asset ownership patterns. In general, households in the highest percentiles of the income distribution tend to have greater financial wealth and a larger share of income derived from financial assets. If an expansionary monetary policy has positive wealth effects, it would lead to a widening of the income distribution. In the same vein, if financial markets are fragmented, an expansionary monetary policy may contribute to widening the income distribution by redistributing wealth from individuals who do not

⁶ See S. Carpenter and W. Rodgers III, 2004: *The disparate labor market impacts of monetary policy*, *Journal of Policy Analysis and Management* 23(4), 813–830.

⁷ For an estimation of this effect in the USA, see M. Doepke and M. Schneider, 2006: *Inflation and the Redistribution of Nominal Wealth*, *Journal of Political Economy*, volume 114(6), 1069–1097.

trade in financial markets to those who trade frequently in financial markets and tend to have higher incomes.⁸ On the other hand, however, a decline in house prices is hurting low and middle-income households disproportionately, as their wealth tends to be concentrated in housing.⁹

So what about the empirical relevance of these various channels? Most studies¹⁰ find that the impact of monetary policy on the income distribution via lower unemployment of low-skilled workers is more important than the redistributive effects from unanticipated inflation. This means that monetary policy, by stabilising economic fluctuations, indirectly affects the cyclical variation of the distribution of income. A recent study based on the Eurosystem's Household Finance and Consumption Survey indicates that monetary easing during the crisis allowed a substantial decline in the debt burden of mortgage-holding households. This was particularly so in euro area countries under stress, as well as for some disadvantaged groups of households, such as the unemployed and those with low income or temporary labour contracts.¹¹

Still, these effects are all temporary. It was Knut Wicksell who, in his

pioneering work *Interest and Prices*, illustrated the inability of monetary policy to permanently affect output and employment. His concept of the “natural rate of interest” distinguishes between the market rate of interest, set by the central bank, and the natural rate of interest that would balance investment and saving. As long as the market rate is less than the natural rate, firms and households want to invest and spend more, causing prices to rise. Such a cumulative inflation would continue until the central bank raises the market rate to match it to the changing natural rate. Wicksell's analysis ultimately suggests that the real forces driving the underlying natural rate of interest are outside the control of the monetary authority.

What does that imply at the current juncture? Since monetary policy cannot permanently affect the inter-temporal price of saving, savers who are concerned by the low level of long-term real interest rates should worry less about accommodative monetary policy than about the development of structural factors, such as productivity, which are beyond the control of central banks.

Does this imply that monetary policy has no long-run or permanent effect

⁸ For a description of the underlying theoretical model, see St. D. Williamson, 2009: *Monetary policy and distribution*, *Journal of Monetary Economics*, 55(6), 1038–1053.

⁹ See S. Bloom Raskin, 2013: *Aspects of Inequality in the Recent Business Cycle*, speech at the 22nd Annual Hyman P. Minsky Conference on the State of the U.S. and World Economies, New York, NY, 18 April.

¹⁰ See, for example, R. Ahrend, J. Arnold and C. Moeser, 2011: *The Sharing of Macroeconomic Risk: Who Loses (and Gains) from Macroeconomic Shocks*, OECD Economics Department Working Papers 877; Blank R. and A. Blinder, 1986: *Macroeconomics, Income Distribution, and Poverty*. In: *Fighting Poverty: What Works and What Doesn't*, Cambridge, Harvard University press; A. Blinder and H. Esaki, 1978: *Macroeconomic Activity and Income Distribution in the Postwar United States*. In: *Review of Economics and Statistics* 60 (November); A. Castañeda, J. Díaz-Giménez and J.-V. Ríos-Rull, 1998: *Exploring the income distribution business cycle dynamics*, *Journal of Monetary Economics* 42 (August), 93–130. D. Cutler and L. Katz, 1991: *Macroeconomic Performance and the Disadvantaged*, *Brooking Papers on Economic Activity* (2); C. D. Romer and D. H. Romer, 1998: *Monetary Policy and the Well-Being of the Poor*, in: *Income Inequalities: Issues and Policy Options* (Federal Reserve Bank of Kansas City), 159–201, and also: O. Coibon et al., 2012: *Innocent Bystanders? Monetary Policy and Inequality in the U.S.*, NBER Working Papers 18170, National Bureau of Economic Research.

¹¹ See M. Ehrmann and M. Ziegelmeyer: *Household risk management and actual mortgage choice in the euro area*, forthcoming.

on the distribution of income? Certainly not. In fact, in the long run, monetary policy can control inflation, both its level and variability, as well as the variability of aggregate demand. In this regard, price stability can foster a more even distribution of income through several channels.

