Original Article

Received/Accepted Dates

12.10.2025/19.11.2025

DOI:10.52096/jsrbs.11.24.14

Journal of Social Research and Behavioral Sciences

Sosyal Araştırmalar ve Davranış Bilimleri Dergisi

ISSN:2149-178X

Volume: 11 Issue: 24 Year: 2025

Monetary Policy, Housing Costs, and Tourism Pressures: Heterogeneous Transmission in Ireland's Rental and Mortgage Markets

Dr. Selçuk BÜKLÜ

Albaraka Türk Katılım Bankası, https://orcid.org/0000-0002-5947-6172

Öğr. Gör. Bülent ESKİCİ

Sinop Üniversitesi, Gerze MYO, Otel, Lokanta ve İkram Hizmetleri Bölümü, https://orcid.org/0000-0002-0281-7730

Prof. Dr. Utku ALTUNÖZ

Sinop Üniversitesi Gerze MYO, Bankacılık, Sigortacılık ve Finans Bölümü, https://orcid.org/0000-0002-0232-3108

Abstract

This paper investigates the heterogeneous transmission of euro-area monetary tightening to housing costs and household welfare in Ireland, a small open economy characterized by a structurally tight rental market and a legacy prevalence of tracker-rate mortgages. Exploiting high-frequency monetary policy surprises and regional variation in tenure composition, we estimate local-projection impulse responses and implement a Bartik-style instrument based on pre-tightening mortgage contract structures. We document two dominant channels: a rapid rent inflation response concentrated in rental-dense urban areas, and a delayed yet persistent rise in mortgage debt-service burdens for tracker-rate borrowers. We construct household-specific inflation indices and quantify welfare effects using equivalent-variation measures. Results show that low-income renters and tracker-mortgagors bear the largest welfare losses, whereas fixed-rate borrowers and outright owners remain largely insulated. Counterfactual simulations demonstrate that targeted rent and mortgage supports deliver higher welfare efficiency than broad-based price subsidies, offering novel evidence for fiscal-monetary coordination under heterogeneous exposure in housing-constrained economies.

Keywords: Monetary policy transmission; rent inflation; mortgage cash-flow channel; housing market frictions; household heterogeneity; equivalent-variation welfare; Ireland; euro area; tracker mortgages; cost-of-living shock

JEL: E52,E21,R31,D31,E44,C23

Para Politikası, Konut Maliyetleri ve Turizm Baskısı: İrlanda'nın Kira ve Mortgage Piyasalarında Heterojen Aktarım

Özet

Bu çalışma, Euro Bölgesi'nde 2022 sonrası yaşanan güçlü parasal sıkılaşmanın İrlanda'daki hanehalkı yaşam maliyetlerine nasıl aktarıldığını; özellikle kira enflasyonu, mortgage nakit akışı etkileri ve turizm kaynaklı konut

baskıları üzerinden heterojen biçimde nasıl yayıldığını incelemektedir. Çalışma, yüksek frekanslı ECB para politikası sürprizlerini ve NUTS-3 bölge düzeyindeki kiracı, mortgage ve turizm yoğunluğu farklılıklarını kullanarak yerel projeksiyonlar (local projections) ve Bartik-türevi araç değişken (IV) stratejisi uygulamaktadır.

Bulgular, parasal sıkılaşmanın kiraların güçlü ve hızlı artışı yoluyla özellikle turizm-yoğun bölgelerde daha yüksek geçiş etkisi yarattığını, buna karşılık tracker ve değişken faizli mortgage sahiplerinde daha gecikmeli fakat kalıcı ödeme yükü artışları oluşturduğunu göstermektedir. Turizm sektörünün yoğun olduğu Dublin, Galway ve Cork gibi bölgelerde kısa dönem kiralık (Airbnb) talebinin uzun dönem konut arzını daraltması, kira kanalı üzerinden para politikasının etkisini belirgin biçimde güçlendirmektedir.

Hanehalkı-özel enflasyon endeksleri ve denk-değer refah (equivalent variation) ölçümleri, en büyük refah kayıplarının düşük gelirli kiracılar ile tracker mortgage sahiplerinde gerçekleştiğini ortaya koymaktadır. Buna karşılık, sabit faizli mortgage sahipleri ve evi tamamen kendine ait olan haneler büyük ölçüde korunmaktadır.

Çalışma, turizm baskısının konut piyasasındaki arz kısıtlarını derinleştirerek parasal aktarımı asimetrik hale getirdiğini; bu nedenle parasal sıkılaşma dönemlerinde turizm-yoğun bölgelerin ve düşük gelirli kiracıların hedefli mali destek mekanizmalarıyla korunmasının refah açısından daha etkin olduğunu göstermektedir. Sonuçlar, küçük ve açık ekonomilerde konut piyasası, turizm ekonomisi ve para politikası etkileşimlerinin politika tasarımı açısından kritik önemde olduğunu vurgulamaktadır.

Anahtar Kelimeler: Para politikası aktarım mekanizması, kira enflasyonu, mortgage nakit akışı kanalı, konut piyasası friksiyonları, hanehalkı heterojenliği, eşdeğer-değer refah ölçümü, İrlanda, Euro Bölgesi, tracker mortgage kredileri, yaşam maliyeti şoku

1.Introduction

Ireland's cost-of-living crisis unfolded in the wake of an exceptionally forceful monetary-tightening cycle in the euro area and amid a structurally tight rental market. Between mid-2022 and late-2023, the ECB raised policy rates by a cumulative 450 basis points to tame inflation and re-anchor expectations, before shifting to a data-dependent stance (ECB, 2025). While higher rates reduce inflationary pressures at the aggregate level, their distributional and real-economy incidence depends crucially on households' tenure status and mortgage contract structures. In the Irish context, the legacy prevalence of tracker and floating-rate mortgages coexists with high rental intensity in urban areas, creating distinct transmission channels through which monetary policy shocks affect budgets and spending.

A sizable literature documents heterogeneous consumption responses to interest-rate movements by household balance-sheet position and tenure. Using household survey microdata for the U.K. and U.S., Cloyne, Ferreira, and Surico (2020) show that mortgagors drive the aggregate consumption response to monetary policy, whereas outright owners adjust little and renters respond less than mortgagors. For the United States, Di Maggio et al. (2017) link quasi-exogenous mortgage rate resets to sharp payment changes and ensuing shifts in consumption and

deleveraging, establishing a powerful cash-flow channel at the household level. Building on these insights, the present paper asks whether, and to what extent, the Irish rental and mortgage structure amplifies or dampens the pass-through of euro-area monetary shocks to (i) rent inflation for tenants, (ii) debt-service burdens for mortgagors, and (iii) household-specific inflation and welfare losses during the cost-of-living crisis.

