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GLOBAL HOUSING AND MORTGAGE OUTLOOK – 2023

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CONTENTS

COUNTRIES

MARKET FORECASTS

Region	Country	Page	NOMINAL HOME PRICES [a] (% change)			LATE-STAGE MORTGAGE ARREARS [b] (%)		
			2022 estimate	2023 forecast	2024 forecast	2022 estimate	2023 forecast	2024 forecast
North America	US	12	5.5%	-5% to 0%	0% to 3%	1.45%	1.8% to 2%	2% to 2.2%
North America	CAN	13	1%	-7% to -5%	3% to 5%	0.14%	0.2% to 0.25%	0.2% to 0.25%
Europe	UK	14	8%	-7% to -5%	-1% to 1%	0.9%	1.5%	1.5%
Europe	GER	15	0%	-4% to -2%	-1% to 1%	0.4%	0.6% to 0.8%	0.8% to 1%
Europe	NLD	16	5%	-6% to -4%	-1% to 1%	0.2%	0.4% to 0.6%	0.3% to 0.5%
Europe	FRA	17	6%	-2% to 0%	-4% to -2%	1%	1.1% to 1.3%	1.2% to 1.3%
Europe	DEN	18	-2%	-10% to -7%	-2% to 0%	0.15%	0.3%	0.2%
Europe	ESP	19	6%	2% to 4%	3% to 5%	3%	3% to 3.5%	3.25% to 3.75%
Europe	ITA	20	3.5%	0.5% to 1%	0.5% to 1%	0.9%	1% to 1.2%	1%
Asia-Pacific	AUS	21	7%	-10% to -7%	2% to 5%	0.5%	0.7% to 0.8%	0.6% to 0.7%
Asia-Pacific	CHN	22	-2%	-3% to -1%	-1% to 1%	0.3%	0.35%-0.45%	0.35%-0.45%
Asia-Pacific	JPN	23	2%	2% to 4%	0% to 2%	0.3%	0.4% to 0.5%	0.4% to 0.5%
Latin America	BRA	24	5.5%	4% to 6%	4% to 6%	2%	1% to 3%	1% to 3%
Latin America	MEX	25	10%	6% to 8%	5% to 7%	3%	3% to 5%	3% to 5%
Latin America	COL	26	7.5%	3% to 5%	3% to 5%	3.5%	3% to 5%	3% to 5%

Legend

a. Index of eight capital cities Australia and index of 70 largest cities in China.

b. Germany, Japan: Fitch-rated RMBS three-months-plus arrears including defaults. Netherlands: Fitch-rated RMBS three-months-plus arrears excluding defaults. China: Annualised gross loss from Chinese RMBS transactions, loss definition varies between 90d+ and 180d+. Mexico: 90d+ arrears on bank loans. Remaining countries: Market-wide or largest lender arrears/impaired loan ratio (definitions vary).

Source: Fitch Ratings

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MACRO INDICATORS

	Country	SOVEREIGN ENVIRONMENT			UNEMPLOYMENT (%)				REAL GDP GROWTH (%)				SHORT-TERM RATES (%) [d]			
		LT IDR [a]	BSI [b]	MPI [c] 2022 (2021)	2021	2022f	2023f	2024f	2021	2022f	2023f	2024f	2021	2022f	2023f	2024f
North America	US	AAA	a	2 (2)	5.4	3.7	4.8	5.3	5.9	1.9	0.2	1.6	0.3	4.5	5.0	3.5
	CAN	AA+	aa	2 (2)	7.4	5.3	6.1	6.1	5.0	3.5	0.6	1.7	0.3	4.0	4.0	3.8
Europe	UK	AA-	a	1 (1)	4.5	3.7	5.0	5.0	7.5	4.4	-1.2	1.5	0.3	3.5	4.8	4.0
	GER	AAA	a	3 (3)	3.6	3.1	3.4	3.3	2.6	1.8	-0.5	1.9	0.0	2.5	3.0	2.0
	NLD	AAA	a	1 (1)	4.2	3.6	4.0	4.1	4.9	4.8	0.5	1.4	0.0	2.5	3.0	2.0
	FRA	AA	a	2 (2)	7.9	7.6	7.9	7.9	6.8	2.5	0.7	1.5	0.0	2.5	3.0	2.0
	DEN	AAA	a	1 (1)	5.1	4.4	4.8	4.6	4.9	2.6	0.5	2.1	-0.4	0.3	1.6	1.4
	ESP	A-	bbb	1 (1)	14.8	12.9	13.0	12.8	5.5	4.7	1.4	2.4	0.0	2.5	3.0	2.0
	ITA	BBB	bbb	1 (1)	9.5	8.3	8.7	8.6	6.7	3.7	-0.1	1.5	0.0	2.5	3.0	2.0
Asia-Pacific	AUS	AAA	a	1 (1)	5.1	3.7	4.2	4.4	4.9	3.9	1.5	2.0	0.1	3.1	3.4	2.8
	CHN	A+	bb	1 (1)	5.1	5.1	5.0	4.8	8.1	2.8	4.1	4.8	3.0	2.8	2.8	2.8
	JPN	A	a	2 (3)	2.8	2.7	2.7	2.7	1.7	1.4	1.1	1.2	-0.1	-0.1	-0.1	-0.1
Latin America	BRA	BB-	bb	1 (1)	13.5	10.5	10.5	10.0	5.0	3.0	0.7	2.0	9.3	13.8	11.5	8.0
	MEX	BBB-	bbb	1 (1)	4.1	3.7	3.5	3.5	4.7	3.0	1.4	1.6	5.5	10.5	11.0	9.5
	COL	BB+	bb	1 (1)	13.8	11.0	10.5	11.5	10.7	7.0	1.9	2.8	1.9	6.2	7.0	4.5

Legend

a. LT IDR: Long-Term Issuer Default Rating

b. As of September 2022; the Bank System Indicator (BSI) is a system weighted average of bank standalone strength as measured by banks' Viability Ratings.

c. As of July 2022; with the Macro-Prudential Indicator (MPI) Fitch systematically monitors macro-prudential risks on a scale from '1' (low) to '3' (high).

d. Short-term rates shown are end-of-period policy rates in the US, Canada, eurozone countries, Australia, Japan, Brazil and Mexico, the One-year Medium-Term Lending Facility rate in China and annual average policy rates for the others.

Source: Fitch Ratings

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KEY GLOBAL TRENDS

HOME PRICES TO SEE DECLINES OR LOWER GROWTH

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MACROECONOMIC CONDITIONS WEAKEN WITH RISK OF RECESSION

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MORTGAGE PERFORMANCE EXPECTED TO DETERIORATE IN MOST MARKETS

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GLOBAL HIGHLIGHTS

Fitch Ratings expects nominal home price growth to decline or slow substantially in 2023 for most markets featured in our Global Housing and Mortgage Outlook, driven by cooling demand due to high mortgage rates. This will follow home price declines in 2H22 in Australia, Canada, China, Denmark, Germany, the Netherlands, the UK and the US.

Fitch forecasts weaker economic growth and stable to rising unemployment in 2023 in our **Global Economic Outlook** for most markets in this report. The UK's recession will continue, while we are predicting a mild recession for the eurozone before the end of 2022 and for the US from 2Q23.

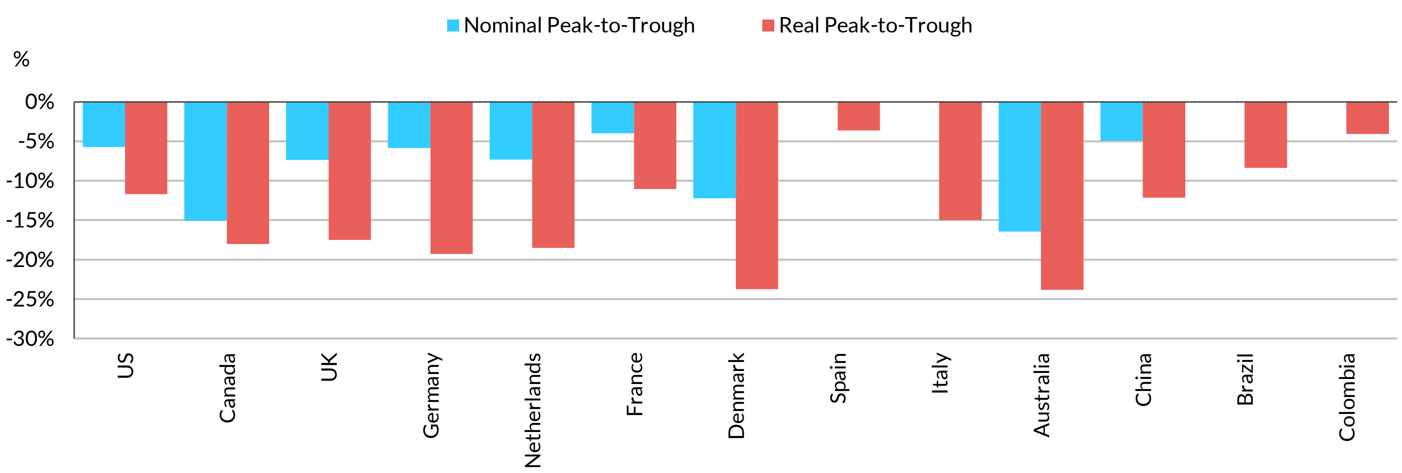
As macroeconomic headwinds grow stronger, real income erosion as a result of inflation and rising unemployment will cause loan performance to deteriorate. Housing markets in countries where mortgage rates are predominantly floating or fixed for short periods are particularly vulnerable. Arrears are expected to remain well below levels seen during the global financial crisis (GFC) due to higher levels of home equity, disciplined underwriting, tighter financial regulation, borrower support offered by lenders and government schemes in certain countries.

Home prices are expected to remain higher than pre-pandemic levels, as housing supply constraints will limit price corrections in some markets, while demand is sustained by household formation and strong household balance sheets. We do not expect nominal home prices to fall in Latin America, Italy and Spain, as they did not see a rapid increase in home prices over the past couple of years, and these markets (specifically more recent originations in the case of Italy and Spain) benefit from longer fixed-rate periods.

Downside risks are material. A failure to contain inflation and stabilise interest rates, resulting in higher-than-expected unemployment with significantly lower consumer income and savings, would further reduce demand and lead to steeper home price declines.

> “Fitch forecasts weaker economic growth and stable to rising unemployment in 2023 in our Global Economic Outlook for most markets covered in this report.

