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Monetary Policy and Inequality

Model Assessment and Literature Review

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Monetary policy and Inequality: Model Assessment and Literature Review

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Executive summary

Central banks are mandated to maintain price stability. In doing so, monetary policy functions as a broad stabilisation tool: it helps prevent excessive inflation, supports stable economic conditions for households and firms, and limits harmful economic fluctuations.

At the same time, monetary policy affects households through the income they earn, the assets they hold and the debts they owe. Since these differ across the population, monetary policy does not affect everyone equally. It therefore has consequences for income and wealth inequality.

This study examines the distributional effects of monetary policy in the euro area by combining insights from the academic literature with evidence from a two-asset Heterogeneous Agent New Keynesian (HANK) model calibrated to euro area data. The framework allows for heterogeneity in household income and wealth and is used to document and interpret how monetary policy affects inequality in the short to medium term, while recognising that long-run inequality is driven primarily by broader structural forces.

The analysis finds that monetary policy does affect inequality, but that these effects are generally modest relative to its broader macroeconomic stabilisation benefits and are unlikely to constitute a first-order determinant of long-run inequality.

Importantly, the direction of the effect varies over time. In the short run, monetary easing tends to increase income and wealth inequality temporarily, mainly because higher asset prices and capital gains disproportionately benefit households with larger financial asset holdings. Over time, however, this effect is gradually reversed as improved macroeconomic conditions strengthen employment, labour income and savings, particularly among lower-income households, thereby reducing inequality.

These dynamics reflect the distinct transmission channels of monetary policy. Financial channels, most notably asset-price revaluations and capital income effects, primarily benefit higher-income and higher-wealth households, whereas labour-market channels tend to be equalising, as lower-income households benefit relatively more from stronger employment and wage growth. Taken together, the results suggest that the distributional consequences of monetary policy are temporary in nature and limited in magnitude, in line with much of the empirical literature.

At the same time, the analysis recognizes the limitations of the modelling framework. The model abstracts from several transmission mechanisms that may be relevant for distributional outcomes. In particular, housing markets, differences in household debt structures, and unconventional monetary policy may also shape distributional outcomes, yet these channels are at best only partly captured in the model.

Overall, although distributional effects do not fall within the primary objective of monetary policy, they remain relevant for understanding the transmission of policy, informing proportionality assessments, and improving communication. Where concerns about inequality require targeted and durable intervention, fiscal policy remains the more appropriate and better-mandated instrument.

1. Introduction

In recent years, the distributional consequences of monetary policy have received growing attention in both academic research and public debate.¹ This reflects the increased prominence of monetary policy measures, such as prolonged low interest rates and large-scale asset purchases, as well as broader societal concerns about income and wealth inequality.

Central banks are mandated to ensure price stability, and in doing so, act primarily as a broad stabilisation mechanism in the economy. By maintaining price stability, monetary policy helps reduce large macroeconomic shocks, which can have substantial and often uneven effects on households. Nevertheless, monetary policy tools inevitably affect households differently, as income sources, assets and debt are unevenly distributed across the population.

These distributional effects should be kept in perspective, as they are not a main driver of long-term inequality. A large body of literature shows that the key drivers of long-term inequality are outside the realm of monetary policy. Structural factors, such as technological change, globalisation, tax systems, and labour-market institutions, play a more significant role in shaping long-term income and wealth disparities.² Not surprisingly, inequality trends in the euro area have evolved largely independently of the monetary policy stance over the past decades (Figure 1). This suggests that monetary policy is unlikely to be a first-order driver of the long-run levels or trends in inequality, even if its effects may interact with structural forces over time. Its main distributional relevance seems to be in the uneven transmission of policy across households in the short to medium term.

Monetary policy affects households through several transmission channels. Lower interest rates, for example, support employment and lower borrowing costs, while also raising asset valuations, which tend to benefit wealthier households. Differences in inflation exposure, credit conditions and housing markets further shape these effects. As households' marginal propensities to consume differ, these distributional effects also influence the strength of transmission to the real economy. Accounting for these channels does not broaden the mandate but helps clarify trade-offs and inform proportionality assessments.

¹ For a recent overview of the academic literature, see e.g. McKay & Wolf (2023) ([JEP: Monetary Policy and Inequality](#)). Multiple policy makers and columnists have contributed to this debate, some examples are: Schnabel ([ECB: Monetary policy and inequality](#)) and Wolf ([FT: Monetary policy is not the solution to inequality](#)). In the Netherlands, recent contributions include Baarsma ([NRC: Hoe het rentebeleid de ongelijkheid veragroot](#)) and reaction from de Jong ([Stop de obsessie met ongelijkheid](#)) as well as Janssens ([De relatie tussen monetair beleid en ongelijkheid ontrafeld](#)).

² See e.g. Acemoglu (2002), Autor & Dorn (2013), Karabarbounis & Neiman (2014), Piketty (2014), Blanchard & Rodrik (2023) and Hubmer, Krusell, and Smith Jr (2021).

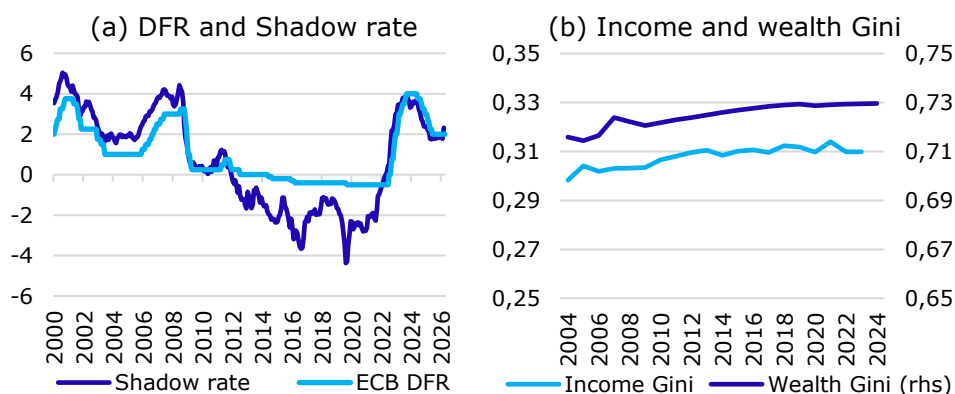


Figure 1: Deposit Facility Rate, Shadow Rate and the average euro area G5 income and wealth Gini

Note: Shadow rate is Krippner's shadow short rate. Gini is calculated as the population-weighted average of five countries (DE, ES, FR, IT, NL). Source: ECB & World Inequality Database (WID). The Gini coefficient summarizes the degree of inequality in a distribution, ranging from 0 under perfect equality to 1 when all income or wealth is concentrated in a single household.