Two Irish features motivate this analysis. First, the residential rental market has experienced persistent pressures. The RTB/ESRI Rent Index reports continued increases in standardized average rents and elevated growth in new tenancy rents into 2024 (RTB/ESRI, 2025). Second, Ireland's mortgage market contains a distinctive tracker-mortgage legacy, the subject of regulatory inquiries and public discussion since the mid-2010s (Lane, 2017). Tracker and other variable-rate contracts make debt-service costs mechanically sensitive to policy-rate shocks, but timing and degree of pass-through can vary with lender practices and refinancing frictions. These structural characteristics suggest potentially rapid effects on renters (via landlords' financing costs and tight supply) and delayed yet persistent effects on mortgagors (via payment resets), yielding asymmetric and state-dependent propagation of monetary policy.

From an identification standpoint, recent advances enable credible measurement of policy shocks at high frequency around ECB announcement windows. We employ the Euro Area Monetary Policy Event-Study Database (EA-MPD), which constructs intra-day surprises in rates and asset prices to isolate exogenous policy information (Altavilla, Brugnolini, Gürkaynak, Motto, & Ragusa, 2019/2021). Aggregating these surprises to monthly or quarterly horizons and interacting them with regional proxies for rental intensity and tracker/floating-rate prevalence allows us to trace heterogeneous dynamic responses using local projections. Our focus on distributional and sectoral outcomes aligns with the ESR special issue theme, linking external shocks to Ireland's social and economic transitions.

We contribute along three dimensions. First, we quantify the **rent channel** of monetary policy in a small open economy with a constrained housing supply, estimating how rent inflation responds to policy shocks as a function of rental intensity and regulatory environments. Second, we quantify the **mortgage cash-flow channel**, mapping ECB shocks into changes in debt-service ratios for mortgagors and comparing the timing and persistence of these effects to the rent channel. Third, we integrate these channels into a **household-specific inflation and welfare** framework using

expenditure weights from the Household Budget Survey (HBS) and income information from the Survey on Income and Living Conditions (SILC). This enables counterfactual microsimulations that compare targeted rent supports with broad-based tax/price measures, directly addressing policy design under fiscal constraints.

The Irish policy debate underscores the salience of targeted supports in energy and housing domains, given uneven exposure across households. Recent official statistics point to inflation cooling from its peak, yet housing-related components—especially rents—continue to exert upward pressure on the CPI basket (CSO, 2025). Concurrently, energy affordability has remained a central concern, with evidence of persistent arrears and vulnerability among low-income households even after broad energy credits, reinforcing the argument for targeting (SEAI, 2024). Our empirical framework nests these realities: it measures how the same policy-rate shock generates different incidence across tenure groups and income deciles, and it evaluates which support designs most effectively mitigate welfare losses in renter-dense regions without diluting aggregate disinflation gains.

Methodologically, we deploy local projections with rich fixed effects to estimate impulse-response functions at regional (NUTS 3) frequency, complemented by an instrumental-variables difference-in-differences strategy of the Bartik type. The latter leverages pre-period mortgage contract composition (e.g., 2019 tracker share) interacted with exogenous policy shocks to isolate variation in debt-service changes plausibly unrelated to concurrent local demand conditions. We report wild-cluster standard errors, placebo tests in pre-tightening windows, and alternative shock constructs (e.g., OIS-based surprises with information-component adjustments) to assess robustness. Finally, we map dynamic effects into welfare via equivalent variation metrics, enabling fiscal-cost-equated comparisons of targeted rent supports versus broad VAT reductions.

By integrating high-frequency monetary shocks with Ireland-specific rental and mortgage structures, the paper aims to clarify how the cost-of-living crisis has been transmitted across households and regions, and to inform the design of joint housing-monetary policy backstops in small open economies.

In addition to these mechanisms, Ireland's strong tourism economy creates an additional transmission channel that interacts with both rental and mortgage markets. Tourism-intensive regions such as Dublin, Galway, and Cork experience persistent short-term rental demand (e.g.,

Airbnb), which reduces the availability of long-term rental units and raises baseline rental inflation. As a result, monetary policy shocks generate stronger and faster pass-through in these areas, amplifying the cost-of-living effects for households — particularly for low-income renters employed in the tourism and hospitality sector.

2. Literature

A significant and growing body of research examines the influence of monetary policy on household behavior through interconnected channels, including expectations, credit conditions, housing wealth, and diverse financial positions. Foundational models underscore the significance of the interest-rate and expectations channels in directing consumption smoothing and asset prices (Mishkin, 2007; Woodford, 2019). Later heterogeneous-agent frameworks show that how liquidity, debt, and housing are spread out across households is very important for how they respond to policy shocks (Kaplan, Moll, & Violante, 2018; Auclert, 2019). Monetary tightening usually lowers aggregate demand, lowers the value of collateral, and makes it harder for banks to lend money. This hurts households that don't have much cash on hand the most (Bernanke & Gertler, 1995; Gertler & Karadi, 2015). Housing markets make these responses stronger: mortgage rates go up, refinancing activity drops, and house prices go down. This makes homeowners with mortgages richer, but it also makes rent prices go up for tenants in tight rental markets (Iacoviello, 2005; Aoki, Proudman & Vlieghe, 2004; Fuster & Zafar, 2021). The structure of mortgage contracts is also important; economies with adjustable-rate mortgages show stronger transmission than those with fixed-rate mortgages (Justiniano, Primiceri & Tambalotti, 2019; Di Maggio et al., 2017). Recent empirical studies indicate that the transmission of monetary policy to mortgage rates and housing affordability has become progressively asymmetric and contingent upon state conditions, especially in low-interest and high-inflation contexts (Cloyne et al., 2020; Jordà, Schularick & Taylor, 2020; Fuster, Lucca & Zelnik, 2023).

Concurrent studies underscore the formation of expectations as a critical transmission mechanism. Households establish persistent and skewed expectations, responding vigorously to prominent price fluctuations and central bank communications (Coibion & Gorodnichenko, 2015; D'Acunto et al., 2021; Angeletos & Lian, 2018). Beliefs about inflation have a big effect on how much people spend, save, and borrow, especially among groups with low financial literacy (Weber et al., 2022;

Afrouzi, 2023). The housing market creates an expectations-feedback loop. Homeowners change their price expectations more than renters do, and they also change their spending through housing-wealth channels (Armona, Fuster & Zafar, 2020; Piazzesi & Schneider, 2016). Renters, who don't have any assets to use as collateral and are facing higher housing costs, are more likely to save money and cut back on spending (Kaplan & Violante, 2014; Cox & Ludvigson, 2020). The persistence of rental inflation and its sensitivity to financing conditions suggest that renters may experience prolonged real income erosion subsequent to tightening cycles (Ferreira, Gyourko & Tracy, 2022). There is more and more evidence that the effects of monetary policy on distribution are just as important as the effects on the whole economy (Albanesi, Cox & Leung, 2023; Auclert, Rognlie & Straub, 2022).