Peak-to-Trough Home Price Forecast in Nominal and Real Terms



Note: Based on middle of forecast ranges. Peak between 3Q21 and 4Q22.
No real or nominal house price decline: Mexico, Japan. Only negative real HPD: Italy, Spain, Brazil, Colombia
Source: Fitch Ratings, OECD (see charts on country pages for additional sources)

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HOME PRICES TO SEE DECLINES OR LOWER GROWTH

Higher mortgage rates will weigh heavily on demand and home prices through 2023 and into 2024. Cost of living increases will also reduce demand as some consumers delay home purchases. Australia, Canada, Denmark, the Netherlands, the UK, Germany, the US, and France, which had some of the largest home price increases since the onset of the pandemic, will see some of the greatest price declines given rate pressures. The areas within these countries that had the steepest run-up in prices are likely to see the largest correction.

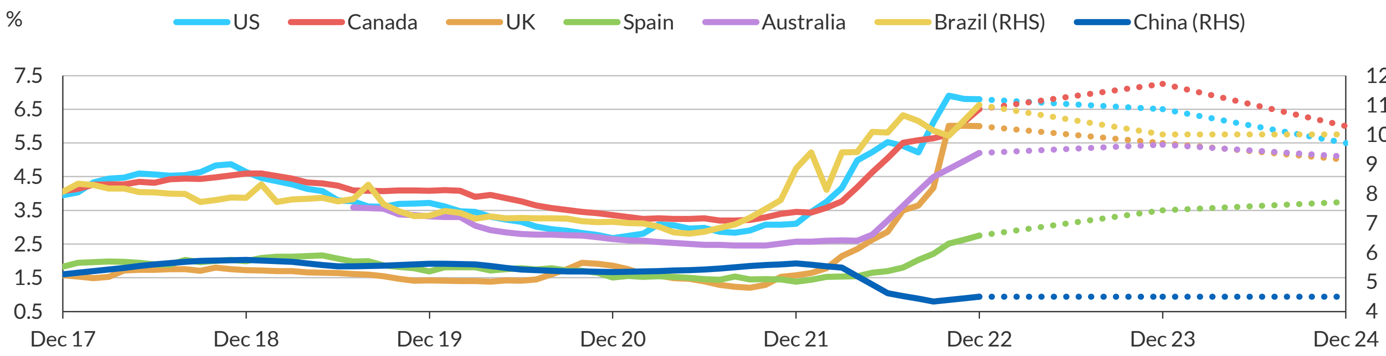
Nominal home price growth will continue in Mexico, Brazil and Colombia, but at a slower pace, as prices did not rapidly increase over the past couple of years and housing remains affordable. Real home prices in Latin America will decline, but less so than other regions. We expect home price changes in China to be contained given the tightly regulated housing market and stable mortgage rates.

AFFORDABILITY PRESSURES INCREASE

Borrowers will continue to face reduced affordability even with home price declines in several countries due to substantial home price gains during the pandemic and falling discretionary income combined with increases in mortgage rates both on a nominal and real basis (the latter reflects rate rises higher than those implied by medium-term inflation expectations). Even in countries where home prices have not shot up in recent years, such as Italy and Spain, cost of living increases and rising rates will stress borrowers, particularly those with floating-rate mortgages. Prospective homebuyers will remain on the sidelines as unaffordability persists, particularly first-time homebuyers who must also contend with increasing rents.

Home price growth has exceeded wage growth in many regions, which is unsustainable, but does not portend a burst housing bubble on a scale seen during the GFC given robust consumer financials, disciplined underwriting and homeowners' higher equity than before the GFC. A deterioration in home prices and mortgage performance may be more muted in those countries with mostly fixed-rate mortgages and lower aggregate debt/income (DTI) ratios.

Mortgage Rates



Source: Fitch Ratings, Haver Analytics, FHLMC, CHMC, BoE, BDE, BCB, ABS, PBC

REAL HOME PRICES EXPECTED TO DROP SIGNIFICANTLY IN 2023

Even in countries where we forecast nominal home price growth in 2023, growth is unlikely to keep pace with the strong pace of inflation, resulting in real home price declines. The rebound in real home prices is likely to take longer than that of nominal home prices given persistent inflation. Latin America, which is the region which has historically faced the highest levels of inflation, is likely to show the lowest real home price declines next year given low supply and stable or improving employment expectations.

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LIMITED HOUSING SUPPLY CONTINUES TO SUPPORT HOME PRICES

Housing supply is unlikely to materially outpace demand in 2023, given new household formation and pent-up demand, as well as fewer homes for sale. These dynamics will continue to buffer home prices over the next year, which will remain higher than pre-pandemic for the most part. Fitch expects home price growth to modestly pick up in 2024 for most countries as recessionary pressures recede, mortgage rates decrease and potential buyers re-enter the market.

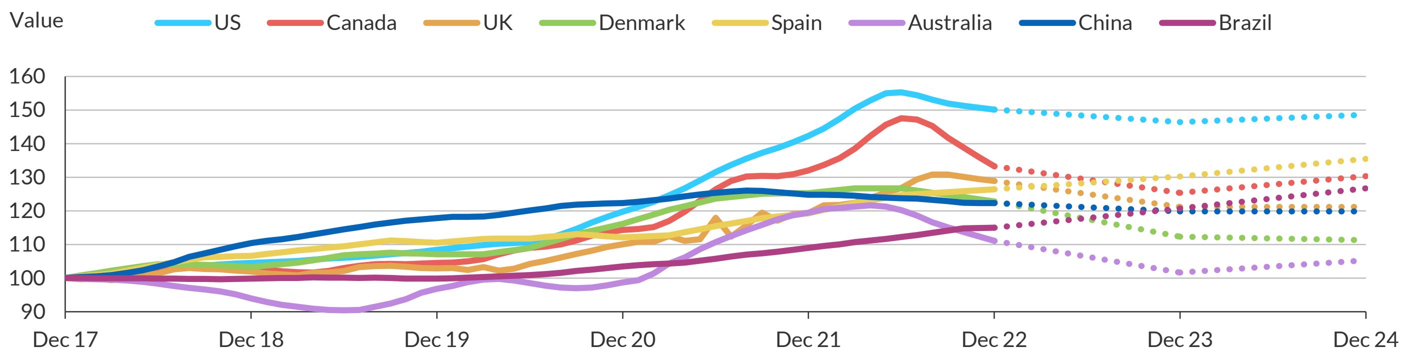
Undersupply, in part due to elevated mortgage rates that will prevent people from trading homes, and construction cost inflation will continue to support higher home prices in some areas and exacerbate affordability issues.

CREDIT SUPPLY EXPECTATIONS VARY BY COUNTRY

Countries with quantitative tightening will have less liquidity in the banking system, which will increase the cost of credit and restrict loan availability, particularly for lower credit quality borrowers. Borrowers may only qualify for lower loan balances or will be priced out of the market. However, mortgage lending could expand in Latin America, supported by central bank policies, and China, although there are regulatory caps on bank exposure to property. In the US, federal policy is driving affordable housing lending priorities.

In the US and some eurozone countries, refinancing activity will decline substantially or stay low after years of lower rates. Conversely, refinancing is picking up in Australia and the UK as borrowers with variable-rate mortgages and those coming off short-term fixed rates search for better terms.

Nominal Home Price Indices and Mid-Points of Forecast Ranges



Source: Fitch Ratings, Haver Analytics, Case-Shiller, TER/NBC, HMLR, DKstat, INE, CoreLogic AU, CNBC, FIPE

MACROECONOMIC CONDITIONS WEAKEN WITH RISK OF RECESSION

Fitch expects global GDP growth to slow to 1.4% in 2023, with most economies covered by the Global Economic Outlook seeing weaker growth. Higher inflation will continue to challenge most central banks, with recessions in the UK, eurozone and the US. China is an exception, as inflation is manageable and interest rates are falling.

Unemployment and real income, both of which are closely related to GDP trends, will remain the biggest drivers of mortgage performance.

The ability of governments to navigate fiscal and monetary policy to avoid a deeper downturn and low consumer confidence are also key to avoiding steep housing market declines. Risks of inflation remaining higher for longer, more severe rate increases than our forecasts, and wages falling further behind inflation could result in a considerably larger price correction. Arrears would multiply, particularly in markets where floating-rate loans dominate.

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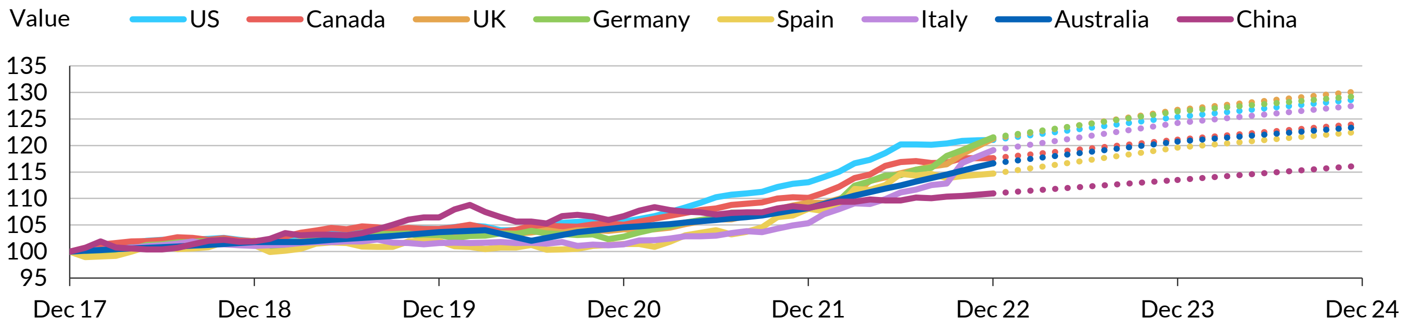
Consumer Price Indices and Forecasts



Source: Fitch Ratings, Haver Analytics, Organization for Economic Cooperation & Development

MORTGAGE PERFORMANCE EXPECTED TO DETERIORATE IN MOST MARKETS

Inflation and high interest rates increase borrower payments and erode real discretionary income, weakening borrower credit quality and driving arrears. In most cases, mortgage arrears will increase from pandemic lows, especially in floating-rate markets and countries with higher unemployment. The exception is Latin America, where unemployment forecasts are flat or improving, although real household income will still be under pressure in 2023.

In the absence of pandemic-related forbearance programmes and payment holidays, lenders may selectively offer forbearance, but this is not expected to greatly affect mortgage arrears. Foreclosures and foreclosure inventory will remain low as servicers are more likely to provide modification plans, with a limited impact on home prices.

Based on current unemployment forecasts, Fitch expects increases in arrears to be modest in both Canada and the US. The large majority of the US market pays long-term fixed-rate, which should limit payment shocks from higher interest rates. Mortgages in Canada are typically fixed for their initial five-year terms, at which point borrowers need to take out new loans based on the principal outstanding, leaving borrowers with near-term maturities susceptible to payment shocks.