Although addressing inequality is not a central bank objective, the distributional effects of monetary policy measures may be assessed as part of the proportionality analysis. In that context, the benefits of a measure are assessed alongside its side effects. Among other considerations, the analysis may cover implications for the distribution of income and wealth, as well as for financial stability. Crucially, when distributional concerns call for more targeted action, fiscal policy instruments are better placed and mandated to address them, with precision and explicit intent that monetary policy instruments cannot replicate.

This analysis builds on these insights by bringing together the academic literature and new evidence from the DNB-HANK model for the euro area and draws conclusions for monetary policymakers. The literature broadly finds that expansionary monetary policy has modest but heterogeneous effects: it supports lower-income households via stronger labour-market outcomes, while raising capital and asset incomes that benefit wealthier households. DNB-HANK simulations confirm this asymmetry: easing briefly raises income and wealth inequality through capital gains for asset-rich households, but this reverses as returns fall and labour income and savings among lower-income and lower-wealth households strengthen.

Overall, the distributional effects of monetary policy are small and temporary, although the initial response of income inequality is non-negligible. The income Gini rises by around 0.01 points on impact, which is also its peak response. Given the size of the policy-rate shock of 35 basis points, this initial jump is economically meaningful. However, the effect reverses quickly: one quarter later, the income

Gini already falls below its long-run level. The response therefore reflects a short-lived redistribution across households rather than a persistent increase in inequality. As a benchmark, the tax-and-transfer system reduces the income Gini by around 0.15, roughly an order of magnitude more than the peak income-Gini response to the monetary shock. While this is not a one-for-one comparison, since fiscal redistribution is structural and persistent, it provides a useful sense of scale. The wealth Gini responds much less. Its maximum response remains below 0.001 Gini points, with only a marginal increase at early horizons followed by a small decline. These movements are small, suggesting that the transitory monetary shock has little effect on overall wealth inequality.

2. Empirical regularities and model

2.1 Model

Most macroeconomic models used by central banks abstract from the distribution of income and wealth across households. While some frameworks distinguish between different household types (e.g. savers and borrowers), they typically do not capture the distributional implications of monetary policy. As a result, while these models are well suited for analysing aggregate developments such as GDP growth or inflation, they are unable to show how policy effects differ across households or generate winners and losers.

We move beyond this approach with a model in which households differ in both income and wealth. These differences matter, because they shape who benefits and who is adversely affected when monetary policy changes. As a result, the household side of the model is central to our analysis and determines how heterogeneity is incorporated.

We build on four core assumptions, which are explained in more detail below. First, households face similar income uncertainty but differ in the level and sources of income and wealth. This gives rise to precautionary saving and wealth inequality. Second, wealth is held in different forms, so the model distinguishes between liquid and illiquid assets to capture differences in returns, liquidity, and portfolio adjustment. Third, the impact of the business cycle differs across the earnings distribution, with lower- and upper-income households exhibiting greater sensitivity to aggregate fluctuations in labour income than households in the middle of the distribution. Fourth, aggregate spending responds gradually because households update their expectations about the macroeconomy at different times, even if individual responses to income changes can be rapid. Together, these assumptions allow the model to capture both the aggregate transmission of monetary policy and its heterogeneous effects across households.

2.2 Assumptions and calibration

The first assumption is that households differ in levels and sources of income and wealth. We capture this by assuming that household earnings are uncertain and vary exogenously over time, so that even households facing the same underlying risks experience different income paths. Because households cannot fully insure against that uncertainty, they accumulate assets as a precautionary buffer and smooth consumption over time. Consequently, wealth inequality emerges endogenously within the model itself, as households accumulate assets in response to income risk and economic conditions (Bewley, 1986; Aiyagari, 1994; Krusell & Smith Jr, 1998). In other words, differences in income histories and

past saving decisions lead households to hold different asset positions and sources of income over time.

The model also reflects how households hold their wealth. Households allocate wealth across assets that differ in liquidity, returns, and ease of adjustment. Some wealth is held in liquid assets, such as deposits or savings, which can be accessed quickly and adjusted freely from one period to the next. Other wealth is held in less liquid assets, such as housing, pension wealth, or investment portfolios, which typically offer higher returns but are more costly or slower to access. Households may also hold debt, especially mortgage debt, which affects net wealth positions and exposure to monetary policy. Our framework focuses on the distinction between liquid and illiquid assets and does not model household debt explicitly.

We therefore include two asset types in the model. The first is a liquid asset, which households can adjust freely between periods. The second is an illiquid asset, representing a diversified portfolio of firm equity and government bonds, which yields a higher return but is not immediately accessible at all times (Kaplan & Violante, 2014; Bayer, Born, & Luetticke, 2024). This two-asset structure captures differences in liquidity and in households' ability to rebalance their portfolios in response to shocks. At the same time, it abstracts from differences in the maturity and contractual structure of assets and liabilities, including mortgages, which may also shape the transmission of monetary policy in practice but lie outside the scope of the model.