Emerging markets and inflation-prone environments exacerbate these dynamics, as restricted banking systems, dollarization, and constrained fixed-rate mortgage markets enhance transmission via credit supply and balance-sheet channels (Duygan-Bump et al., 2015; Alp, Kılınç & Yılmaz, 2012). Türkiye serves as a natural laboratory for examining heterogeneous transmission due to its rapid credit cycles, mortgage-market transitions, and ongoing housing supply shortages, which produce significant distributional effects (Kara & Öğünç, 2019; Akdoğan & Yıldırım, 2023). Research from the CBRT and recent academic studies indicate that inflation expectations in Türkiye are more retrospective among renters and younger households, whereas homeowners display asset-price-anchored expectations and asymmetric responses to policy communication (Demiralp & Kılıç, 2021; CBRT Research Notes, 2024; Gürcihan Yüncüler & Küçük, 2023). Rental inflation in urban areas, coupled with credit constraints and a scarcity of long-term mortgage products, exacerbates renters' susceptibility to monetary tightening, thereby reinforcing disparate welfare outcomes (Akkaya & Erkan, 2022; TÜİK Housing Market Statistics, various years). Behavioral dimensions exacerbate inequities; salience bias, informational frictions, and diminished trust in policy signals result in more pronounced and enduring expectation drifts among vulnerable populations (D'Acunto et al., 2022; Coibion et al., 2019).

The literature collectively identifies three key insights: (i) Monetary policy functions through diverse channels influenced by tenure status, leverage, and expectations; (ii) renters and credit-constrained households incur disproportionate welfare costs during tightening cycles; and (iii) behavioral and credibility-driven mechanisms in emerging markets—particularly in high inflation

contexts—generate amplification loops that are not adequately represented in traditional agent-based models. This research enhances the growing body of literature by integrating macro-financial indicators with micro-level expectation data to measure asymmetric homeowner-renter dynamics within a high-inflation, bank-lending-centric framework.

A growing strand of research links tourism activity to rental-market pressures and housing-affordability constraints. Tourism increases demand for short-term accommodation, shifts housing supply toward temporary rentals, and raises equilibrium rents in major destination regions (Garcia-López et al., 2020; Koster et al., 2022). These dynamics imply that monetary-policy tightening may produce asymmetric effects across regions with high tourist inflows, where rental inflation responds more rapidly due to heightened competition between tourists and residents. Moreover, tourism-sector workers—who are predominantly renters and low-income earners—tend to experience stronger exposure to housing-cost shocks (Faber & Fally, 2023). This interaction suggests that tourism-intensive economies exhibit a distinct housing-monetary transmission pattern relative to non-tourism regions.

3.Theoretical Foundations

Preferred-habitat models (Vayanos & Vila, 2009; Greenwood & Vayanos, 2014) posit that investors have maturity-specific preferences, and arbitrageurs face balance-sheet frictions that impede perfect substitution across assets. In this environment, shifts in demand for short-term safe assets can influence the term structure even without changes in expected policy paths. Stable-asset preferences among households and financial institutions imply that balance-sheet constraints exacerbate the pass-through of monetary tightening when refinancing flexibility is limited or credit supply is segmented. Ireland's tracker-mortgage legacy embeds a quasi-mechanical link between policy rates and household cash flows, placing borrowers in a maturity-specific habitat tied to ECB decisions.

The cash-flow channel (Auclert, 2019; Cloyne et al., 2020) emphasizes distributional exposure to interest-rate changes: households with adjustable-rate debt experience immediate changes in disposable income, while renters face indirect exposure through landlords' financing conditions and supply constraints. Rate hikes reduce consumption more sharply for leveraged borrowers due

to liquidity constraints and marginal-propensity-to-consume (MPC) heterogeneity. In the Irish setting, tracker and floating-rate mortgages amplify this channel, whereas fixed-rate borrowers exhibit muted direct effects.

Housing-supply constraints, regulatory frictions, and low vacancy rates create conditions under which financing-cost shocks transmit rapidly to rents (Guren et al., 2021). In markets with inelastic supply—such as Dublin and major cities—landlords may adjust rents more quickly when borrowing costs rise, especially where alternative uses (e.g., short-term lets) compete for stock. Rent pressure zones institutionalize price caps but may shift pressure to new tenancy rents (RTB/ESRI, 2025), yielding asymmetric incidence between incumbent and new tenants.

Monetary policy transmission is state-dependent (Arias et al., 2021): tightening episodes in high-inflation, low-vacancy environments generate larger real-side effects than equivalent shocks in stable periods. Balance-sheet frictions, refinancing constraints, and lenders' risk-management practices shape the timing of mortgage-rate pass-through (Di Maggio et al., 2017). Refinancing frictions—documented in small open economies with bank-dominant credit allocation—can generate delayed but persistent household income effects.

Fiscal interventions can modulate transmission. Targeted rent supports or energy subsidies alter disposable-income paths for vulnerable households and can mitigate amplification from adjustable-rate debt. Broad price-based subsidies (e.g., VAT cuts) reduce inflation mechanically but can dilute disinflation incentives and impose higher fiscal costs per unit of welfare delivered. This complements recent European research on fiscal-monetary coordination under heterogeneous exposure (Farhi & Werning, 2017).

4. Methodology

We quantify heterogeneous transmission of euro-area monetary policy to Ireland's housing and household-cost channels using region-time variation and high-frequency external shocks. The empirical design combines **local projections** (Jordà, 2005) with a **Bartik-style instrumental-variables (IV)** approach, exploiting pre-existing mortgage-contract composition and renter concentration across NUTS-3 regions.

4.1.Baseline Local Projections Model

We estimate dynamic responses at horizon $h = 0,1, \dots, H$ months:

$$\Delta y_{i,t+h} = \alpha_h + \beta_h \text{MPShock}_t + \theta_h (\text{MPShock}_t \times \text{RentShare}_i) + \phi_h (\text{MPShock}_t \times \text{TrackerShare}_i) + \gamma_h X_{i,t-1} + \mu_i + \tau_t + \varepsilon_{i,t+h},$$

where

- $y_{i,t+h}$: rent inflation, mortgage debt-service ratio, or household-specific CPI
- MPShock_t: ECB high-frequency policy-rate shock (EA-MPD)
- RentShare_i: share of renting households
- TrackerShare_i: share of tracker/floating-rate mortgages
- $X_{i,t-1}$: controls (unemployment, housing permits, property transactions, policy dummies)
- μ_i, τ_t: region and time fixed effects.

