

House of cards? Perspectives on European housing

Slowing growth, higher interest rates and energy inflation force hard policy choices impacting social cohesion and climate change mitigation

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Pablo Espinosa Uriel
Investment Strategist
pablo.espinosa-urriel@allianz.com

Patricia Pelayo Romero
Economist – Insurance and ESG
patricia.pelayo-romero@allianz.com

Maddalena Martini
Economist for Italy and Greece
maddalena.martini@allianz.com

Andreas (Andy) Jobst
Head of Macroeconomic & Capital Markets Research
andreas.jobst@allianz.com

Eric Barthalon
Head of Capital Markets
eric.barthalon@allianz.com

Nihal Temüge
Research Assistant
nihal.temuege@allianz.com

Christian Janssen
Research Assistant
christian-johannes.janssen@allianz.com

EXECUTIVE SUMMARY

- **Tightening financing conditions, slowing growth and soaring inflation are putting pressure on the European housing market.** Swiftly rising mortgage rates have dramatically reduced home affordability at a time when home prices have already reached unsustainable levels in many European countries. With higher energy prices and inflation further eroding disposable income, credit demand for home purchases is bound to subside over the next quarters.
- **Germany's housing market is most at risk among the major European economies.** Property prices increased by more than 50% in real terms since 2015 while home affordability has dropped by -30%. We project a price correction of -8% in real terms until end-2024, followed by around -5% in France and the UK. Price corrections in Spain and Italy, whose housing markets did not really take off after the 2000s' bubble burst, will be less severe at around -3%.
- **However, the slump in house prices will not materially mitigate the growing social challenge of rapidly declining home affordability, especially for the younger generation.** The massive expansion of money supply since the mid-2010s due to quantitative easing inflated prices of non-productive investment in areas that are highly collateralized, such as real estate. Thus, home affordability for younger generations and vulnerable households will become an increasingly pressing public policy issue.
- **At the same time, soaring energy prices, higher construction costs and rising interest rates could also challenge the European "renovation wave".**
- **Unlike after the 2008 financial crisis, to address this, policy interventions need to be geared towards social and green aspects.** We find that a combination of increasing the supply of housing and scaling up public support for vulnerable households could strengthen households' incentives to invest in energy-efficiency measures, advancing one of the key goals of the EU Green Deal.

European households hit by higher mortgage interest-rate burden as the economy continues to slow.

Tightening financing conditions, slowing growth and soaring inflation are putting pressure on the European housing market. Although 2022 has been the year of price corrections across many markets, the implications of housing make it one of the most sensitive and unique sectors. For many, housing is the main form of investment, but even when not owned, real-estate-related payments (be it for rent or mortgage loans) take up a large part of monthly incomes, and housing is a basic social need.

While the overvaluation of real estate is a global concern, Europe is particularly affected by the current energy crisis and its impact on real incomes (which were declining even before Russia’s invasion of Ukraine). As Europe slides into recession, rising interest rates¹ and higher energy costs have put purchasing a home out of reach for most households, adding to pre-crisis price pressures resulting from disrupted supply chains for construction materials. And the effects on house prices vary across the Eurozone.²

In this paper, we analyze the current developments in residential real estate in the largest European countries based on four factors: demand, supply, prices and financial conditions. We then project the scale of the potential price correction and assess the impact on home affordability, with a focus on the implications for the young generation and the green transition.

Table 1. Heatmap of the yearly changes in key variables for residential real estate. Latest available date for each indicator (z-scores)*

		Germany	France	Italy	Spain	UK
Demand	Consumer sentiment	Blue	Blue	Blue	Blue	Blue
	Wages	Light Blue	Light Red	Light Blue	Light Red	Light Red
	Delinquent loans	Grey	Grey	Light Blue	Light Blue	Light Red
	Savings rate	Blue	Blue	Blue	Blue	Blue
Supply	Building permits	Light Blue	Light Red	Light Red	Light Red	Grey
	Business confidence	Blue	Light Blue	Light Blue	Light Red	Light Blue
	Construction spending	Light Red	Light Red	Light Red	Light Red	Light Red
	Housing starts	Blue	Light Red	Light Red	Light Red	Light Red
	Supply new homes	Grey	Light Blue	Grey	Light Red	Light Red
Price	Nominal HPI	Light Red	Light Red	Light Red	Light Red	Light Red
	Price-to-rent Ratio	Light Red	Light Red	Light Red	Light Red	Light Red
	Price-to-income Ratio	Light Red	Light Red	Light Red	Light Red	Light Red
	Materials prices	Red	Light Red	Red	Light Red	Light Red
Financial sector RE related	RE Equities	Blue	Light Blue	Light Blue	Light Blue	Blue
	Residential loans	Light Red	Light Red	Light Red	Light Red	Light Red
	Mortgage rate	Red	Light Red	Light Red	Light Red	Light Red
	MBS Yield	Red	Grey	Grey	Grey	Grey

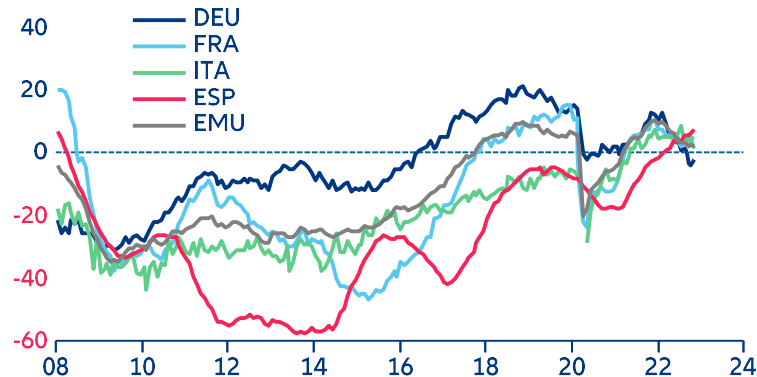
¹ See our recent report on [the impact of the interest rate shock on Europe’s credit dynamics](#).