The composition of wealth across these two assets varies systematically over the wealth distribution. Lower-wealth households, who have less access to housing and financial investments and stronger precautionary saving motives, tend to hold a relatively larger share of their wealth in liquid form. Middle-wealth households, by contrast, tend to hold more of their wealth in illiquid assets, especially housing and pensions, and are also more likely to hold mortgage debt. Higher-wealth households hold larger portfolios overall and typically combine substantial illiquid wealth with a relatively larger liquid component and more diversified financial investments (Figure 2, Panel (a)).

The distinction between household types is empirically important because it captures a group of households referred to as “wealthy hand-to-mouth” (Kaplan, Violante, & Weidner, 2014). These households hold substantial wealth in illiquid assets, but not in liquid assets. As a result, they are likely to respond strongly to changes in current income because of limited liquid cash or savings. By distinguishing between liquid and illiquid assets, the model is able to match both the level and composition of household wealth in the data. It also accounts for

how strongly households, on average, adjust consumption in response to income changes, which is an important determinant of aggregate dynamics and the transmission of monetary policy.

The distinction between liquid and illiquid assets also matters for the distributional effects of monetary policy. In HANK models, the distribution of monopoly profits is important because it shapes how monetary policy shocks affect different households. More generally, it is useful to distinguish between flows, which matter for income inequality, and stocks, which matter for wealth inequality. In our framework, both profits, paid out as dividends, and capital gains accrue to households' illiquid asset accounts. This means that capital gains generated by a monetary policy shock enter the return flow on illiquid assets and affect income inequality on impact, while the underlying stock of illiquid asset holdings remains central for the distribution of wealth. This assumption is quantitatively relevant because illiquid assets are concentrated among wealthier households, so surprise capital gains can have meaningful short-run effects on both the income and wealth distributions.

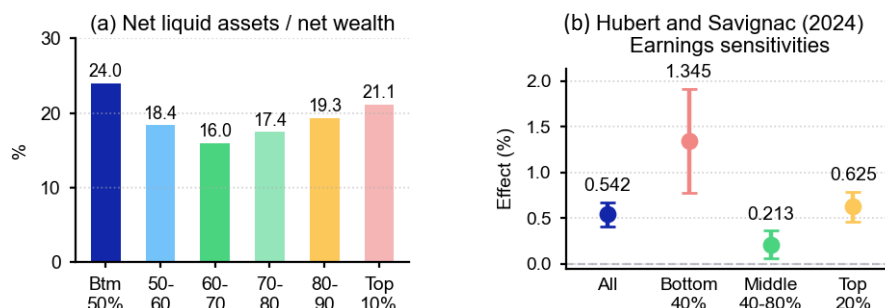


Figure 2: Net liquid asset ratio over the wealth distribution (Panel (a)) and earnings elasticities to GDP over the earnings distribution in France (Panel (b)).

Note: Net liquid assets are defined as the sum of deposits, debt securities, listed shares, investment funds minus other loans. The data comes from the Distributional Wealth Accounts (ECB). Panel (b) is reproduced from Hubert & Savignac (2024) and plots the sensitivity of household labour income to the business cycle.

The model captures the empirical regularity that lower-income workers are more exposed to swings in the economy. Evidence shows a U-shaped pattern in earnings cyclicalities across the income distribution: GDP betas, a measure of how strongly earnings respond to the business cycle, are highest at the bottom, decline toward the middle, and rise again at the top (Güvenen, Schulhofer-Wohl, Song, & Yogo, 2017). The elevated sensitivity at the lower end reflects higher risks of unemployment, whereas the upper end is more sensitive to adjustments in wages, in the form of bonuses or variable-pay, and hours worked (Figure 2, Panel (b)) (Hubert & Savignac, 2024). As a result, their earnings respond strongly to

aggregate shocks. We capture this by allowing households' share of total labour income to depend both on where they are in the earnings distribution and on overall economic conditions (Auclert & Rognlie, 2020). We do not explicitly model unemployment (the extensive margin), so GDP betas serve as a reduced-form proxy for these effects.

The model captures the gradual response of spending to monetary policy.

Monetary policy changes are unanticipated, so households do not adjust their behaviour in advance. However, while individual households often respond quickly when their own income changes, aggregate household spending in the economy usually adjusts more gradually after an interest rate change. We capture this by assuming that households update their views about the aggregate economy at different points in time after a monetary policy surprise. Some adjust their expectations with respect to economic aggregates, such as interest rates and wages, immediately, while others do so only later. As a result, aggregate consumption responds gradually (Auclert, Rognlie, & Straub, 2020). While we do not explicitly tie updating frequencies to the wealth or income distribution, this assumption is consistent with evidence that households devote more attention to idiosyncratic (micro) conditions than to aggregate (macro) developments, and it allows the model to match the observed gap between fast micro responses and sluggish aggregate consumption dynamics (Carroll et al., 2020).

For the rest of the economy, we remain close to the standard New Keynesian framework (Smets & Wouters, 2003). Firms produce using labour and capital and face price adjustment frictions, while wages are set under similar frictions. Investment adjustment costs help generate the gradual response of output to monetary policy shocks. A financial intermediary channels household savings into government bonds and firm equity, and liquidity transformation costs sustain the return premium on illiquid assets. Monetary policy follows a Taylor rule, and the government gradually stabilises debt by adjusting labour taxes.

Fiscal policy plays a central role in shaping how monetary policy affects the economy in HANK models. In our model, the government finances its spending through labour taxes and debt issuance, with tax rates adjusting gradually in response to deviations of public debt from its long-run level. Changes in monetary policy directly affect the government budget constraint through changes in interest payments on public debt, which in turn trigger adjustments in taxes or borrowing. This fiscal response affects current disposable income and spending decisions of households. As a result, the effects of monetary policy are closely intertwined with the fiscal response (Kaplan, Moll, & Violante, 2018).