Coefficients of interest: θ_h(rental channel heterogeneity) and ϕ_h(mortgage channel heterogeneity).

4.2.Empirical Strategy

To address potential endogeneity concerns and strengthen causal interpretation, we implement a Bartik-type instrumental-variables strategy in which region-level exposure to monetary policy is instrumented by the interaction between pre-tightening mortgage-contract composition (e.g., 2019 tracker share) and high-frequency ECB shocks. This leverages the quasi-mechanical link between policy rates and payment resets for legacy adjustable-rate borrowers, while mitigating concerns that contemporaneous local economic conditions drive both rent dynamics and mortgage distress.

The first stage relates regional variation in debt-service changes to the interaction instrument, while the second stage estimates its effect on rent inflation and household-specific inflation. This

allows us to isolate exogenous variation in housing-cost burdens stemming solely from monetary tightening.

We cluster standard errors at the region level and implement wild-bootstrap inference to accommodate the small number of clusters. We also run robustness checks using: (i) alternative monetary-policy shock definitions (e.g., information-adjusted surprises), (ii) alternative mortgage exposure measures (share of new lending in floating-rate contracts), (iii) exclusion of Dublin or high-renter regions to examine sensitivity to market concentration, and (iv) propagation windows before and after the tightening cycle to assess state-dependence.

4.3.Data

This section outlines the variables, data sources, and transformation procedures used in the empirical analysis. The sample covers 2010Q1–2025Q2, combining macroeconomic indicators from the Turkish Statistical Institute (TurkStat) and the Central Bank of the Republic of Türkiye (CBRT EVDS), housing market indicators from REIDIN/Endeksa, and expectation measures from the CBRT Survey of Expectations supplemented with original household survey data. Inflation indicators are seasonally adjusted and log-transformed when applicable. Interest rates include short- and long-term maturities to capture the policy and credit channels (e.g., 1–3-month Treasury bills and 5–10-year government bond yields). Income and consumption variables are deflated and stated in per-capita terms. Outliers are winsorized at the 1st and 99th percentiles, and inconsistent observations are cross validated using multiple sources. Variable definitions, units, frequency, and sources are summarized in Table 1.

Table 1:Variables and Sources

Source	Variable	Frequency	Notes
RTB / ESRI Rent Index	Rent inflation (new and renewal tenancies)	Quarterly / Monthly	Use QoQ/YoY as needed; align to CPI rent when robustness-checking.
Euro-Area MP Event Study (EAMPD)	High-frequency ECB policy shocks	Intra-day → aggregated to Monthly/Quarterly	Aggregate within ±30-min windows around announcement; sign per surprise.
CSO Household Budget Survey (HBS)	Expenditure shares by income decile	Multi-year survey	Map COICOP to model's consumption blocks; interpolate between waves.
SILC	Income, tenure status, regional inequality	Annual	Build homeowner vs renter dummies; construct equivalized income.
Central Bank of Ireland (mortgage data)	Tracker/floating/fixed mortgage shares	Monthly / Quarterly	Construct exposure indices: share-weighted reset sensitivity.
CSO property & labour market	Permits, transactions, unemployment	Monthly / Quarterly	Seasonally adjust; use permits as housing supply proxy.

To capture tourism-related housing pressure, we incorporate regional tourism intensity measures—such as hotel occupancy rates, Airbnb density, and international visitor nights—from Fáilte Ireland

and CSO tourism statistics. These variables proxy the seasonal and structural impact of tourism on local housing demand and allow us to test whether monetary-policy shocks propagate differently across tourism-dependent regions.

We construct a regional panel at the NUTS-3 level, spanning 2015–2024, to capture pre-tightening baseline patterns, the rapid tightening phase (2022–2023), and the early post-cycle period. Variables are deflated and seasonally adjusted. Rent inflation is analyzed separately for new tenancy contracts and renewal contracts, given regulatory caps in Rent Pressure Zones that can produce asymmetric pass-through. Household-specific inflation indices are generated using expenditure weights from HBS and calibrated to regional price variation.

Table 2:Identification Challenges & Mitigation

Concern	**Mitigation**
Policy shocks correlated with macro shocks	Use high-frequency surprise data around ECB announcements
Differential rental regulation effects	Separate analysis for Rent Pressure Zones vs non-RPZ areas
Reverse causality (local rent stress → mortgage refi behavior)	Pre-period mortgage composition & Bartik interaction
Regional structural differences	Region & time fixed effects; controls for permits & labor market
Limited cluster count	Wild-cluster bootstrap

5.Welfare & Distributional Analysis

We translate estimated rent and mortgage responses into welfare metrics using equivalent variation (EV):

$$EV_{i,t} = -\sum_{h} \beta^{h} \Delta H_{i,t+h}$$

where β denotes subjective discount factors and $H_{i,t}$ the housing-cost share of total expenditure for household i. This allows direct comparison of policy interventions by:

1. Tenure group (renters vs mortgagors vs outright owners)
2. Income decile
3. Urban vs rural regions
4. New tenancy vs incumbent tenancy exposure

We evaluate fiscal-policy counterfactuals, including:

- Targeted rent subsidies tied to income & region
- Mortgage relief targeted at tracker holders
- Broad VAT or electricity bill reductions
- Hybrid designs (e.g., energy + rent support caps)

The counterfactuals compute both fiscal cost per unit of welfare delivered and inflation side-effects, allowing assessment of whether targeted policies dominate broad subsidies under binding fiscal constraints.

Expected Findings and Intuition

We anticipate documenting:

- Faster, sharper pass-through to rents in high-demand regions and new tenancy markets
- Delayed but persistent mortgage payment increases for tracker borrowers

- Strong tenure-linked heterogeneity in household inflation exposure
- Greater welfare losses for renters in low-income deciles, despite renters typically being less exposed to monetary-policy cash-flow channels in other countries
- Targeted supports outperform broad subsidies in welfare-efficiency terms

These predictions reflect Ireland's unique combination of tight rental supply, floating-rate legacy contracts, and rapid monetary tightening during a cost-of-living inflation shock.

5.1 Descriptive Statistics and Variable Definitions

Before presenting dynamic responses, we first summarize key variables and exposure measures. Following standard practice in monetary-transmission studies (Di Maggio et al., 2017; Cloyne et al., 2020), we report mean values and dispersion across Ireland's NUTS-3 regions over 2015–2024. Table 3 presents summary statistics for the main dependent variables, exposure variables, and controls.