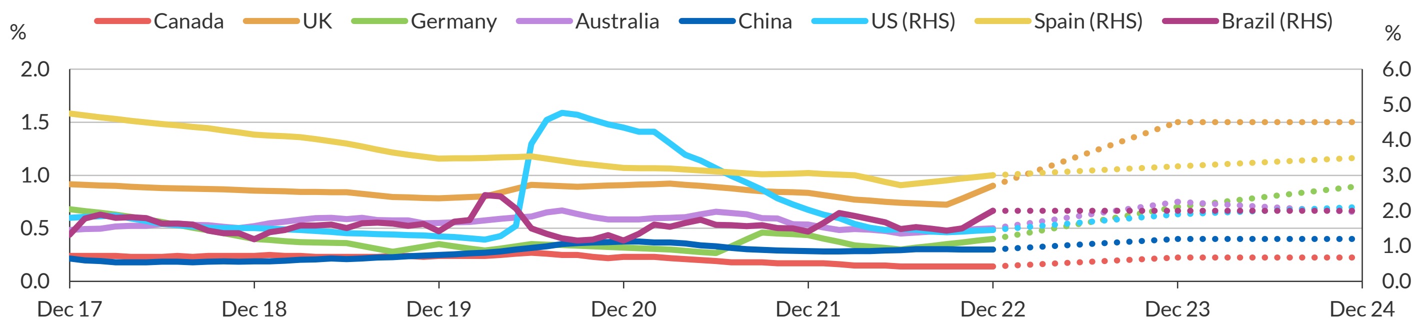
In Europe, early arrears are expected to increase from 4Q22 due to the increase in inflation and recessionary pressures. Loan performance deterioration will be more acute for countries or products with short-term fixed or floating rates. Late-stage arrears are expected to materialise in 2H23.

We expect only a moderate increase in 90+ arrears in Australia from historically low levels, ending up in the upper range of the past five years (0.7%-0.8%). Lenders typically provide hardship provisions for borrowers who have short-term difficulties with making mortgage repayments.

The mortgage market is mostly fixed-rate in Latin America, so arrears should remain moderate, given that installments should decrease in real terms once wages are adjusted.

In China, Fitch expects a modest deteriorating trend, with annualised defaults of 0.35-0.45% in 2023 and 2024 amid a housing market slump. Employment will be volatile based on the government's evolving Covid-19 strategy, stimulus policies and export growth, but positive GDP growth, albeit low, and borrower credit quality will limit performance deterioration.

Late-Stage Mortgage Arrears (Definitions Vary)



Market wide 90+d: Australia, Brazil, Canada, Spain, UK, US. Fitch-rated transactions: China (90dpd), Germany (3+m)
Source: Fitch Ratings, Haver Analytics, BKFS, CBA, UKF, BdE, BCB

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WHAT TO WATCH

Significant uncertainty remains regarding the extent of the home price correction in most markets. This will depend upon the depth and duration of any downturn – specifically, the magnitude of increases in interest rates and unemployment. Policy risks, including misalignment of fiscal and monetary responses to inflation, could disrupt market and consumer confidence and exacerbate home price declines. Some sub-markets, such as buy-to-let, could see notably worse performance than housing markets as a whole, leading to loss of confidence.

> “Real home prices in several markets had grown to record highs in 2022, but could rapidly decrease with demand if interest rates continue to increase significantly. Effects may be felt well beyond 2023 if marginal demand is wiped out with a deeper recession.

Real home prices had grown to record highs in some places in 2022, but could rapidly decrease with steep declines in demand as a result of continued large interest rate rises. Effects may be felt well beyond 2023 if marginal demand is wiped out with a deeper recession.

Stagflation with inflation beyond our forecast and rapid and severe monetary and fiscal tightening would materially diminish real discretionary income and result in much higher monthly payments for some. Along with persistent, elevated unemployment, arrears could exceed levels indicated above.

Environmental considerations are playing a greater role in EMEA, with bifurcation between energy efficient/liquid properties and inefficient/illiquid assets becoming more likely. Climate and carbon emissions targets will affect housing development, but are not expected to be material drivers of housing market movements in the short term.

For China, longer-than-anticipated property sector stress, Covid-19 policy missteps and weak employment could cause home prices to decline beyond our forecast. Other than in China, the pandemic is not expected to be a driver for housing markets as there is limited political appetite to reintroduce lockdowns.

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FITCH PEAK-TO-TROUGH HOME PRICES FORECAST VS HOME PRICE GROWTH (HPG) SINCE 2020

Note: Based on middle of forecast ranges, and estimate for full year 2022 growth. Peak between 3Q21 and 4Q22.
Source: Fitch Ratings, (see charts on country pages for additional sources)

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UNITED STATES

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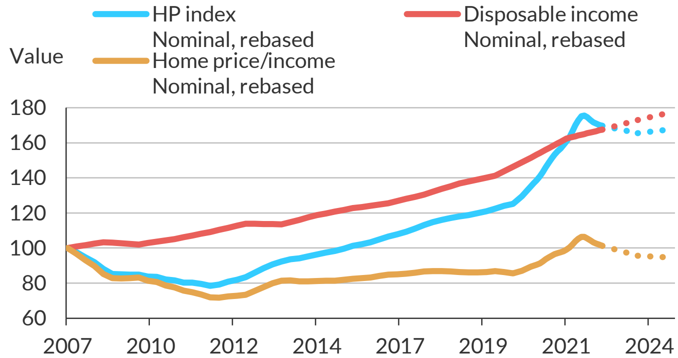
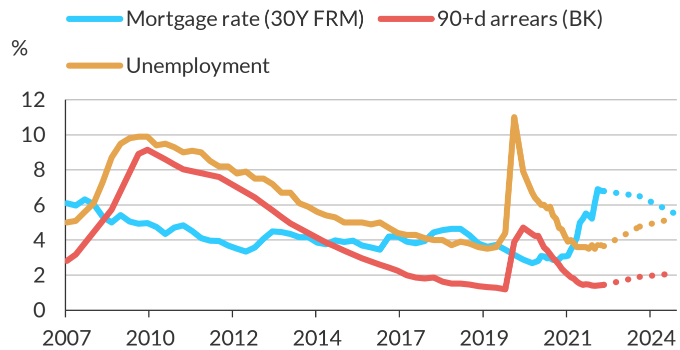
> We expect the declining home prices and modestly higher arrears in 2023 to be driven by cooling demand and a worsening economic landscape.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, European Commission/AMECO, S&P CoreLogic Case-Shiller Home Price Indices

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Black Knight, Inc., Federal Home Loan Mortgage Corporation, Bureau of Labor Statistics

HOME PRICES WILL CONTINUE TO DECLINE DUE TO AFFORDABILITY CONCERNS

Fitch expects nominal national home prices to fall by between 0% and 5% in 2023, based on industry consensus forecasts. This will lead to a fall of about 5% from the peak in 2022 (using the mid-point of the forecast). A modest reversal of 0%-3% growth will follow in 2024. The forecasts are a material deceleration from the 8% growth rate earlier in 2022 and a continuation of the declining trend since the middle of the year.

Demand will continue to decline heading into 2023, further eroding home prices. The materially higher mortgage costs (average payment is up more than 50% from 2021) will price out first-time buyers and those looking to upgrade their property. Property investors have begun to step back and will remain on the sidelines into 2023.

With a split US Congress any affordability intervention would need to come from lenders as government support is unlikely to materialise in a meaningful way. Regions that experienced the largest home price gains since the pandemic are expected to incur declines more severe than the national average.

Risks to the projection include rates rising above 7% as well as sellers pulling homes from the market, further limiting supply.

ARREARS TO INCREASE MODESTLY ALONGSIDE UNEMPLOYMENT

We forecast that mortgage arrears will increase to 1.8%-2% in 2023 and 2%-2.2% in 2024. Mortgage arrears are projected to be 1.45% at end-2022 with any further performance deterioration lagging behind declines in the economic environment. Expected weakening in mortgage performance will be driven by a worsening economic landscape as well as borrowers that have been stretched thin by inflationary pressures.

The modest increase in mortgage arrears will be driven by the forecasted increase in unemployment. Most US borrowers are unlikely to be affected by the rapid rise in mortgage rates due to the overwhelming prevalence of 30-year fixed-rate loans. (Less than 5% of purchase loans originated after 2009 were adjustable-rate loans.) Given the substantial amount of equity build up since the start of the pandemic (national average home price growth of more than 30%), foreclosures and mortgage losses are not expected to be material.

Mortgage arrears coming in higher or lower than the projection will be primarily driven by the actual unemployment trends.

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CANADA

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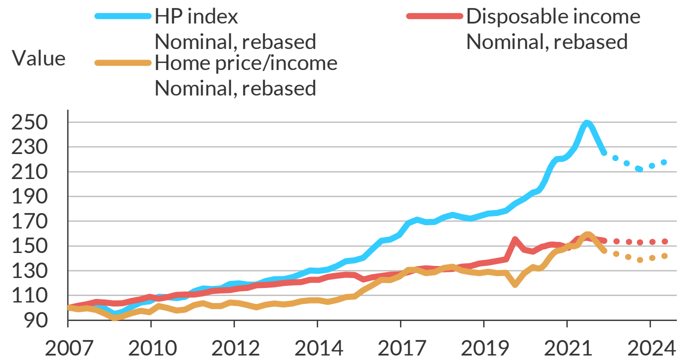
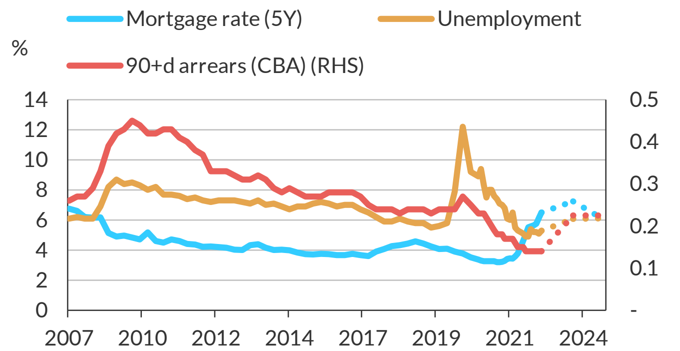
We expect home price declines to be curbed by the supply/demand imbalance, while arrears will increase modestly.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Statistics Canada, Teranet/National Bank of Canada

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Canada Mortgage and Housing Corporation, Canadian Bankers Association, Statistics Canada

STAGNANT ECONOMY AND WORSENING AFFORDABILITY TO DRIVE HOME PRICE DECLINES

Fitch expects nominal home prices to decline by 5%-7% in 2023 followed by 3%-5% growth in 2024, based on industry consensus forecasts. The peak-to-trough decline will be around 15%, (using the mid-point of the forecasts). The fall will be driven by the continued rise in interest rates expected through 1H23, inflationary pressures, a stagnant economy and declining affordability, which will dampen demand.