The two-asset HANK model calibrated to euro area data closely replicates key aggregate and distributional moments, with a particularly good fit for the Gini coefficients reported in Table 1. This provides a strong basis for the analysis of monetary policy effects in the next sections.

Panel A: Aggregate statistics	Data Moment	Model Moment
Capital to output	2.9	2.14
Investment to output	0.21	0.21
Consumption to output	0.53	0.58
Labour share	0.62	0.67
Panel B: Inequality statistics		
Gini coefficient: income	0.30	0.31
Gini coefficient: wealth	0.72	0.71
Gini coefficient: expenditure	0.34	0.28
Share of illiquid wealth held by top 10%	0.52	0.50

Table 1: Key aggregate and inequality metrics in EA data and in the model.

Notes: Gini coefficient income comes from Eurostat, EA-20 data, average between 2014-2024. Gini coefficient wealth is derived from the average in the ECB Distributional Wealth Accounts, 2009q1-2025q3. Gini coefficient expenditure comes from the Eurostat experimental statistics and is the average of 2015 and 2020. The Gini coefficient summarizes the degree of inequality in a distribution, ranging from 0 under perfect equality to 1 when all income or wealth is concentrated in a single household.

3. Aggregate and distributional effects

3.1 Aggregate effects

Before turning to the distributional effects, we examine the impact of monetary policy on euro area aggregates such as inflation and output. Consistent with the euro area monetary transmission literature, including Coenen et al. (2019) (NAWM II), an expansionary monetary policy shock (i.e., a lower policy rate) generates temporary, hump-shaped increases in output and inflation. Figure 3 shows that following a one-standard-deviation shock, output and inflation rise on impact, peak after a few quarters, and then gradually return to steady state.

In what follows, all distributional responses are reported for this same expansionary monetary policy shock, corresponding to a peak decline in the policy rate of around 35 basis points. This normalization is important for interpreting the magnitude of the effects on household income and wealth.

The interpretation of our results is also shaped by the surprise nature of the experiment. The shock is an unexpected and transitory monetary-policy innovation, so the impact response captures the effect of a sudden adjustment in financial conditions. Such surprises can generate relatively sharp short-run asset-price and valuation effects. In practice, however, policy changes are often partly anticipated, so the immediate distributional response may be less pronounced than in our experiment.

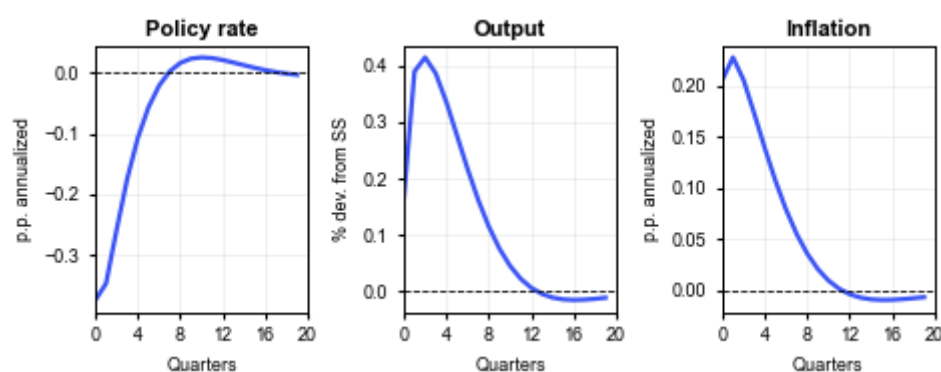


Figure 3: Aggregate responses to a monetary policy shock.

Notes: Impulse responses of the policy rate, output, and inflation to a one-standard-deviation monetary policy shock. The policy rate is expressed in annualized percentage points, output as percent deviation from steady state, and inflation in annualized percentage points. The horizontal axis reports quarters after the shock.

3.2 Income inequality

According to the literature, monetary policy has modest effects on the distribution of income and wealth, with effects most concentrated at the extremes. Expansionary interventions tend to benefit lower-income households mainly through improved labour-market outcomes and easier credit conditions,

while higher-income and higher-wealth households gain primarily via asset prices and capital income. By contrast, middle-income households often experience smaller net gains as these effects are less prevalent for this group of households.

The income effects of monetary easing are often described as U-shaped across the distribution driven by labour-market dynamics and returns on capital. Two channels are central to this pattern.

First, the earnings heterogeneity channel operates through the labour market: monetary policy affects earnings at the extensive margin (job entry/exit) and the intensive margin (wages and hours worked). These effects are typically stronger for lower-income households. Hence, this channel underpins findings that expansionary monetary policy tends to reduce income inequality (Auclert, 2019; Amberg, Jansson, Klein, & Picco, 2022; Samarina & Nguyen, 2024; Chang & Schorfheide, 2024; Groiss, 2023). The channel is state-dependent because monetary policy transmits more strongly through earnings in high-inflation periods (Meriküll & Rottner (2025)). This implies that stabilising inflation may place greater relative burdens on low-income households through labour-market effects of monetary tightening.

Second, the income composition channel reflects differences in income sources across households. Higher-income households derive a larger share of income from capital, which responds strongly to monetary easing through asset prices and returns, whereas lower-income households depend more on labour income and transfers. The sensitivity of capital income to monetary policy is broadly similar across the income distribution; what drives the stronger response at the top is that capital income constitutes a larger share of total income for higher-income households (Coibion, Gorodnichenko, Kueng, & Silvia, 2017).

These two channels clarify why monetary easing yields a U-shaped distributional profile. Labour-market effects are most salient at the bottom, capital-income effects at the top, and these effects are generally muted for households in the middle. At the same time, differences in marginal propensities to consume imply that these exposure patterns do not translate one-for-one into consumption responses, as households at the top tend to have lower MPCs.