² For example, Germany missed the 2000s boom after of the investment glut that followed the “Fördergebietsgesetz”, but it experienced its own boom after 2015.

Sources: Refinitiv, Allianz Research. * The z-scores are computed over a 20 year-period, or the maximum available when the series has less than 20 years of history. Grey cells reflect missing data.

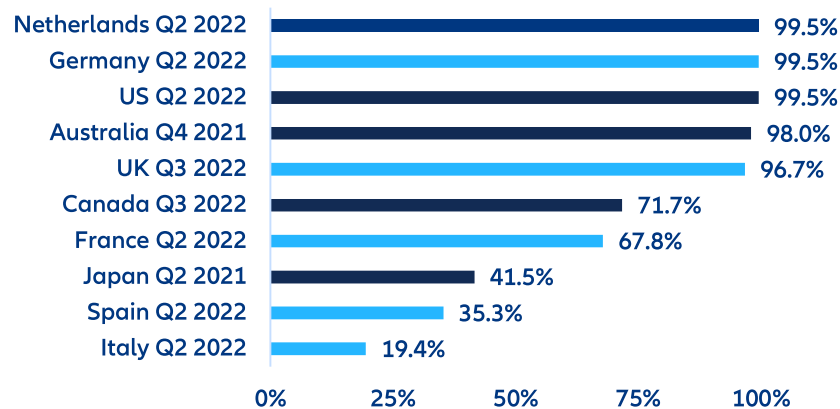
Our fundamental analysis suggests a significant slowdown is looming in the near term (Table 1). Demand is showing clear signs of weakness as wage growth is not keeping up with inflation, which has eaten into the savings boosted during the Covid-related lockdowns. Supply is also receding, with construction orders and construction companies' business confidence deteriorating further in November (see Figure 1; insufficient demand was named the top limiting factor in the latest ESI³ release, overtaking labor and material shortages). Looking ahead, the picture does not improve: demand for housing is set to slow further, with European households already overburdened by the increasing cost of living. Typically, the first signs of a real estate downturn come from weak demand and supply, which translates into decline in sales and a fall in prices. The size of the fall depends mostly on the willingness to sell, which itself depends on the link between growth and unemployment, and the safety nets in place.

Figure 1. Economic sentiment indicator for the construction sector



Sources: European Commission, Refinitiv, Allianz Research.

Figure 2. Housing market: currently perceived appreciation (as percentile of the historical distribution) *



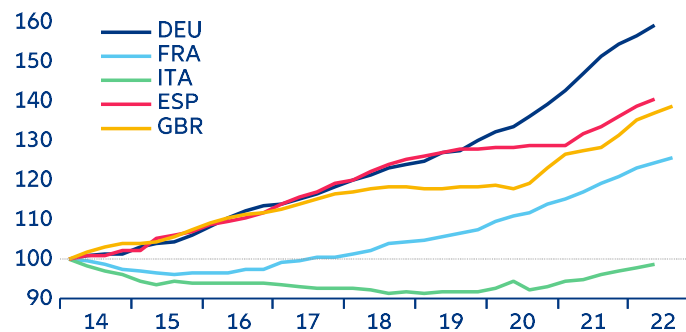
Sources: Refinitiv, Allianz Research. Notes: * Same method as the one explained in footnote 3. The distribution of perceived returns was calculated since 1970. While there is not a certain threshold for

³ Economic Sentiment Indicator, a business survey devised by the European Commission to track members' sentiment.

overvaluation, a perceived rate of appreciation that exceeds the 95th percentile generally indicates a housing bubble.

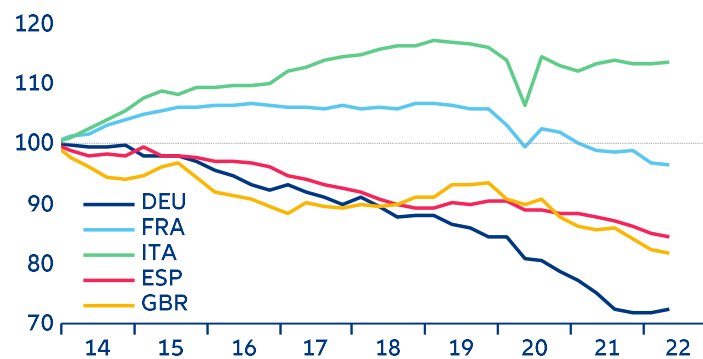
Price developments, the crux of the matter. The largest European economies did not enjoy the same pandemic housing boom as the US or other developed markets. In nominal terms, real estate prices increased, but at more modest rates; in real terms, they have declined already.⁴ To measure the degree of overvaluation in real estate market – which makes it more prone to a severe correction once the wind shifts – we use the distribution of past perceived appreciation rates.⁵ We find that the housing market in Germany and the UK, and to a lesser extent in France, are most overvalued among the largest economies in Europe (Figure 2). In these countries, affordability has also declined dramatically over the years, and more so than in other countries if measured on the basis of the price-to-rent/price-to-income ratios (Figures 3 and 4).

Figure 3. Evolution of price-to-rent ratios. Rebased at 31/12/2013



Sources: Refinitiv, Allianz Research.

Figure 4. Evolution of the ratio between disposable income and house prices as a proxy for availability. Rebased at 31/12/2013.



Sources: Refinitiv, Allianz Research.