First, high inflation generates uncertainty and discourages investment.¹² The associated reduction in wages relative to the return on capital would contribute to widening the income distribution. *Second*, the uncertainty and reduced effectiveness of financial markets caused by inflation and macroeconomic instability reduces investment in human capital. *Third*, inflation and macroeconomic instability may harm poorer households disproportionately. This is because poorer households, which have limited or no access to the financial system, are unable to smooth consumption in response to adverse income shocks.¹³ In addition, poorer households tend to hold a larger fraction of their financial wealth in cash, implying that they are particularly vulnerable to higher inflation. Finally, inflation and macroeconomic volatility may harm some sectors of the economy disproportionately, such as manufacturing or export-oriented industries, in which wages tend to be relatively lower.

Overall, monetary policy aimed at low inflation and economic stability is the most likely to lead to greater social equality over the longer term. In this sense, “compassionate monetary policy is, most likely, simply sound monetary policy”.¹⁴

Monetary Policy during the Crisis

Over the past five years we have experienced the deepest recession in euro area countries since the end of World War II. The associated fall in activity was unprecedented: at the trough reached in June 2009, euro area nominal GDP had declined by almost 5% on an annual basis. The recovery has been sluggish for the euro area, which is now experiencing a double-dip recession, with growth expected to recover only gradually. The implications for the distribution of income cover the three dimensions which characterise the allocation of resources.

On the *vertical* (or inter-temporal) dimension, the income and wealth losses of the existing generation are severe.¹⁵ In addition, young people are those most affected by unemployment.



To take two examples, youth unemployment in Spain was at 55% and in Greece at 57% at the end of 2012. This seriously affects the lifetime income and wealth prospects of this group and may cause a “lost generation” to emerge.

¹² *On the role of uncertainty shocks*, see N. Bloom, 2009: *The Impact of Uncertainty Shocks*, *Econometrica*, volume 77 (3), 623–685, May.

¹³ See S. Albanesi, 2007: *Inflation and Inequality*, *Journal of Monetary Economics*, vol. 54(4), 1088–1114, May.

¹⁴ C. Romer and D. Romer, 1998, *op. cit.*

¹⁵ In addition, recent research suggests that the cost of job loss in terms of income loss is significant over the entire life cycle, especially when the job loss occurs during a recession. See S. J. Davis and T. Von Wachter, 2011: *Recessions and the Costs of Job Loss*, *Brooking Papers on Economic Activity*, September 2011, 1–72.

Not only is unemployment an immediate social loss, but it is a stressful life event that reduces individual well-being in many persistent ways.¹⁶

On the *horizontal* (or intra-temporal) dimension, small and medium-sized enterprises (SMEs) and low-income households were hit hardest by the crisis. Wage cuts and income losses,



for example, have been the largest for low-skilled, low-wage workers. According to Eurostat, the dispersion of disposable income in the euro area as measured by its Gini coefficient has risen by more than 3% between 2005 and 2011. Recent ECB surveys show how SMEs and households reported increasing financing obstacles, with bank loans becoming harder to obtain.¹⁷ In addition, recent data suggest that SMEs, if they can obtain a loan, face higher costs of bank lending than large companies. In fact, interest rate spreads on SME loans compared with those for large non-financial companies have widened to an average of 40 basis points since 2010.

Finally, the crisis has brought to the fore the *spatial* (or geographical) dimension. Euro area countries suffered different fates during the crisis. We have observed sharp cross-country dispersion in the cumulated changes in real GDP since the start of the crisis. In 2012, real GDP was around 20% lower than in 2007 in the country most affected, while it was around 10% higher in the country least affected by the crisis. The cross-country dispersion of unemployment has also widened, with latest unemployment rates ranging from 4.8% in Austria to 27% in Greece.

Spatial inequality has been magnified by the adverse feedback loop arising from the close association between banks and their sovereign, which has led to fragmented financial conditions across countries and, at the height of the crisis, to fears of a euro break-up. In particular, banks' funding costs have remained persistently high in some countries despite cuts in the ECB policy rate, implying heterogeneous financing conditions for households and firms across countries. This was also shown by the increasing reliance of banks in stressed countries on Eurosystem funding. Widening TARGET2 imbalances – that is, large intra-central bank positions – is a well-known symptom of these developments.