Affordability is at an all-time low in Canada. This is driven not only by the sharp rise in mortgage rates (the posted five-year mortgage rate is roughly 6.5% – more than double the mortgage rates offered this time last year) but also by persistently high home prices that have not seen material declines since the early 1990s, limited supply and high demand (homes are only on the market for about 20 days in the main city centres and suburbs).

Home prices will continue to be supported by lack of supply, high demand, net immigration and rising rents. But they would be subject to steeper-than-projected declines if the economy is significantly stunted by the macro-measures to curb inflation, which would further affect affordability and demand.

SIGNIFICANT HOME EQUITY TO LIMIT INCREASE IN ARREARS

Fitch expects mortgage arrears to increase modestly from the record low delinquency rates in 2022 of 0.14%. For 2023, we are predicting delinquencies to increase to 0.2%-0.25% before declining to 0.2% or just above as the economy recovers in 2024.

Despite rising mortgage rates and declining home prices, we expect only a modest increase in delinquencies due to significant equity that home owners have built overtime in their homes, historically low unemployment and strong wage growth.

Moreover, there is sufficient pent-up demand to enable home owners to sell if they get into financial distress. Canada's target of increasing immigration is adding to the demand.

Fitch does not expect a significant increase in delinquencies or foreclosures in 2023 as a result of the housing downturn. This is partly due to banks proactively working with existing borrowers to make their payments more affordable by re-amortising their loans over a longer term and working with borrowers who are in distress to avoid foreclosure.

FitchRatings

UNITED KINGDOM

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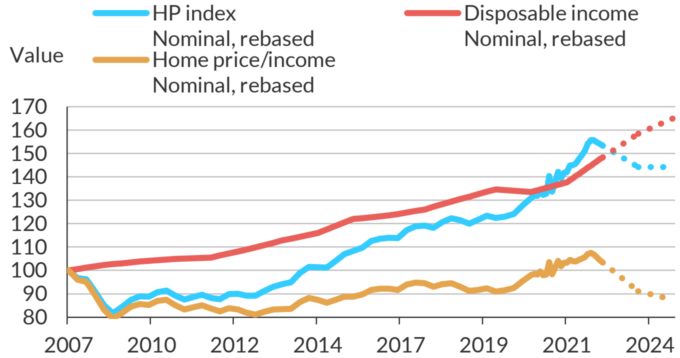
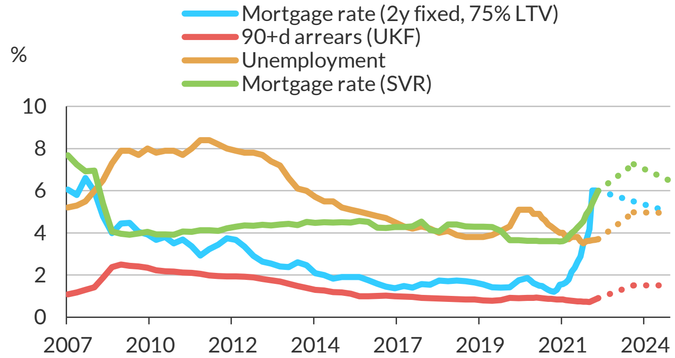
We forecast falling home prices and rising arrears as households adjust to higher interest rates and lower real wages.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, European Commission/AMECO, HM Land Registry

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Bank of England, UK Finance, Eurostat

HOMES PRICES TO FALL AS AFFORDABILITY PRESSURE BITES

Fitch expects a nominal home price decline of 5%-7% in 2023 leading to a peak-to-trough fall in the high single digits, mostly reversing the 10% growth from January to September 2022. We expect the trough to be reached towards the end of next year, but further price reductions into 2024 cannot be excluded.

The sharp rise in interest rates, which is more pronounced for pound sterling than other European currencies, has significantly pressured affordability, which we expect to continue to be challenged in 2023 even if mortgage rates ease. Fixed mortgage rates, which account for most new lending, were quoted above 6% in 4Q22, sharply up from about 1.5% at the start of the year. We expect fixed mortgage rates of 5%-6% throughout 2023 and 2024.

The UK continues to build insufficient new homes to meet demand, and this lack of supply supports a limited price decline despite the additional affordability challenges of inflation, falling real wages and an expected 1.3pp increase in unemployment by end-2024.

We expect only a modest rise in foreclosures as lenders will be accommodating with forbearance provided borrowers can meet interest payments. Foreclosures create downward pressure on prices, so more aggressive possession activity could lead to a larger fall than forecast.

LATE-STAGE ARREARS TO DOUBLE IN 2023

We expect arrears greater than 90 days to increase from 0.75% to 1.5% in 2023 before stabilising in 2024. The payment shock from rising interest rates and falling real wages will challenge affordability for weaker borrowers.

Borrowers paying floating rates, about 17% of the market, according to the Prudential Regulation Authority, are immediately vulnerable to rising rates, while borrowers with the typical fixed-rate period of two to five years face rate rises when the fixed rate expires. Fitch estimates that up to GBP217 billion of fixed-rate products will mature in 2023. The expected peak in the Bank of England base rate of 4.75% in 2023 will drive higher mortgage rates resulting in increased arrears.

We consider legacy non-conforming loans and loans to borrowers with a high loan/income ratio more vulnerable to underperformance. Some buy-to-let landlords may also face difficulty if tenants fall into significant rent arrears. Landlords seeking to refinance after fixed-rate periods may find less favourable terms as a result of falling home prices and higher interest rates.

The projected increase in unemployment to 5.0% by 2024 is likely to keep arrears below the 2009 peak. A deterioration in the labour market beyond our expectations could lead to arrears above the forecast.

FitchRatings

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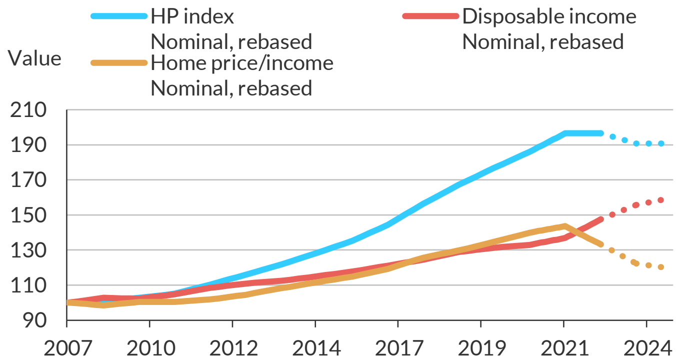
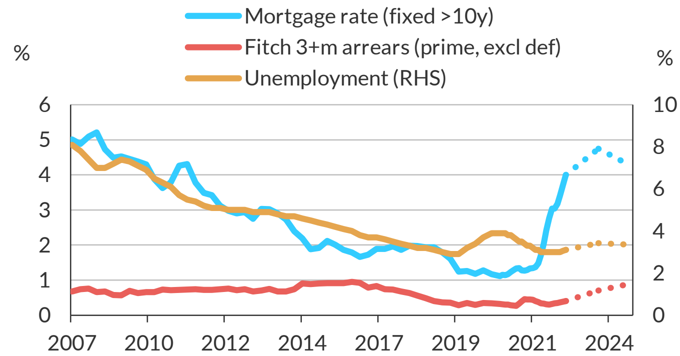
Price declines will be inevitable but moderate in 2023. Robust serviceability will support mortgage performance.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, European Commission/AMECO, BulwienGesa AG

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: FItch Ratings, Haver Analytics, Deutsche Bundesbank, Eurostat

PERSISTING HIGHER RATES WILL DAMPEN DEMAND AND PRICE RECOVERY

Fitch expects a nominal home price drop between -2% and -4% in 2023 after peaking in 2022, resulting in a peak-to-trough of about 6%. This ends a period of unprecedented growth of 115% since 2009. We expect flat prices in 2024.

Affordability was already stretched due to high property prices and high equity requirements for purchase-related costs before 10-year mortgage rates increased this year to almost 4% from 0.75% in January. Discretionary income fell due to rising living costs.

The number of potential buyers will be limited given a mild recession and economic uncertainty, with mortgage rates increasing to a peak of about 4.75% in 2023. Some mortgage lenders reduced risk appetite in 2H22 by tightening lending limits for high LTVs in particular for lower-income borrowers. We expect the tighter underwriting rules to persist throughout 2023.

We forecast flat home prices in 2024. The economy is expected to recover from the recession in 2023, unemployment will remain low, and wage rises will be negotiated. Decreasing nominal prices will spark demand from buyers who have been unable to buy at current prices. Supply continues to be limited and rising building costs will support high home prices.

INCOME BUFFERS TO SUPPORT MORTGAGE ASSET PERFORMANCE

We expect late-stage arrears to increase from 0.4% at end-2022 to 0.6%-0.8% at end-2023 and 0.8%-1% at end-2024, as CPI inflation of 11% in 2022 has reduced discretionary income, and compensating wage rises will only be gradual. A government support scheme will provide up to EUR5,000 to households, according to the Institut der deutschen Wirtschaft, but it will not fully offset higher costs of living for all.

Mortgage lenders' underwriting incorporates stress assumptions on borrowers' serviceability, through stressed interest or annual amortisation rates. This results in income buffers for most borrowers, but those with limited buffers, lower income and the minority of loans with floating interest will face greater performance pressure.

Interest rates on the typical mortgages with fixed-rate periods of 10 to 15 years have reached levels last seen a decade ago. Mortgage borrowers usually only refinance after 10 years due to high penalties before this date. Most borrowers refinancing next year will therefore not experience significant increases in their mortgage rate from the original rate.

Increasing numbers of foreclosures are unlikely as long as home prices remain at high levels and voluntary home sales without a loss remain possible.