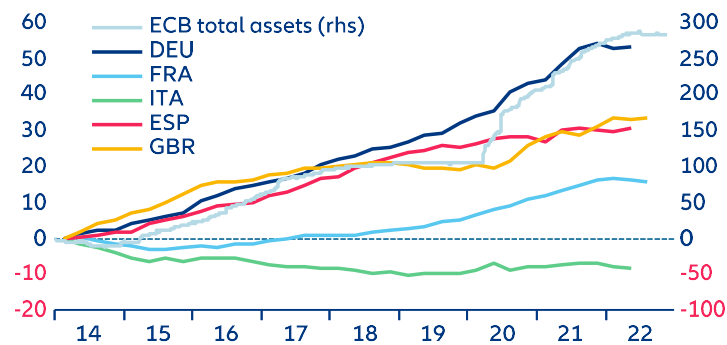
⁴ Nominal house price indexes deflated by CPI.

⁵ Perceived returns are a proprietary measure based on Maurice Allais' Theory of Psychological Time, a particular moving average in which the weights not only depend on time but also adjust dynamically to assign greater share to larger movements. It is used as a "self-reliant" measure of overvaluation by analysing its historical returns (see Figure 2).

The overvaluation was supported by asset-price inflation fueled by quantitative easing (QE).

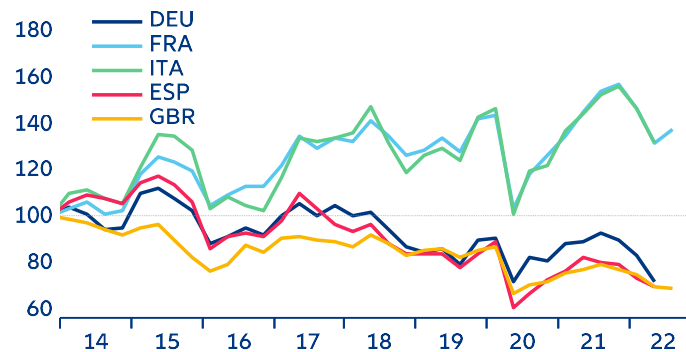
Successive rounds of quantitative easing carried out by the main central banks since 2008 supported high asset prices in two ways: directly, because excess liquidity did not translate into productive investment but was rather used to consolidate balance sheets and create buffers (hoarding), and indirectly, because the timely interventions were seen by markets as a stop-loss, incentivizing risk-taking behavior. While this is most evident in the stock market, house prices in many countries have also benefited from this money (see Figures 5 and 6). With the failure of QE failure to meet its theoretical goal, i.e. to bring inflation to target and take the Eurozone economy out of the ICU, the price of residential real estate has grown faster than disposable income in every large European economy, with the exception of Italy (see Figure 5).

Figure 5. Accumulated increase in real house prices (%) vs. ECB's balance sheet (rhs, %).



Sources: BIS, Refinitiv, Allianz Research.

Figure 6. Evolution of the ratio of equity market performance to house prices. Rebased at 31/12/2013.



Sources: Refinitiv, Allianz Research.

While overvaluation is a necessary condition, it is not enough: a macro-financial shock is required to spark a price correction. Possible triggers could be either tightening credit conditions or a slowing growth outlook, and the combination of both will certainly increase the probability of a price correction.

Looking ahead, we expect the largest correction of real house prices in Germany due to pre-existing conditions⁶ and an impending contraction of economic activity, followed by France and the UK. Based on the recent trends in prices and panel-data estimation of changes in real house prices,⁷ we expect a correction over 2023-2024 in all the five largest Eurozone economies, although it will be particularly deep in Germany, France and the UK (see Table 2).

Table 2. Real HPI estimations for 2023-24 (y/y %, year-end)

	DEU	FRA	ITA	ESP	GBR
Macro-financial equation ^{1/}					
2023	-5.1	-3.4	-1.8	-2.4	-3.4
2024	-3.1	-2.3	-0.6	-1.0	-1.6
Equity markets equation ^{1/}					
2023	-13.5	-10	7.1 ^{2/}	0.1	-3.7

Sources: Refinitiv, Allianz Research. ^{1/} For further details on the methodologies please refer to Annex 1. ^{2/} As explained in Annex 1, the wide positive number of Italy builds on two important factors: the poor performance of real house prices in the last decade, and the working assumption that the perceived appreciation will converge to its long-term value, expected by the model by December 2023.

Pre-existing conditions matter the most in Spain and Italy, setting the stage for a smaller correction, but those forecasts are the ones with the greatest downside risks due to the combination of a sluggish recovery expected for 2024 (around +0.8-0.9%), a persistently high output gap and long-lasting risks of high public debt. In addition to these purely macro-financially-driven forecasts, we also model the relationship between the performance of real estate-related equities and the performance of official real price indices. We find that Germany and France are the most exposed to a correction, followed by the UK. In Italy, residential real estate prices still have room to catch up, which is unlikely under the current macroeconomic conditions.

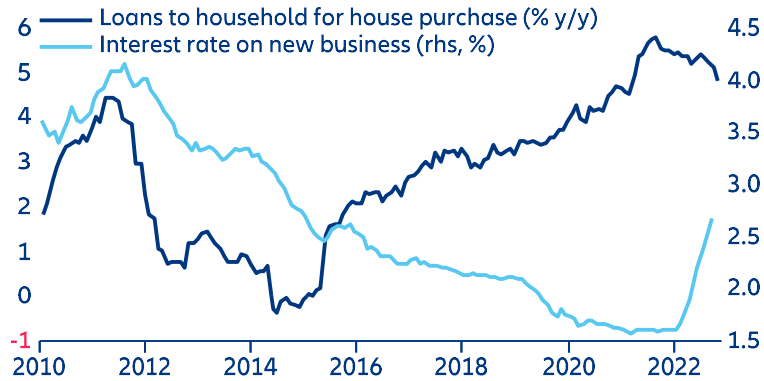
Rising vulnerabilities: households' leverage, credit conditions and lending rates

Bank lending to households for home purchases is slowing after solid growth rates since 2020. In most European countries, low interest rates spurred housing credit. Recently, however, credit demand has subsided in response to tightening financing conditions (Figure 7), weakening housing market prospects and deteriorating consumer confidence. The latest data on monetary aggregates for October also confirm that banks have become more cautious in providing mortgage loans, with monthly flows almost halved (from EUR15bn to EUR8bn). Annual growth of housing lending eased to 4.2% (from 4.4% in September). Moreover, banks expect to significantly tighten their credit standards in Q4 as demand is likely to slow further.