The results from our HANK model indicate a pronounced but short-lived increase in income inequality on impact (Figure 4, Panel (a)). The income Gini rises sharply in the first period, driven by a spike in financial income accruing to holders of illiquid assets (the Gini rises by approximately 0.008 points or 2.5%). This reflects surprise capital gains generated by the monetary policy shock, which are

concentrated among households with substantial illiquid portfolios. As these returns are paid out immediately, they temporarily amplify dispersion at the top of the distribution. Moreover, in line with our calibration, earnings react more strongly at the bottom of the distribution.

While these movements in the income Gini coefficient are visible in the model, their magnitude should be interpreted with care. Compared to empirical estimates, such as Coibion et al. (2017), the short-run responses in the model are relatively pronounced. At the same time, they are broadly in line with model-based studies, including Lueticke (2021), which find comparable responses of income inequality to monetary shocks. Importantly, these effects are also sizeable relative to the typical variation of income inequality over time in the data, where changes in the income Gini are generally modest from year to year. Nevertheless, when put in perspective, they remain small compared to structural redistribution mechanisms. For example, the reduction in inequality between pre-tax and post-tax income is on the order of 0.13–0.17 Gini points, substantially larger than the changes induced by monetary policy in our simulations.

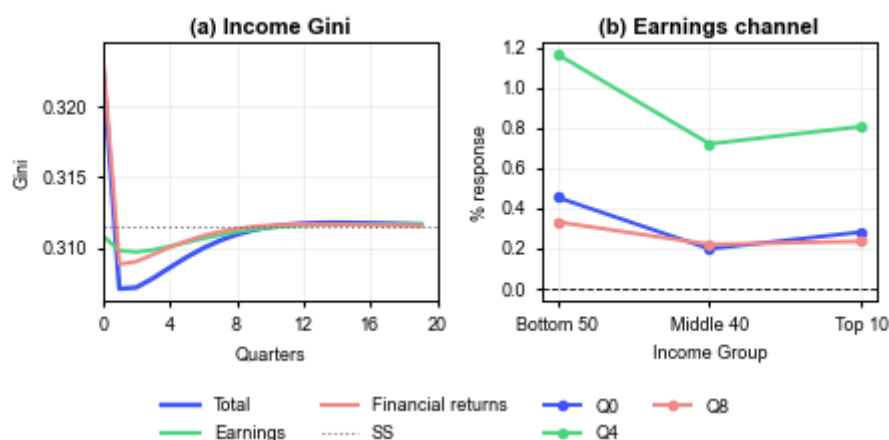


Figure 4: Income inequality and earnings response to monetary policy shock

Notes: Panel (a) shows the response of Gini Income, disentangled into Earnings and Financial income. Panel (b) depicts the response of earnings across the income distribution for different quarters after the shock (0, 4 and 8 quarters after the shock in blue, green and red, respectively).

In subsequent periods, this pattern reverses. Once the initial revaluation effects dissipate, all assets earn the (now lower) risk-free rate following monetary easing. As a result, financial income declines across the distribution—most notably for asset-rich households—leading to a reduction in overall income inequality. This dynamic explains why the initial rise in the Gini is not persistent and is followed by a gradual compression.

By contrast, labour income consistently acts as an equalising force. The earnings component of the Gini moves in the opposite direction to total inequality, reflecting stronger labour-market improvements for lower-income households. This is mirrored in Figure 4, Panel (b), which displays the U-shaped earnings response across the income distribution: earnings gains are largest at the bottom, more muted in the middle, and again somewhat stronger at the top, in line with the empirical literature. Together, these results highlight that short-run inequality dynamics are dominated by asset price movements, while medium-run distributional effects are driven by labour-market adjustments.

3.3 Wealth inequality

The response of wealth inequality to monetary policy is shaped by the distribution and valuation of financial and non-financial assets across households. Here, three key channels emerge from the literature.

First, the portfolio channel reflects how expansionary policy raises asset prices, benefiting wealthier households who hold a larger share of (risky or illiquid) assets. Model-based evidence from the euro area and the US confirms that such policies increase net worth at the top of the distribution, while households with few of these assets see limited gains (Luetticke, 2021; Kase & Rigato, 2025; Lee, 2024; Del Negro, et al., 2025).

Second, the Fisher channel (Doepke & Schneider, 2006; Auclert, Monetary policy and the redistribution channel, 2019; Luetticke, 2021) **describes how unexpected inflation redistributes wealth between creditors and debtors.** Inflation erodes the real value of nominal assets, harming savers, while reducing the real burden of debt, benefiting borrowers. In economies where the wealthy are net creditors, this can lead to a reduction in wealth inequality. For monetary policy, this channel is relevant to the extent that policy may generate inflation. More generally, however, the same mechanism also arises under other shocks, such as supply disturbances, that push inflation above expectations.

Finally, the financial segmentation channel highlights disparities in households' access to financial markets. Wealthier households, with greater flexibility and financial literacy, can reallocate portfolios in response to monetary shocks (Alessie, Van Rooij, & Lusardi, 2011; Van Rooij, Lusardi, & Alessie, 2012). In contrast, lower-wealth households often lack the means to adjust, making them more vulnerable to adverse effects. Studies show that following contractionary monetary shocks, high-wealth households increase portfolio liquidity, while poorer households reduce it, underscoring their limited capacity to respond

(Luetticke, 2021; Kase & Rigato, 2025; Colciago, Samarina, & de Haan, 2019; Gornemann, Kuester, & Nakajima, 2012).

In the model, we capture the portfolio channel. Simulations (Figure 5, Panel(a)) show that the response of wealth inequality is initially driven by asset revaluation effects. On impact, the wealth Gini increases, reflecting a sharp rise in the value of illiquid assets that are disproportionately held by high-wealth households. This revaluation effect generates immediate capital gains for these households, making the short-run response clearly regressive. Panel (b) corroborates this pattern: in the initial quarter (Q0), wealth gains are concentrated at the top of the distribution, while responses for the bottom and middle groups remain more modest.