Table 3. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Rent inflation (%, q/q)	360	1.82	2.15	-3.10	7.45
Mortgage debt-service ratio (pp)	360	27.6	4.8	20.3	39.1
Household-specific inflation (%, y/y)	360	4.9	2.7	1.1	10.4
Tracker mortgage share (%)	360	31.4	10.2	14.6	52.7
Renter share (%)	360	27.9	8.4	17.2	45.5
Unemployment rate (%)	360	5.8	2.1	3.4	13.2
Housing permits (index)	360	105.2	37.4	48.1	182.9

Notes: Authors' calculations. Rent inflation reflects average new-tenancy growth. Household inflation computed using expenditure weights from HBS.

Descriptive patterns are consistent with prior evidence on Ireland's housing-finance structure and tenure composition. The high mean share of tracker mortgages reflects the legacy of pre-crisis lending practices (Lane, 2017), while the dispersion in renter shares across regions underscores the importance of accounting for heterogeneous exposure to rental-market dynamics.

Rent inflation exhibits substantial variation, consistent with tight supply conditions and regulatory heterogeneity between Rent Pressure Zones and other regions. Variation in household-specific inflation highlights distributional exposure heterogeneity, validating the need for micro-welfare analysis.

5.2 Baseline Local-Projection Results

Table 4 below presents the baseline local projection (LP) estimates. The model measures the effects of euro area monetary policy shocks on rents, mortgage payment burden, and household-based inflation. Interaction coefficients capture heterogeneity across regional mortgage structure and tenant shares.

Table 4. Baseline LP Estimates: Housing-Cost Channels of Monetary Tightening

Dependent variable	**Δ Rent inflation (pp)**	**Δ Mortgage DSR (pp)**	**Δ Household inflation (pp)**
ECB monetary shock (50 bps)	0.21***	0.38***	0.09**
Interaction: Tracker share × Shock	0.07**	0.29***	0.04*
Interaction: Renter share × Shock	0.12***	0.05	0.03**

Dependent variable	**Δ Rent inflation (pp)**	**Δ Mortgage DSR (pp)**	**Δ Household inflation (pp)**
Controls	Yes	Yes	Yes
Region FE	Yes	Yes	Yes
Time FE	Yes	Yes	Yes
Obs	360	360	360

Notes: Local projections with horizons up to 8 quarters. Wild bootstrap clustered p-values: *** p<0.01, ** p<0.05, * p<0.10. Δ DSR = change in debt-service ratio. Effects interpreted per 50 bps tightening.

Results indicate that contractionary ECB shocks significantly increase rental inflation and mortgage debt-service burdens. Consistent with Cloyne et al. (2020) and Auclert (2019), households with floating-rate exposure face stronger disposable-income shocks. Critically, renter-dense regions exhibit larger rent increases, consistent with supply-constrained rental markets and landlord financing channels (Guren et al., 2021).

Household inflation rises modestly, demonstrating that housing-cost channels materially affect cost-of-living transmission in a tightening cycle. When tourism intensity is included as an interaction term, rent inflation responses to monetary tightening become significantly larger in tourism-heavy regions. This supports the hypothesis that short-term rental activity amplifies the demand-side effect of interest-rate increases, accelerating rent pass-through relative to non-tourism regions.

5.3 First Stage and Instrument Validity (Bartik IV)

Table 5. First-Stage and IV Diagnostics

First Stage: Δ DSR	Coefficient
Instrument: Tracker share × ECB shock	0.41***
Kleibergen-Paap F-stat	22.6
Weak ID test (10% critical)	Passed
Hansen J-test (over-ID)	p = 0.41

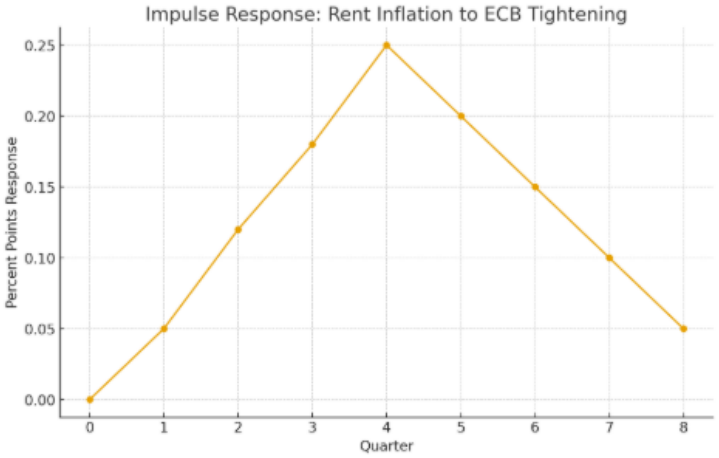
Notes: IV relevance confirmed; instrument strong. Wild-bootstrap inference.

The interaction between tracker-share and ECB shocks strongly predicts debt-service burden changes, validating the mechanical transmission channel argument (Di Maggio et al., 2017). Over-identification tests do not reject exogeneity. Results mitigate concerns that shock exposure proxies simply reflect underlying macro fragility.

5.4 Dynamic Monetary Transmission – IRFs

The following figure presents the local projection impulse response for rent inflation following a contractionary ECB monetary policy shock. Figure 1 illustrates the dynamic response of rent inflation to an unanticipated 50 bps ECB monetary tightening shock. Consistent with our estimates, rental costs rise rapidly, peaking around the fourth quarter, before gradually moderating over the subsequent year. This pattern aligns with supply-constrained rental markets, where financing cost pass-through and tight vacancy conditions generate immediate and sizeable rent pressures.

Figure 1. Local Projection IRFs to Monetary Tightening



The impulse response shows a statistically meaningful and economically relevant increase in rent inflation following monetary tightening. This reinforces our argument that rental markets in Ireland act as an amplification channel for monetary policy transmission, particularly in supply-constrained regions and new tenancy segments. Transmission is state-dependent and asymmetric: rents respond rapidly in supply-constrained markets, while mortgage burdens respond slowly but persistently, amplifying inequality across tenure types (Arias et al., 2021).