⁶ Pre-existing conditions are the set of country specific factors – including recent market developments – that determine price movements and that are not captured by the rest of variables in the model (see Annex 1).

⁷ See Annex 1 for further details.

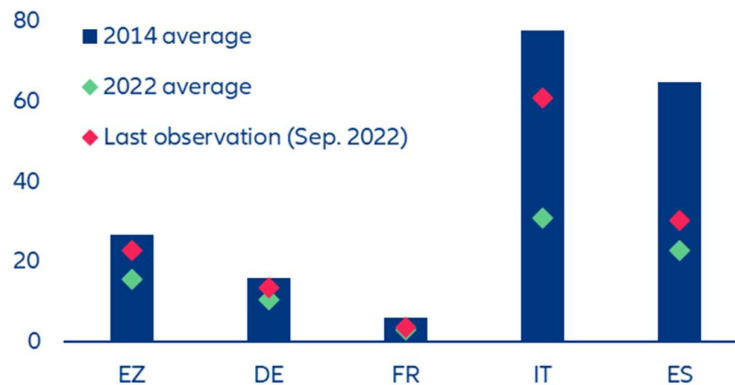
Figure 7. Loan growth vs. interest rates on new loans for house purchase



Sources: Refinitiv, Allianz Research

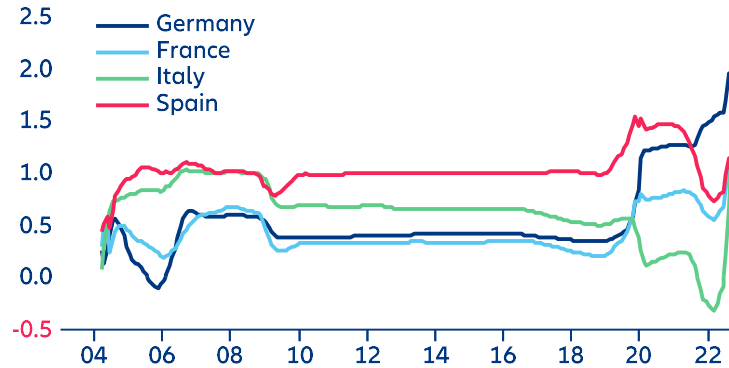
Higher interest rates are also affecting households' credit behavior. Demand for variable-interest-rate mortgages seems to be picking up again across the Eurozone, albeit with significant country differences, as households want to avoid "locking in" the currently high fixed interest rate (Figure 8). A further rise in rates could squeeze borrowers' debt-servicing capacity, already challenged by spiking energy costs and inflation, and further lower borrowing capacity.

Figure 8. Variable rate loans as % of total new loans for house purchase



Sources: ECB, Allianz Research

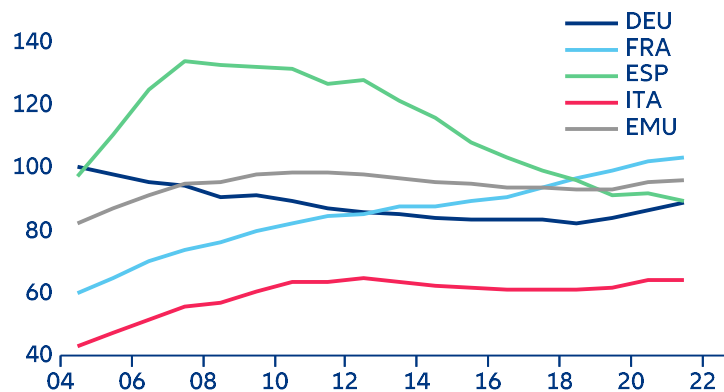
Figure 9. Sensitivity analysis of lending rates for house purchase to change in policy rate (10y rolling estimate)



Sources: Refinitiv, Allianz Research

The transmission from policy rates and bank lending rates has intensified in recent months across the bloc's largest economies. The average pass-through ranges between four months in Italy and Spain to up to six months in Germany and France. Recently, lending rates have become more sensitive to changes in policy rates, especially in Germany and Italy (Figure 9). Since we expect the peak in key interest rates in Q1 2023, households will become more exposed to interest-rate risk in the next quarters. In particular, Italy and Spain would be impacted earlier due to their higher share of variable-rate loans (with declining debt-to-income ratios providing some buffer). Conversely, outstanding mortgages in Germany and France are largely at fixed rates (but household leverage in these countries is edging up) (Figure 10). Overall, households have become more vulnerable to house price dynamics in 2023-24.

Figure 10. Debt-to-gross-income ratio of households (%)



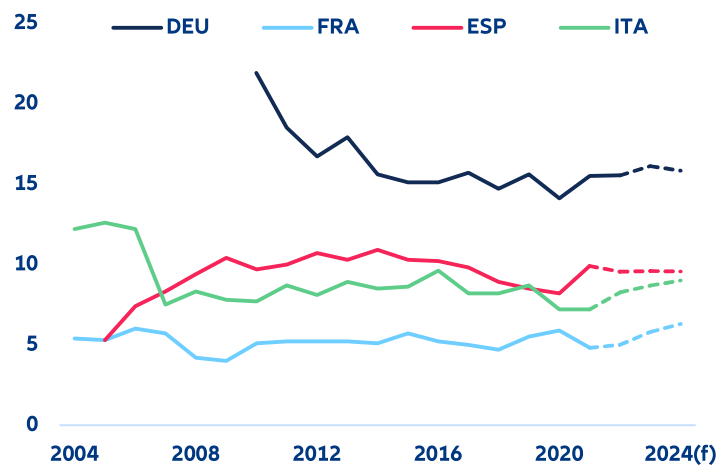
Sources: Eurostat, Allianz Research

Social implications: no home without a mortgage

Slowing growth coupled with the rising cost of living and the shortage of affordable housing is likely to increase the number of vulnerable households. Around 8% of the EU's population