Figure 5: Wealth inequality response after a monetary policy shock

Notes: Panel (a) shows the response of Gini Wealth, disentangled into Earnings and Financial income. Panel (b) depicts the response of wealth across the wealth distribution for different quarters after the shock (0, 4 and 8 quarters after the shock in blue, green and red, respectively).

This effect is short-lived. As time progresses, the importance of revaluation declines and eventually reverses. Following the monetary easing, the risk-free rate falls, compressing returns on financial assets. This reduces financial income going forward, particularly for wealthy households with large asset holdings. As a result, the contribution of financial returns to wealth inequality weakens and turns negative, putting downward pressure on the wealth Gini.

At the same time, the earnings channel gradually becomes more important. Improved labour market conditions allow lower-wealth households—especially those in the bottom 50 percent—to increase savings. This accumulation of wealth at the lower end contributes to a relatively rapid decline in wealth inequality after the initial spike. This dynamic is reflected in Panel (b), where the distributional

pattern shifts from regressive on impact to progressive at longer horizons (Q4 and Q8), with relatively stronger gains for lower-wealth households.

Overall, the quantitative effects are modest, in line with the broader literature, which typically finds that monetary policy has limited and transitory effects on wealth inequality. The figure shows that short-run dynamics are dominated by asset price revaluations, while medium-run adjustments are shaped by savings behaviour and labour income, ultimately leading to a small compression in wealth inequality (a relative maximum reduction of Gini wealth of 0.08%).

3.4 Consumption inequality

Consumption is central to understanding the distributional effects of monetary policy, for both macroeconomic dynamics and welfare. While income and wealth inequality often receive the most attention in public debate, they provide only a partial view of economic well-being. Consumption is, next to income and wealth, just as important to study. First, monetary policy operates primarily through business cycle stabilization in the short run, where output is largely demand-determined. Since consumption is the largest component of aggregate demand and GDP, understanding its response is essential. Second, in many macroeconomic frameworks, including the one used in this analysis, consumption is the key measure of welfare. It reflects households' ability to smooth resources over time and directly captures the utility derived from economic activity, making its distribution central to assessing the welfare consequences of monetary policy.

The model shows that consumption responses to monetary policy differ across income groups. Figure 6 decomposes the response into a real income effect (via disposable income) and a real interest rate effect (intertemporal substitution). In the bottom quartile (Panel (a)), consumption changes are entirely explained by movements in disposable income, reflecting a dependence on wage income and binding liquidity constraints. In our current calibration, no household in the bottom quartile holds liquid assets, so the standard substitution response to interest rate changes is absent. In contrast, the top quartile (Panel (b)) reacts through both channels: consumption rises with higher income and adjusts to the change in interest rates, consistent with greater asset holdings and stronger exposure to returns. Overall, consumption responds more strongly and persistently in the bottom quartile, consistent with higher marginal propensities to consume among households with limited savings.

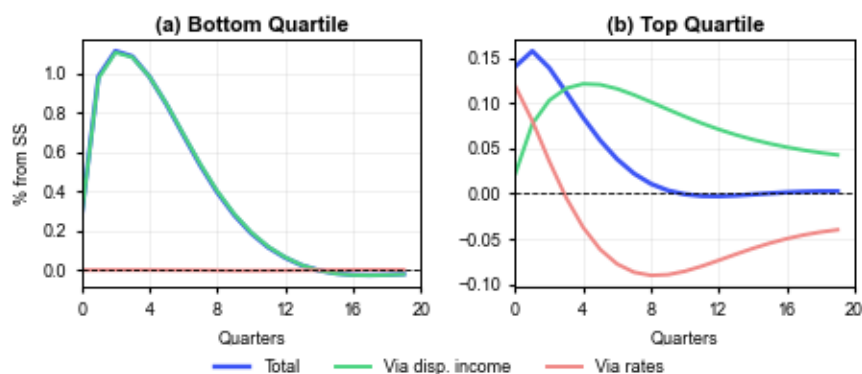


Figure 6: Response of consumption after a monetary policy shock

Notes: Panel (a) shows the response of consumption of the bottom 25% of the initial wealth distribution, disentangled into Earnings and Financial income. Panel (b) depicts the response of consumption of the top 25%.

Overview table summarising effects of an expansionary MP shock

HOUSEHOLD GROUP	INCOME	WEALTH	CONSUMPTION
BOTTOM	Benefit mainly through stronger labour-market outcomes. Employment, hours, and wage income tend to respond relatively strongly, so labour income rises over time.	Gain little on impact from asset revaluation because they hold few illiquid assets but may gradually accumulate wealth as higher labour income supports saving.	Consumption responds strongly and persistently, mainly through disposable income. Liquidity constraints and high marginal propensities to consume make this group especially sensitive to income gains.
MIDDLE	Experience more muted income effects, as labour-market gains are smaller than at the bottom and capital-income effects are less important than at the top.	Wealth effects are generally moderate. These households may benefit somewhat through housing and pension-like illiquid assets, but less than top-income households from financial revaluation.	Consumption rises, but less strongly than for low-income households. Responses reflect a combination of some income support and weaker liquidity constraints.
TOP	Benefit mainly through the higher capital income, as capital income and returns on illiquid assets rise strongly on impact.	Gain most in the short run from higher asset prices and revaluation of illiquid portfolios, so wealth rises immediately. These gains fade as returns decline over time.	Consumption increases through both higher income and intertemporal substitution, but the response is typically smaller than for lower-income households because marginal propensities to consume are lower.

4. Missing Channels

We have shown how distributional effects of monetary policy operate within our two-asset HANK framework for the euro area and related them to the existing empirical literature. At the same time, by construction, the model abstracts from several dimensions that may shape distributional outcomes in practice. Housing and unconventional monetary policy are two prominent factors that introduce additional transmission channels not fully captured in our framework. The next sections discuss these dimensions and their implications for the distributional transmission of monetary policy.