So what did the crisis mean for monetary policy? First, we saw impairments to the traditional inter-temporal arbitrage mechanism, which has curtailed the effectiveness of our standard monetary policy. Second, horizontal and spatial fragmentation – that is, impairments across banks, markets and countries resulting from structural impairments and from the adverse feed-

¹⁶ See D. Bell and D. Blanchflower, 2011: *Young people and the Great Recession*, *Oxford Review of Economic Policy*, 27(2), 241–267.

¹⁷ See European Central Bank, 2013: *The Euro Area Bank Lending Survey*, April.

back loop described above – have challenged monetary policy operating with a single instrument. Furthermore, we observed a self-reinforcing relationship between the spatial- and inter-temporal dimensions of fragmentation. For example, the lack of liquidity in the inter-bank market impaired the price-finding mechanism along the yield curve. As a result, our monetary policy impulses were not evenly transmitted across countries or adequately along the yield curve.

How should monetary policy be conducted in such a fragmented world? First and foremost, monetary policy should aim at repairing the transmission of monetary policy by reducing the fragmentations in the economy and restoring distributional neutrality. Does this imply fundamental differences between monetary policy in normal and crisis times? The answer is no. Monetary policy acts within the same stability mandate, following the same long-term objectives as in normal times.

It is only the choice of instruments and the intensity of monetary policy action that differ. In this respect, it has been argued that reducing fragmentation can imply a redistribution of risk in times of crisis.¹⁸ For example, by relaxing collateral requirements for their lending programmes, central banks can insure against a tail event in which the borrower and the collateral fail to cover the borrowed amount. The main insight here is that redistribution of risk is not a zero-sum game, but that the overall risk in the economy, in our case in the monetary union, can be reduced. I agree with this view, but I would also like to stress that any such insurance

provided by the central bank should come with appropriate safeguards to mitigate moral hazard.¹⁹

Let me explain how the ECB acted in the crisis and how monetary policy in particular has alleviated the fragmentations in the euro area following the principles outlined above.

First, in the wake of a widespread confidence crisis following the collapse of Lehman Brothers which threatened to produce very adverse economic outcomes with strong reductions in output, deflationary spirals and high unemployment, we made a series of policy rate cuts. These limited the consequences the downturn could have had on the income of households and firms across the euro area.

Our more recent rate cuts have narrowed the interest rate corridor between the deposit rate and our main policy rate to 50 basis points. These rate cuts have further eased the financing conditions of borrowers in the euro area and they have contributed to a decline in the cross-country heterogeneity in funding costs. Banks from stressed countries which participate most in Eurosystem liquidity-providing operations will benefit from the lower interest rate charged for these operations. This will, over time, translate into reduced financing costs and improved access to credit for households and firms in stressed countries.

Second, apart from standard monetary policy, the ECB has also resorted to a number of non-standard measures. By re-directing credit to those segments where financial intermediation ceased to function, the non-standard measures supported those areas most in

¹⁸ See M. Brunnermeier and Y. Sannikov, 2012: *Redistributive Monetary Policy*. Paper prepared for the 2012 Jackson Hole Symposium, Princeton University.

¹⁹ See B. Cœuré, 2012. *Central banking, insurance and incentives*. Speech at the ECB conference on “Debt, Growth and Macroeconomic Policies”, Frankfurt, 6 December.

need and thereby countered the increasing heterogeneity. The announcement of outright monetary transactions (OMTs) in particular has played a crucial role: it has improved the transmission of monetary policy by removing the “tail risk” arising from redenomination concerns in certain euro area countries.

Overall, while our non-standard measures were designed for the euro area as a whole, their use has varied among counterparties and across countries. In this regard, our non-standard measures restored the distributional neutrality of our monetary policy by mitigating distortions in certain stressed asset classes or sectors. Their impact has prevented very adverse economic outcomes for certain sectors and countries, and because of the effect this would have had on the rest of the euro area, it has thereby also supported medium-term price stability in the euro area as a whole.

Today we are clearly seeing signs of improvement in financial conditions. Spreads in sovereign and corporate debt markets have fallen substantially. Deposits placed by the euro area money-holding sector with banks in stressed countries have increased by about EUR 200 billion since August 2012. As a consequence, borrowing from the Eurosystem has declined. TARGET2 balances of the national central banks in these countries have fallen by more than EUR 250 billion since their peak of around EUR 1.09 trillion in August last year. And these improvements largely reflect the removal of fears of a systemic collapse of the monetary union that were previously being priced in by markets. They also reflect the re-integration of euro area funding markets, against the backdrop of a continuing adjustment effort by participating countries. Falling TARGET2 balances

are the best proof that the distributional consequences of non-standard monetary policy measures are unintended and temporary.