is currently living in a household where total housing costs represent more than 40% of the total disposable household income. Additionally, household disposable income has been growing at a slower pace than house prices (Figure 11). In the largest four countries, the correction in housing prices could help improve the financial standing of prospective buyers, but higher non-discretionary spending due to inflation offsets the benefit of lower prices in nominal terms. Using our macroeconomic expectations and the housing-price correction estimations, we estimate the housing-cost overburden rates. In Spain, we expect the housing-cost overburden rate to increase from 8.2% to 9.6% in 2024. In Italy, we could see this ratio rise from the lowest rate of 7.2% at the height of the pandemic to 9.0% in 2024, while in France, the ratio could reach 6.3% (up from 4.8%). Germany has the highest housing-cost overburden rates in our sample (15.5%), and we expect this to stay relatively stable at 15.8%.

Figure 11. Housing-cost overburden rate, in % *

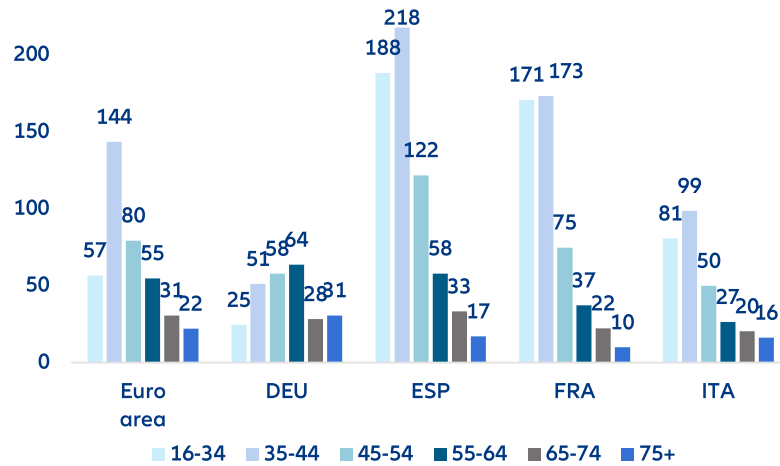


Sources: Eurostat, Allianz Research. * Note: The housing cost overburden rate is the percentage of the population living in households where the total housing costs ('net' of housing allowances) represent more than 40 % of disposable income ('net' of housing allowances).

While the housing-cost overburden encompasses all costs related to housing, if we look at home purchasing, it is not only diminished purchasing power that makes prospective buyers think twice. Even if there is a correction in house prices, rate movements suggest that servicing mortgage debt might also become unaffordable. In the US, the median 30-year mortgage rate has more than doubled in the last 12 months and is at its highest level in the last two decades. Homeowners that did not lock in a low interest rate for mortgages may also be forced to sell in an environment of depressed demand.

Challenges are different as much between countries as within countries. Germany has the lowest owner-occupied rates for housing of the four Eurozone sample countries (49.5%). In contrast, Spain (75.8%) and Italy (73.7%) have a higher share of homeowners. In France, first-home buyers tend to be younger than in neighboring countries. Nonetheless, all countries have one thing in common: affordability gaps are pervasive especially in urban areas, within lower income deciles, especially for renters and amongst the youth. Homeownership among younger households has been decreasing in several advanced economies, not just in Europe, driven by increasing labor income inequality and uncertainty. Faced with high house prices and low, risky incomes, younger households might choose to not engage in an illiquid risky investment, which in turn results in lower wealth accumulation.

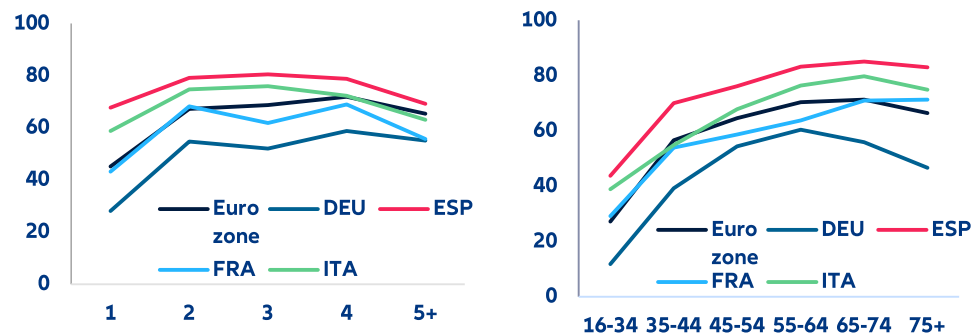
Figure 12. Debt-to-disposable-income ratio by age, in %



Sources: Household Finance and Consumption Survey, Allianz Research

Price increases, higher mortgage interest rates and the diminished purchasing power have put pressure on the most vulnerable households. Homeownership is relatively high amongst the lowest income quintile in Spain (73% of households, according to Eurostat), much higher than in Italy (48%) or France (33%). Deteriorating credit conditions might create more tensions in Spain and Italy than in France and Germany, where homeownership is not the norm. Although the housing-cost overburden rate is higher for younger people in Germany (23.9% for those aged 15 to 29) when compared to the entire population (19.9%), as well as in France (youth: 7.1%, all ages: 5.9%). In Spain, it is relatively similar at 8.3% for the youth and 8.2% for the entire population. In Italy, there is no difference in homeownership between younger and older cohorts (8.7%). It is important to highlight that in Spain and Italy, younger people tend to leave their parents' homes at a later age, which might also provide an opportunity to accumulate initial assets (Figure 13).