4.1 Housing

Housing is the main form of wealth for most households, making tenure differences central to how monetary policy affects inequality. As illustrated in the data, housing accounts for the largest share of wealth for most households, and particularly for the bottom 50%, where it dominates the portfolio, while wealthier households hold more diversified portfolios alongside housing (Figure 7, Panel (a)). Monetary policy affects homeowners and renters asymmetrically: lower rates tend to raise house prices and ease collateral constraints, amplifying wealth gains for homeowners, while higher rates increase borrowing costs for mortgagors and restrict renters' entry into homeownership (Iacoviello, 2005).

Changes in house prices can have ambiguous effects on inequality, depending on how homeownership is distributed. Rising house prices can reduce wealth inequality when homeownership is broadly distributed, as middle-income households benefit from capital gains (Vale, 2024). At the same time, these gains are not evenly shared: while homeowners gain, renters may face worsening affordability, potentially widening the gap between owners and non-owners (Di Casola, 2023).

Interest rate changes also affect households through housing-related cash flows, with more immediate and uneven effects across groups. Lower interest rates reduce mortgage payments, especially in countries with a high share of adjustable-rate mortgages, freeing up disposable income for indebted households and stimulating consumption (Di Casola, 2023). Conversely, rate hikes disproportionately affect younger and lower-income households with high debt burdens, as their mortgage costs rise and housing wealth declines. These effects are particularly pronounced in euro area countries with high household debt and homeownership rates, such as the Netherlands and Spain (Albuquerque, Lazarowicz, & Lenney, 2025; Di Casola, 2023).

Structural models with housing confirm that these price and income effects jointly shape monetary policy’s distributional impact. HANK models with housing and rental sectors show that monetary tightening lowers house prices while rents adjust more slowly, leading to a short-term redistribution from landlords to renters (Albuquerque, Lazarowicz, & Lenney, 2025). They also highlight that features such as borrowing constraints, tenure choice, and expectations about house prices are key to understanding how monetary policy affects both the macroeconomy and the distribution of income and wealth (Kaplan, Moll, & Violante, 2018; Slacalek, Tristani, & Violante, 2020).

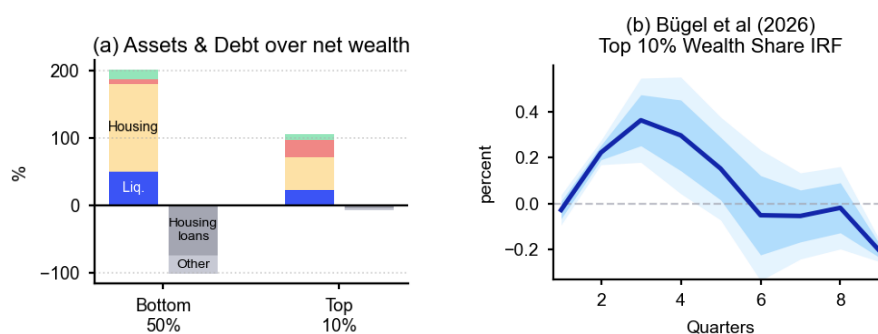


Figure 7: Portfolio composition (Panel (a)) and response of wealth inequality to an unconventional monetary shock in the US (Panel (b)).

Note: Net liquid assets are defined as the sum of deposits, debt securities, listed shares, investment funds minus other loans. Net housing is defined as housing wealth minus mortgages. The data comes from the Distributional Wealth Accounts (ECB). Panel (b) is reproduced from Buegel et al (2026) and depicts the percentage deviation of the top 10% wealth share after an unconventional monetary policy shock in the US.

4.2 Unconventional monetary policy

Since the Global Financial Crisis and Euro Area Crisis starting in 2008-09, the ECB has engaged in asset purchases to circumvent the effective lower bound on nominal short-term interest rates. Under these purchases, also known as quantitative easing (QE), the ECB purchases securities via banks, injecting liquidity into the financial system, lowering yields, and making borrowing cheaper to stimulate economic activity. At their peak in mid-2022, total asset purchases under the ECB’s Asset Purchase Programme (APP) and Pandemic Emergency Purchase Programme (PEPP) amounted to EUR 5.0 trillion.

Given the scale of these direct asset-market interventions, QE may have been a significant driver of income and wealth inequality. Yet, findings in the academic literature are far from uniform. Empirical evidence by Casiraghi, Gaiotti, Rodano, and Secchi (2018) and Lenza and Slacalek (2024) suggests that income inequality decreased due to identified ECB QE shocks. Both papers find the earnings heterogeneity channel to be the most important driver. Moreover, both papers

find U-shaped, albeit small effects on wealth inequality. On the other hand, Domanski, Scatigna, and Zabai (2016), focusing on wealth inequality only, find an increase in wealth inequality, mainly because of increasing equity prices. Similar conflicting results have been found for FED QE episodes. A recent study by Bügel, Hidalgo, and Luetticke (2026) argues that while conventional and unconventional monetary policy have similar aggregate outcomes, they differ in their distributional consequences. While conventional monetary policy decreases wealth inequality, unconventional monetary policy increases it (Figure 7, Panel (b)). The driving force behind this result is that UMP increases stock prices, which are held disproportionately by the rich, relative to house prices, which are more relevant for the bottom 50%. As such, the distributional effects are driven by the asset composition channel.

HANK model-based evidence on QE's distributional effects is hard to come by.

First, it requires a departure from “Wallace neutrality” (Wallace, 1981), the idea that the central bank's balance-sheet composition has no real effects. Second, for the exercise to be meaningful, the model must incorporate the zero lower bound, that is, a non-linearity. Both are challenging additions to already complex models. Both Cui and Sterk (2021) and Lee (2024) incorporate these features. However, they also find conflicting results. While both papers find that inequality worsens due to QE, they differ in their assessment of whether these distributional effects would have been worse under conventional interest rate policy.