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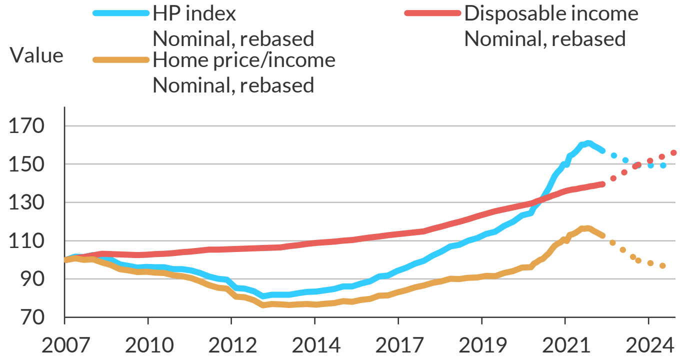
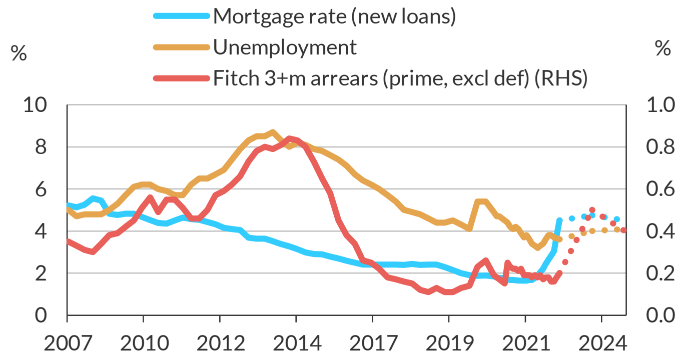
We forecast home prices to fall in 2023 due to substantially higher interest rates and strong pressure on borrower affordability.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, European Commission/AMECO, Centraal Bureau voor de Statistiek

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, European Central Bank, Eurostat

HOME PRICES TO FALL AS AFFORDABILITY PRESSURES INCREASE

Fitch forecasts nominal home prices falls of 4% to 6% in 2023, which is a significant deceleration from our estimated 5% for 2022 and from 20% in 2021. We expect prices to be flat in 2024 when the macroeconomic environment should improve and mortgage rates stabilise.

The price drop will result from dampened borrowing capacity and demand due to mortgage rates increasing further in 2023 (up to 5% for a 20-year fixed-rate period) after increasing to 4.5% in 2022 from 2% at the start of the year. We expect mortgage rates to return to current levels in 2024.

High levels of CPI inflation (14.5% in September 2022) will continue to put pressure on households' discretionary income. A planned increase in transfer tax for investors to 10.4% from 8% will also limit demand from this group.

We expect a larger decline for homes with lower energy labels, due to high energy costs and expected changes to underwriting criteria, benefitting purchases of energy-efficient homes.

Factors limiting the level of decline include a persisting housing shortage, an expected construction slowdown due to legal limits on nitrogen levels and because significant numbers of forced sales should be prevented by the lower LTVs and smaller share of interest-only mortgages in place.

ARREARS TO RISE AMID INFLATIONARY BURDENS DESPITE GOVERNMENT SUPPORT

We expect late-stage arrears to deteriorate from their current low levels of about 0.2% to 0.4%-0.6% in 2023, before improving slightly in 2024 to 0.3%-0.5%.

Borrowers exposed to floating-rate mortgages (less than 1% of outstanding according to De Nederlandsche Bank) and those with lower incomes are expected to experience greater performance pressure, driven by the higher costs of living and declines in real wages.

Given that Dutch mortgages usually have fixed-rate reset periods of between 10 and 20 years, the worsening but still strong employment market (with unemployment expected to increase from 3.6% at end-2022 to 4.0% at end-2023) and government measures dampening the pressure from increasing energy prices, we expect arrears to increase but remain at low absolute levels. Borrowers approaching the end of their fixed-rate periods are still able to reset at lower rates than when they originated their mortgage, so these loans are not considered particularly vulnerable to arrears.

Furthermore, high levels of personal savings accumulated during the pandemic and tight underwriting standards since 2013 also are supporting factors for only a limited increase in delinquencies. Additionally, high home prices mean that defaults are unlikely to lead to forced sales.

FitchRatings

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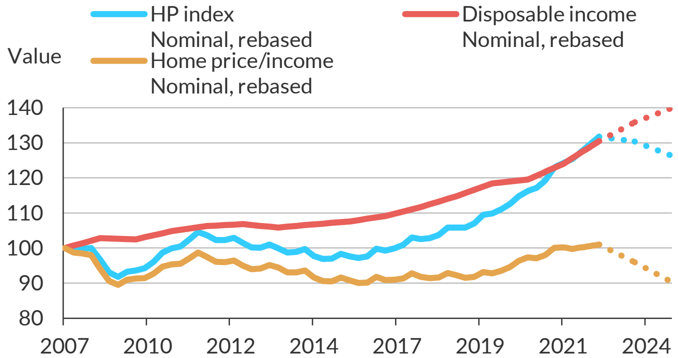
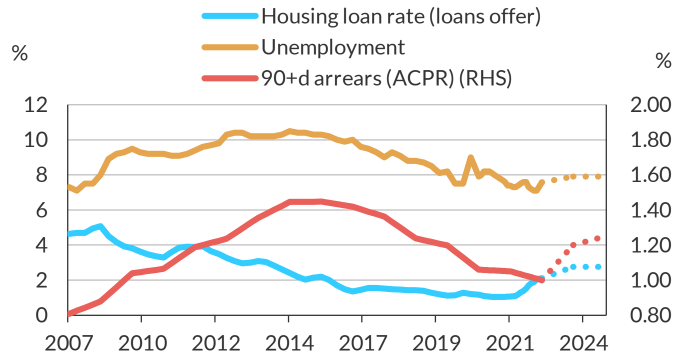
> We expect home prices to stall in 2023 and decrease in 2024 while late-stage mortgage arrears will increase but remain at a low level.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, European Commission/AMECO, Institut National de la Statistique et des Etudes Economiques

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Credit Logement, Autorité de contrôle prudentiel et de résolution, Eurostat

RISING INTEREST RATES AND UNDERWRITING LIMITATIONS TO HALT HOME PRICE GROWTH

Fitch expects nominal home prices to stall (0 to -2% growth) in 2023 and to decrease by between 2% and 4% in 2024, down from our estimated 6% growth for 2022. Pressure on borrower affordability from rising mortgage rates and regulatory debt service and maturity limits will drive the price movements.

Typical mortgage rates (for 20-year fixed-rate periods) have risen to 2% from about 1% at the start of 2022 and could reach 3% in 2023-2024. However, the increase will continue to be smaller than for many other countries due to usury rate limits and strong competition among lenders. Low consumer confidence will reduce demand for home purchases.

Credit availability will diminish due to the regulatory limits (required since January 2022) on the maximum debt service payment of 35% of income and maturity of 25 to 27 years. The long-established usury rate also acts as a brake on credit during periods of rapidly changing rates, because it is only updated quarterly. Demand from low-income households and first-time buyers will fall the most.

Home prices will increasingly diverge based on energy efficiency as low-energy-efficient properties will be banned from renting in 2025 and will have frozen rents from 2023.

ARREARS TO GROW BUT LIMITED BY PRUDENT UNDERWRITING PRACTICES

Fitch expects a mild increase in late-stage arrears for residential loans from about 1% estimated for end-2022 to between 1.1% and 1.3% in 2023 and 2024. The limited deterioration in loan performance is mainly explained by prudent underwriting reinforced by regulatory limitations on maximum debt service to income and loan maturity.

Residential loans' performance is not exposed to rising interest rates as 97% of outstanding residential loans in France bear fixed interest rates until maturity. The main performance driver will be unemployment, which is expected to marginally increase over the next two years while remaining below the average level of the past five years.

Rising costs of living will weigh on households' capacity to service debt. The government package to fight inflation has been effective at protecting households, especially with regards to energy costs.

The squeeze on household income from high inflation and worse-than-expected deterioration of the labour market remain the main concerns for loan performance. However, prudent origination resulting from the underwriting limits introduced in 2019 will keep arrears growth low.

FitchRatings

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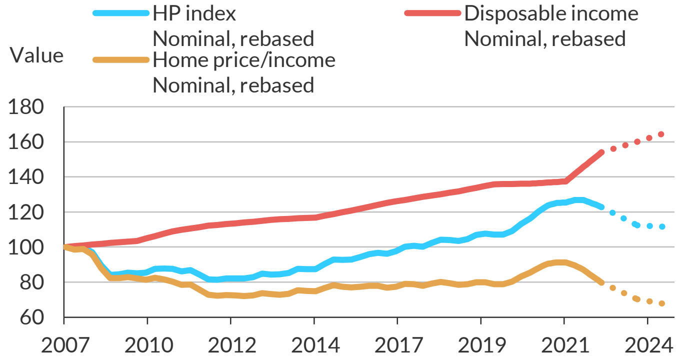
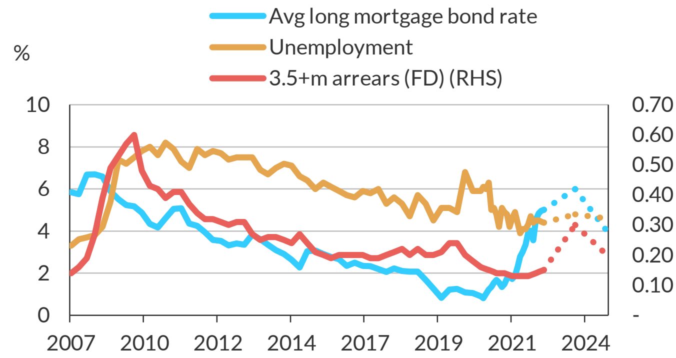
> Higher interest rates will drive a home price decline of around 15% from the peak in 2022. Low unemployment, substantial savings and tax rules on interest should limit a rise in arrears.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, European Commission/AMECO, Statistics Denmark

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Finance Denmark, Eurostat

HOME PRICE DECLINE TO PARTLY REVERSE STRONG GAINS SINCE 2020

Fitch forecasts nominal home prices to decrease by up to 10% in 2023 leading to an overall decline of 10%-15% from the peak in June 2022 (following a 20% increase from 2020 to mid-2022). The price falls will result from higher mortgage rates and squeezed discretionary income. Flats in Copenhagen, which experienced the highest increase in recent years, will face the largest decline. We expect prices to bottom out in 2024, when the impact from inflation and rates should ease.

The surge in the long-term mortgage rates from 2% at the start of 2022 to 5% in October and high inflation (8% in October) have led to a lower demand for home purchases. The rate used for affordability testing (30-year fixed mortgage bond rate + 1%) reached 6% in 3Q22, and is expected to remain high in 2023.

Lower expected inflation in 2024, together with higher wages and a reduction in mortgage rates should stabilise home prices. However, we still expect prices to marginally decrease in 2024, notably due to new housing taxation rules coming into effect then. The tax, which will fluctuate with property values, will mostly affect high value properties. A longer-than-expected high inflationary and interest rate environment could put further downward pressure on home prices.

FLOATING-RATE BORROWERS MOST AT RISK OF FINANCIAL DIFFICULTIES

We expect arrears to increase to 0.3% in 2023 from about 0.15% in 2022, as borrowers' serviceability will be impacted by higher interest rates, and a rise in unemployment to 4.8% in 2023 (from 4.4% estimated for 2022) curtailing income growth to below inflation. Arrears are low by international standards and are expected to decrease slightly in 2024 due to improved economic conditions.

The higher mortgage rates will affect borrowers on a floating rate and those with a rate due to reset in 2023 (about 23% of mortgage loans outstanding as of September 2022, according to Statistics Denmark). Fitch expects defaults to remain limited, due to overall low unemployment and accumulated savings at record highs (according to CEICDATA). Borrowers that reset are likely to choose shorter fixing periods that offer cheaper rates than the 30-year fixed rate, continuing a trend that started in 2022.