Figure 13. Real asset ownership as a % of households, by household size and age of household reference person



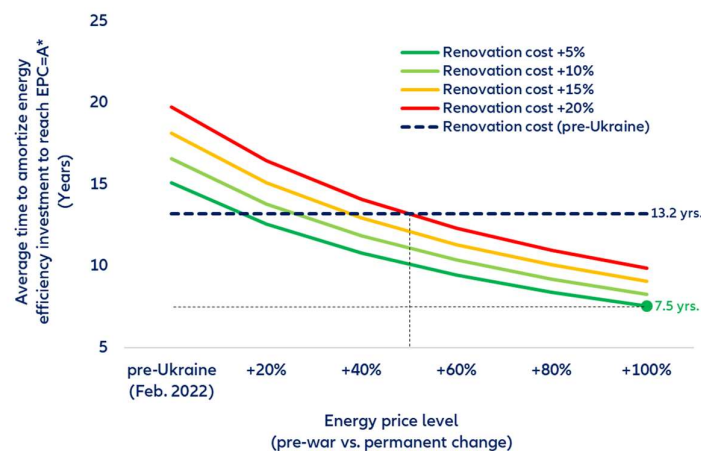
Sources: Household Finance and Consumption Survey, Allianz Research. *Note: Real assets include the value of the household main residence for homeowners, other real estate property, vehicles and valuables (such as jewelry, works of art, antiques, etc.) and value of self-employment businesses. Real estate wealth includes households' main residences and other real estate property. Medians are conditional among households owning the assets.

The risks in the European housing market also put “green renovation” in jeopardy

Soaring energy prices, higher construction costs and rising interest rates could also challenge the European “renovation wave” under the EU’s Green Deal ambitions. Enhancing the energy efficiency of buildings through renovation and retrofitting represents a key plank in the EU climate policy agenda and will be essential for the EU to achieve its net-zero emission target by 2050.

We find that energy-efficiency renovations have become more attractive as additional energy savings over the long run outweigh higher renovation and installation costs (due to the rising costs of construction materials and labor, Figure 14).⁸ We find that the amortization time has declined from 13.2 years to less than 10 years for an average dwelling if structural price pressures in the building and construction sector as well as labor costs remain contained and energy prices stabilize at higher levels.

Figure 14. EU: Average amortization time of investment in energy efficiency of residential buildings



Sources: [Jobst and others \(2020\)](#), Allianz Research. Note: based on an energy efficiency upgrade to EPC=A as simple average across all EU countries, after controlling for differences in energy prices, quality of housing stock, and dwelling size (see also Box 1).

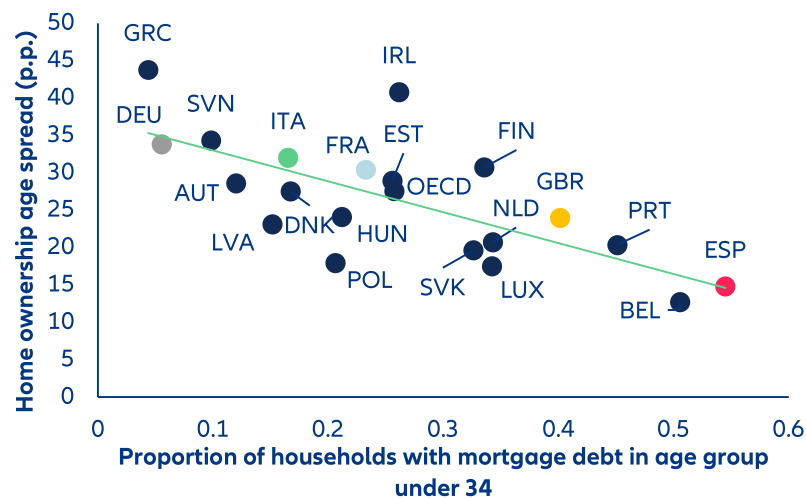
⁸ Energy efficiency also leads to a disproportionately higher increase in property values. For instance, [Taruttis and Weber \(2022\)](#) find that about 98% of future energy cost savings are already reflected in higher housing values in Germany.

Policy implications: more effort needed to reduce shortage in affordable and energy efficient housing

How can policymakers respond to improve home affordability? There are several options: (i) releasing more land for development, (ii) streamlining approval processes for permits and re-zoning, (iii) assessing incentives to build rental properties, (iv) encouraging more innovation in construction (including greater use of building technology and energy-efficiency measures), (v) increasing supply, including of social housing and (vi) providing access to financing for energy-efficiency improvements and renovation for vulnerable households (which benefit most from energy savings but find upfront investment costs too high), including “green mortgages”.⁹ This also includes introducing a percentage-based affordable housing requirement on new developments that benefit from public sector support via credit guarantees and/or grants.

Policies that improve borrowing conditions for younger cohorts will prove to be the most effective to increase their chances of acquiring real estate. Younger households are relatively more sensitive to policies that improve credit conditions. Figure 13 illustrates the negative correlation between home ownership age spread (i.e. the difference in homeownership rates between the younger cohort and the rest of the population in percentage points) and the proportion of young households with mortgage debt.

Figure 13. Importance of access to mortgage finance to young cohorts



Sources: OECD, Allianz Research

Scaling up improvements in energy efficiency will also depend on policy support for vulnerable households (see section above). While the affordability of energy-efficiency measures has increased over the lifetime of the investment, declining real disposable income has increased the budget constraints of households, which cannot afford the front-loaded

⁹ For instance, Spain recently introduced a mortgage relief plan as “guidance” to financial institutions, which includes: (i) facilitating the restructuring of mortgage debt at a rate -0.1pps below Euribor (vulnerable people), with up to five years of an interest-only period; (ii) freezing of mortgage payments during 12 months, extending mortgage maturity and (iii) reducing the fees for those who change between fixed and variable interest rates, and eliminating extra-charges during 2023 for early principal redemptions.