5. Conclusion and policy implications

Monetary policy affects income and wealth inequality through several channels, but these effects are limited in size and vary over time. Our results point to a consistent pattern: following a monetary easing, inequality may increase temporarily, as asset prices and capital income rise more strongly for wealthier households. As the effects of the shock unfold, this pattern reverses, with stronger labour-market outcomes supporting income and savings for lower-income households and reducing inequality again.

These dynamics reflect how monetary policy transmits through the economy, with financial channels dominating in the short run and labour-market effects becoming more important over time, limiting the persistence of distributional effects. Monetary policy is unlikely to be a key driver of longer-term inequality. Structural factors—such as technological change, globalisation, tax systems and labour market institutions—remain far more important in shaping the level and trends of inequality over time.

Distributional effects are relevant for understanding and assessing monetary policy. Differences across households influence how policy transmits to consumption and the real economy and inform assessments of strength and timing of policy. In addition, they form part of the broader evaluation of policy measures, including proportionality considerations to ensure instruments achieve price stability while limiting unintended side effects.

Our findings confirm that monetary policy should be understood first and foremost as a broad stabilisation mechanism. By maintaining price stability and dampening macroeconomic volatility, it prevents episodes of persistently high inflation or deep recessions that have large and uneven effects across households. In this sense, the distributional effects of monetary policy cannot be assessed in isolation from the cost for society if the central bank would not act to stabilise inflation.

Where distributional concerns call for targeted and lasting interventions, fiscal policy is generally better placed to respond. It has the instruments to address differences in income and wealth more directly, and the mandate to make such choices. Monetary policy, by contrast, contributes primarily by maintaining macroeconomic stability through broad-based instruments rather than tools tailored to distributional objectives. Its distributional effects should nevertheless be examined as part of the proportionality assessment.

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Appendix

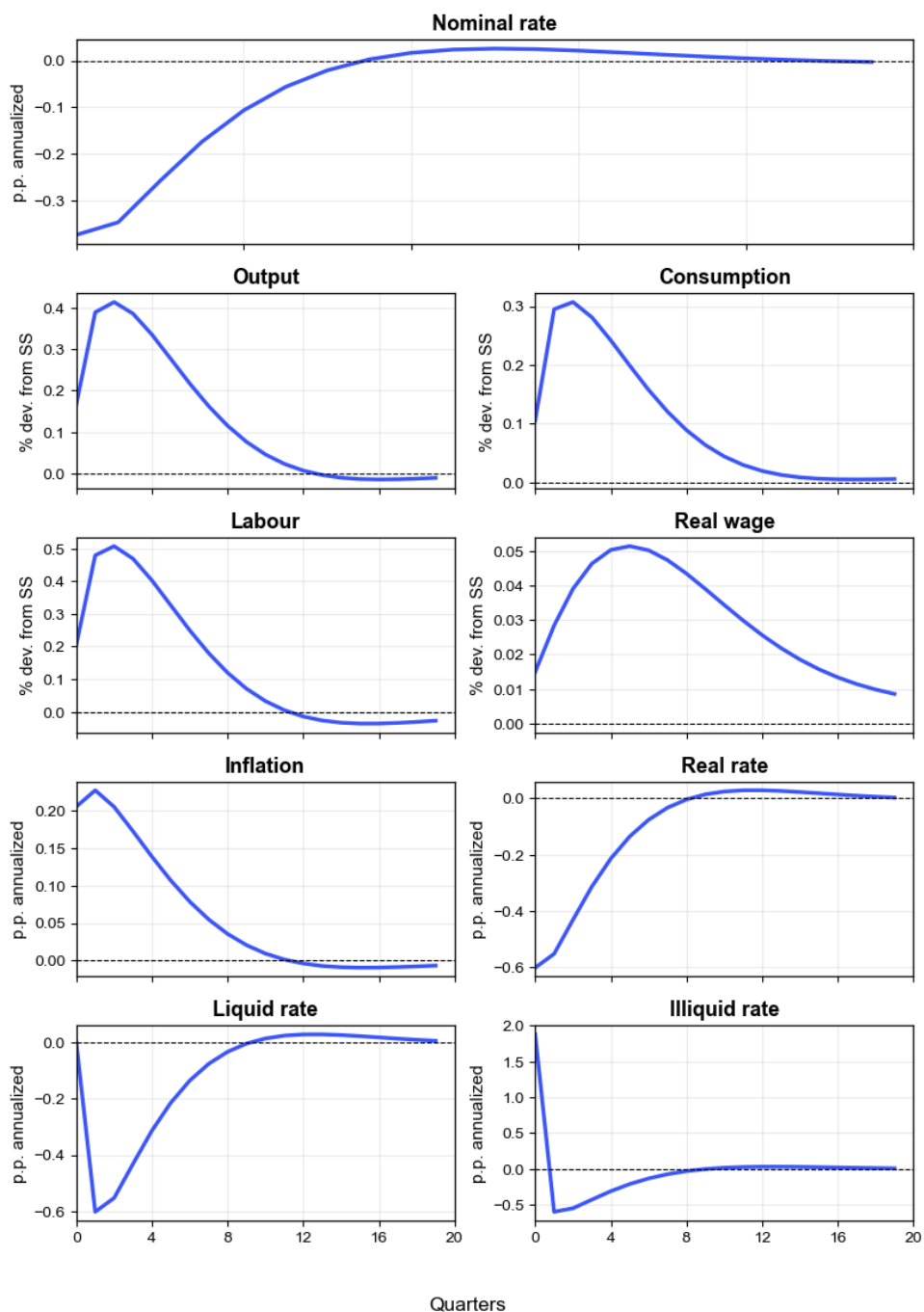


Figure A1: Monetary policy effects after a 1 std dev MP shock across a wider range of variables.