About half of mortgage borrowers pay long-term fixed rates, with most set at historical lows in 2019-2021. We expect these to perform well as unemployment will remain low and wages will increase. These borrowers also benefit from favourable prepayment conditions, which allow them to prepay part or all of their loans for its market value, currently well below par value.

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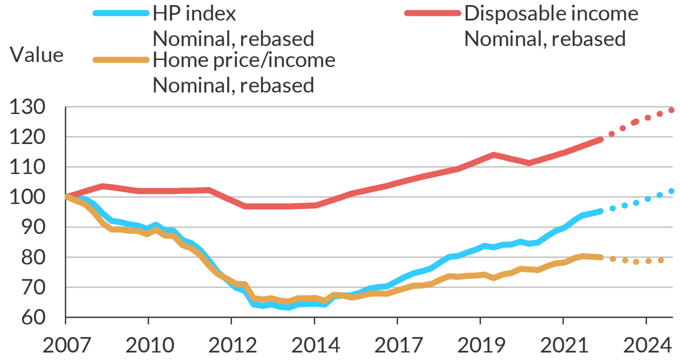
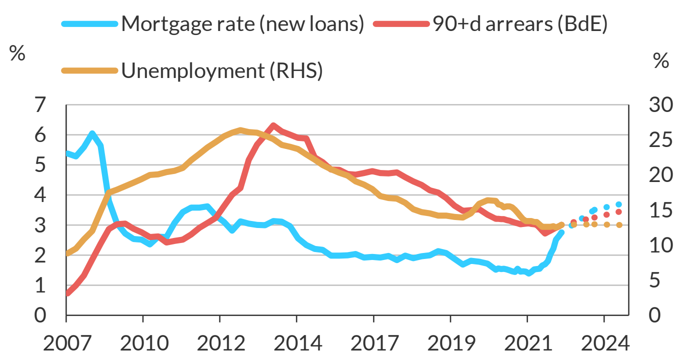
We forecast low-single-digit home price growth in 2023-2024, the highest for a European country in this report.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: FItch Ratings, Haver Analytics, European Commission/AMECO, Instituto Nacional de Estadistica

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Banco de Espana, Eurostat

HOME PRICES TO INCREASE AT A LOWER PACE

Fitch expects nominal home prices to grow by 2%-4% in 2023 and 3%-5% in 2024, both of which would be a deceleration from the 6% estimated for 2022.

Home price growth will slow due to higher mortgage rates denting demand, especially for first-time buyers as mortgage rates could reach 4% in 2024 from around 2% as of September 2022.

Nominal home prices will not fall due to stable forecast unemployment at around 13%, the very low risk of housing over-supply and limited numbers of forced sales due to prudent underwriting strategies and macro-prudential limits applied since the housing crash.

New residential construction activity has been extremely subdued over the past 10 years, at only about a quarter of the levels of the real estate boom before the GFC.

The timid pace of home price growth implies that it will be 2024 before home prices return to the level of the past peak in 2007-2008. The most influential factor that could change our forecast is larger-than-expected interest rate increases.

LATE-STAGE ARREARS TO MODERATELY INCREASE

We expect loans in late-stage arrears to increase to 3.0%-3.5% in 2023 and 3.25%-3.75% in 2024 up from 3.0% estimated for end-2022. The deterioration will be driven by higher rates for floating-rate loans.

The limited increase in arrears reflects the large share (50%-70%) of long-term fixed-rate mortgages originated in 2020-2021 that are immune to rate rises and the stable forecast unemployment rate. Close to 75% of outstanding mortgages have floating rates, but many of these loans have significant seasoning (of about eight years) and low LTVs of 50%-60%, features that support strong loan performance.

High LTV loans, especially those paying floating rates or those with short-term fixed periods, and recently restructured loans or those on a temporary grace period have the highest risk of entering arrears. The payment shock will be large when rates reset, such as after the typical 12 months for mortgage loans linked to 12-month Euribor. The recently announced government-led borrower relief measures for low-income borrowers paying floating rates should lead to fewer new arrears cases for these borrowers.

We do not anticipate a large wave of forced sales in 2023-2024 as lenders continue to prioritise amicable recovery solutions, which have proved to be more effective than judicial recoveries.

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ITALY

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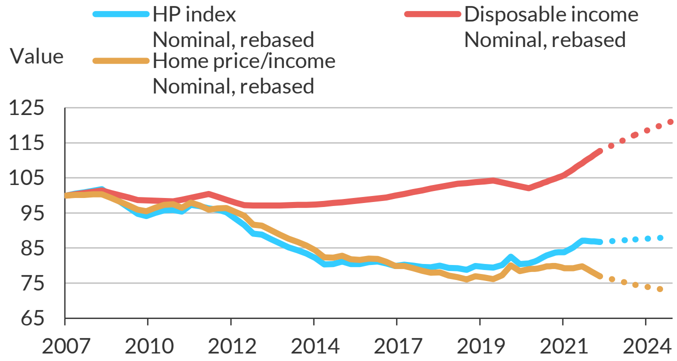
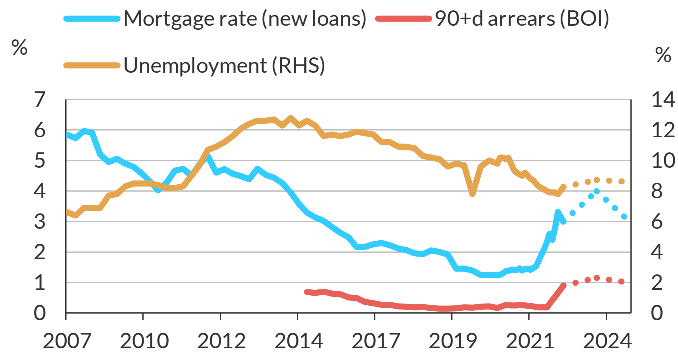
> We expect slower home price growth and mortgage performance to deteriorate mildly over the next two years.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, European Commission/AMECO, Scenari Immobiliari/ National Institute of Statistics

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, European Central Bank, Eurostat, National Institute of Statistics

DEMAND FOR HOME PURCHASES TO REDUCE AS FUNDAMENTALS WEAKEN

Fitch forecasts nominal home price growth of 0.5%-1% in 2023 and 2024, down from an estimated 3.5% for 2022.

Housing demand will reduce as interest rates increase and services inflation continues to rise. We expect the floating rate for a mortgage loan to rise to 4% next year after reaching 3% by end-2022, up from about 1.4% at the start of 2022. Fitch believes that the number of home purchases will reduce as households' purchasing power shrinks and consumer confidence remains low.

Limited supply will prevent nominal price falls, as the housing stock, which largely comprises dated properties, has not caught up with the increasing demand over the past three to four years. This is particularly evident in large metropolitan areas, where the supply of new properties is scarce.

The number of building permits for new residential units continue to decrease. Given the limited supply of new and newly refurbished homes, housing patterns will be driven by transactions on dated properties, whose prices have been characterised by a smaller growth rate.

ARREARS TO INCREASE AMID RAPID RATES RISES

We expect mortgage arrears to increase in 2023 to 1%-1.2% and to stabilise in 2024. This implies a moderate increase from current levels (0.2% as of June 2022, Bank of Italy[1]), consistent with an environment of high interest rates, rising inflation but also a tight labour market.

The risk of deterioration in performance is mitigated by the gradual shift from floating- to fixed-rate loans over the past three to four years. The Bank of Italy reports that fixed-rate mortgages represented 85% of the 2021 new origination of housing loans and 60% of the stock.

This trend was driven by low interest rates and refinancing (which can be done without penalties in Italy), which in recent years were predominantly towards fixed-rate loans. However, Fitch sees some risk stemming from a subset of floating-rate loans exposed to borrowers with a stretched affordability and risky credit profiles.

We acknowledge the benefit of government support in limiting the knock-on effects of rising inflation and tightening fiscal policies on asset performance.

1. The ratio between non-performing loans/exposures and long-term loans to consumer households for house purchase.

FitchRatings

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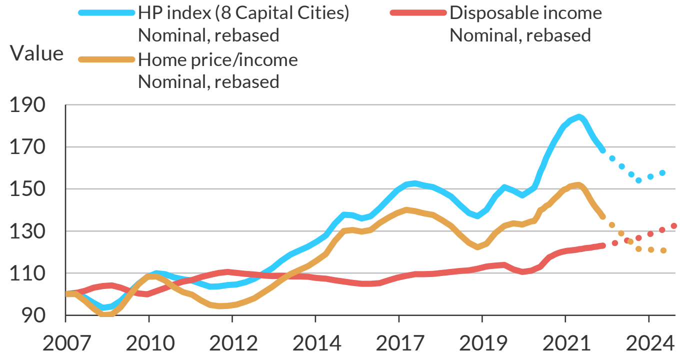
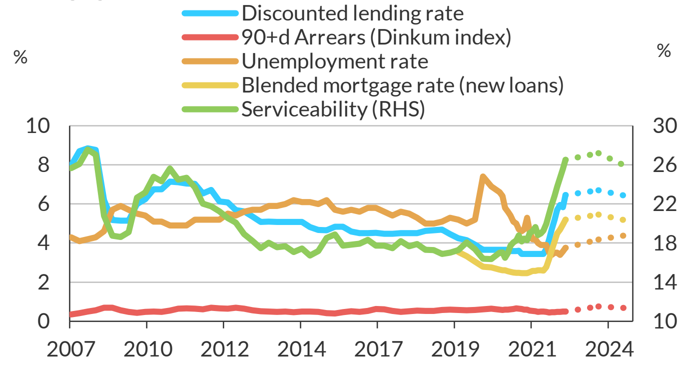
In 2023, we forecast home prices will have declined by 17% to 20% from the peak in 2022 due to rapidly rising interest rates and affordability constraints.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Australian Bureau of Statistics, CoreLogic

Mortgage Rates and Arrears



Graphs shows the mid-point of the forecast ranges.
'Discounted' rates are rates offered on standard variable rate housing loans.
Source: Fitch Ratings, Haver Analytics, Reserve Bank of Australia, Australian Bureau of Statistics

HOME PRICE DECLINE TO CONTINUE AS FURTHER RATE RISES DENT AFFORDABILITY

Fitch expects nominal home prices to decline by a further 7%-10% in 2023 following an estimated drop of about 10% between the peak in 2Q22 and end-2022. A modest growth of 2%-5% will follow in 2024. Increasing mortgage rates, high CPI inflation and sluggish wage growth will continue to stretch borrowers' affordability, which will further dampen demand for new home purchases.