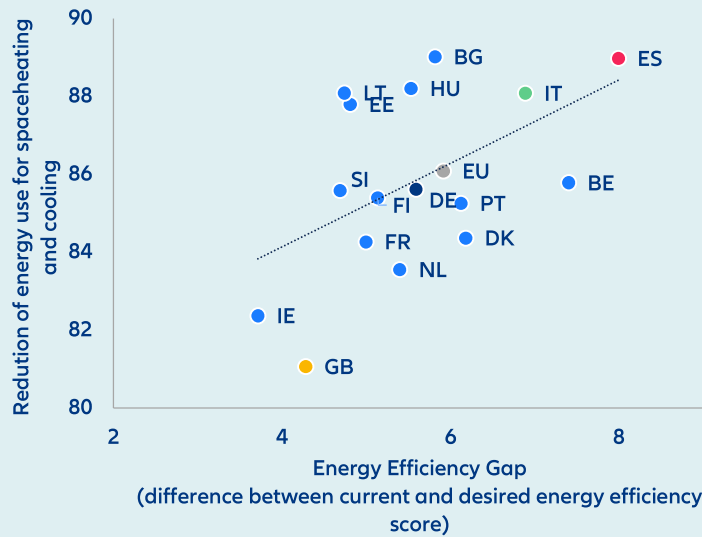
expenditure. Thus, it is essential to scale up public sector support in the form of grants or interest-rate subsidies (via more favorable credit terms, such as the ones offered by national development banks and some banks in the form of “green mortgages, see Box 1).

However, policies should resist stimulating demand further, given the existing supply-demand imbalances and avoid resorting to short-term solutions, such as relaxing prudential regulations to enable households to borrow more. The program to subsidize buying a home needs to be carefully designed and remain limited in size to minimize risks to the financial sector.

Box 1. Policy considerations for financing the (green) renovation wave

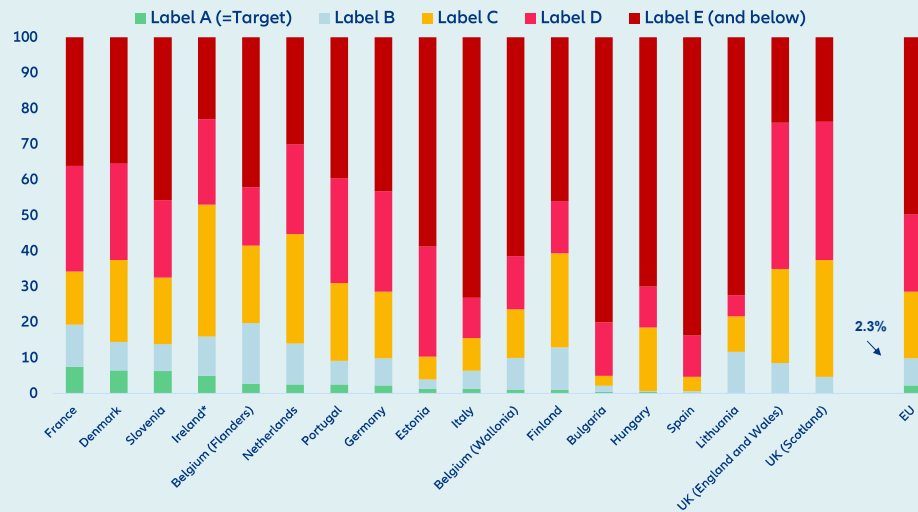
In this box, we estimate how the changed macroeconomic conditions have influenced the need for public sector support to overcome the timing-mismatch in housing renovations aimed at improving the energy efficiency of residential buildings. We estimate that improving the energy efficiency of the current EU housing stock could reduce energy usage by about 85% (Figure B.1), especially in Italy and Spain.

Figure B1. EU households: Potential reduction of energy use from retrofitting (complete upgrade to EPC=A). (%)



Sources: [Jobst and others \(2020\)](#), Allianz Research.

Figure B2. EU-28 (selected): Distribution of building stock by EPC class. (% of dwellings)



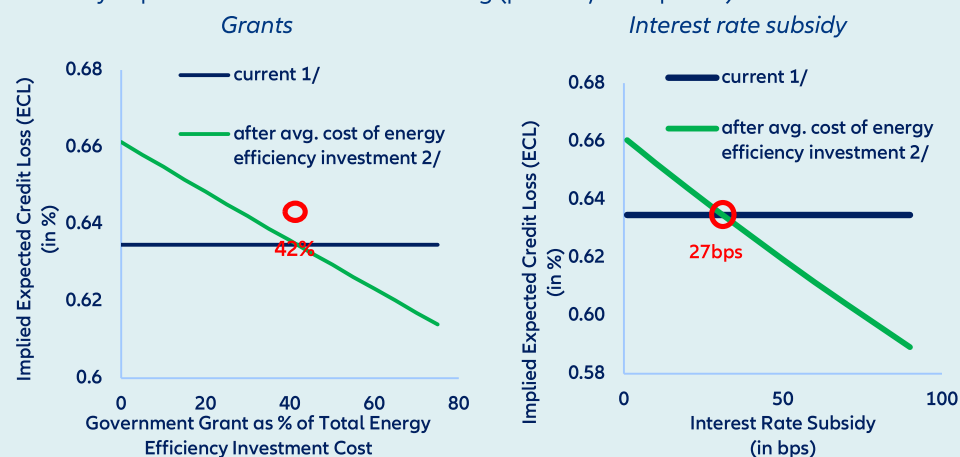
Sources: BPIE, EEA, Eurostat (EU Building Stock Observatory), [Jobst and others \(2020\)](#), Allianz Research. Note: 1/ countries with no central database (e.g., Poland) or with limited information (Czech Republic, Romania, Slovak Republic) are not included.