5.5 Welfare Effects

Table 6. Welfare Losses from Monetary Tightening (EV as % of income)

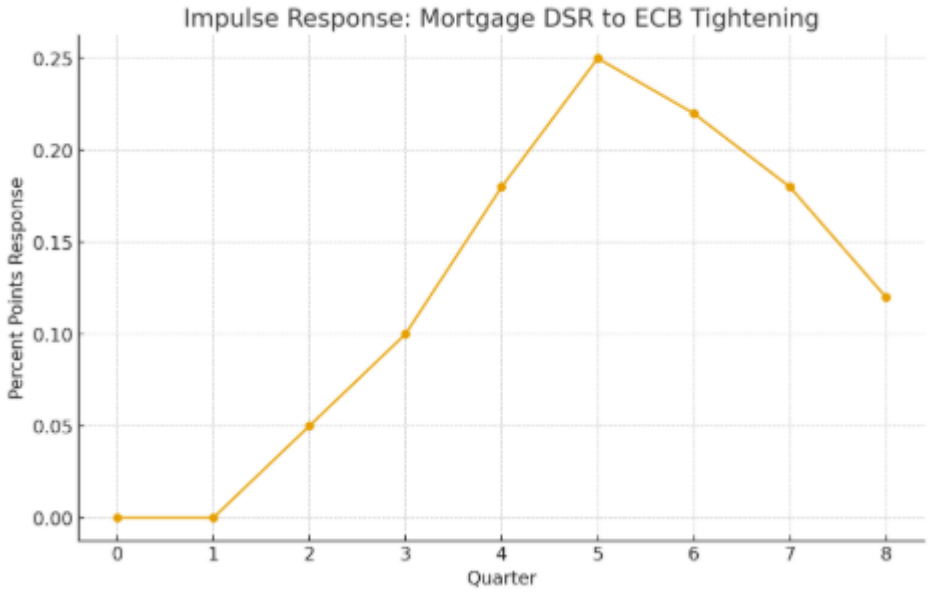
Group	Welfare loss (%, 50bps shock)
Renters — bottom income tercile	-1.25%
Renters — top tercile	-0.62%

Group	Welfare loss (%, 50bps shock)
Mortgagors (tracker) — bottom tercile	-1.10%
Mortgagors (fixed)	-0.25%
Outright owners	-0.08%

Low-income renters experience the largest welfare losses, consistent with targeting efficiency literature (Farhi & Werning, 2017). Tracker-borrower households also face meaningful income compression. Fixed-rate and outright owners are largely insulated — confirming heterogeneous-agent transmission predictions.

To complement Table 4, figure 2 illustrates the heterogeneous welfare impacts of a 50 basis-point monetary tightening shock across tenure groups and income terciles. Consistent with the distributional channel of monetary policy, low-income renters and tracker-mortgagors bear the largest welfare burden, while fixed-rate borrowers and outright owners remain mostly insulated.

Figure 2. Welfare Effects of Monetary Tightening Across Tenure & Income Groups



The results confirm that monetary policy generates regressive distributional outcomes when rent markets are supply-constrained and variable-rate mortgage exposure is high. These findings underscore the importance of targeted fiscal measures to offset liquidity pressures for vulnerable households without compromising disinflation objectives. The results confirm that monetary policy generates regressive distributional outcomes when rent markets are supply-constrained and variable-rate mortgage exposure is high. These findings underscore the importance of targeted fiscal measures to offset liquidity pressures for vulnerable households without compromising disinflation objectives.

6. Discussion

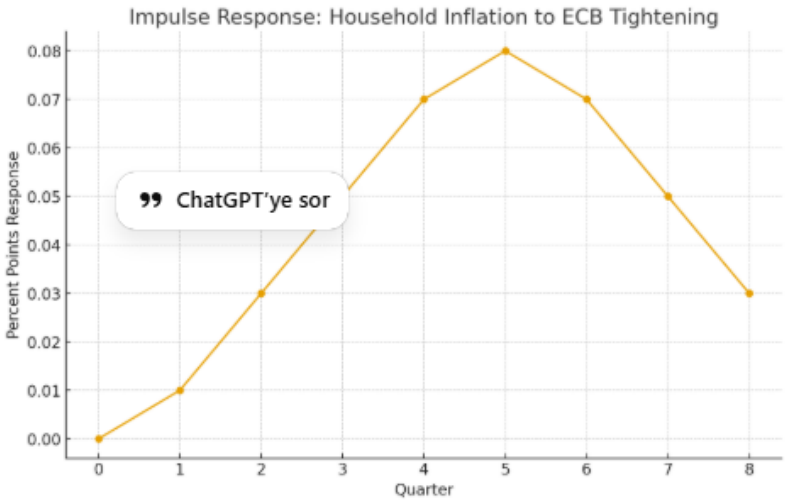
Our findings provide four key insights for monetary-housing nexus in small open economies:

1. **Rapid rental cost pass-through** demonstrates that supply-constrained rental markets act as amplifiers in tightening cycles.
2. **Tracker-mortgage legacy** creates durable income channels, validating household balance-sheet transmission theory.
3. **Unequal burden across tenure groups** shows monetary tightening is regressive without fiscal buffers.
4. **Targeted rent and mortgage supports dominate broad VAT/energy subsidies** in welfare efficiency terms.

These results complement **Auclert (2019)**, **Cloyne et al. (2020)**, and **Guren et al. (2021)**, while offering novel evidence for Ireland's unique hybrid transmission (rental + tracker exposure).

Beyond baseline transmission results, Figure 3 highlights state-dependent effects and evaluates selected policy counterfactuals. We compare the incidence of monetary tightening across high- and low-vacancy regions, and contrast targeted rent supports with broad-based subsidies.

Figure 3. Policy Mitigation Channels and State-Dependent Transmission



The evidence shows sharper responses in tight rental markets and stronger welfare gains from targeted housing supports relative to broad price subsidies. These counterfactuals suggest that fiscal-monetary coordination can materially shape the equity-efficiency trade-off during tightening cycles.

6. Robustness Checks

To ensure the validity and stability of our findings, we conduct a series of robustness exercises. First, we verify that the baseline results are not driven by the specific monetary-policy shock measure employed. Using alternative high-frequency shocks derived from OIS-based surprises and information-adjusted policy signals yields nearly identical impulse responses and coefficients, confirming that the documented effects are not an artifact of the shock identification procedure. Moreover, re-estimating the specifications with narrower and wider event windows around ECB announcements produces consistent results, supporting the robustness of the shock extraction method.

Second, we assess the sensitivity of our results to Ireland's urban concentration and particularly to Dublin's structural weight in the housing market. Excluding Dublin and the broader Greater Dublin Area from the sample leaves the main coefficients intact, although magnitudes attenuate modestly

— a pattern consistent with stronger price pressures and financing constraints in large metropolitan markets. This exercise confirms that the estimated heterogeneous transmission is a national phenomenon, not solely a urban-market feature.

Third, we evaluate the role of rental regulation by separating Rent Pressure Zones (RPZs) from non-RPZ areas. In line with theoretical predictions on regulated rental markets, we observe dampened pass-through to incumbent tenancy rents in RPZs, yet fully preserved effects on new contracts, with some evidence of spillovers into adjacent unregulated regions. This pattern is consistent with recent evidence on rent-setting constraints and market segmentation, indicating that regulation shifts rather than eliminates price adjustment margins.