Mortgage rates in Australia's mainly floating-rate market have more than doubled since late 2021, reducing borrowing capacity by over 20%. They will increase at a slower pace in 2023. Geographic areas with largest increases since the pandemic will have the strongest declines, while high-density apartments will be more resilient due to the return to office working and demand shifting to this more affordable sector.

We expect demand for home purchases to pick up in 2024 as inflationary pressures ease, interest rates stabilise and overseas migration supports housing demand in the medium to long term. However, the demand from first-time buyers will continue to be subdued due to their lower borrowing capacity.

Persistent inflation may lead to high interest rates for longer than our expectations leading to home price declines above our forecast.

MODEST INCREASE IN LATE-STAGE ARREARS IN 2023 AMID INFLATIONARY PRESSURE

Fitch expects late-stage arrears increasing to 0.7%-0.8% from current record low levels, before stabilising in 2024. Steep rises in mortgage rates and falling discretionary income will lead to some borrowers having difficulty making contractual payments.

Tight underwriting standards since 2014 and high aggregate household liquidity buffers, support only a limited increase in arrears. Borrowers with low savings, those who have borrowed to their serviceability limit and those in the lowest income distribution quartile are most vulnerable for mortgage arrears.

About 35% of borrowers have fixed their rates for up to five years since 2019, with most expiring in 2023, leading to a higher payment shock than borrowers with variable-rate loans. A small increase in late-stage arrears will also be driven by the slowing housing market, where properties in arrears are taking longer to sell.

Fitch expects foreclosures to be limited driven by low unemployment rates and lenders' willingness to support borrowers facing financial hardship.

Increases in interest rates and deterioration in the labour market beyond our expectations could lead to higher arrears than forecast.

FitchRatings

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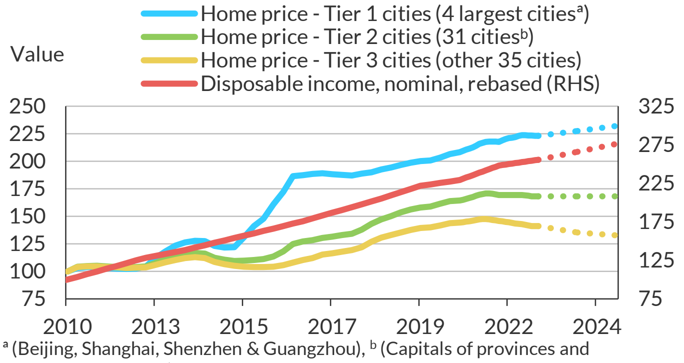
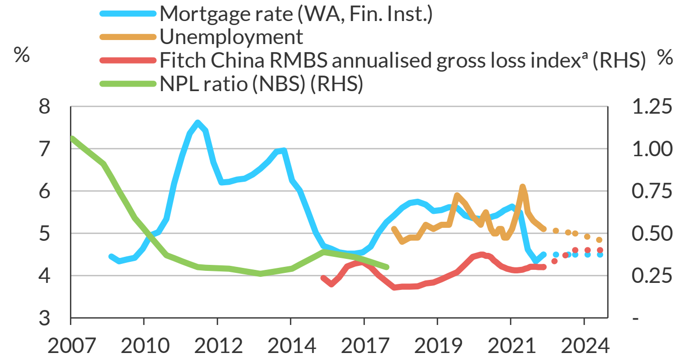
We expect prices to decline further in 2023 before bottoming out but mortgage performance to only modestly deteriorate, in the face of economic headwinds.

Home Prices and Affordability



[a] (Beijing, Shanghai, Shenzhen & Guangzhou), [b] (Capitals of provinces and autonomous regions), Home Price Index is calculated by NBS nominal home price index rebased as of end-2010.
Source: Fitch Ratings, NBS China (National Bureau of Statistics)

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
[a] 12-month rolling average of annualised gross loss %.
Source: Fitch Ratings, Haver Analytics, People's Bank of China, National Bureau of Statistics

PRICE DECLINE PRESSURE TO CONTINUE DESPITE POCKETS OF STRENGTH

Fitch forecasts national nominal home prices to drop further by 1%-3% in 2023 and stay largely flat in 2024. We expect the magnitude of drop to be milder compared to the 2% decline in 2022, given policy support in the housing market, falling interest rates and a likely orderly resolution of property sector risks.

We anticipate the expansion of stimulus in the sector to be sustained, in the forms of rate cuts, eased downpayment requirements and relaxed restrictions on home sales. Stimulus measures are increasingly customised in regional markets based on local supply-demand dynamics, and Fitch expects more-aggressive easing policies to be introduced in markets with weaker demand. However, we still believe the larger markets will continue to outperform smaller regions, considering the stronger demand and tighter supply in the Tier 1 metropolises than in smaller cities and towns.

Slow or fickle adaptation of the Covid-19 policies and a looming international recession may hinder China's economic growth and consequently, homebuying demand. Policy missteps, such as overextending credit supply or prematurely punishing ownership of multiple homes, could also destabilise the already frail housing market.

STRONG BORROWERS AND CREDIT TO NAVIGATE SAFELY THROUGH STORMS

We forecast the average annualised gross loss in RMBS to modestly deteriorate to 0.35%-0.45% in 2023 from 0.3% in 2022, and remain steady in 2024. Weaker economic growth due to cautious and slow easing of Covid-19 policies and the likelihood of the global recession may weigh on mortgage serviceability. A delayed resolution of the property sector crisis may trigger a wider group of borrowers to default on mortgages on pre-sold homes failing to be delivered on time. The recently eased underwriting typically in the form of lower downpayment requirements may slightly erode the credit quality of recent originations.

Fitch believes the robust quality of borrowers, characterised by strong credit profiles and substantial home equity by international standards, will continue to provide solid support to mortgage performance. The highly seasoned nature of securitised mortgages will also help mitigate risks of defaulting due to temporary home equity losses.

The risk of a severe global recession, potential for anaemic local economic growth with protracted Covid-19 curbs and any ineffective resolution of property sector crisis may lead to a worse-than-expected mortgage performance deterioration.

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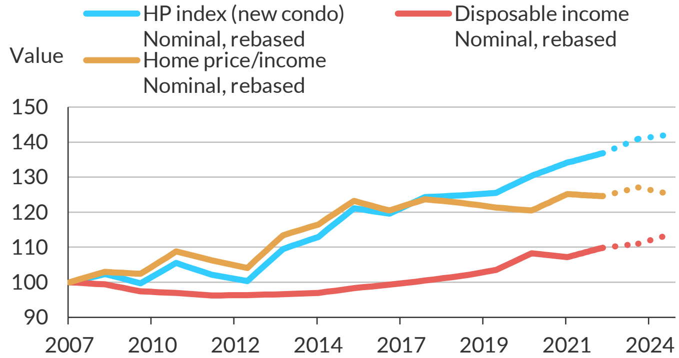
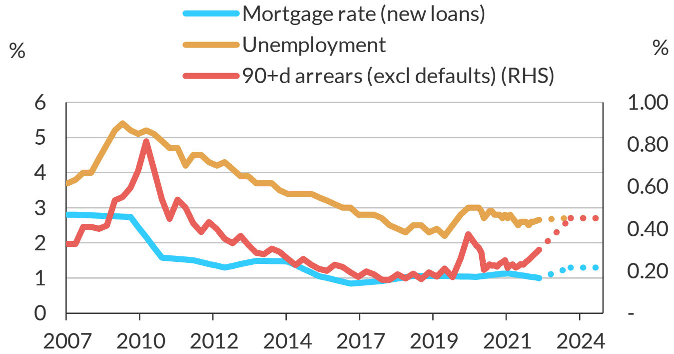
Home price growth to continue due to low interest rates and high construction costs, with only a limited rise in arrears.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Japan Housing Finance Agency, European Commission/AMECO

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Japan Housing Finance Agency, Eurostat

LOW INTEREST RATES AND HIGH CONSTRUCTION COSTS TO SUPPORT HOME PRICES

Fitch forecasts nominal home prices to rise by 2%-4% in 2023, up from 2% estimated growth for 2022, before slowing to 0%-2% in 2024.

Our forecast is due to strong demand driven by the Bank of Japan's (BOJ) monetary policy. Low mortgage loan rates will support home buyers' affordability, making purchasing property attractive as debt service will be cheaper than rent. Fitch expects the BOJ to maintain its policy with rates staying flat at -0.1% in 2023 and 2024. A weaker Japanese yen, which has depreciated by about 30% over the past year, will also bolster home prices by attracting overseas investors.

Upward home price momentum will also be driven by an increase in construction costs which increased by 9.5% yoy in 3Q22, due to inflation and a weak yen.

We expect that appreciation of new condo prices will slow down in 2024 as construction costs stabilise with expected reversal of inflation and exchange rates. Demand is also expected to slow for new condos driven by limited room for mortgage credit expansion given the stretched affordability and high leverage of households.

LOW UNEMPLOYMENT EXPECTATIONS TO LIMIT RISE IN ARREARS

Fitch forecasts 90+ mortgage arrears to rise slightly to 0.4% to 0.5% in 2023 and 2024, reflecting the expected deterioration in household income and expenditure due to the inflation which puts pressure on borrowers' serviceability. The real wage growth in September 2022 fell by 1.2% yoy as inflation was higher than pay rises. The real wage growth has been negative for six consecutive months since April. An increase of household expenditure as life is back to normal will also have a negative impact on mortgage arrears.

However, a severe deterioration of mortgage loan performance is not expected, supported by the sound labour market. Fitch forecasts the unemployment rate in Japan to stay low at 2.7% in 2023 and 2024.

A dramatic change in the BOJ's monetary policy is not our expected scenario, but any change in the monetary policy will have a negative impact on borrowers' serviceability as the mortgage loans in Japan are highly leveraged. In recently originated pools of Japan Housing Finance Agency's RMBS transactions, the average DTI and LTV ratios increased to about 25% and 93%, respectively, from about 20% and 75% before the GFC.