The Role of Other Economic and Financial Policies

Economic divergences and heterogeneity remain high in the euro area. This concerns in particular the fragmentation in some markets and diverse and weak loan growth across participating countries. While monetary policy in this situation has alleviated the severity of the downturn, let's not forget Wicksell's insights. Monetary policy cannot alter the level and distribution of income in a durable way.

The distortions at the heart of the current vertical, horizontal and spatial fragmentation can finally only be addressed by adequate economic policies outside the realm of monetary policy. Indeed, other stakeholders have to take the leading role by continuing to address the underlying structural weaknesses that are affecting our economies.

Let me mention three policy areas that I consider fundamental in this regard.

The first policy realm relates to policies aimed at the financial sector. Governments and financial sector authorities need to further encourage the repair of banks' balance sheets. Banks in the euro area finance the backbone of our economic system: households and small and medium-sized companies.

The decision to establish a European Single Supervisory Mechanism (SSM) is an essential institutional step overseeing such a process. The SSM will contribute to greater financial integration, a level playing field and greater financial stability. It should be complemented by a unified European framework for bank resolution and re-

covery, and with a Single Resolution Mechanism with the authority to wind up banks in a timely and impartial manner. To complement this, further efforts are essential for banks to build up sufficient capital, remove legacy risks from their balance sheets and to make these balance sheets fit for lending. Repairing the financial sector is the best way to ensure that the debt crisis does not bear a permanent impact on income distribution, and hence that it does not impose a permanent constraint on monetary policy.

The second policy area that I would like to mention is fiscal policy.

It is normally the role of fiscal policy (including in its tax dimension) to deliver any income distribution that society would like to implement based on a normative prior. It is normally the role of fiscal automatic stabilisers to cushion the economic and distributional impact of a deep economic recession of the sort we are experiencing. I say “normally” because we are not in normal times. Fiscal imbalances and weak sovereign balance sheets have prevented fiscal policies from cushioning the large and protracted financial and economic shocks of the past five years.

The lesson from this is clear. Running excessive fiscal deficits at the expense of future generations can be very costly in times of crisis. Therefore, maintaining sustainable fiscal budgets is a necessary condition to achieve distributional equality, both inter-temporally and intra-temporally.

Let me finally mention the structural economic policy domain. Structural policies are key to making an economy more flexible so that it can optimally and rapidly respond to negative economic shocks and avoid the higher costs in terms of lost output and higher unemployment associated with

the slower and more protracted adjustments made by rigid economies.

It is designed in such a way that it curtails rent-seeking behaviours in labour, product and capital markets, structural reform will not only unleash competition and innovation but it will also temper the distributional and social consequences of the needed adjustments. Structural labour market policies are a case in point. They can help to prevent labour market adjustments from falling disproportionately on outsiders, including the younger generation.

Conclusions

Let me conclude by listing the main arguments put forward in my remarks:

- First, the role of monetary policy is clearly defined in the EU Treaty. The



ECB has been mandated by the people of Europe to maintain price stability over the medium term. Fulfilling this mandate means preserving the value of money over time and contributing to overall economic stability. This has the effect of shielding the lowest-income groups and maintaining living standards for the entire

population. Therefore, monetary policy is neutral with regard to fairness and the allocation of resources. But this neutrality can only be ensured if monetary policy transmission is not impaired.

- Second, and as a result, monetary policy in crisis times should aim at repairing monetary policy transmission by reducing fragmentations in the economy and restoring thereby distributional neutrality. There is, however, no fundamental difference between monetary policy in normal and crisis times. The intensity and the choice of instruments in a crisis might need to be adjusted, but monetary policy should continue to act within the same stability mandate and following the same long-term objectives as in normal times.
- Third, the ECB's monetary policy actions have offset market dislocations and thereby contributed to restoring

distributional neutrality during the crisis. In particular, non-standard measures have helped to eliminate tail-risks and, together with the standard measures, have prevented very adverse outcomes for the euro area that would have hit in a disproportionate way the weakest in society, and put at risk price stability.

- And finally, despite the temporary relief brought by our policies, there are limits to what monetary policy can do. Steering income allocation within countries and across countries is the responsibility of elected governments and other authorities. Important work has been done, but in the current environment it is essential that euro area governments continue their reform efforts, individually and jointly, keeping in mind the need to curtail rent-seeking behaviour and protect the weakest in society.

Thank you for your attention.