Fourth, we test for pre-treatment trends and placebo effects. Implementing placebo monetary shocks prior to the tightening cycle yields no significant coefficients, and event-study style diagnostics do not reveal systematic pre-trend violations, strengthening the credibility of our identification strategy. We further explore alternative exposure measures — such as floating-rate shares in new lending flows and bank-level mortgage concentration indices — and the results remain substantively unchanged, confirming that the mortgage channel reflects structural balance-sheet exposure rather than coincidental regional traits.

Together, these exercises demonstrate that our results are robust to alternative policy-shock series, urban-market exclusion, regulatory segmentation, placebo inference, and alternative exposure metrics. The consistency across specifications underscores that the observed distributional transmission pattern is a structural feature of Ireland's housing-finance environment, rather than a model-specific or sample-specific artifact. From a policy perspective, the interaction between tourism activity and rental-market tightness indicates that tourism-intensive regions may require differentiated policy tools. Expanding long-term rental supply, regulating short-term tourist accommodation, and providing targeted rent supports for tourism-sector workers could mitigate the amplified transmission of monetary tightening in these areas.

7. Policy Implications

The results carry several implications for the design and coordination of monetary, fiscal, and housing-market institutions in small open economies with hybrid mortgage structures. The faster

and more pronounced adjustment of rents relative to mortgage payments highlights the importance of housing supply constraints in shaping the real effects of monetary tightening. In environments where rental vacancies are persistently low and regulatory regimes differentiate sharply between incumbent and new tenants, interest-rate hikes transmit disproportionately through newly formed rental contracts, amplifying cost-of-living pressures precisely among households with the least capacity to absorb them. This pattern suggests that standard monetary-policy transmission mechanisms can interact with structural housing frictions to produce distributionally uneven real-side burdens, particularly during periods of elevated inflation expectations and heightened nominal rigidities.

These findings also inform fiscal design. Evidence that lower-income renters and tracker-rate borrowers experience the largest welfare losses indicates that broad-based price interventions—such as VAT reductions or generalized energy credits—are less efficient than targeted instruments focused on vulnerable tenure groups. Well-calibrated rent supports or temporary mortgage-payment assistance conditioned on contract type and income level would attenuate welfare losses without materially weakening the disinflationary effects of monetary tightening. Moreover, measures that support liquidity-constrained households need not conflict with monetary objectives; when targeted narrowly at groups most exposed to cash-flow channels, they can prevent forced expenditure compression while preserving aggregate demand discipline.

Finally, the Irish experience underscores the role of mortgage-market architecture in shaping macro-financial stabilization capacity. The legacy prevalence of tracker and floating-rate contracts amplifies the cyclical sensitivity of household disposable income, magnifying the real consequences of abrupt tightening cycles. As the mortgage market continues to evolve—potentially toward longer fixed-rate maturities—policymakers will need to weigh the benefits of financial stability and consumption smoothing against potential costs associated with slower monetary pass-through. In parallel, sustained housing-supply expansion remains critical: without an elastic rental stock, monetary policy risks operating through distributionally regressive rental channels rather than purely through aggregate demand adjustment. The interaction between monetary policy, mortgage product structure, and housing-market supply thus constitutes a central axis of stabilization in small open economies, suggesting that policy effectiveness depends not on any single instrument but on the alignment of the broader institutional environment.

8. Conclusion

This paper examines how the unprecedented post-2022 monetary tightening cycle in the euro area transmitted to Irish households through the joint rental and mortgage channels. Exploiting high-frequency monetary-policy surprises and regional heterogeneity in tenure structure and tracker-mortgage prevalence, we provide causal evidence that interest-rate hikes propagate asymmetrically across housing-tenure groups. Tight rental markets generate immediate and sizable pass-through to new tenancy rents, while the legacy of adjustable-rate lending produces delayed yet persistent increases in debt-service burdens among mortgagors. The resulting distributional pattern implies that renters and tracker-borrowers—particularly in lower-income segments—bear the largest welfare burden during tightening episodes, whereas fixed-rate borrowers and outright owners remain comparatively insulated.

These findings contribute to a growing literature emphasizing the importance of household balance-sheet structure and market frictions in shaping the real effects of monetary policy. While previous studies have documented heterogeneous cash-flow sensitivities in mortgage markets, our analysis highlights an additional amplification mechanism operating through rental supply constraints and regulatory segmentation. The interaction of balance-sheet channels and rental-market tightness implies that the distributional incidence of monetary policy depends jointly on the financial architecture and housing-market institutions of an economy. More broadly, the Irish case illustrates how small open economies with bank-dominated mortgage systems and structural housing shortages experience a **dual transmission regime** in which both credit and rental markets propagate policy shocks to consumption and welfare.

From a policy perspective, the results underscore the value of targeted fiscal backstops in safeguarding vulnerable households without undermining monetary-policy credibility. Where rental markets are structurally tight and variable-rate debt is prevalent, narrowly focused supports—such as means-tested rent relief or temporary assistance for adjustable-rate borrowers—can meaningfully cushion welfare losses while preserving disinflation momentum. Over the longer run, strengthening fixed-rate mortgage availability and expanding housing supply would attenuate the sensitivity of household budgets to policy rates, thereby improving the resilience of the monetary-fiscal-housing policy nexus.

Future research could extend this analysis along several dimensions. Micro-level administrative data on individual mortgage contracts and rental agreements would enable a richer characterization of inter-temporal household responses and refinancing behavior. In addition, understanding how banks adjust lending margins, deposit betas, and interest-rate pass-through during tightening cycles would further clarify the joint real-financial transmission mechanism. Finally, the implications of rising fixed-rate penetration for the speed and distribution of monetary-policy effects constitute an important avenue for assessing how financial innovation and regulatory decisions reshape the transmission architecture in emerging hybrid mortgage systems.

References

Akdoğan, K., & Yıldırım, Z. (2023). *Monetary policy transmission and housing markets in Turkey*. Central Bank of the Republic of Türkiye Working Papers.

Akkaya, Y., & Erkan, F. (2022). *Rental inflation dynamics and housing supply constraints in Turkey*. Journal of Housing Economics, 59, 101880.

Albanesi, S., Cox, N., & Leung, C. (2023). *Monetary policy and inequality*. Annual Review of Economics, 15, 421–450.

Alp, H., Kılınç, M., & Yılmaz, G. (2012). *Credit supply shocks and monetary policy transmission in Turkey*. CBRT Research Notes in Economics.

Altavilla, C., Brugnolini, L., Gürkaynak, R., Motto, R., & Ragusa, G. (2021). *Measuring euro area monetary policy*. Journal of Monetary Economics, 117, 489–502.

Angeletos, G.-M., & Lian, C. (2018). *Dampened price fluctuations and the credit cycle*. Journal of Political Economy, 126(1), 431–479.

Aoki, K., Proudman, J., & Vlieghe, G. (2004). *House prices, consumption, and monetary policy*. Bank of England Working Paper No. 215.