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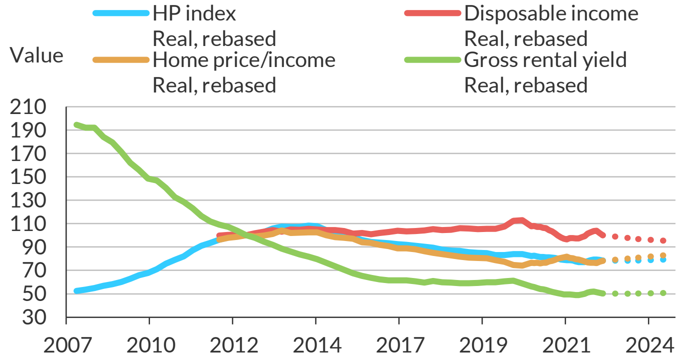
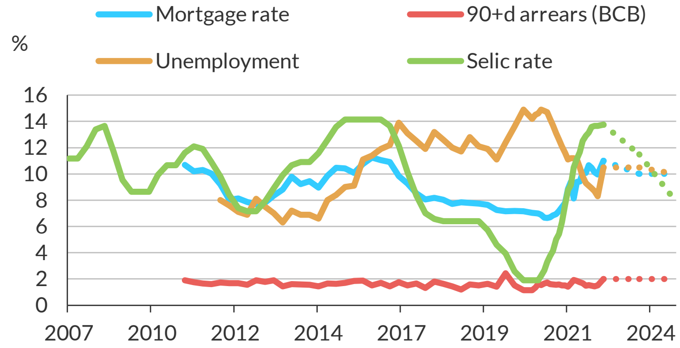
> We forecast nominal home price growth supported by inflation; arrears to increase slightly amid a challenging macroeconomic environment.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Instituto Brasileiro de Geografia e Estatística, Fundação Instituto de Pesquisas Econômicas, OECD

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Banco Central do Brazil

INFLATION TO SUPPORT NOMINAL HOME PRICE GROWTH

Fitch forecasts annual nominal home price growth of 4%-6% in 2023 and 2024, slightly higher than our 5.5% estimate for 2022, given strong inflationary pressures, credit availability and expected government support. Home price growth is also supported by continued supply shortages and increasing construction costs on new properties.

Credit availability is expected to stay strong, although lower than in 2021, when rates were at historical lows. We expect alternative funding sources, such as covered bonds, to keep increasing, which in the medium term will allow a lower dependency on savings deposits to fund credit.

Fitch expects broad continuity in macroeconomic policies after Lula takes office in January 2023, although with higher government spending. While government spending on social housing programmes would support home prices, fiscal uncertainty could have adverse spillovers for confidence and monetary policy, and influence the growth and home price trajectory.

Property appreciation could be tempered by persisting double-digit interest rates and lower-than-expected GDP growth, which would reduce in affordability.

HIGH INDEBTEDNESS AND COST OF CREDIT TO PRESSURE PERFORMANCE

Fitch expects mortgage arrears to keep between 1.0% and 3.0% in 2023 and 2024, compared to about 2% in 2022, with with upward pressures, as household indebtedness and interest rates are still high.

Increases in mortgage arrears will be moderated by stable employment for the next two years and adequate underwriting standards that are expected to remain in place. Loan characteristics, such as decreasing instalments (linear amortisation), fixed interest rates and guarantee type (first-lien), contribute to strong loan performance. This should offset the impact of record high household indebtedness of 53% as a share of disposable income.

Interest rates will stay high for 2023, which we believe will increase the negative effects on arrears as borrowers' ability to refinance their mortgages will be challenged, after having been able to do so at unprecedented competitive rates in 2020 and 2021.

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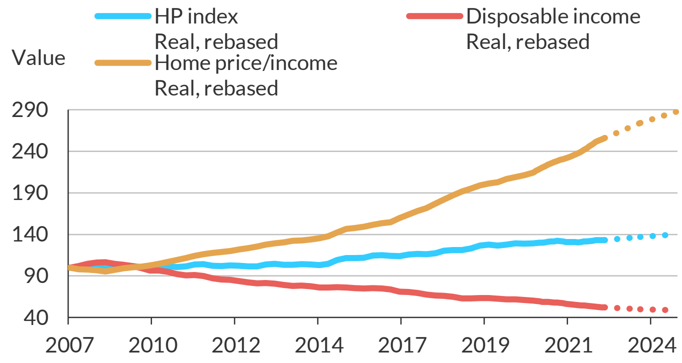
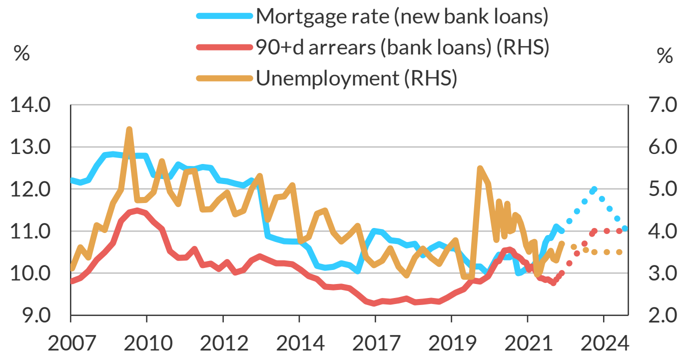
We forecast home price growth to decelerate, but remain positive as prices partially absorb higher inflation.



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Instituto Nacional de Estadística Geografía e Informática, Sociedad Hipotecaria Federal, OECD



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Banco de México (BANXICO), Instituto Nacional de Estadística Geografía e Informática

HOME PRICE GROWTH CONSTRAINED BY AFFORDABILITY PRESSURES

Fitch expects home price growth of 6%-8% in 2023 and 5%-7% 2024, decelerating gradually from the estimated 10% in 2022. High inflation levels will drive positive home price trends, while decreased housing affordability together with an economic slowdown are expected to reduce demand and moderate price growth.

We estimate that policy interest rates will continue to rise, reaching 10% by end-2023, before falling gradually once inflationary pressures subside. A similar trend is expected for construction costs, which will pressure borrowers' affordability and affect housing supply, translating into home price growth. However, lower economic growth of an estimated 1.4% in 2023 supports home price growth deceleration.

Fitch expects a fall in disposable income and higher mortgage interest rates of up to 11%-13% in 2023 to constrain housing demand and moderate price increases. Affordability pressures are already decelerating mortgage originations, particularly for Infonavit and Fovissste, the largest mortgage originators in the market.

CONTAINED UNEMPLOYMENT TO DRIVE MORTGAGE PERFORMANCE

Fitch expects mortgage arrears for bank originated loans to increase to 3%-5% in 2023 and 2024 from 3% in 2022. This forecast is based on disposable income remaining pressured by high inflation but loan performance not deteriorating significantly as unemployment flattens and banks continue with prudent underwriting policies.

Mortgage performance is supported by recent monthly economic indicators showing slight economic growth in 2022, together with contained unemployment levels of around 3.5% in 2023 and 2024. Arrears for Infonavit, the public-sector largest mortgage originator, remain at historically high levels. Nonetheless, Fitch does not expect additional deterioration as Infonavit continues to implement solutions to contain arrears.

As for Fovissste, the public-sector mortgage originator, we expect asset performance to be little changed in line with job stability in the public sector. However, the general elections in 2024 may have an impact here.

Fitch remains cautious with its forecasts as both global and local economy remains uncertain. Downside risks remain given the expected recession in 2Q23 and 3Q23 in the US and the upcoming elections in Mexico in 2024.

FitchRatings

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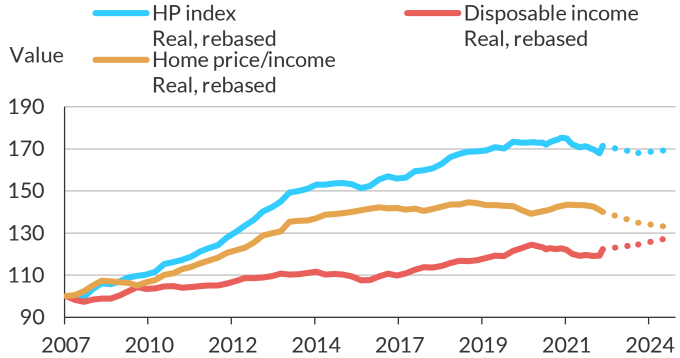
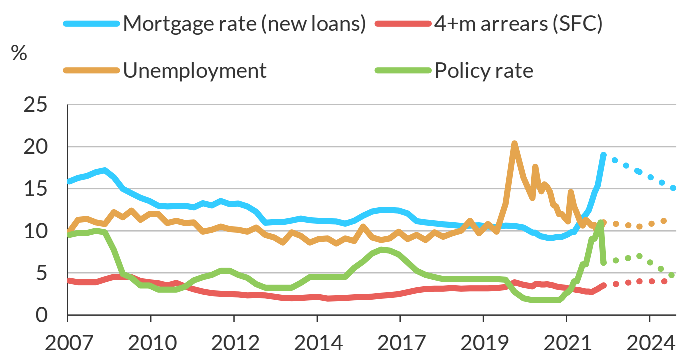
> We expect a slower nominal home price growth in 2023, while mortgage arrears could increase due to macro conditions.

Home Prices and Affordability



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Banco de la República, Departamento Administrativo Nacional de Estadísticas, OECD

Mortgage Rates and Arrears



Graph shows the mid-point of the forecast ranges.
Source: Fitch Ratings, Haver Analytics, Superintendencia Financiera, Banco de la República

GOVERNMENT SUPPORT TO BOOST DEMAND AND PREVENT NOMINAL HOME PRICE DECLINE

We forecast nominal home prices to rise between 3% to 5% in 2023 and 2024, lower than 5.5% expected by the end of 2022. Continued home price growth will be primarily supported by subsidies programmes maintained by the recently elected government. This policy has boosted housing demand in the past, particularly for non-social housing.

The lower home price growth rate will be driven by declining GDP growth, high unemployment and rising interest rates in response to high inflation.

Fitch's forecasted decline in GDP growth for 2023 and 2024 (1.86% and 2.84%) is expected to slow the rate of home price increases. In addition, housing demand could be hindered considering the historic peak both mortgage interest rates (around 20%) and inflation (10.86% as of November 2022). However, home prices are not expected to fall due to a housing supply shortage, higher construction expenses and the effect of subsidy programmes. The recently approved tax reform also supports housing demand as sales will be tax exempt if proceeds are used to buy another home.

HISTORIC HIGH MORTGAGE RATES AND INFLATION WILL LEAD TO INCREASE IN ARREARS

Fitch expects late-stage mortgage arrears to increase to between 3% and 5% in 2023 and 2024, higher than the 3.5% expected by end-2022 as a result of both lower debtors' affordability and mortgage loan originations.

Colombia's mortgage portfolio has been historically originated under conservative underwriting parameters and fixed interest rates. Although this has helped keep arrears under control, macroeconomic conditions could reduce borrowers' payment capacity. Non-performing ratios (+120 days) could rise if loan origination decreases, due to high interest rates and an economic downturn.

We expect to see more deterioration in the UVR mortgage portfolio as interest rates are linked to inflation, rather than the Pesos portfolio. The government will play an important role in controlling arrears as subsidy programmes have historically supported good portfolio performance subject to borrowers meeting timely payments.

The minimum salary will be set in December 2022 and Fitch believes it could increase by about 14%, above annual inflation, which could lead to higher unemployment and reduce borrowers' ability to make repayments.

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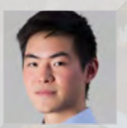

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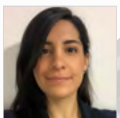

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