While energy-efficiency investments are self-financing, they are front-loaded and tend to exceed the financial capacity of most households. Hence, demand for energy-efficiency improvements has remained below the levels required to align emission reductions in the building sector with the overall EU emission-reduction target. This raises the question of whether existing financial instruments (i.e., mortgages, home equity/consumer loans) can address this market failure, and to what extent this has implications for financial stability.

We analyze the scale of public financial support needed to neutralize the net impact of energy-efficiency investments (renovation/retrofitting as well as greater electrification) by keeping the default risk of EU households unchanged under no arbitrage conditions.

We find policy support would need to be scaled up urgently, especially in countries with a high potential of reducing the carbon footprint of housing (especially in Belgium, Italy and Spain; see charts below). Based on current household survey data, households would on average require either government grants covering about 42% of energy-efficiency investments or a reduction of their mortgage interest rate burden by about 15% (see charts below). Future work will focus on refining these estimates based on distributional characteristics, focusing on vulnerable households.

Figure B3. Optimal scale of grants and interest rate subsidies for complete energy-efficiency improvement in residential housing (percent/basis points)



Sources: Sources: Eurostat, Gross and Jobst (forthcoming), Allianz Research. Note: 1/ for an average European household with annual gross income of EUR100k and a mortgage with LTV=80% and interest rate of 2% over 10 years for a property valued at EUR226k.; 2/ Upfront investment cost of EUR30k generating energy savings of EUR3k per year.

EU taxonomy on sustainable activities

The European Commission (EC) adopted a sustainable finance taxonomy that determines for EU purposes which activities contribute to climate-change mitigation or adaptation, and in a late amendment the EC significantly expanded the taxonomy's criteria for buildings acquisition and ownership. The current (and recently) broadened criteria include financing secured by pre-2021 buildings that fall within the top 15% of energy-efficient buildings in the country or region. The 15% standard supports the energy transition by capturing a country's improvements in energy-efficiency standards over time, and now aligns with the Climate Bond Initiative standard accepted by the market. The EC's initial draft required buildings to have an Energy Performance Certificate (EPC) of "A," which would typically include fewer than 10% of properties in a country, and in some countries as low as 1%.

Annex I. Different methodologies for assessing the potential house price correction

Macro-financial driven model

Panel data framework with quarterly data since 1990. Changes (y/y) in real house prices are regressed over several variables, of which we end up selecting a subsample of them: real GDP growth, output gap, fiscal balance and long-term yields (with country-fixed effects). The countries in the sample are only advanced economies that present a similar structural trend (e.g. demographics or stage of development).

To ensure stationarity, the regressions are performed using first differences. After different combinations of the four variables previously mentioned, and once consistency of signs is proven, the fiscal balance ends up discarded. Although typically unemployment is used in residential real estate models, its high correlation with the output gap, and its rigidity due to the welfare state (see unemployment rate vs. output gap in Q2 2020), it has been substituted by the output gap. The 10Y yield is used.

With the movements of the same magnitude in the exogenous variables, the main driver is the output gap (the larger the output gap, the larger the price increase), followed by 10Y yields (negatively correlated) and real GDP growth (positively correlated).

The main limitation to this approach is the use of country fixed effects with such a small dataset for panel data standards – basically due to its relatively short timespan. Markets that have enjoyed a more buoyant housing market in the last 30 years, such as Spain, get a higher effect, while Italy and Germany get the lowest. As the size of the shock in our baseline scenario does not significantly vary across countries, much of the difference in the outcome is explained by the country-specific factor.

Market-based housing price model: what is the performance of real estate equities telling us?

This model builds on the relationship between the perceived returns of the real estate equities¹⁰ and the perceived appreciation of (nominal) house prices. The assumption – which on the long term proves itself true – is that the cycles on both converge, i.e. that as the investment in real estate becomes more appealing, related equities should perform better. It normally works with a lag: movements in official house prices indexes occur after investors have identified a market opportunity in those companies.

To estimate the 2023 correction, we assume that, by the end of 2023, the perceived appreciation of nominal house prices will coincide with the one expected by a single-variable equation based on perceived return of real-estate-related equities. It could be interpreted as well as the “distance to fair-value”, but with the caveat that size matters in the computation of perceived returns: i.e. if we would fix the point of convergence by the end of 2024, the accumulated correction would be larger, but the correction in 2023 smaller. Similarly, for a quicker convergence we would need a sharper fall in the first quarters of 2023.

¹⁰ When possible, as is the case of the US, using a homebuilders-only index is more accurate. However, the equity-market depth elsewhere cannot be compared.

These assessments are, as always, subject to the disclaimer provided below.

FORWARD-LOOKING STATEMENTS

The statements contained herein may include prospects, statements of future expectations and other forward-looking statements that are based on management's current views and assumptions and involve known and unknown risks and uncertainties. Actual results, performance or events may differ materially from those expressed or implied in such forward-looking statements.

Such deviations may arise due to, without limitation, (i) changes of the general economic conditions and competitive situation, particularly in the Allianz Group's core business and core markets, (ii) performance of financial markets (particularly market volatility, liquidity and credit events), (iii) frequency and severity of insured loss events, including from natural catastrophes, and the development of loss expenses, (iv) mortality and morbidity levels and trends, (v) persistency levels, (vi) particularly in the banking business, the extent of credit defaults, (vii) interest rate levels, (viii) currency exchange rates including the EUR/USD exchange rate, (ix) changes in laws and regulations, including tax regulations, (x) the impact of acquisitions, including related integration issues, and reorganization measures, and (xi) general competitive factors, in each case on a local, regional, national and/or global basis. Many of these factors may be more likely to occur, or more pronounced, as a result of terrorist activities and their consequences.

NO DUTY TO UPDATE

The company assumes no obligation to update any information or forward-looking statement contained herein, save for any information required to be disclosed by law.