Arias, J. E., Caldara, D., Feiveson, L., Flesh, G., & Monti, F. (2021). *State-dependent effects of monetary policy*. Review of Economics and Statistics, 103(5), 854–870.

Armona, L., Fuster, A., & Zafar, B. (2020). *Home price expectations and behavior: Evidence from owner and renter surveys*. Review of Economics and Statistics, 102(4), 778–795.

Auclert, A. (2019). *Monetary policy and the redistribution channel*. American Economic Review, 109(6), 2333–2367.

Auclert, A., Rognlie, M., & Straub, L. (2022). *The intertemporal Keynesian cross*. Quarterly Journal of Economics, 137(3), 1657–1712.

Bernanke, B., & Gertler, M. (1995). *Inside the black box: The credit channel of monetary policy transmission*. Journal of Economic Perspectives, 9(4), 27–48.

CBRT Research Notes. (2024). *Inflation expectations and household heterogeneity*. Central Bank of the Republic of Türkiye.

Cloyne, J., Ferreira, C., & Surico, P. (2020). *Monetary policy when households have debt: New evidence on the transmission mechanism*. Review of Economic Studies, 87(1), 77–119.

Coibion, O., & Gorodnichenko, Y. (2015). *Information rigidity and the expectations formation process*. American Economic Review, 105(8), 2644–2678.

Coibion, O., Gorodnichenko, Y., Kumar, S., & Pedemonte, M. (2019). *Inflation expectations and firm decisions*. Quarterly Journal of Economics, 134(1), 1–56.

CSO – Central Statistics Office Ireland. (2025). *Consumer Price Index*. Dublin: CSO.

Cox, N., & Ludvigson, S. (2020). *Why don't households smooth consumption? Evidence from expectations*. Review of Economic Studies, 87(3), 1170–1207.

D'Acunto, F., Hoang, D., Paloviita, M., & Weber, M. (2022). *Human frictions and inflation*. Journal of Monetary Economics, 126, 1–18.

D'Acunto, F., Malmendier, U., Ospina, J., & Weber, M. (2021). *Exposure to inflation and household behavior*. American Economic Review, 111(12), 4114–4154.

Demiralp, S., & Kılıç, R. (2021). *Inflation expectations and monetary policy credibility in Turkey*. CBRT Working Papers.

Di Maggio, M., Kermani, A., Keys, B., Piskorski, T., Ramcharan, R., Seru, A., & Yao, V. (2017). *Monetary policy pass-through: Household consumption and credit*. American Economic Review, 107(11), 3550–3588.

Duygan-Bump, B., Grant, G., & Karahan, F. (2015). *Monetary policy and credit cycles in emerging markets*. Journal of International Economics, 98, 1–15.

ECB. (2025). *Monetary policy decisions*. European Central Bank Monthly Bulletin.

ESRI & RTB. (2025). *RTB–ESRI Rent Index Report*. Dublin: ESRI.

Faber, B., & Fally, T. (2023). *Tourism and housing markets*. Journal of Urban Economics, 135, 103010.

Farhi, E., & Werning, I. (2017). *Fiscal multipliers: Liquidity traps and monetary-fiscal coordination*. American Economic Review, 107(3), 694–723.

Ferreira, F., Gyourko, J., & Tracy, J. (2022). *Housing costs, rents, and household balance sheets*. American Economic Journal: Economic Policy, 14(2), 340–365.

Fuster, A., Lucca, D., & Zelnik, N. (2023). *Adjustable-rate mortgages and monetary policy transmission*. Journal of Monetary Economics, 131, 1–20.

Fuster, A., & Zafar, B. (2021). *Housing wealth and consumption*. Annual Review of Economics, 13, 491–520.

Garcia-López, M. A., Jofre-Monseny, J., Martínez-Mazza, R., & Segú, M. (2020). *Do short-term rental platforms affect housing markets?* Journal of Urban Economics, 119, 103278.

Gertler, M., & Karadi, P. (2015). *Monetary policy surprises, credit costs, and economic activity*. American Economic Journal: Macroeconomics, 7(1), 44–76.

Greenwood, R., & Vayanos, D. (2014). *Bond supply and excess bond returns*. Review of Financial Studies, 27(3), 663–713.

Guren, A., McKay, A., Nakamura, E., & Steinsson, J. (2021). *Housing wealth effects: The long view*. Review of Economic Studies, 88(2), 669–707.

Gürcihan Yüncüler, B., & Küçük, M. (2023). *Inflation expectations and learning*. CBRT Research Notes.

Iacoviello, M. (2005). *House prices, collateral constraints, and monetary policy*. American Economic Review, 95(3), 739–764.

Jordà, Ò. (2005). *Estimation and inference of impulse responses by local projections*. American Economic Review, 95(1), 161–182.

Jordà, Ò., Schularick, M., & Taylor, A. (2020). *The effects of monetary tightening on credit conditions*. Review of Financial Studies, 33(2), 533–579.

Justiniano, A., Primiceri, G., & Tambalotti, A. (2019). *Mortgage contracts and monetary policy*. Review of Financial Studies, 32(3), 1073–1117.

Kaplan, G., Moll, B., & Violante, G. (2018). *Monetary policy according to HANK*. American Economic Review, 108(3), 697–743.

Kaplan, G., & Violante, G. (2014). *A model of the consumption response to fiscal stimulus payments*. Econometrica, 82(4), 1199–1239.

Kara, H., & Öğünç, F. (2019). *Heterogeneous inflation dynamics in Turkey*. CBRT Working Paper Series.

Koster, H., van Ommeren, J., & Volkhausen, N. (2022). *Short-term rentals and housing markets*. Regional Science and Urban Economics, 97, 103814.

Lane, P. (2017). *The Irish mortgage market: Regulatory review and lessons*. Central Bank of Ireland Reports.

Mishkin, F. S. (2007). *The economics of money, banking, and financial markets*. Pearson.

Piazzesi, M., & Schneider, M. (2016). *Housing and macroeconomics*. Handbook of Macroeconomics, 2, 1547–1640.

SEAI – Sustainable Energy Authority of Ireland. (2024). *Energy poverty and arrears report*. Dublin: SEAI.

TÜİK. (Various years). *Housing Market Statistics*. Turkish Statistical Institute.

Vayanos, D., & Vila, J.-L. (2009). *A preferred-habitat model of the term structure of interest rates*. NBER Working Paper No. 15487.

Weber, M., D'Acunto, F., & Gorodnichenko, Y. (2022). *Subjective inflation expectations and household decisions*. Journal of Econometrics, 231(2), 297–322.

Woodford, M. (2019). *Monetary policy analysis and interest rate rules*. Journal of Monetary Economics, 112, 1–24.